

SASSIN

Power Distribution Electricians



Алматы (7273) 495-231
Ангарск (3955) 60-70-56
Архангельск (8182) 63-90-72
Астрахань (8512) 99-46-04
Барнаул (3852) 73-04-60
Белгород (4722) 40-23-64
Благовещенск (4162) 22-76-07
Брянск (4832) 59-03-52
Владивосток (423) 249-28-31
Владикавказ (8672) 28-90-48
Владимир (4922) 49-43-18
Волгоград (844) 278-03-48
Вологда (8172) 26-41-59
Воронеж (473) 204-51-73
Екатеринбург (343) 384-55-89

Иваново (4932) 77-34-06
Ижевск (3412) 26-03-58
Иркутск (395) 279-98-46
Казань (843) 206-01-48
Калининград (4012) 72-03-81
Калуга (4842) 92-23-67
Кемерово (3842) 65-04-62
Киров (8332) 68-02-04
Коломна (4966) 23-41-49
Кострома (4942) 77-07-48
Краснодар (861) 203-40-90
Красноярск (391) 204-63-61
Курск (4712) 77-13-04
Курган (3522) 50-90-47
Липецк (4742) 52-20-81

Магнитогорск (3519) 55-03-13
Москва (495) 268-04-70
Мурманск (8152) 59-64-93
Набережные Челны (8552) 20-53-41
Нижегород (831) 429-08-12
Новокузнецк (3843) 20-46-81
Новый Орск (3496) 41-32-12
Новосибирск (383) 227-86-73
Омск (3812) 21-46-40
Орел (4862) 44-53-42
Оренбург (3532) 37-68-04
Пенза (8412) 22-31-16
Петрозаводск (8142) 55-98-37
Пермь (342) 205-81-47

Ростов-на-Дону (863) 308-18-15
Рязань (4912) 46-61-64
Самара (846) 206-03-16
Санкт-Петербург (812) 309-46-40
Саратов (845) 249-38-78
Севастополь (8692) 22-31-93
Саранск (8342) 22-96-24
Симферополь (3652) 67-13-56
Смоленск (4812) 29-41-54
Сочи (862) 225-72-31
Ставрополь (8652) 20-65-13
Сургут (3462) 77-98-35
Сыктывкар (8212) 25-95-17
Тамбов (4752) 50-40-97
Тверь (4822) 63-31-35

Тольятти (8482) 63-91-07
Томск (3822) 98-41-53
Тула (4872) 33-79-87
Тюмень (3452) 66-21-18
Ульяновск (8422) 24-23-59
Улан-Удэ (3012) 59-97-51
Уфа (347) 229-48-12
Хабаровск (4212) 92-98-04
Чебоксары (8352) 28-53-07
Челябинск (351) 202-03-61
Череповец (8202) 49-02-64
Чита (3022) 38-34-83
Якутск (4112) 23-90-97
Ярославль (4852) 69-52-93

Россия +7(495) 268-04-70

Казахстан +7(7172) 727-132

Киргизия +996(312) 96-26-47

<https://sassin.nt-rt.ru/> || sib@nt-rt.ru



Company Profile

As one of the leading enterprises in the low voltage electric field in China, Sassin International Electric Shanghai Co., Ltd is committed to offering professional solutions of low voltage electric and smart electricity for different fields customers from the countries and regions around the world, to satisfy worldwide customers' requirements on utilizing energy more safely and conveniently, help customers to constantly improve efficiency of production and energy, and reducing their impact on the environment.

Sassin focuses on the global market, driving the company development with technical R&D. Sassin is committed to researching and developing different low electric products to satisfy the different requirements from customers all over the world. With the trend of

intelligent electricity, Sassin has developed the smart electric devices and Smart Power Management System - SPMS to protect the safety of life and property, make the electricity management easily and remotely in any time at any place, and improve the power efficiency. In order to achieve the quick R&D, Sassin has set up the Test Center including a 10kA Short Circuit Breaking Laboratory, the Test Center has been certified by the CNAS (China National Accreditation Service for Conformity Assessment).

Quality is company's life. Sassin is always sparing no effort to promote the construction of quality management system and improve it. For this purpose, Sassin implemented the Total Quality Management System, and oriented by market and customers, to drive the employees and suppliers focusing on the continuous improvement of product quality. Sassin has been certified by the ISO9001 Quality Management System and ISO14001 Environment Management System.

Corporate Culture - Value System

Better Vision

Better Electric, Better Life.

Sacred Mission

Make Electric Smart, Safe, Simple and Green.

Core Value

Confidence, Faith, Credit.

Catalog classification

V 26.1 Power Distribution Electrics

- Air Circuit Breakers
- Moulded Case Circuit Breakers
- Automatic Transfer Switches
- Load Break Switches
- Fuse Combination Switches
- Low Voltage Fuses
- Fuse Disconnecter Switches



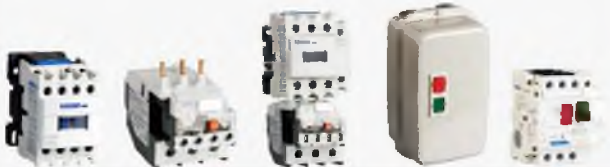
V 26.2 Modular DIN-rail Devices

- Miniature Circuit Breakers
- RCCBs
- RCD Blocks
- RCBOs
- Main Switches
- Additional Components
- Time Switches
- Push Buttons and Indicator Lamps
- Surge Protective Devices
- Distribution Boxes
- Mini Contactors
- Fuse Holders
- Accessories



V 26.3 Industry Control Electrics

- Contactors & Thermal Relays
- DC Operated AC Contactors
- Soft Starters
- Capacitor Switching Contactors
- DOL Starters
- Motor Protection Circuit Breakers
- Inverters



V 26.4 Switches and Relays

- Pushbutton Switches
- Indicators
- Control Stations
- Pushbutton Switch Boxes
- Micro Switches
- Rotary Change-over Cam Switches
- Limit Switches
- Toggle Switches
- Time Relays



V 26.5 Power Sources

- Automatic Voltage Stabilizers
- Voltage Regulators
- Compensated Voltage Stabilizers
- Pure Sine Wave Inverters
- Back Up UPS
- Switching Power Supplies
- Control Transformers



V 26.6 Meters & Electrical Accessories

- Electronic Kilowatt Hour Meters
- Power Capacitors
- Analogue Panel Meters
- Digital Panel Meters
- Current Transformers
- Metal Boxes
- Terminal Blocks
- PC Plug Socket Couplings
- Electric Bell & Buzzers



Catalog CD

All products in these catalogs listed above are available in CD.



Catalog PDF

www.sassin.com

All catalogs can be downloaded as PDF files from SASSIN website.





Power Distribution Electrics

Air circuit breakers

- P 1-87 3SW68
- P 88-114 3SW8

Molded case circuit breakers

- P 115-129 3SM8N MCCBs with thermal-magnetic trip units
- P 130-134 3SM8E MCCBs with electronic trip units
- P 135-138 3SM8L MCCBs with earth leakage protection
- P 139-142 3SM8G switch disconnectors
- P 143-170 3SM29 MCCBs

P 171 Automatic transfer switches

- P 172-174 3SAQ1 CB class
- P 175-192 3SAQ2 CB class
- P 193-207 3SAQ3 PC class

P 208-209 3SGL load break switches

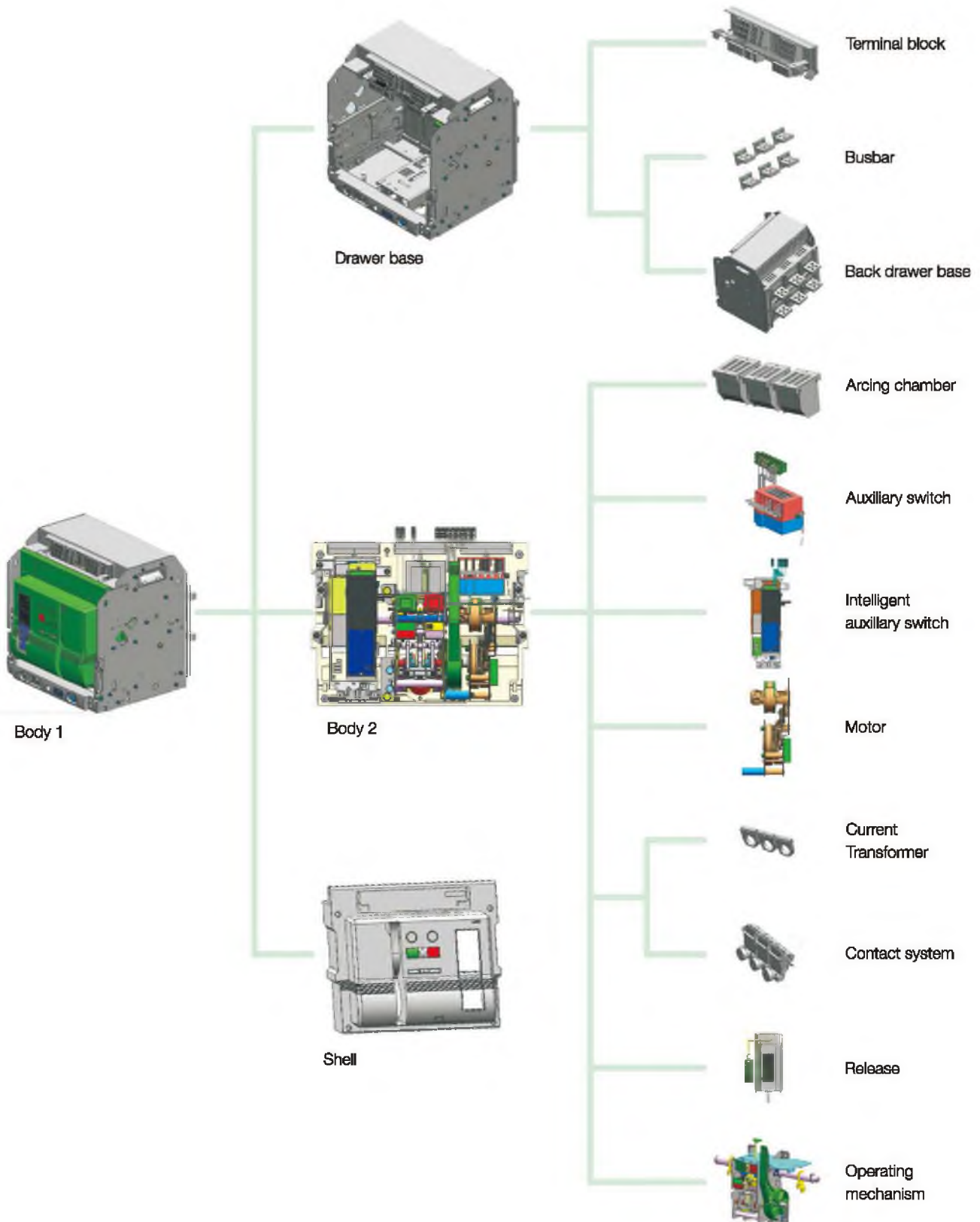
Fusegear

- P 210-211 3SGLR fuse combination switches
- P 212-213 3SHR17 fuse disconnector switches
- P 214-216 RT16 low voltage fuses

P 217-240 Index order code

Overview

The 3SW68 air circuit breaker not only provides protections against overload, short circuit, undervoltage but also has a lot of advantages like optimized size, inner communication module and the function of measurement and management to just name a few.



Air Circuit Breakers

Series 3SW68

Applications and functions

- Distributing electricity and protecting loads from overload, short circuit, undervoltage, and residual current
- Providing high reliability of power supply by smart and optional protection
- Used as an isolator
- Operating the motor directly for occasionally starting and stopping when the rated current of the breaker is not higher than 630A

Standards

- IEC60947-1: Low-voltage switchgear and controlgear - Part 1: General rules
- IEC60947-2: Low-voltage switchgear and controlgear - Part 2: Circuit-breaker
- IEC60947-4-1: Low-voltage switchgear and controlgear - Part 4-1: Contactors and motor-starters – Electromechanical contactors and motor-starters



Instruction of type code

W68	A	F	3	N	1000	L3
Type of electronic trip unit						
Size A:						
AL3: Basic type LSI						
AL4: Basic type LSIG						
AM: Standard type LSIG, LCD display						
AH: Communicate type LSIG, LCD display, Communication function						
Size B, C, D:						
BL3: Basic type LSI						
BL4: Basic type LSIG						
BM3: Basic type LSI, LCD display						
BM4: Basic type LSIG, LCD display						
BHP: Communicate type LSIG, LCD display						
BHQ: Communicate type LSIG, LCD display, measurement function						
BHG: Communicate type LSIG, LCD display, measurement function, motor protection function						
Rated current						
Size A:	Size B:	Size C:	Size D:			
200	630	2000	4000			
400	800	2500	5000			
630	1000	2900	6300			
800	1250	3200				
1000	1600	3600				
1250	2000	4000				
1600	2500					
Short circuit breaking capacity I _{cu} (kA) (400 V AC)						
N: Size A: 65; Size B: 70; Size C: 85; Size D: 100						
H: Size A: 65; Size B: 85; Size C: 120; Size D: 120						
S: Size D: 150						
Poles: 3: 3-pole; 4: 4-pole						
Installation type						
F: Fixed type						
D: Withdrawable type						
Frame code						
A: Size A, 3SW68-1600						
B: Size B, 3SW68-2500						
C: Size C, 3SW68-4000						
D: Size D, 3SW68-6300						
Series code						

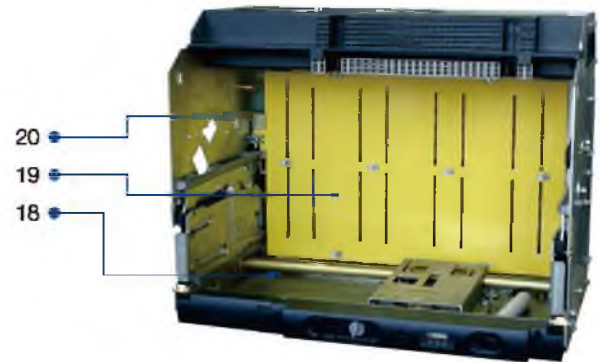
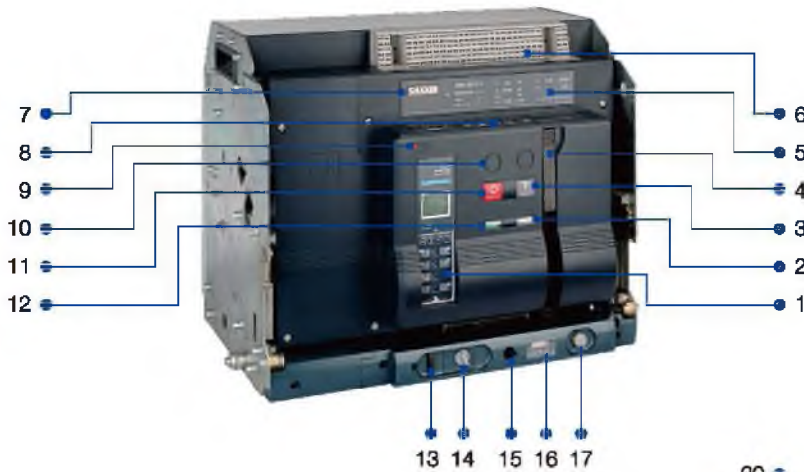
Characteristic

Structure of withdrawable type

Withdrawable type circuit breaker seat

Withdrawable type circuit breaker seat has block board for main circuit, so it can play the protective function when the breaker is removed.

1



1. Electronic trip unit
2. Stored energy release indicator
3. Switching-ON button
4. Lever to manually charge closing springs
5. Data label
6. Terminal of secondary circuit
7. Brand mark
8. Wiring diagram of secondary circuit
9. Signal for mechanical trip /Resetting button
10. Locking device of circuit breaker open (O)
11. Switching-OFF button
12. indicator of circuit breaker closed (I) and open (O)
13. Safety padlock position
14. "Unlocking button" for the three positions ("separated", "test" and "connected")

15. Cranking bar operation hole
16. positions indication of the three positions ("separated", "test" and "connected")
17. Cranking bar storage hole
18. safety hole
19. safety block board
20. side board

Note:

1. "separated": Indicating main circuit and secondary circuit are isolated
2. "test": indicating main circuit is isolated, and secondary circuit is connected
3. "connected": Indicating both main circuit and secondary circuit are connected
4. When the circuit breaker is set to the given positions ("separated" or "test" or "connected"), it will be locked automatically and can be unlocked by sliding the unlock button to the left.

Air Circuit Breakers Series 3SW68

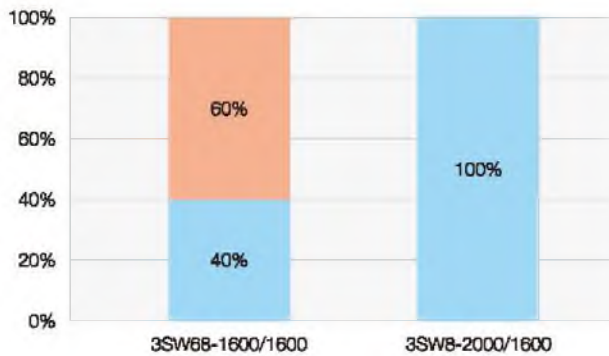
Features and benefits

Low space requirements

3SW68 devices are very compact require very little space for installation. Frame A devices (up to 1600A) fit into a 400 mm wide switchgear panel.

Frame B, C, D devices (up to 6300 A) are the smallest of their kind and with their smallest construction width fits into a 800 mm wide switchgear panel.

Example of comparison with 3SW8 in measurement



Four-pole circuit breaker with a drawer as an example

Actual body size Reduction of body size

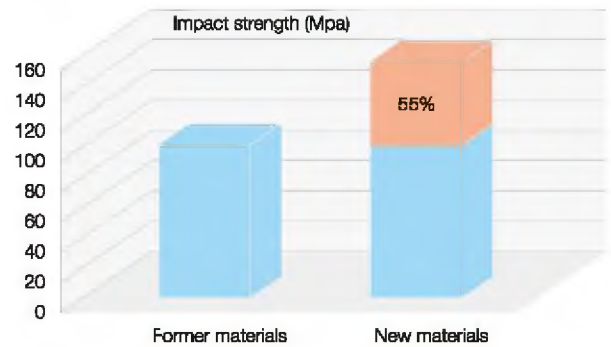
Modular design

Components like auxiliary, motorized operating mechanisms, electronic releases, current sensors, auxiliary circuit signaling switches, automatic reset devices, interlocks and engagement operating mechanisms can all be exchanged or retrofitted in the back ground, thus allowing the circuit breaker to be adapted to new, changing required.

Communication

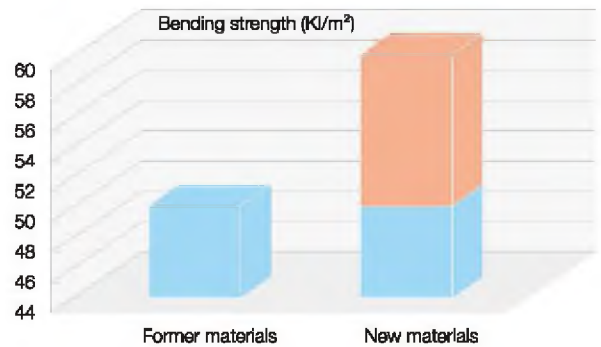
The use of modern communication capable circuit breakers opens up completely new possibilities in terms of start-up, parameterization, diagnostic, maintenance and operation. This allows varieties of ways of reducing costs and improving productivity in industrial plants, buildings and infrastructure projects.

Strength of new material



Strength of former insulation materials.

Strength increased after adopting new insulation materials using nanotechnology.

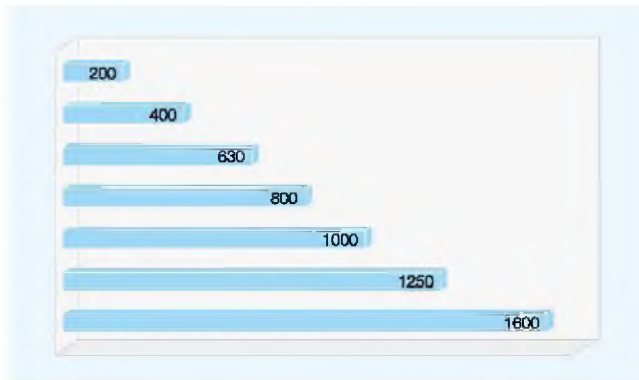


Strength of former insulation materials.

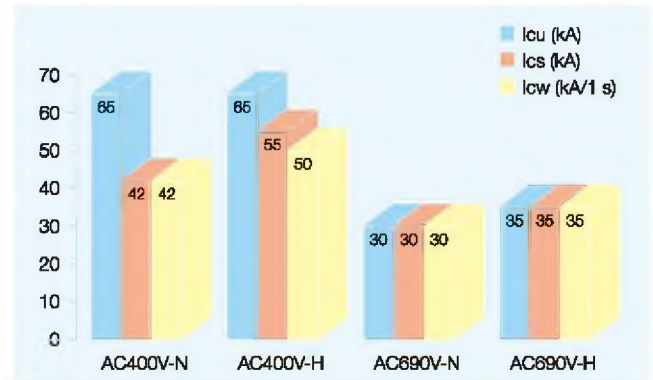
Strength increased after adopting new insulation materials using nanotechnology.

Complete current range and high breaking capacity

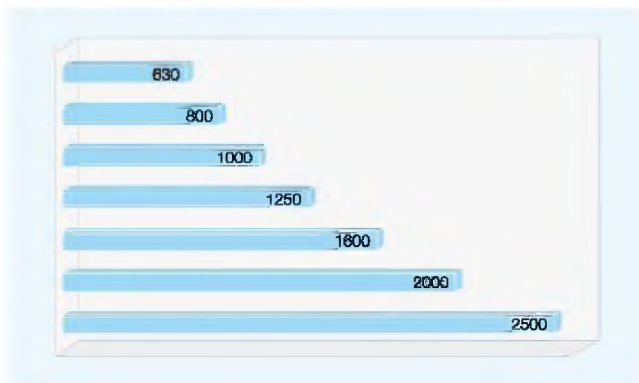
3SW68-1600 Rated current I_n (A)



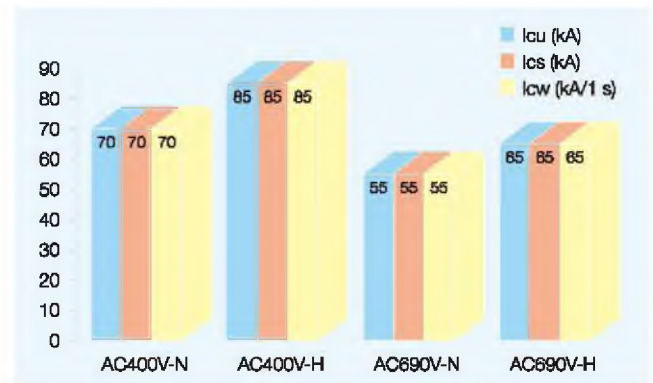
3SW68-1600 Breaking capacity



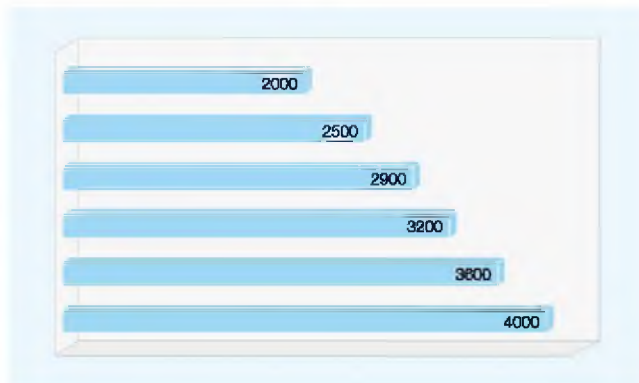
3SW68-2500 Rated current I_n (A)



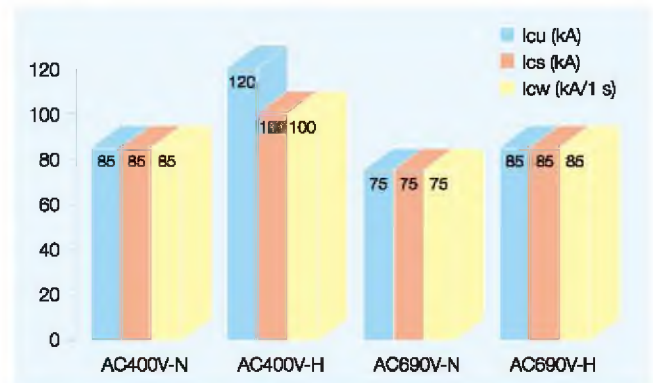
3SW68-2500 Breaking capacity



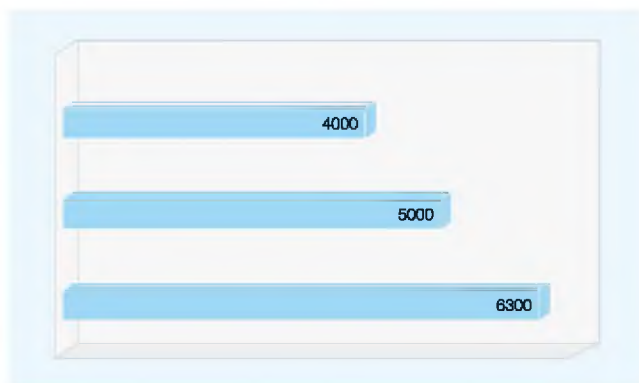
3SW68-4000 Rated current I_n (A)



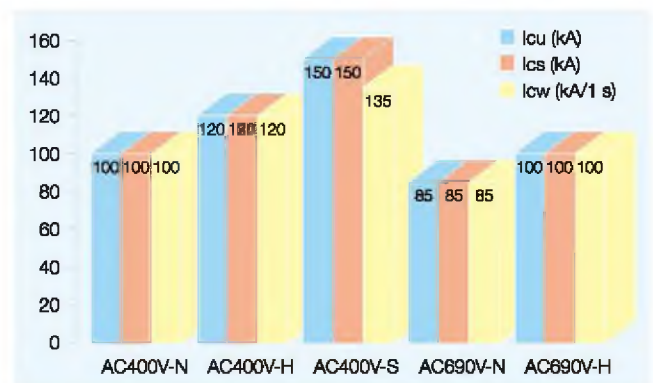
3SW68-4000 Breaking capacity



3SW68-6300 Rated current I_n (A)



3SW68-4000 Breaking capacity



Air Circuit Breakers

Series 3SW68

Technical specifications

Size	A		B		C		D			
Type	3SW68-1600		3SW68-2500		3SW68-4000		3SW68-6300			
Rated frame current I _{nm}	A 1600		2500		4000		6300			
Rated current I _n	A 200, 400, 630, 800, 1000, 1250, 1600		630, 800, 1000, 1250, 1600, 2000, 2500		2000, 2500, 2900, 3200, 3600, 4000		4000, 5000, 6300			
Rated operational voltage U _e	V 400, 690		400, 690		400, 690		400, 690			
Rated insulating voltage U _i	V 1000		1000		1000		1000			
Rated impulsive withstand voltage U _{imp}	kV 12		12		12		12			
Power-frequency withstand voltage 1min	V 3500		3500		3500		3500			
Poles	P 3, 4		3, 4		3, 4		3, 4			
Neutral pole current-carrying capacity for 4-pole CBEs	100 % I _n		100 % I _n		100 % I _n		100 % I _n			
Breaking capacity	N	H	N	H	N	H	N	H	S	
Rated ultimate short-circuit breaking capacity I _{cu}										
O-CO up to 400 V AC 50-60 Hz	kA	65	65	70	85	85	120	100	120	150
O-CO up to 690 V AC 50-60 Hz	kA	30	35	55	65	75	85	85	100	100
Rated operating short-circuit breaking capacity I _{cs}										
O-CO-CO up to 400 V AC 50-60 Hz	kA	42	55	70	85	85	100	100	120	150
O-CO-CO up to 690 V AC 50-60 Hz	kA	30	35	55	65	75	85	85	100	100
Rated short-circuit making capacity I _{cm}										
up to 400 V AC 50-60 Hz	kA	143	143	164	187	187	264	220	264	330
up to 690 V AC 50-60 Hz	kA	63	73	121	143	165	187	187	220	220
Rated short-time withstand current for 1 s I _{sw}										
up to 400 V AC 50-60 Hz	kA	42	50	70	85	85	100	100	120	135
up to 690 V AC 50-60 Hz	kA	30	35	55	65	85	85	85	100	100
Breaking time	ms	25-30		25-30		25-30		25-30		
Closing time (max.)	ms	70		70		70		70		
Electrical life										
400 V	cycles	6500		5000		2000		1000		
690 V	cycles	3000		2500		1500		800		
Mechanical life										
Without maintenance	cycles	15000		12500		10000		5000		
With maintenance	cycles	30000		25000		20000		10000		
Available terminal type			Horizontal		Horizontal		Horizontal		Horizontal (2)	
			Vertical		Vertical		Vertical		Vertical	
			Front		Front		Front (1)			
Versions			Withdrawable		Withdrawable		Withdrawable		Withdrawable	
			Fixed		Fixed		Fixed		Fixed	
Dimensions										
Withdrawable type	3-pole / 4-pole	W	mm	248 / 318		347 / 442		440 / 566		818 / 1070
		H	mm	360		450		450		490
		D	mm	310		406.5		406.5		406.5
Withdrawable type	3-pole / 4-pole	W	mm	254 / 324		368 / 463		461 / 587		839 / 1091
		H	mm	328.5		415.5		415.5		415.5
		D	mm	217.5		308		308		308

1. Front terminal is available for fixed version only.

2. Horizontal terminal is not available for circuit breaker with rated current 6300 A.

Electronic trip unit

Functions

Suitable size	A					B, C, D						
	3SW68-AL3	3SW68-AL4	3SW68-AM3	3SW68-AM4	3SW68-AH	3SW68-BL3	3SW68-BL4	3SW68-BM3	3SW68-BM4	3SW68-BHP	3SW68-BHQ	3SW68-BHG
Protection and alarm												
Overload protection	●	●	●	●	●	●	●	●	●	●	●	●
Short-time delayed short-circuit protection	●	●	●	●	●	●	●	●	●	●	●	●
Instantaneous short-circuit protection	●	●	●	●	●	●	●	●	●	●	●	●
Earth fault protection	-	●	-	●	●	-	●	-	●	●	●	●
Current leakage protection	-	-	○	○	○	-	-	-	-	○	○	○
Neutral pole protection	●	●	○	○	○	●	●	●	●	●	●	●
Thermal memory	●	●	●	●	●	●	●	●	●	●	●	●
Fault trip display	●	●	-	-	-	●	●	●	●	●	●	●
MCR & HSISC protection	○	○	●	●	●	○	○	○	○	○	○	○
Zone selective interlocking	-	-	○	○	○	-	-	○	○	○	○	○
Load monitoring display	○	○	●	●	●	○	○	○	○	○	○	○
Overload pre-alarm	-	-	-	-	-	-	-	○	○	○	○	○
Grounding alarm	-	-	●	●	●	-	-	-	-	○	○	○
Current imbalance protection	-	-	●	●	●	-	-	-	-	●	●	●
Required current protection	-	-	○	○	○	-	-	-	-	●	●	●
Phase loss protection	-	-	●	●	●	-	-	-	-	●	●	●
Undervoltage protection	-	-	○	○	○	-	-	-	-	○	○	○
Overvoltage protection	-	-	○	○	○	-	-	-	-	○	○	○
Voltage imbalance protection	-	-	○	○	○	-	-	-	-	○	○	○
Phase sequence protection	-	-	○	○	○	-	-	-	-	○	○	○
Under frequency protection	-	-	○	○	○	-	-	-	-	-	-	●
Over frequency protection	-	-	○	○	○	-	-	-	-	-	-	●
Inverse power protection	-	-	○	○	○	-	-	-	-	-	-	●
Measurement												
Current (three-phase, neutral, earth, current imbalance rate)	-	-	●	●	●	-	-	●	●	●	●	●
Voltage (line, phase, average, voltage imbalance rate)	-	-	○	○	○	-	-	-	-	●	●	●
power (active power, reactive power, power factors)	-	-	○	○	○	-	-	-	-	●	●	●
Frequency	-	-	○	○	○	-	-	-	-	●	●	●
Energy (active energy, reactive energy, apparent energy)	-	-	○	○	○	-	-	-	-	●	●	●
Heat capacity	-	-	●	●	●	-	-	-	-	●	●	●
Phase sequence	-	-	○	○	○	-	-	-	-	●	●	●
Required value (current, power)	-	-	○	○	○	-	-	-	-	●	●	●
Harmonic analysis	-	-	○	○	○	-	-	-	-	-	●	●
Waveform	-	-	-	-	-	-	-	-	-	-	●	●
Maintain												
Test function	●	●	-	-	-	●	●	●	●	●	●	●
Self-diagnostic function	●	●	●	●	●	●	●	●	●	●	●	●
Contact loss indicator	-	-	●	●	●	-	-	●	●	●	●	●
Operation times of trip unit on electricity	-	-	●	●	●	-	-	●	●	●	●	●
Remote reset	-	-	-	-	-	-	-	-	-	○	○	○
Historic record												
Historic fault record	●	●	●	●	●	●	●	●	●	●	●	●
Historic maximum current	-	-	●	●	●	-	-	●	●	●	●	●
Alarm record	-	-	●	●	●	-	-	-	-	●	●	●
Clock function (Y, M, D, h, m, s)	-	-	●	●	●	-	-	-	-	●	●	●
Communication												
Communication output	-	-	-	-	●	-	-	-	-	●	●	●
Modbus	-	-	-	-	-	-	-	-	-	○	○	○
Profibus	-	-	-	-	○	-	-	-	-	○	○	○
Devicenet	-	-	-	-	○	-	-	-	-	○	○	○

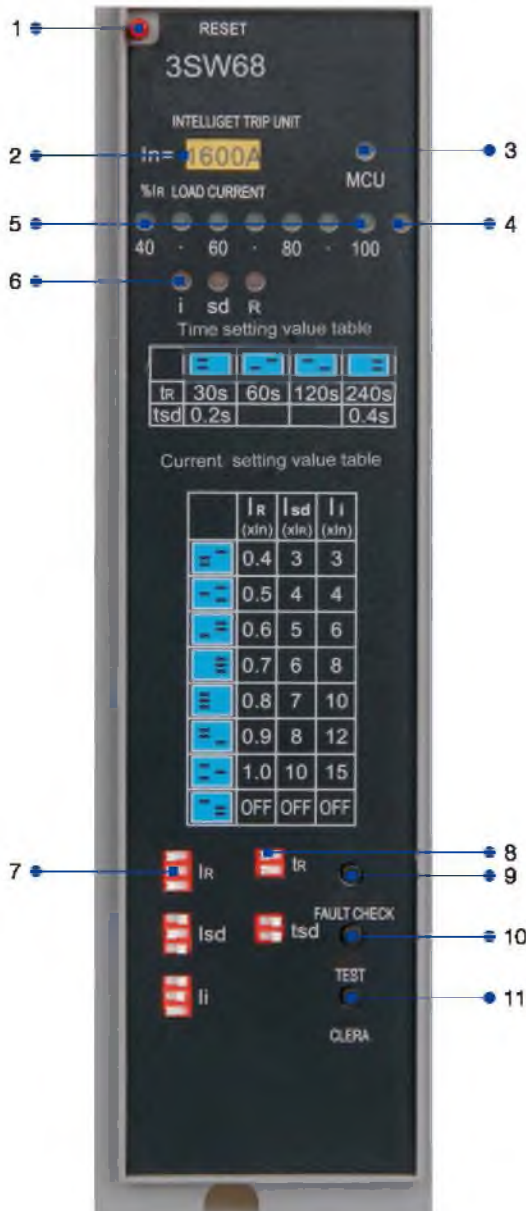
Air Circuit Breakers

Series 3SW68 (Electronic trip unit 3SW68-AL)

Suitable for size A (3SW68-1600)

3SW68-AL electronic trip units are with LED displays, the protection value and delay time is set by dialing device.

- Type 3SW68-AL3: provides selective protections of long-time delayed protection, short-time delayed protection and instantaneous protection.
- Type 3SW68-AL4: provides additional selective earth fault protection and all protection functions of type 3SW68-AL3.



- RESET button**
It pops up when fault tripping or test tripping. The circuit breaker can be switched on only when the button is pressed down, together with the fault indicator.
- Indication of rated current (In)**
- MCU indicator**
It remains lit when the controller is under normal working.
- Overvoltage Indicator**
It lights up when current reaches 1.15 I_R.
- Current bar indicator**
To display the real time current as the percentage of I_R; 10% each step.
- Fault type indicator**
To show the fault type after tripping occurs.
 - If power supply works normally, it will indicate the fault type after fault tripping. Press RESET to quit.
 - If power supply is lost, press FAULT CHECK key to show the type of last tripping when power recovers.
- Current settings adjuster**
- Time settings adjuster**
- FAULT CHECK key**
Press the key to check fault status when the electronic trip unit is under normal working.
- TEST key**
Press TEST key, the breaker trips immediately, but no fault recorded. Press RESET and CLEAR after test.
- CLEAR key**

Note: Parameter setting $I_R < I_{sd} < I_i$

Air Circuit Breakers Series 3SW68 (Electronic trip unit 3SW68-AL)

Characteristics

● Protection

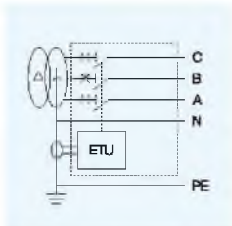
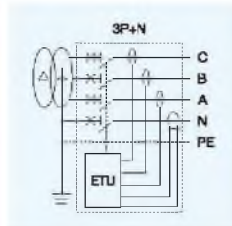
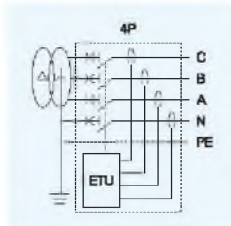
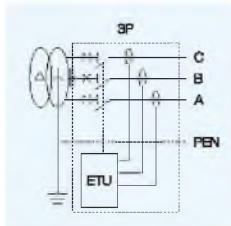
Type 3SW68-AL3, suitable for size A 3SW68-1600

Long-time delayed protection		Current setting IR (A)	IR = in x ...	0.4	0.5	0.6	0.7	0.8	0.9	1	OFF
Action characteristics		Time delay TR (s)	Accuracy ±10% (Original difference ±40 ms)	≤1.05 IR, >2 h no action; >1.3 IR (generator >1.2 IR), <1 h action							
Time delay TR (s)		Time setting tR (s)		30	60	120	240				
		I = 1.5 x IR		30	60	120	240				
		I = 2 x IR		16.9	33.8	67.5	135				
		I = 6 x IR		1.88	3.75	7.5	15				
		I = 7.2 x IR		1.3	2.6	5.2	10				
		I = 10 x IR		0.68	1.35	2.7	5.4				
Thermal memory		10 min cold reset or remove after trip unit out of electricity									
Short-time delayed protection		Current setting Isd (A)	Isd = IR x ...	3	4	5	6	7	8	10	OFF
Action characteristics		Time delay Tsd (s)	Accuracy within 10% (Original difference ±40 ms)	≤ 0.9 Isd no action; > 1.1 Isd action							
Time delay Tsd (s)		Time setting tsd (s)		0.1	0.2	0.3	0.4				
(definite time protection)		Return time (s)		0.06	0.14	0.23	0.35				
Instantaneous protection		Current setting II (A)	II = In x ...	3	4	6	8	10	12	15	OFF
Action characteristics		≤ 0.85 II no action; > 1.15 II action									
Action time delayed		< 30 ms									

● Protection

Type 3SW68-AL4, suitable for size A 3SW68-1600

Long-time delayed protection: the same as type 3SW68-AL3											
Short-time delayed protection: the same as type 3SW68-AL3											
Instantaneous protection: the same as type 3SW68-AL3											
Earth fault protection		Current setting I _g (A)	In ≤ 1250 A, I _g = In x ...	0.4	0.5	0.6	0.65	0.7	0.75	0.8	OFF
Action characteristics		Time delay T _g (s)	In > 1250 A, I _g = ...	500	600	700	800	900	1000	1200	OFF
Time delay T _g (s)		Accuracy within 10% (Original difference ±40 ms)		≤ 0.9 I _g no action; > 1.1 I _g action							
(definite time protection)		Time setting t _g (s)		0.2	0.4	0.6	0.8				
Differential protection (type T)		Source ground return (type W)									



● Default settings

- IR = 1.0 In, tR = 15 s;
- I_{sd} = 3.0 IR, t_{sd} = 0.4 s;
- II = 10 In;
- I_g = OFF, t_g = 0.8 s.

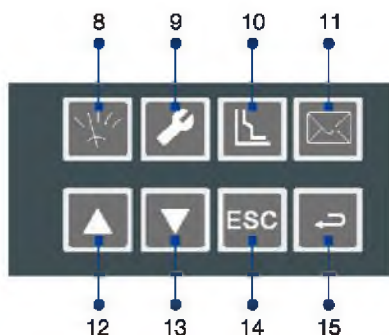
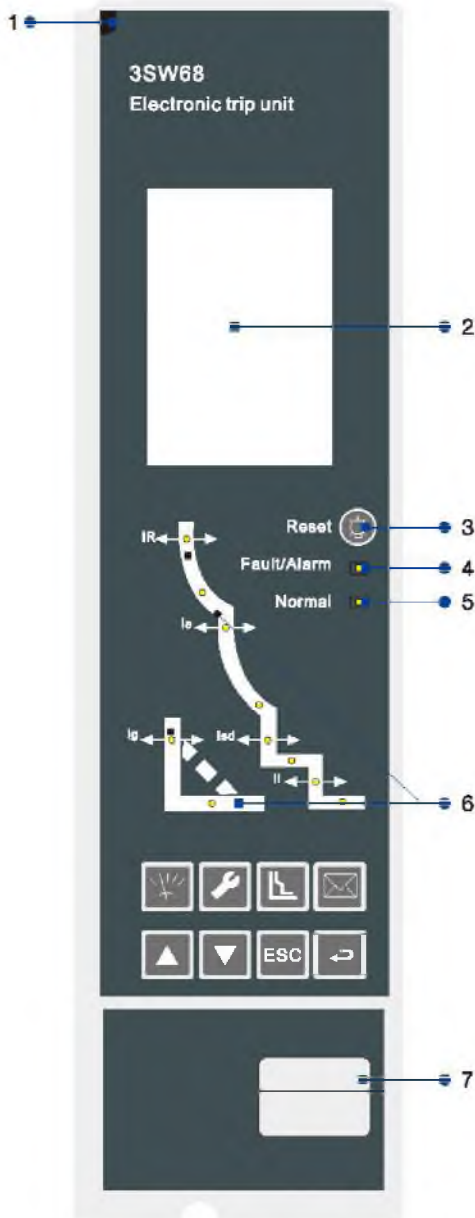
Air Circuit Breakers

Series 3SW68 (Electronic trip unit 3SW68-AM, 3SW68-AH)

Suitable for size A (3SW68-1600)

3SW68-AM and 3SW68-AH electronic trip units are equipped with a LCD display, and all the operations can be conducted through function buttons.

- 3SW68-AM3: provides selective protections of long-time delayed protection, short-time delayed protection and instantaneous protection.
- 3SW68-AM4: provides additional selective earth fault protection and all protection functions of type 3SW68-AM3.
- 3SW68-AH: provides selective protections of long-time delayed protection, short-time delayed protection, instantaneous protection and earth fault protection, as well as the communication function to take remote measurement, control, setting and communication.



1. RESET button
It pops up when fault tripping or test tripping. The circuit breaker can be switched on only when the button is pressed down, together with the fault indicator.
2. LCD display
3. Fault and alarm RESET key
4. FAULT/ALARM LED Indicator
The Indicator is out when normal working; it flashes quickly when maintenance; it turns on in red when alarm.
5. NORMAL LED indicator
It always flashes in green when the power is on and under normal working.
6. LED curve
Red LED indicators are equipped in the curve.
The corresponding indicator flashes to indicate the fault reason when fault tripping.
The corresponding indicator remains lit to indicate the current setting when protection settings.
7. Test port
A 16-pin test port is available on the bottom of front panel for plug-in portable power supply or inspection unit.

Keyboard

8. Measurement: For measuring (In password input interface, the LEFT key)
Press to enter the measurement default menu to measure current "I", voltage "U", frequency "F", power "P", energy "E", and harmonic "H".
9. Settings: For system parameter settings (In password input interface, the RIGHT key)
Press to enter the setting default menu to set "Clock settings", "Meter settings", "Test & Lock", "Communication settings", "I/O settings".
10. Protections: For protection parameter settings Press to set the parameters of "Current protection", "Load monitor", "Voltage protection", and "Other protection".
11. Information: For history record and maintenance Press to check "Current alarm", "Operation times", "Contact wear", "Product information", "Tripping record", "Alarm record", "Transposition record".
12. UP - To move up or change the parameters upwards
13. DOWN - To move down or change the parameters downwards.
14. Esc - To exit and return to previous menu or cancel the current setting selection.
15. ENTER - To enter the next menu, select the current parameter, or save the updates.

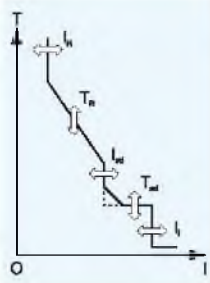
Air Circuit Breakers

Series 3SW68 (Electronic trip unit 3SW68-AM, 3SW68-AH)

Characteristics

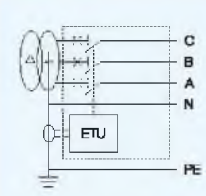
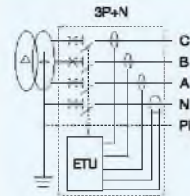
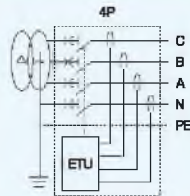
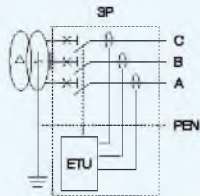
● Protection

Type 3SW68-AM3, 3SW68-AM4, 3SW68-AH, suitable for size A 3SW68-1800



Long-time delayed protection		
Current setting IR (A)	$IR = I_n \times \dots$	(0.4 ~ 1.0) + OFF, setting step: 1 A or 2 A
Action characteristics		< 1.05 IR, > 2 h no action; $\geq 1.2 IR$, < 1 h action
Type of curves	SI: Standard inverse time VI: Fast inverse time EI(G): Express inverse time (general power distribution) EI(M): Express inverse time (motor protection) HV: High-voltage fuse compatibility I2t: General inverse time protection	selectable in menu Default setting is I2t, the same as 3SW68-AL.
Time delay TR (s)	Accuracy within 10% (Original difference ± 40 ms)	Time setting tR (s) C1 ~ C16, selectable in menu
Thermal memory		
(10, 20, 30, 45) min, (1, 2, 3) h reset or remove after trip unit out of electricity		
Short-time delayed protection		
Current setting I _{sd} (A)	$I_{sd} = I_n \times \dots$	(1.5 ~ 15) + OFF, setting step: 1 A or 2 A
Action characteristics		< 0.9 I _{sd} no action; $\geq 1.1 I_{sd}$ action
I2t: (OFF) (definite time)	Accuracy within 10% (Original difference ± 40 ms)	Time setting t _{sd} (s) (0.1 ~ 0.4) s, setting step: 0.1 s
Time delay T _{sd} (s)		
I2t: (ON) (inverse time)	Accuracy within 10%	
Time delay T (s)	(Original difference ± 40 ms)	The same as long-time delayed protection, the delayed action time is 1/10 of that long-time delayed.
Thermal memory		
5 min reset or remove after trip unit out of electricity		
Instantaneous protection		
Current setting I _i (A)	$I_i = I_n \times \dots$	(1.0 ~ 20) + OFF, setting step: 1 A or 2 A
Action characteristics		< 0.85 I _i no action; $\geq 1.15 I_i$ action
Action time delayed		< 30 ms
Earth fault protection		
Current setting I _g (A)	$I_n \leq 1250$ A, $I_g = I_n \times \dots$ $I_n > 1250$ A, $I_g = \dots$	(0.4 ~ 0.8) + OFF, setting step: 1 A (500 A ~ 1200 A) + OFF, setting step: 2 A
Action characteristics		$\leq 0.8 I_g$ no action; $> 1.0 I_g$ action
Time delay T _g (s)	Accuracy within 10% (Original difference ± 40 ms)	Time setting t _g (s) (0.1 ~ 1.0) s, setting step: 0.1 s
(definite time protection)		
Differential protection (type T)		

Source ground return (type W)



● Neutral pole protection

○ Applications:

When the neutral line is thin, half value will be applied.

When the neutral line is the same as others, full value will be applied.

When harmonic wave is heavy, double or 1.6 times value will be applied.

○ Setting range:

50 %, 100 %, 160 %, 200 %, OFF

Air Circuit Breakers

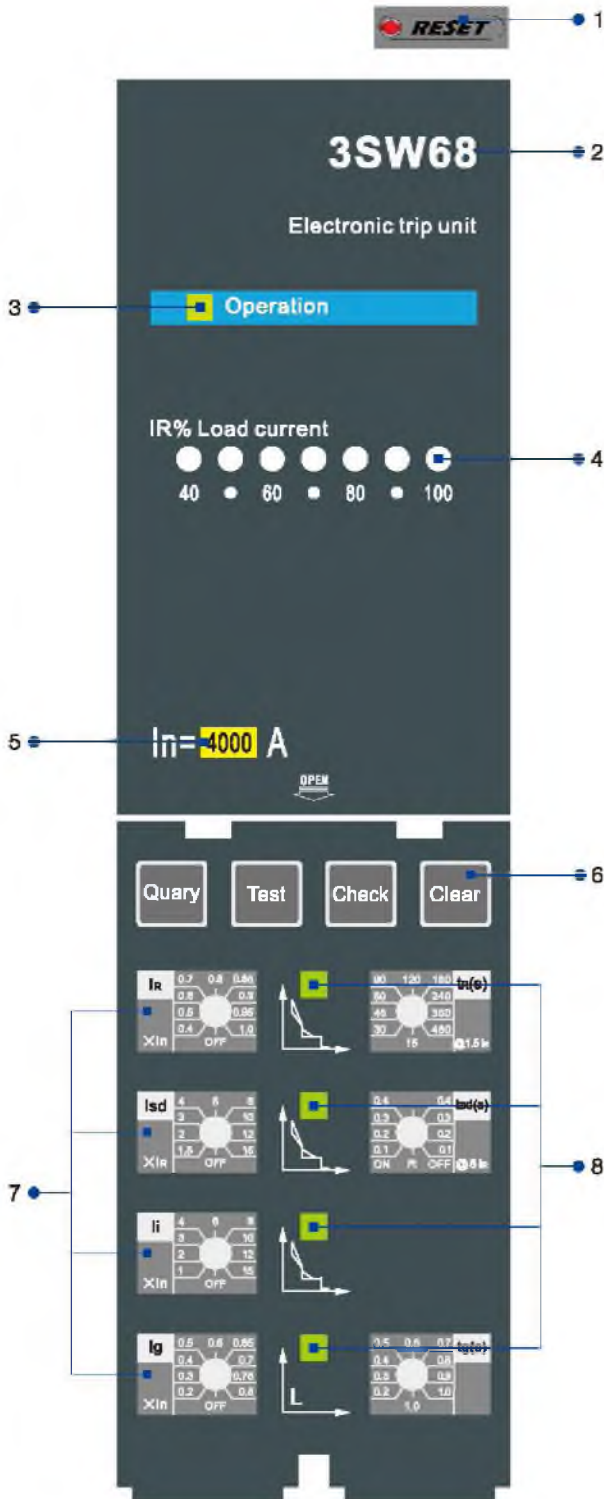
Series 3SW68 (Electronic trip unit 3SW68-BL)

Suitable for size B/C/D (3SW68-2500/4000/6300)

3SW68-BL electronic trip unit equips with LED displays, the protection value and delay time is set by knobs.

- 3SW68-BL3: provides selective protections of long-time delayed protection, short-time delayed protection and instantaneous protection.
- 3SW68-BL4: provides additional selective earth fault protection and all protection functions of type 3SW68-BL3.

1



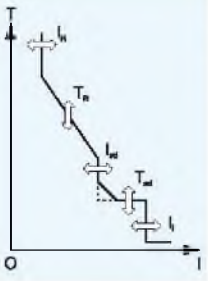
- Mechanical RESET button**
It pops up after tripping. Manual reset is required.
- Indication of electronic trip unit**
- Operation indicator**
It remains flashing when the electronic trip unit is under normal working.
- IR%**
40%~100% indicator:
To display the real time current as the percentage of IR.
- Indication of rated current (In)**
- Simulation test area**
Query: check the last fault record (Record is shown as: one of the four fault indicators, IR, Isd, Ii, and Ig, becomes lighting. Press Clear button to clear indication).
Test: When press Test Key under normal working status of controller, the breaker, commanded by the controller, trips instantaneously. Meanwhile, Ii fault indicator lights up, but no fault recorded.
Check: self-diagnosis of inner working, each light will automatically scan, and will show a menu in one minute.
Clear: clear the fault indicator
- Protect characteristic parameter setting area**
Default settings are as follows:
IR = 1.0 In, tR = 15 s
Isd = 3 IR, tsd = 0.4s
(ON: inverse time status, OFF: definite time status)
Ii = 10In
Ig = 0.8 In, tg = 0.4s
- Fault Indicator: Lighting when fault occurs.**

Air Circuit Breakers Series 3SW68 (Electronic trip unit 3SW68-BL)

Characteristics

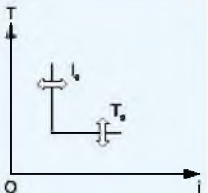
Protection

Type 3SW68-BL3, suitable for size B/C/D 3SW68-2500/4000/6300



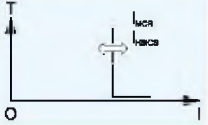
Long-time delayed protection																			
Current setting IR (A)		IR = ln x ...	0.4	0.5	0.6	0.7	0.8	0.85	0.9	0.95	1	OFF							
Action characteristics			≤1.05 IR, >2 h no action; >1.3 IR (generator >1.2 IR), <1 h action																
Time delay TR (s)	Accuracy ±10% (Original difference ±40 ms)	Time setting tR (s)	15	30	45	60	90	120	180	240	360	480							
		I = 1.5 x IR	15	30	45	60	90	120	180	240	360	480							
		I = 2 x IR	8.4	16.9	25.3	33.8	50.6	67.5	101.2	135	203	270							
		I = 6 x IR	0.94	1.88	3.81	3.75	5.62	7.5	11.3	15	22.5	30							
		I = 7.2 x IR	0.86	1.3	1.95	2.6	3.9	5.2	7.74	10	15.62	21							
		I = 10 x IR	0.34	0.68	1.01	1.35	2.03	2.7	4.05	5.4	8.1	10.8							
Thermal memory			10 min cold reset or remove after trip unit out of electricity																
Short-time delayed protection																			
Current setting lsd (A)		lsd = IR x ...	1.2	2	3	4	6	8	10	12	15	OFF							
Action characteristics			≤ 0.9 lsd no action; > 1.1 lsd action																
I ² t (OFF) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Time setting tsd (s)	0.1			0.2		0.3			0.4								
Time delay Tsd (s)		Return time (s)	0.06			0.14		0.23			0.35								
I ² t (ON) > 8 IR (definite time)	Accuracy within 10% (Original difference ±40 ms)	Time setting tsd (s)	0.1			0.2		0.3			0.4								
Time delay Tsd (s)		Return time (s)	0.06			0.14		0.23			0.35								
I ² t (ON) ≤ 8 IR (inverse time)	Accuracy within 10% (Original difference ±40 ms)	8 IR tsd (s)	0.1			0.2		0.3			0.4								
Time delay T (s)		Time delay T = [(8 x IR) / I] x [(8 x IR) / I] / tsd																	
Instantaneous protection																			
Current setting Ii (A)	Size B/C	Ii = ln x ...	1	2	4	6	8	10	12	15	20	OFF							
	Size D	Ii = ln x ...	1	2	3	4	6	8	10	12	15	OFF							
Action characteristics			≤ 0.85 Ii no action; > 1.15 Ii action																
Action time delayed			< 30 ms																

Type 3SW68-BL4, suitable for size B/C/D 3SW68-2500/4000/6300



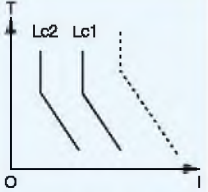
Long-time delayed protection: the same as type 3SW68-BL3																			
Short-time delayed protection: the same as type 3SW68-BL3																			
Instantaneous protection: the same as type 3SW68-BL3																			
Earth fault protection																			
Current setting Ig (A)		In ≤ 1250 A, Ig = ln x ...	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75	0.8	OFF							
		In > 1250 A, Ig = ...	500	600	700	800	850	900	1000	1100	1200	OFF							
Action characteristics			≤ 0.9 Ig no action; > 1.1 Ig action																
Time delay Tg (s) (definite time protection)	Accuracy within 10% (Original difference ±40 ms)	Time setting tg (s)	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1							

MCR & HSISC (Trip beyond limit) protection (selection function)



MCR & HSISC																				
Current setting IMCR (A)		IMCR = ln x ...	10 (Other settings depend on requirement)										OFF							
Current setting IHSISC (A)		IHSISC = ln x ...	15 (Other settings depend on requirement)										OFF							
Action characteristics			MCR: ≤ 0.85 IMCR, no action; > 1.15 IMCR, action;																	
			HSISC: ≤ 0.85 IHSISC, no action; > 1.15 IHSISC, action;																	
Action time delayed			< 20 ms																	

Load monitoring (selection function)



Load monitoring (discharge current Lc1, discharge current Lc2)																			
Current setting Ic1 (A)	Setting is unavailable, Ic1 depends on IR = ln x ...		0.4	0.5	0.6	0.7	0.8	0.85	0.9	0.95	1	OFF							
Current setting Ic2 (A)	Setting is unavailable, Ic2 depends on IR = ln x ...		0.4	0.5	0.6	0.7	0.8	0.85	0.9	0.95	1	OFF							
Action characteristics Lc1			≤ 1.05 Ic1, > 2 h no pick-up																
			> 1.3 Ic1(generator > 1.2 Ic1), < 1 h time delayed pick-up																
Action characteristics Lc2			≤ 1.05 Ic2, > 2 h no pick-up																
			> 1.3 Ic2(generator > 1.2 Ic2), < 1 h time delayed pick-up																
Action time delayed			< 20 ms																
Time delay Tc1 (s)	Accuracy within 10% (Original difference ±40 ms)	Setting is unavailable, depends on tR (s)	15	30	45	60	90	120	180	240	360	480							
Tc1 = 50% TR																			
Time delay Tc2 (s)	Accuracy within 10% (Original difference ±40 ms)	Setting is unavailable, depends on tR (s)	15	30	45	60	90	120	180	240	360	480							
Tc2 = 25% TR																			

Default settings

IR = 1.0 In, tR = 15 s; lsd = 3.0 IR, tsd = 0.4 s; (I²t = OFF) Ii = 10 In; Ig = OFF, tg = 0.8 s.

Air Circuit Breakers

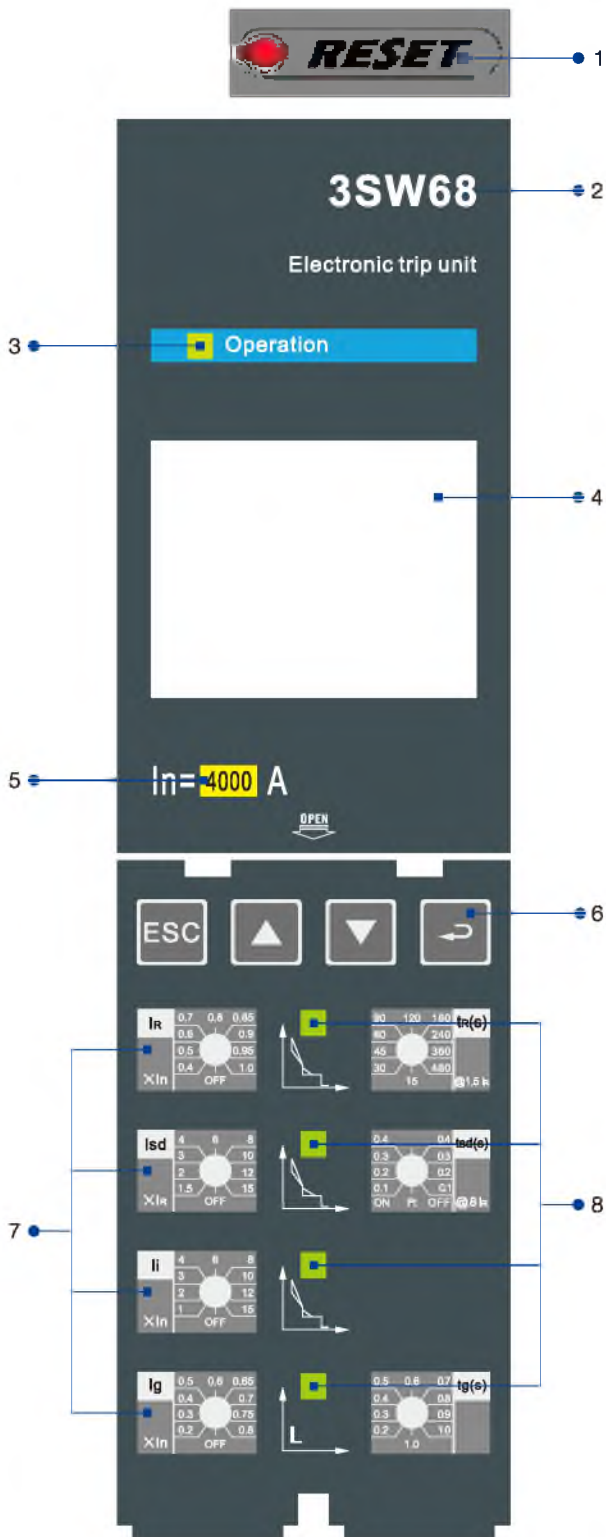
Series 3SW68 (Electronic trip unit 3SW68-BM)

Suitable for size B/C/D (3SW68-2500/4000/6300)

3SW68-BM electronic trip unit equips with a LCD displays, the protection value and delay time are set by knobs, some functions can be set by function keys.

1

- 3SW68-BM3: provides selective protections of long-time delayed protection, short-time delayed protection and instantaneous protection.
- 3SW68-BM4: provides additional selective earth fault protection and all protection functions of type 3SW68-BM3.



Function

Except the all functions of 3SW68-BL, 3SW68-BM is with additional or different functions as follows:

- Protection
Protection value and delay time can be set by the knobs and be checked on the LCD display, some functions can be set by function keys.
- Fault trip display
When circuit breaker trips due to any fault, the fault type is indicated by LED light accordingly, and the data is shown on the LCD display.
- Measure
Current measurement.
- Without self- diagnosis
- Indicator of contact loss
Show the percentage of the contact loss (based on breaking current equivalent and total life)
- Operation cycles when electronic trip unit on charge
Record the total operation cycles
- Record of historical fault
Check the latest 10 faults (display fault type and data)
- Historical maximum current
Record the maximum current since running.
- Zone selective interlocking (ZSI) (selection function)
ZSI connected with several breakers from upstream and downstream, to provides full selective protection of earth fault protection and short circuit protection, with instantaneous trip.
- Overload pre-alarm(selection function)
When load current reach the overload setting values, the electronic trip unit give a DO alarm signal and indicate.

Air Circuit Breakers

Series 3SW68 (Electronic trip unit 3SW68-BM)

Characteristics

- Protection

Type 3SW68-BM3, suitable for size B/C/D 3SW68-2500/4000/6300

Long-time delayed protection: the same as type 3SW68-BL3

Short-time delayed protection: the same as type 3SW68-BL3

Instantaneous protection: the same as type 3SW68-BL3

- Protection

Type 3SW68-BM4, suitable for size B/C/D 3SW68-2500/4000/6300

Long-time delayed protection: the same as type 3SW68-BM3

Short-time delayed protection: the same as type 3SW68-BM3

Instantaneous protection: the same as type 3SW68-BM3

Earth fault protection: the same as type 3SW68-BL4

- Protection

Type 3SW68-BM3, 3SW68-BM4, suitable for size B/C/D 3SW68-2500/4000/6300

Current (Continuous current measurement)

Measurement parameters:

I_A, I_B, I_C, I_G, I_N

Measurement range:

I_A, I_B, I_C, I_N based on 25 In

Measurement accuracy:

$\leq 2In: \pm 1.5\%; > 2 In: \pm 5\%$

- MCR & HSISC (Trip beyond limit) protection (selection function) - the same as type 3SW68-BL.

- Protection

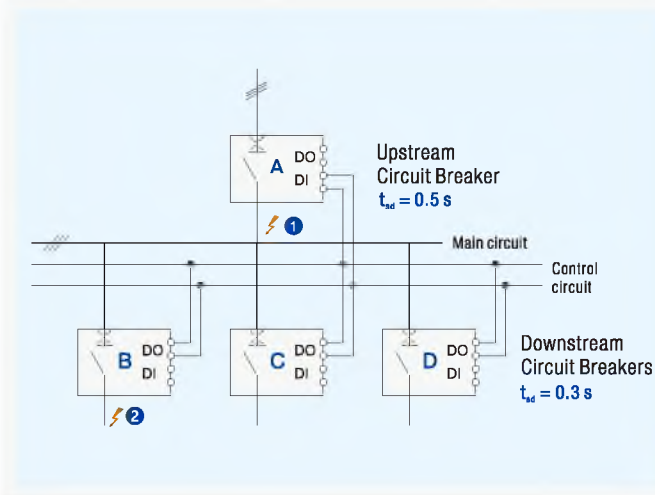
Type 3SW68-BL3, 3SW68-BL4, suitable for size B/C/D 3SW68-2500/4000/6300

Zone selective interlocking (ZSI) (selection function)

Application:

Used to reduce the electrodynamic forces exerted on installation by shortening the time required to clear faults, while maintaining time discrimination between the various devices.

Including short-circuit interlocking and earth fault interlocking.



Settings requirements:

At least 1 DI of upstream circuit breaker is set to detect and receive signal from zone interlocking circuit breakers;

At least 1 DO of downstream circuit breaker is set to send signal upstream.

Operating mode

The electronic trip unit detecting a fault current sends a signal upstream and checks the signal arriving from downstream. If there is a signal from downstream, the circuit breaker remains closed for the full duration of its tripping-delay time. If there is no signal from downstream, the circuit breaker opens immediately, regardless of its tripping-delay setting.

Example explanation

Fault 1:

Only circuit breaker A detect the fault. Because it does not receive signal from downstream, it opens immediately, regardless of its tripping-delay t_{sd} set to 0.5 s.

Fault 2:

Both circuit breaks A and B detect the fault. Circuit breaker B does not receive a signal from downstream and opens immediately, in spite of its tripping-delay t_{sd} set to 0.3 s, meanwhile sends a signal to upstream circuit breaker A.

Circuit breaker A receives the signal and remains closed for the full duration of its tripping-delay t_{sd} set to 0.5 s. If the fault current disappears within the duration 0.5 s, the circuit breaker A does not trip. If the fault current does not disappear within 0.5 s, the circuit breaker A trips also, to cut off the fault circuit.

- Load monitoring (selection function) - the same as type 3SW68-BL.

- Default settings

$IR = 1.0 I_n, tR = 15 \text{ s};$

$I_{sd} = 3.0 IR, t_{sd} = 0.4 \text{ s}; (I^2t = \text{OFF})$

$li = 10 I_n;$

$I_g = \text{OFF}, t_g = 0.8 \text{ s}.$

Air Circuit Breakers

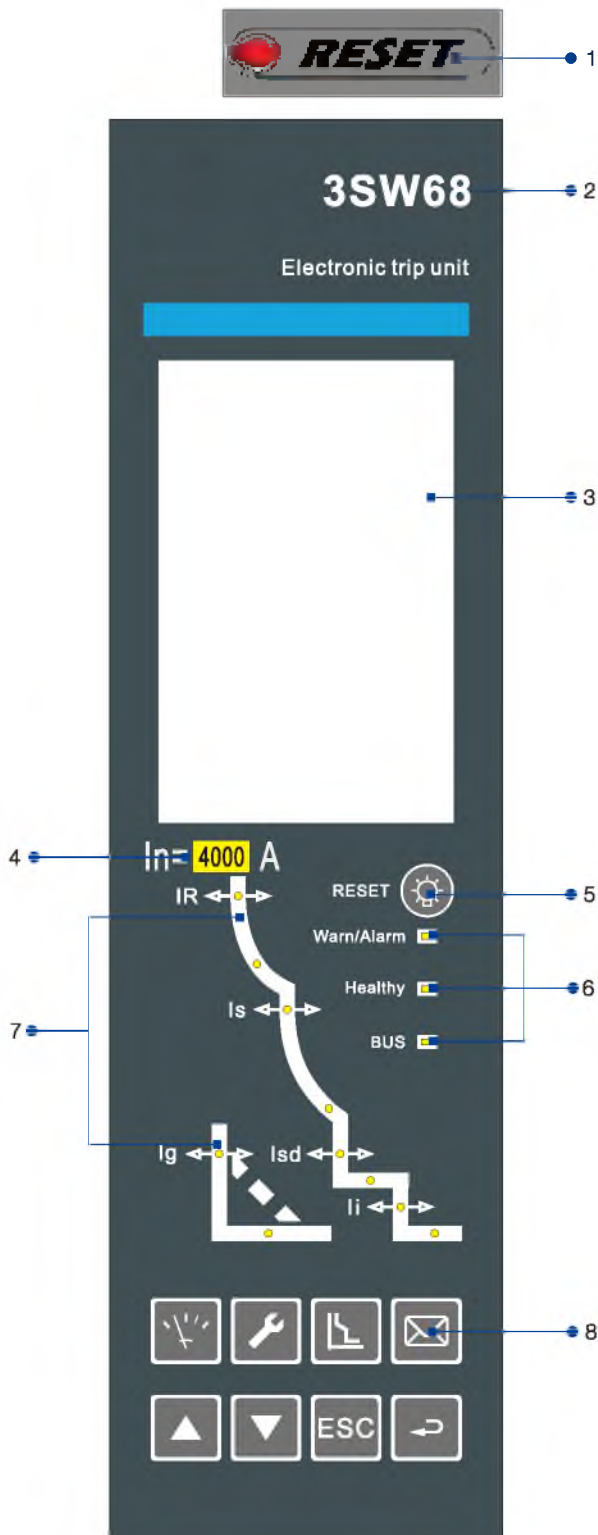
Series 3SW68 (Electronic trip unit 3SW68-BH)

Suitable for size B/C/D (3SW68-2500/4000/6300)

3SW68-BH electronic trip unit equips with a LCD displays, the protection value and delay time are set by function keys.

Provides full selective protections of long-time delayed protection, short-time delayed protection, instantaneous protection and earth fault protection, as well as the communication function to take remote measurement, control, setting and communication.

1



IFunction

Except the allfunctions of 3SW68-BM, 3SW68-BM is with additional or different functions as follows:

- Protection
Protection value and delay time are set and checked by function keys.
- Overload protection
Based on true RMS and long-time delay multi-curve protection, can be switched OFF.
Thermal memory: The heat accumulation before or after trip.
- Short-circuit protection
Short-time delay (RMS) and instantaneous protection, can be switched OFF.
Short-time delay I^2t can be switched ON or OFF by function keys.
- Earth fault protection
Type T and type W both are available, type T is default setting, can be switched OFF.
Time-delay characteristic I^2t (definite time protection), can be selected by function keys.
- Neutral protection
Provide half, whole, 1.6 times and 2 times protection, can be switched ON or OFF.
- Current imbalance, current required, phase-loss protection
- Under frequency, over frequency, reverse frequency protection (only 3SW68-HG)
- Measurement
Provide measurement of current, voltage, power, frequency, electricity, heat capacity, phase sequence, value required. And type 3W68-BHQ and 3SW68-BHG have additional functions of harmonic analyze and wave display.
- Alarm record
Record the latest 10 alarms.
- Clock
Setting date and time.
- Communication
Provide outputs for communication functions.
- Residual current protection (selection function)
Sampling by zero sequence current to get high accuracy and sensitivity, applied for protection of lower current.
- Load monitor (selection function)
Can be used for pre-alarm, as well as the branch load control, act according to current and power.
- Earth alarm (selection function)
Send alarm signal, can be switched OFF.
- Undervoltage, over voltage, voltage imbalance, phase sequence protection (selection function)
- Remote reset (selection function)
Remote reset operational button, remove fault indication.
- Communicating (selection function)
Software support for remote measurement, control, setting and communication.
Modbus-RTU, Prodigbus-DP and Devicenet are available.

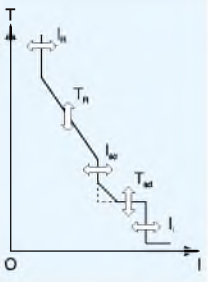
Air Circuit Breakers

Series 3SW68 (Electronic trip unit 3SW68-BH)

Characteristics

● Protection

Type 3SW68-BH, suitable for size B/C/D 3SW68-2500/4000/6300

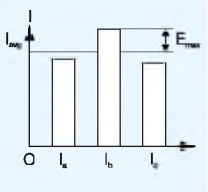


Long-time delayed protection			
Current setting IR (A)		$IR = I_n \times \dots$	(0.4 ~ 1.0) + OFF, setting step: 1 A or 2 A
Action characteristics			<1.05 IR, >2 h no action; ≥1.2 IR, <1 h action selectable in menu
Type of curves		SI: Standard inverse time VI: Fast inverse time EI(G): Express inverse time (general power distribution) EI(M): Express inverse time (motor protection) HV: High-voltage fuse compatibility I ² t: General inverse time protection	Default setting is I ² t, the same as 3SW68-BL.
Time delay TR (s)	Accuracy within 10% (Original difference ±40 ms)	Time setting tR (s)	C1 ~ C16, selectable in menu
Thermal memory			(10, 20, 30, 45) min, (1, 2, 3) h reset or remove after trip unit out of electricity
Short-time delayed protection			
Current setting lsd (A)		$lsd = IR \times \dots$	(1.5 ~ 15) + OFF, setting step: 1 A or 2 A
Action characteristics			< 0.9 lsd no action; ≥ 1.1 lsd action
I2t: (OFF) (definite time)	Accuracy within 10% (Original difference ±40 ms)	Time setting tsd (s)	(0.1 ~ 0.4) s, setting step: 0.1 s
Time delay Tsd (s)			
I2t: (ON) (inverse time)	Accuracy within 10%		The same as long-time delayed protection, the delayed action time is 1/10 of that long-time delayed.
Time delay T (s)	(Original difference ±40 ms)		
Thermal memory			5 min reset or remove after trip unit out of electricity
Instantaneous protection			
Current setting li (A)		Size B/C, $li = I_n \times \dots$ Size D, $li = I_n \times \dots$	(1.0 ~ 20) + OFF, setting step: 1 A or 2 A (1.0 ~ 15) + OFF, setting step: 2 A
Action characteristics			< 0.85 li no action; ≥ 1.15 li action
Action time delayed			< 30 ms
Earth fault protection			
Current setting Ig (A)		$I_g \leq 1250 \text{ A}, I_g = I_n \times \dots$ $I_g > 1250 \text{ A}, I_g = \dots$	(0.4 ~ 0.8) + OFF, setting step: 1 A (500 A ~ 1200 A) + OFF, setting step: 2 A
Action characteristics			≤ 0.8 Ig no action; > 1.0 Ig action
Time delay Tg (s)	Accuracy within 10% (Original difference ±40 ms)	Time setting tg (s)	(0.1 ~ 1.0) s, setting step: 0.1 s
(definite time)			

● Neutral pole protection

Neutral pole protection			
Applications:			Setting range:
When the neutral line is thin, half value will be applied.			50 %, 100 %, 160 %, 200 %, OFF
When the neutral line is the same as others, full value will be applied.			
When harmonic wave is heavy, double or 1.6 times value will be applied.			

● Current imbalance protection



Current imbalance protection			
Current imbalance rate l _{nbal} setting for protection start-up			(5 ~ 60) %, setting step: 1 %
Action characteristics			< 0.9 I _{nbal} no action; ≥ 1.1 I _{nbal} action
Time delay (s)	Accuracy within 10% (Original difference ±40 ms)	Delayed action time setting (s)	(0.1 ~ 40) s, setting step: 0.1 s
(definite time)			Definite time is the same as delay time.
Setting for protection return			5 % ~ start-up setting. Setting step: 1 % (available when ALARM mode only)
Return characteristics			>1.1 I _{nbal} no return; ≤ 0.9 I _{nbal} return
Time delay return (s)	Accuracy within 10% (Original difference ±40 ms)	Delayed return time setting (s)	(10 ~ 200) s, setting step: 1 s (available when ALARM mode only); Definite time is the same as delay time.
(definite time)			
Mode			Alarm / Trip / OFF

● Required current protection

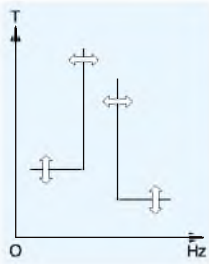
Required current protection			
Setting for protection start-up			(0.2 ~ 1) I _n , setting step: 1 A or 2 A
Action characteristics			< 0.9 (I/setting) no action; ≥ 1.1 (I/setting) action
Time delay (s)	Accuracy within 10% (Original difference ±40 ms)	Delayed action time setting (s)	(15 ~ 1500) s, setting step: 1 s
(definite time)			Definite time is the same as delay time.
Setting for protection return			0.2 I _n ~ start-up setting. Setting step: 1 A or 2 A (available when ALARM mode only)
Return characteristics			>1.1 (I/setting) no return; ≤ 0.9 (I/setting) return
Time delay return (s)	Accuracy within 10% (Original difference ±40 ms)	Delayed return time setting (s)	(15 ~ 3000) s, setting step: 1 s (available when ALARM mode only); Definite time is the same as delay time.
(definite time)			
Mode			Alarm / Trip / OFF

Air Circuit Breakers

Series 3SW68 (Electronic trip unit 3SW68-BH)

Characteristics

Under frequency protection



Under frequency protection

Setting for protection start-up

Action characteristics

Time delay (s) Accuracy within 10%
(definite time) (Original difference ± 40 ms)

Setting for protection return

Return characteristics

Time delay return (s) Accuracy within 10%
(definite time) (Original difference ± 40 ms)

Mode

Delayed action time setting (s)

Delayed return time setting (s)

45 Hz ~ setting, setting step: 0.5 Hz

> setting +1 Hz no action; \leq setting - 1 Hz action

(0.2 ~ 5.0) s, setting step: 1 s

Definite time is the same as delay time.

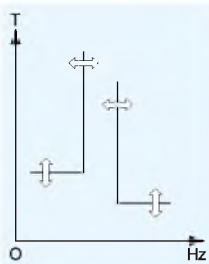
Start-up setting ~ 65 Hz. Setting step: 0.5 Hz
(available when ALARM mode only)

< setting -1 Hz no return; \geq setting + 1 Hz return

(0.2 ~ 36) s, setting step: 0.1 s (available when ALARM mode only); Definite time is the same as delay time.

Alarm / Trip / OFF

Over frequency protection



Over frequency protection

Setting for protection start-up

Action characteristics

Time delay (s) Accuracy within 10%
(definite time) (Original difference ± 40 ms)

Setting for protection return

Return characteristics

Time delay return (s) Accuracy within 10%
(definite time) (Original difference ± 40 ms)

Mode

Delayed action time setting (s)

Delayed return time setting (s)

Return setting ~ 65 Hz, setting step: 0.5 Hz

< setting - 1 Hz no action; \geq setting +1 Hz action

(0.2 ~ 5.0) s, setting step: 1 s

Definite time is the same as delay time.

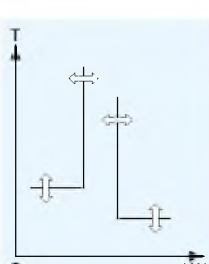
45 Hz ~ start-up setting. Setting step: 0.5 Hz
(available when ALARM mode only)

> setting + 1 Hz no return; \leq setting - 1 Hz return

(0.2 ~ 36) s, setting step: 0.1 s (available when ALARM mode only); Definite time is the same as delay time.

Alarm / Trip / OFF

Reverse power protection



Reverse power protection

Setting for protection start-up

Action characteristics

Time delay (s) Accuracy within 10%
(definite time) (Original difference ± 40 ms)

Setting for protection return

Return characteristics

Time delay return (s) Accuracy within 10%
(definite time) (Original difference ± 40 ms)

Mode

Delayed action time setting (s)

Delayed return time setting (s)

5 ~ 50 kW, setting step: 1 kW

< 0.9 (reverse power/setting) no action;

≥ 1.1 (reverse power/setting) action

(0.2 ~ 20) s, setting step: 1 s

Definite time is the same as delay time.

5 kW ~ start-up setting. Setting step: 1 kW
(available when ALARM mode only)

> 1.1 (reverse power/setting) no return

≤ 0.9 (reverse power/setting) return

(1.0 ~ 360) s, setting step: 0.1 s (available when ALARM mode only); Definite time is the same as delay time.

Alarm / Trip / OFF

Air Circuit Breakers

Series 3SW68 (Electronic trip unit 3SW68-BH)

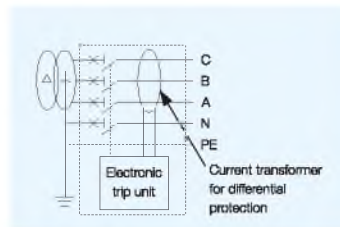
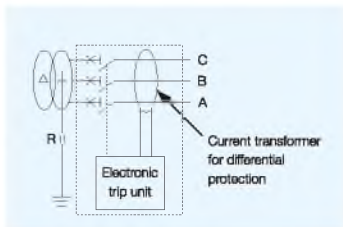
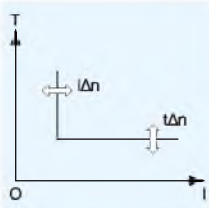
Characteristics

● Measurement

Current (Continuous current measurement, applied to power system with 50 Hz or 60 Hz)		
Content:	Range:	Accuracy:
I_A, I_B, I_C (three phase)	I_A, I_B, I_C, I_N : 25 I_n	$\leq 2 I_n$: $\pm 1.5\%$
I_N (neutral pole), I_e (earth current)		$> 2 I_n$: $\pm 5\%$
I_{unbal} (current imbalance rate)		
Current (Continuous current measurement, applied to power system with 50 Hz or 60 Hz)		
Content:	Range:	Accuracy:
Line voltage, phase voltage, average voltage, phase sequence, voltage imbalance rate	Line voltage: 0 ~ 1200 V phase voltage: 0 ~ 600 V display the phase sequence	$\pm 5\%$
Power		
Content:	Range:	Accuracy:
Active power, reactive power, apparent power (not applied to three phase three line)	Active power: - 32768 kW ~ + 32767 kW Reactive power: - 32768 kar ~ + 32767 kar Apparent power: 0 kVA ~ 65535 kVA	$\pm 2.5\%$
Power factor		
Content:	Range:	Accuracy:
System power factor, phase power factor (not applied to three phase three line)	- 1.00 ~ + 1.00	± 0.02
Frequency		
Content: Frequency	Range: 40 Hz ~ 65 Hz	Accuracy: ± 0.05 Hz
Energy		
Content:	Range:	Accuracy:
Input (output) active energy	Active: 0 ~ 4294967295 kWh	$\pm 2.5\%$
Input (output) reactive energy	Reactive: 0 ~ 4294967295 karh	
Total active (reactive, apparent) energy	Apparent: 0 ~ 4294967295 kVAh	
Required value		
Content:	Range:	Accuracy:
Required current I_A, I_B, I_C, I_N	The same as real-time measured value of current and power	The same as accuracy of current and power
Required power P, Q, S		
Harmonic wave (available for type 3SW68-BHQ and 3SW68-BHG)		
Fundamental wave of current, voltage; Total harmonic distortion of current, voltage THD and thd; Latest 31 odd harmonics amplitude Pope;		
Waveform (available for type 3SW68-BHQ and 3SW68-BHG)		
Capture waveform display: 4 current I_A, I_B, I_C, I_N ; 3 phase voltage U_{AN}, U_{BN}, U_{CN}		

● Residual current protection (selection function)

Residual current protection		0.5 ~ 30.0 A, setting step: 0.1 A												
Action current setting $I_{\Delta n}$		$< 0.8 (I/\Delta_n)$ no action; $\geq 1.0 (I/\Delta_n)$ action												
Action characteristics														
Time delay $t_{\Delta n}$ (s)	Accuracy within 10% (Original difference ± 40 ms)	Time setting (s)	0.06	0.08	0.17	0.25	0.33	0.42	0.5	0.58	0.67	0.75	0.8	instantaneous
		$1 \Delta_n$	0.36	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	0.04
		$2 \Delta_n$	0.18	0.25	0.5	0.75	1	1.25	1.5	1.75	2	2.25	2.5	0.04
		$5 \Delta_n$	0.07	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	0.04
	$10 \Delta_n$													
Mode		Trip / OFF												



- MCR & HSISC (Trip beyond limit) protection (selection function) - the same as type 3SW68-BL.
- Zone selective interlocking (ZSI) (selection function) - the same as type 3SW68-BL.

Air Circuit Breakers

Series 3SW68 (Electronic trip unit 3SW68-BH)

Characteristics

● Load monitoring (selection function)

Load monitoring
Action according to
current or power

Mode 1:

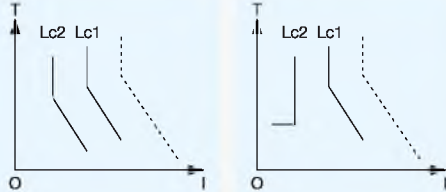
Control two loads independently, when actual value over setting value, load monitor DO action with time delay (DO function should be set accordingly), to break the branch load, ensure the main power supply.

Mode 2:

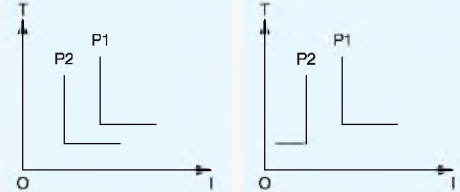
Generally used for controlling one load, when value over setting start-up value, load monitor 1 DO action with time delay, open branch load; if actual values after breaking are lower than return value, after setting time delay, load monitor 1 DO returns, load monitor 2 DO action. to close the circuit and recovery the supply power.

Note: Load1 start-up value \geq Load 2 return value

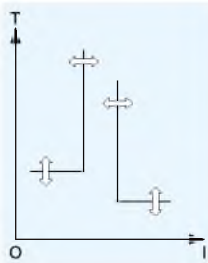
According to current:



According to power:



● Earth alarm (selection function)



Earth alarm

Current setting for alarm

$I_n \leq 1250$ A

$(0.4 - 0.8) \times I_n + \text{OFF}$, setting step: 1 A

$I_n > 1250$ A

$(500 \text{ A} - 1200 \text{ A}) + \text{OFF}$, setting step: 2 A

Action characteristics

Time delay (s) Accuracy within 10%
(definite time) (Original difference ± 40 ms)

Delay time setting (s)

$(0.1 - 1.0)$ s, setting step: 0.1 s

Current setting for alarm return (available when ALARM mode only)

$I_n \leq 1250$ A

$(0.4 - 0.8) \times I_n$, setting step: 0.1 s

$I_n > 1250$ A

500 A - 1200 A, setting step: 2 A

Return characteristics

Time delay return (s) Accuracy within 10%
(definite time) (Original difference ± 40 ms)

Delayed return time setting (s)

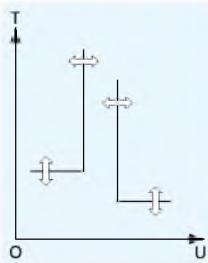
> 1.0 (l/setting value) no return; ≤ 0.9 (l/setting value) return

$(0.1 - 1.0)$ s, setting step: 0.1 s (available when ALARM mode only)

Mode

Alarm / OFF

● Under voltage protection (selection function)



Under voltage protection

Setting for protection start-up

100 V ~ return value, setting step: 1 V

Action characteristics

Time delay (s) Accuracy within 10%
(definite time) (Original difference ± 40 ms)

Delay time setting (s)

> 1.1 (U_{max} /setting of action value) no action

≤ 0.9 (U_{max} /setting of action value) action

Setting for protection return

$(0.2 - 60)$ s, setting step: 0.1 s

Definite time is the same as delay time.

Return characteristics

Time delay return (s) Accuracy within 10%
(definite time) (Original difference ± 40 ms)

Delayed return time setting (s)

start-up value ~ 1200 V, setting step: 1 V (available when ALARM mode only, setting value for return \geq start-up value)

< 0.9 (U_{max} /setting of return value) no return

≥ 1.1 (U_{max} /setting of return value) return

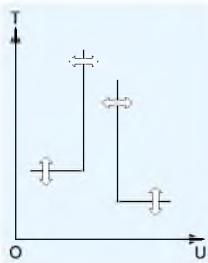
Mode

$(0.2 - 60)$ s, setting step: 0.1 s (available when ALARM mode only)

Definite time is the same as delay time.

Alarm / Trip / OFF

● Over voltage protection (selection function)



Over voltage protection (setting value for under voltage protection must less than that for over voltage protection)

Setting for protection start-up

Return value ~ 1200 V, setting step: 1 V

Action characteristics

Time delay (s) Accuracy within 10%
(definite time) (Original difference ± 40 ms)

Delay time setting (s)

< 0.9 (U_{min} /setting of action value) no action

≥ 1.1 (U_{min} /setting of action value) action

Setting for protection return

$(0.2 - 60)$ s, setting step: 0.1 s

Definite time is the same as delay time.

Return characteristics

Time delay return (s) Accuracy within 10%
(definite time) (Original difference ± 40 ms)

Delayed return time setting (s)

100 V ~ start-up value, setting step: 1 V (available when ALARM mode only, setting value for start-up \geq return value)

≥ 1.1 (U_{min} /setting of return value) no return

< 0.9 (U_{min} /setting of return value) return

Mode

$(0.2 - 60)$ s, setting step: 0.1 s (available when ALARM mode only)

Definite time is the same as delay time.

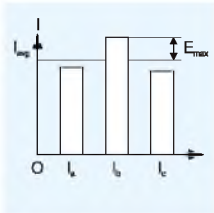
Alarm / Trip / OFF

Air Circuit Breakers

Series 3SW68 (Electronic trip unit 3SW68-BH)

Characteristics

- Voltage imbalance protection (selection function)



Voltage imbalance protection		
Voltage imbalance rate U_{unbal} setting for protection start-up		(2 ~ 30) %, setting step: 1 %
Action characteristics		
Time delay (s) (definite time)		Accuracy within 10% (Original difference ± 40 ms)
Setting for protection return		Delay time setting (s)
Return characteristics		
Time delay return (s) (definite time)		Accuracy within 10% (Original difference ± 40 ms)
Mode		Delayed return time setting (s)

< 0.9 (actual voltage imbalance rate/setting value) no action
 ≥ 1.1 (actual voltage imbalance rate/setting value) action
 (0.2 ~ 60) s, setting step: 0.1 s
 Definite time is the same as delay time.
 2 % ~ start-up value, setting step: 1 % (available when ALARM mode only, setting value for return \geq start-up value)
 > 1.1 (actual voltage imbalance rate/setting value) no return
 ≤ 0.9 (actual voltage imbalance rate/setting value) return
 (0.2 ~ 60) s, setting step: 0.1 s (available when ALARM mode only)
 Definite time is the same as delay time.
 Alarm / Trip / OFF

- Phase sequence protection (selection function)

Phase sequence protection	
Action phase sequence	Setting range: $\Delta\phi$: A, B, C / $\Delta\phi$: A, C, B
Mode	Alarm / Trip / OFF

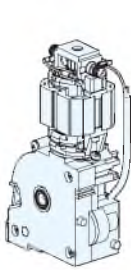
- Default settings

- IR = 1.0 I_n , tR = 15 s;
- Isd = 3.0 IR, tsd = 0.4 s; (definite time)
- li = 10 I_n ;
- Ig = OFF, tg = 0.8 s.

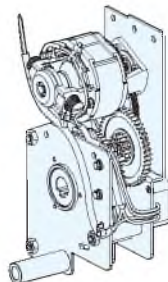
Air Circuit Breakers Series 3SW68

Accessories for circuit-breakers

1



for size A



for size B/C/D

- Motorized operating mechanism - EM (Standard configuration)
The motorized operating mechanism can automatically charge and recharge the spring mechanism when the circuit breaker is closed, to ensure the instantaneous reclosing of the breaker after possible opening.
As a standard configuration, it is already equipped in circuit breaker before delivery.

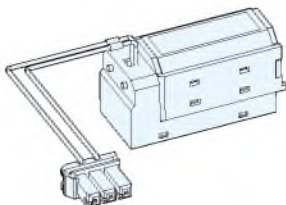
General characteristics

Size	Size A	Size B/C	Size D
Power supply Us	AC 230 V AC 400 V DC 110 V DC 220 V		
Operating limits	85 % ... 110 % Us		
Consumption	40 W	50 W	75 W
Charging time	< 5 s	< 7 s	< 7 s

- Closing coil - CM (Standard configuration)
The closing coil can remotely close the circuit breaker if the spring mechanism is charged.
As a standard configuration, it is already equipped in circuit breaker before delivery.

General characteristics

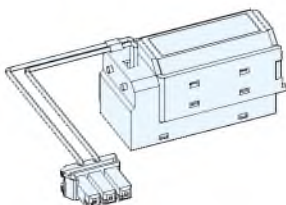
Power supply Us	AC 230 V AC 400 V DC 110 V DC 220 V
Operating limits	85 % ... 110 % Us
Consumption	500 W
Closing time	≤ 100 ms



- Shunt release - SH (Standard configuration)
The shunt release can remotely open the circuit breaker instantaneously when energized.
As a standard configuration, it is already equipped in circuit breaker before delivery.

General characteristics

Power supply Us	AC 230 V AC 400 V DC 110 V DC 220 V
Operating limits	70 % ... 110 % Us
Consumption	500 W
Opening time	≤ 100 ms



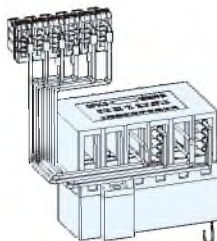
- Auxiliary contact - AU (Standard configuration)
The circuit breaker can be equipped with auxiliary contacts that signal the status of the circuit breaker.
The first block of contacts (4 convertible contact) is always configured inside of the circuit breaker before delivery.
Special contacts as 4 NO + 4 NC or 6 NO + 6 NC are also available as optional applications.

General characteristics

Size	Size A	Size B/C/D
Type	4NO-C 4NO+4C 6NO+6NC	4NO-C 4NO+4C 6NO+6NC
Power supply Us	AC 230 V AC 400 V	DC 110 V DC 220 V AC 230 V AC 400 V AC 415 V DC 250 V
Rated control capacity	300 VA	60 W 830 VA 75 W
Conventional thermal current	10	

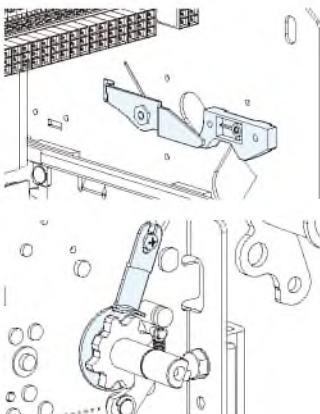
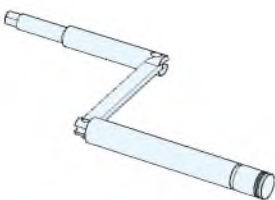
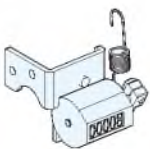
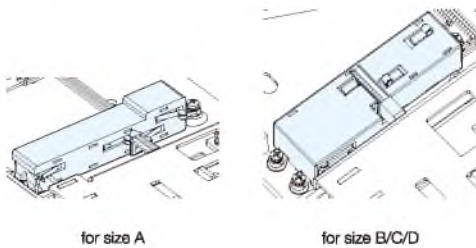
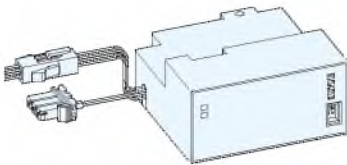
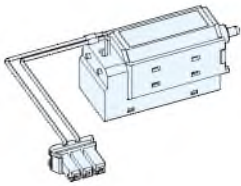


for size A



for size B/C/D

Accessories for circuit-breakers



- Under-voltage release - UV (Optional configuration)

The under-voltage release can open the circuit breaker when the supply voltage drops to a value between 35% and 70% of its rated voltage or there is power supply failure. If there is no power supply on the release, it is impossible to close the circuit breaker, either manually or electrically. It can be used for safe remote tripping, for blocking unexpected closing or to control the voltage in the primary and secondary circuits.

Circuit breaker closing is enable again only when the supply voltage returns to 85% of its rated value.

It is an optional accessory which is configured in circuit breaker before delivery unless there is request.

General characteristics

Power supply U_s	AC 230 V , AC 400 V
Operating limits	Opening 35 % ... 70 % U_e
	Closing 85 % ... 110 % U_e
	Non-closing ≤ 25 % U_e
Consumption	Starting 500 W
	Holding 12 W
Opening time	≤ 100 ms
Time delay	0, 1, 2, 3 s

- Closing coil - CM (Standard configuration)

The closing coil can remotely close the circuit breaker if the spring mechanism is charged.

As a standard configuration, it is already equipped in circuit breaker before delivery.

General characteristics

Size	Size A	Size B/C/D
Quantity of contact	1NO (separated), 1NO (test), 1NC (connected)	
Power supply U_e	AC 230 V, AC 400 V, AC 415 V, DC 110 V, DC 220 V, DC 250 V	
Rated control capacity	300 VA / 60 W	830 VA / 75 W
Conventional thermal current	10 A	

- Mechanical operation counter - MOC (Optional configuration)

The mechanical operation counter makes the number of mechanical operations visible on the front of the circuit-breaker, the user knows how many mechanical operations the circuit-breaker has performed and determines the frequency of ordinary maintenance operations.

- Crank- CRK (Standard configuration)

The crank is used to rack in or out the mobile part.

It is for withdrawable circuit-breaker only.

- Opening protection for racking in / racking out- OPC (Standard configuration)

It can automatically open the circuit-breaker when the mobile part is racked out from the drawer base, and prohibit the racking in at closing condition.

It is for withdrawable circuit-breaker only.

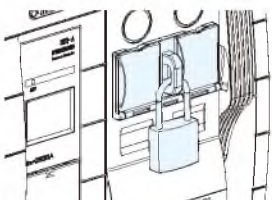
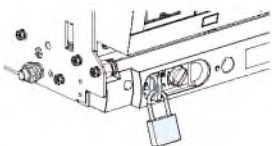
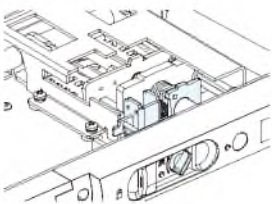
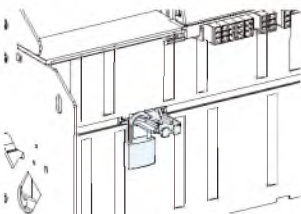
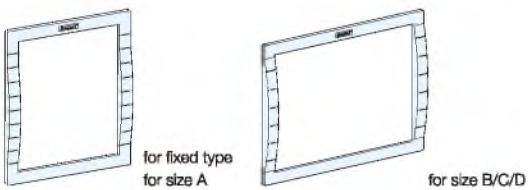
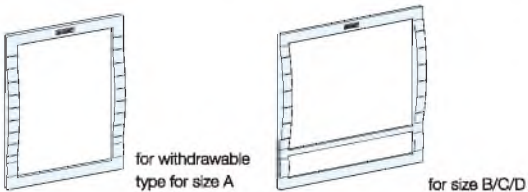
- Protection device for unexpected charging - PUC (Standard configuration)

This device is to separate the handle pawl and the mesh surface of the mechanism ratchet when spring charging, and prevent the unexpected charging during process flowing or maintaining. It is unlocked before delivery inspection.

Air Circuit Breakers Series 3SW68

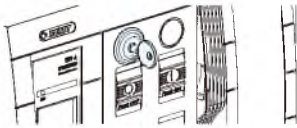
Accessories for circuit-breakers

1



- Separators -PSB (Optional configuration)
These protection devices increase the insulation distance between adjacent phases. They are available for all the sizes.
Separators must be used if the operation voltage is higher than 500 V.
- Door frame (Optional configuration)
The door frame is installed on the door of cabinet to achieve IP40 degree of protection on the front part of the circuit-breaker.
- Protection cover for secondary terminal (Optional configuration)
It is equipped on the drawer base to prevent dust and touching to electrical parts of secondary terminal.
It is available for withdrawable circuit-breaker only.
- Separate lock device (Optional configuration)
To lock the safety board at OFF position (the lock should be prepared by user):
- Prevent the mobile part connecting to the drawer base
- Prevent touching the electrical parts in case of racking in or out the mobile part or taking maintenance.
It is available for withdrawable circuit-breaker only.
- 3-position locking device (Optional configuration)
This device enables the mobile part to be locked in one of the three positions: separated, test and connected.
It is available for withdrawable circuit-breaker only.
- Position locking device (Optional configuration)
To prevent crank inserting in and make the circuit-breaker to be in the "separated" position.
It is available for withdrawable circuit-breaker only.
- Protection device for opening and closing buttons (Optional configuration)
This device enables it is possible to prevent any unexpected operation on both the opening and closing buttons (the lock should be prepared by user). The lock of opening button and closing button is independent, usually used for remote operation.

Accessories for circuit-breakers



- Key lock in open position (Optional configuration)

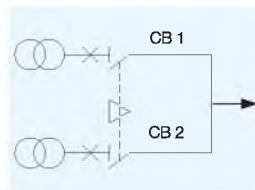
Keep the open button at pressed position by a lock which should be prepared by user, to lock the circuit-breaker in OFF position. It is possible to make interlock between different locks of several circuit-breakers.

- One key for one lock

One lock and one key for one circuit-breaker. The key could be pull out in locked position only, and the circuit-breaker can't be closed.

- Two locks with one key

There are two same locks and one key for two circuit-breakers, to enable that only one circuit-breaker can be closed.

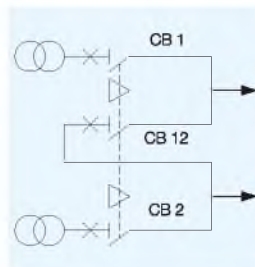


CB 1	CB 2
O	O
O	I
I	O

O: open I: close

- Three locks with two keys

There are three same locks and two keys for three circuit-breakers, to enable that only two circuit-breakers can be closed.

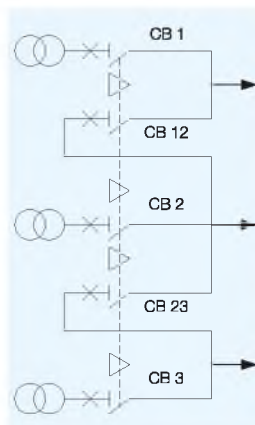


CB 1	CB 12	CB 2
O	O	O
I	O	O
O	I	O
O	O	I
I	I	O
O	I	I
I	O	I

O: open I: close

- Five locks with three keys

Used in power distribution systems with three power supplies and two bus couples, and breakers are dispersedly installed.



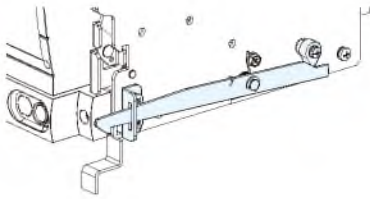
CB 1	CB 12	CB 2	CB 23	CB 3
O	O	O	O	O
I	O	O	O	O
O	I	O	O	O
O	O	I	O	O
O	O	O	I	O
O	O	O	O	I
I	I	O	O	O
I	O	I	O	O
I	O	O	I	O
I	O	O	O	I
O	I	I	O	O
O	I	O	I	O
O	O	I	I	O
O	O	O	I	I
I	I	O	I	O
I	I	O	O	I
I	O	I	O	I
I	O	O	I	I
O	I	I	I	O
O	I	O	I	I

O: open I: close

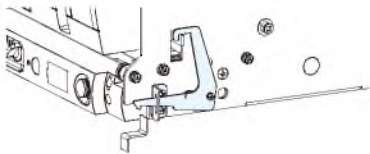
Air Circuit Breakers Series 3SW68

Accessories for circuit-breakers

1



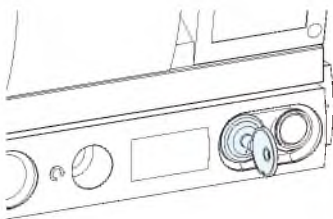
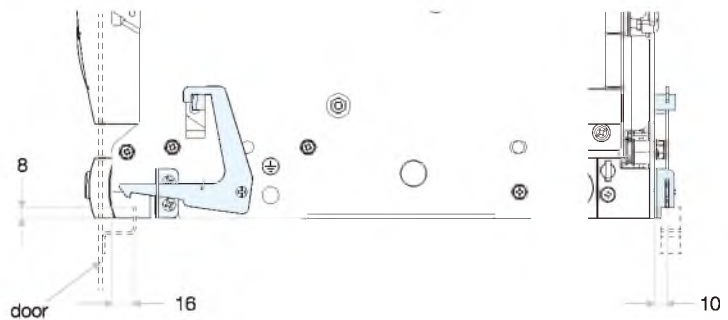
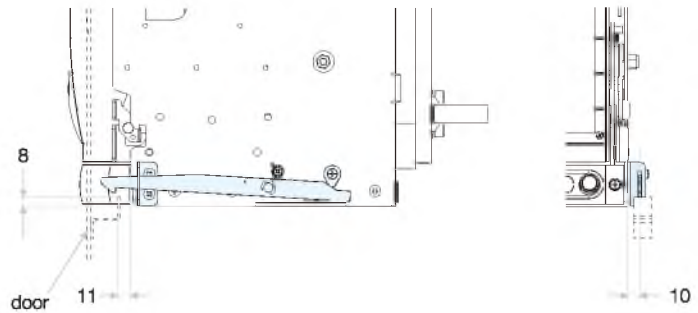
for size A



for size B/C/D

- Interlock for switchgear door (Optional configuration)

This device can be installed on either the left side or right side of the drawer base to prevent the switchgear door from being opened when the mobile part of the withdrawable version of circuit-breaker is in position of "test" or "connected". If the switchgear door is open and circuit-breaker is in "connected" position, then it can be closed directly without opening the circuit-breaker. It is available for withdrawable circuit-breaker only.

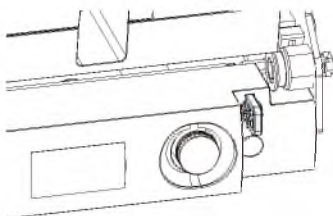


- Position key lock (Optional configuration)

The same as position locking devices, this position key lock can lock the circuit-breaker in "separated" position.

Besides, it is possible to install two same locks on two circuit-breakers with only one key, to achieve the interlock of "separated" position between these two circuit-breakers.

It is available for size A (3SW68-1600) of withdrawable version of circuit-breaker.

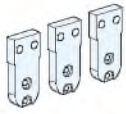


- Blocking device for inserting in crank when the door is open (Optional configuration)

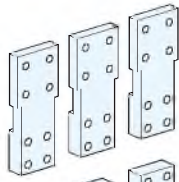
It is used to block the crank being inserted in and prevent the mobile part from being racked in or out when the switchgear door is open.

It is available for size B/C/D (3SW68-2500/4000/6300) of withdrawable version of circuit-breaker.

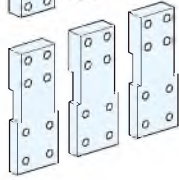
Accessories for circuit-breakers



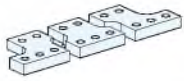
for size A of
withdrawable type



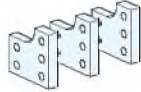
for size B/C/D



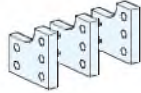
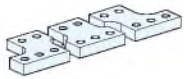
- Front terminals (Optional configuration)
Used for circuit-breakers with rated current up to 4000A.



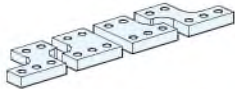
Horizontal



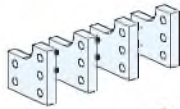
Vertical



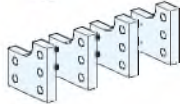
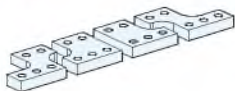
- Spread terminals for 3-pole circuit-breakers (Optional configuration)
The terminals are available for size A (3SW68-1600) of 3-pole circuit-breakers with purpose to enlarge the phase distances and ensure the electric safety by reducing the temperature rise.



Horizontal



Vertical

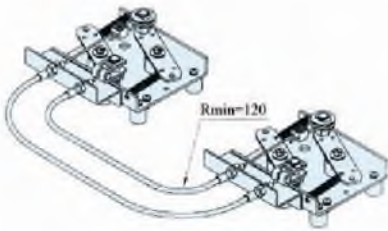


- Spread terminals for 4-pole circuit-breakers (Optional configuration)
The terminals are available for size A (3SW68-1600) of 4-pole circuit-breakers with purpose to enlarge the phase distances and ensure the electric safety by reducing the temperature rise.

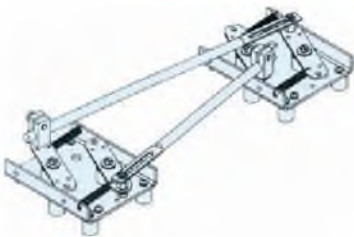
Air Circuit Breakers Series 3SW68

Accessories for circuit-breakers

1



Cable type



Connecting rod type

- Mechanical interlock (Optional configuration)

It is installed on the right side of drawer base to enable various opening and closing configurations to be obtained between two or three circuit-breakers. The mechanical interlock is installed by user.

- Two types of mechanical interlock are available:
 - Cable type
 - Connecting rod type

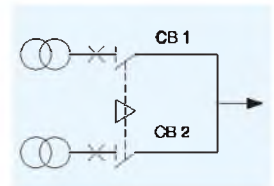
- Four types of interlock configuration are available:

Possible running status	Typical application
-------------------------	---------------------

Type A

Two circuit-breakers can't be in closed position at the same time.

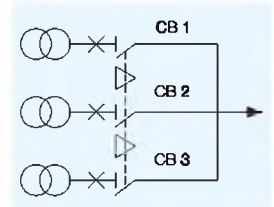
CB 1	CB 2
O	O
O	I
I	O



Type B

One out of three interlocked circuit-breakers can be closed.

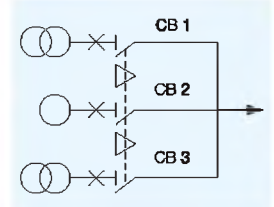
CB 1	CB 2	CB 3
O	O	O
I	O	O
O	I	O
O	O	I



Type C

Two circuit-breakers can be closed if the third is open. The latter can only be closed when the two circuit-breakers are open.

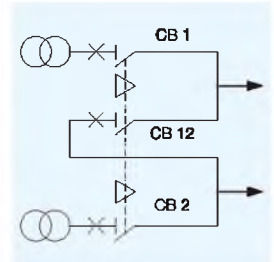
CB 1	CB 2	CB 3
O	O	O
I	O	O
O	I	O
I	O	I
O	O	I



Type D

Two out of three circuit-breakers can be closed at the same time.

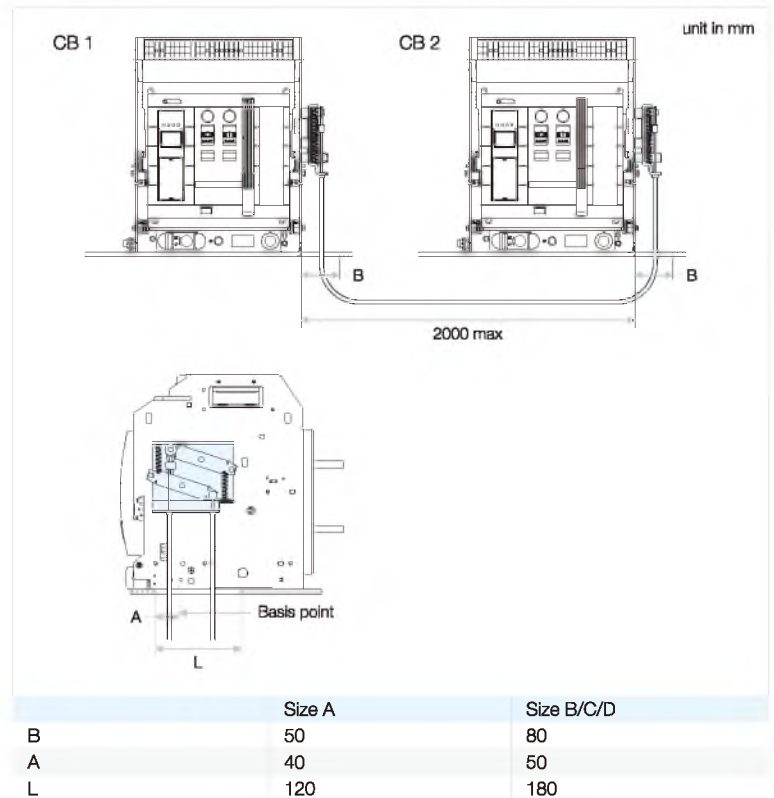
CB 1	CB 2	CB 3
O	O	O
I	O	O
O	I	O
O	O	I
I	I	O
O	I	I
I	O	I



Accessories for circuit-breakers

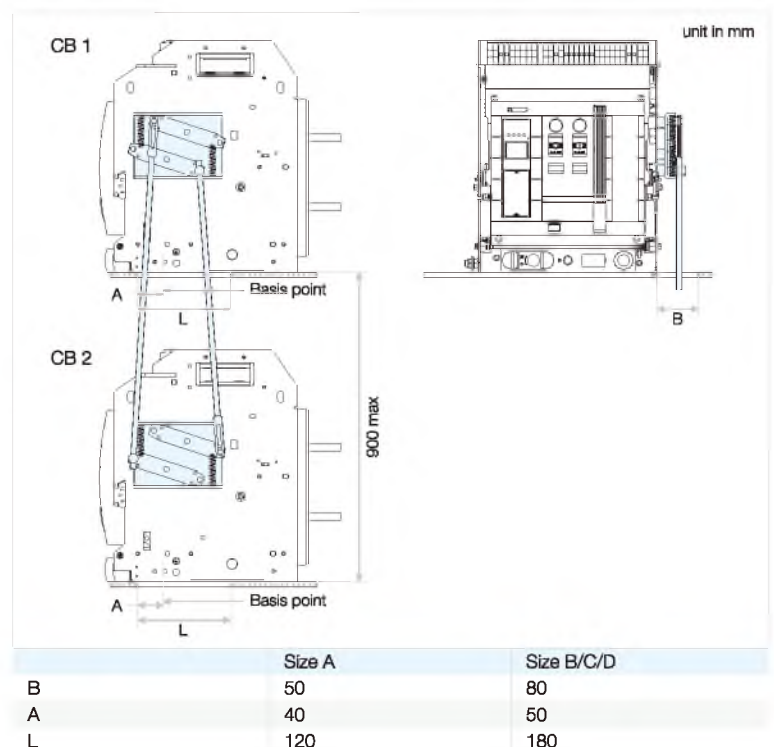
- Mechanical interlock (Optional configuration)
- Cable type mechanical interlock for two horizontal installed circuit-breakers

Dimensions



- Connecting rod type mechanical interlock for two vertical installed circuit-breakers

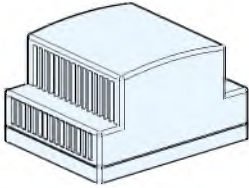
Dimensions



Air Circuit Breakers Series 3SW68

Accessories for electronic trip units

1



- DC power supply module (optional)

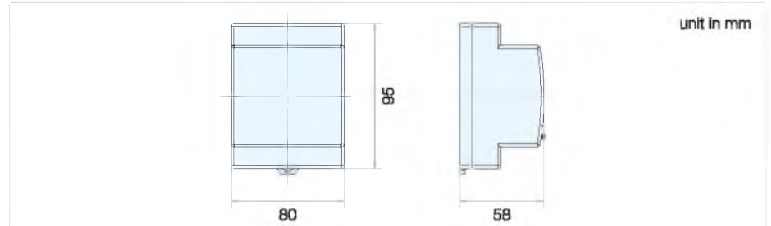
If the control voltage is DC 220 V or DC 110 V, a DC power supply module is necessary.

The DC power supply module can be installed on 35 mm DIN-rail.

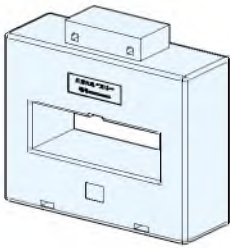
Characteristics

Input voltage	DC 220 V \pm 15% or DC 110 V \pm 15%
Output voltage	DC 24 V \pm 5%
Output current	1.5 A

Dimensions



Electrical diagram reference: Wiring diagram



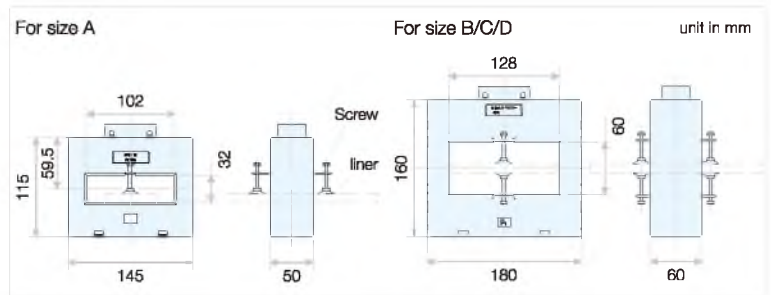
- External current transformer for neutral conductor

This is only for 3-pole circuit-breakers;

According to requirements of particular situations, connecting a current transformer to the electronic trip unit, to enable the protection of the neutral conductor. A different electronic trip unit is needed accordingly.

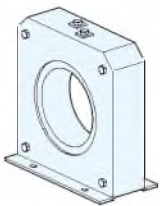
The distance between current transformer and circuit-breaker should be less than 2 meters.

Dimensions:



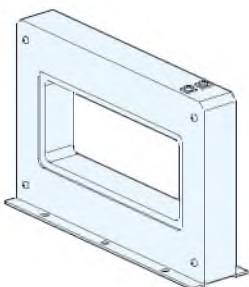
- External current transformer for earth-fault protection

In the case of grounding connection named Source Ground Return (type W), the external current transformer can be used to check the current on the earthing cables and protect the circuits from both upstream and downstream from the earth-fault at the same time. The distance between current transformer and circuit-breaker should be less than 10 meters.



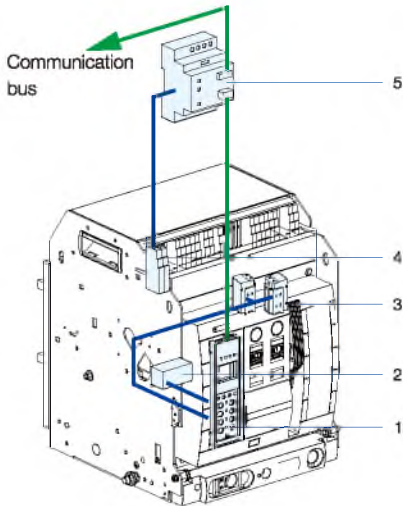
- External current transformer for differential protection

It is used in the case of grounding connection is with differential protection. The distance between current transformer and circuit-breakers should be less than 2 meters.



Accessories for communication

Including software, data transformer, communication module, data collector, relay module, power-supply module, and kinds of communication cables etc.



Structure and network

1. Internal communication module
2. Micro switch (Open/Close, fault trip, Ready to close, charged)
3. Coil of close and open
4. Signal of connected, test and separated
5. External communication module

- For fixed circuit-breakers, the communication COM option is made up of: an internal communication module installed behind the electronic trip unit and signals are given by auxiliary contacts (open/close, fault trip, ready to close, charged) which is connected to the communicating voltage release.
- For withdrawable circuit-breakers, the communication COM option is made up of:
 - an internal communication module installed behind the electronic trip unit and signals are given by auxiliary contacts (open/close, fault trip, ready to close, charged) which is connected to the communicating voltage release.
 - an external communication module with signals given by 3-position micro switch (connected, test, separated).
- The status indication by the COM option is independent of the circuit-breaker indication contacts. These contacts remain available for conventional uses.
- Internal communication module

This module is installed behind the electronic trip unit and is independent of the control unit. It receives and transmits information on the communicating network. An infra-red link transmits data between the control unit and the communication module.
- External communication module

This module makes it possible to address the frame and to maintain the address when the circuit-breaker is in the separated position. A power-supply with DC 24 V is needed.
- Communication voltage release of open/close

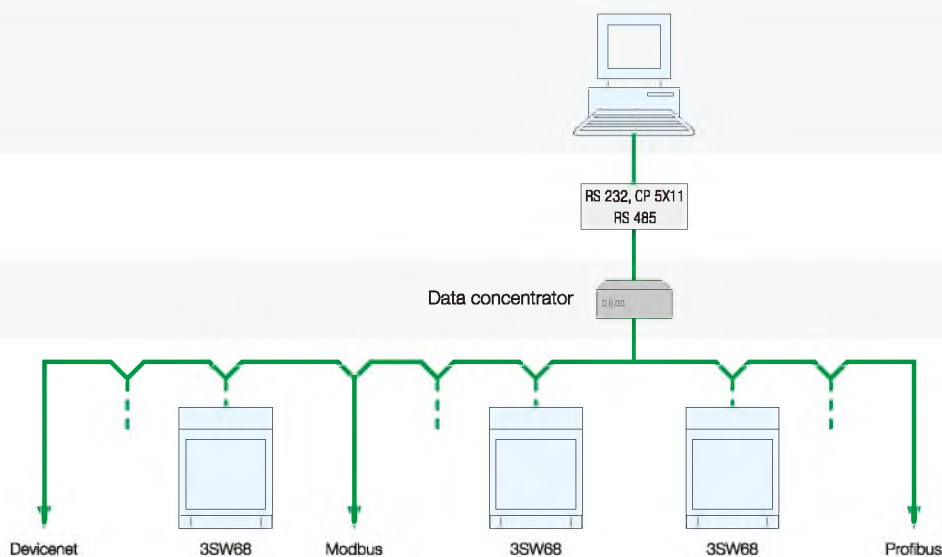
The communication voltage release of open/close is connected to the internal communication module. The remote-tripping function (the second voltage release of open or under voltage release) are independent of the communication option. They are not connected to the internal communication module.

Software

Communication port

Communication bus

Circuit-breakers



- Hard wire
- Communication port

Air Circuit Breakers

Series 3SW68

Installation - Installation environment

- Utilization category (according to IEC 60947-2)

Main circuit:

- type A: without selective protection
- type B: with selective protection
- AC-3: motor protection

Auxiliary circuit:

- AC-15: for controlling the electromagnet load which capacity is higher than 72 VA
- DC-13: for controlling the DC electromagnet load

- Electromagnetic compatibility (EMC)

Applies to environment A: relates to low-voltage non-public or industrial networks/locations/installations including highly disturbing sources.

- Ambient temperature

The circuit-breakers can operate in temperature range from -5 °C to + 40 °C, and the average temperature in 24 hours should be below + 35 °C. Under certain installation conditions, the circuit-breakers can operate at higher temperature than the reference temperature of + 40 °C. In this case the current-carrying capacity of the circuit-breaker may be lower than the rated current-carrying capacity at the reference temperature, therefore the derating rated current shown in the table must be applied.

Size	Rated frame current I _{nm} (A)	Rated current (A)	Maximum rated current under different ambient temperature		
			+ 40 °C (A)	+ 50 °C	+ 60 °C
A	1600	200	200	200	200
		400	400	400	400
		630	630	630	630
		800	800	800	800
		1000	1000	900	800
		1250	1250	1250	1250
		1600	1600	1440	1280
B	2500	630	630	630	630
		800	800	800	800
		1000	1000	900	800
		1250	1250	1250	1250
		1600	1600	1600	1600
		2000	2000	2000	2000
		2500	2500	2250	2000
C	4000	2000	2000	2000	2000
		2500	2500	2500	2500
		2900	2900	2900	2880
		3200	3200	3200	2880
		3600	3600	3240	2880
		4000	4000	3600	3200
		6300	6300	5670	5040
D	6300	4000	4000	4000	4000
		5000	5000	4500	4000
		6300	6300	5670	5040

- Altitude

The rated performance of circuit-breaker remains unchanged with altitude up to 2000 meters. Beyond this altitude, the properties of the atmosphere in terms of composition, dielectric capacitance, cooling power and pressure can vary, and effects the rated operational voltage, rated insulating voltage and rated current, which are subject to derating.

Altitude	m	2000	3000	4000	5000
Rated insulating voltage	V	1000	900	700	600
Max. operational voltage	V	690	590	520	460
Rated current	% I _n	100	98	95	93

- Atmospheric conditions

- Humidity: air relative humidity no higher than 50 % when the ambient temperature is + 40 °C. The higher relative humidity is allowable under lower ambient temperature. In the most humidity month, the average relative humidity no higher than 90 %, and the average lowest temperature no lower than + 25 °C, special measures should be adopted also for the condensation occasionally produced due to the temperature change.

- Pollution degree: 3

Note:

User should negotiate with manufacturer about the circuit-breakers which may be used under conditions of over + 40 °C or below - 25 °C or the altitude higher than 2000 meters.

Installation - Installation environment

- Overvoltage category
 - Main circuit: IV
 - Coil of under-voltage release: IV
 - Primary coil of power transformer: IV
 - Auxiliary circuit, control circuit: III

- Other installation conditions
 - The circuit-breaker should be installed under the conditions without risks of explosive, without conductive dust, and without gas which would corrode metal or destroy the insulation.
 - The vertical gradient should be less than 5 °C.

- Power loss and resistance

The power loss of a circuit-breaker is the total power consumption between the input and output of main circuits, usually they are measured under the rated frame current.

The resistance between input/output is the value measured per pole (cold state).

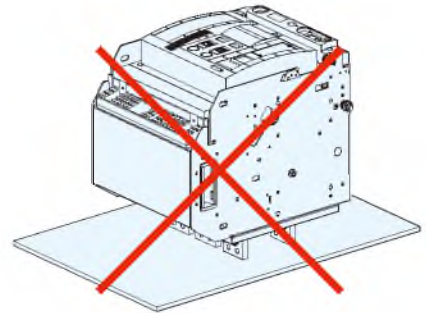
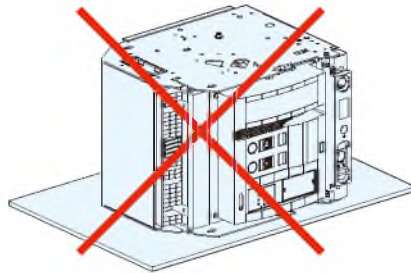
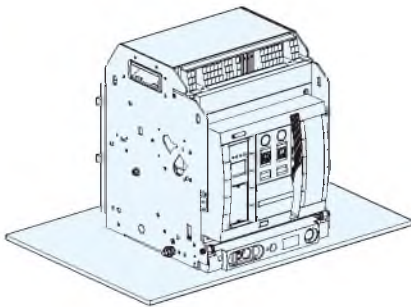
Version Size	Rated frame current (A)	Withdrawable circuit-breaker		Fixed circuit-breaker	
		Power loss (W)	Input/output resistance ($\mu\Omega$)	Power loss (W)	Input/output resistance ($\mu\Omega$)
A	1600	460	36	220	26
B	2500	600	20	260	12
C	4000	900	12	650	8
D	6300	1200	8	1050	5

Air Circuit Breakers Series 3SW68

Installation - Installation environment

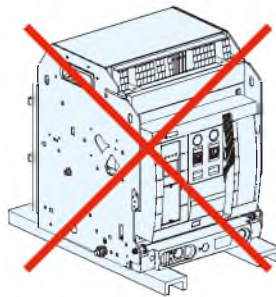
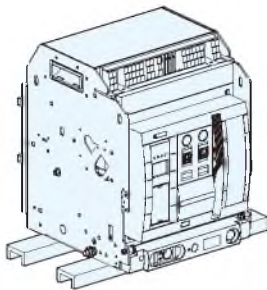
- Permitted placing of circuit-breaker before installing

1



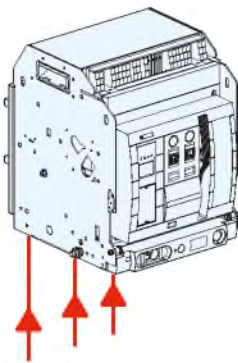
- Installation position

The circuit-breaker is required to be installed on the flat surface which is hard without deformation, and make the weight evenly distributed on it.



- Power incoming

The circuit-breaker is available to connect the incoming power from either the top side or the bottom side without any impact on performance.

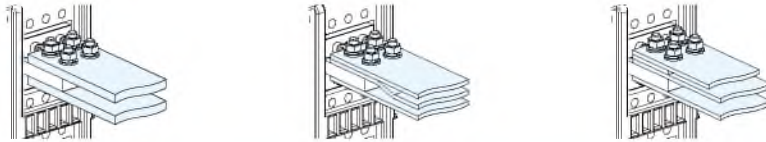


Installation - Power connection

- Clamping

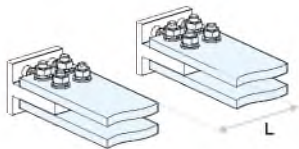
The copper busbars connected to the circuit-breaker should be fixed with steel nuts and bolts, class 8.8, and with proper tightening torque which are shown in the table below, over-tightening may have the same consequences as under-tightening and is prohibited.

Example



Ø Nominal (mm)	Ø Drilling (mm)	Tightening torques	
		with grower or flat washers (Nm)	with contact or corrugatec washers
10	11	37.5	50
12	13	45	60

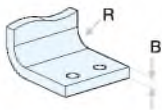
- Isolation distance



Rated impulse withstand voltage U _{imp} (kV)	L minimum (mm)
12	14

- Busbar bending

When bending busbars maintain the radius indicated below (a smaller radius would cause cracks).



Dimensions (mm)

B	Radius of curvature R	
	Minimum	Recommended
5	5	7.5
10	15	18 ~ 20

- Busbar sizing and quantity

Size of circuit-breaker	Rated frame current	Rated current (A)	Thickness	Width	Quantity per pole
A	1600	200	5	50	1
		400	5	50	1
		630	5	50	2
		800	5	50	2
		1000	5	50	3
		1250	5	50	3
		1600	5	50	4
B	2500	630	5	80	1
		800	5	60	2
		1000	5	60	2
		1250	5	80	2
		1600	10	60	2
		2000	10	80	2
		2500	10	80	3
C	4000	2000	5	100	3
		2500	10	100	2
		2900	10	100	3
		3200	10	100	3
		3600	10	100	4
		4000	10	100	4
		4000	10	100	4
D	6300	4000	10	100	4
		5000	10	100	6
		6300	10	100	6 (vertical)

Air Circuit Breakers

Series 3SW68

Installation - Power connection

There are four types of connection are available:

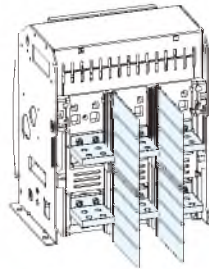
- Horizontal connection or vertical connection
- Front connection
- Mix connection
- Spread connection

1

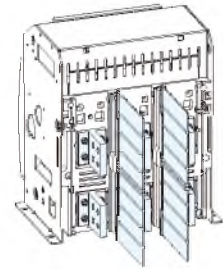
Horizontal connection or vertical connection

- For size A/B, just simply turn the horizontal terminals at 90° to make vertical terminals
- For size D, only vertical connections available
- Phase separators are optional depending on user's requirement

Horizontal connection

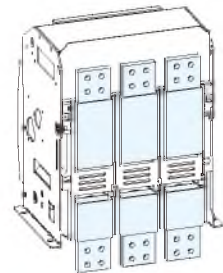


Vertical connection



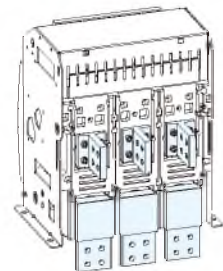
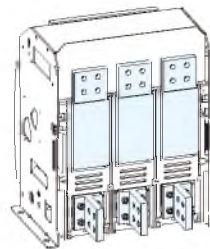
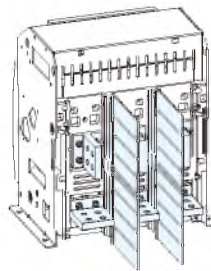
Front connection

- Front connection is available for circuit-breakers with rated current up to 4000 A, but excluding the circuit-breakers of size A



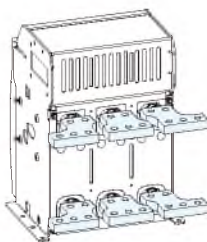
Mixed connection

- For the mixed connections involved front connections, only available for the circuit-breakers with rated current up to 4000 A, but excluding the circuit-breakers of size A.

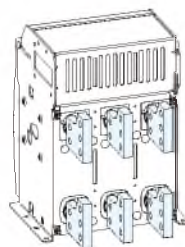


Spread connection (available for size A only)

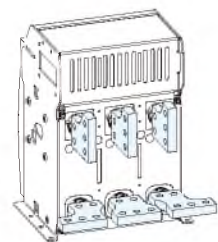
Horizontal



Vertical



Mixed

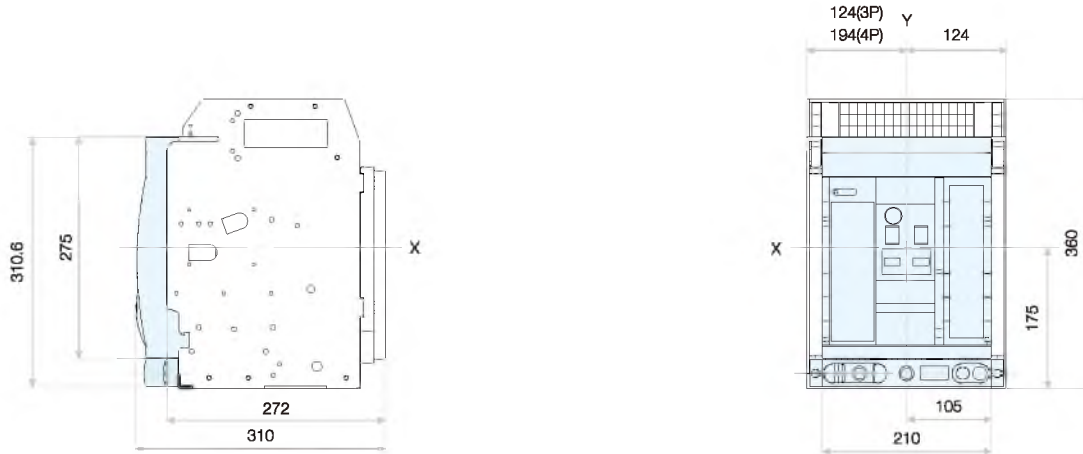


Dimensions

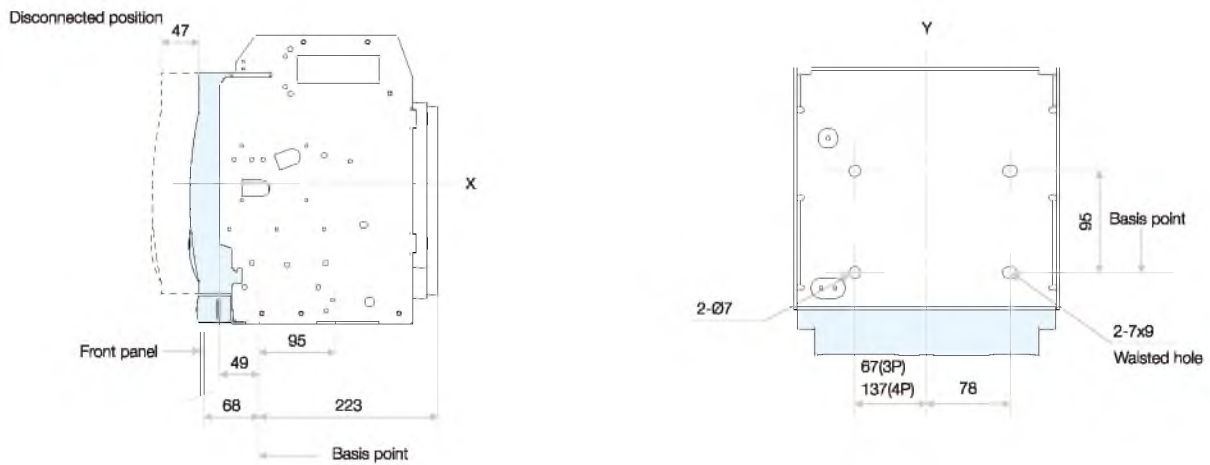
Size A (3SW68-1600) withdrawable circuit-breaker, 3-pole/4-pole

Dimension

unit in mm

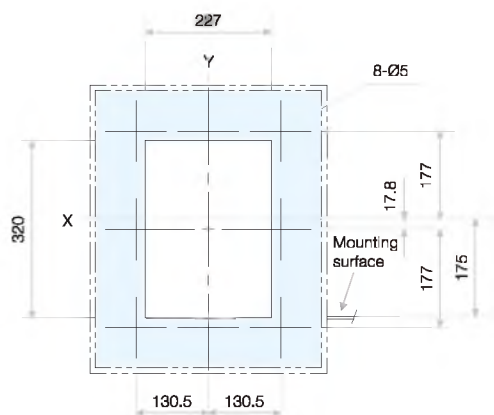


Mounting

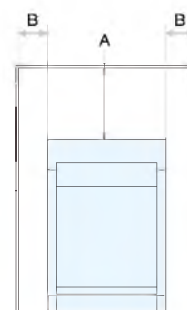


Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

Note:

"X" and "Y" are the symmetry planes of circuit-breaker cover.

Air Circuit Breakers Series 3SW68

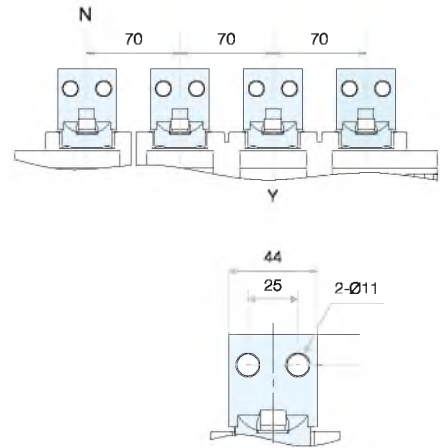
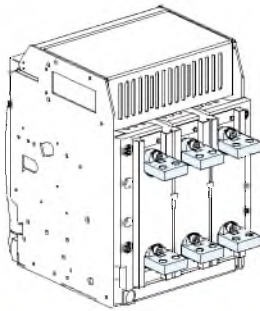
Dimensions

Size A (3SW68-1600) withdrawable circuit-breaker, 3-pole/4-pole

1

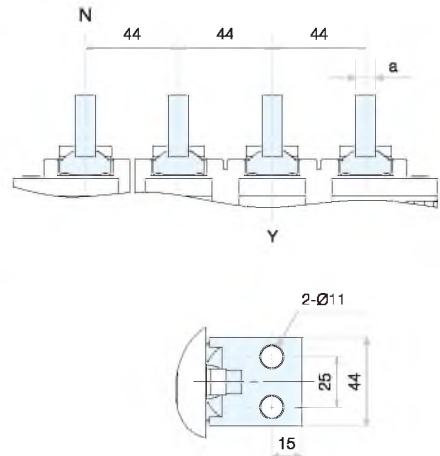
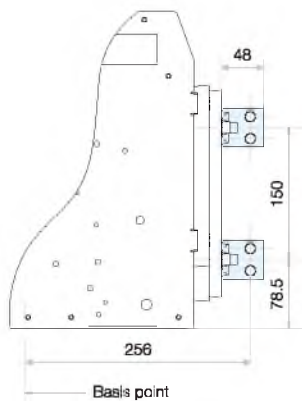
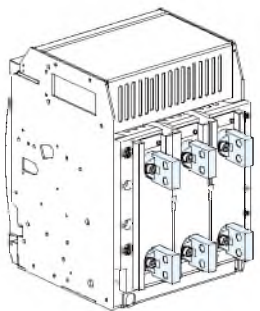
Horizontal rear connections (standard configuration)

unit in mm



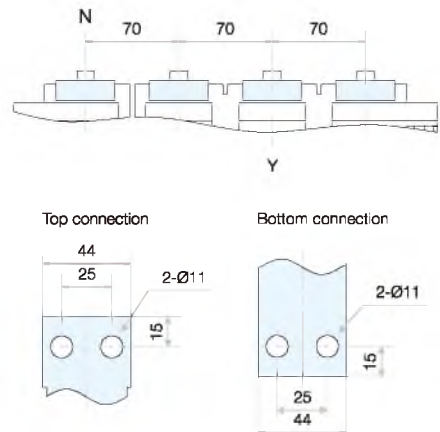
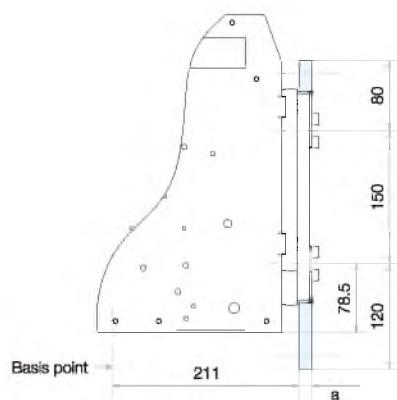
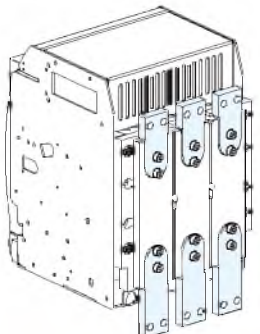
In	a
200 - 1000 A	8
1250 - 1600 A	15

Vertical rear connections



In	a
200 - 1000 A	8
1250 - 1600 A	15

Front connections



In	a
200 - 1000 A	8
1250 - 1600 A	15

Note:
"Y" is the symmetry plane of circuit-breaker cover.

Dimensions

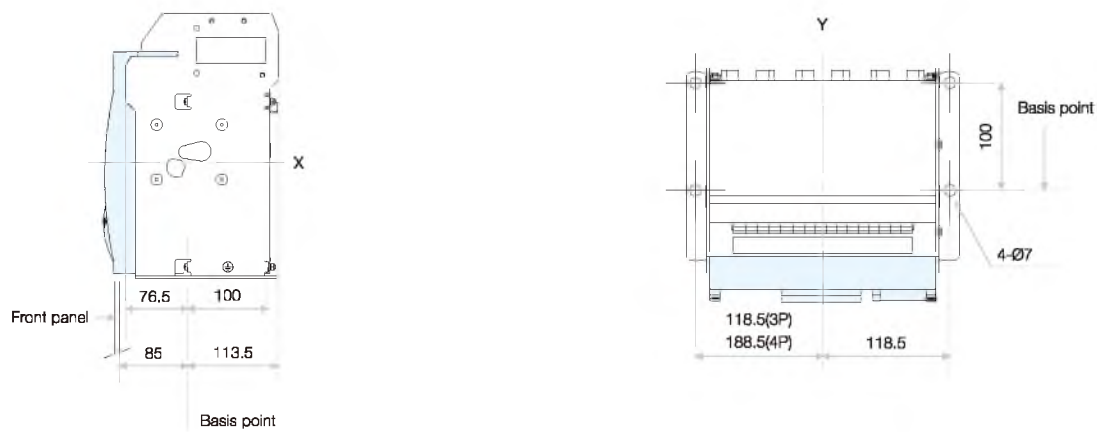
Size A (3SW68-1600) fixed circuit-breaker, 3-pole/4-pole

unit in mm

Dimension

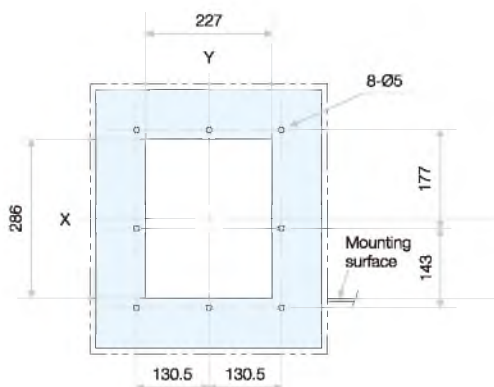


Mounting

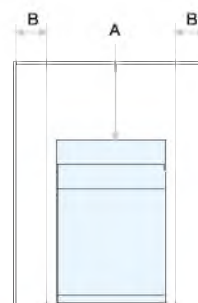


Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

Note:

"X" and "Y" are the symmetry planes of circuit-breaker cover.

Air Circuit Breakers Series 3SW68

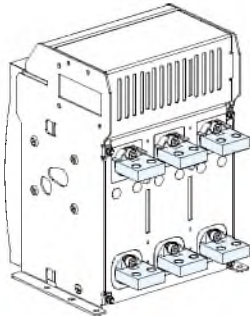
Dimensions

Size A (3SW68-1600) fixed circuit-breaker, 3-pole/4-pole

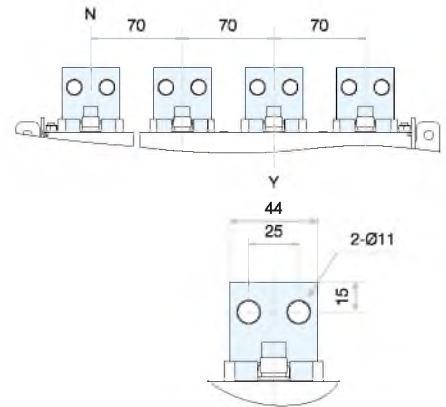
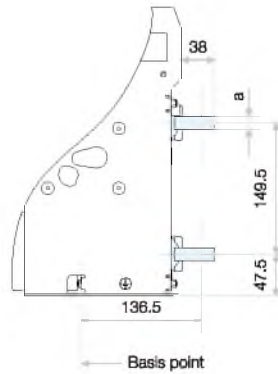
1

Horizontal rear connections (standard configuration)

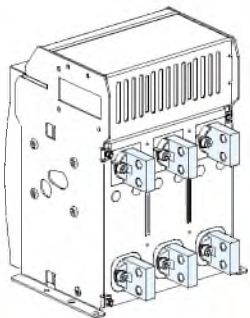
unit in mm



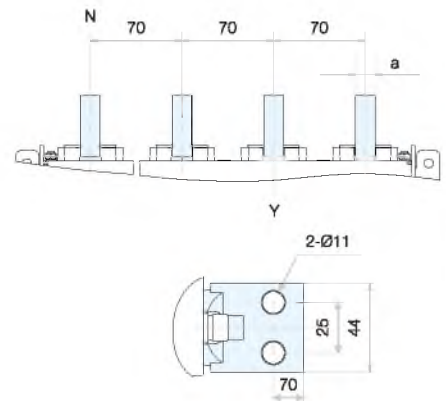
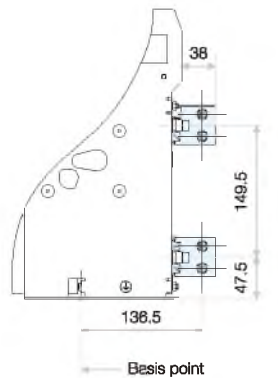
In	a
200 - 1000 A	8
1250 - 1600 A	15



Vertical rear connections



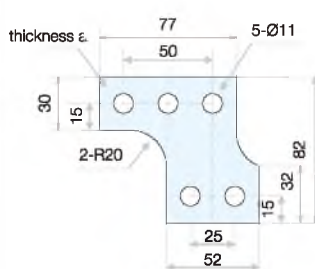
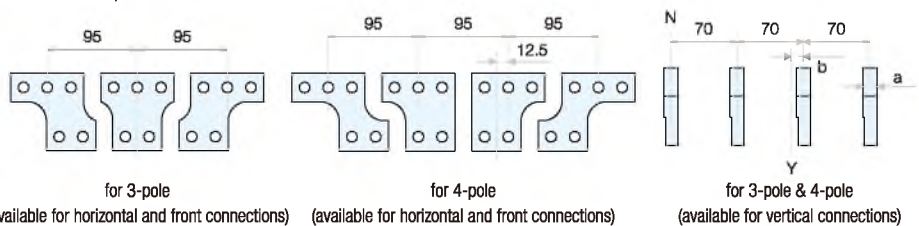
In	a
200 - 1000 A	8
1250 - 1600 A	15



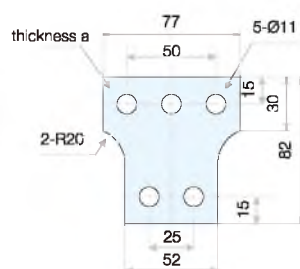
Spread busbar (available for withdrawable circuit-breakers also)

In	a	b
200 - 1000 A	8	6
1250 - 1600 A	15	13

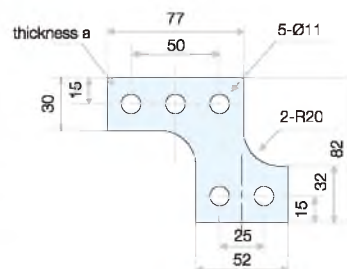
Note: Recommended connection screws: M10 class 8.8
Tightening torque: 50 Nm with contact washer



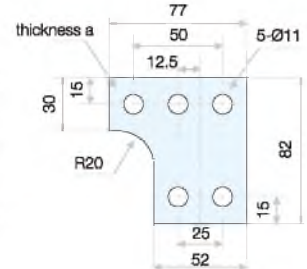
Left or right spread connection for 3-pole



Middle spread connection for 3-pole



Left or right spread connection for 4-pole



Middle spread connections for 4-pole
Vertical spread connection

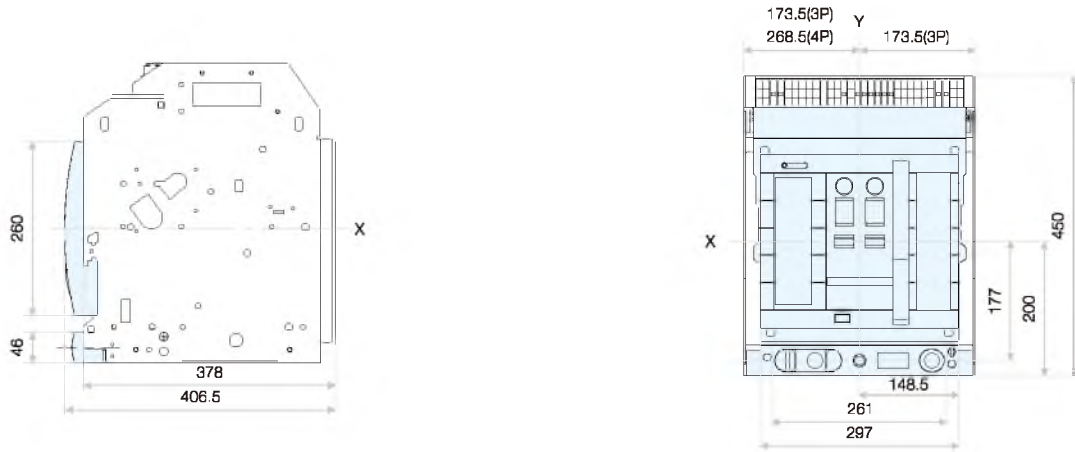
Note:
"Y" is the symmetry plane of circuit-breaker cover.

Dimensions

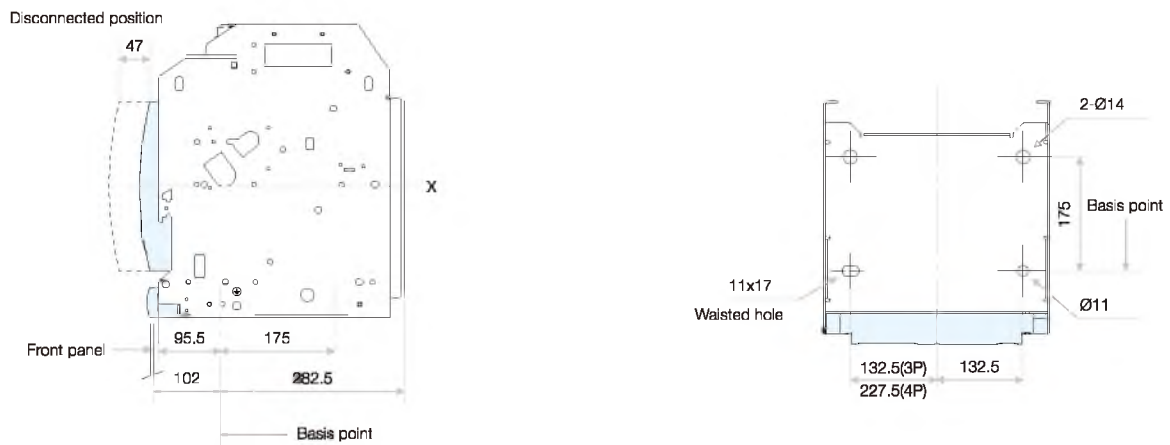
Size B (3SW68-2500) withdrawable circuit-breaker, 3-pole/4-pole

Dimension

unit in mm

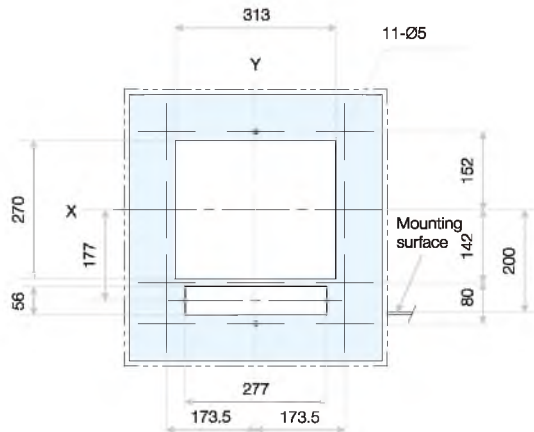


Mounting

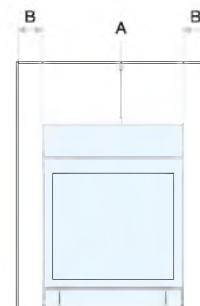


Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

Note:

"X" and "Y" are the symmetry planes of circuit-breaker cover.

Air Circuit Breakers Series 3SW68

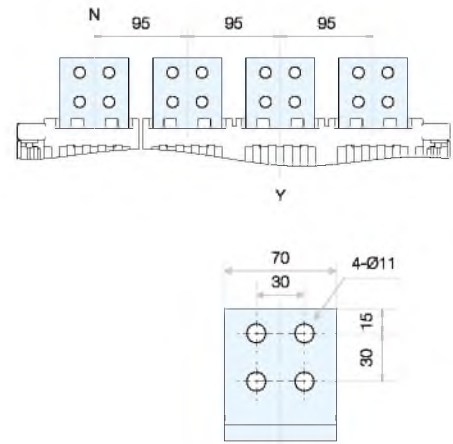
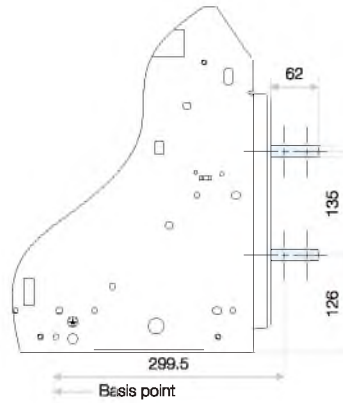
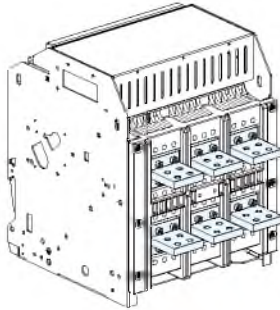
Dimensions

Size B (3SW68-2500) withdrawable circuit-breaker, 3-pole/4-pole

1

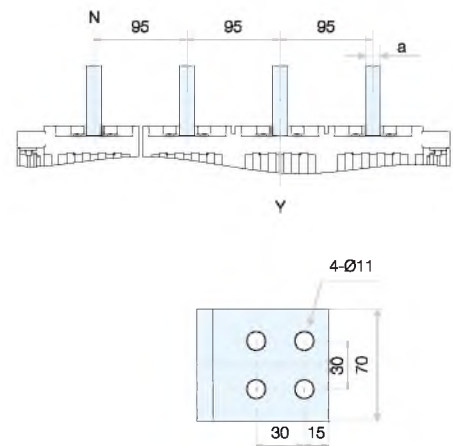
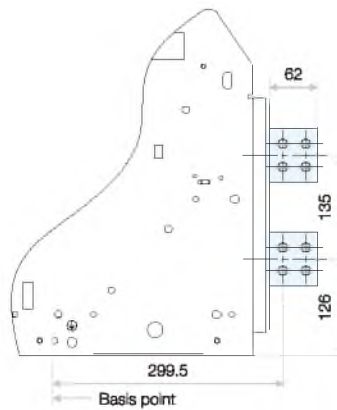
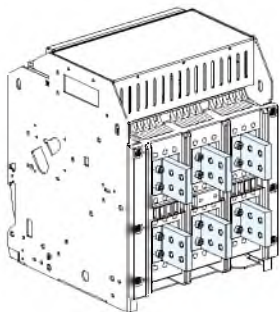
Horizontal rear connections (standard configuration)

unit in mm



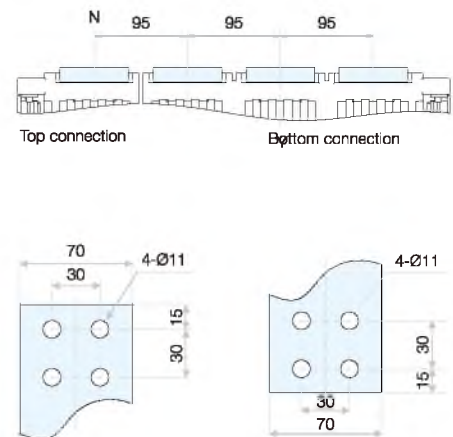
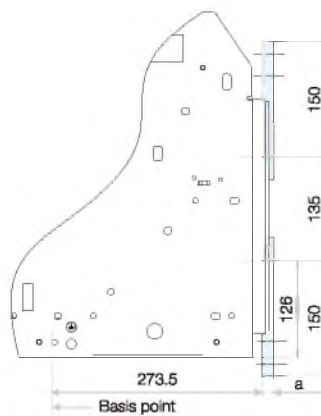
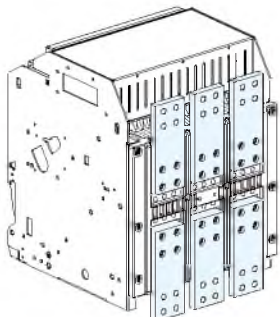
In	a
630 - 1000 A	10
1250 - 2500 A	15

Vertical rear connections



In	a
630 - 1000 A	10
1250 - 2500 A	15

Front connection

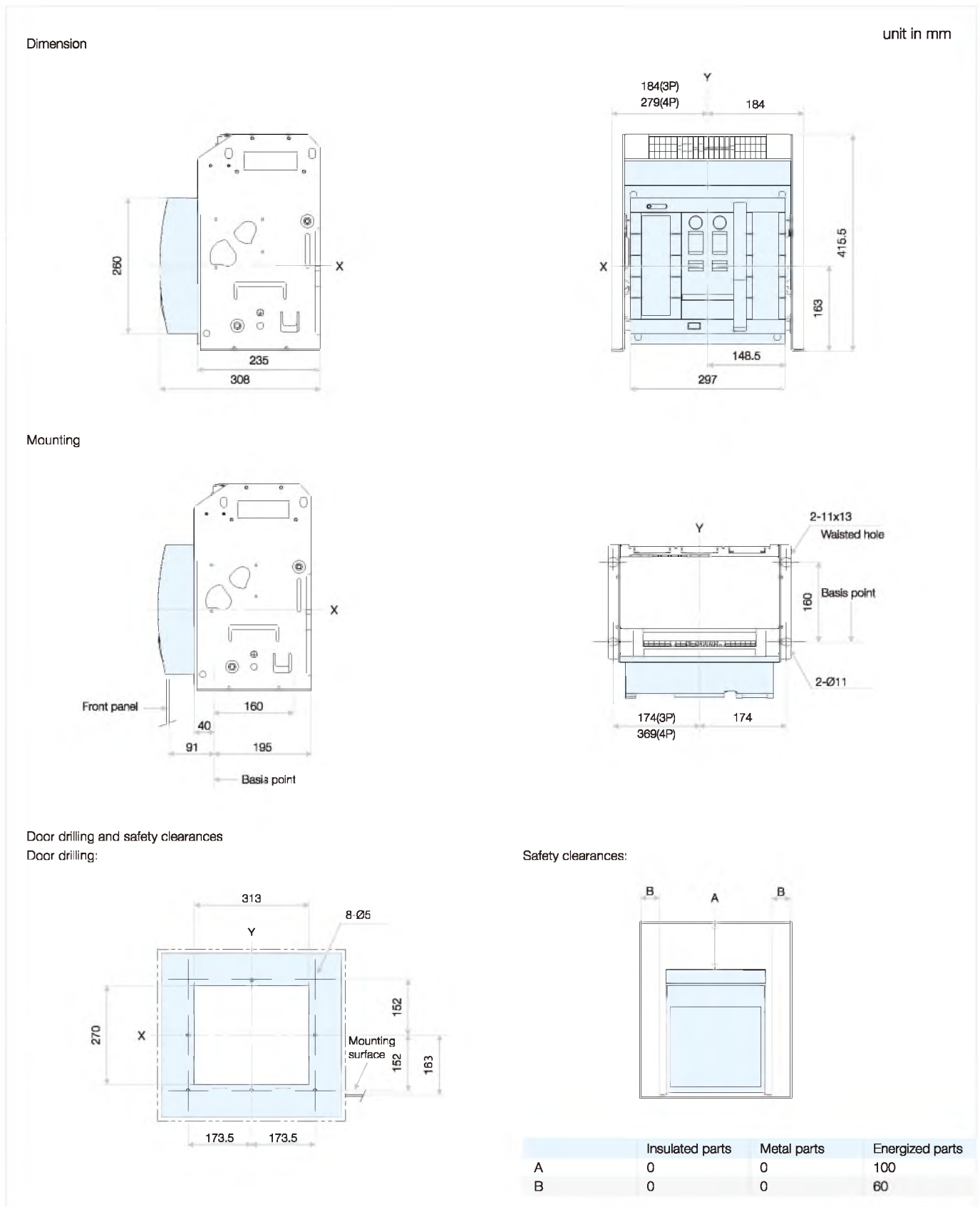


In	a
630 - 1000 A	10
1250 - 2500 A	15

Note:
"Y" is the symmetry plane of circuit-breaker cover.

Dimensions

Size B (3SW68-2500) fixed circuit-breaker, 3-pole/4-pole



Note:

"X" and "Y" are the symmetry planes of circuit-breaker cover.

Air Circuit Breakers Series 3SW68

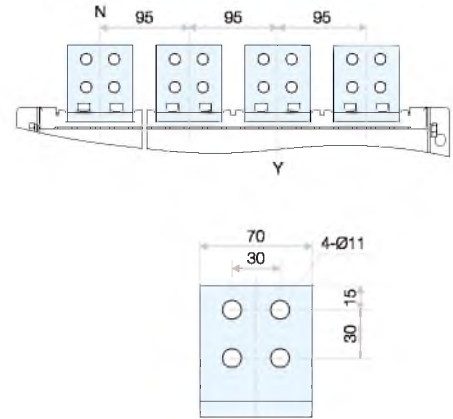
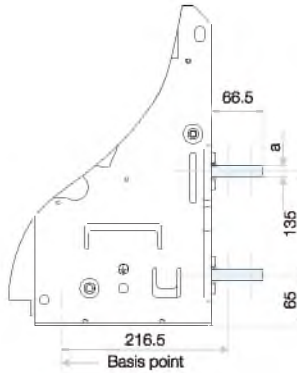
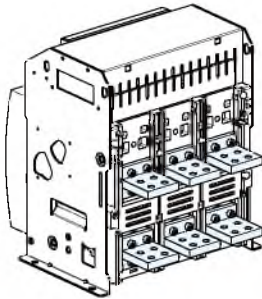
Dimensions

Size B (3SW68-2500) fixed circuit-breaker, 3-pole/4-pole

1

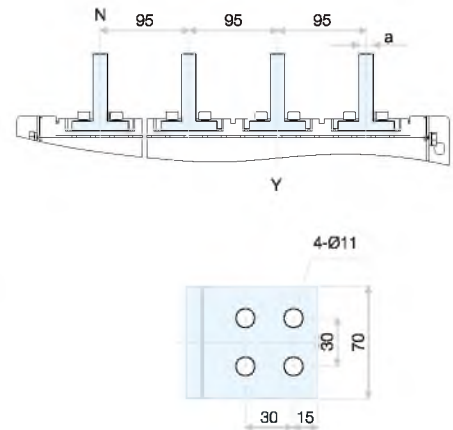
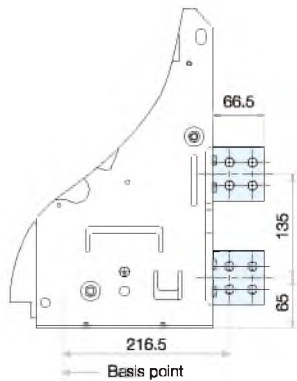
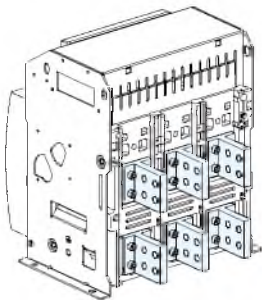
Horizontal rear connections (standard configuration)

unit in mm



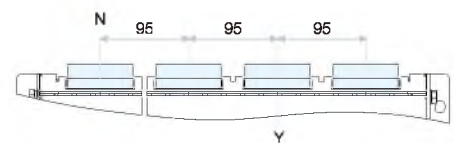
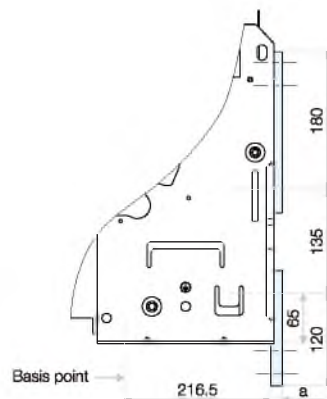
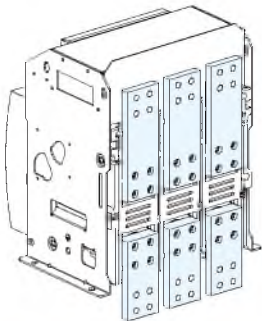
In	a
630 - 1000 A	10
1250 - 2500 A	15

Vertical rear connections



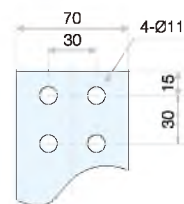
In	a
630 - 1000 A	10
1250 - 2500 A	15

Front connection

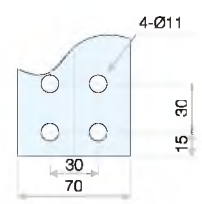


In	a
630 - 1000 A	10
1250 - 2500 A	15

Top connection



Bottom connection



Note:

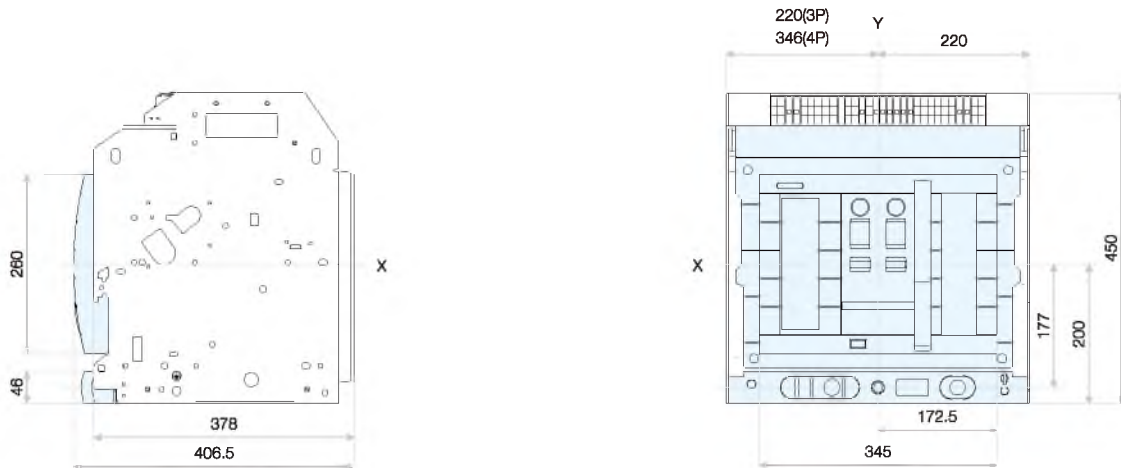
"Y" is the symmetry plane of circuit-breaker cover.

Dimensions

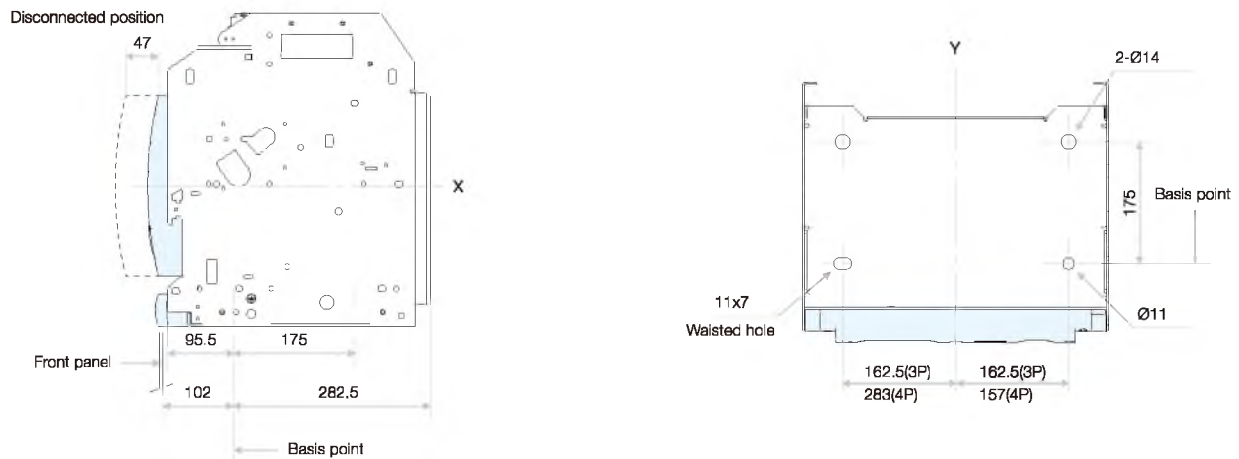
Size C (3SW68-4000) withdrawable circuit-breaker, 3-pole/4-pole

Dimension

unit in mm

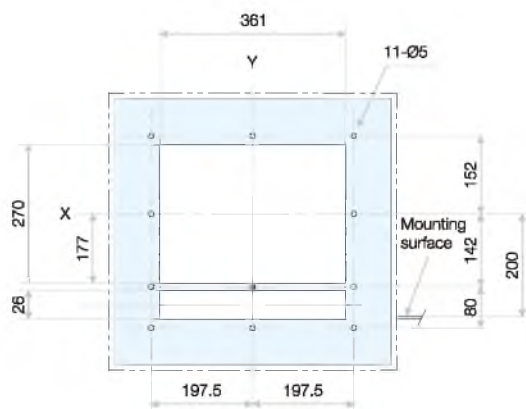


Mounting

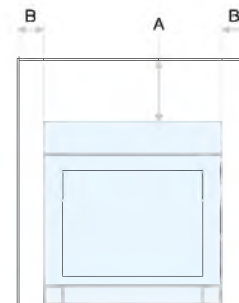


Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

Note:

"X" and "Y" are the symmetry planes of circuit-breaker cover.

Air Circuit Breakers Series 3SW68

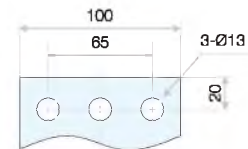
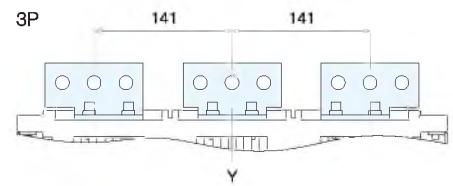
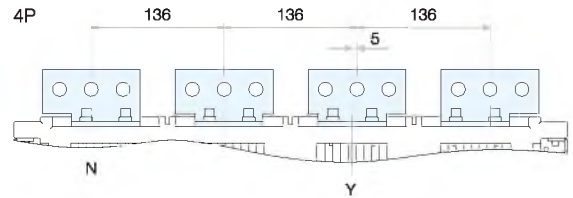
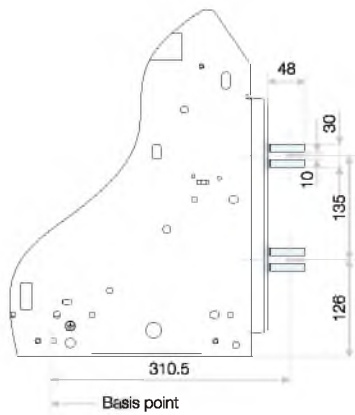
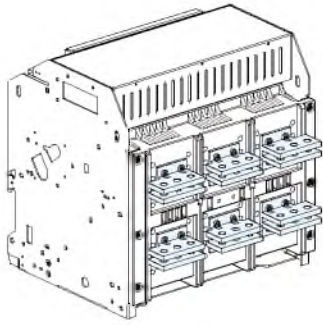
Dimensions

Size C (3SW68-4000) withdrawable circuit-breaker, 3-pole/4-pole

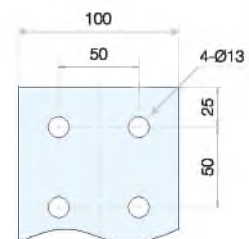
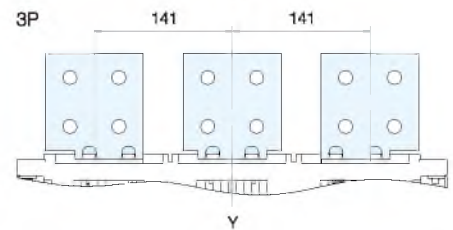
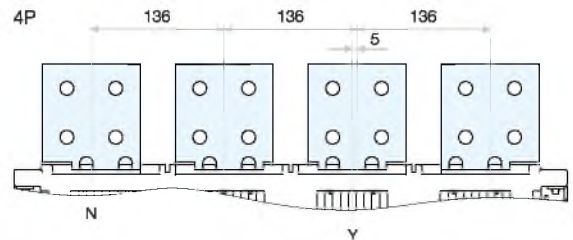
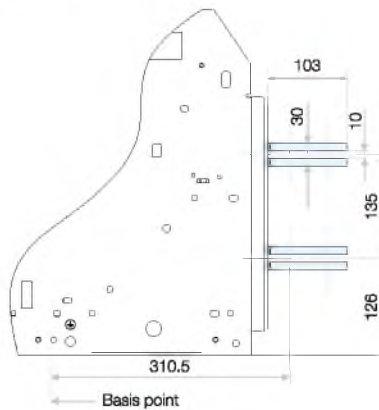
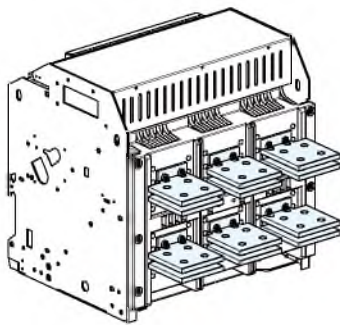
1

Horizontal rear connections for 2000 A to 3600 A (standard configuration)

unit in mm



Horizontal rear connections for 4000 A (standard configuration)



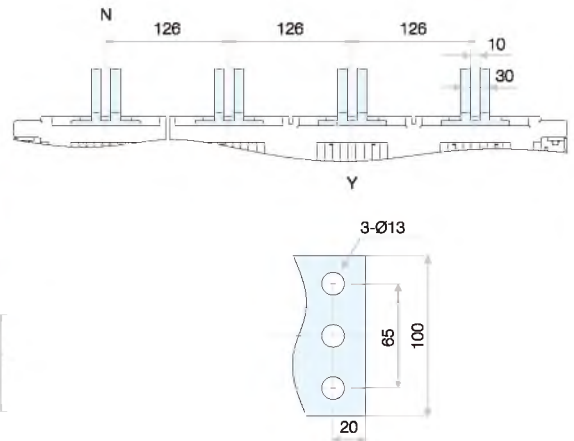
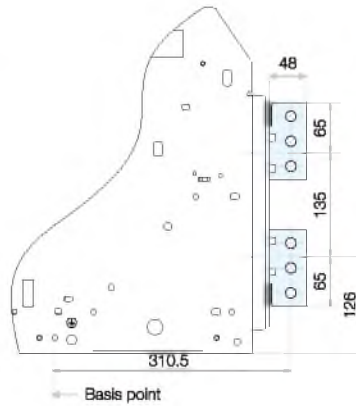
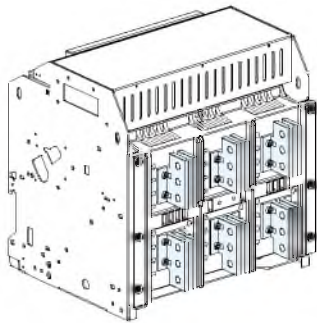
Note:
"Y" is the symmetry plane of circuit-breaker cover.

Dimensions

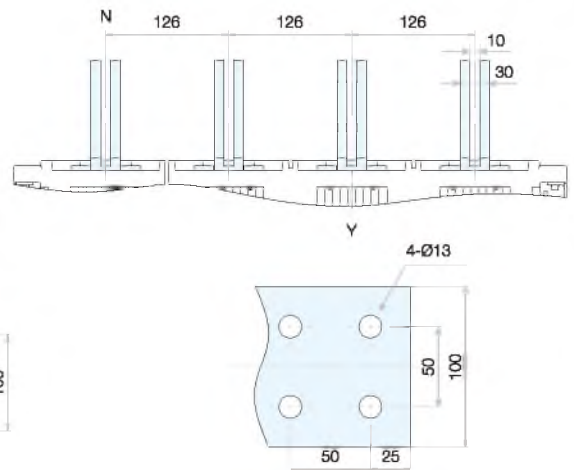
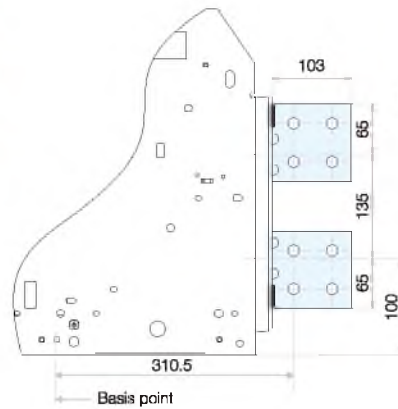
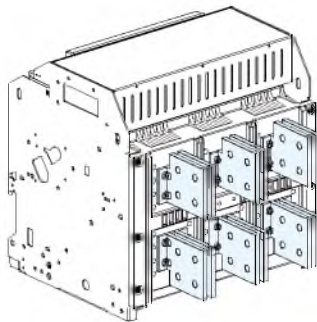
Size C (3SW68-4000) withdrawable circuit-breaker, 3-pole/4-pole

unit in mm

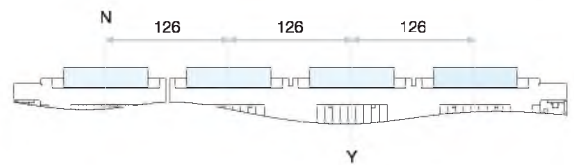
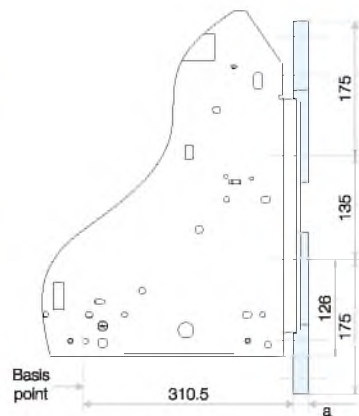
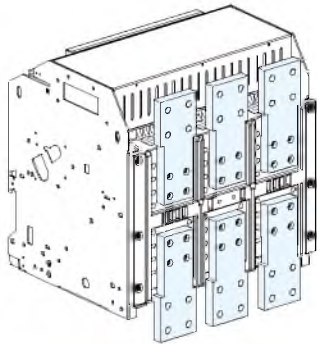
Vertical rear connections for 2000 A to 3600 A



Vertical rear connections for 4000 A

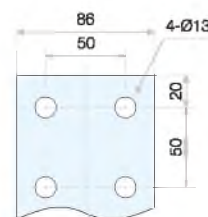


Front connection

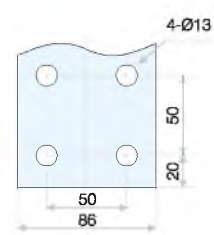


In	a
2000 - 3600 A	15
4000 A	20

Top connection



Bottom connection



Note:
"Y" is the symmetry plane of circuit-breaker cover.

Air Circuit Breakers

Series 3SW68

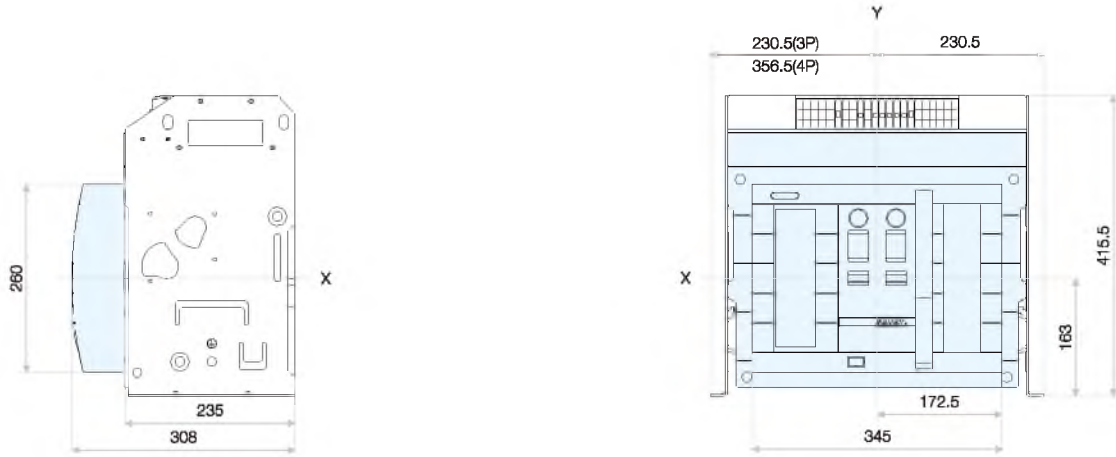
Dimensions

Size C (3SW68-4000) fixed circuit-breaker, 3-pole/4-pole

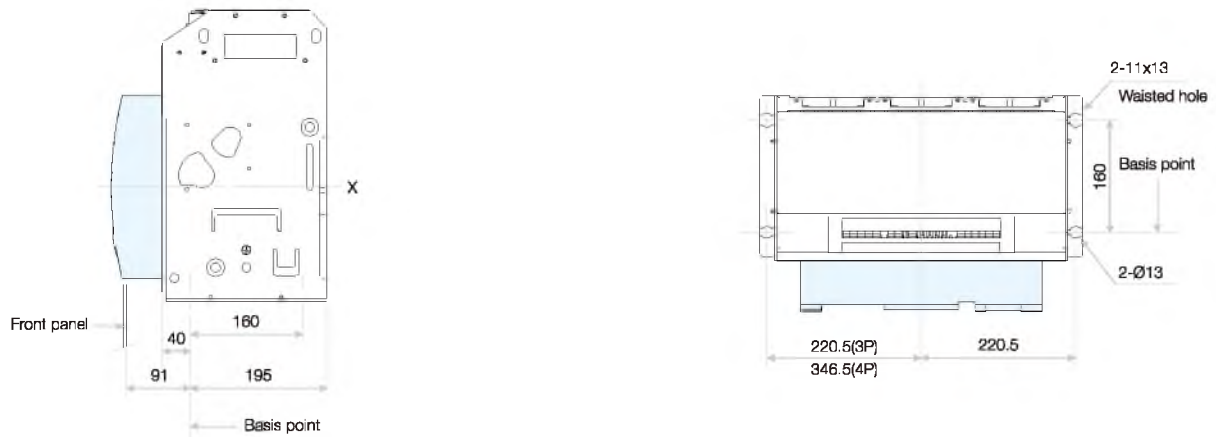
1

Dimension

unit in mm

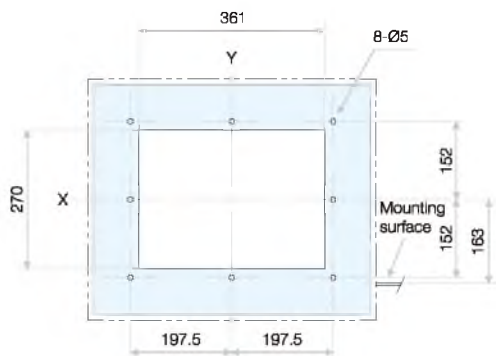


Mounting

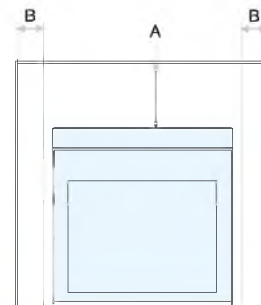


Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

Note:

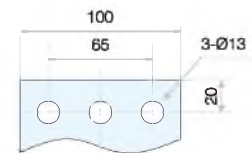
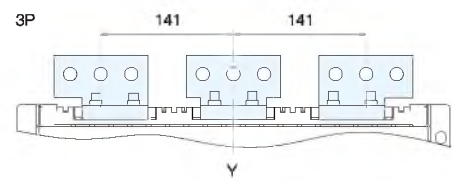
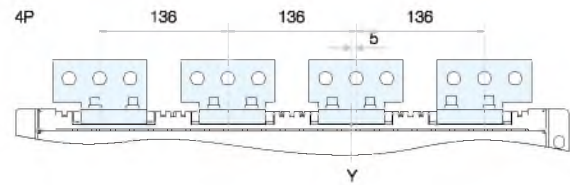
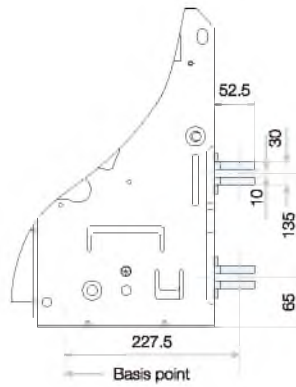
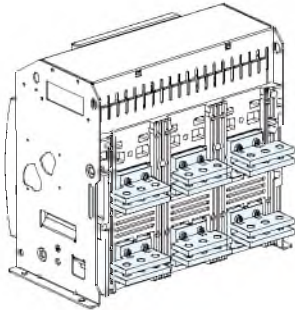
"X" and "Y" are the symmetry planes of circuit-breaker cover.

Dimensions

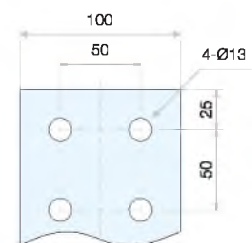
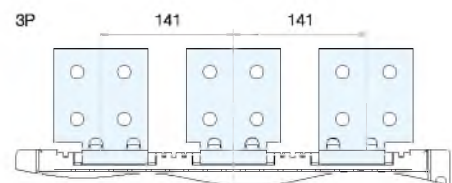
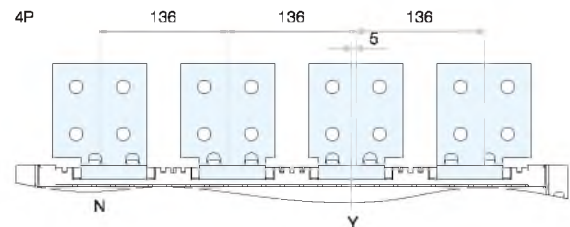
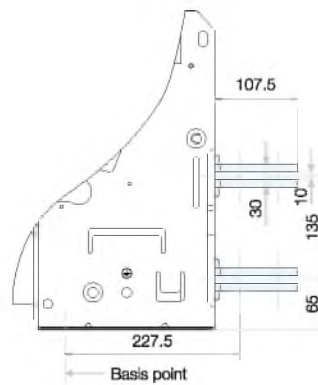
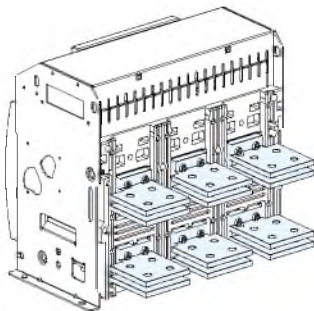
Size C (3SW68-4000) fixed circuit-breaker, 3-pole/4-pole

Horizontal rear connections for 2000 A to 3600 A (standard configuration)

unit in mm



Horizontal rear connections for 4000 A (standard configuration)



Note:

"X" and "Y" are the symmetry planes of circuit-breaker cover.

Air Circuit Breakers Series 3SW68

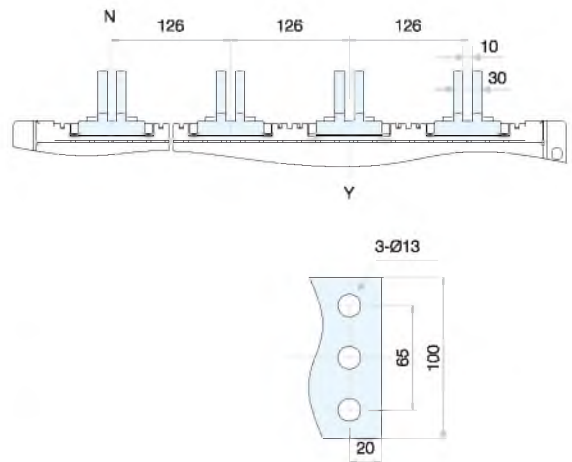
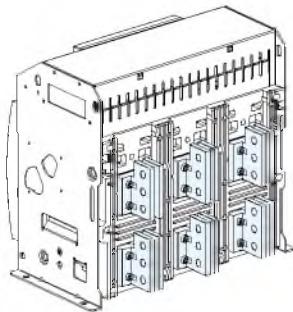
Dimensions

Size C (3SW68-4000) fixed circuit-breaker, 3-pole/4-pole

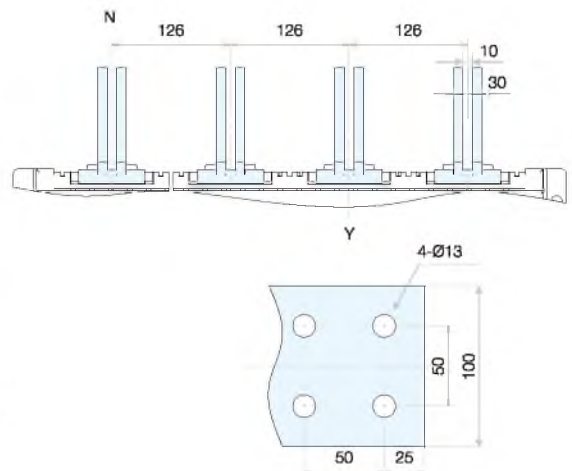
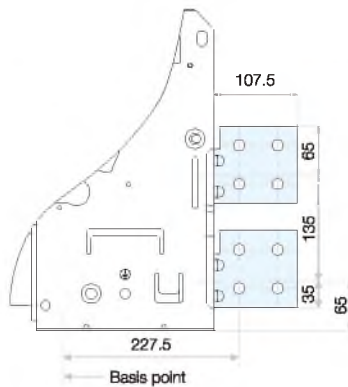
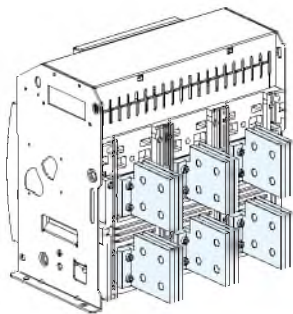
1

Vertical rear connections for 2000 A to 3600 A

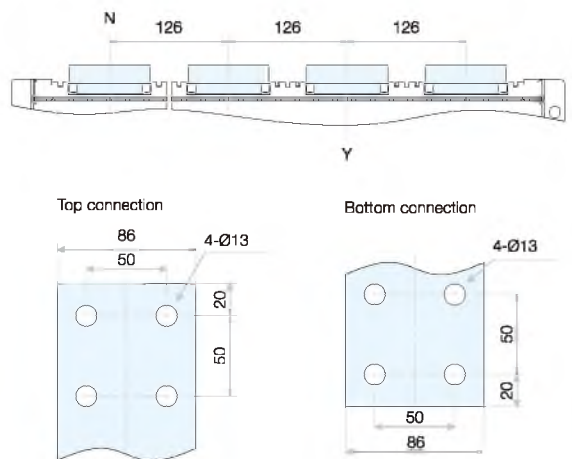
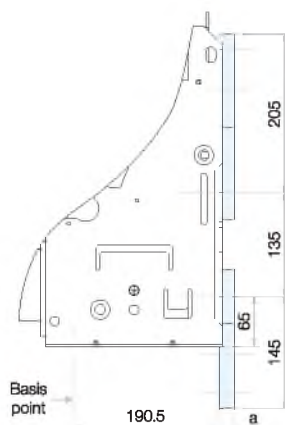
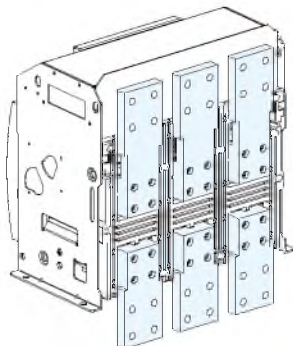
unit in mm



Vertical rear connections for 4000 A



Front connection



In	a
2000 - 3600 A	15
4000 A	20

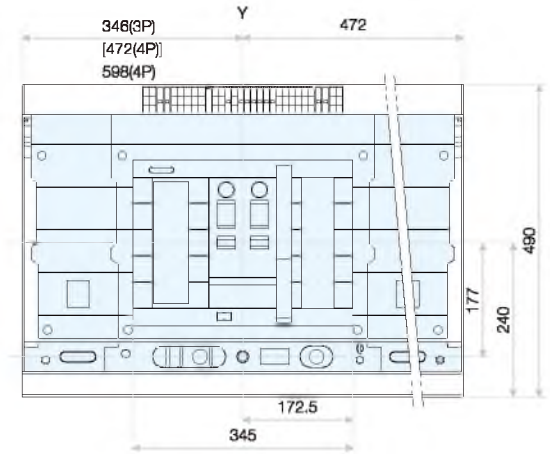
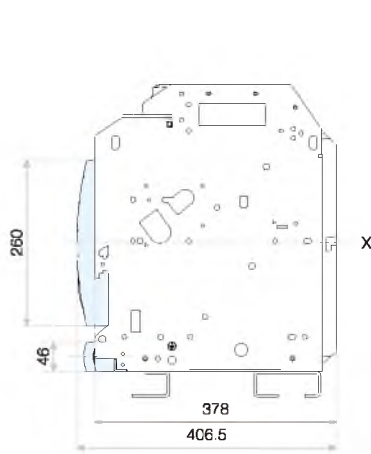
Note:
"Y" is the symmetry plane of circuit-breaker cover.

Dimensions

Size D (3SW68-6300) withdrawable circuit-breaker, 3-pole/4-pole

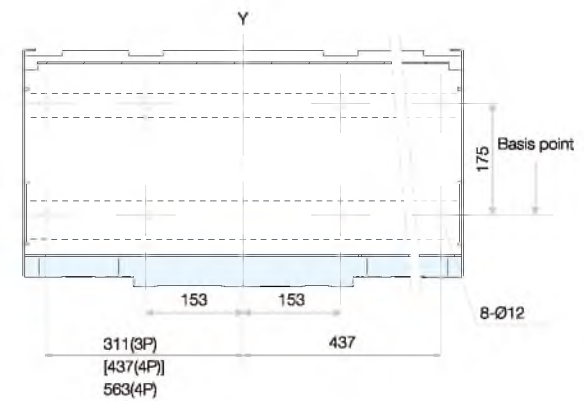
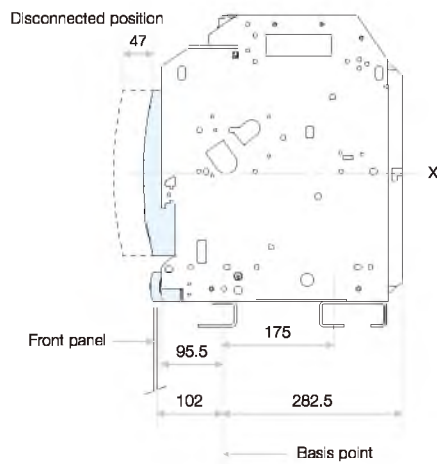
unit in mm

Dimension



Note:
Value in [] is the dimension when the current of Neutral = 0.5 in.

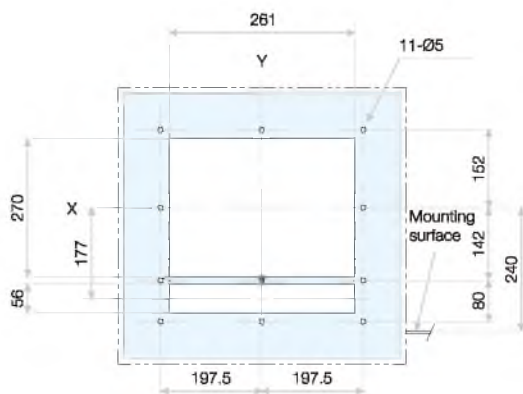
Mounting



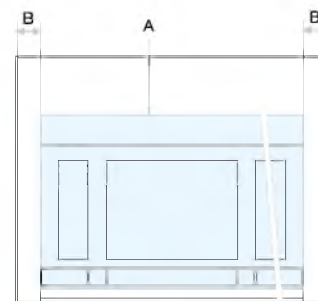
Note:
Value in [] is the dimension when the current of Neutral = 0.5 in.

Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

Note:

"X" and "Y" are the symmetry planes of circuit-breaker cover.

Air Circuit Breakers

Series 3SW68

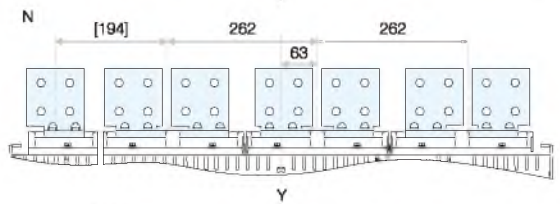
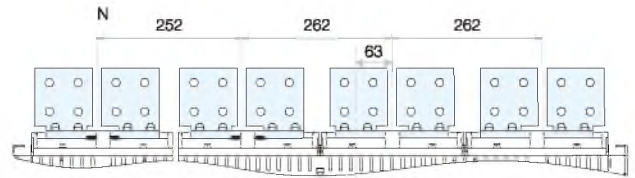
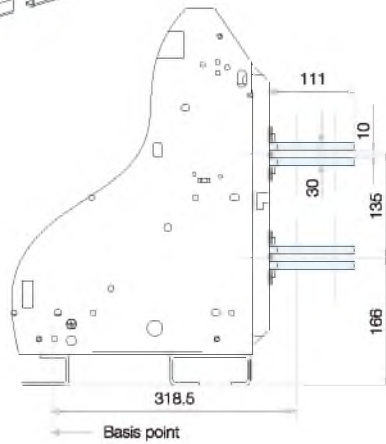
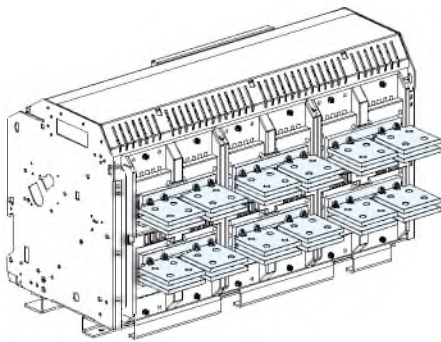
Dimensions

Size D (3SW68-6300) withdrawable circuit-breaker, 3-pole/4-pole

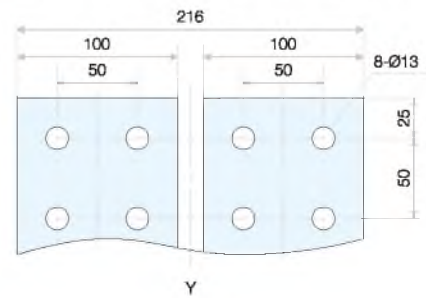
1

Horizontal rear connections for 4000 A and 5000 A (standard configuration)

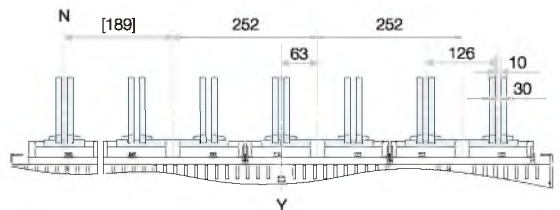
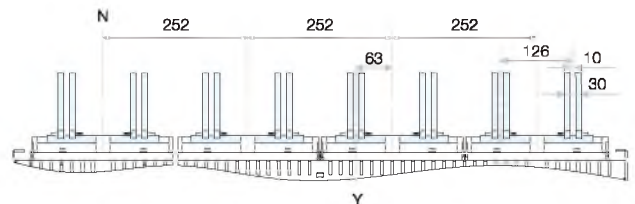
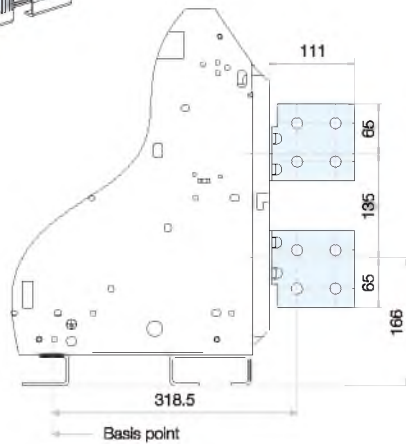
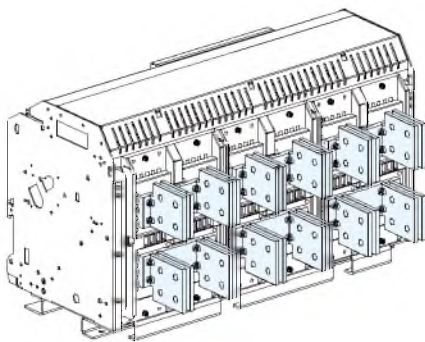
unit in mm



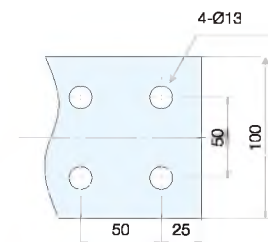
Note:
Value in [] is the dimension when the current of Neutral = 0.5 In.



Vertical rear connections for 6300 A (standard configuration)



Note:
Value in [] is the dimension when the current of Neutral = 0.5 In.



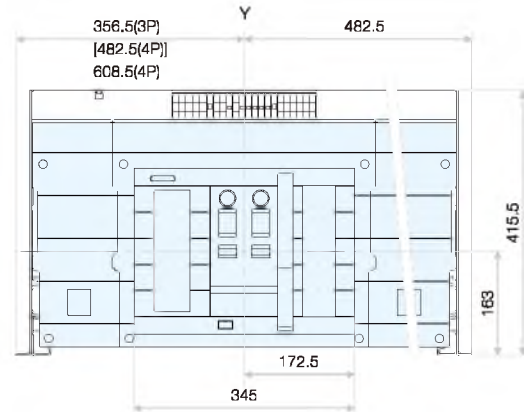
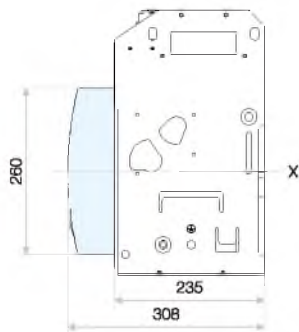
Note:
"Y" is the symmetry plane of circuit-breaker cover.

Dimensions

Size D (3SW68-6300) fixed circuit-breaker, 3-pole/4-pole

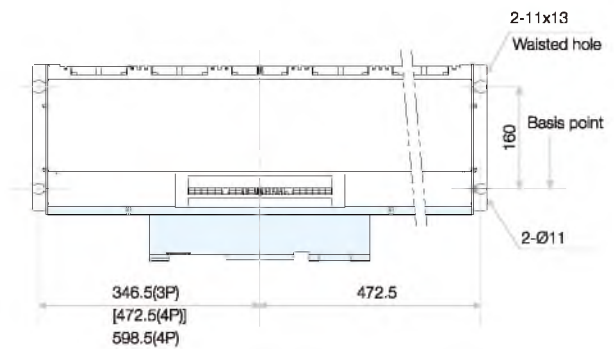
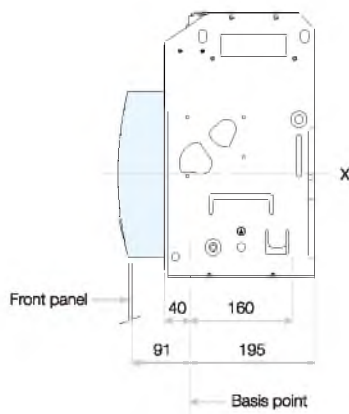
Dimension

unit in mm



Note:
Value in [] is the dimension when the current of Neutral = 0.5 in.

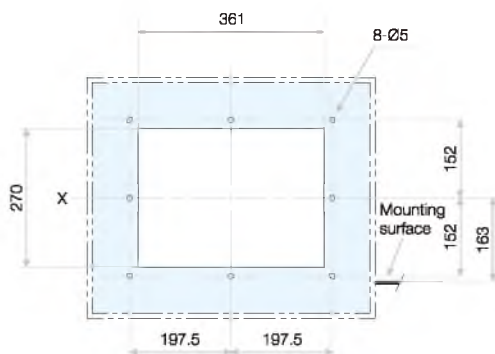
Mounting



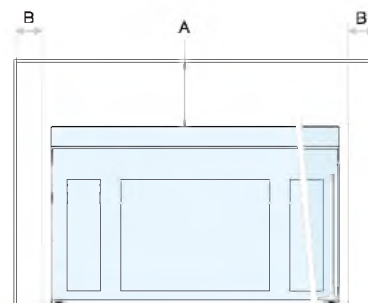
Note:
Value in [] is the dimension when the current of Neutral = 0.5 in.

Door drilling and safety clearances

Door drilling:



Safety clearances:



	Insulated parts	Metal parts	Energized parts
A	0	0	100
B	0	0	60

Note:
"X" and "Y" are the symmetry planes of circuit-breaker cover.

Air Circuit Breakers Series 3SW68

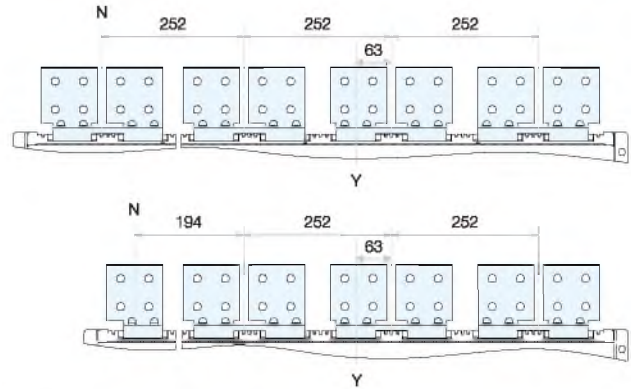
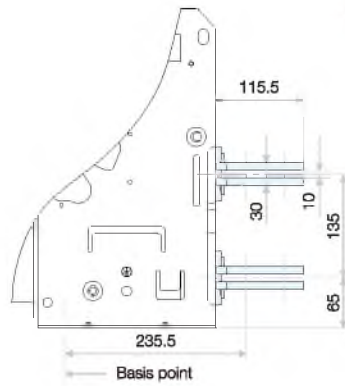
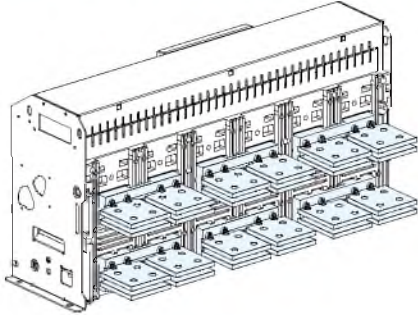
Dimensions

Size D (3SW68-6300) fixed circuit-breaker, 3-pole/4-pole

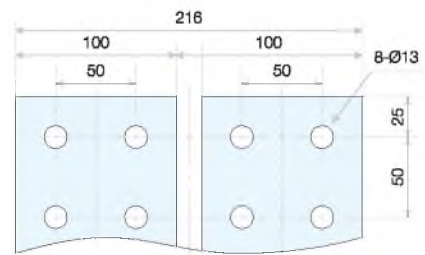
1

Horizontal rear connections for 4000 A and 5000 A (standard configuration)

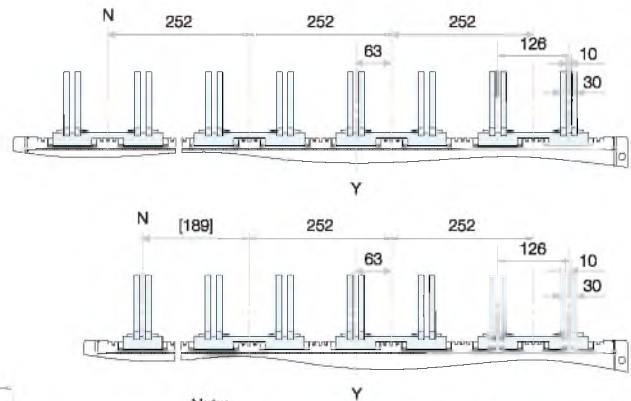
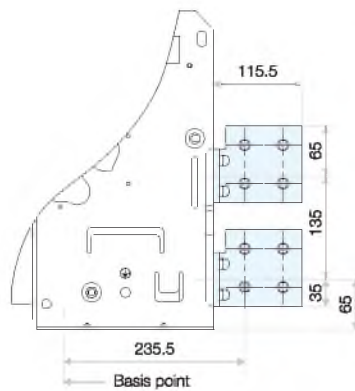
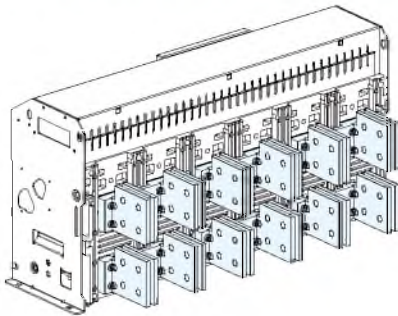
unit in mm



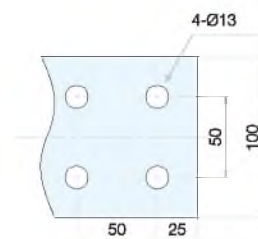
Note:
Value in [] is the dimension when the current of Neutral = 0.5 in.



Vertical rear connections for 6300 A (standard configuration)



Note:
Value in [] is the dimension when the current of Neutral = 0.5 in.



Note:
"Y" is the symmetry plane of circuit-breaker cover.

Electrical diagram

- Reading information

Versions

The electrical diagrams shown are for withdrawable circuit-breakers, but they are also valid for fixed circuit-breakers.

Key

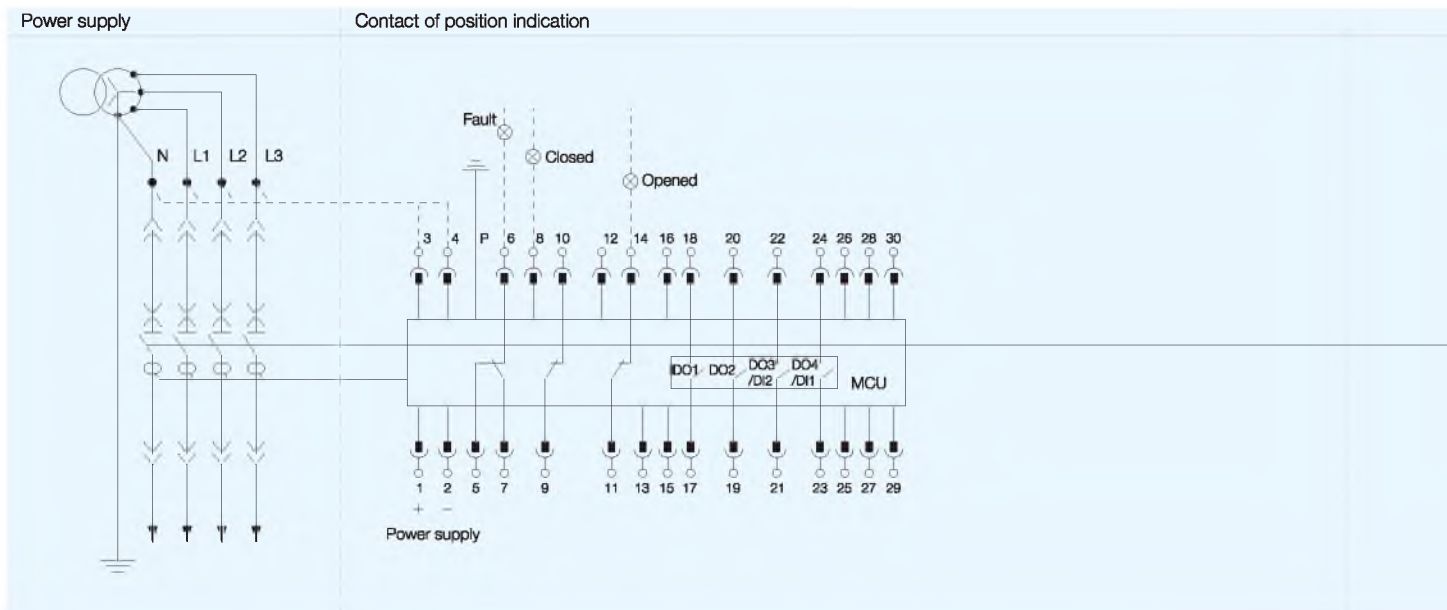
AX	Auxiliary switch	
DT	Closing electromagnet	
DW	Circuit breaker	
ETU	Electronic trip unit	
F	Shunt release	
FU	Fuse	Equipped by user
J1	Relay for remote closing	Equipped by user
J2	Relay for remote opening	Equipped by user
M	Motorized operating mechanism	
Q	Under-voltage release	
Q1 ... Q8	Auxiliary contact 4 NO + 4 NC	
Q9 ... Q14	3-position indication for withdrawable circuit-breakers	
Qa, Qb	Closing indication contact	
Qc, Qd	Open indication contact	
QY	Time-delay under-voltage release	
Res	Remote reset	
S1 ... S7	Indicators	Equipped by user
SA	Limit switch of motor	
SAL	Indicator contact for fault trip	
SB1	Closing button	Equipped by user
SB2	Shunt release button	Equipped by user
SB3	Under-voltage release button	Equipped by user
SB4	Remote reset button	Equipped by user
TA	Current transformer	
TN	Residual current transformer	Offered upon request
XT	Secondary wiring	

Air Circuit Breakers Series 3SW68

Electrical diagram

- Electrical diagram of secondary circuit for electronic trip unit 3SW68-AL, 3SW68-AM & 3SW68-AH

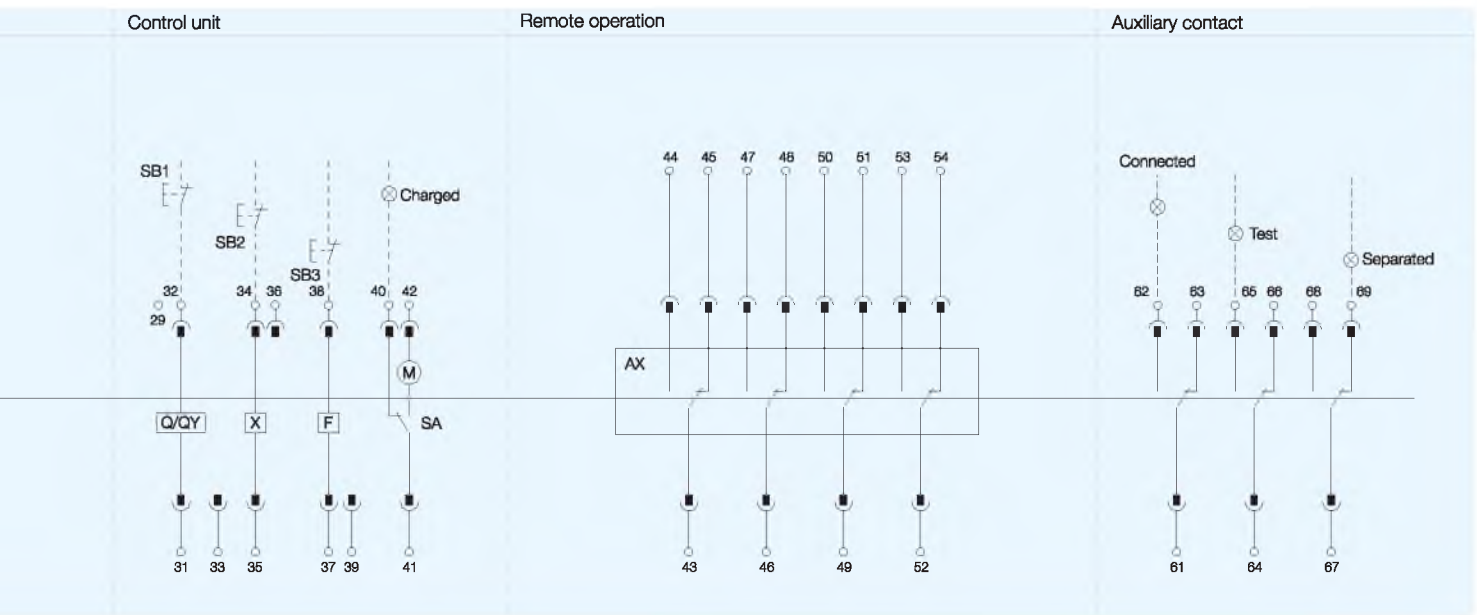
1



Power supply	Contact of position indication																													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Terminal box	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

- 1, 2: Auxiliary power supply for electronic trip unit
- P: Protection for earth connection, connect to side board of circuit breaker
- 3, 4: Input of signal for external current transformer
 - Type T: connect to output terminal of external ZT100
 - Type W: connect to output terminal of external ZCT1
- 5, 6, 7: Signal output of fault trip indication
- 8, 9, 10: Signal output of closing indication
- 11, 12, 14: Signal output of opening indication
- 13: Shield grounding for communication
- 15, 16: Output of communication
- 17 ... 24: Programmable I/O
 - DO: DC 110 V 0.5 A or AC 250 V 5A
 - DI: DC 110 ... 130 V or AC 110 ... 250 V
 - No signal unit: all terminals are blank
 - Type S1 signal unit: 4 DO mode
 - 17, 18: Programmable output contact 1 (DO 1)
 - 19, 20: Programmable output contact 2 (DO 2)
 - 21, 22: Programmable output contact 3 (DO 3)
 - 23, 24: Programmable output contact 4 (DO 4)
 - Type S2 signal unit: 3 DO + 1 DI mode
 - 17, 18: Programmable output contact 1 (DO 1)
 - 19, 20: Programmable output contact 2 (DO 2)
 - 21, 22: Programmable output contact 3 (DO 3)
 - 23, 24: Programmable switch input contact 1 (DI 1)
 - Type S3 signal unit: 2 DO + 2 DI mode
 - 17, 18: Programmable output contact 1 (DO 1)
 - 19, 20: Programmable output contact 2 (DO 2)
 - 21, 22: Programmable switch input contact 2 (DI 2)
 - 23, 24: Programmable switch input contact 1 (DI 1)
- 25 ... 28: Input of voltage signal
 - Must be connected to incoming side of power supply.
 - Keep blank if no any optional function is selected.
- 29, 30: Input of signal for external N-pole CT under 3P+N type grounding protection

Electrical diagram



Control unit

○—○	○—○	○—○	○—○
31	33	37	40
○—○	○—○	○—○	○—○
32	34	38	41
			○—○
			42

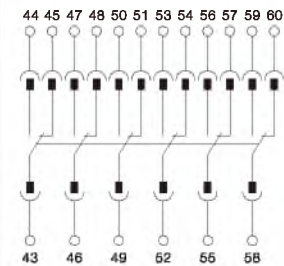
31, 32: Power supply for under voltage (or with time delay) release
 34, 35: Power supply for closing coil
 37, 38: Power supply for shunt release
 40, 41, 42: Power supply and signal output of charged

Remote operation

○—○	○—○	○—○	○—○	○—○	○—○
43	46	49	52	55	58
○—○	○—○	○—○	○—○	○—○	○—○
44	47	50	53	56	59
○—○	○—○	○—○	○—○	○—○	○—○
45	48	51	54	57	60

43, 46: Output terminals of auxiliary switch

6 convertible contact is optional:



Auxiliary contact

○—○	○—○	○—○
61	64	67
○—○	○—○	○—○
62	65	69

61, 62: Contact of "connected" position indication
 64, 65: Contact of "test" position indication
 67, 69: Contact of "separated" position indication

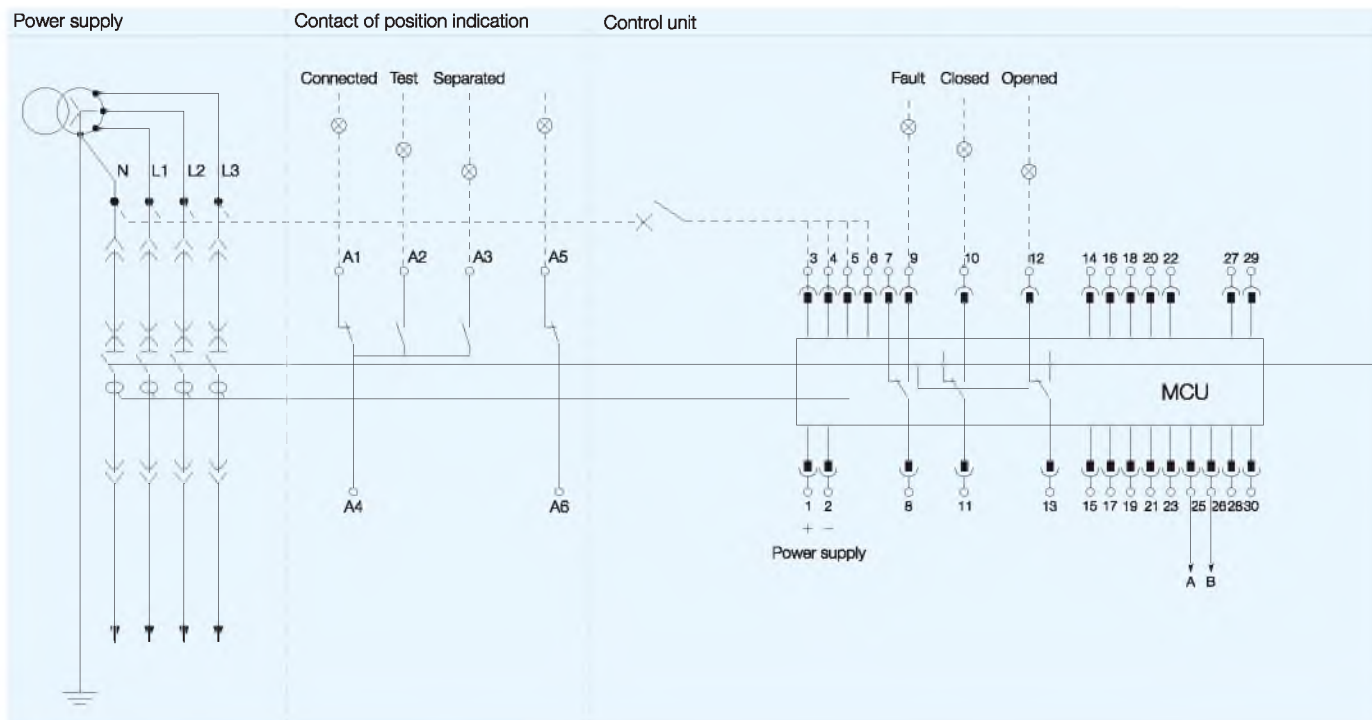
Air Circuit Breakers

Series 3SW68

Electrical diagram

- Electrical diagram of secondary circuit for electronic trip unit 3SW68-BL, 3SW68-BM & 3SW68-BH

1



Power supply	Contact of position indication		Control unit												
	O—O	O—O	O—O	O—O	O	O	O	O	O	O	O	O	O	O	O
	A1	A4	1	4	7	10	13	16	19	22	25	28			
Terminal box	O—O	O—O	O—O	O—O	O	O	O	O	O	O	O	O	O	O	O
	A2	A5	2	5	8	11	14	17	20	23	26	29			
	O—O	O—O	O—O	O—O	O	O	O	O	O	O	O	O	O	O	O
	A3	A6	3	6	9	12	15	18	21		27	30			

A1, A2: Connect to contact of position (optional)
 A4, A2: Contact of "test" position indication (optional)
 A4, A3: Contact of "separated" position indication (optional)
 A6, A5: Contact of locked position indication (optional)

1, 2: Auxiliary power supply for electronic trip unit
 3, 4, 5, 6: For voltage display, three-phase voltage input of A, B, C and N (optional)
 7, 8, 9: Signal output of fault trip indication
 10, 11: Signal output of closing indication
 12, 13: Signal output of opening indication
 14, 15: Relay input DI1 (optional, see below table 1), "Zone interlock" if default
 16, 17: Relay input DO1 (optional, see below table 2), "Zone interlock" if default
 18, 19: Relay input DO2 (optional, see below table 2), general use if default
 20, 21: Relay input DO3 (optional, see below table 2), general use if default
 22, 23: Relay input DO4 (optional, see below table 2), general use if default
 25, 26: Communication output of electronic trip unit
 27, 28: Input of signal for external current transformer (type W) (optional)
 29, 30: Input of signal for external current transformer (type T) (optional)

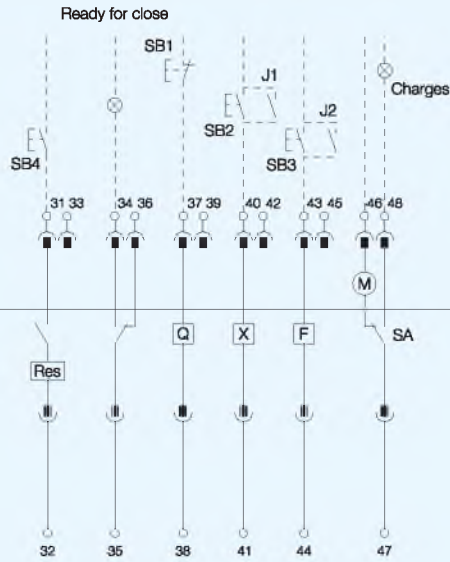
Table 1: function of relay output DI1

General	Alarm	Trip
Zone interlock	Earth interlock	Short-circuit interlock

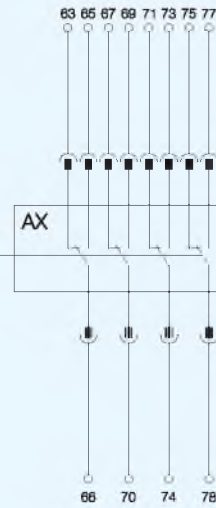
Table 2: function of relay output DO1 ... Do4

General	Alarm	Fault trip
Self-diagnosis alarm	Load monitor 1	Load monitor 2
Overload pre-alarm	Overload fault	Short-time delay fault
Instantaneous fault	Earth/residual current fault	Earth alarm
Current imbalance fault	Neutral fault	Under voltage fault
Over voltage fault	Voltage imbalance fault	Under frequency fault
Over frequency fault	Required value fault	Reverse power fault
Zone interlock	Closing	Opening
Phase sequence fault	MCR fault	Earth interlock
Short-circuit interlock	Required value fault of phase A	Required value fault of phase B
Required value fault of phase C	Required value fault of phase N	Required value over limit

Remote operation



Auxiliary contact



Remote operation

○—○	○—○	○—○	○—○	○—○	○—○
31	33	37	40	43	46
○—○	○—○	○—○	○—○	○—○	○—○
32	34	38	41	44	47
				○—○	48

- 31, 32: Power supply for remote reset (optional)
- 34, 35: Signal output of ready for closing (optional)
- 37, 38: Power supply for under voltage (or with time delay) release
- 40, 41: Power supply for closing coil
- 43, 44: Power supply for shunt release
- 46, 47, 48: Power supply and signal output of charged

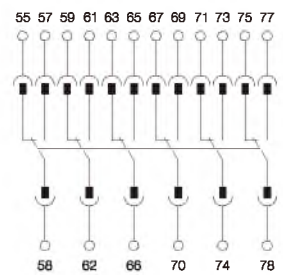
Auxiliary contact

○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○
55	58	61	64	67	70	73	76
○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○
56	59	62	65	68	71	74	77
○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○
57	60	63	66	69	72	75	78

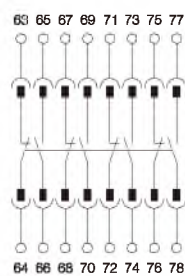
55 ... 78: Terminal output connected to auxiliary switch

There are three optional modes:

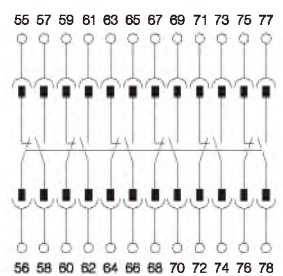
Mode 1: 6 convertible contact



Mode 2: 4 NO + 4 NC



Mode 3: 6 NO + 6 NC

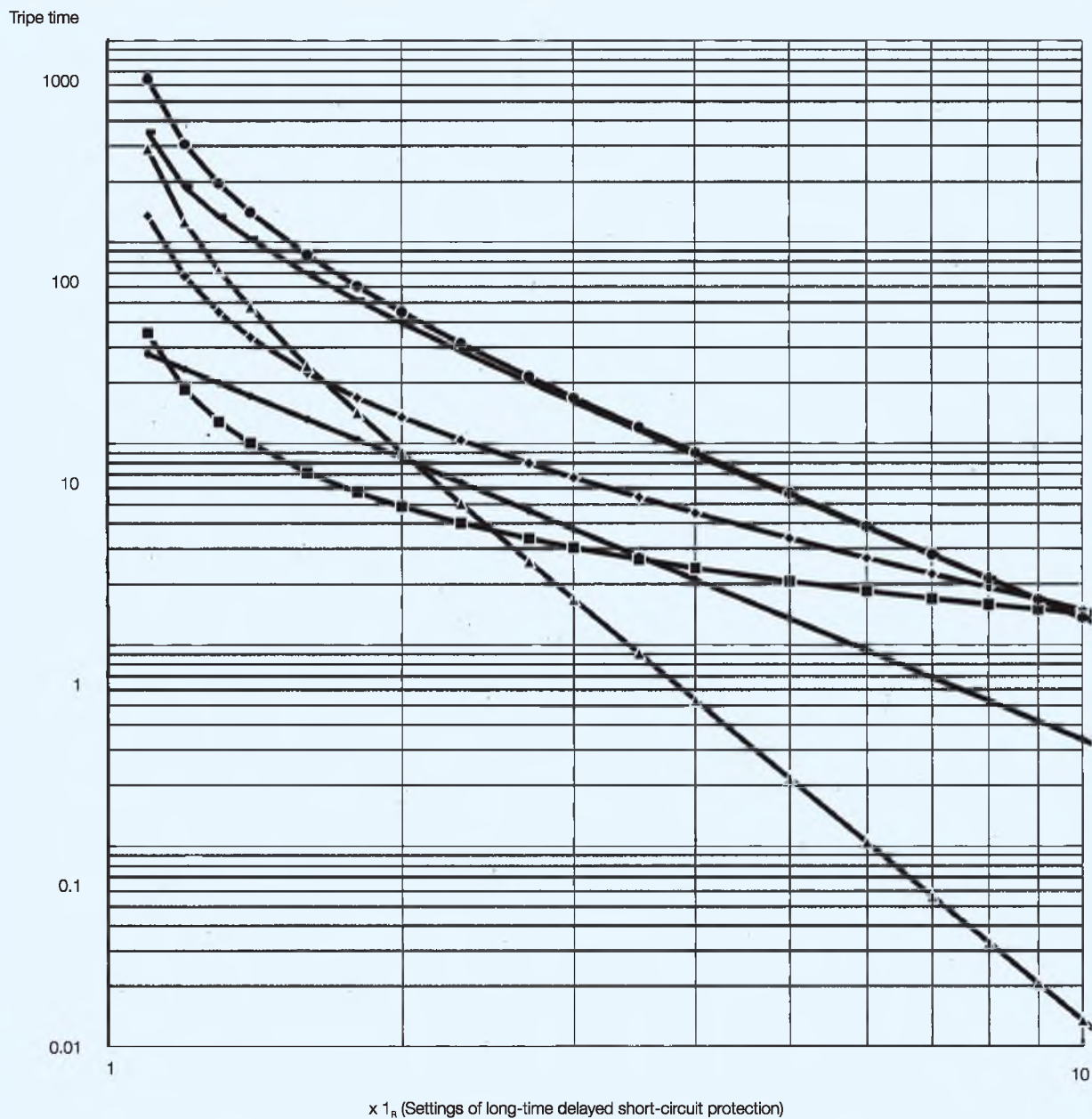


Air Circuit Breakers Series 3SW68

Characteristic curves for overload protection

- Comparison between different curves (curve rate: C8)

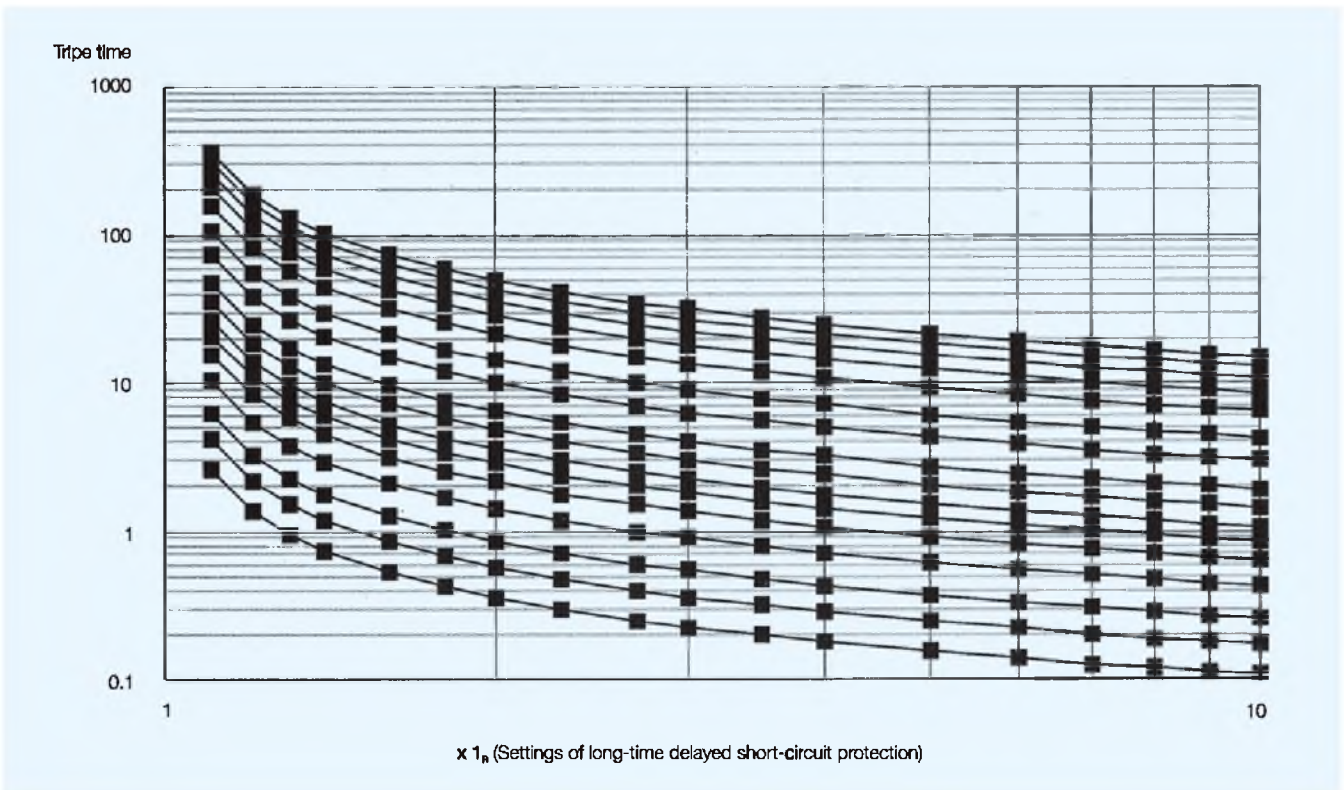
1



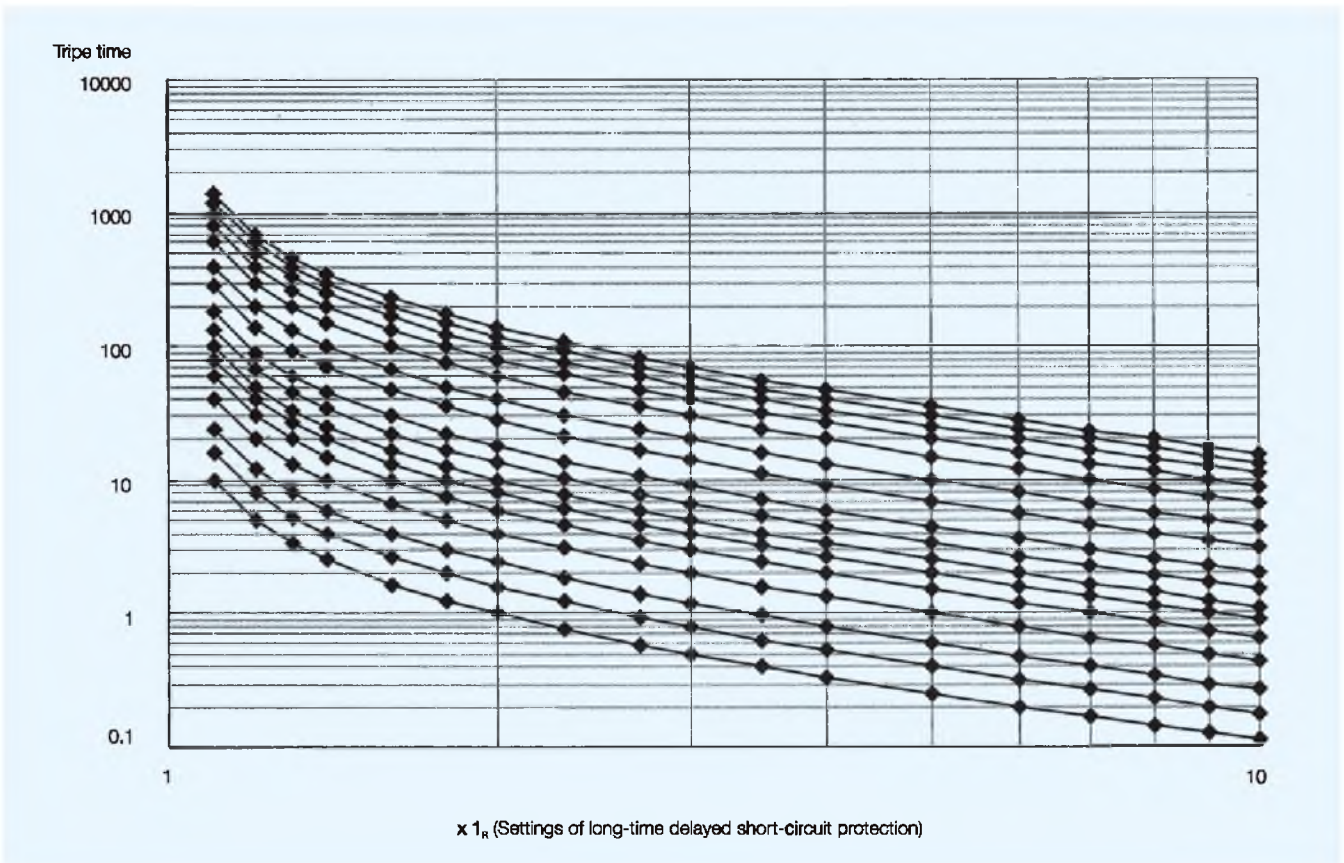
- Standard inverse time protection C8
- Fast inverse time protection C8
- Express inverse time protection (G) C8
- Express inverse time protection (M) C8
- High-voltage fuse compatibility C8
- I² C1

Characteristic curves for overload protection

- Standard inverse time protection C8



- Fast inverse time protection C8

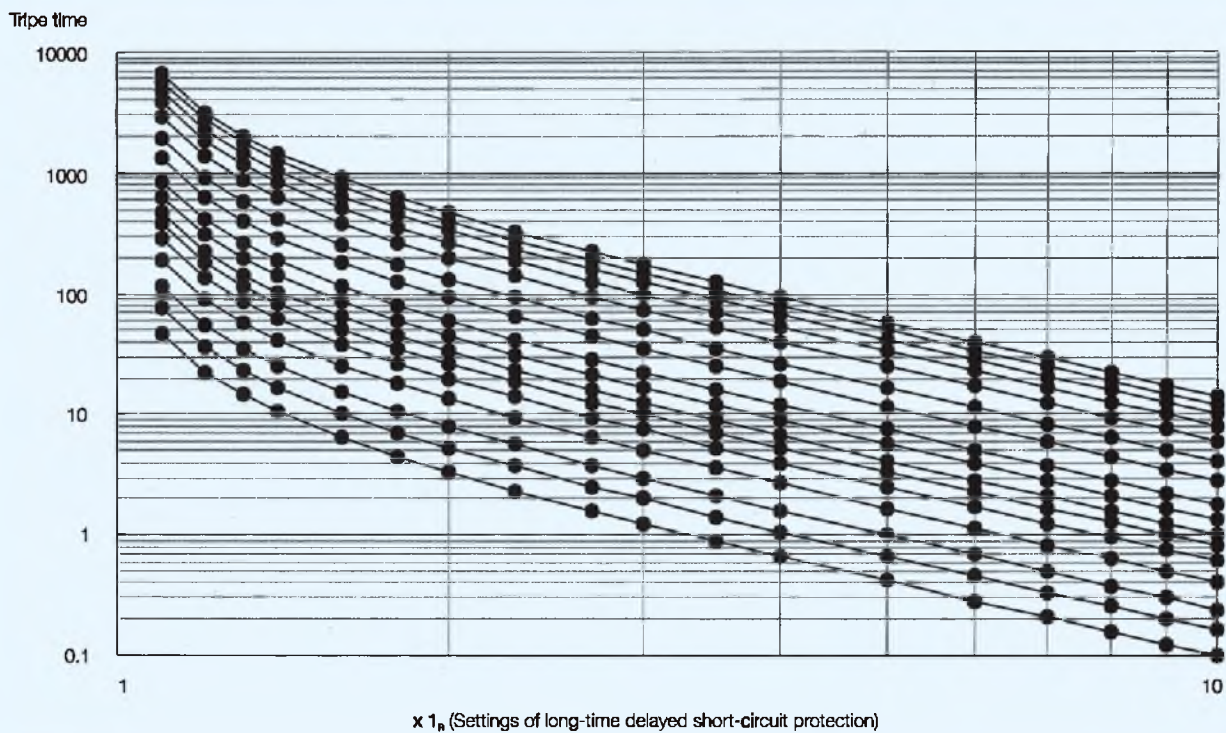


Air Circuit Breakers Series 3SW68

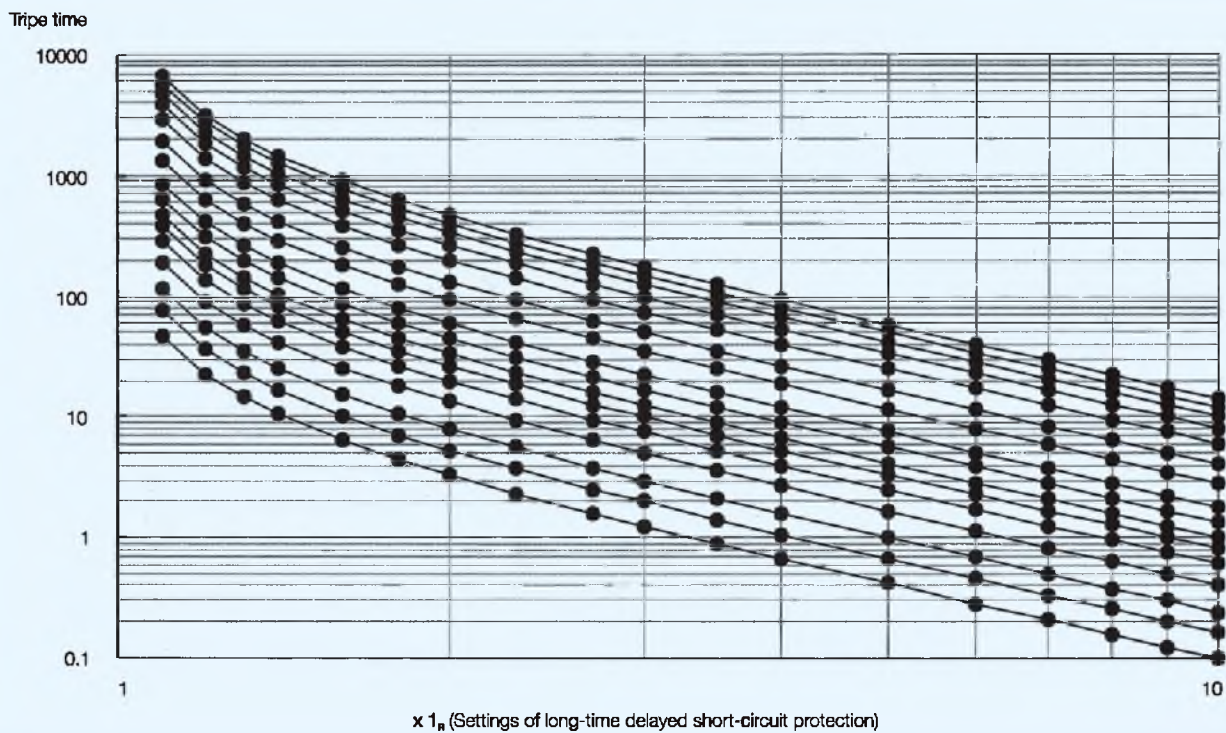
Characteristic curves for overload protection

- Express inverse time protection (for power distribution) C8

1

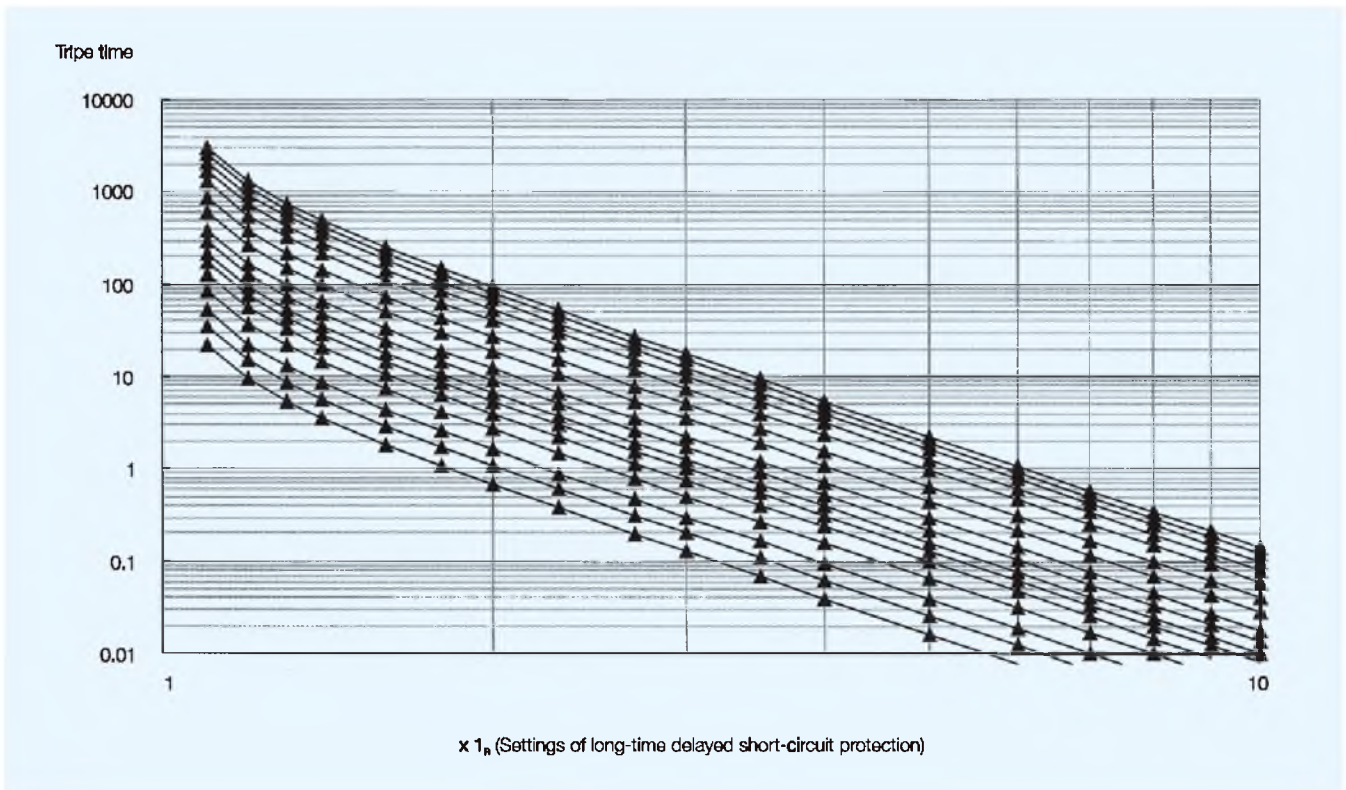


- Express inverse time protection (for motor protection) C8

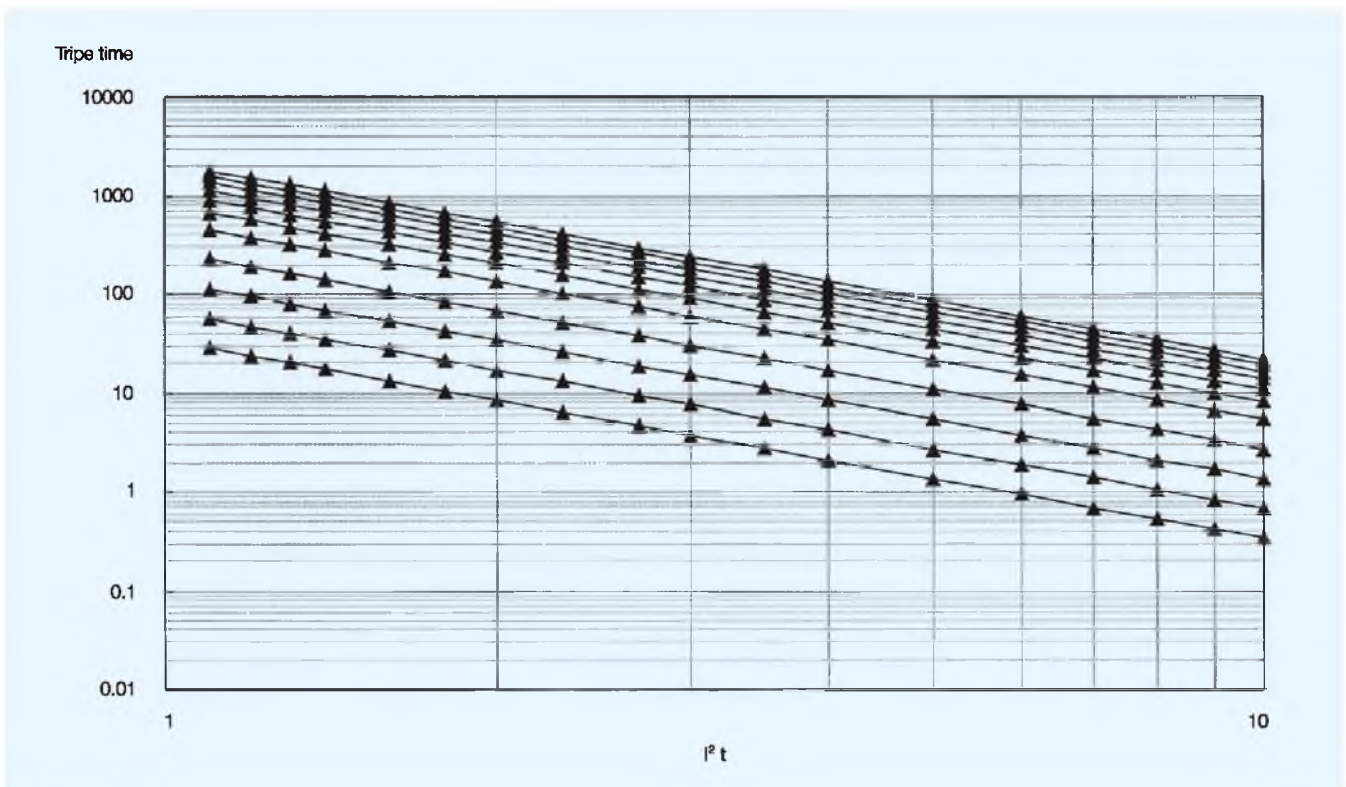


Characteristic curves for overload protection

- High-voltage fuse compatibility C8



- Express inverse time protection (for motor protection) C8

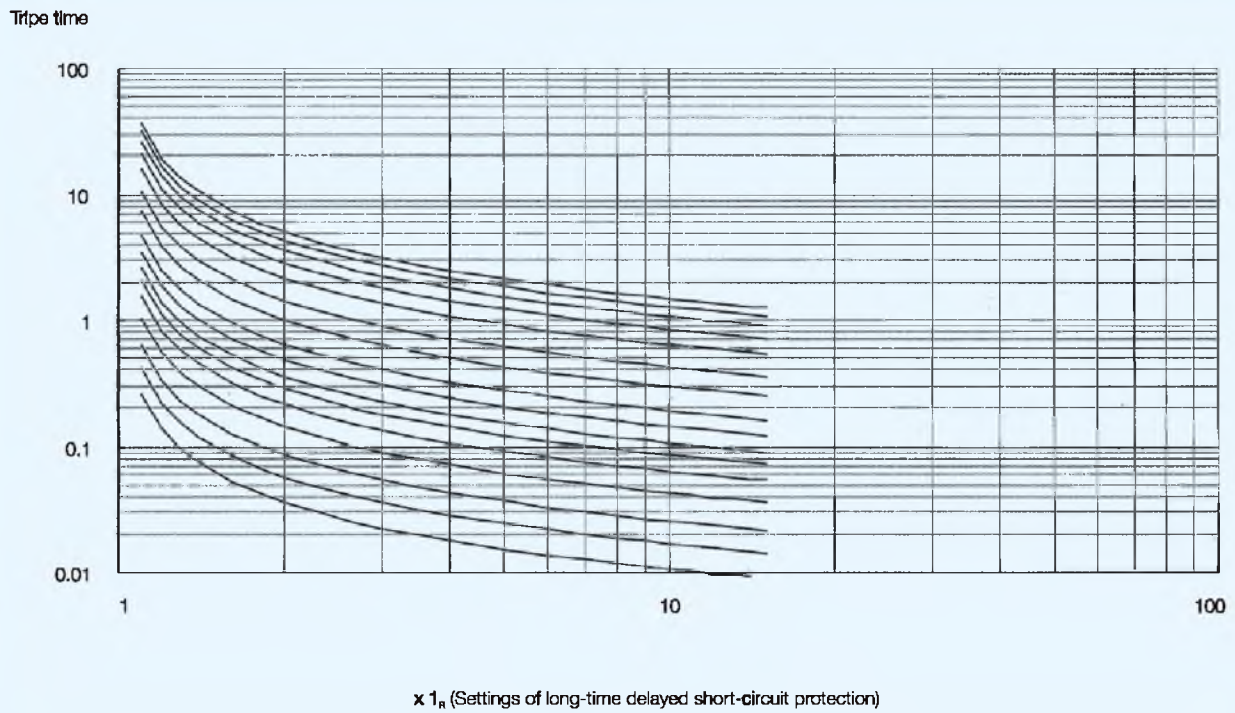


Air Circuit Breakers Series 3SW68

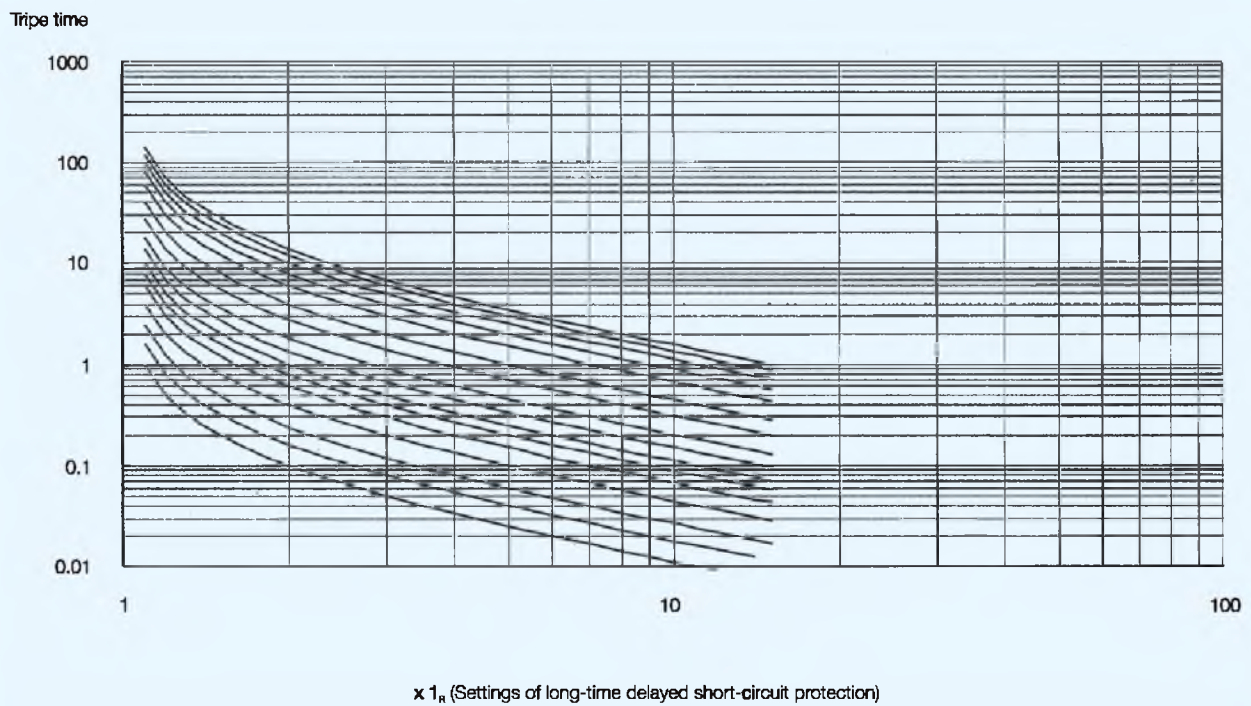
Characteristic curves for overload protection

- Short-time delayed inverse time protection - Standard inverse time

1

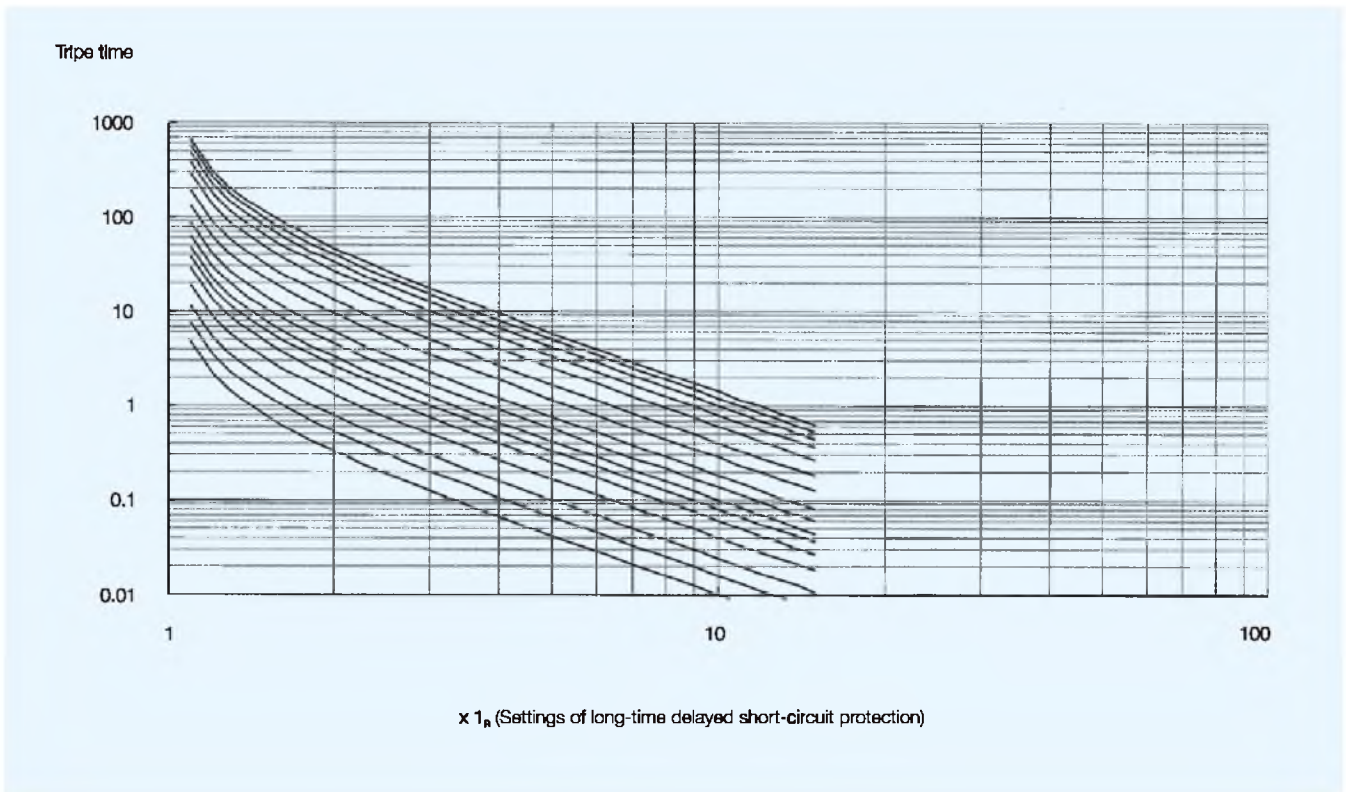


- Short-time delayed inverse time protection - Fast inverse time

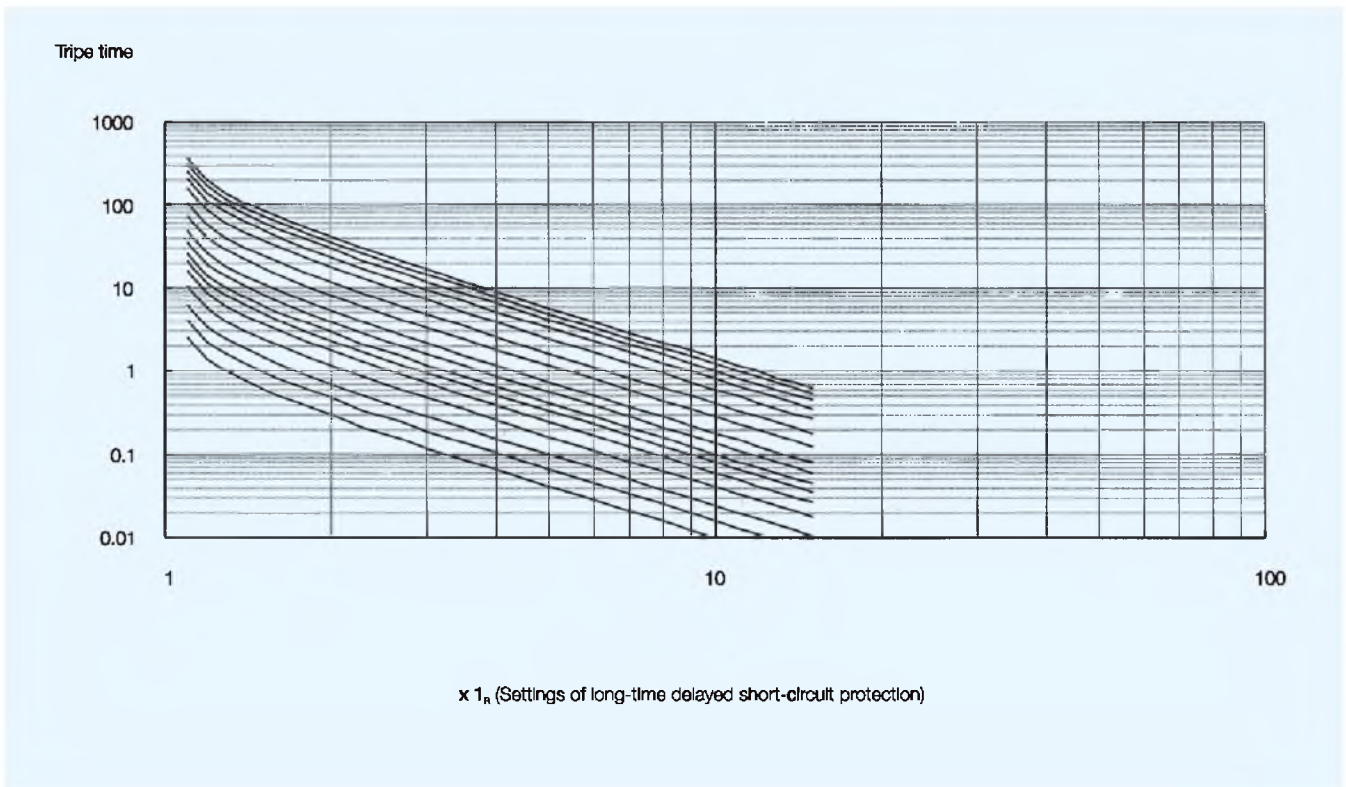


Characteristic curves for overload protection

- Short-time delayed inverse time protection - Express inverse time (for power distribution)



- Short-time delayed inverse time protection - Express inverse time (for power distribution)

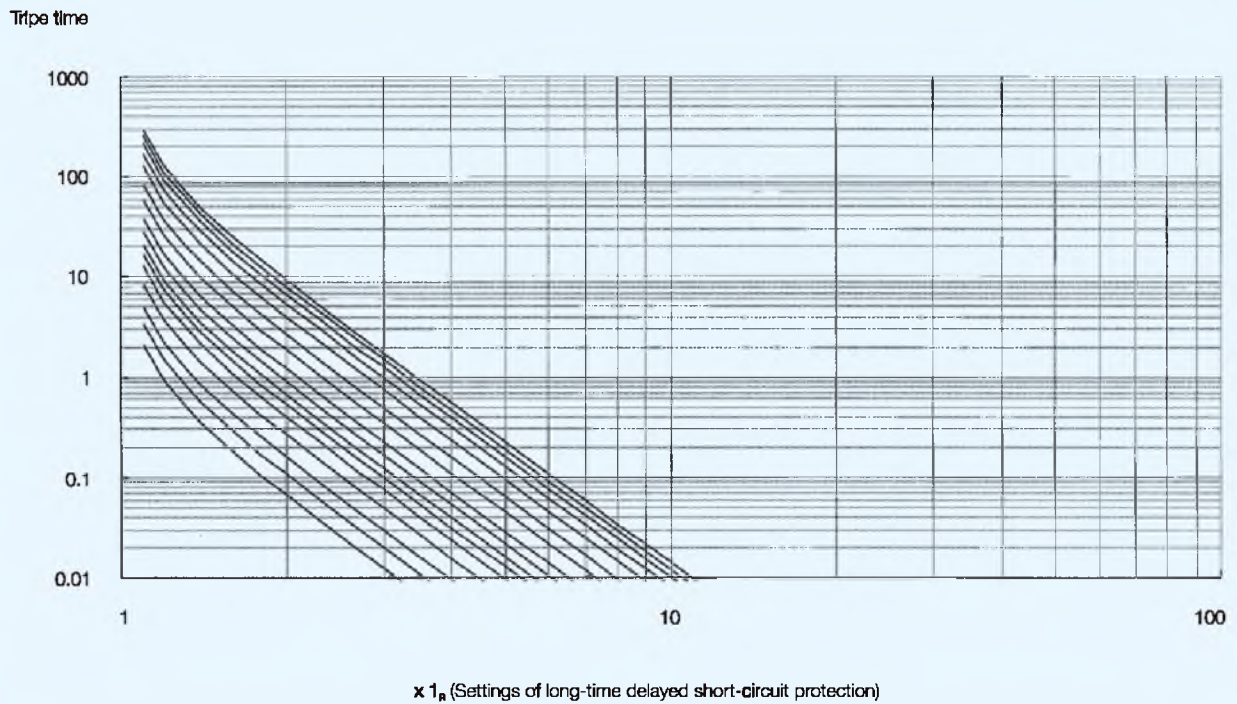


Air Circuit Breakers Series 3SW68

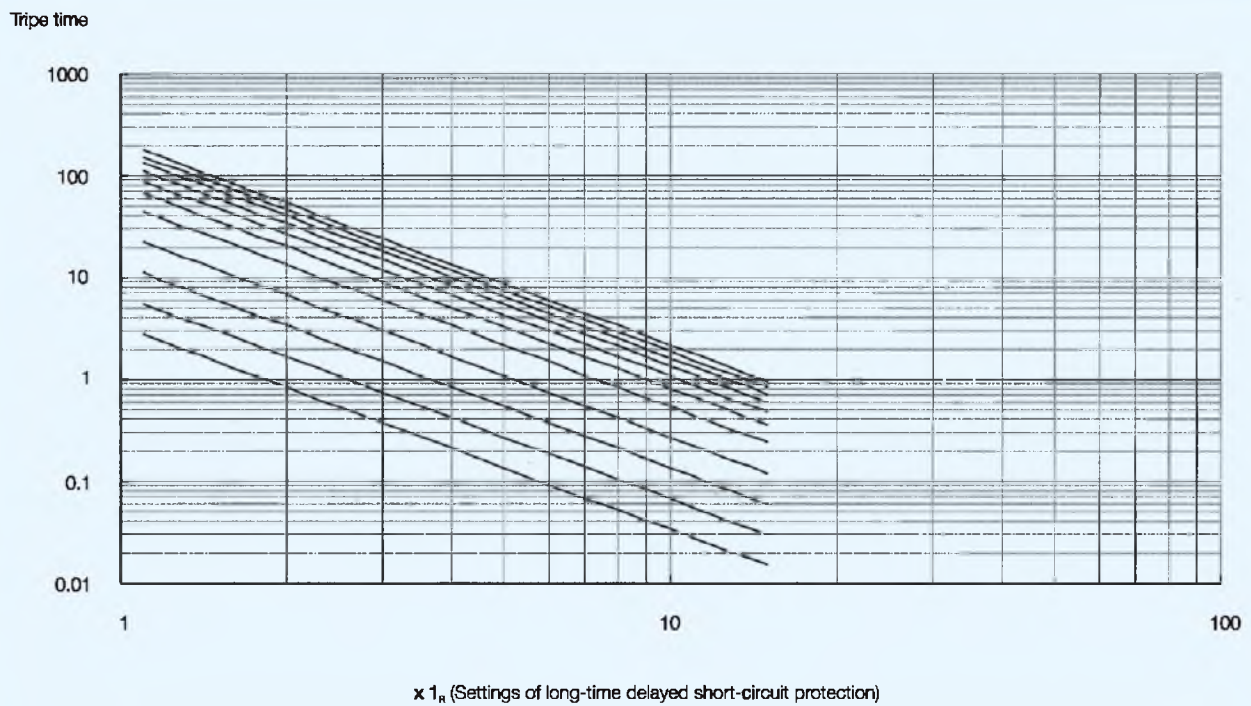
Characteristic curves for overload protection

- Short-time delayed inverse time protection - high voltage fuse compatibility

1

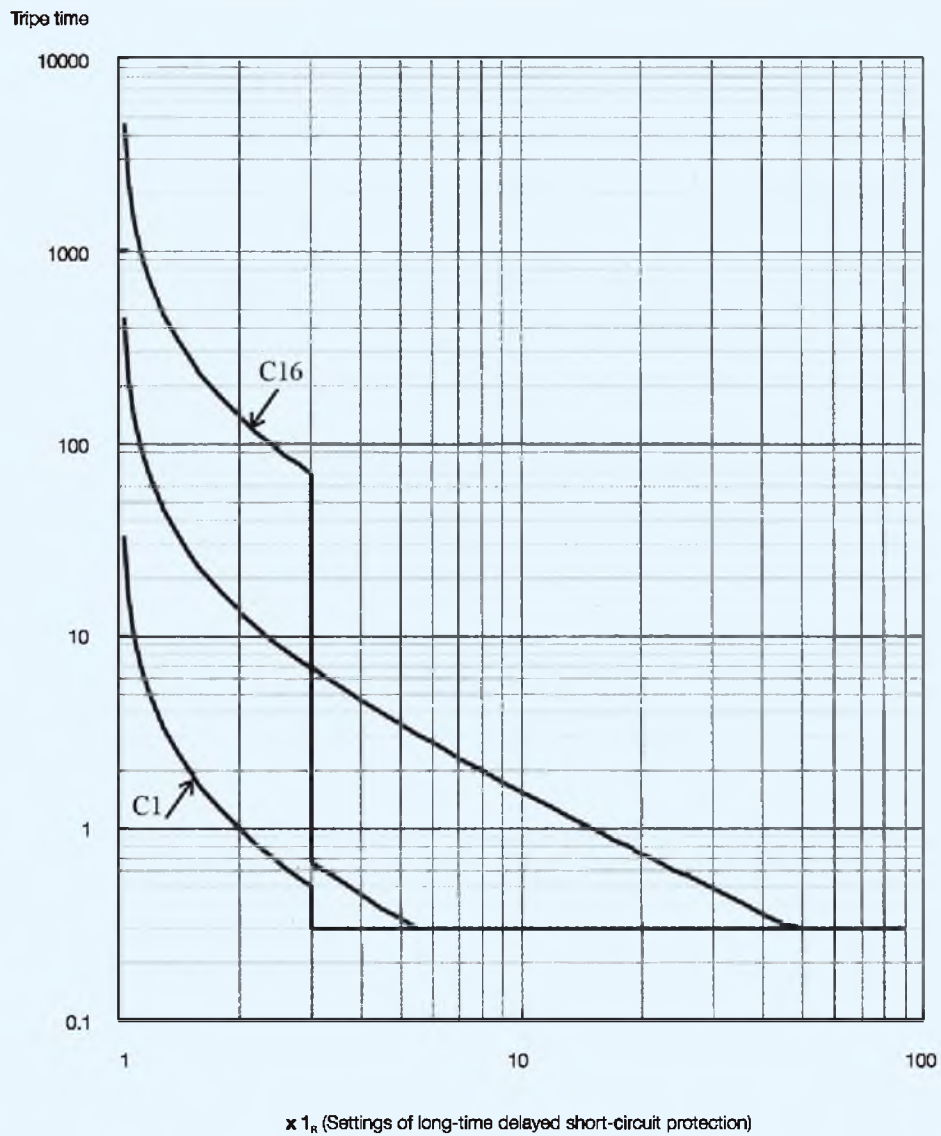


- Short-time delayed inverse time protection



Curve examples

- Example of inverse time protection



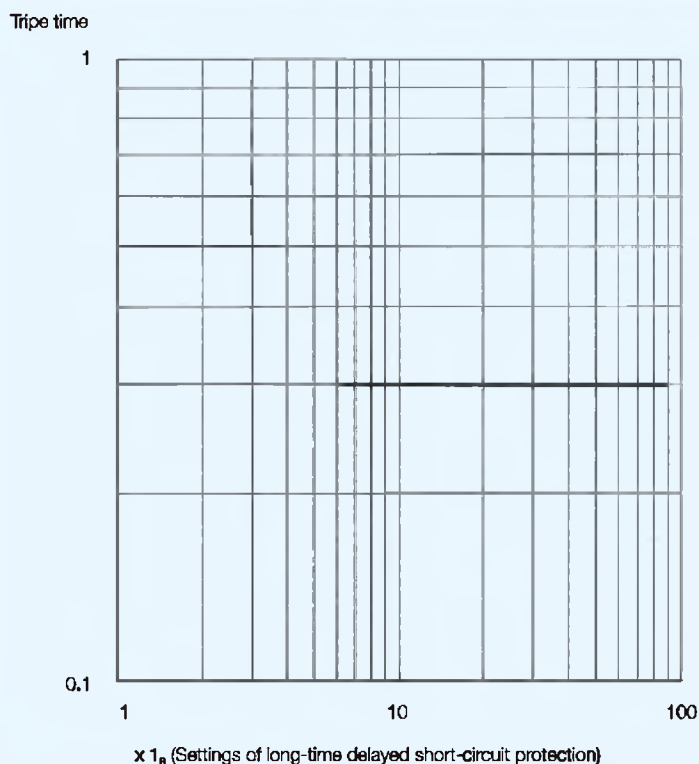
The curve example is based on below the settings:
 Curve type: Fast inverse time protection
 Curve rate: C1, C8 and C16
 Action value setting of short-time delayed inverse time: $3 \times I_{set}$
 Time setting of short-time delayed definite time: 0.3 s

Air Circuit Breakers Series 3SW68

Curve examples

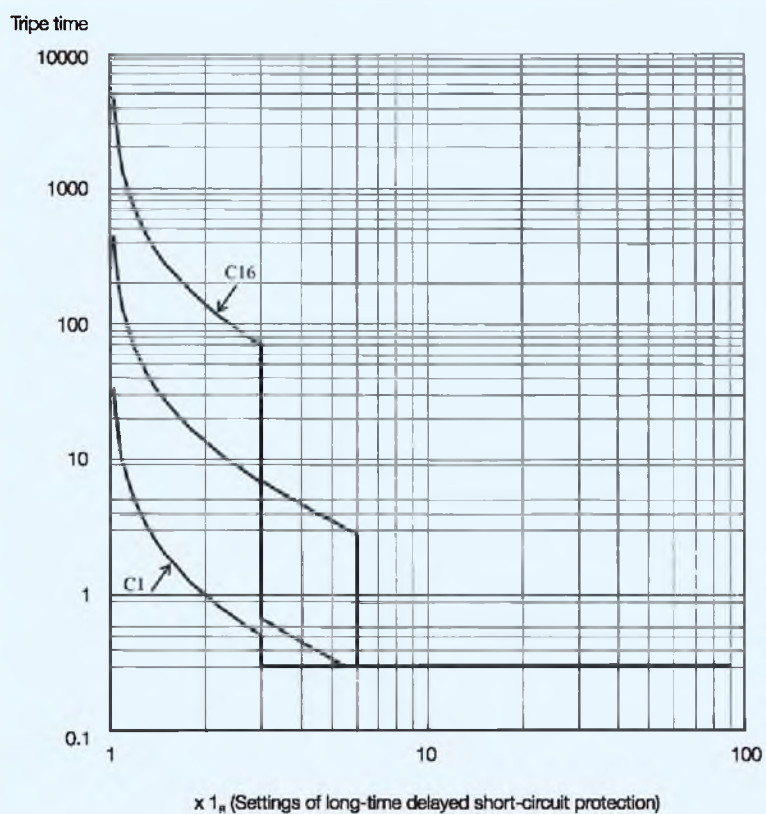
- Example of definite time protection

1



The curve example is based on below the settings:
Action value setting of short-time delayed definite time: $6 \times I_n$
Time setting of short-time delayed definite time: 0.3 s

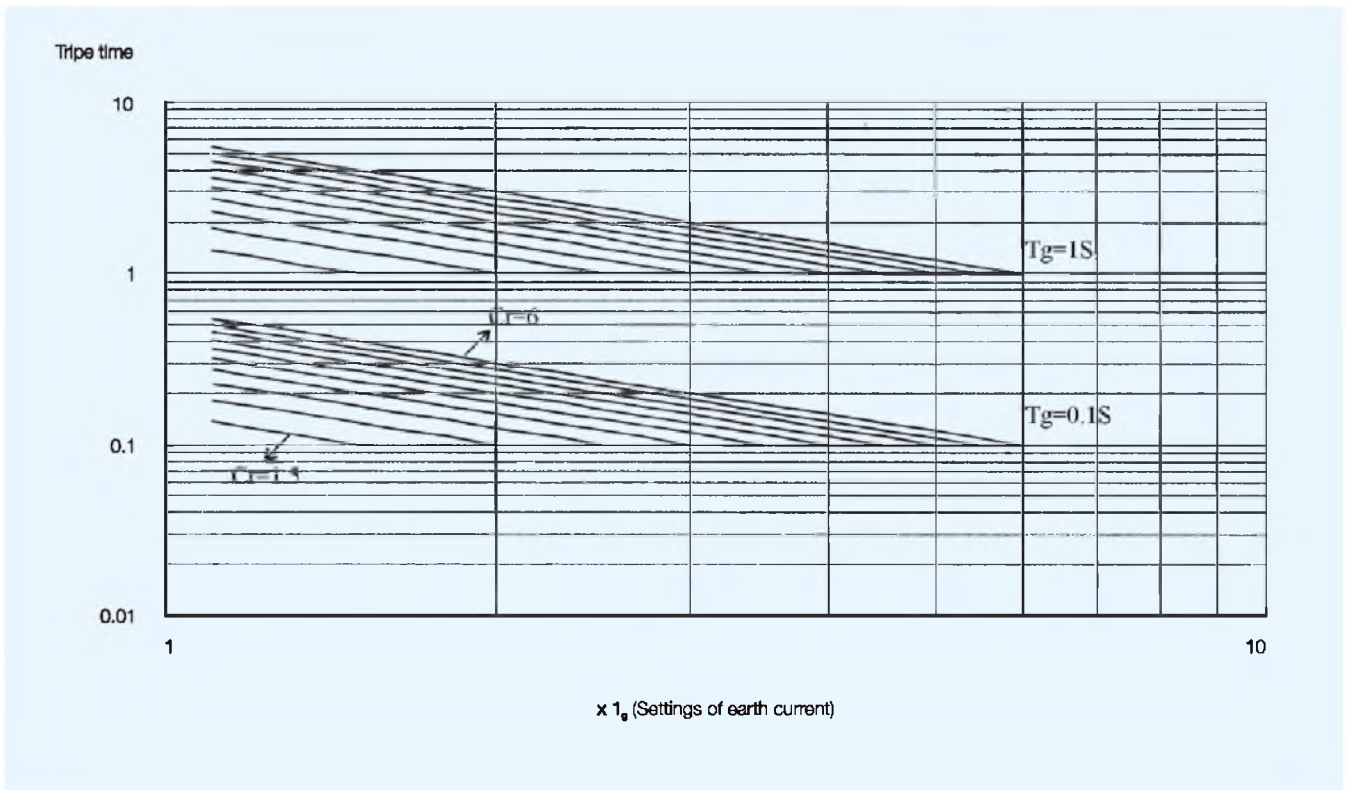
- Example of inverse time and definite time protection



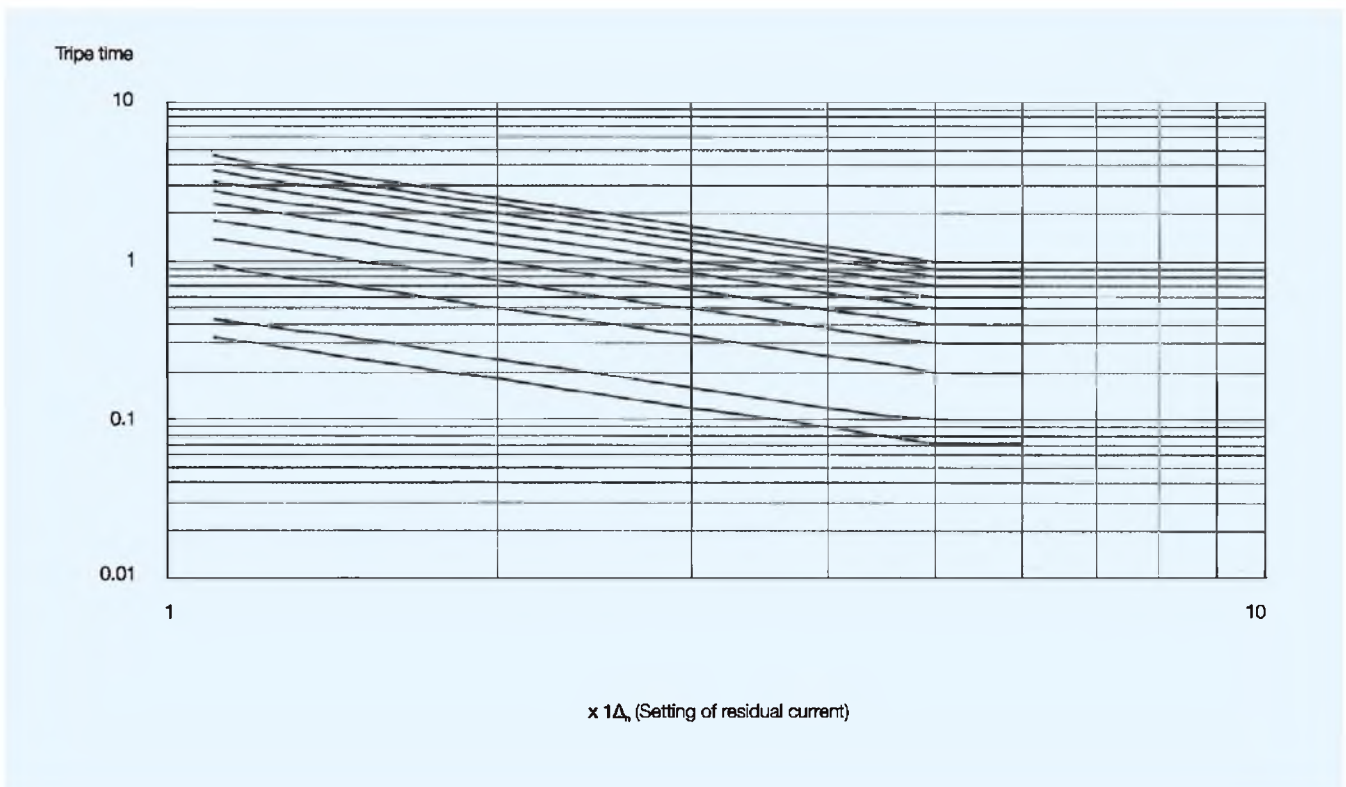
The curve example is based on below the settings:
Curve type: Fast inverse time protection
Curve rate: C1, C8 and C16
Action value setting of short-time delayed inverse time: $3 \times I_n$
Action value setting of short-time delayed definite time: $6 \times I_n$
Time setting of short-time definite time: 0.3 s

Characteristic curve of earth/residual current protection

- Earth protection



- Residual current protection



Air Circuit Breakers Series 3SW68

Selection and ordering data

Size A, fixed version, horizontal rear connection, Icu = 65 kA, Ics = 42 kA, with standard accessories ⁽¹⁾

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with AL3 electronic trip unit				
200	W68AF 3N200AL3	28057	W68AF 4N200AL3	28127
400	W68AF 3N400AL3	28058	W68AF 4N400AL3	28128
630	W68AF 3N630AL3	28059	W68AF 4N630AL3	28129
800	W68AF 3N800AL3	28060	W68AF 4N800AL3	28130
1000	W68AF 3N1000AL3	28061	W68AF 4N1000AL3	28131
1250	W68AF 3N1250AL3	28062	W68AF 4N1250AL3	28132
1600	W68AF 3N1600AL3	28063	W68AF 4N1600AL3	28133
Equipped with AL4 electronic trip unit				
200	W68AF 3N200AL4	28064	W68AF 4N200AL4	28134
400	W68AF 3N400AL4	28065	W68AF 4N400AL4	28135
630	W68AF 3N630AL4	28066	W68AF 4N630AL4	28136
800	W68AF 3N800AL4	28067	W68AF 4N800AL4	28137
1000	W68AF 3N1000AL4	28068	W68AF 4N1000AL4	28138
1250	W68AF 3N1250AL4	28069	W68AF 4N1250AL4	28139
1600	W68AF 3N1600AL4	28070	W68AF 4N1600AL4	28140
Equipped with AM3 electronic trip unit				
200	W68AF 3N200AM3	28071	W68AF 4N200AM3	28141
400	W68AF 3N400AM3	28072	W68AF 4N400AM3	28142
630	W68AF 3N630AM3	28073	W68AF 4N630AM3	28143
800	W68AF 3N800AM3	28074	W68AF 4N800AM3	28144
1000	W68AF 3N1000AM3	28075	W68AF 4N1000AM3	28145
1250	W68AF 3N1250AM3	28076	W68AF 4N1250AM3	28146
1600	W68AF 3N1600AM3	28077	W68AF 4N1600AM3	28147
Equipped with AM4 electronic trip unit				
200	W68AF 3N200AM4	28078	W68AF 4N200AM4	28148
400	W68AF 3N400AM4	28079	W68AF 4N400AM4	28149
630	W68AF 3N630AM4	28080	W68AF 4N630AM4	28150
800	W68AF 3N800AM4	28081	W68AF 4N800AM4	28151
1000	W68AF 3N1000AM4	28082	W68AF 4N1000AM4	28152
1250	W68AF 3N1250AM4	28083	W68AF 4N1250AM4	28153
1600	W68AF 3N1600AM4	28084	W68AF 4N1600AM4	28154
Equipped with AH4 electronic trip unit				
200	W68AF 3N200AH	28085	W68AF 4N200AH	28155
400	W68AF 3N400AH	28086	W68AF 4N400AH	28156
630	W68AF 3N630AH	28087	W68AF 4N630AH	28157
800	W68AF 3N800AH	28088	W68AF 4N800AH	28158
1000	W68AF 3N1000AH	28089	W68AF 4N1000AH	28159
1250	W68AF 3N1250AH	28090	W68AF 4N1250AH	28160
1600	W68AF 3N1600AH	28091	W68AF 4N1600AH	28161

Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators



Selection and ordering data

Size A, fixed version, horizontal rear connection, Icu = 65 kA, Ics = 55 kA, with standard accessories ⁽¹⁾

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with AL3 electronic trip unit				
200	W68AF 3H200AL3	28092	W68AF 4H200AL3	28162
400	W68AF 3H400AL3	28093	W68AF 4H400AL3	28163
630	W68AF 3H630AL3	28094	W68AF 4H630AL3	28164
800	W68AF 3H800AL3	28095	W68AF 4H800AL3	28165
1000	W68AF 3H1000AL3	28096	W68AF 4H1000AL3	28166
1250	W68AF 3H1250AL3	28097	W68AF 4H1250AL3	28167
1600	W68AF 3H1600AL3	28098	W68AF 4H1600AL3	28168
Equipped with AL4 electronic trip unit				
200	W68AF 3H200AL4	28099	W68AF 4H200AL4	28169
400	W68AF 3H400AL4	28100	W68AF 4H400AL4	28170
630	W68AF 3H630AL4	28101	W68AF 4H630AL4	28171
800	W68AF 3H800AL4	28102	W68AF 4H800AL4	28172
1000	W68AF 3H1000AL4	28103	W68AF 4H1000AL4	28173
1250	W68AF 3H1250AL4	28104	W68AF 4H1250AL4	28174
1600	W68AF 3H1600AL4	28105	W68AF 4H1600AL4	28175
Equipped with AM3 electronic trip unit				
200	W68AF 3H200AM3	28106	W68AF 4H200AM3	28176
400	W68AF 3H400AM3	28107	W68AF 4H400AM3	28177
630	W68AF 3H630AM3	28108	W68AF 4H630AM3	28178
800	W68AF 3H800AM3	28109	W68AF 4H800AM3	28179
1000	W68AF 3H1000AM3	28110	W68AF 4H1000AM3	28180
1250	W68AF 3H1250AM3	28111	W68AF 4H1250AM3	28181
1600	W68AF 3H1600AM3	28112	W68AF 4H1600AM3	28182
Equipped with AM4 electronic trip unit				
200	W68AF 3H200AM4	28113	W68AF 4H200AM4	28183
400	W68AF 3H400AM4	28114	W68AF 4H400AM4	28184
630	W68AF 3H630AM4	28115	W68AF 4H630AM4	28185
800	W68AF 3H800AM4	28116	W68AF 4H800AM4	28186
1000	W68AF 3H1000AM4	28117	W68AF 4H1000AM4	28187
1250	W68AF 3H1250AM4	28118	W68AF 4H1250AM4	28188
1600	W68AF 3H1600AM4	28119	W68AF 4H1600AM4	28189
Equipped with AH electronic trip unit				
200	W68AF 3H200AH	28120	W68AF 4H200AH	28190
400	W68AF 3H400AH	28121	W68AF 4H400AH	28191
630	W68AF 3H630AH	28122	W68AF 4H630AH	28192
800	W68AF 3H800AH	28123	W68AF 4H800AH	28193
1000	W68AF 3H1000AH	28124	W68AF 4H1000AH	28194
1250	W68AF 3H1250AH	28125	W68AF 4H1250AH	28195
1600	W68AF 3H1600AH	28126	W68AF 4H1600AH	28196

Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators



Air Circuit Breakers Series 3SW68

Selection and ordering data

Size A, withdrawable version, horizontal rear connection, Icu = 65 kA, Ics = 42 kA, with standard accessories ⁽¹⁾

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with AL3 electronic trip unit				
200	W68AD 3N200AL3	28197	W68AD 4N200AL3	28267
400	W68AD 3N400AL3	28198	W68AD 4N400AL3	28268
630	W68AD 3N630AL3	28199	W68AD 4N630AL3	28269
800	W68AD 3N800AL3	28200	W68AD 4N800AL3	28270
1000	W68AD 3N1000AL3	28201	W68AD 4N1000AL3	28271
1250	W68AD 3N1250AL3	28202	W68AD 4N1250AL3	28272
1600	W68AD 3N1600AL3	28203	W68AD 4N1600AL3	28273
Equipped with AL4 electronic trip unit				
200	W68AD 3N200AL4	28204	W68AD 4N200AL4	28274
400	W68AD 3N400AL4	28205	W68AD 4N400AL4	28275
630	W68AD 3N630AL4	28206	W68AD 4N630AL4	28276
800	W68AD 3N800AL4	28207	W68AD 4N800AL4	28277
1000	W68AD 3N1000AL4	28208	W68AD 4N1000AL4	28278
1250	W68AD 3N1250AL4	28209	W68AD 4N1250AL4	28279
1600	W68AD 3N1600AL4	28210	W68AD 4N1600AL4	28280
Equipped with AM3 electronic trip unit				
200	W68AD 3N200AM3	28211	W68AD 4N200AM3	28281
400	W68AD 3N400AM3	28212	W68AD 4N400AM3	28282
630	W68AD 3N630AM3	28213	W68AD 4N630AM3	28283
800	W68AD 3N800AM3	28214	W68AD 4N800AM3	28284
1000	W68AD 3N1000AM3	28215	W68AD 4N1000AM3	28285
1250	W68AD 3N1250AM3	28216	W68AD 4N1250AM3	28286
1600	W68AD 3N1600AM3	28217	W68AD 4N1600AM3	28287
Equipped with AM4 electronic trip unit				
200	W68AD 3N200AM4	28218	W68AD 4N200AM4	28288
400	W68AD 3N400AM4	28219	W68AD 4N400AM4	28289
630	W68AD 3N630AM4	28220	W68AD 4N630AM4	28290
800	W68AD 3N800AM4	28221	W68AD 4N800AM4	28291
1000	W68AD 3N1000AM4	28222	W68AD 4N1000AM4	28292
1250	W68AD 3N1250AM4	28223	W68AD 4N1250AM4	28293
1600	W68AD 3N1600AM4	28224	W68AD 4N1600AM4	28294
Equipped with AH electronic trip unit				
200	W68AD 3N200AH	28225	W68AD 4N200AH	28295
400	W68AD 3N400AH	28226	W68AD 4N400AH	28296
630	W68AD 3N630AH	28227	W68AD 4N630AH	28297
800	W68AD 3N800AH	28228	W68AD 4N800AH	28298
1000	W68AD 3N1000AH	28229	W68AD 4N1000AH	28299
1250	W68AD 3N1250AH	28230	W68AD 4N1250AH	28300
1600	W68AD 3N1600AH	28231	W68AD 4N1600AH	28301

Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators



Selection and ordering data

Size A, withdrawable version, horizontal rear connection, Icu = 65 kA, Ics = 55 kA, with standard accessories ⁽¹⁾

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with AL3 electronic trip unit				
200	W68AD 3H200AL3	28232	W68AD 4H200AL3	28302
400	W68AD 3H400AL3	28233	W68AD 4H400AL3	28303
630	W68AD 3H630AL3	28234	W68AD 4H630AL3	28304
800	W68AD 3H800AL3	28235	W68AD 4H800AL3	28305
1000	W68AD 3H1000AL3	28236	W68AD 4H1000AL3	28306
1250	W68AD 3H1250AL3	28237	W68AD 4H1250AL3	28307
1600	W68AD 3H1600AL3	28238	W68AD 4H1600AL3	28308
Equipped with AL4 electronic trip unit				
200	W68AD 3H200AL4	28239	W68AD 4H200AL4	28309
400	W68AD 3H400AL4	28240	W68AD 4H400AL4	28310
630	W68AD 3H630AL4	28241	W68AD 4H630AL4	28311
800	W68AD 3H800AL4	28242	W68AD 4H800AL4	28312
1000	W68AD 3H1000AL4	28243	W68AD 4H1000AL4	28313
1250	W68AD 3H1250AL4	28244	W68AD 4H1250AL4	28314
1600	W68AD 3H1600AL4	28245	W68AD 4H1600AL4	28315
Equipped with AM3 electronic trip unit				
200	W68AD 3H200AM3	28246	W68AD 4H200AM3	28316
400	W68AD 3H400AM3	28247	W68AD 4H400AM3	28317
630	W68AD 3H630AM3	28248	W68AD 4H630AM3	28318
800	W68AD 3H800AM3	28249	W68AD 4H800AM3	28319
1000	W68AD 3H1000AM3	28250	W68AD 4H1000AM3	28320
1250	W68AD 3H1250AM3	28251	W68AD 4H1250AM3	28321
1600	W68AD 3H1600AM3	28252	W68AD 4H1600AM3	28322
Equipped with AM4 electronic trip unit				
200	W68AD 3H200AM4	28253	W68AD 4H200AM4	28323
400	W68AD 3H400AM4	28254	W68AD 4H400AM4	28324
630	W68AD 3H630AM4	28255	W68AD 4H630AM4	28325
800	W68AD 3H800AM4	28256	W68AD 4H800AM4	28326
1000	W68AD 3H1000AM4	28257	W68AD 4H1000AM4	28327
1250	W68AD 3H1250AM4	28258	W68AD 4H1250AM4	28328
1600	W68AD 3H1600AM4	28259	W68AD 4H1600AM4	28329
Equipped with AH electronic trip unit				
200	W68AD 3H200AH	28260	W68AD 4H200AH	28330
400	W68AD 3H400AH	28261	W68AD 4H400AH	28331
630	W68AD 3H630AH	28262	W68AD 4H630AH	28332
800	W68AD 3H800AH	28263	W68AD 4H800AH	28333
1000	W68AD 3H1000AH	28264	W68AD 4H1000AH	28334
1250	W68AD 3H1250AH	28265	W68AD 4H1250AH	28335
1600	W68AD 3H1600AH	28266	W68AD 4H1600AH	28336



Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Air Circuit Breakers Series 3SW68

Selection and ordering data

Size B, fixed version, horizontal rear connection, Icu = Ics = 70 kA, with standard accessories ⁽¹⁾

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
630	W68BF 3N630BL3	28337	W68BF 4N630BL3	28435
800	W68BF 3N800BL3	28338	W68BF 4N800BL3	28436
1000	W68BF 3N1000BL3	28339	W68BF 4N1000BL3	28437
1250	W68BF 3N1250BL3	28340	W68BF 4N1250BL3	28438
1600	W68BF 3N1600BL3	28341	W68BF 4N1600BL3	28439
2000	W68BF 3N2000BL3	28342	W68BF 4N2000BL3	28440
2500	W68BF 3N2500BL3	28343	W68BF 4N2500BL3	28441
Equipped with BL4 electronic trip unit				
630	W68BF 3N630BL4	28344	W68BF 4N630BL4	28442
800	W68BF 3N800BL4	28345	W68BF 4N800BL4	28443
1000	W68BF 3N1000BL4	28346	W68BF 4N1000BL4	28444
1250	W68BF 3N1250BL4	28347	W68BF 4N1250BL4	28445
1600	W68BF 3N1600BL4	28348	W68BF 4N1600BL4	28446
2000	W68BF 3N2000BL4	28349	W68BF 4N2000BL4	28447
2500	W68BF 3N2500BL4	28350	W68BF 4N2500BL4	28448
Equipped with BM3 electronic trip unit				
630	W68BF 3N630BM3	28351	W68BF 4N630BM3	28449
800	W68BF 3N800BM3	28352	W68BF 4N800BM3	28450
1000	W68BF 3N1000BM3	28353	W68BF 4N1000BM3	28451
1250	W68BF 3N1250BM3	28354	W68BF 4N1250BM3	28452
1600	W68BF 3N1600BM3	28355	W68BF 4N1600BM3	28453
2000	W68BF 3N2000BM3	28356	W68BF 4N2000BM3	28454
2500	W68BF 3N2500BM3	28357	W68BF 4N2500BM3	28455
Equipped with BM4 electronic trip unit				
630	W68BF 3N630BM4	28358	W68BF 4N630BM4	28456
800	W68BF 3N800BM4	28359	W68BF 4N800BM4	28457
1000	W68BF 3N1000BM4	28360	W68BF 4N1000BM4	28458
1250	W68BF 3N1250BM4	28361	W68BF 4N1250BM4	28459
1600	W68BF 3N1600BM4	28362	W68BF 4N1600BM4	28460
2000	W68BF 3N2000BM4	28363	W68BF 4N2000BM4	28461
2500	W68BF 3N2500BM4	28364	W68BF 4N2500BM4	28462
Equipped with BHP electronic trip unit				
630	W68BF 3N630BHP	28365	W68BF 4N630BHP	28463
800	W68BF 3N800BHP	28366	W68BF 4N800BHP	28464
1000	W68BF 3N1000BHP	28367	W68BF 4N1000BHP	28465
1250	W68BF 3N1250BHP	28368	W68BF 4N1250BHP	28466
1600	W68BF 3N1600BHP	28369	W68BF 4N1600BHP	28467
2000	W68BF 3N2000BHP	28370	W68BF 4N2000BHP	28468
2500	W68BF 3N2500BHP	28371	W68BF 4N2500BHP	28469
Equipped with BHQ electronic trip unit				
630	W68BF 3N630BHQ	28372	W68BF 4N630BHQ	28470
800	W68BF 3N800BHQ	28373	W68BF 4N800BHQ	28471
1000	W68BF 3N1000BHQ	28374	W68BF 4N1000BHQ	28472
1250	W68BF 3N1250BHQ	28375	W68BF 4N1250BHQ	28473
1600	W68BF 3N1600BHQ	28376	W68BF 4N1600BHQ	28474
2000	W68BF 3N2000BHQ	28377	W68BF 4N2000BHQ	28475
2500	W68BF 3N2500BHQ	28378	W68BF 4N2500BHQ	28476
Equipped with BHG electronic trip unit				
630	W68BF 3N630BHG	28379	W68BF 4N630BHG	28477
800	W68BF 3N800BHG	28380	W68BF 4N800BHG	28478
1000	W68BF 3N1000BHG	28381	W68BF 4N1000BHG	28479
1250	W68BF 3N1250BHG	28382	W68BF 4N1250BHG	28480
1600	W68BF 3N1600BHG	28383	W68BF 4N1600BHG	28481
2000	W68BF 3N2000BHG	28384	W68BF 4N2000BHG	28482
2500	W68BF 3N2500BHG	28385	W68BF 4N2500BHG	28483



Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size B, fixed version, horizontal rear connection, Icu = Ics = 85 kA, with standard accessories ⁽¹⁾

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
630	W68BF 3H630BL3	28386	W68BF 4H630BL3	28484
800	W68BF 3H800BL3	28387	W68BF 4H800BL3	28485
1000	W68BF 3H1000BL3	28388	W68BF 4H1000BL3	28486
1250	W68BF 3H1250BL3	28389	W68BF 4H1250BL3	28487
1600	W68BF 3H1600BL3	28390	W68BF 4H1600BL3	28488
2000	W68BF 3H2000BL3	28391	W68BF 4H2000BL3	28489
2500	W68BF 3H2500BL3	28392	W68BF 4H2500BL3	28490
Equipped with BL4 electronic trip unit				
630	W68BF 3H630BL4	28393	W68BF 4H630BL4	28491
800	W68BF 3H800BL4	28394	W68BF 4H800BL4	28492
1000	W68BF 3H1000BL4	28395	W68BF 4H1000BL4	28493
1250	W68BF 3H1250BL4	28396	W68BF 4H1250BL4	28494
1600	W68BF 3H1600BL4	28397	W68BF 4H1600BL4	28495
2000	W68BF 3H2000BL4	28398	W68BF 4H2000BL4	28496
2500	W68BF 3H2500BL4	28399	W68BF 4H2500BL4	28497
Equipped with BM3 electronic trip unit				
630	W68BF 3H630BM3	28400	W68BF 4H630BM3	28498
800	W68BF 3H800BM3	28401	W68BF 4H800BM3	28499
1000	W68BF 3H1000BM3	28402	W68BF 4H1000BM3	28500
1250	W68BF 3H1250BM3	28403	W68BF 4H1250BM3	28501
1600	W68BF 3H1600BM3	28404	W68BF 4H1600BM3	28502
2000	W68BF 3H2000BM3	28405	W68BF 4H2000BM3	28503
2500	W68BF 3H2500BM3	28406	W68BF 4H2500BM3	28504
Equipped with BM4 electronic trip unit				
630	W68BF 3H630BM4	28407	W68BF 4H630BM4	28505
800	W68BF 3H800BM4	28408	W68BF 4H800BM4	28506
1000	W68BF 3H1000BM4	28409	W68BF 4H1000BM4	28507
1250	W68BF 3H1250BM4	28410	W68BF 4H1250BM4	28508
1600	W68BF 3H1600BM4	28411	W68BF 4H1600BM4	28509
2000	W68BF 3H2000BM4	28412	W68BF 4H2000BM4	28510
2500	W68BF 3H2500BM4	28413	W68BF 4H2500BM4	28511
Equipped with BHP electronic trip unit				
630	W68BF 3H630BHP	28414	W68BF 4H630BHP	28512
800	W68BF 3H800BHP	28415	W68BF 4H800BHP	28513
1000	W68BF 3H1000BHP	28416	W68BF 4H1000BHP	28514
1250	W68BF 3H1250BHP	28417	W68BF 4H1250BHP	28515
1600	W68BF 3H1600BHP	28418	W68BF 4H1600BHP	28516
2000	W68BF 3H2000BHP	28419	W68BF 4H2000BHP	28517
2500	W68BF 3H2500BHP	28420	W68BF 4H2500BHP	28518
Equipped with BHQ electronic trip unit				
630	W68BF 3H630BHQ	28421	W68BF 4H630BHQ	28519
800	W68BF 3H800BHQ	28422	W68BF 4H800BHQ	28520
1000	W68BF 3H1000BHQ	28423	W68BF 4H1000BHQ	28521
1250	W68BF 3H1250BHQ	28424	W68BF 4H1250BHQ	28522
1600	W68BF 3H1600BHQ	28425	W68BF 4H1600BHQ	28523
2000	W68BF 3H2000BHQ	28426	W68BF 4H2000BHQ	28524
2500	W68BF 3H2500BHQ	28427	W68BF 4H2500BHQ	28525
Equipped with BHG electronic trip unit				
630	W68BF 3H630BHG	28428	W68BF 4H630BHG	28526
800	W68BF 3H800BHG	28429	W68BF 4H800BHG	28527
1000	W68BF 3H1000BHG	28430	W68BF 4H1000BHG	28528
1250	W68BF 3H1250BHG	28431	W68BF 4H1250BHG	28529
1600	W68BF 3H1600BHG	28432	W68BF 4H1600BHG	28530
2000	W68BF 3H2000BHG	28433	W68BF 4H2000BHG	28531
2500	W68BF 3H2500BHG	28434	W68BF 4H2500BHG	28532



Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Air Circuit Breakers Series 3SW68

Selection and ordering data

Size B, withdrawable version, horizontal rear connection, Icu = Ics = 70 kA, with standard accessories ⁽¹⁾

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
630	W68BD 3N630BL3	28533	W68BD 4N630BL3	18228
800	W68BD 3N800BL3	28534	W68BD 4N800BL3	18229
1000	W68BD 3N1000BL3	28535	W68BD 4N1000BL3	18230
1250	W68BD 3N1250BL3	28536	W68BD 4N1250BL3	18231
1600	W68BD 3N1600BL3	28537	W68BD 4N1600BL3	18232
2000	W68BD 3N2000BL3	28538	W68BD 4N2000BL3	18233
2500	W68BD 3N2500BL3	28539	W68BD 4N2500BL3	18234
Equipped with BL4 electronic trip unit				
630	W68BD 3N630BL4	28540	W68BD 4N630BL4	18235
800	W68BD 3N800BL4	28541	W68BD 4N800BL4	18236
1000	W68BD 3N1000BL4	28542	W68BD 4N1000BL4	18237
1250	W68BD 3N1250BL4	28543	W68BD 4N1250BL4	18238
1600	W68BD 3N1600BL4	28544	W68BD 4N1600BL4	18239
2000	W68BD 3N2000BL4	28545	W68BD 4N2000BL4	18240
2500	W68BD 3N2500BL4	28546	W68BD 4N2500BL4	18241
Equipped with BM3 electronic trip unit				
630	W68BD 3N630BM3	28547	W68BD 4N630BM3	18242
800	W68BD 3N800BM3	28548	W68BD 4N800BM3	18243
1000	W68BD 3N1000BM3	28549	W68BD 4N1000BM3	18244
1250	W68BD 3N1250BM3	28550	W68BD 4N1250BM3	18245
1600	W68BD 3N1600BM3	28551	W68BD 4N1600BM3	18246
2000	W68BD 3N2000BM3	28552	W68BD 4N2000BM3	18247
2500	W68BD 3N2500BM3	28553	W68BD 4N2500BM3	18248
Equipped with BM4 electronic trip unit				
630	W68BD 3N630BM4	28554	W68BD 4N630BM4	18249
800	W68BD 3N800BM4	28555	W68BD 4N800BM4	18250
1000	W68BD 3N1000BM4	28556	W68BD 4N1000BM4	18251
1250	W68BD 3N1250BM4	28557	W68BD 4N1250BM4	18252
1600	W68BD 3N1600BM4	28558	W68BD 4N1600BM4	18253
2000	W68BD 3N2000BM4	28559	W68BD 4N2000BM4	18254
2500	W68BD 3N2500BM4	28560	W68BD 4N2500BM4	18255
Equipped with BHP electronic trip unit				
630	W68BD 3N630BHP	28561	W68BD 4N630BHP	18256
800	W68BD 3N800BHP	28562	W68BD 4N800BHP	18257
1000	W68BD 3N1000BHP	28563	W68BD 4N1000BHP	18258
1250	W68BD 3N1250BHP	28564	W68BD 4N1250BHP	18259
1600	W68BD 3N1600BHP	28565	W68BD 4N1600BHP	18260
2000	W68BD 3N2000BHP	28566	W68BD 4N2000BHP	18261
2500	W68BD 3N2500BHP	28567	W68BD 4N2500BHP	18262
Equipped with BHQ electronic trip unit				
630	W68BD 3N630BHQ	28568	W68BD 4N630BHQ	18263
800	W68BD 3N800BHQ	28569	W68BD 4N800BHQ	18264
1000	W68BD 3N1000BHQ	28570	W68BD 4N1000BHQ	18265
1250	W68BD 3N1250BHQ	28571	W68BD 4N1250BHQ	18266
1600	W68BD 3N1600BHQ	28572	W68BD 4N1600BHQ	18267
2000	W68BD 3N2000BHQ	28573	W68BD 4N2000BHQ	18268
2500	W68BD 3N2500BHQ	28574	W68BD 4N2500BHQ	18269
Equipped with BHG electronic trip unit				
630	W68BD 3N630BHG	28575	W68BD 4N630BHG	18270
800	W68BD 3N800BHG	28576	W68BD 4N800BHG	18271
1000	W68BD 3N1000BHG	28577	W68BD 4N1000BHG	18272
1250	W68BD 3N1250BHG	28578	W68BD 4N1250BHG	18273
1600	W68BD 3N1600BHG	28579	W68BD 4N1600BHG	18274
2000	W68BD 3N2000BHG	28580	W68BD 4N2000BHG	18275
2500	W68BD 3N2500BHG	28581	W68BD 4N2500BHG	18276



Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size B, withdrawable version, horizontal rear connection, Icu = Ics = 85 kA, with standard accessories ⁽¹⁾

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
630	W68BD 3H630BL3	28582	W68BD 4H630BL3	18277
800	W68BD 3H800BL3	28583	W68BD 4H800BL3	18278
1000	W68BD 3H1000BL3	28584	W68BD 4H1000BL3	18279
1250	W68BD 3H1250BL3	28585	W68BD 4H1250BL3	18280
1600	W68BD 3H1600BL3	28586	W68BD 4H1600BL3	18281
2000	W68BD 3H2000BL3	28587	W68BD 4H2000BL3	18282
2500	W68BD 3H2500BL3	28588	W68BD 4H2500BL3	18283
Equipped with BL4 electronic trip unit				
630	W68BD 3H630BL4	28589	W68BD 4H630BL4	18284
800	W68BD 3H800BL4	28590	W68BD 4H800BL4	18285
1000	W68BD 3H1000BL4	28591	W68BD 4H1000BL4	18286
1250	W68BD 3H1250BL4	28592	W68BD 4H1250BL4	18287
1600	W68BD 3H1600BL4	28593	W68BD 4H1600BL4	18288
2000	W68BD 3H2000BL4	28594	W68BD 4H2000BL4	18289
2500	W68BD 3H2500BL4	28595	W68BD 4H2500BL4	18290
Equipped with BM3 electronic trip unit				
630	W68BD 3H630BM3	28596	W68BD 4H630BM3	18291
800	W68BD 3H800BM3	28597	W68BD 4H800BM3	18292
1000	W68BD 3H1000BM3	28598	W68BD 4H1000BM3	18293
1250	W68BD 3H1250BM3	28599	W68BD 4H1250BM3	18294
1600	W68BD 3H1600BM3	28600	W68BD 4H1600BM3	18295
2000	W68BD 3H2000BM3	28601	W68BD 4H2000BM3	18296
2500	W68BD 3H2500BM3	28602	W68BD 4H2500BM3	18297
Equipped with BM4 electronic trip unit				
630	W68BD 3H630BM4	28603	W68BD 4H630BM4	18298
800	W68BD 3H800BM4	28604	W68BD 4H800BM4	18299
1000	W68BD 3H1000BM4	28605	W68BD 4H1000BM4	18300
1250	W68BD 3H1250BM4	28606	W68BD 4H1250BM4	18301
1600	W68BD 3H1600BM4	28607	W68BD 4H1600BM4	18302
2000	W68BD 3H2000BM4	28608	W68BD 4H2000BM4	18303
2500	W68BD 3H2500BM4	28609	W68BD 4H2500BM4	18304
Equipped with BHP electronic trip unit				
630	W68BD 3H630BHP	28610	W68BD 4H630BHP	18305
800	W68BD 3H800BHP	28611	W68BD 4H800BHP	18306
1000	W68BD 3H1000BHP	28612	W68BD 4H1000BHP	18307
1250	W68BD 3H1250BHP	28613	W68BD 4H1250BHP	18308
1600	W68BD 3H1600BHP	28614	W68BD 4H1600BHP	18309
2000	W68BD 3H2000BHP	28615	W68BD 4H2000BHP	18310
2500	W68BD 3H2500BHP	28616	W68BD 4H2500BHP	18311
Equipped with BHQ electronic trip unit				
630	W68BD 3H630BHQ	18214	W68BD 4H630BHQ	18312
800	W68BD 3H800BHQ	18215	W68BD 4H800BHQ	18313
1000	W68BD 3H1000BHQ	18216	W68BD 4H1000BHQ	18314
1250	W68BD 3H1250BHQ	18217	W68BD 4H1250BHQ	18315
1600	W68BD 3H1600BHQ	18218	W68BD 4H1600BHQ	18316
2000	W68BD 3H2000BHQ	18219	W68BD 4H2000BHQ	18317
2500	W68BD 3H2500BHQ	18220	W68BD 4H2500BHQ	18318
Equipped with BHG electronic trip unit				
630	W68BD 3H630BHG	18221	W68BD 4H630BHG	18319
800	W68BD 3H800BHG	18222	W68BD 4H800BHG	18320
1000	W68BD 3H1000BHG	18223	W68BD 4H1000BHG	18321
1250	W68BD 3H1250BHG	18224	W68BD 4H1250BHG	18322
1600	W68BD 3H1600BHG	18225	W68BD 4H1600BHG	18323
2000	W68BD 3H2000BHG	18226	W68BD 4H2000BHG	18324
2500	W68BD 3H2500BHG	18227	W68BD 4H2500BHG	18325



Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Air Circuit Breakers Series 3SW68

Selection and ordering data

Size C, fixed version, horizontal rear connection, Icu = Ics = 85 kA, with standard accessories ⁽¹⁾

Rated current I _n (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
2000	W68CF 3N2000BL3	18326	W68CF 34N2000BL3	18410
2500	W68CF 3N2500BL3	18327	W68CF 34N2500BL3	18411
2900	W68CF 3N2900BL3	18328	W68CF 34N2900BL3	18412
3200	W68CF 3N3200BL3	18329	W68CF 34N3200BL3	18413
3600	W68CF 3N3600BL3	18330	W68CF 34N3600BL3	18414
4000	W68CF 3N4000BL3	18331	W68CF 34N4000BL3	18415
Equipped with BL4 electronic trip unit				
2000	W68CF 3N2000BL4	18332	W68CF 34N2000BL4	18416
2500	W68CF 3N2500BL4	18333	W68CF 34N2500BL4	18417
2900	W68CF 3N2900BL4	18334	W68CF 34N2900BL4	18418
3200	W68CF 3N3200BL4	18335	W68CF 34N3200BL4	18419
3600	W68CF 3N3600BL4	18336	W68CF 34N3600BL4	18420
4000	W68CF 3N4000BL4	18337	W68CF 34N4000BL4	18421
Equipped with BM3 electronic trip unit				
2000	W68CF 3N2000BM3	18338	W68CF 34N2000BM3	18422
2500	W68CF 3N2500BM3	18339	W68CF 34N2500BM3	18423
2900	W68CF 3N2900BM3	18340	W68CF 34N2900BM3	18424
3200	W68CF 3N3200BM3	18341	W68CF 34N3200BM3	18425
3600A	W68CF 3N3600BM3	18342	W68CF 34N3600BM3	18426
4000	W68CF 3N4000BM3	18343	W68CF 34N4000BM3	18427
Equipped with BM4 electronic trip unit				
2000	W68CF 3N2000BM4	18344	W68CF 34N2000BM4	18428
2500	W68CF 3N2500BM4	18345	W68CF 34N2500BM4	18429
2900	W68CF 3N2900BM4	18346	W68CF 34N2900BM4	18430
3200	W68CF 3N3200BM4	18347	W68CF 34N3200BM4	18431
3600	W68CF 3N3600BM4	18348	W68CF 34N3600BM4	18432
4000	W68CF 3N4000BM4	18349	W68CF 34N4000BM4	18433
Equipped with BHP electronic trip unit				
2000	W68CF 3N2000BHP	18350	W68CF 34N2000BH4P	18434
2500	W68CF 3N2500BHP	18351	W68CF 34N2500BH4P	18435
2900	W68CF 3N2900BHP	18352	W68CF 34N2900BH4P	18436
3200	W68CF 3N3200BHP	18353	W68CF 34N3200BH4P	18437
3600	W68CF 3N3600BHP	18354	W68CF 34N3600BH4P	18438
4000	W68CF 3N4000BHP	18355	W68CF 34N4000BH4P	18439
Equipped with BHQ electronic trip unit				
2000	W68CF 3N2000BHQ	18356	W68CF 34N2000BHQ	18440
2500	W68CF 3N2500BHQ	18357	W68CF 34N2500BHQ	18441
2900	W68CF 3N2900BHQ	18358	W68CF 34N2900BHQ	18442
3200	W68CF 3N3200BHQ	18359	W68CF 34N3200BHQ	18443
3600	W68CF 3N3600BHQ	18360	W68CF 34N3600BHQ	18444
4000	W68CF 3N4000BHQ	18361	W68CF 34N4000BHQ	18445
Equipped with BHG electronic trip unit				
2000	W68CF 3N2000BHG	18362	W68CF 34N2000BHG	18446
2500	W68CF 3N2500BHG	18363	W68CF 34N2500BHG	18447
2900	W68CF 3N2900BHG	18364	W68CF 34N2900BHG	18448
3200	W68CF 3N3200BHG	18365	W68CF 34N3200BHG	18449
3600	W68CF 3N3600BHG	18366	W68CF 34N3600BHG	18450
4000	W68CF 3N4000BHG	18367	W68CF 34N4000BHG	18451

Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators



Selection and ordering data

Size C, fixed version, horizontal rear connection, Icu 120 kA, Ics = 100 kA, with standard accessories⁽¹⁾

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
2000	W68CF 3H2000BL3	18368	W68CF 34H2000BL3	18452
2500	W68CF 3H2500BL3	18369	W68CF 34H2500BL3	18453
2900	W68CF 3H2900BL3	18370	W68CF 34H2900BL3	18454
3200	W68CF 3H3200BL3	18371	W68CF 34H3200BL3	18455
3600	W68CF 3H3600BL3	18372	W68CF 34H3600BL3	18456
4000	W68CF 3H4000BL3	18373	W68CF 34H4000BL3	18457
Equipped with BL4 electronic trip unit				
2000	W68CF 3H2000BL4	18374	W68CF 34H2000BL4	18458
2500	W68CF 3H2500BL4	18375	W68CF 34H2500BL4	18459
2900	W68CF 3H2900BL4	18376	W68CF 34H2900BL4	18460
3200	W68CF 3H3200BL4	18377	W68CF 34H3200BL4	18461
3600	W68CF 3H3600BL4	18378	W68CF 34H3600BL4	18462
4000	W68CF 3H4000BL4	18379	W68CF 34H4000BL4	18463
Equipped with BM3 electronic trip unit				
2000	W68CF 3H2000BM3	18380	W68CF 34H2000BM3	18464
2500	W68CF 3H2500BM3	18381	W68CF 34H2500BM3	18465
2900	W68CF 3H2900BM3	18382	W68CF 34H2900BM3	18466
3200	W68CF 3H3200BM3	18383	W68CF 34H3200BM3	18467
3600A	W68CF 3H3600BM3	18384	W68CF 34H3600BM3	18468
4000	W68CF 3H4000BM3	18385	W68CF 34H4000BM3	18469
Equipped with BM4 electronic trip unit				
2000	W68CF 3H2000BM4	18386	W68CF 34H2000BM4	18470
2500	W68CF 3H2500BM4	18387	W68CF 34H2500BM4	18471
2900	W68CF 3H2900BM4	18388	W68CF 34H2900BM4	18472
3200	W68CF 3H3200BM4	18389	W68CF 34H3200BM4	18473
3600	W68CF 3H3600BM4	18390	W68CF 34H3600BM4	18474
4000	W68CF 3H4000BM4	18391	W68CF 34H4000BM4	18475
Equipped with BHP electronic trip unit				
2000	W68CF 3H2000BHP	18392	W68CF 34H2000BH4P	18476
2500	W68CF 3H2500BHP	18393	W68CF 34H2500BH4P	18477
2900	W68CF 3H2900BHP	18394	W68CF 34H2900BH4P	18478
3200	W68CF 3H3200BHP	18395	W68CF 34H3200BH4P	18479
3600	W68CF 3H3600BHP	18396	W68CF 34H3600BH4P	18480
4000	W68CF 3H4000BHP	18397	W68CF 34H4000BH4P	18481
Equipped with BHQ electronic trip unit				
2000	W68CF 3H2000BHQ	18398	W68CF 34H2000BHQ	18482
2500	W68CF 3H2500BHQ	18399	W68CF 34H2500BHQ	18483
2900	W68CF 3H2900BHQ	18400	W68CF 34H2900BHQ	18484
3200	W68CF 3H3200BHQ	18401	W68CF 34H3200BHQ	18485
3600	W68CF 3H3600BHQ	18402	W68CF 34H3600BHQ	18486
4000	W68CF 3H4000BHQ	18403	W68CF 34H4000BHQ	18487
Equipped with BHG electronic trip unit				
2000	W68CF 3H2000BHG	18404	W68CF 34H2000BHG	18488
2500	W68CF 3H2500BHG	18405	W68CF 34H2500BHG	18489
2900	W68CF 3H2900BHG	18406	W68CF 34H2900BHG	18490
3200	W68CF 3H3200BHG	18407	W68CF 34H3200BHG	18491
3600	W68CF 3H3600BHG	18408	W68CF 34H3600BHG	18492
4000	W68CF 3H4000BHG	18409	W68CF 34H4000BHG	18493

Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators



Air Circuit Breakers Series 3SW68

Selection and ordering data

Size C, withdrawable version, horizontal rear connection, Icu = Ics = 85 kA, with standard accessories⁽¹⁾

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
2000	W68CD 3N2000BL3	18494	W68CD 34N2000BL3	32145
2500	W68CD 3N2500BL3	18495	W68CD 34N2500BL3	32146
2900	W68CD 3N2900BL3	18496	W68CD 34N2900BL3	32147
3200	W68CD 3N3200BL3	18497	W68CD 34N3200BL3	32148
3600	W68CD 3N3600BL3	18498	W68CD 34N3600BL3	32149
4000	W68CD 3N4000BL3	18499	W68CD 34N4000BL3	32150
Equipped with BL4 electronic trip unit				
2000	W68CD 3N2000BL4	18500	W68CD 34N2000BL4	32151
2500	W68CD 3N2500BL4	18501	W68CD 34N2500BL4	32152
2900	W68CD 3N2900BL4	32069	W68CD 34N2900BL4	32153
3200	W68CD 3N3200BL4	32070	W68CD 34N3200BL4	32154
3600	W68CD 3N3600BL4	32071	W68CD 34N3600BL4	32155
4000	W68CD 3N4000BL4	32072	W68CD 34N4000BL4	32156
Equipped with BM3 electronic trip unit				
2000	W68CD 3N2000BM3	32073	W68CD 34N2000BM3	32157
2500	W68CD 3N2500BM3	32074	W68CD 34N2500BM3	32158
2900	W68CD 3N2900BM3	32075	W68CD 34N2900BM3	32159
3200	W68CD 3N3200BM3	32076	W68CD 34N3200BM3	32160
3600A	W68CD 3N3600BM3	32077	W68CD 34N3600BM3	32161
4000	W68CD 3N4000BM3	32078	W68CD 34N4000BM3	32162
Equipped with BM4 electronic trip unit				
2000	W68CD 3N2000BM4	32079	W68CD 34N2000BM4	32163
2500	W68CD 3N2500BM4	32080	W68CD 34N2500BM4	32164
2900	W68CD 3N2900BM4	32081	W68CD 34N2900BM4	32165
3200	W68CD 3N3200BM4	32082	W68CD 34N3200BM4	32166
3600	W68CD 3N3600BM4	32083	W68CD 34N3600BM4	32167
4000	W68CD 3N4000BM4	32084	W68CD 34N4000BM4	32168
Equipped with BHP electronic trip unit				
2000	W68CD 3N2000BHP	32085	W68CD 34N2000BH4P	32169
2500	W68CD 3N2500BHP	32086	W68CD 34N2500BH4P	32170
2900	W68CD 3N2900BHP	32087	W68CD 34N2900BH4P	32171
3200	W68CD 3N3200BHP	32088	W68CD 34N3200BH4P	32172
3600	W68CD 3N3600BHP	32089	W68CD 34N3600BH4P	32173
4000	W68CD 3N4000BHP	32090	W68CD 34N4000BH4P	32174
Equipped with BHQ electronic trip unit				
2000	W68CD 3N2000BHQ	32091	W68CD 34N2000BHQ	32175
2500	W68CD 3N2500BHQ	32092	W68CD 34N2500BHQ	32176
2900	W68CD 3N2900BHQ	32093	W68CD 34N2900BHQ	32177
3200	W68CD 3N3200BHQ	32094	W68CD 34N3200BHQ	32178
3600	W68CD 3N3600BHQ	32095	W68CD 34N3600BHQ	32179
4000	W68CD 3N4000BHQ	32096	W68CD 34N4000BHQ	32180
Equipped with BHG electronic trip unit				
2000	W68CD 3N2000BHG	32097	W68CD 34N2000BHG	32181
2500	W68CD 3N2500BHG	32098	W68CD 34N2500BHG	32182
2900	W68CD 3N2900BHG	32099	W68CD 34N2900BHG	32183
3200	W68CD 3N3200BHG	32100	W68CD 34N3200BHG	32184
3600	W68CD 3N3600BHG	32101	W68CD 34N3600BHG	32185
4000	W68CD 3N4000BHG	32102	W68CD 34N4000BHG	32186

Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators



Selection and ordering data

Size C, withdrawable version, horizontal rear connection, Icu 120 kA, Ics = 100 kA, with standard accessories⁽¹⁾

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
2000	W68CD 3H2000BL3	32103	W68CD 34H2000BL3	32187
2500	W68CD 3H2500BL3	32104	W68CD 34H2500BL3	32188
2900	W68CD 3H2900BL3	32105	W68CD 34H2900BL3	32189
3200	W68CD 3H3200BL3	32106	W68CD 34H3200BL3	32190
3600	W68CD 3H3600BL3	32107	W68CD 34H3600BL3	32191
4000	W68CD 3H4000BL3	32108	W68CD 34H4000BL3	32192
Equipped with BL4 electronic trip unit				
2000	W68CD 3H2000BL4	32109	W68CD 34H2000BL4	32193
2500	W68CD 3H2500BL4	32110	W68CD 34H2500BL4	32194
2900	W68CD 3H2900BL4	32111	W68CD 34H2900BL4	32195
3200	W68CD 3H3200BL4	32112	W68CD 34H3200BL4	32196
3600	W68CD 3H3600BL4	32113	W68CD 34H3600BL4	32197
4000	W68CD 3H4000BL4	32114	W68CD 34H4000BL4	32198
Equipped with BM3 electronic trip unit				
2000	W68CD 3H2000BM3	32115	W68CD 34H2000BM3	32199
2500	W68CD 3H2500BM3	32116	W68CD 34H2500BM3	32200
2900	W68CD 3H2900BM3	32117	W68CD 34H2900BM3	32201
3200	W68CD 3H3200BM3	32118	W68CD 34H3200BM3	32202
3600A	W68CD 3H3600BM3	32119	W68CD 34H3600BM3	32203
4000	W68CD 3H4000BM3	32120	W68CD 34H4000BM3	32204
Equipped with BM4 electronic trip unit				
2000	W68CD 3H2000BM4	32121	W68CD 34H2000BM4	32205
2500	W68CD 3H2500BM4	32122	W68CD 34H2500BM4	32206
2900	W68CD 3H2900BM4	32123	W68CD 34H2900BM4	32207
3200	W68CD 3H3200BM4	32124	W68CD 34H3200BM4	32208
3600	W68CD 3H3600BM4	32125	W68CD 34H3600BM4	32209
4000	W68CD 3H4000BM4	32126	W68CD 34H4000BM4	32210
Equipped with BHP electronic trip unit				
2000	W68CD 3H2000BHP	32127	W68CD 34H2000BH4P	32211
2500	W68CD 3H2500BHP	32128	W68CD 34H2500BH4P	32212
2900	W68CD 3H2900BHP	32129	W68CD 34H2900BH4P	32213
3200	W68CD 3H3200BHP	32130	W68CD 34H3200BH4P	32214
3600	W68CD 3H3600BHP	32131	W68CD 34H3600BH4P	32215
4000	W68CD 3H4000BHP	32132	W68CD 34H4000BH4P	32216
Equipped with BHQ electronic trip unit				
2000	W68CD 3H2000BHQ	32133	W68CD 34H2000BHQ	32217
2500	W68CD 3H2500BHQ	32134	W68CD 34H2500BHQ	32218
2900	W68CD 3H2900BHQ	32135	W68CD 34H2900BHQ	32219
3200	W68CD 3H3200BHQ	32136	W68CD 34H3200BHQ	32220
3600	W68CD 3H3600BHQ	32137	W68CD 34H3600BHQ	32221
4000	W68CD 3H4000BHQ	32138	W68CD 34H4000BHQ	32222
Equipped with BHG electronic trip unit				
2000	W68CD 3H2000BHG	32139	W68CD 34H2000BHG	32223
2500	W68CD 3H2500BHG	32140	W68CD 34H2500BHG	32224
2900	W68CD 3H2900BHG	32141	W68CD 34H2900BHG	32225
3200	W68CD 3H3200BHG	32142	W68CD 34H3200BHG	32226
3600	W68CD 3H3600BHG	32143	W68CD 34H3600BHG	32227
4000	W68CD 3H4000BHG	32144	W68CD 34H4000BHG	32228

Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators



Air Circuit Breakers

Series 3SW68

Selection and ordering data

Size D, fixed version, I_{cu} = I_{cs} = 100 kA, with standard accessories⁽¹⁾
 4000 A & 5000 A: Horizontal rear connection; 6300 A: Vertical rear connection

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
4000	W68DF 3N4000BL3	32229	W68DF 4N4000BL3	32292
5000	W68DF 3N5000BL3	32230	W68DF 4N5000BL3	32293
6300	W68DF 3N6300BL3	32231	W68DF 4N6300BL3	32294
Equipped with BL4 electronic trip unit				
4000	W68DF 3N4000BL4	32232	W68DF 4N4000BL4	32295
5000	W68DF 3N5000BL4	32233	W68DF 4N5000BL4	32296
6300	W68DF 3N6300BL4	32234	W68DF 4N6300BL4	32297
Equipped with BM3 electronic trip unit				
4000	W68DF 3N4000BM3	32235	W68DF 4N4000BM3	32298
5000	W68DF 3N5000BM3	32236	W68DF 4N5000BM3	32299
6300	W68DF 3N6300BM3	32237	W68DF 4N6300BM3	32300
Equipped with BM4 electronic trip unit				
4000	W68DF 3N4000BM4	32238	W68DF 4N4000BM4	32301
5000	W68DF 3N5000BM4	32239	W68DF 4N5000BM4	32302
6300	W68DF 3N6300BM4	32240	W68DF 4N6300BM4	32303
Equipped with BHP electronic trip unit				
4000	W68DF 3N4000BHP	32241	W68DF 4N4000BHP	32304
5000	W68DF 3N5000BHP	32242	W68DF 4N5000BHP	32305
6300	W68DF 3N6300BHP	32243	W68DF 4N6300BHP	32306
Equipped with BHQ electronic trip unit				
4000	W68DF 3N4000BHQ	32244	W68DF 4N4000BHQ	32307
5000	W68DF 3N5000BHQ	32245	W68DF 4N5000BHQ	32308
6300	W68DF 3N6300BHQ	32246	W68DF 4N6300BHQ	32309
Equipped with BHG electronic trip unit				
4000	W68DF 3N4000BHG	32247	W68DF 4N4000BHG	32310
5000	W68DF 3N5000BHG	32248	W68DF 4N5000BHG	32311
6300	W68DF 3N6300BHG	32249	W68DF 4N6300BHG	32312

Size D, fixed version, I_{cu} = I_{cs} = 120 kA, with standard accessories⁽¹⁾
 4000 A & 5000 A: Horizontal rear connection; 6300 A: Vertical rear connection

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
4000	W68DF 3H4000BL3	32250	W68DF 4H4000BL3	32313
5000	W68DF 3H5000BL3	32251	W68DF 4H5000BL3	32314
6300	W68DF 3H6300BL3	32252	W68DF 4H6300BL3	32315
Equipped with BL4 electronic trip unit				
4000	W68DF 3H4000BL4	32253	W68DF 4H4000BL4	32316
5000	W68DF 3H5000BL4	32254	W68DF 4H5000BL4	32317
6300	W68DF 3H6300BL4	32255	W68DF 4H6300BL4	32318
Equipped with BM3 electronic trip unit				
4000	W68DF 3H4000BM3	32256	W68DF 4H4000BM3	32319
5000	W68DF 3H5000BM3	32257	W68DF 4H5000BM3	32320
6300	W68DF 3H6300BM3	32258	W68DF 4H6300BM3	32321
Equipped with BM4 electronic trip unit				
4000	W68DF 3H4000BM4	32259	W68DF 4H4000BM4	32322
5000	W68DF 3H5000BM4	32260	W68DF 4H5000BM4	32323
6300	W68DF 3H6300BM4	32261	W68DF 4H6300BM4	32324
Equipped with BHP electronic trip unit				
4000	W68DF 3H4000BHP	32262	W68DF 4H4000BHP	32325
5000	W68DF 3H5000BHP	32263	W68DF 4H5000BHP	32326
6300	W68DF 3H6300BHP	32264	W68DF 4H6300BHP	32327
Equipped with BHQ electronic trip unit				
4000	W68DF 3H4000BHQ	32265	W68DF 4H4000BHQ	32328
5000	W68DF 3H5000BHQ	32266	W68DF 4H5000BHQ	32329
6300	W68DF 3H6300BHQ	32267	W68DF 4H6300BHQ	32330
Equipped with BHG electronic trip unit				
4000	W68DF 3H4000BHG	32268	W68DF 4H4000BHG	32331
5000	W68DF 3H5000BHG	32269	W68DF 4H5000BHG	32332
6300	W68DF 3H6300BHG	32270	W68DF 4H6300BHG	32333

Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Selection and ordering data

Size D, fixed version, I_{cu} = I_{cs} = 150 kA, with standard accessories⁽¹⁾
4000 A & 5000 A: Horizontal rear connection; 6300 A: Vertical rear connection

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
4000	W68DF 3S4000BL3	32271	W68DF 4S4000BL3	32334
5000	W68DF 3S5000BL3	32272	W68DF 4S5000BL3	32335
6300	W68DF 3S6300BL3	32273	W68DF 4S6300BL3	32336
Equipped with BL4 electronic trip unit				
4000	W68DF 3S4000BL4	32274	W68DF 4S4000BL4	32337
5000	W68DF 3S5000BL4	32275	W68DF 4S5000BL4	32338
6300	W68DF 3S6300BL4	32276	W68DF 4S6300BL4	32339
Equipped with BM3 electronic trip unit				
4000	W68DF 3S4000BM3	32277	W68DF 4S4000BM3	32340
5000	W68DF 3S5000BM3	32278	W68DF 4S5000BM3	32341
6300	W68DF 3S6300BM3	32279	W68DF 4S6300BM3	32342
Equipped with BM4 electronic trip unit				
4000	W68DF 3S4000BM4	32280	W68DF 4S4000BM4	32343
5000	W68DF 3S5000BM4	32281	W68DF 4S5000BM4	32344
6300	W68DF 3S6300BM4	32282	W68DF 4S6300BM4	32345
Equipped with BHP electronic trip unit				
4000	W68DF 3S4000BHP	32283	W68DF 4S4000BHP	32346
5000	W68DF 3S5000BHP	32284	W68DF 4S5000BHP	32347
6300	W68DF 3S6300BHP	32285	W68DF 4S6300BHP	32348
Equipped with BHQ electronic trip unit				
4000	W68DF 3S4000BHQ	32286	W68DF 4S4000BHQ	32349
5000	W68DF 3S5000BHQ	32287	W68DF 4S5000BHQ	32350
6300	W68DF 3S6300BHQ	32288	W68DF 4S6300BHQ	32351
Equipped with BHG electronic trip unit				
4000	W68DF 3S4000BHG	32289	W68DF 4S4000BHG	32352
5000	W68DF 3S5000BHG	32290	W68DF 4S5000BHG	32353
6300	W68DF 3S6300BHG	32291	W68DF 4S6300BHG	32354

Size D, withdrawable version, I_{cu} = I_{cs} = 100 kA, with standard accessories⁽¹⁾
4000 A & 5000 A: Horizontal rear connection; 6300 A: Vertical rear connection

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
4000	W68DD 3N4000BL3	32355	W68DD 4N4000BL3	32418
5000	W68DD 3N5000BL3	32356	W68DD 4N5000BL3	32419
6300	W68DD 3N6300BL3	32357	W68DD 4N6300BL3	32420
Equipped with BL4 electronic trip unit				
4000	W68DD 3N4000BL4	32358	W68DD 4N4000BL4	13898
5000	W68DD 3N5000BL4	32359	W68DD 4N5000BL4	13899
6300	W68DD 3N6300BL4	32360	W68DD 4N6300BL4	13900
Equipped with BM3 electronic trip unit				
4000	W68DD 3N4000BM3	32361	W68DD 4N4000BM3	13901
5000	W68DD 3N5000BM3	32362	W68DD 4N5000BM3	13902
6300	W68DD 3N6300BM3	32363	W68DD 4N6300BM3	13903
Equipped with BM4 electronic trip unit				
4000	W68DD 3N4000BM4	32364	W68DD 4N4000BM4	13904
5000	W68DD 3N5000BM4	32365	W68DD 4N5000BM4	13905
6300	W68DD 3N6300BM4	32366	W68DD 4N6300BM4	13906
Equipped with BHP electronic trip unit				
4000	W68DD 3N4000BHP	32367	W68DD 4N4000BHP	13907
5000	W68DD 3N5000BHP	32368	W68DD 4N5000BHP	13908
6300	W68DD 3N6300BHP	32369	W68DD 4N6300BHP	13909
Equipped with BHQ electronic trip unit				
4000	W68DD 3N4000BHQ	32370	W68DD 4N4000BHQ	13910
5000	W68DD 3N5000BHQ	32371	W68DD 4N5000BHQ	13911
6300	W68DD 3N6300BHQ	32372	W68DD 4N6300BHQ	13912
Equipped with BHG electronic trip unit				
4000	W68DD 3N4000BHG	32373	W68DD 4N4000BHG	13913
5000	W68DD 3N5000BHG	32374	W68DD 4N5000BHG	13914
6300	W68DD 3N6300BHG	32375	W68DD 4N6300BHG	13915

Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Air Circuit Breakers

Series 3SW68

Selection and ordering data

Size D, withdrawable version, Icu = Ics = 120 kA, with standard accessories⁽¹⁾
 4000 A & 5000 A: Horizontal rear connection; 6300 A: Vertical rear connection

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
4000	W68DD 3H4000BL3	32376	W68DD 4H4000BL3	13916
5000	W68DD 3H5000BL3	32377	W68DD 4H5000BL3	13917
6300	W68DD 3H6300BL3	32378	W68DD 4H6300BL3	13918
Equipped with BL4 electronic trip unit				
4000	W68DD 3H4000BL4	32379	W68DD 4H4000BL4	13919
5000	W68DD 3H5000BL4	32380	W68DD 4H5000BL4	13920
6300	W68DD 3H6300BL4	32381	W68DD 4H6300BL4	13921
Equipped with BM3 electronic trip unit				
4000	W68DD 3H4000BM3	32382	W68DD 4H4000BM3	13922
5000	W68DD 3H5000BM3	32383	W68DD 4H5000BM3	13923
6300	W68DD 3H6300BM3	32384	W68DD 4H6300BM3	13924
Equipped with BM4 electronic trip unit				
4000	W68DD 3H4000BM4	32385	W68DD 4H4000BM4	13925
5000	W68DD 3H5000BM4	32386	W68DD 4H5000BM4	13926
6300	W68DD 3H6300BM4	32387	W68DD 4H6300BM4	13927
Equipped with BHP electronic trip unit				
4000	W68DD 3H4000BHP	32388	W68DD 4H4000BHP	13928
5000	W68DD 3H5000BHP	32389	W68DD 4H5000BHP	13929
6300	W68DD 3H6300BHP	32390	W68DD 4H6300BHP	13930
Equipped with BHQ electronic trip unit				
4000	W68DD 3H4000BHQ	32391	W68DD 4H4000BHQ	13931
5000	W68DD 3H5000BHQ	32392	W68DD 4H5000BHQ	13932
6300	W68DD 3H6300BHQ	32393	W68DD 4H6300BHQ	13933
Equipped with BHG electronic trip unit				
4000	W68DD 3H4000BHG	32394	W68DD 4H4000BHG	13934
5000	W68DD 3H5000BHG	32395	W68DD 4H5000BHG	13935
6300	W68DD 3H6300BHG	32396	W68DD 4H6300BHG	13936

Size D, withdrawable version, Icu = Ics = 150 kA, with standard accessories⁽¹⁾
 4000 A & 5000 A: Horizontal rear connection; 6300 A: Vertical rear connection

Rated current In (A)	3-pole		4-pole	
	Type code	Order code	Type code	Order code
Equipped with BL3 electronic trip unit				
4000	W68DD 3S4000BL3	32397	W68DD 4S4000BL3	13937
5000	W68DD 3S5000BL3	32398	W68DD 4S5000BL3	13938
6300	W68DD 3S6300BL3	32399	W68DD 4S6300BL3	13939
Equipped with BL4 electronic trip unit				
4000	W68DD 3S4000BL4	32400	W68DD 4S4000BL4	13940
5000	W68DD 3S5000BL4	32401	W68DD 4S5000BL4	13941
6300	W68DD 3S6300BL4	32402	W68DD 4S6300BL4	13942
Equipped with BM3 electronic trip unit				
4000	W68DD 3S4000BM3	32403	W68DD 4S4000BM3	13943
5000	W68DD 3S5000BM3	32404	W68DD 4S5000BM3	13944
6300	W68DD 3S6300BM3	32405	W68DD 4S6300BM3	13945
Equipped with BM4 electronic trip unit				
4000	W68DD 3S4000BM4	32406	W68DD 4S4000BM4	13946
5000	W68DD 3S5000BM4	32407	W68DD 4S5000BM4	13947
6300	W68DD 3S6300BM4	32408	W68DD 4S6300BM4	13948
Equipped with BHP electronic trip unit				
4000	W68DD 3S4000BHP	32409	W68DD 4S4000BHP	13949
5000	W68DD 3S5000BHP	32410	W68DD 4S5000BHP	13950
6300	W68DD 3S6300BHP	32411	W68DD 4S6300BHP	13951
Equipped with BHQ electronic trip unit				
4000	W68DD 3S4000BHQ	32412	W68DD 4S4000BHQ	13952
5000	W68DD 3S5000BHQ	32413	W68DD 4S5000BHQ	13953
6300	W68DD 3S6300BHQ	32414	W68DD 4S6300BHQ	13954
Equipped with BHG electronic trip unit				
4000	W68DD 3S4000BHG	32415	W68DD 4S4000BHG	13955
5000	W68DD 3S5000BHG	32416	W68DD 4S5000BHG	13956
6300	W68DD 3S6300BHG	32417	W68DD 4S6300BHG	13957

Note:

(1) The standard accessories includes:

- Shunt release
- Closing coil
- Motorized operating mechanism
- Auxiliary contact (4 convertible contact)
- Separators

Air Circuit Breakers Series 3SW68

Selection and ordering data

Electrical accessories for circuit breakers

Size	Rated Voltage Un	Description	Type code	Order code	
Motorized operating mechanism - EM					
Size A	AC 230 V	EM AC 230 V for 3SW68-1600	W68A EM230A	39684	
	AC 400 V	EM AC 400 V for 3SW68-1600	W68A EM400A	39685	
	DC 110 V	EM DC 110 V for 3SW68-1600	W68A EM110D	39686	
Size B/C/D	DC 220 V	EM DC 220 V for 3SW68-1600	W68A EM220D	39687	
	AC 230 V	EM AC 230 V for 3SW68-2500...6300	W68B EM230A	39688	
	AC 400 V	EM AC 400 V for 3SW68-2500...6300	W68B EM400A	39689	
	DC 110 V	EM DC 110 V for 3SW68-2500...6300	W68B EM110D	39690	
	DC 220 V	EM DC 220 V for 3SW68-2500...6300	W68B EM220D	39691	
Closing coil - CM					
Size A/B/C/D	AC 230 V	CM AC 230 V for 3SW68	W68 CM230A	39692	
	AC 400 V	CM AC 400 V for 3SW68	W68 CM400A	39693	
	DC 110 V	CM DC 110 V for 3SW68	W68 CM110D	39694	
	DC 220 V	CM DC 220 V for 3SW68	W68 CM220D	39695	
Shunt release - SH					
Size A/B/C/D	AC 230 V	SH AC 230 V for 3SW68	W68 SH230A	39696	
	AC 400 V	SH AC 400 V for 3SW68	W68 SH400A	39697	
	DC 110 V	SH DC 110 V for 3SW68	W68 SH110D	39698	
	DC 220 V	SH DC 220 V for 3SW68	W68 SH220D	39699	
Under-voltage release - UV					
Size A/B/C/D	AC 230 V	UV AC 230 V for 3SW68	W68 UV230A	39700	
	AC 400 V	UV AC 400 V for 3SW68	W68 UV400A	39701	
Time-delay module for under-voltage release - UVD					
Size A/B/C/D	AC 230 V	UVD AC 230 V for 3SW68	W68 UVD230A	39702	
	AC 400 V	UVD AC 400 V for 3SW68	W68 UVD400A	39703	
Auxiliary contact - AU					
Size A	AC 230 V	AU 4 convertible contact AC 230 V for 3SW68-1600	W68A AU4X230A	39704	
	AC 400 V	AU 4 convertible contact AC 400 V for 3SW68-1600	W68A AU4X400A	39705	
	DC 110 V	AU 4 convertible contact DC 110 V for 3SW68-1600	W68A AU4X110D	39706	
	DC 220 V	AU 4 convertible contact DC 220 V for 3SW68-1600	W68A AU4X220D	39707	
	AC 230 V	AU 4 NO + 4 NC AC 230 V for 3SW68-1600	W68A AU44230A	39708	
	AC 400 V	AU 4 NO + 4 NC AC 400 V for 3SW68-1600	W68A AU44400A	39709	
	DC 110 V	AU 4 NO + 4 NC DC 110 V for 3SW68-1600	W68A AU44110D	39710	
	DC 220 V	AU 4 NO + 4 NC DC 220 V for 3SW68-1600	W68A AU44220D	39711	
	AC 230 V	AU 6 NO + 6 NC AC 230 V for 3SW68-1600	W68A AU66230A	39712	
	AC 400 V	AU 6 NO + 6 NC AC 400 V for 3SW68-1600	W68A AU66400A	39713	
	DC 110 V	AU 6 NO + 6 NC DC 110 V for 3SW68-1600	W68A AU66110D	39714	
	DC 220 V	AU 6 NO + 6 NC DC 220 V for 3SW68-1600	W68A AU66220D	39715	
	Size B/C/D	AC 230 V	AU 4 convertible contact AC 230 V for 3SW68-2500...6300	W68B AU4X230A	39716
		AC 400 V	AU 4 convertible contact AC 400 V for 3SW68-2500...6300	W68B AU4X400A	39717
		AC 415 V	AU 4 convertible contact AC 415 V for 3SW68-2500...6300	W68B AU4X415A	39718
		DC 110 V	AU 4 convertible contact DC 110 V for 3SW68-2500...6300	W68B AU4X110D	39719
DC 220 V		AU 4 convertible contact DC 220 V for 3SW68-2500...6300	W68B AU4X220D	39720	
DC 250 V		AU 4 convertible contact DC 250 V for 3SW68-2500...6300	W68B AU4X250D	39721	
AC 230 V		AU 4 NO + 4 NC AC 230 V for 3SW68-2500...6300	W68B AU44230A	39722	
AC 400 V		AU 4 NO + 4 NC AC 400 V for 3SW68-2500...6300	W68B AU44400A	39723	
AC 415 V		AU 4 NO + 4 NC AC 415 V for 3SW68-2500...6300	W68B AU44415A	39724	
DC 110 V		AU 4 NO + 4 NC DC 110 V for 3SW68-2500...6300	W68B AU44110D	39725	
DC 220 V		AU 4 NO + 4 NC DC 220 V for 3SW68-2500...6300	W68B AU44220D	39726	
DC 250 V		AU 4 NO + 4 NC DC 250 V for 3SW68-2500...6300	W68B AU44250D	39727	
AC 230 V		AU 6 NO + 6 NC AC 230 V for 3SW68-2500...6300	W68B AU66230A	39728	
AC 400 V		AU 6 NO + 6 NC AC 400 V for 3SW68-2500...6300	W68B AU66400A	39729	
AC 415 V		AU 6 NO + 6 NC AC 415 V for 3SW68-2500...6300	W68B AU66415A	39730	
DC 110 V		AU 6 NO + 6 NC DC 110 V for 3SW68-2500...6300	W68B AU66110D	39731	
DC 220 V	AU 6 NO + 6 NC DC 220 V for 3SW68-2500...6300	W68B AU66220D	39732		
DC 250 V	AU 6 NO + 6 NC DC 250 V for 3SW68-2500...6300	W68B AU66250D	39733		
Auxiliary position contacts - AUP					
Size A		AUP for 3SW68-1600	W68A AUP	39734	
Size B/C/D		AUP for 3SW68-2500...6300	W68B AUP	39735	

Air Circuit Breakers

Series 3SW68

Selection and ordering data

Mechanical accessories for circuit breakers

Size	Description	4-pole	
		Type code	Order code
Safety protection devices			
Size A/B/C/D	Opening protection for racking in / racking out for 3SW68 - OPC	W68 OPC	39737
Size A/B/C/D	Protection device for unexpected charging for 3SW68 - PUC	W68 PUC	39738
Size A	Protection cover for secondary terminal for 3SW68-1600 - CST	W68A CST	13959
Size B/C/D	Protection cover for secondary terminal for 3SW68-2500...6300 - CST	W68B CST	13960
Size A/B/C/D	Separate lock device for 3SW68 - SLD	W68 SLD	13961
Size A	3-position locking device for 3SW68-1600 - TPL	W68A TPL	13962
Size B	3-position locking device for 3SW68-2500...6300 - TPL	W68B TPL	13963
Size A/B/C/D	Position locking device for 3SW68 - PLD	W68 PLD	13964
Size A/B/C/D	Protection device for opening and closing buttons for 3SW68 - PDOC	W68 PDOC	13965
Size A/B/C/D	Key lock in open position for 3SW68 - KLO	W68 KLO	13966
Size A/B/C/D	Interlock for switchgear door for 3SW68 - ISD	W68 ISD	13967
Size A/B/C/D	Position key lock for 3SW68 - PKL	W68 PKL	13968
Size A/B/C/D	Blocking device for inserting in crank when the door is open for 3SW68 - BDI	W68 BDI	13969
Separators			
Size A	Separators 2 pieces for 3-pole 3SW68-1600 - PSB	W68A PSB3	39739
	Separators 3 pieces for 4-pole 3SW68-1600 - PSB	W68A PSB4	39740
Size B/C/D	Separators 2 pieces for 3-pole 3SW68-2500...6300 - PSB	W68B PSB3	39741
	Separators 3 pieces for 4-pole 3SW68-2500...6300 - PSB	W68B PSB4	39742
Door frame			
Size A	Door frame for withdrawable 3SW68-1600 - DF	W68A DFD	39744
Size B	Door frame for withdrawable 3SW68-2500 - DF	W68B DFD	39745
Size C	Door frame for withdrawable 3SW68-4000 - DF	W68C DFD	39746
Size D	Door frame for withdrawable 3SW68-6300 - DF	W68D DFD	39747
Size A	Door frame for fixed 3SW68-1600 - DF	W68A DFF	39748
Size B	Door frame for fixed 3SW68-2500 - DF	W68B DFF	32490
Size C	Door frame for fixed 3SW68-4000 - DF	W68C DFF	32491
Size D	Door frame for fixed 3SW68-6300 - DF	W68D DFF	13958
Connection terminals			
Size A	Front terminals for 3-pole 3SW68-1600 200...1000 A thickness 8 mm - BR	W68A BRF31	13970
	Front terminals for 3-pole 3SW68-1600 1250...1600 A thickness 15 mm - BR	W68A BRF32	13971
Size B	Front terminals for 3-pole 3SW68-2500 630...1000 A thickness 10 mm - BR	W68B BRF31	13972
	Front terminals for 3-pole 3SW68-2500 1250...2500 A thickness 10 mm - BR	W68B BRF32	13973
Size C	Front terminals for 3-pole 3SW68-4000 2000...3600 A thickness 15 mm - BR	W68C BRF31	13974
	Front terminals for 3-pole 3SW68-4000 4000 A thickness 20 mm - BR	W68C BRF32	13975
Size A	Front terminals for 4-pole 3SW68-1600 200...1000 A thickness 8 mm - BR	W68A BRF41	13976
	Front terminals for 4-pole 3SW68-1600 1250...1600 A thickness 15 mm - BR	W68A BRF42	13977
Size B	Front terminals for 4-pole 3SW68-2500 630...1000 A thickness 10 mm - BR	W68B BRF41	13978
	Front terminals for 4-pole 3SW68-2500 1250...2500 A thickness 10 mm - BR	W68B BRF42	13979
Size C	Front terminals for 4-pole 3SW68-4000 2000...3600 A thickness 15 mm - BR	W68C BRF41	13980
	Front terminals for 4-pole 3SW68-4000 4000 A thickness 20 mm - BR	W68C BRF42	13981
Size A	Spread terminals for 3-pole 3SW68-1600 200...1000 A thickness 8 mm - BR	W68A BRE31	13982
	Spread terminals for 3-pole 3SW68-1600 1250...1600 A thickness 15 mm - BR	W68A BRE32	13983
	Spread terminals for 4-pole 3SW68-1600 200...1000 A thickness 8 mm - BR	W68A BRE41	13984
	Spread terminals for 4-pole 3SW68-1600 1250...1600 A thickness 15 mm - BR	W68A BRE42	13985
Mechanical interlock			
Size A/B/C/D	Mechanical interlock cable type - LM	W68 LMC	13986
Size A/B/C/D	Mechanical interlock connecting rod type - LM	W68 LML	13987
Other accessories			
Size A/B/C/D	Crank for 3SW68 - CRK	W68 CRK	39736
Size A/B/C/D	Mechanical operation counter - MOC	MOC	39743

Selection and ordering data

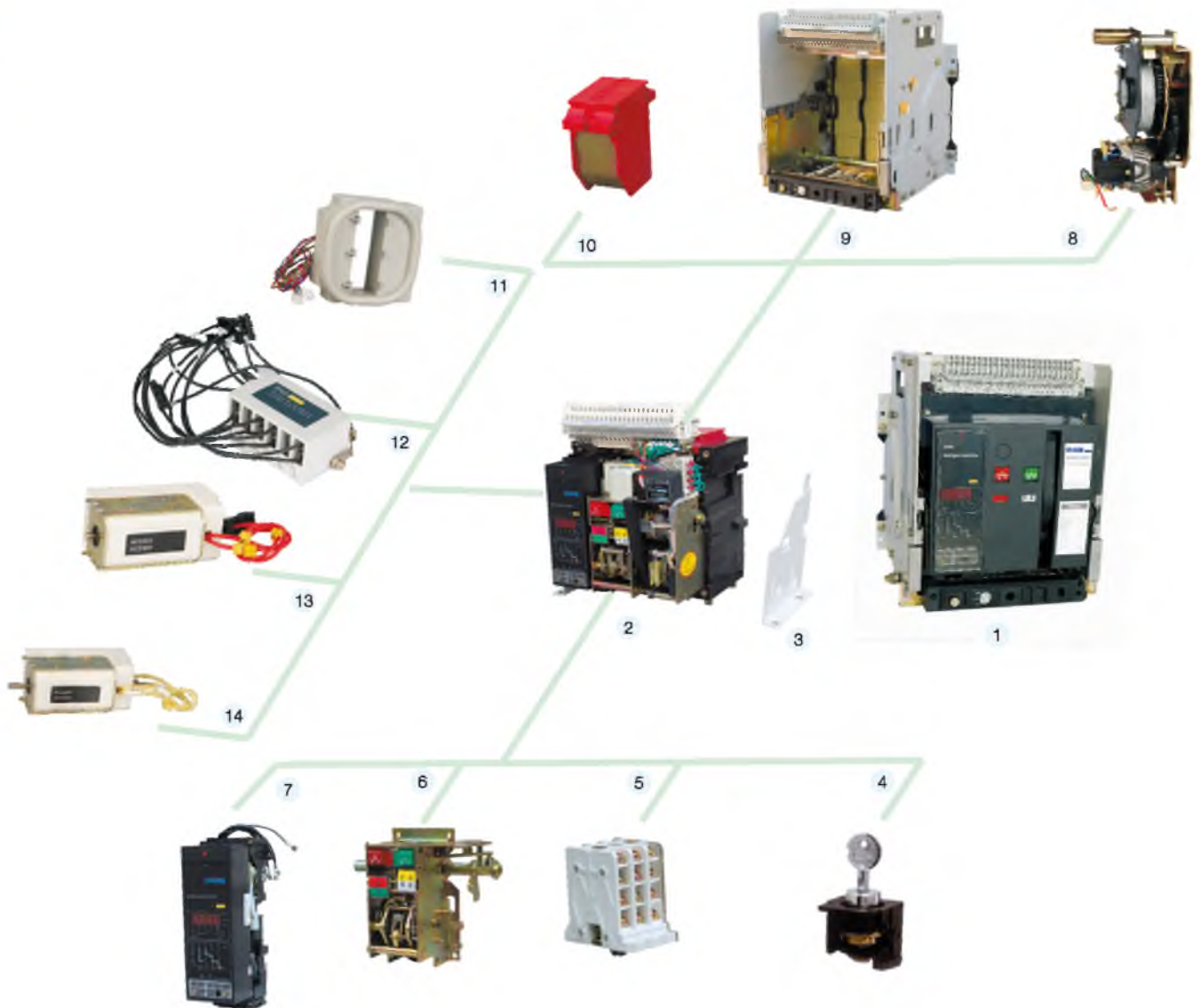
Accessories for electronic trip unit

Size	Rated Voltage Un	Description	Type code	Order code
DC power supply – PSM				
Size A/B/C/D	DC 220 V	Power supply DC 220 V	W68 PSM220D	13988
	DC 110 V	Power supply DC 110 V	W68 PSM110D	13989
External current transformer for neutral conductor – CTN				
Size A		CTN for 3SW68-1600 200...1000 A	W68A CTN1	13990
		CTN for 3SW68-1600 1250...1600 A	W68A CTN2	13991
Size B		CTN for 3SW68-2500 630...1000 A	W68B CTN1	13992
		CTN for 3SW68-2500 1250...1600 A	W68B CTN2	13993
Size C		CTN for 3SW68-4000 2000...3600 A	W68C CTN1	13994
		CTN for 3SW68-4000 4000 A	W68C CTN2	13995
Size D		CTN for 3SW68-6300	W68D CTN	13996
External current transformer for earth-fault protection – CTE				
Size A		CTE for 3SW68-1600 200...1000 A	W68A CTE1	13997
		CTE for 3SW68-1600 1250...1600 A	W68A CTE2	13998
Size B		CTE for 3SW68-2500 630...1000 A	W68B CTE1	13999
		CTE for 3SW68-2500 1250...1600 A	W68B CTE2	14000
Size C		CTE for 3SW68-4000 2000...3600 A	W68C CTE1	14001
		CTE for 3SW68-4000 4000 A	W68C CTE2	14002
Size D		CTE for 3SW68-6300	W68D CTE	14003
External current transformer for differential protection – CTD				
Size A		CTD for 3SW68-1600 200...1000 A	W68A CTD1	14004
		CTD for 3SW68-1600 1250...1600 A	W68A CTD2	14005
Size B		CTD for 3SW68-2500 630...1000 A	W68B CTD1	14006
		CTD for 3SW68-2500 1250...1600 A	W68B CTD2	14007
Size C		CTD for 3SW68-4000 2000...3600 A	W68C CTD1	14008
		CTD for 3SW68-4000 4000 A	W68C CTD2	14009
Size D		CTD for 3SW68-6300	W68D CTD	14010

Air Circuit Breakers Series 3SW8

Overview

1



1	Body 1	5	Auxiliary contact	9	Drawer base	13	Release
2	Body 2	6	Operating mechanism	10	Arcing chamber	14	Under-voltage release
3	Fixed plate	7	Electronic trip unit	11	Transformers		
4	Lock breaking device	8	Motorized operating mechanism	12	Auxiliary switch		

Applications and functions

- Incoming-feeder and outgoing-feeder function in distribution systems
- Switching and protecting large powers, motors, capacitors, generators, transformers, busbars and cables
- Overload protection
- Short-time delayed short-circuit protection
- Instantaneous short-circuit protection Used in building, industry, energy and infrastructures

Technical specifications:

Type	3SW8-2000		3SW8-3200		3SW8-6300		
Standard	IEC 60947-2		IEC 60947-2		IEC 60947-2		
Frame type	A		B		C		
Rated frame current Inm	A 2000		3200		6300		
Number of poles	3, 4		3, 4 (not for 4000A)		3, 4		
Rated current In	A	400 630 800 1000 1250 1600, 2000		2000, 2,500 4000 2900, 3200	4000	5000	6300
Rated frequency	Hz	50/60		50/60	50/60		
Rated voltage, Ue	V	400, 690		400, 690	400, 690		
Rated insulating voltage Ui	V	1000		1000	1000		
Rated impulsive withstand voltage, Uimp	kV	12		12	12		
N-pole rated current		100% In		100% In	100% In		
Rated ultimate short-circuit breaking capacity, Icu		80		100	120		
(AC) 50-60 Hz 400V O-CO	kA	50		65	75		
(AC) 50-60 Hz 690V O-CO	kA						
Rated operating short-circuit breaking capacity, Ics		50		80	100		
(AC) 50-60 Hz 400V O-CO	kA	40		50	65		
(AC) 50-60 Hz 690V O-CO	kA						
Rated short-circuit making capacity (peak), Icm		176		220	264		
(AC) 50-60 Hz 400V	kA	105		143	165		
(AC) 50-60 Hz 690V	kA						
Rated short-time withstand current for 1s Icw	kA	50		80	100		
(AC) 50-60 Hz 400V	kA/s	40		50	65		
(AC) 50-60 Hz 690V	kA/s						
Making time	mS	25-30		25-30	25-30		
Breaking time	mS	70		70	70		
Electrical life (times) in 400V		6000		3000	1000		
in 690V		3000		1500	800		
Mechanical life (times) without maintenance		15000		10000	4000		
with maintenance		30000		20000	8000		
Mounting position							
Installation type	Fixed /Withdrawable		Fixed (not for 4000 A) /Withdrawable		Withdrawable		
Dimension (mm)	HxWxD		HxWxD		HxWxD	HxWxD	HxWxD
Fixed, 3P	402x362x322		402x422x322		-	-	-
Fixed, 4P	402x362x322		402x537x322		-	-	-
Drawer, 3P	433x375x420		433x435x420		450x550x492	450x930x492	450x930x492
Drawer, 4P	433x375x420		433x550x420		-	450x390x492	450x930x492
Type of Electronic trip unit	Electronic type L, Standard type M, Communication type H						
Ambient temperature	-5 to +40°C , max. 95% humidity						
Storage temperature	-40 to +75°C						
Altitude (Max)	2000						

Air Circuit Breakers Series 3SW8

Instruction of type

1

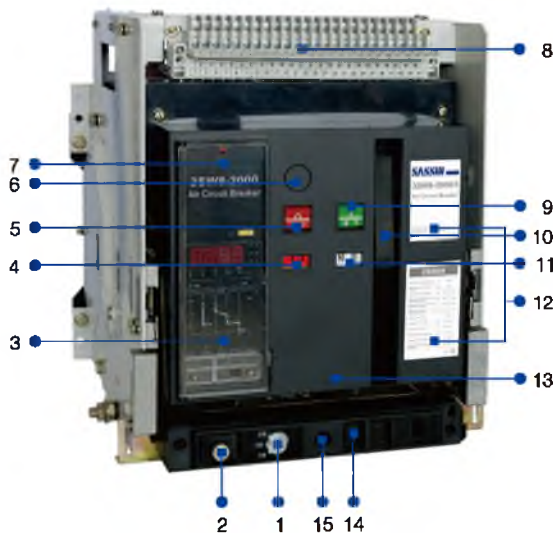
W8	A	F	3	L	H	400
Rated current 400, 630, 800, 1000, 1250, 1600, 2000 (Frame A) 2000, 2500, 2900, 3200, 4000 (Frame B) 4000, 5000, 6300 (Frame C)						
Connection type H: Horizontal terminal connection V: Vertical terminal connection						
Model of electronic trip unit L: L type M: M type H: H type						
Poles: 3: 3P; 4: 4P						
Installation type F: Fix type D: Withdrawable type						
Frame A: 3SW8-2000 B: 3SW8-3200 C: 3SW8-6300						
Series code						



Product structure

3SW8 series ACB has fixed type and withdrawable type. Putting the fixed breaker into the drawer base becomes drawer type circuit breaker. The breaker is consist of contact system, arc extinction system, operation mechanism, electronic trip unit, auxiliary switch, secondary circuit wiring terminal, under voltage release, shunt release, closing coil, etc.

Drawer type



1. Rocker hole
2. "Separation", "Test" and "Connection" three-position Indicator
3. Electronic trip unit
4. ON-OFF switch button
5. Switch off button
6. Trip indicator and reset button
7. "opening" lock mechanism
8. Secondary circuit terminals
9. Switch on button
10. Manual charging handle
11. Energy charging and discharging Indicator
12. Nameplate
13. Mask
14. Safety padlock mechanism on "Separation" indicator
15. Rocker operating hole

Note:

- "Separation" indicates that main circuit and secondary circuit are both in isolation.
- "Test": indicates that main circuit is in isolation and secondary circuit is in connection.
- "Connection": indicates that main circuit and secondary circuit are both in connection.

Normal Operation and Installation Conditions

- Ambient temperature: -5°C ~ +40°C , and the average temperature is not exceeding +35°C within 24 h;
- Altitude: Not higher than 2000 m. The capacity should be decreased if the altitude is above 2000m
- Humidity: When the ambient air temperature is +40 °C , the relative humidity of the air shall not be higher than 50%, a higher relative humidity is allowed at a lower temperature. For example, the relative humidity should be 90% when temperature is 20°C . Special measures should be adopted for the condensation occasionally produced due to temperature change.
- Pollution degree: 3
- The circuit breaker can be used in electromagnetic environment A
- Installing category: IV for main circuit; III for other auxiliary and control circuits;
- The vertical gradient: no more than 5°
- Mounting Ambient: There must be no explosive medium, no gas which would corrode metal or any conducting dust which would destroy the insulation;
- The circuit breakers should be installed in the compartment of switchgear cabinet with doorframes fixed additionally. Protection grade is up to IP40.

Installation

- Following items to be checked before installation
 - Check the label plate on the breaker panel to see if it conforms to the specifications of the ordered goods Rated current;
 - Voltage and time delay of under voltage release;
 - Voltage of shunt release;
 - Voltage of closing coil;
 - Voltage of motorized operating mechanism.
 - Before installation, operation, maintenance and inspection, you shall read this manual, and consult the manufacturer for questions if any.
- Preparations before installation
- Before the breaker is installed, check the insulation resistance of the breaker by using a 1000V megohmmeter according to regulations; when the surrounding media temperature is 25°C±5°C and the relative humidity is 5%~70%, the insulation resistance shall not be less than 20 megohm.
- The place with the insulation resistance to be tested includes: the place between various phases and between various phases and the frame when the breaker is closed; the place between in-and out-lines of various phases when the breaker is switched off.
- Installation of the fixed type breaker
- Place the breaker into the distribution cabinet, and fasten it by using 4 pieces of M6 (Inm=1600 A) or M10 (Inm=3200 A or above) bolts and washers; the breaker shall be installed stably with no d=additional mechanical stress to avoid damage of the breaker or bad contact of the main bus bar and the secondary circuit. After the work is completed, mount the body into the draw-out socket.
- The specification of the wiring copper bars for the primary circuit of the breaker shall meet the copper bar specification used under the conditions of conventional heating in IEC60947-2.
- The breaker shall be grounded substantially

Power loss

Power loss is the total loss measured when the breaker is charged with the rated current

Breaker type	Rated current (A)	Withdrawable (w)	Fixed type (w)
3SW8-2000	630	24	15
	800	39	25
	1000	61	40
	1250	87	54
	1600	128	64
	2000	160	80
	2000	150	80
	2500	180	100
3SW8-3200	2900	230	120
	3200	250	130
	4000/3P	270	-
3SW8-6300	4000/4P	290	-
	5000	330	-
	6300	360	-

Note:

The data and parameters in the above technical documentation result from tests and theoretical calculation, and can only be used as a general type selection guide. They cannot replace industrial practical experience or proof test.

Air Circuit Breakers

Series 3SW8

Intelligent controller characteristics

Function	Model	L	M	H
Basic protection	Overload protection	✓	✓	✓
	Short circuit short delay protection	✓	✓	✓
	Instantaneous short-circuit protection	✓	✓	✓
	Ground fault protection or neutral pole protection G/N	✓	✓	✓
Additional Function	MCR	○	○	○
	Thermal memory	✓	✓	✓
	Contact loss indication	○	✓	✓
	Self-diagnosis	○	✓	✓
	Fault memory	✓	✓	✓
	Test	✓	✓	✓
	Operation times	○	✓	✓
Parameterization and display	Fault trip display	✓	✓	✓
	Load monitor display	○	✓	✓
	Current display	✓	✓	✓
	Time display	–	✓	✓
Measurement	Current measurement	–	✓	✓
	Voltage measurement	–	○	○
	Frequency measurement	–	○	○
	Power measurement	–	○	○
	Power factor measurement	–	○	○
	Phase sequence detection	–	○	○
	Voltage unbalance measurement	–	○	○
	Electric power measurement	–	○	○
	Harmonic measurement	–	○	○
	Overvoltage protection	–	○	○
	Undervoltage protection	–	○	○
	Voltage unbalance protection	–	○	○
	Over frequency protection	–	○	○
	Under-frequency protection	–	○	○
	Phase sequence protection	–	○	○
Reverse power protection	–	○	○	
Communication	Communication Interface	–	–	○
	Achieve communication through the Modbus	–	–	○
	Achieve communication through the Profibus-DP	–	–	○
	Achieve communication through the Device Net	–	–	○

Note: ✓ standard – unavailable ○ selectable

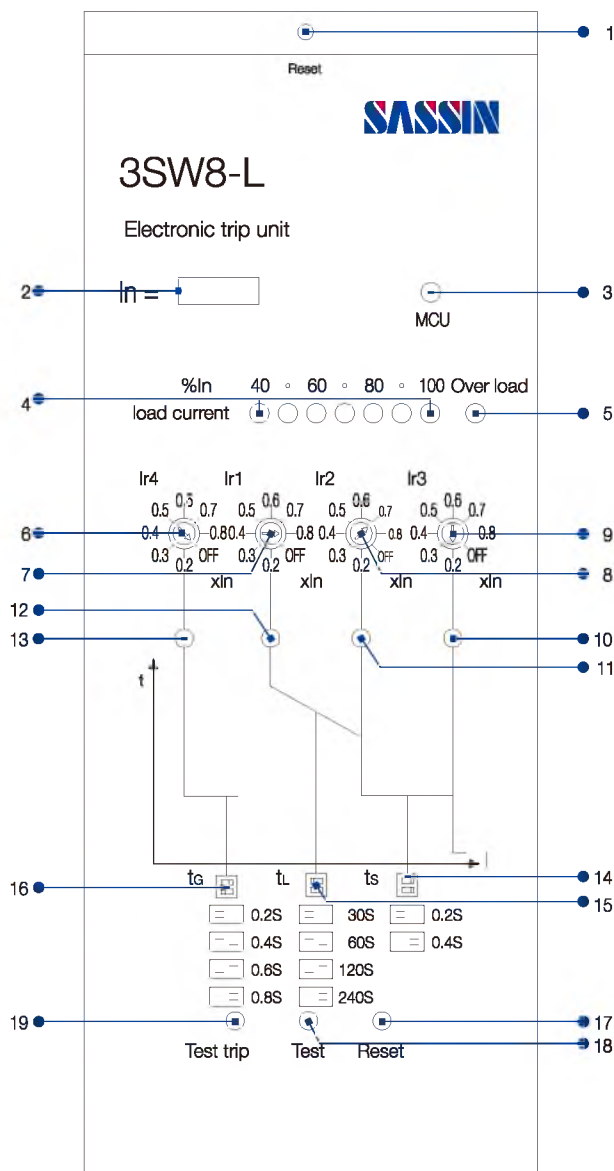
Types of electronic trip unit

There are three types available:

- L type-Basic type (Histogram display current, dial for adjustment)
- M type-Standard type (figures display current, button for adjustment)
- H type-Communication type (figures display current, button adjusting and for communication)

L type - panel structure instruction

L-type electronic trip unit adopts code switch and pull switch, simply and easy to handle.



1. Reset button
2. Rated current labels
3. Operation indicator
4. 40% ~ 100% Ir1 current light beam indicator
5. Overload indicator
6. Code switch for ground fault protection
7. Code switch for long time delayed overload protection
8. Code switch for short time delayed overload protection
9. Code switch for instantaneous short-circuit protection
10. Fault indicator for instantaneous short-circuit protection
11. fault indicator short time delayed short circuit protection
12. Fault indicator for long time delayed overload protection
13. Fault Indicator for ground protection
14. Pull switch for short time delayed short-circuit protection
15. Pull switch for long time delayed overload protection
16. Pull switch for time setting of ground protection
17. Reset key
18. Test trip button
19. Fault-checking button

Note:

- (1) "OFF" function is available for every protection function, user can chose different protection functions as per actual requirement.
- (2) MCU light; blink in normal operation, constantly light in self-diagnostic fault.
- (3) 40% to 100% light: show the percentage of maximum phase current to Ir1, the grade is 10%.
- (4) Overload light: when the current reaches 1.15 IR the overload light lighting; when IR = OFF, current reaches 1.15 IR the overload light lighting.
- (5) Fault reason indicator: check the reason why malfunction. When fault tripping occurs, the light indicator relevant fault reason, press the reset button to exit; if the power supply lost, press the check button to display the last fault trip reason when the power is on again.
- (6) Test trip button, check the status of release and circuit breakers.

Air Circuit Breakers

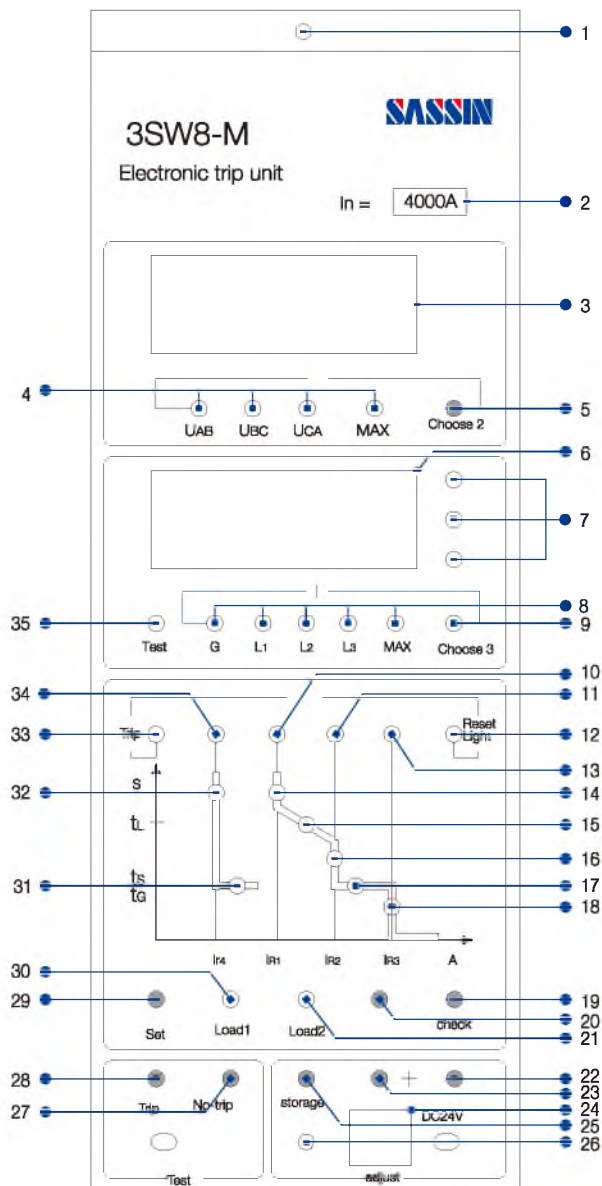
Series 3SW8

Types of electronic trip unit (Power distribution protection)

M type-panel structure instruction

1

M-type electronic trip unit, adopt button setting, digit and lights display mode, featured by large range of protection parameters which can be reorganize accordingly to different application requirement, suitable for most industrial applications.



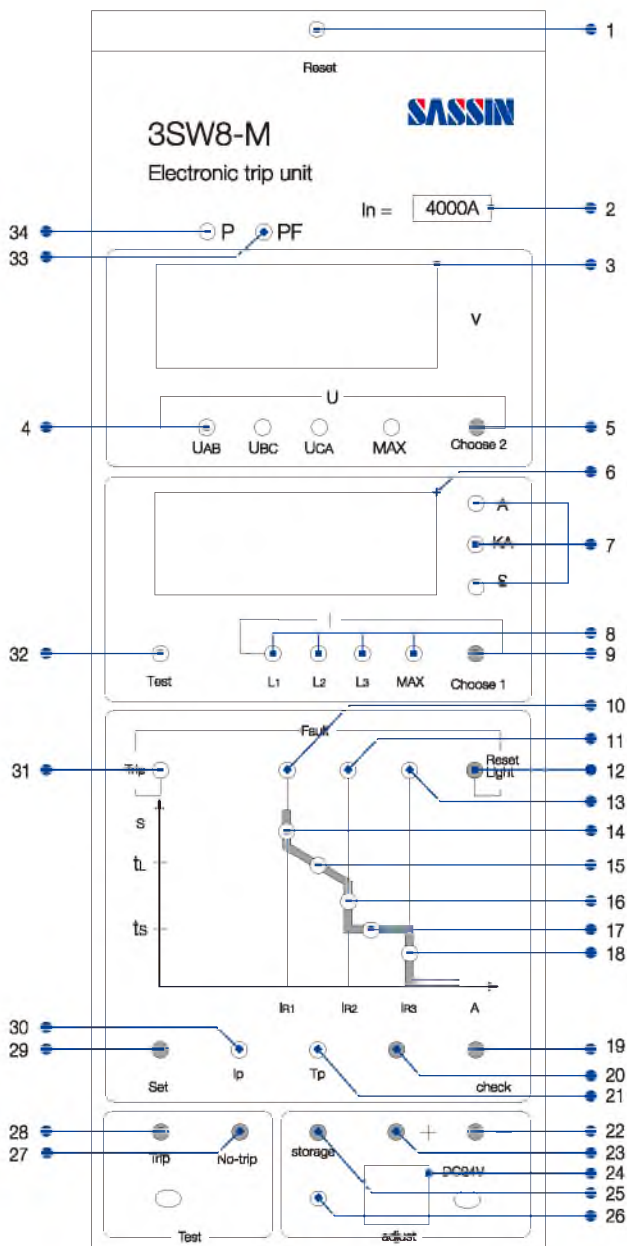
1. Reset button
2. Rated current labels
3. Voltage display
4. Three-phase line voltage and maximum voltage indicator
5. Voltage- checking button
6. Three-phase current display
7. Current and time Indicator
8. Four-phase, ground and the maximum phase current indicator
9. Current-checking button
10. Long time delayed overload fault indicator
11. Short time delayed short circuit fault indicator
12. Light clear reset button
13. Instantaneous short-circuit fault indicator
14. Current setting for long time delayed overload protection and alarm indicator
15. Time setting indicator of long time delayed overload protection
16. Current setting for short time delayed short circuit protection and alarm indicator
17. Time setting indicator for short time delayed short circuit protection
18. Instantaneous short circuit current protection settings and alarm indicator
19. Fault checking button
20. Spare key
21. Load monitoring 2, current setting and alarm indicator
22. Decrease button
23. Increase button
24. Power supply socket
25. Save button
26. Extra Indicator
27. Non trip test button
28. Trip test button
29. Parameter setting button
30. Load monitoring 2, current setting and alarm indicator
31. Time setting indicator for ground protection
32. Ground protection current setting and alarm indicator
33. Fault trip indicator
34. Fault indicator for ground protection
35. Test status lights

Note:

- (1) Fault current signal appears when the M type controller in the process of parameter setting, testing, fault checking, all the functional setting will be automatically turn off and enter the fault handling;
- (2) Cross-setting of protection parameters is forbidden and make sure $I_{r1} < I_{r2} < I_{r3}$
- (3) "Voltage display" is optional function, users should specify when place order.

Types of electronic trip unit (motor protection)

M-type panel structure instruction



1. Reset button
2. Rated current labels
3. Voltage display
4. Three-phase line voltage and maximum voltage indicator
5. Voltage- checking button
6. Three-phase current display
7. Current and time indicator
8. Four-phase, ground and the maximum phase current indicator
9. Current- checking button
10. Long time delayed overload fault indicator
11. Short time delayed short circuit fault indicator
12. Light clear reset button
13. Instantaneous short-circuit fault indicator
14. Current setting for long time delayed overload protection and alarm indicator
15. Long time delayed overload protection time setting indicator
16. Current settings for short time delayed short circuit protection and alarm indicator
17. Short time delayed short circuit protection time setting indicator
18. Instantaneous short circuit current protection settings and alarm indicator
19. Fault checking button
20. Spare key
21. Pre-alarm overload time setting indicator
22. Decrease button
23. Increase button
24. Power supply socket
25. Save button
26. Extra Indicator
27. Non trip test button
28. Trip test button
29. Parameter setting button
30. Pre-alarm overload current setting and alarm indicator
31. Fault trip indicator
32. Test status lights
33. Power factor measurement indicator
34. Active power measurement indicators

Note:

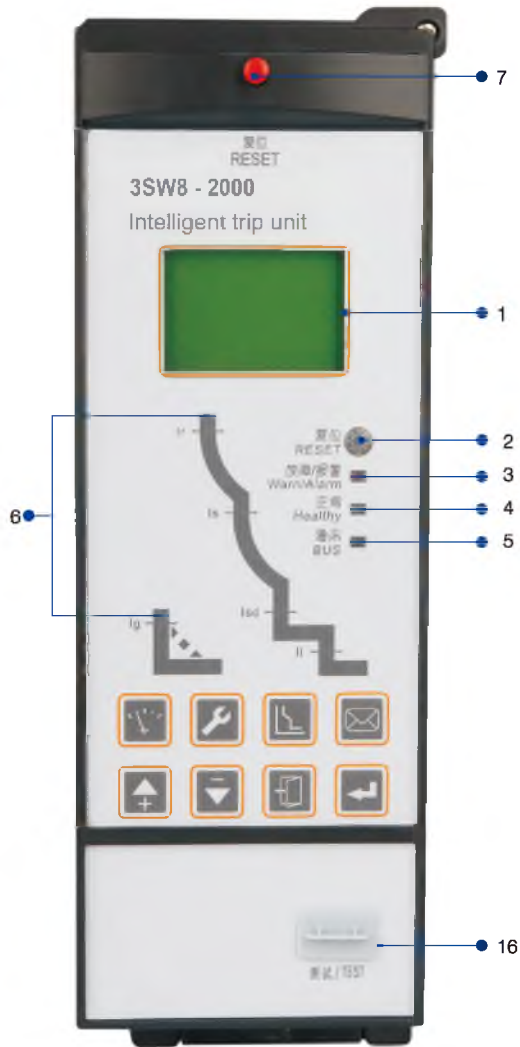
- (1) No ground fault protection for motor protection type.
- (2) "Voltage display" is optional function, users should specify when place order.

Air Circuit Breakers Series 3SW8

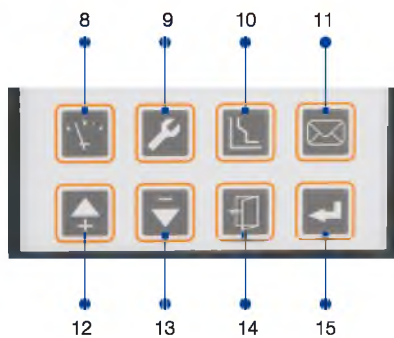
Types of electronic trip unit

H-type controller panel structure instruction

1



- Instruction
 1. LCD display
 2. Fault and alarm reset button
 3. "Fault and alarm" LED indicator will not lighten when normal operation; LED flash quickly when maintenance; LED turned red when alarm.
 4. LED blinking green color on normal working condition
 5. Communication indicator
Communication status as follows:
Light go out when no communication, keep lighting when in communication.
Light go out when no communication, keep flashing when in communication.
Flashing when no communication, keep lighting when in communication.
 6. Curve LED
The red LED hide inside curve. The corresponding LED flashes to indicate the type of fault when fault trip occurs.
LED constantly lighten to indicating the current set projects when protection of parameter settings.
 7. Reset button:
Reset button pops up when tripping or test tripping. The circuit-breaker can't switch on if the button hasn't pressed down; press down the button and the fault indications will recovery.
- Keyboard
 8. Measurement function key 1, can be switched to the default theme menu. (Measurement function key is the "left" key in the password input interface).
 9. Setting function key 2: can be switched to the parameter setting menu. (Setting function key is the "right" key in the password input screen).
 10. Protection function key 3: switch to the parameter setting protection menu.
 11. Information function 4: switch to history record and menu maintenance.
 12. Up-move up or change the parameters.
 13. Down-move down or change the parameter.
 14. Exit-exit and enter the previous menu or cancel the current selected parameters.
 15. Choice-enter into the next menu or select the parameters and save the amendment.
 16. Test port
There is a 16-pin test plug at the bottom of the front panel, a portable power pack or detection unit can be insert able.



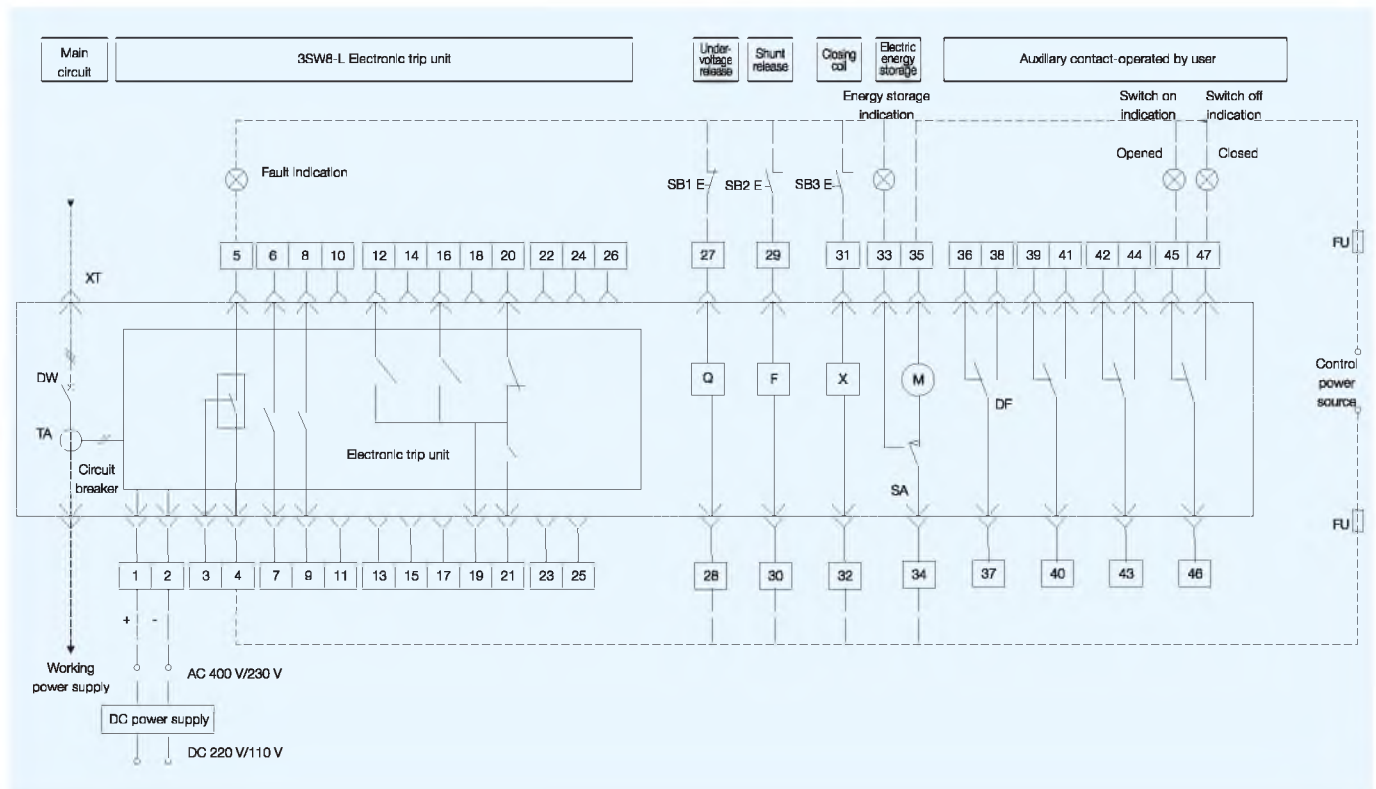
Protection characteristic of electronic trip unit type M and H

Overload thermal tripping L	NO/OFF selectable							
Setting current value adjustment range Ir1	(0.4~1.0) In stepless adjustment							
Inverse time characteristic	1.05 Ir1	2h no action						
Set by the user	1.30 Ir1	≤2h action						
1.5 Ir tL (s)	1.50 Ir1	15	30	60	120	240	480	
± 10% accuracy	2.00 Ir1	8.4	16.9	33.8	67.5	135	270	
	6.00 Ir1	0.94	1.88	3.75	7.50	15.0	30.0	
	7.20 Ir1	0.65	1.30	2.60	5.20	10.0	21.0	
Thermal memory (min)	≤30 + Off							
Short-circuit short delay (s)	NO/OFF Selectable							
Setting current value adjustment range Ir 2 ± 10% accuracy	(1.0 ~ 15) Ir1 stepless adjustment							
Setting delay time ts (s)	I > 8 Ir1	0.1	0.2	0.3	0.4			
± 15% accuracy	Time to return	0.06	0.14	0.23	0.35			
	I ≤ 8 Ir1	With inverse time characteristic						
Thermal memory(min)	≤15							
Instantaneous short-circuit (I)	NO/OFF Selectable							
Short-circuit current value adjustment range Ir 3 ± 15 % accuracy	(1.0-20) In							
Ground fault	NO/OFF Selectable							
Setting current value adjustment range Ir4 ± 10 % accuracy	(0.2 ~ 1.0) Ir stepless adjustment							
Ground fault delay time tG (s)	s	0.1	0.2	0.3	0.4			
Time to return	ms	60	160	225	340			
Maximum breaking time	ms	140	240	345	460			
Load monitoring								
Two load limit	A	Ic1 =In x ...	0.2~1 (≤2% differential, min 160 A)					
		tr1 =	0.5 t1, when 1.5 Ic1, T = 1.5 Ir1 x tr 1/I ²					
	A	Ic2 =In x ...	0.2~1 (≤2% differential, min160 A)					
One load limit and one reclose	A	tr2 =	0.25 t1, when 1.5 Ic1, T = 1.5 Ir1 x tr1/I ²					
		Ic1 =In x ...	0.2~1 (≤2% differential, min 160 A)					
		tr1 =	0.25 t1, when 1.5 Ic1, T = 1.5 Ir1 x tr1/I ²					
	A	Ic2 =In x ...	0.2~1 (≤2% differential, min 160 A)					
		tr2 =	Fixed 60 s					
Accuracy	± 10%							
Thermal memory (30 min. clear power)	Standard+off							
Fault trip								
Fault trip indication	Machinery	Mechanical reset button (red)						
	Electrical installations	Remote indication contact						
Overcurrent fault alarm	Fault trip display	Flash after fault trip						
Fault type display	Fault trip display	Long-time delayed overload protection, short-time delayed short-circuit protection, Instantaneous short-circuit protection, Earth fault protection						
Time display of fault current	Digital display, LCD display	Current and action time of overload, short-circuit, earth fault etc.						
Display of main contacts losses	Digital display, LCD display	Display the equivalent value						
Test	Trip button	Test the current-time characteristic of electronic trip unit and mechanical execution of circuit-breaker						
	Non trip button	Test the current-time characteristic of electronic trip unit						

Air Circuit Breakers Series 3SW8

Secondary circuit wiring diagram

- Secondary circuit wiring equipped with L type electronic trip unit



Note:

- 1) If the control voltage of F, X, M are different, they should connect different power source
- 2) Terminal 35# can connect the power source directly (automatic pre-energy storage), after series connecting with normally open button, it can connect the power source (manual pre-storage)
- 3) The #6 - #7 are normally closed terminal if user requires
- 4) Additional accessory should be self-provided by user

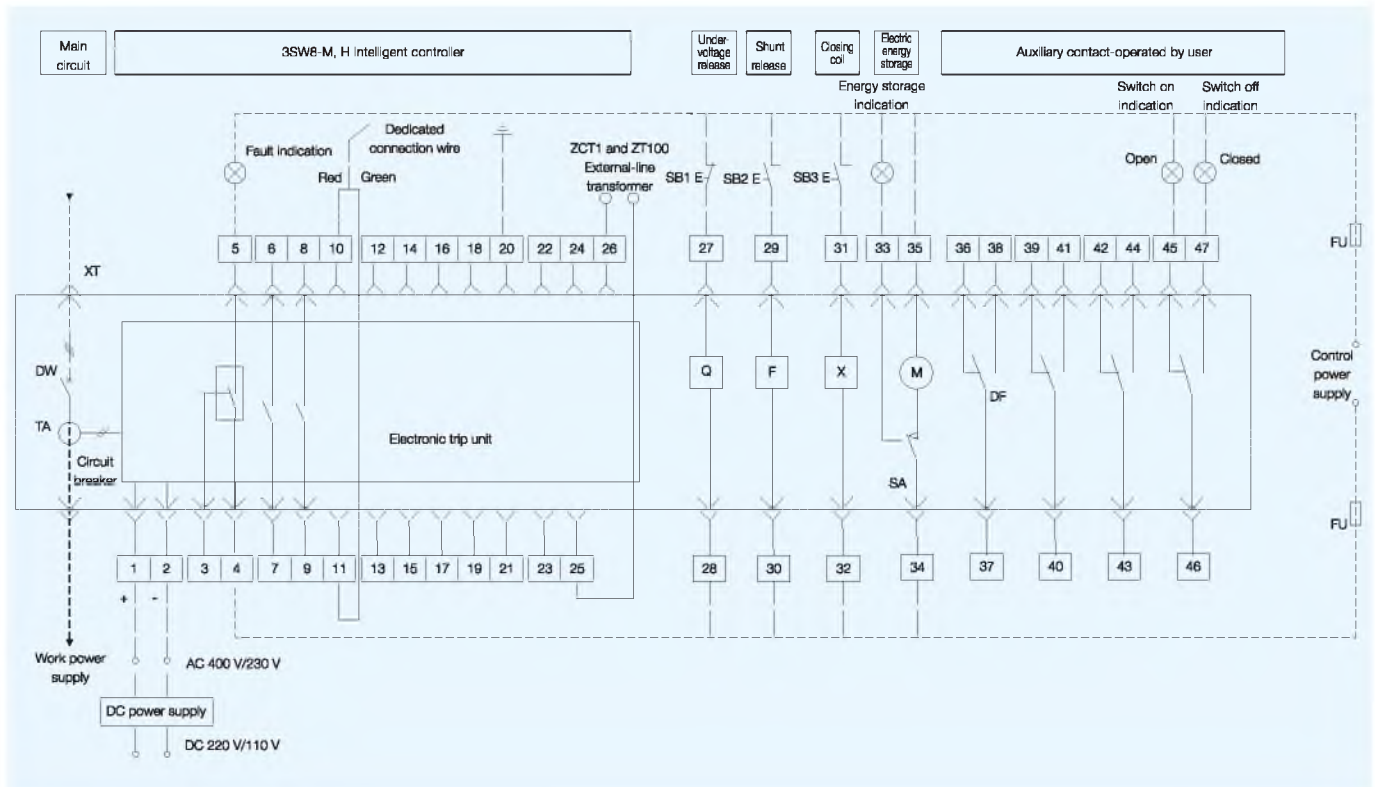
Abbreviation	Meaning	Abbreviation	Meaning
SB1	Under-voltage button (self-provided by user)	DF	Auxiliary contact
SB2	Shunt button (self-provided by user)	F	Shunt release
SB3	Switching on button	SA	Motor micro operation switch
X	Closing electromagnet	Q	Under-voltage release or under voltage time delay release
M	Motorized operating mechanism	⊗	Signal light (self-provided by user)
XT	Terminal		

Pin function

- 1#, 2#: Auxiliary power source input terminal 1# is "+" if it is direct current
- 3#, 4#, 5#: Fault trip contact output (#4 is common terminal), contact capacity: AC250V/16A
- 6#, 7# & 8#, 9#: Two groups breaker status auxiliary contacts, contact capacity: AC250V/16A
- 12#, 19#: DO signal alarm output, function: normally open, overload pre-alarm, contact capacity AC 250V/5A
- 16#, 19#: DO signal alarm output, function: normally open, ground trip or alarm, contact capacity AC 250V/5A
- 20#, 19#: DO signal alarm output, function: normally open, self-diagnosis alarm, contact capacity AC 250V/5A
- 21#, 19#: DO signal alarm output, function: normally open, OCR fault trip, contact capacity AC 250V/5A
- 25#, 26#: External current transformer input terminal (only 3P+N is available)

Secondary circuit wiring diagram

- Secondary circuit wiring equipped with M, electronic trip unit



Note:

- If the control voltage of F, X, M are different, they should connect different power source
- Terminal 35# can connect the power source directly (automatic pre-energy storage), After series connecting with normally open button, it can connect the power source (manual pre-storage)
- The #6 - #7 are normally closed terminal if the client requires
- Additional accessory should be self-provided by user

Abbreviation	Meaning	Abbreviation	Meaning
SB1	Under-voltage button (self-provided by user)	DF	Auxiliary contact
SB2	Shunt button (self-provided by user)	F	Shunt release
SB3	Switching on button	SA	Motor micro operation switch
X	Closing electromagnet	Q	Under-voltage release or under-voltage time delay release
M	Motorized operating mechanism	⊗	Signal light (User prepares)
XT	Terminal		

Pin function

1#, 2#: Auxiliary power source input terminal 1# is "+" if it is direct current.
 Because the controller has several optional types of power source, please note the input power source is same with the working power source of the controller; otherwise the controller will be broken.
 3#, 4#, 5#: Fault trip contact output (#4 is common terminal), contact capacity: AC250V/16A
 6#, 7# & 8#, 9#: Two groups of breaker status auxiliary contacts, contact capacity: AC250V/16A
 10#, 11#: Communication interface output, the three Com-munication protocol outputs are the same. 10#, 11# are empty if there is no communication (communication output).
 12#,19#: (DO:DC11V 0.5A, AC250V, 5A.DI: DC110V~13V or AC110V~AC250V)

When the signal unit type is S1: (4DO mode)

- 12#, 13#: Programmable output contact 1 (DO1)
 - 14#, 15#: Programmable output contact 2 (DO2)
 - 16#, 17#: Programmable output contact 3 (DO3)
 - 18#, 19#: Programmable output contact 4 (DO4)
- When the signal unit type is S2: (3DO+1DI mode)
- 12#, 13#: Programmable output contact 1 (DO1)

14#, 15#: Programmable output contact 2 (DO2)

16#, 17#: Programmable Discrete Output (DO3)

18#, 19#: Programmable Discrete Output (DI1)

When the signal unit type is S3: (2DO+2DI mode)

12#, 13#: Programmable output contact 1 (DO1)

14#, 15#: Programmable output contact 2 (DO2)

16#, 17#: Programmable Discrete Output 2 (DI3)

18#, 19#: Programmable Discrete Output 1 (DI1)

20# is the earth protection line of the controller

21#-24# pins are voltage signal input terminal, connecting with the input side of the power by correct order. The pin is empty if there is no added function

25#, 26# pin are used for input of external transformer

The pin is connected with the output terminal of external transformer ZT100 if the earth protection way is current returned type (T)

The pin is connected with the output terminal of external

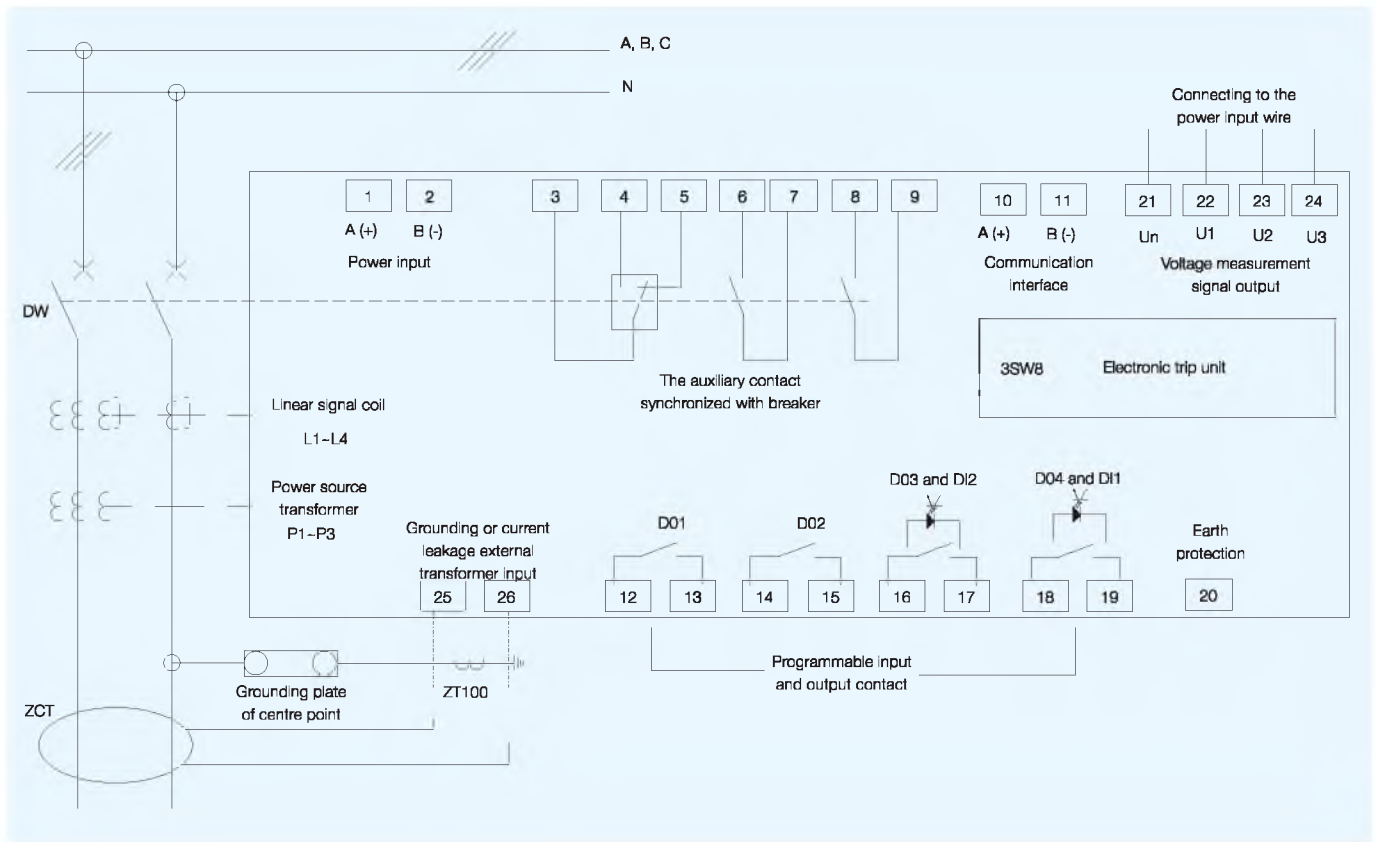
ZCT rectangle transformer if the ground mode is current leakage type.

The pin is connected with external added N phase transformer is when the ground protection mode is 3P+N value difference type.

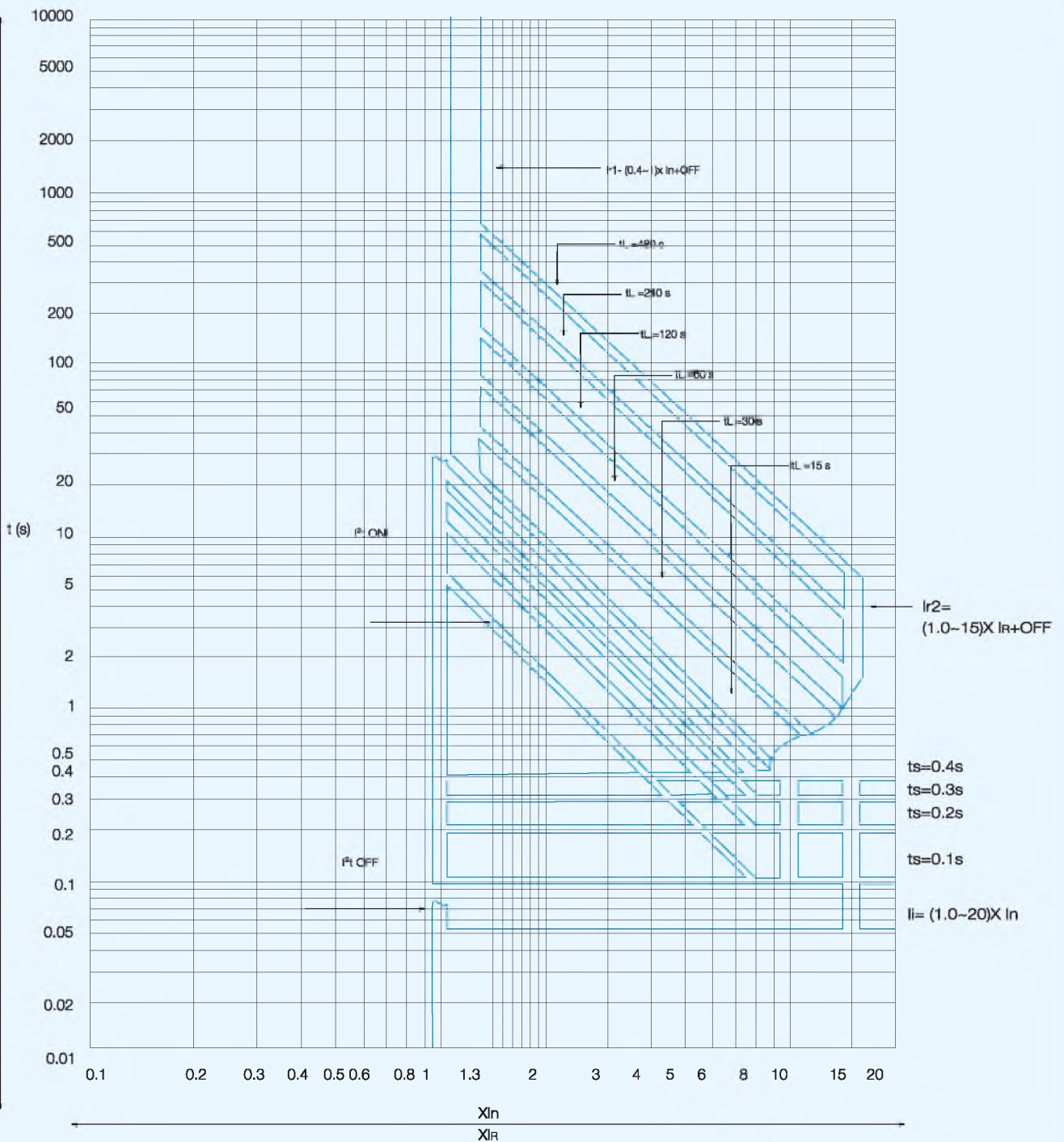
Air Circuit Breakers Series 3SW8

Secondary circuit wiring diagram

- Wiring diagram for circuit breaker equipped with type M/H electronic trip unit



Characteristic curves for overload protection



I_n Rated current

I_{r1} Current setting of long-time delayed overload protection

I_{r2} Current setting of short-time delayed short-circuit protection

I_i Current setting of instantaneous short-circuit protection

t_L Time setting of long-time delayed overload protection

t_s Time setting of short-time delayed short-circuit protection

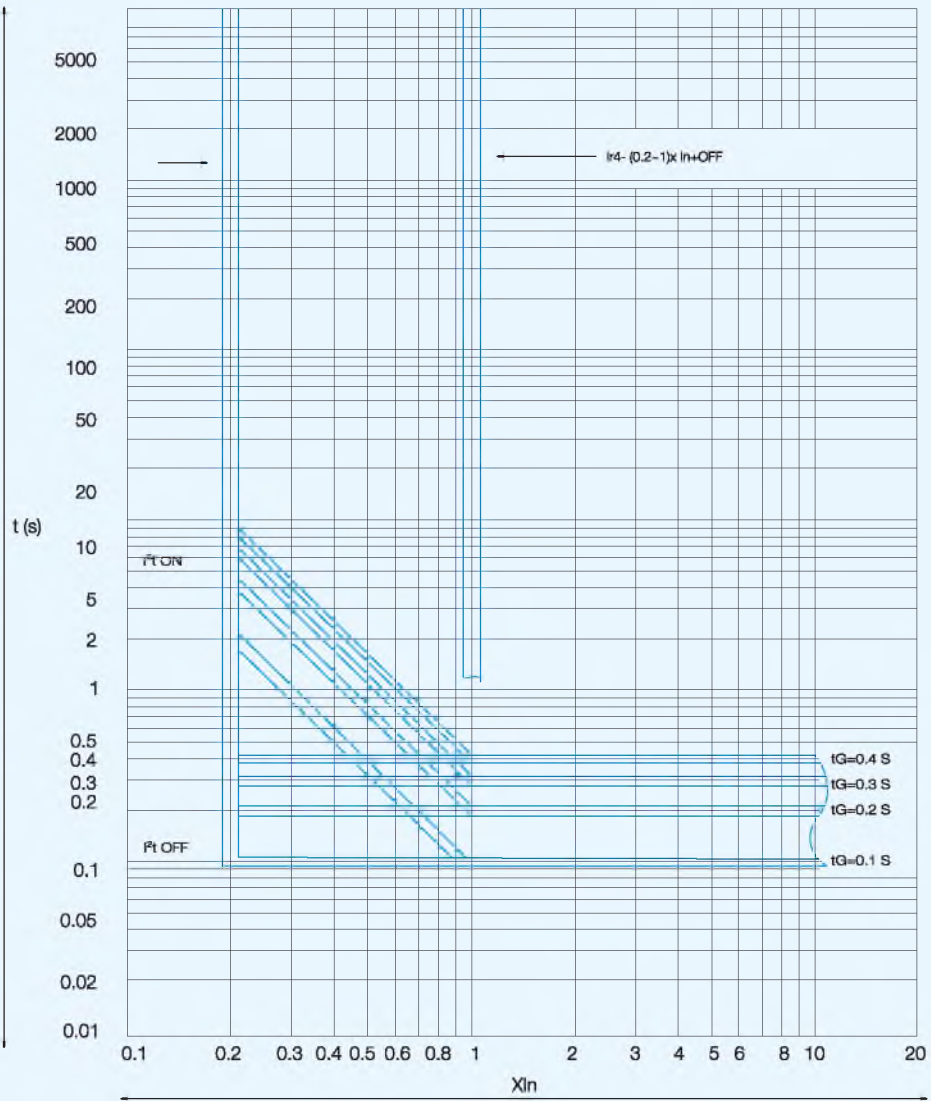
$I_2 \text{ ON}$ Inverse time characteristic

$I_2 \text{ OFF}$ Definite time characteristic

Air Circuit Breakers Series 3SW8

Characteristic curves for overload protection

1



I_{r4} Current setting of earth fault protection

tG Time setting of earth fault protection

Selection and ordering data

Frame A	Rated current In (A)	Number of poles	Fixed type		Withdrawable type	
			Type code	Order code	Type code	Order code
3SW8-2000	L type electronic trip unit					
	<i>Horizontal terminal connection</i>					
	400	3P	W8AF 3LH400	27997	W8AD 3LH400	27977
		4P	W8AF 4LH400	32444	W8AD 4LH400	32430
	630	3P	W8AF 3LH630	28001	W8AD 3LH630	27981
		4P	W8AF 4LH630	32446	W8AD 4LH630	32432
	800	3P	W8AF 3LH800	28003	W8AD 3LH800	27985
		4P	W8AF 4LH800	32448	W8AD 4LH800	32434
	1000	3P	W8AF 3LH1000	28005	W8AD 3LH1000	27987
		4P	W8AF 4LH1000	32450	W8AD 4LH1000	32436
	1250	3P	W8AF 3LH1250	28007	W8AD 3LH1250	27989
		4P	W8AF 4LH1250	32452	W8AD 4LH1250	32438
	1600	3P	W8AF 3LH1600	32426	W8AD 3LH1600	27991
		4P	W8AF 4LH1600	32454	W8AD 4LH1600	32440
	2000	3P	W8AF 3LH2000	32428	W8AD 3LH2000	27993
		4P	W8AF 4LH2000	32456	W8AD 4LH2000	32442
	<i>vertical terminal connection</i>					
	400	3P	W8AF 3LV400	27998	W8AD 3LV400	27978
		4P	W8AF 4LV400	32445	W8AD 4LV400	32431
	630	3P	W8AF 3LV630	28002	W8AD 3LV630	27982
		4P	W8AF 4LV630	32447	W8AD 4LV630	32433
	800	3P	W8AF 3LV800	28004	W8AD 3LV800	27986
		4P	W8AF 4LV800	32449	W8AD 4LV800	32435
	1000	3P	W8AF 3LV1000	28006	W8AD 3LV1000	27988
		4P	W8AF 4LV1000	32451	W8AD 4LV1000	32437
	1250	3P	W8AF 3LV1250	28008	W8AD 3LV1250	27990
		4P	W8AF 4LV1250	32453	W8AD 4LV1250	32439
	1600	3P	W8AF 3LV1600	32427	W8AD 3LV1600	27992
		4P	W8AF 4LV1600	32455	W8AD 4LV1600	32441
	2000	3P	W8AF 3LV2000	32429	W8AD 3LV2000	27994
		4P	W8AF 4LV2000	32457	W8AD 4LV2000	32443
	M type electronic trip unit					
	<i>Horizontal terminal connection</i>					
	400	3P	W8AF 3MH400	27815	W8AD 3MH400	27801
		4P	W8AF 4MH400	27843	W8AD 4MH400	27829
	630	3P	W8AF 3MH630	27817	W8AD 3MH630	27803
		4P	W8AF 4MH630	27845	W8AD 4MH630	27831
	800	3P	W8AF 3MH800	27819	W8AD 3MH800	27805
		4P	W8AF 4MH800	27847	W8AD 4MH800	27833
	1000	3P	W8AF 3MH1000	27821	W8AD 3MH1000	27807
		4P	W8AF 4MH1000	27849	W8AD 4MH1000	27835
	1250	3P	W8AF 3MH1250	27823	W8AD 3MH1250	27809
		4P	W8AF 4MH1250	27851	W8AD 4MH1250	27837
	1600	3P	W8AF 3MH1600	27825	W8AD 3MH1600	27811
		4P	W8AF 4MH1600	27853	W8AD 4MH1600	27839
	2000	3P	W8AF 3MH2000	27827	W8AD 3MH2000	27813
		4P	W8AF 4MH2000	27855	W8AD 4MH2000	27841



Air Circuit Breakers

Series 3SW8

Selection and ordering data

Frame A	Rated current In (A)	Number of poles	Fixed type		Withdrawable type	
			Type code	Order code	Type code	Order code
3SW8-2000	M type electronic trip unit					
	<i>Vertical terminal connection</i>					
	400	3P	W8AF 3MV400	27816	W8AD 3MV400	27802
		4P	W8AF 4MV400	27844	W8AD 4MV400	27830
	630	3P	W8AF 3MV630	27818	W8AD 3MV630	27804
		4P	W8AF 4MV630	27846	W8AD 4MV630	27832
	800	3P	W8AF 3MV800	27820	W8AD 3MV800	27806
		4P	W8AF 4MV800	27848	W8AD 4MV800	27834
	1000	3P	W8AF 3MV1000	27822	W8AD 3MV1000	27808
		4P	W8AF 4MV1000	27850	W8AD 4MV1000	27836
	1250	3P	W8AF 3MV1250	27824	W8AD 3MV1250	27810
		4P	W8AF 4MV1250	27852	W8AD 4MV1250	27838
	1600	3P	W8AF 3MV1600	27826	W8AD 3MV1600	27812
		4P	W8AF 4MV1600	27854	W8AD 4MV1600	27840
	2000	3P	W8AF 3MV2000	27828	W8AD 3MV2000	27814
		4P	W8AF 4MV2000	27856	W8AD 4MV2000	27842
	H type electronic trip unit					
	<i>Horizontal terminal connection</i>					
	400	3P	W8AF 3HH400	27871	W8AD 3HH400	27857
		4P	W8AF 4HH400	27899	W8AD 4HH400	27885
	630	3P	W8AF 3HH630	27873	W8AD 3HH630	27859
		4P	W8AF 4HH630	27901	W8AD 4HH630	27887
	800	3P	W8AF 3HH800	27875	W8AD 3HH800	27861
		4P	W8AF 4HH800	27903	W8AD 4HH800	27889
	1000	3P	W8AF 3HH1000	27877	W8AD 3HH1000	27863
		4P	W8AF 4HH1000	27905	W8AD 4HH1000	27891
	1250	3P	W8AF 3HH1250	27879	W8AD 3HH1250	27865
		4P	W8AF 4HH1250	27907	W8AD 4HH1250	27893
	1600	3P	W8AF 3HH1600	27881	W8AD 3HH1600	27867
		4P	W8AF 4HH1600	27909	W8AD 4HH1600	27895
	2000	3P	W8AF 3HH2000	27883	W8AD 3HH2000	27869
		4P	W8AF 4HH2000	27911	W8AD 4HH2000	27897
	<i>Vertical terminal connection</i>					
	400	3P	W8AF 3HV400	27872	W8AD 3HV400	27858
		4P	W8AF 4HV400	27900	W8AD 4HV400	27886
	630	3P	W8AF 3HV630	27874	W8AD 3HV630	27860
		4P	W8AF 4HV630	27902	W8AD 4HV630	27888
	800	3P	W8AF 3HV800	27876	W8AD 3HV800	27862
		4P	W8AF 4HV800	27904	W8AD 4HV800	27890
	1000	3P	W8AF 3HV1000	27878	W8AD 3HV1000	27864
		4P	W8AF 4HV1000	27906	W8AD 4HV1000	27892
	1250	3P	W8AF 3HV1250	27880	W8AD 3HV1250	27866
		4P	W8AF 4HV1250	27908	W8AD 4HV1250	27894
	1600	3P	W8AF 3HV1600	27882	W8AD 3HV1600	27868
		4P	W8AF 4HV1600	27910	W8AD 4HV1600	27896
	2000	3P	W8AF 3HV2000	27884	W8AD 3HV2000	27870
		4P	W8AF 4HV2000	27912	W8AD 4HV2000	27898

Selection and ordering data

Frame B	Rated current In (A)	Number of poles	Fixed type		Withdrawable type	
			Type code	Order code	Type code	Order code
3SW8-3200	L type electronic trip unit					
	<i>Horizontal terminal connection</i>					
	2000	3P	W8BF 3LH2000	32466	W8BD 3LH2000	32458
		4P	W8BF 4LH2000	32482	W8BD 4LH2000	32474
	2500	3P	W8BF 3LH2500	32468	W8BD 3LH2500	32460
		4P	W8BF 4LH2500	32484	W8BD 4LH2500	32476
	2900	3P	W8BF 3LH2900	32470	W8BD 3LH2900	32462
		4P	W8BF 4LH2900	32486	W8BD 4LH2900	32478
	3200	3P	W8BF 3LH3200	32472	W8BD 3LH3200	32464
		4P	W8BF 4LH3200	32488	W8BD 4LH3200	32480
	4000	3P	W8BF 3LH4000	32516	W8BD 3LH4000	32514
		4P	-	-	-	-
	<i>Vertical terminal connection</i>					
	2000	3P	W8BF 3LV2000	32467	W8BD 3LV2000	32459
		4P	W8BF 4LV2000	32483	W8BD 4LV2000	32475
	2500	3P	W8BF 3LV2500	32469	W8BD 3LV2500	32461
		4P	W8BF 4LV2500	32485	W8BD 4LV2500	32477
	2900	3P	W8BF 3LV2900	32471	W8BD 3LV2900	32463
		4P	W8BF 4LV2900	32487	W8BD 4LV2900	32479
	32200	3P	W8BF 3LV3200	32473	W8BD 3LV3200	32465
		4P	W8BF 4LV3200	32489	W8BD 4LV3200	32481
	4000	3P	W8BF 3LV4000	32517	W8BD 3LV4000	32515
		4P	-	-	-	-
	M type electronic trip unit					
	<i>Horizontal terminal connection</i>					
	2000	3P	W8BF 3MH2000	27921	W8BD 3MH2000	27913
		4P	W8BF 4MH2000	27937	W8BD 4MH2000	27929
	2500	3P	W8BF 3MH2500	27923	W8BD 3MH2500	27915
		4P	W8BF 4MH2500	27939	W8BD 4MH2500	27931
	2900	3P	W8BF 3MH2900	27925	W8BD 3MH2900	27917
		4P	W8BF 4MH2900	27941	W8BD 4MH2900	27933
	3200	3P	W8BF 3MH3200	27927	W8BD 3MH3200	27919
		4P	W8BF 4MH3200	27943	W8BD 4MH3200	27935
	4000	3P	W8BF 3MH4000	27983	W8BD 3MH4000	27979
		4P	-	-	-	-
	<i>Vertical terminal connection</i>					
	2000	3P	W8BF 3MV2000	27922	W8BD 3MV2000	27914
		4P	W8BF 4MV2000	27938	W8BD 4MV2000	27930
	2500	3P	W8BF 3MV2500	27924	W8BD 3MV2500	27916
		4P	W8BF 4MV2500	27940	W8BD 4MV2500	27932
	2900	3P	W8BF 3MV2900	27926	W8BD 3MV2900	27918
		4P	W8BF 4MV2900	27942	W8BD 4MV2900	27934
	32200	3P	W8BF 3MV3200	27928	W8BD 3MV3200	27920
		4P	W8BF 4MV3200	27944	W8BD 4MV3200	27936
	4000	3P	W8BF 3MV4000	27984	W8BD 3MV4000	27980
		4P	-	-	-	-
	H type electronic trip unit					
	<i>Horizontal terminal connection</i>					
	2000	3P	W8BF 3HH2000	27953	W8BD 3HH2000	27945
		4P	W8BF 4HH2000	27969	W8BD 4HH2000	27961
	2500	3P	W8BF 3HH2500	27955	W8BD 3HH2500	27947
		4P	W8BF 4HH2500	27971	W8BD 4HH2500	27963
	2900	3P	W8BF 3HH2900	27957	W8BD 3HH2900	27949
		4P	W8BF 4HH2900	27973	W8BD 4HH2900	27965
	3200	3P	W8BF 3HH3200	27959	W8BD 3HH3200	27951
		4P	W8BF 4HH3200	27975	W8BD 4HH3200	27967
	4000	3P	W8BF 3HH4000	27999	W8BD 3HH4000	27995
		4P	-	-	-	-

Air Circuit Breakers

Series 3SW8

Selection and ordering data

Frame B	Rated current In (A)	Number of poles	Fixed type		Withdrawable type		
			Type code	Order code	Type code	Order code	
3SW8-3200	H type electronic trip unit						
	<i>Vertical terminal connection</i>						
	2000	3P	W8BF 3HV2000	27954	W8BD 3HV2000	27946	
		4P	W8BF 4HV2000	27970	W8BD 4HV2000	27962	
	2500	3P	W8BF 3HV2500	27956	W8BD 3HV2500	27948	
		4P	W8BF 4HV2500	27972	W8BD 4HV2500	27964	
	2900	3P	W8BF 3HV2900	27958	W8BD 3HV2900	27950	
		4P	W8BF 4HV2900	27974	W8BD 4HV2900	27966	
	3200	3P	W8BF 3HV3200	27960	W8BD 3HV3200	27952	
		4P	W8BF 4HV3200	27976	W8BD 4HV3200	27968	
	4000	3P	W8BF 3HV4000	28000	W8BD 3HV4000	27996	
		4P	-	-	-	-	
	3SW8-6300	L type electronic trip unit					
		<i>Horizontal terminal connection</i>					
4000		3P	W8CF 3LH4000	32496	W8CD 3LH4000	32490	
		4P	W8CF 4LH4000	32508	W8CD 4LH4000	32502	
5000		3P	W8CF 3LH5000	32498	W8CD 3LH5000	32492	
		4P	W8CF 4LH5000	32510	W8CD 4LH5000	32504	
6300		3P	W8CF 3LH6300	32500	W8CD 3LH6300	32494	
		4P	W8CF 4LH6300	32512	W8CD 4LH6300	32506	
<i>Vertical terminal connection</i>							
4000		3P	W8CF 3LV4000	32497	W8CD 3LV4000	32491	
		4P	W8CF 4LV4000	32509	W8CD 4LV4000	32503	
5000		3P	W8CF 3LV5000	32499	W8CD 3LV5000	32493	
		4P	W8CF 4LV5000	32511	W8CD 4LV5000	32505	
6300		3P	W8CF 3LV6300	32501	W8CD 3LV6300	32495	
	4P	W8CF 4LV6300	32513	W8CD 4LV6300	32507		
M type electronic trip unit							
<i>Horizontal terminal connection</i>							
4000	3P	W8CF 3MH4000	28015	W8CD 3MH4000	28009		
	4P	W8CF 4MH4000	28027	W8CD 4MH4000	28021		
5000	3P	W8CF 3MH5000	28017	W8CD 3MH5000	28011		
	4P	W8CF 4MH5000	28029	W8CD 4MH5000	28023		
6300	3P	W8CF 3MH6300	28019	W8CD 3MH6300	28013		
	4P	W8CF 4MH6300	28031	W8CD 4MH6300	28025		
<i>Vertical terminal connection</i>							
4000	3P	W8CD 3MV4000	28016	W8CF 3MV4000	28010		
	4P	W8CD 4MV4000	28028	W8CF 4MV4000	28022		
5000	3P	W8CD 3MV5000	28018	W8CF 3MV5000	28012		
	4P	W8CD 4MV5000	28030	W8CF 4MV5000	28024		
6300	3P	W8CD 3MV6300	28020	W8CF 3MV6300	28014		
	4P	W8CD 4MV6300	28032	W8CF 4MV6300	28026		
H type electronic trip unit							
<i>Horizontal terminal connection</i>							
4000	3P	W8CF 3HH4000	28039	W8CD 3HH4000	28033		
	4P	W8CF 4HH4000	28051	W8CD 4HH4000	28045		
5000	3P	W8CF 3HH5000	28041	W8CD 3HH5000	28035		
	4P	W8CF 4HH5000	28053	W8CD 4HH5000	28047		
6300	3P	W8CF 3HH6300	28043	W8CD 3HH6300	28037		
	4P	W8CF 4HH6300	28055	W8CD 4HH6300	28049		
<i>Vertical terminal connection</i>							
4000	3P	W8CF 3HV4000	28040	W8CD 3HV4000	28034		
	4P	W8CF 4HV4000	28052	W8CD 4HV4000	28046		
5000	3P	W8CF 3HV5000	28042	W8CD 3HV5000	28036		
	4P	W8CF 4HV5000	28054	W8CD 4HV5000	28048		
6300	3P	W8CF 3HV6300	28044	W8CD 3HV6300	28038		
	4P	W8CF 4HV6300	28056	W8CD 4HV6300	28050		

Accessory



- Under-voltage release

When circuit breaker is power off, it requires automatic break, user should adopt under-voltage instantaneous release; when breaker is instantaneous power failure or under voltage, it does not require break, user adopt under-voltage delay release. Thus, it is not a necessary accessory, it is optional. It should always connect the power source if circuit breaker is equipped with such release.

Note:

In the thunderstorm-prone areas or in unstable voltage grids, it is recommended to use under voltage time-delayed release. It can prevent the breaker tripping caused by instantaneous voltage decrease. The delayed time are normally 0.5 s, 1 s, 2 s, 3 s, for user to choose.

Characteristics:

Rated working voltage U_e (V)	AC 400, AC 230
Tripping voltage (V)	(0.35~0.7) U_e
Reliable closing voltage (V)	(0.85~1.1) U_e
Reliable open voltage (V)	$\leq 0.35 U_e$
Power consumption	12 VA

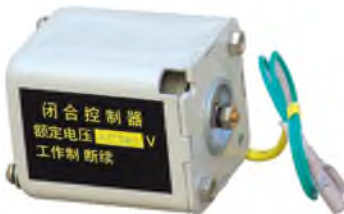


- Shunt release

Shunt release can break circuit breaker through remote operation instead of on the spot, which can avoid contact with circuit breaker during circuit operation and make worker safer. Shunt release can't always be connected to power source, otherwise coil will be burned.

Characteristics:

Rated control power source voltage U_s (V)	AC 400, AC 230, DC 220, DC 110
Tripping voltage (V)	(0.7~1.1) U_s
Limit current	0.7, 1.3, 1.3, 2.4
Breaking time (ms)	≤ 30



- Closing electromagnet

Closing electromagnet can switch on circuit breaker through remote operation instead of on the spot, which can avoid contact with circuit breaker during circuit operation and make worker safer. Such release can't always be connected to power source, otherwise coil will be burned. After energy storage is finished, the closing electromagnet will make the energy storage spring of operation mechanism to release its energy instantly so that the circuit breaker is closed rapidly.

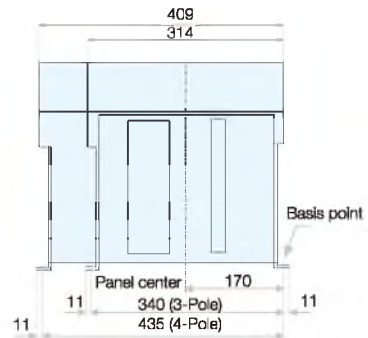
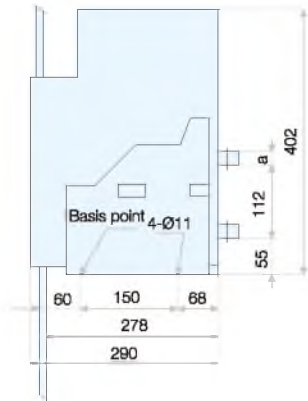
Characteristics:

Rated control power source voltage U_e (V)	AC 400, AC 230, DC 220, DC 110
Tripping voltage (V)	(0.8~1.1) U_s
Limit current (A)	0.7, 1.3, 1.3, 2.4
Closing time (ms)	≤ 70

Outline and installation dimensions

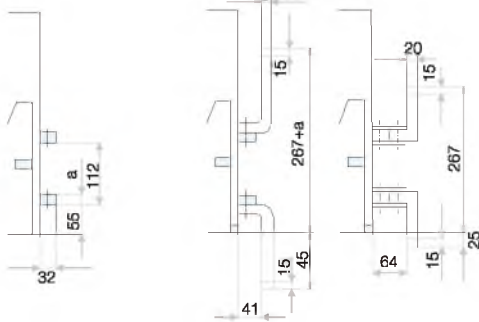
3SW8-2000

Fixed type 3-pole/4-pole



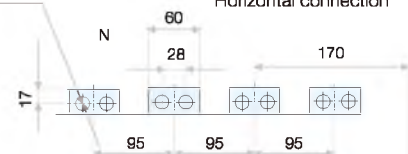
Horizontal connection

L-type connection



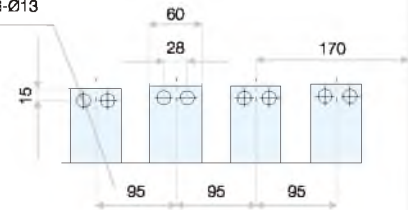
3-Pole 12-Ø13
4-Pole 16-Ø13

Horizontal connection



L-type connection

3-Pole 12-Ø13
4-Pole 16-Ø13

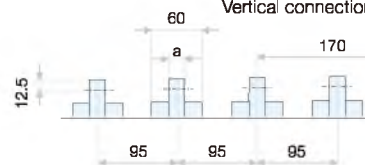


Vertical connection

Extended horizontal connection

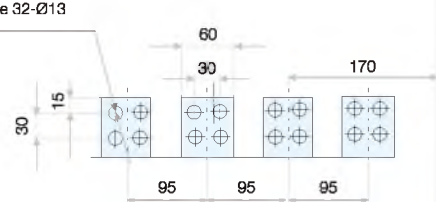


Vertical connection

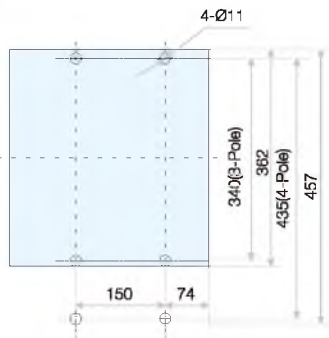


3-Pole 24-Ø13
4-Pole 32-Ø13

Extended horizontal connection



Basis point



Withdrawable 3-pole 4-pole

In A	a mm
400-800	10
1000-1600	15
2000	20

Air Circuit Breakers Series 3SW8

Accessory

1



- Electric operation mechanism
The breaker is of operation mechanism energy storage and re-storage function. The breaker can store energy manually

Characteristics:

Rated control power source voltage U_s (V)	AC 400, AC 230, DC 220, DC 110
Tripping voltage (V)	(0.85~1.1) U_s
Power consumption	192 VA, 192 W
Storage time (s)	≤ 5



- Disconnecting lock device
Disconnecting lock device can lock the switch off button at the off location, thus breaker can not be closed;
The factory will provide the key and lock after user selects breaker;
One circuit breaker is equipped with independent lock and key;
Two circuit breakers are equipped with two same locks and one key;
Three circuit breakers are equipped with three same locks and two keys.



- Partition plate of the withdrawable type circuit breaker;
The partition strengthens the busbar insulation. It is optional.



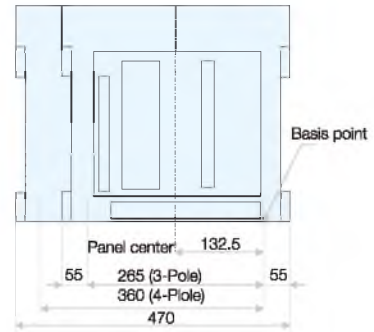
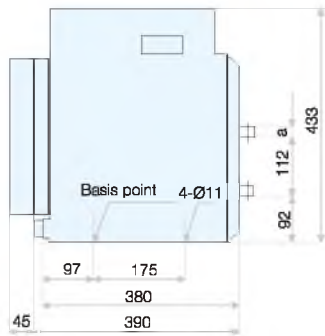
- Door frame
It is fixed on the door cabinet and used as seal. Protection grade is up to IP40;
Beautiful and practical;
The door frame has withdrawable type and fixed type.

Air Circuit Breakers Series 3SW8

Outline and installation dimensions

3SW8-2000

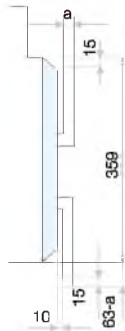
Withdrawable type 3-pole/4-pole



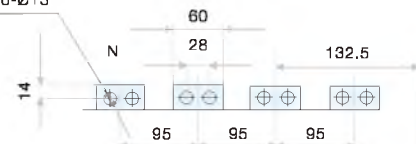
Horizontal connection



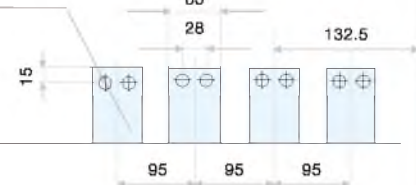
L-type connection



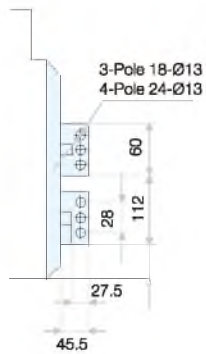
3-Pole 12-Ø13
4-Pole 16-Ø13 Horizontal connection



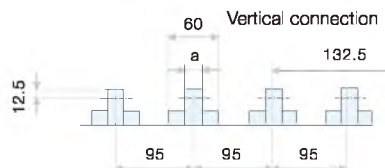
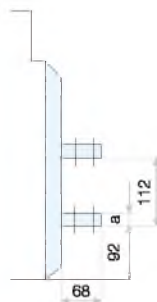
3-Pole 12-Ø13
4-Pole 16-Ø13 L-type connection



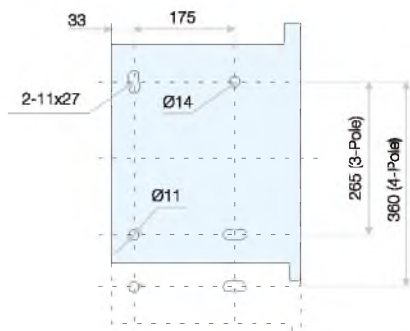
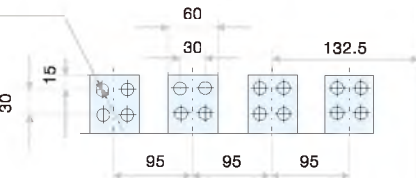
Vertical connection



Extended horizontal connection



3-Pole 24-Ø13
4-Pole 32-Ø13 Extended horizontal connection



Basis point

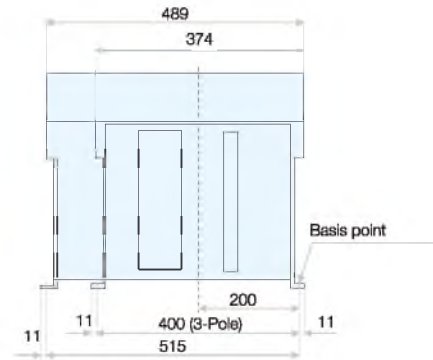
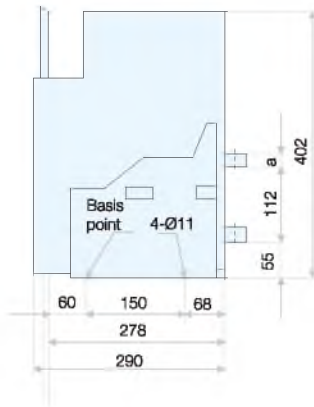
Withdrawable 3-pole 4-pole

In A	a mm
400-800	10
1000-1600	15
2000	20

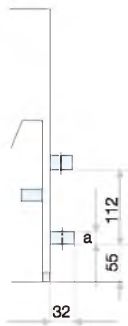
Outline and installation dimensions

3SW8-3200

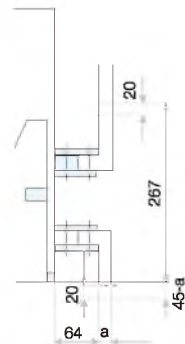
Fixed type 3-pole/4-pole



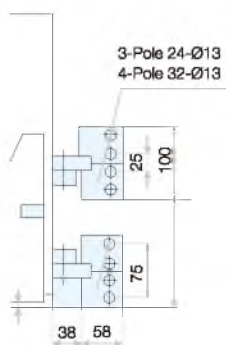
Horizontal connection



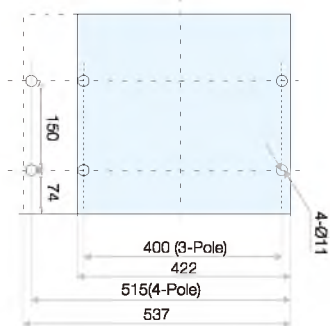
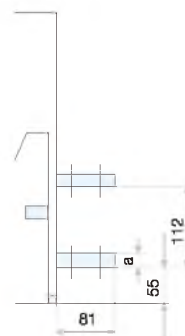
L-type connection



Vertical connection

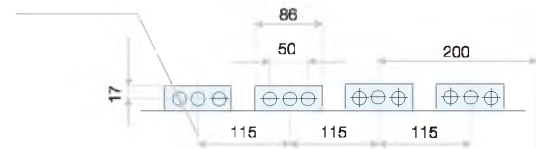


Extended horizontal connection



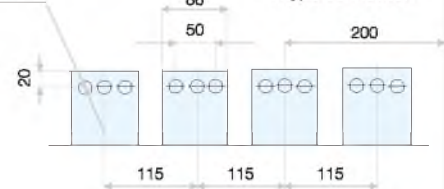
3-Pole 18-Ø13
4-Pole 24-Ø13

Horizontal connection



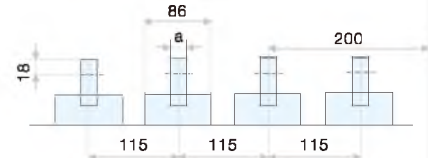
3-Pole 18-Ø13
4-Pole 24-Ø13

L-type connection



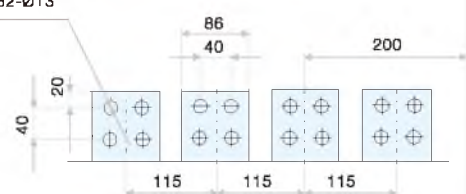
3-Pole 24-Ø13
4-Pole 32-Ø13

Vertical connection



3-Pole 24-Ø13
4-Pole 32-Ø13

Extended horizontal connection



Basis point

Withdrawable 3-pole 4-pole

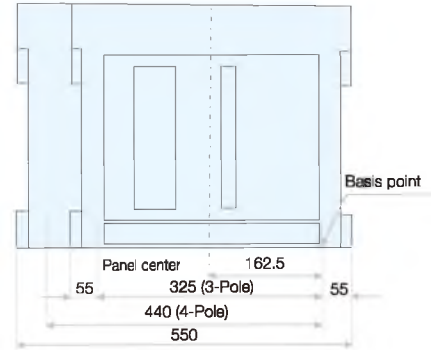
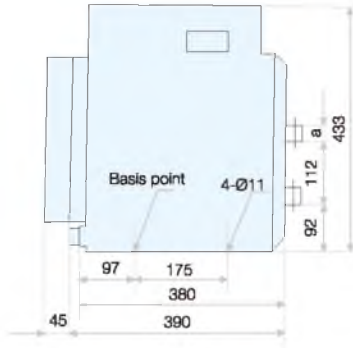
In A	a mm
2000-2500	20
2900-3200	30

Air Circuit Breakers Series 3SW8

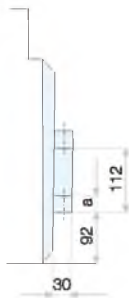
Outline and installation dimensions

3SW8-3200

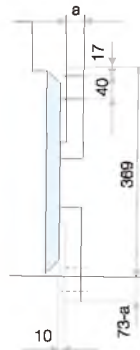
Withdrawable type 3-pole/4-pole



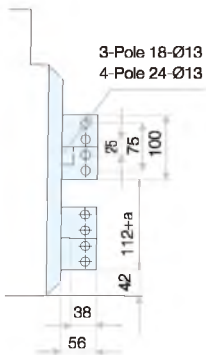
Horizontal connection



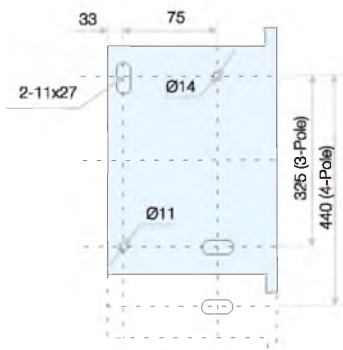
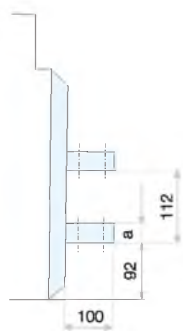
L-type connection



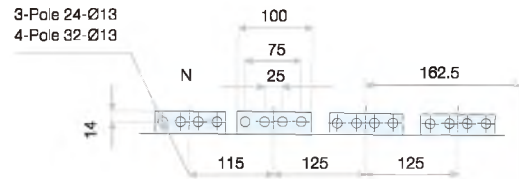
Vertical connection



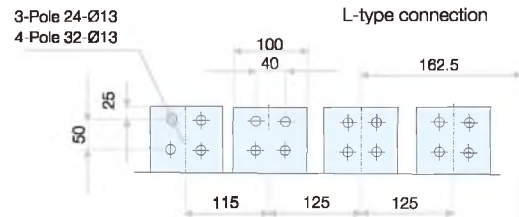
Extended horizontal connection



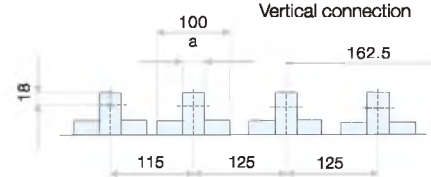
Horizontal connection



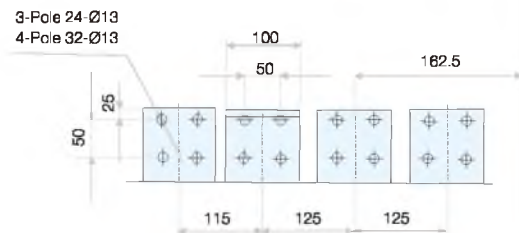
L-type connection



Vertical connection



Extended horizontal connection



Basis point

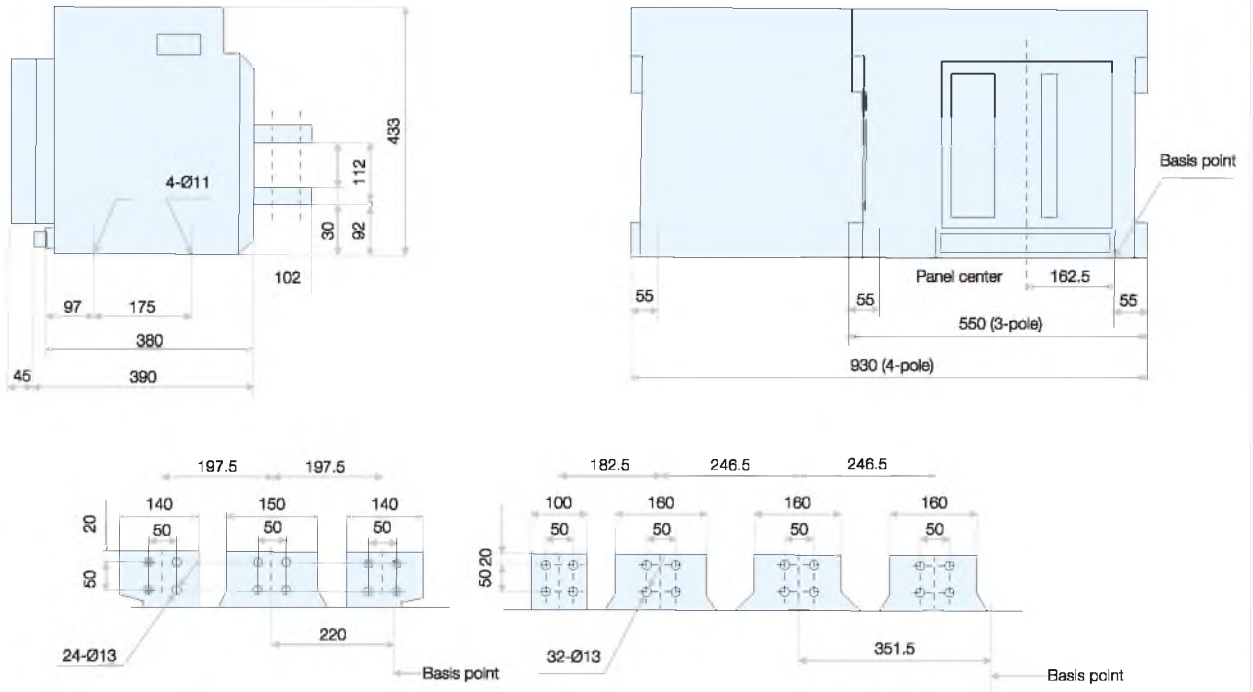
Withdrawable 3-pole 4-pole

In A	a mm
2000~2500	20
2900~3200	30

Outline and installation dimensions

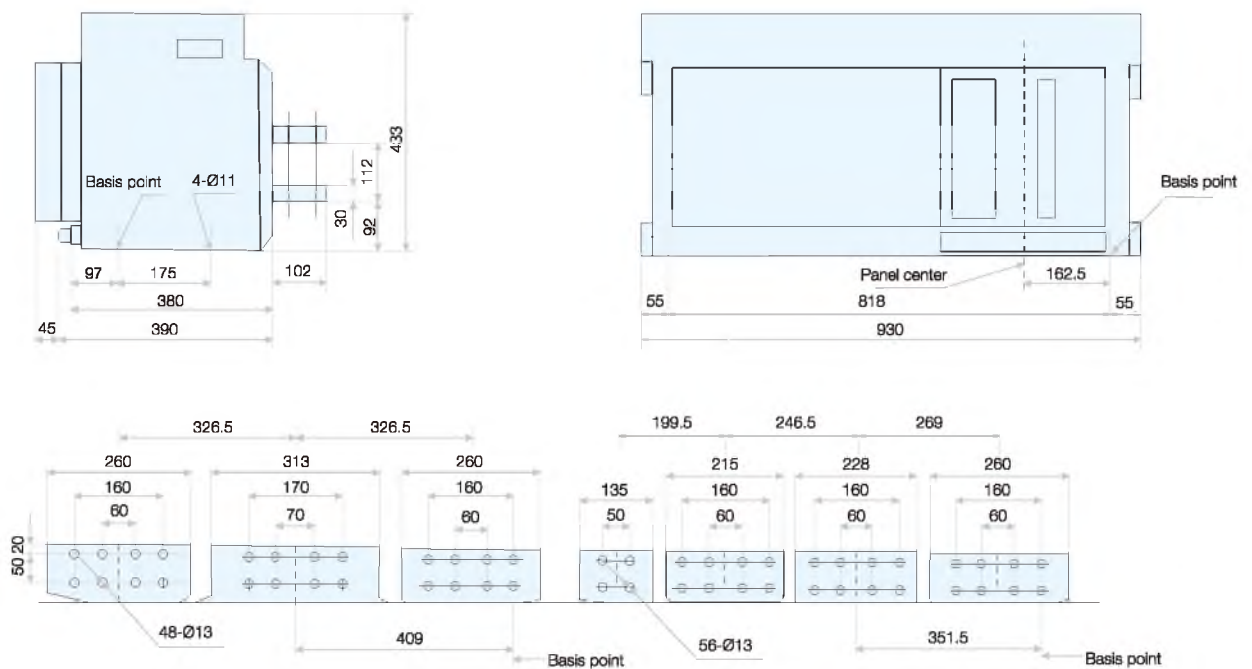
3SW8-4000

Drawable type 3-pole/4-pole



3SW8-6300

Withdrawable type 3-pole/4pole



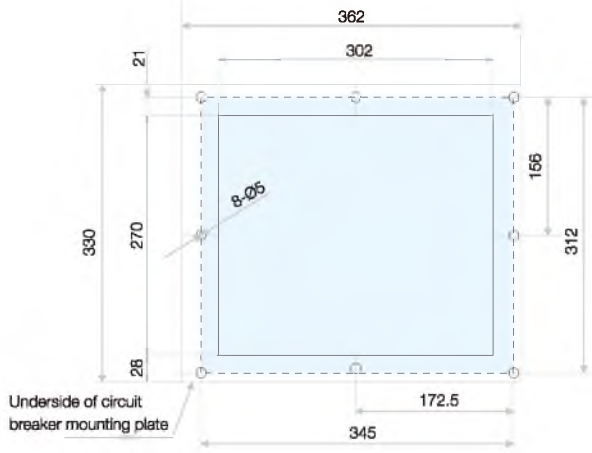
Air Circuit Breakers Series 3SW8

Outline and installation dimensions

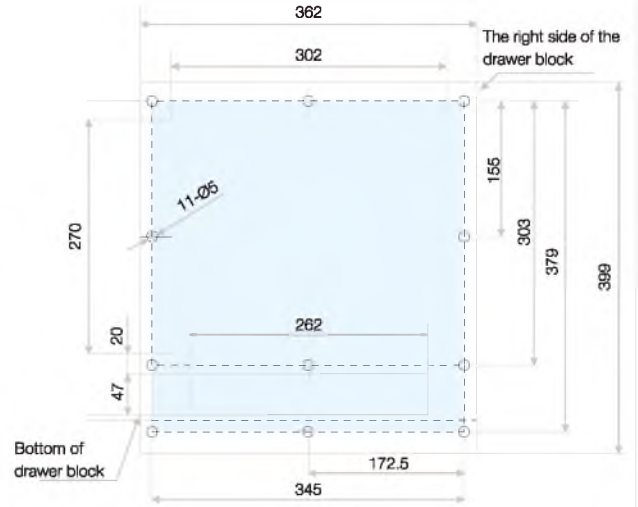
3SW8-2000 (3-pole, 4-pole)

1

Fixed type

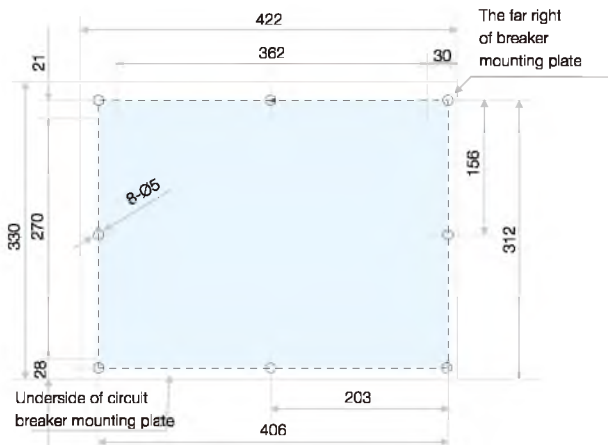


Withdrawable type

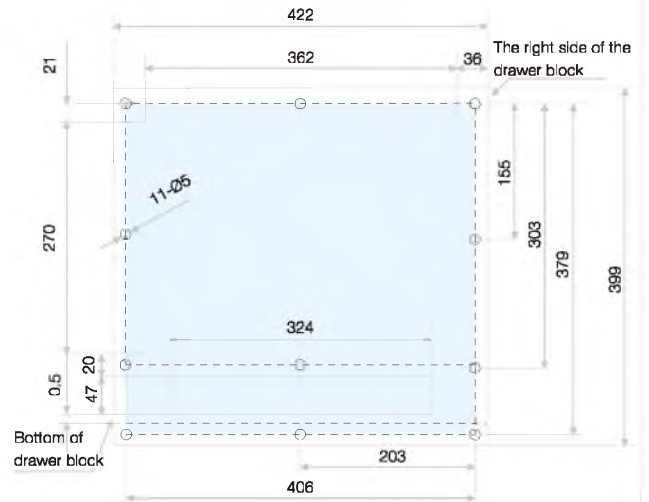


3SW8-3200 (3-pole,4-pole)
3SW8-4000 (3-pole)
3SW8-6300 (3-pole, 4-pole)

Fixed type

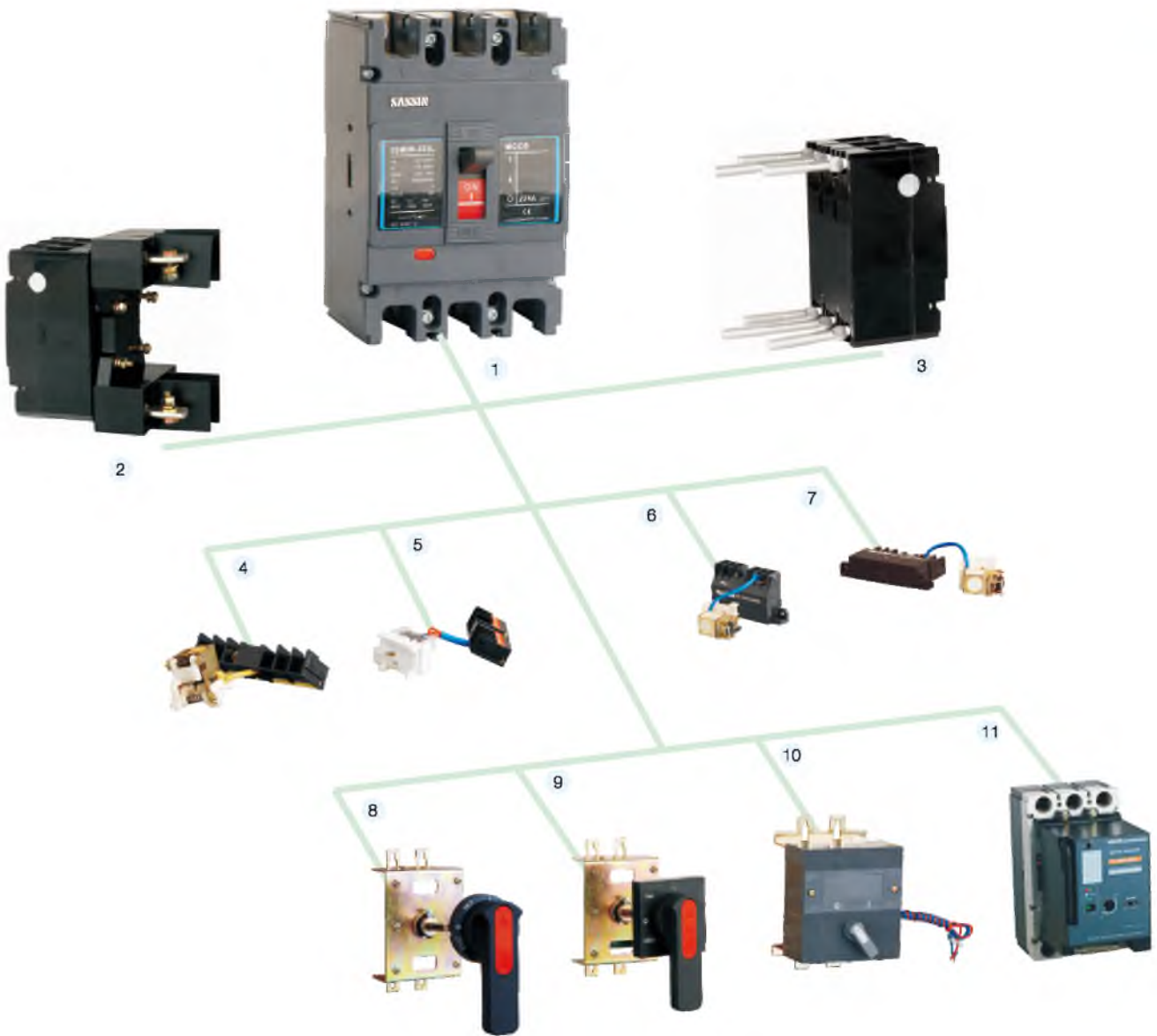


Withdrawable type



Moulded Case Circuit Breakers Series 3SM8N with thermal-magnetic trip unit

Overview



3SM8N series product overview

1	Body	5	Alarm contact	9	Rotary handle operating mechanism
2	Plug-in connection	6	Shunt release	10	Electromagnetic operating mechanism
3	Rear panel connection	7	Under-voltage release	11	Electric motor operating mechanism
4	Auxiliary contact	8	Rotary handle operating mechanism		

Moulded Case Circuit Breakers

Series 3SM8N with thermal-magnetic trip unit

Applications and functions

- Incoming and outgoing function in distribution systems
- Switching and protection devices for motors, transformers and capacitors
- Disconnect or units with features for stopping and switching off in an emergency mechanisms and terminal covers in conjunction with likeable rotary operating
- Available in the following versions
- Power protection: the overload and short-circuit releases are designed for the protection of cables, leads and non-motor loads
- Motor protection: the overload and short-circuit releases are designed for optimized protection and direct-on-line starting of induction squirrel-cage motors. The circuit breakers for motor protection are susceptible to phase failure and feature an adjustable trip class



Instruction of type code

M8N	A	3	P	400	L
Breaking capacity					
L: Standard breaking capacity					
M: Middle breaking capacity					
H: High breaking capacity					
Rated current (A)					
10, 16, 20, 25, 32, 40, 50, 63 (Frame A)					
16, 20, 25, 32, 40, 50, 63, 80, 100 (Frame B)					
100, 125, 160, 180, 200, 225 (Frame C)					
225, 250, 315, 350, 400 (Frame D)					
400, 500, 630 (Frame E)					
630, 700, 800 (Frame F)					
Protection type					
P: Power protection					
M: Motor protection					
Poles (P): 3: 3P; 4: 4P					
Frame					
A: 3SM8N-63; B: 3SM8N-100; C: 3SM8N-225					
D: 3SM8N-400; E: 3SM8N-630; F: 3SM8N-800					
Series code					

Instruction of external structure



- There is no frame E and F for motor protection.
- Only M type (medium breaking capacity type) has 4 poles:
 - 4A: N-pole fixed without over-current release unit, it has been connected all along, and does not act with other three poles to turn on or off.
 - 4B: N-pole fixed without over-current release unit, it acts with other three poles.
 - 4C: N-pole fixed with over-current release unit, it acts with other three poles.
 - 4D: N-pole fixed with over-current release unit, it has been connected all along, and does not act with other three poles to turn on or off.

1. SASSIN logo
2. Type
3. Technical data
4. Standard

5. Test button
6. Working condition indicator
7. Rated current
8. Certificate

Moulded Case Circuit Breakers

Series 3SM8N with thermal-magnetic trip unit

Technical Specifications

Type	3SM8N-63			3SM8N-100			3SM8N-225			3SM8N-400			3SM8N-630			3SM8N-800		
Standards	IEC 60947-2			IEC 60947-2			IEC 60947-2			IEC 60947-2			IEC 60947-2			IEC 60947-2		
Approval	IEC 60947-4-1			IEC 60947-4-1			IEC 60947-4-1			IEC 60947-4-1			IEC 60947-4-1			IEC 60947-4-1		
Frame type	A			B			C			D			E			F		
Class of breaking capacity	L	M		L	M	H	L	M	H	L	M	H	L	M	H	M	H	
Number of poles	3	3,4		3	3,4	3	3	3,4	3	3	3,4	3	3	3,4	3	3	3	
Frame Current Inm (A)	63			100			225			400			630			800		
Rated current In (A)	10, 16, 20, 25,			16, 20, 25, 32			100, 125, 160			225, 250, 315			400, 500			630, 700		
Rated insulating voltage Ui (V)	32, 40, 50, 63			40, 50, 63, 80, 100			180, 200, 225			350, 400			630			800		
	500			800			800			800			800			800		
Rated operating voltage, Ue (V)	400			400 690 400			400 690 400			400 690 400			400 690 400			400 690 400		
Rated frequency (Hz)	50/60			50/60			50/60			50/60			50/60			50/60		
Rated impulsive withstand voltage, Uimp (kV)	6			8			8			8			8			8		
Rated ultimate short-circuit breaking capacity, Icu (AC) 50-60 Hz 400 V O-CO (kA)	25	50		35	50	85	35	50	85	50	65	100	50	65	100	65	100	
(AC) 50-60 Hz 690 V O-CO (kA)	-	-		-	20	-	-	20	-	-	20	-	-	20	-	20	-	
Rated operating short-circuit breaking capacity, Ics (AC) 50-60 Hz 400 V O-CO-CO (kA)	18	35		22	35	50	22	35	50	35	42	65	35	42	65	42	65	
(AC) 50-60 Hz 690 V O-CO-CO (kA)	-	-		-	10	-	-	10	-	-	10	-	-	10	-	15	-	
Mechanical life (times)	8000			8000			8000			7500			7500			7500		
Electrical life (times.)	1500			1500			1000			1000			1000			500		
Flashover distance (mm)	≤ 50			≤ 50			≤ 50			≤ 50			≤ 100			≤ 100		
Thermal magnetic release	■			■			■			■			■			■		
Electronic release	-			-			-			-			-			-		
Utilization category (IEC 60947-2)	A			A			A			A			A			A		
Under-voltage release	■			■			■			■			■			■		
Shunt-release	■			■			■			■			■			■		
Auxiliary contact	■			■			■			■			■			■		
Alarm Contact	■			■			■			■			■			■		
Weight	-			-			-			-			-			-		
Ambient temperature	-5 to +40 °C , max. 95 % humidity																	
Storage temperature	-40 to +75 °C																	
Altitude (Max)	2000																	

Moulded Case Circuit Breakers

Series 3SM8N with thermal-magnetic trip unit

Selection and ordering data

1




	Breaking capacity at 400 V AC	Rated current In (A)	Number of Poles	Power distribution		Motor protection	
				Type code	Order code	Type code	Order code
For 4 poles, please complete the code by adding N-pole code.							
Frame A 3SM8N-63	L	16	3	M8NA 3P16L	25016	M8NA 3M16L	10139
		20	3	M8NA 3P20L	25017	M8NA 3M20L	10140
		25	3	M8NA 3P25L	25018	M8NA 3M25L	10141
		32	3	M8NA 3P32L	25019	M8NA 3M32L	10142
		40	3	M8NA 3P40L	25020	M8NA 3M40L	10143
		50	3	M8NA 3P50L	25021	M8NA 3M50L	10144
	M 50kA	63	3	M8NA 3P63L	25022	M8NA 3M63L	10145
		16	3	M8NA 3P16M	25025	M8NA 3M16M	10148
		20	4	M8NA 4*P16M	25034*	M8NA 4*M16M	10157*
		20	3	M8NA 3P20M	25026	M8NA 3M20M	10149
		25	4	M8NA 4*P20M	25035*	M8NA 4*M20M	10158*
		25	3	M8NA 3P25M	25027	M8NA 3M25M	10150
		32	4	M8NA 4*P25M	25036*	M8NA 4*M25M	10159*
		32	3	M8NA 3P32M	25028	M8NA 3M32M	10151
		40	4	M8NA 4*P32M	25037*	M8NA 4*M32M	10160*
		40	3	M8NA 3P40M	25029	M8NA 3M40M	10152
Frame B 3SM8N-100	L	40	4	M8NA 4*P40M	25038*	M8NA 4*M40M	10161*
		50	3	M8NA 3P50M	25030	M8NA 3M50M	10153
		50	4	M8NA 4*P50M	25039*	M8NA 4*M50M	10162*
		63	3	M8NA 3P63M	25031	M8NA 3M63M	10154
		63	4	M8NA 4*P63M	25040*	M8NA 4*M63M	10163*
		80	3	M8NB 3P080L	25048	M8NB 3M080L	10171
		80	4	M8NB 4*P80M	25066*	M8NB 4*M80M	10189*
		100	3	M8NB 3P100L	25049	M8NB 3M100L	10172
		100	4	M8NB 4*P100M	25067*	M8NB 4*M100M	10190*
		M 50kA	16	3	M8NB 3P16M	25050	M8NB 3M16M
	20		4	M8NB 4*P16M	25059*	M8NB 4*M16M	10182*
	20		3	M8NB 3P20M	25051	M8NB 3M20M	10174
	25		4	M8NB 4*P20M	25060*	M8NB 4*M20M	10183*
	25		3	M8NB 3P25M	25052	M8NB 3M25M	10175
	32		4	M8NB 4*P25M	25061*	M8NB 4*M25M	10184*
	32		3	M8NB 3P32M	25053	M8NB 3M32M	10176
40	4		M8NB 4*P32M	25062*	M8NB 4*M32M	10185*	
40	3		M8NB 3P40M	25054	M8NB 3M40M	10177	
50	4		M8NB 4*P40M	25063*	M8NB 4*M40M	10186*	
M 50kA	50	3	M8NB 3P50M	25055	M8NB 3M50M	10178	
	50	4	M8NB 4*P50M	25064*	M8NB 4*M50M	10187*	
	63	3	M8NB 3P63M	25056	M8NB 3M63M	10179	
	63	4	M8NB 4*P63M	25065*	M8NB 4*M63M	10188*	
	80	3	M8NB 3P80M	25057	M8NB 3M80M	10180	
	80	4	M8NB 4*P80M	25066*	M8NB 4*M80M	10189*	
	100	3	M8NB 3P100M	25058	M8NB 3M100M	10181	
	100	4	M8NB 4*P100M	25067*	M8NB 4*M100M	10190*	



Moulded Case Circuit Breakers

Series 3SM8N with thermal-magnetic trip unit

Selection and ordering data

	Breaking capacity at 400 V AC	Rated current In (A)	Number of Poles	Power distribution		Motor protection	
				Type code	Order code	Type code	Order code
For 4 poles, please complete the code by adding N-pole code.							
Frame B 3SM8N-100 	H 85kA	16	3	M8NB 3P016H	25068	M8NB 3M016H	10191
		20	3	M8NB 3P020H	25069	M8NB 3M020H	10192
		25	3	M8NB 3P025H	25070	M8NB 3M025H	10193
		32	3	M8NB 3P032H	25071	M8NB 3M032H	10194
		40	3	M8NB 3P040H	25072	M8NB 3M040H	10195
		50	3	M8NB 3P050H	25073	M8NB 3M050H	10196
		63	3	M8NB 3P063H	25074	M8NB 3M063H	10197
		80	3	M8NB 3P080H	25075	M8NB 3M080H	10198
		100	3	M8NB 3P100H	25076	M8NB 3M100H	10199
	Frame C 3SM8N-225 	L 35kA	100	3	M8NC 3P100L	25077	M8NC 3M100L
125			3	M8NC 3P125L	25078	M8NC 3M125L	10201
160			3	M8NC 3P160L	25079	M8NC 3M160L	10202
180			3	M8NC 3P180L	25080	M8NC 3M180L	10203
200			3	M8NC 3P200L	25081	M8NC 3M200L	10204
225			3	M8NC 3P225L	25082	M8NC 3M225L	10205
M 50kA		100	3	M8NC 3P100M	25083	M8NC 3M100M	10206
			4	M8NC 4*P100M	25089*	M8NC 4*M100M	10212*
		125	3	M8NC 3P125M	25084	M8NC 3M125M	10207
			4	M8NC 4*P125M	25090*	M8NC 4*M125M	10213*
		160	3	M8NC 3P160M	25085	M8NC 3M160M	10208
			4	M8NC 4*P160M	25091*	M8NC 4*M160M	10214*
		180	3	M8NC 3P180M	25086	M8NC 3M180M	10209
			4	M8NC 4*P180M	25092*	M8NC 4*M180M	10215*
		200	3	M8NC 3P200M	25087	M8NC 3M200M	10210
			4	M8NC 4*P200M	25093*	M8NC 4*M200M	10216*
		225	3	M8NC 3P225M	25088	M8NC 3M225M	10211
			4	M8NC 4*P225M	25094*	M8NC 4*M225M	10217*
H 85kA	100	3	M8NC 3P100H	25095	M8NC 3M100H	10218	
	125	3	M8NC 3P125H	25096	M8NC 3M125H	10219	
	160	3	M8NC 3P160H	25097	M8NC 3M160H	10220	
	180	3	M8NC 3P180H	25098	M8NC 3M180H	10221	
	200	3	M8NC 3P200H	25099	M8NC 3M200H	10222	
	225	3	M8NC 3P225H	25100	M8NC 3M225H	10223	
Frame D 3SM8N-400 	L 50kA	225	3	M8ND 3P225L	25101	M8ND 3M225L	10224
		250	3	M8ND 3P250L	25102	M8ND 3M250L	10225
		315	3	M8ND 3P315L	25103	M8ND 3M315L	10226
		350	3	M8ND 3P350L	25104	M8ND 3M350L	10227
		400	3	M8ND 3P400L	25105	M8ND 3M400L	10228
		225	3	M8ND 3P225M	25106	M8ND 3M225M	10229
	M 65kA		4	M8ND 4*P225M	25111*	M8ND 4*M225M	10234*
		250	3	M8ND 3P250M	25107	M8ND 3M250M	10230
			4	M8ND 4*P250M	25112*	M8ND 4*M250M	10235*
		315	3	M8ND 3P315M	25108	M8ND 3M315M	10231
			4	M8ND 4*P315M	25113*	M8ND 4*M315M	10236*
		350	3	M8ND 3P350M	25109	M8ND 3M350M	10232
	4	M8ND 4*P350M	25114*	M8ND 4*M350M	10237*		
	400	3	M8ND 3P400M	25110	M8ND 3M400M	10233	
	4	M8ND 4*P400M	25115*	M8ND 4*M400M	10238*		

Moulded Case Circuit Breakers

Series 3SM8N with thermal-magnetic trip unit

Selection and ordering data

1

	Breaking capacity at 400 V AC	Rated current In (A)	Number of Poles	Power distribution		Motor protection	
				Type code	Order code	Type code	Order code
For 4 poles, please complete the code by adding N-pole code.							
Frame D 3SM8N-400	H 100kA	225	3	M8ND 3P225H	25116	M8ND 3M225H	10239
		250	3	M8ND 3P250H	25117	M8ND 3M250H	10240
		315	3	M8ND 3P315H	25118	M8ND 3M315H	10241
		350	3	M8ND 3P350H	25119	M8ND 3M350H	10242
		400	3	M8ND 3P400H	25120	M8ND 3M400H	10243
Frame E 3SM8N-630	L 50kA	400	3	M8NE 3P400L	25121	-	-
		500	3	M8NE 3P500L	25122	-	-
		630	3	M8NE 3P630L	25123	-	-
	M 65kA	400	3	M8NE 3P400M	25124	-	-
		500	3	M8NE 3P500M	25125	-	-
		630	3	M8NE 3P630M	25126	-	-
		400	4	M8NE 4*P400M	25127*	-	-
		500	4	M8NE 4*P500M	25128*	-	-
		630	4	M8NE 4*P630M	25129*	-	-
	H 100kA	400	3	M8NE 3P400H	25130	-	-
		500	3	M8NE 3P500H	25131	-	-
		630	3	M8NE 3P630H	25132	-	-
Frame F 3SM8N-800	M 65kA	630	3	M8NF 3P630M	25133	-	-
		700	3	M8NF 4*P630M	25136*	-	-
		700	4	M8NF 3P700M	25134	-	-
		800	4	M8NF 4*P700M	25137*	-	-
	H 100kA	630	3	M8NF 3P630M	25135	-	-
		700	3	M8NF 4*P800M	25138*	-	-
		700	4	M8NF 3P700H	25139	-	-
		800	3	M8NF 3P700H	25140	-	-
		800	3	M8NF 3P800H	25141	-	-



Accessories

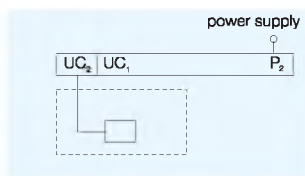
- Under-voltage release



When voltage is 35%-70% of rated voltage, the under voltage release should make the breaker reliable operation.

When the voltage is more than 85%~110% of rated voltage, the under voltage release should make the breaker reliable operation.

When voltage is less than 35% of rated voltage, the under voltage release should prevent breaker from making.

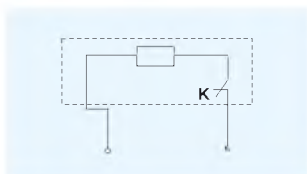


Frame	Rated voltage		
		Type Code	Order Code
A 3SM8N-63	230V AC	M8NA UR230A	25154
	400V AC	M8NA UR230A	25160
B 3SM8N-100	230V AC	M8NB UR230A	25155
	400V AC	M8NB UR230A	25161
C 3SM8N-225	230V AC	M8NC UR230A	25156
	400V AC	M8NC UR230A	25162
D 3SM8N-400	230V AC	M8ND UR230A	25157
	400V AC	M8ND UR230A	25163
E 3SM8N-630	230V AC	M8NE UR230A	25158
	400V AC	M8NE UR230A	25164
F 3SM8N-800	230V AC	M8NF UR230A	25159
	400V AC	M8NF UR230A	25165

Moulded Case Circuit Breakers

Series 3SM8N with thermal-magnetic trip unit

Accessory



- Shunt release

In 70% ~ 110% of the rated voltage, the breaker can reliably operate.

Frame	Rated voltage	Type Code	Order Code
A 3SM8N-63	230 V AC	M8NA SR230A	25142
	400 V AC	M8NA SR400A	25148
	110 V DC	M8NA SR110D	10244
B 3SM8N-100	230 V AC	M8NB SR230A	25143
	400 V AC	M8NB SR400A	25149
	110 V DC	M8NB SR110D	10245
C 3SM8N-225	230 V AC	M8NC SR230A	25144
	400 V AC	M8NC SR400A	25150
	110 V DC	M8NC SR110D	10246
D 3SM8N-400	230 V AC	M8ND SR230A	25145
	400 V AC	M8ND SR400A	25151
	110 V DC	M8ND SR110D	10247
E 3SM8N-630	230 V AC	M8NE SR230A	25146
	400 V AC	M8NE SR400A	25152
	110 V DC	M8NE SR110D	10248
F 3SM8N-800	230 V AC	M8NF SR230A	25147
	400 V AC	M8NF SR400A	25153
	110 V DC	M8NF SR110D	10249
	220 V DC	M8NF SR220D	10255

- Auxiliary contact

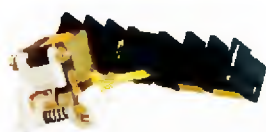
Indication of contacting status.

Frame		Type Code	Order Code
A 3SM8N-63	Left	M8NA ACL	25166
	Right	M8NA ACR	10256
B 3SM8N-100	Left	M8NB ACL	25167
	Right	M8NB ACR	10257
C 3SM8N-225	Left	M8NC ACL	25168
	Right	M8NC ACR	10258
D 3SM8N-400	Left	M8ND ACL	25169
	Right	M8ND ACR	10259
E 3SM8N-630	Left	M8NE ACL	25170
	Right	M8NE ACR	10260
F 3SM8N-800	Left	M8NF ACL	25171
	Right	M8NF ACR	10261

- Alarm contact

Indication of contacting status.

Frame		Type Code	Order Code
A 3SM8N-63		M8NA AMC	25172
B 3SM8N-100		M8NB AMC	25173
C 3SM8N-225		M8NC AMC	25174
D 3SM8N-400		M8ND AMC	25175
E 3SM8N-630		M8NE AMC	25176
F 3SM8N-800		M8NF AMC	25177



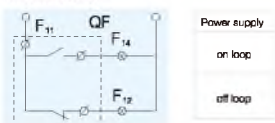
When circuit breaker is at breaking status



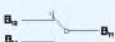
When circuit breaker is at breaking status



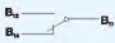
Connection chart



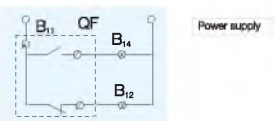
When circuit breaker is at breaking/locking status



When circuit breaker is in "free release" (alarm)



Connection chart



Moulded Case Circuit Breakers

Series 3SM8N with thermal-magnetic trip unit

Tripping Characteristic

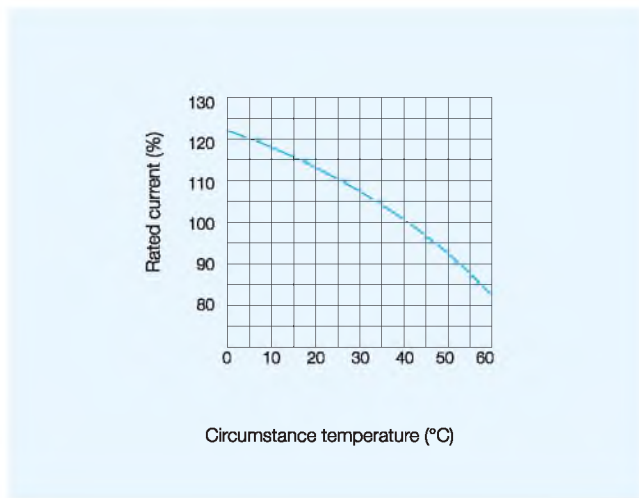
For power distribution

No.	Test current	I/In	Conventional time	Start status
1	Conventional non-trip current	1.05	2h (In > 63A), 1h (In ≤ 63A)	Cold status
2	Conventional trip current	1.3	2h (In > 63A), 1h (In ≤ 63A)	Right after test No.1

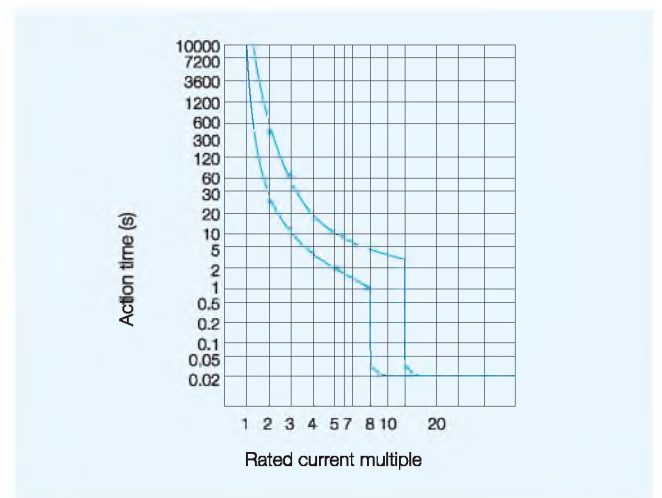
For motor protection

No.	Operational current	Conventional time	Start status	Remark
1	1.0 In	2 h	Cold status	-
2	1.2 In	≤ 2 h	Right after test No.1	-
3	1.5 In	≤ 4 min	Cold status	10 ≤ In ≤ 225
		≤ 8 min	Cold status	225 ≤ In ≤ 630
4	7.2 In	4s ≤ T ≤ 0s	Cold status	10 ≤ In ≤ 225
		6s ≤ T ≤ 20s	Cold status	225 ≤ In ≤ 635

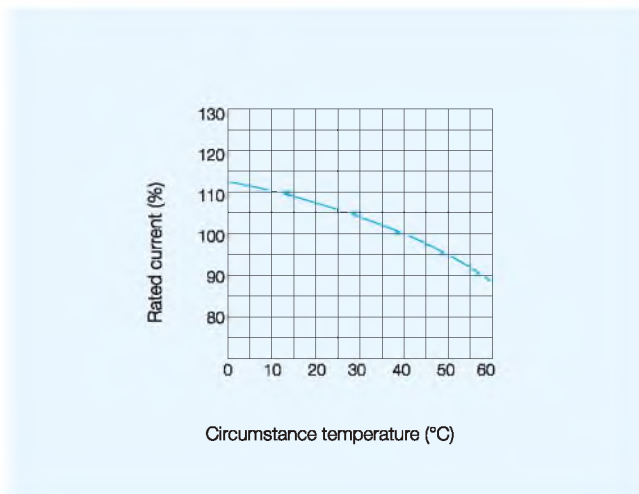
3SM8N-63,100 (10~32) Temperature emendation curve



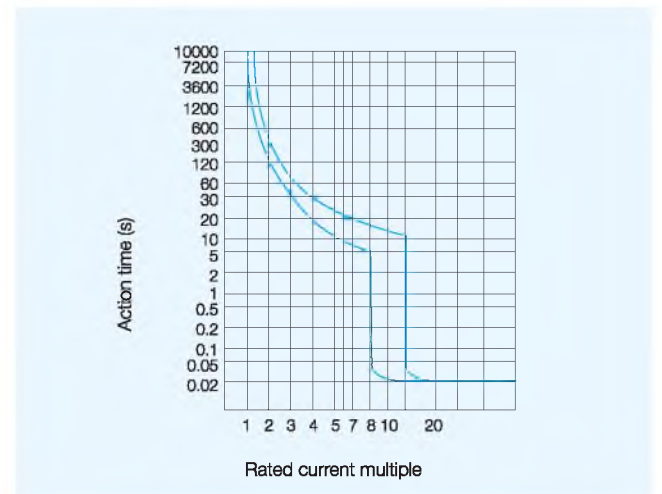
3SM8N-63,100 (10~32) Characteristic curve



3SM8N-63,100 (40~100) Temperature emendation curve



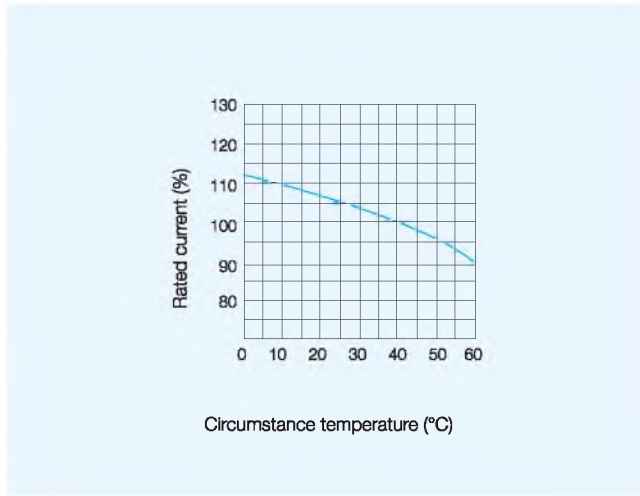
3SM8N-63,100 (40 ~100) Characteristic curve



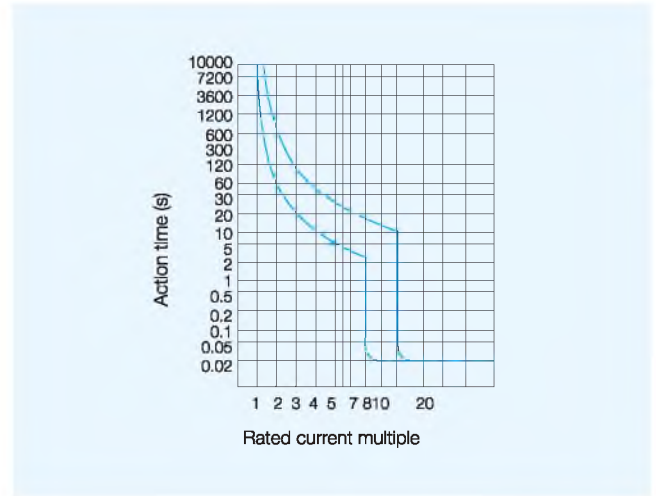
Moulded Case Circuit Breakers Series 3SM8N with thermal-magnetic trip unit

Temperature performance curve

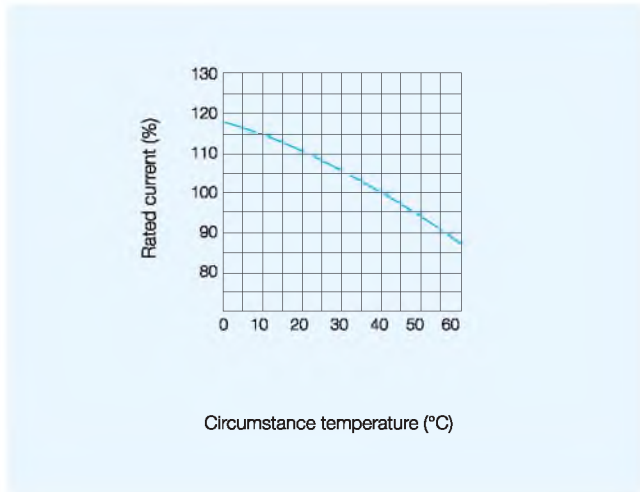
3SM8N-225 Temperature emendation curve



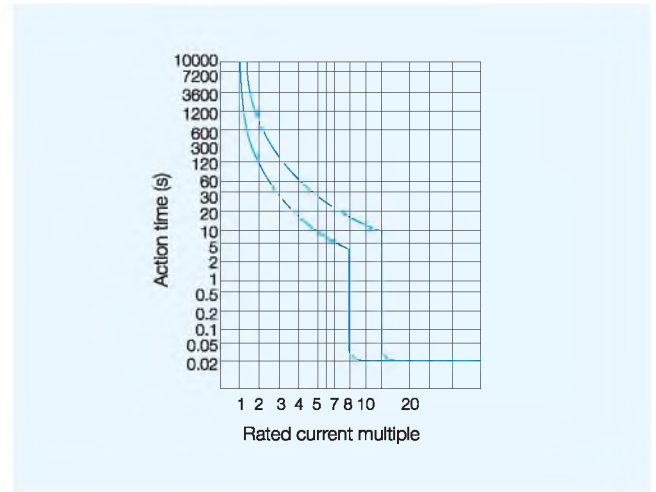
3SM8N-225 Characteristic curve



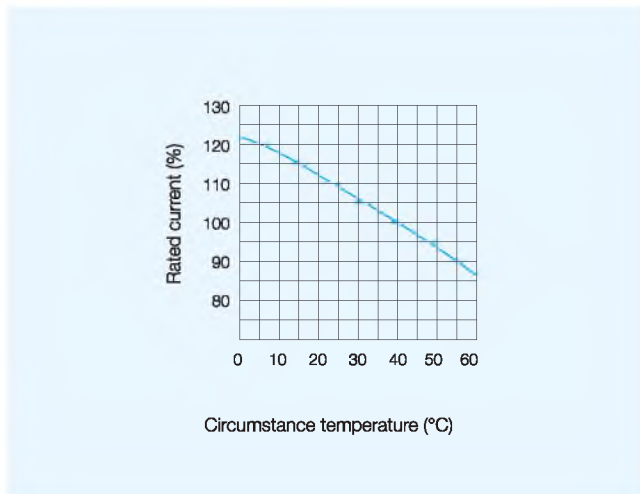
3SM8N-400 Temperature emendation curve



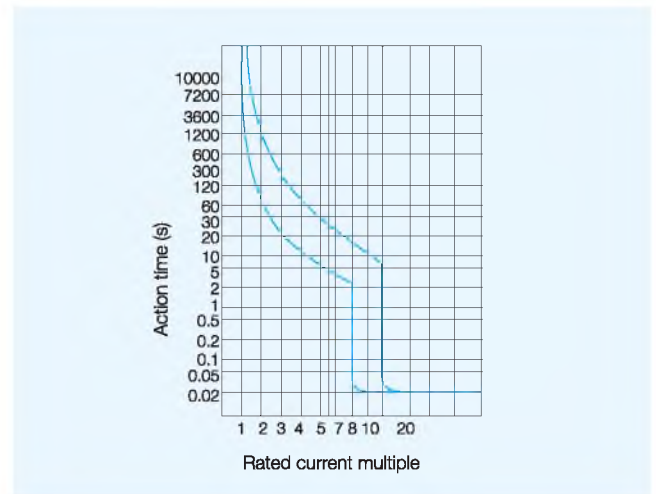
3SM8N-400 Characteristic curve



3SM8N-630,800 Temperature emendation curve



3SM8N-630,800 Characteristic curve



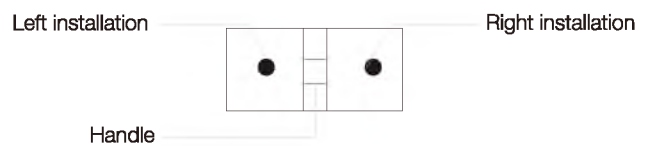
Moulded Case Circuit Breakers

Series 3SM8N with thermal-magnetic trip unit

Release type codes of accessories

Codes of accessories Name of accessories	Installation types		Installation types			
	Electromagnetism trip	Double trip	3SM8N-63L. M 3SM8N-100L. M. H 3SM8N-225L. M. H 3pole. 4pole	3SM8N-400L. M. H 3pole. 4pole	3SM8N-630L. M. H 3pole	3SM8N-800M. H 3pole
No Accessories	200	300				
Warning contact	208	308				
Shunt trip	210	310				
Auxiliary contact	220	320				
Under-voltage shunt trip	230	330				
Auxiliary contact of trip	240	340				
Shunt trip under-voltage trip	250	350				
2-group auxiliary contact	260	360				
Auxiliary contact Under-voltage trip	270	370				
Shunt trip Warning contact	218	318				
Auxiliary contact Warning contact	228	328				
Under-voltage trip Warning contact	238	338				
Shunt trip Auxiliary contact Warning contact	248	348				
2-group auxiliary contact Warning contact	268	368				
Auxiliary contact Under-voltage trip Warning contact	278	378				

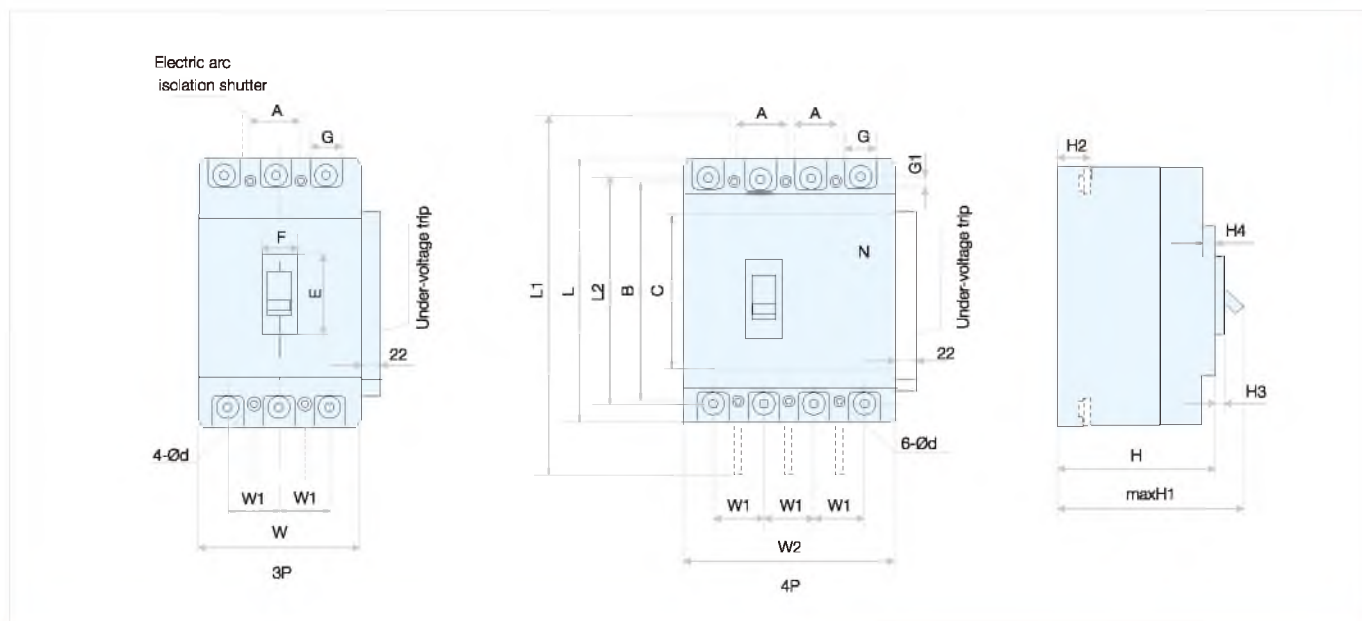
Note: ○ Auxiliary contact
● Warning contact
■ Shunt trip
▲ Under-voltage trip



Moulded Case Circuit Breakers Series 3SM8N with thermal-magnetic trip unit

Outline and installation dimensions

3SM8N-63, 100, 225 (front connection)



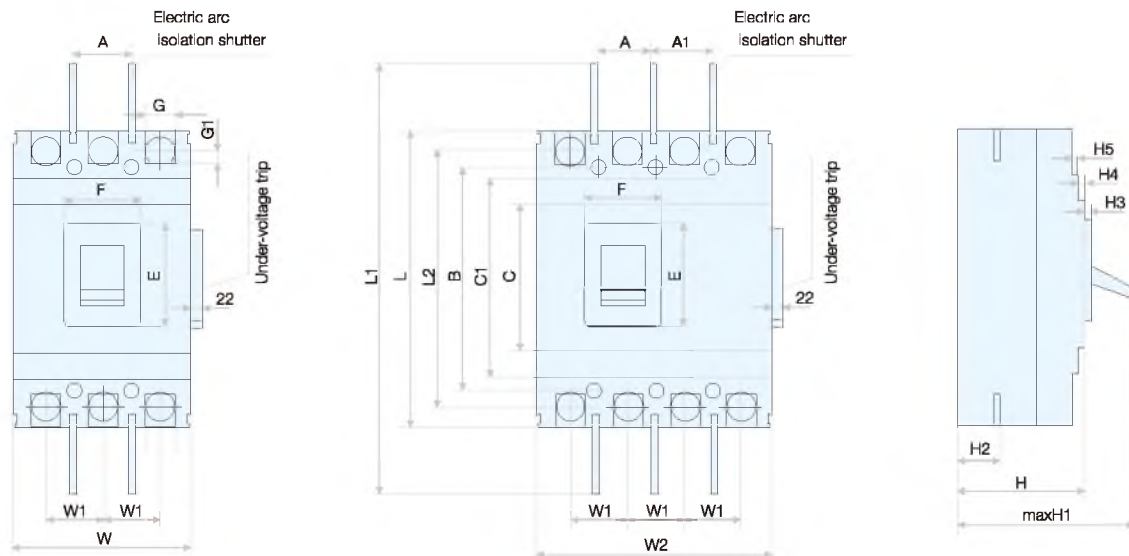
		Model	3SM8N-63L	3SM8N-63M	3SM8N-100L	3SM8N-100M 3SM8N-100H	3SM8N-225L	3SM8N-225M 3SM8N-225H
Dimensions	C	85	85	84	84	103	103	
	E	48	48	50.5	50.5	51	51	
	F	22	22	22	22	23	23	
	G	14	14	17	17	22	22	
	G1	6.5	6.5	7.5	7.5	11.5	11.5	
	H	73	81	68	86	86.5	103	
	H1	90	98.5	86	103	110	127	
	H2	20	27	24	24	24	24	
	H3	4	4	4	4	4	4	
	H4	6	6	7	7	5	5	
	L	135	135	155	155	165	165	
	L1	170	173	255	255	360	360	
	L2	117	117	136	136	144	144	
W	76	76	90	90	105	105		
W1	25	25	30	30	35	35		
W2	-	102.5	-	120	-	140		
W3	-	-	-	64.5	-	74.5		
Installation Dimensions	A	25	25	30	30	35	35	
	B	117	117	130	130	126	126	
	ød	3.5	3.5	4.5x6	4.5x6	5	5	

Moulded Case Circuit Breakers

Series 3SM8N with thermal-magnetic trip unit

Outline and installation dimensions

3SM8N-400, 630, 800 (front connection)

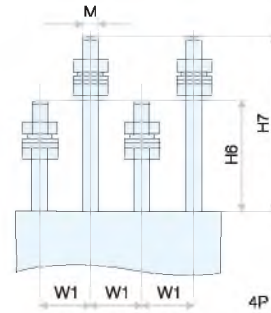
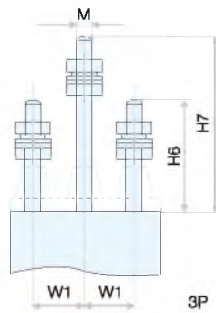


		Model				
		3SM8N-400L	3SM8N-400M 3SM8N-400H	3SM8N-630L	3SM8N-630M	3SM8N-630H 3SM8N-800M/H
Dimensions	C	102	129	134	134	154
	C1	179	175	184	184	204
	E	90	89	89	89	106
	F	62	65	65	65	66
	G	28	30.5	40	44	44
	G1	13	10.5	13.5	13.5	12.5
	H	104	107	111	111	107
	H1	155	150	160	160	148
	H2	38	39	44	44	33
	H3	6	6	6	6	4.5
	H4	6	4.5	3.5	3.5	4.5
	H5	2.5	4.5	4.5	4.5	8
	L	257	257	270	270	280
	L1	457	457	470	470	470
	L2	225	225	234	234	243
W	140	150	182	182	210	
W1	44	44	58	58	70	
W2	198	-	240	-	-	
Installation Dimensions	A	44	44	58	58	70
	A1	50	-	58	-	-
	B	194	194	200	200	243
	∅d	7	7	7	7	7

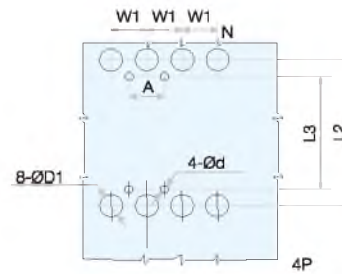
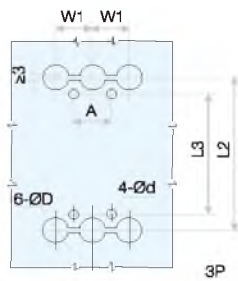
Moulded Case Circuit Breakers Series 3SM8N with thermal-magnetic trip unit

Outline and installation dimensions

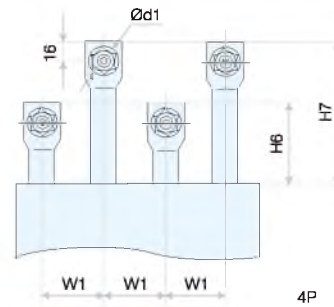
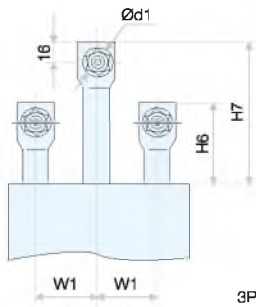
3SM8N-63, 100, 225 (Rear connection)



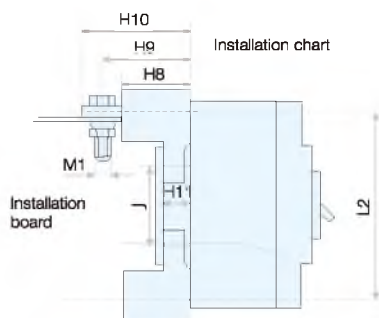
Rear connection stiletto chart



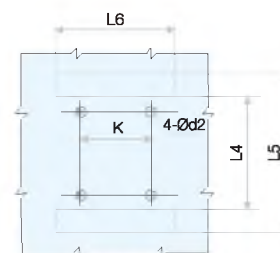
3SM8N-400, 630, 800 (Rear connection)



Insert style



Installation board stiletto chart



Moulded Case Circuit Breakers

Series 3SM8N with thermal-magnetic trip unit

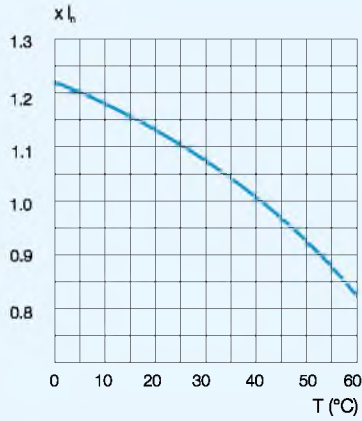
Outline and installation dimensions

	3SM8N-63L 3SM8N-63M	3SM8N-100L 3SM8N-100M 3SM8N-100H	3SM8N-225L 3SM8N-225M 3SM8N-225H	3SM8N-400L	3SM8N-400M 3SM8N-400H	3SM8N-630L 3SM8N-630M	3SM8N-630H 3SM8N-800M 3SM8N-800H
A	25	30	30	44	44	58	70
Ød	3.5	4.5x6 (long hole)	5.5	7	7	7	7
Ød1	-	-	-	Ø12.5	Ø12.5	Ø16.5	Ø16.5
Ød2	6	8	8	9	9	9	12
ØD	8	24	26	31	33	37	37
ØD1	8	16	20	33	37	37	37
H6	44	68	66	60	65	65	48
H7	66	108	110	120	120	125	125
H8	28	51	51	61	60	60	87
H9	38	68	72	-	83.5	93	-
H10	44	79	91	99	106.5	112	106
H11	8.5	17.5	17.5	22	21	21	26.5
L2	117	132	144	225	225	234	243
L3	117	108	126	194	194	200	243
L4	97	95	93	165	163	165	173
L5	138	180	190	285	285	302	305
L6	80	95	110	145	155	185	215
M	M6	M8N	M10	-	-	-	-
K	50.2	60	70	60	60	100	90
J	60.7	62	54	129	130	123	143
M1	M5	M8N	M8N	M10	M10	M12	M14
W1	25	30	35	44	44	58	70

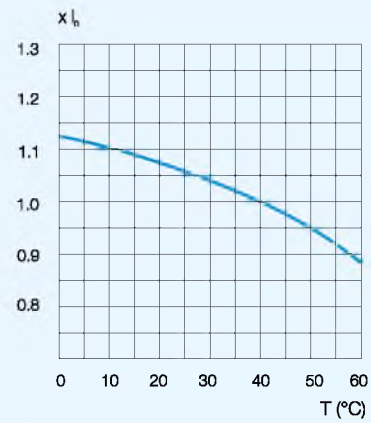
Moulded Case Circuit Breakers Series 3SM8N with thermal-magnetic trip unit

Temperature performance curve

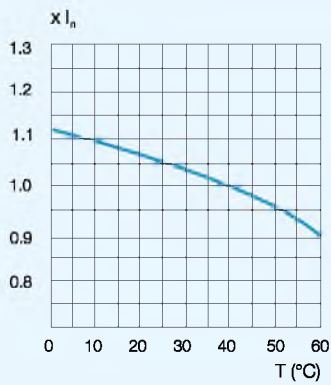
Size A/B
3SM8N-63 3SM8N-100
 $I_n = 10 \dots 25 \text{ A}$



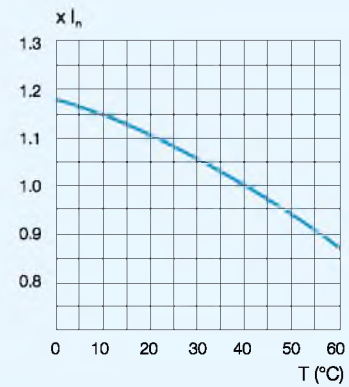
Size A/B
3SM8N-63/3SM8N-100
 $I_n = 32 \dots 100 \text{ A}$



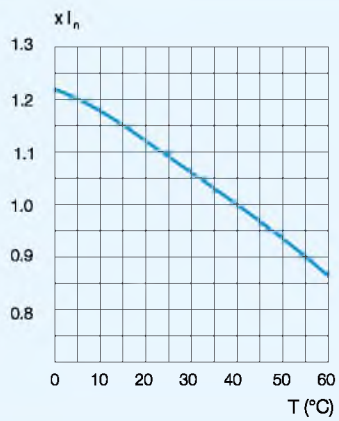
Size C
3SM8N-225
 $I_n = 100 \dots 255 \text{ A}$



Size D
3SM8N-400
 $I_n = 225 \dots 400 \text{ A}$



Size E/F
3SM8N-630/3SM8N-800
 $I_n = 400 \dots 800 \text{ A}$



Moulded Case Circuit Breakers

Series 3SM8E with electronic trip unit

Applications and functions

- incoming and outgoing function in distribution systems
- **Switching and protection** devices for motors, transformers and capacitors
- **Protect circuits** and power supply devices against overload, short-circuit, under-voltage etc.
- Used in new energy, power, industry control, buildings,
- Available in the following versions
 - Power protection
 - The overload and short-circuit releases are designed for the protection of cables, leads and non-motor loads
 - Motor protection
 - The overload and short-circuit releases are designed for optimized protection and direct-on-line starting of induction squirrel-cage motors.

Instruction of type code

M8E	A	3	P	400	M
					Breaking capacity M: Medium H: High
					Rated current 32: 16...32 A 63: 32...63 A 100: 63...100 A 225: 100...225 A 400: 200...400 A 630: 400...630 A 800: 630...800 A
					Versions P: Power distribution M: Motor protection
					Number of poles 3: 3-pole 4: 4-pole
					Code of size A: 3SM8E-100 B: 3SM8E-225 C: 3SM8E-400 D: 3SM8E-630 E: 3SM8E-800
					Series code



Moulded Case Circuit Breakers

Series 3SM8E with electronic trip unit

Technical specifications

Size	A		B		C		D		E	
Type	3SM8E-100		3SM8E-225		3SM8E-400		3SM8E-630		3SM8E-800	
Standard	IEC 60947-2		IEC 60947-4-1							
Rated current I_n , adjustable	A									
	16-20-25-32, 32-36-40-45-50-55-60-63, 63-65-70-75-80-85-90-95-100		100-125-140-160-180-200-225		200-225-250-280-315-350-400		400-429-440-460-480-500-530-560-600-630		630-640-660-680-700-720-740-760-780-800	
Breaking capacity	M	H	M	H	M	H	M	H	M	H
Number of poles	pole									
	3	3	3	3	3	3	3	3	3	3
		4		4		4		4		4
Rated operating voltage U_o	V		AC 400							
Rated insulating voltage U_i	V		AC 800							
Rated impulsive withstand voltage U_{imp}	kV		8							
Rated frequency	Hz		50/60							
Rated ultimate short-circuit breaking capacity at AC 400 V 50/60 Hz I_{cu}	kA		50	85	50	85	65	100	65	100
Rated operating short-circuit breaking capacity at AC 400 V 50/60 Hz I_{cs}	kA		35	50	35	50	42	65	42	65
Rated short-time withstand current for 1 s at AC 400 V 50/60 Hz I_{sw}	cycles		1		2.5		5		8	10
Category	cycles		A		A		B		B	
Mechanical life	mm		7000		7000		4000		3000	
Electrical life			3000		3000		2000		1500	
Flashover distance			≤50		≤50		≤100		≤100	

Normal working environment

Altitude

The rated performance of the circuit breaker does not change up to 2000 meters.

Beyond this altitude, the performance of the circuit breaker is subject to derating, see the derating coefficients table on page A/00 .

Temperature

Storage: -40°C to +70°C

Operating: -5°C to +40°C

In case the circuit breaker operates at higher temperatures than +40°C, the current-carrying capacity of the circuit breaker may be lower than the rated current-carry capacity at the reference temperature, therefore the derating coefficients must be applied. see the derating coefficients table on page A/00.

Relative humidity

When maximum temperature is 40°C, relative humidity shall be less than 50%.

When the temperature is relative low, the relative humidity is allowed to be higher.

Condensation caused by change of temperature shall be taken special measures.

Pollution level

3

Installation category

Main circuit: III

Auxiliary circuit and control circuit: II

Installation environment

Horizontal or vertical, maximum inclination: 22.5 °.

Resistance to moist air, salt mist and oil mist.

Installed in an environment which is not enough to erode the metal or to destroy the insulating gas and without explosive danger.

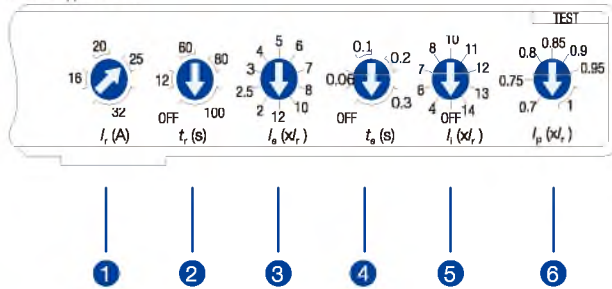
Installed in an environment without attack from rain and snow.

Moulded Case Circuit Breakers

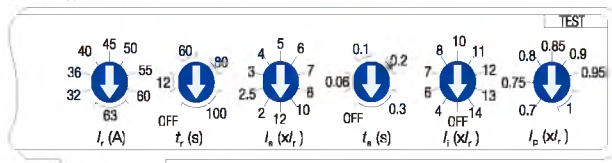
Series 3SM8E with electronic trip unit

Electronic trip unit

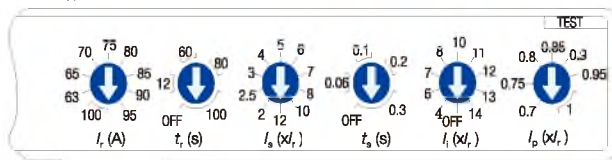
Size A $I_n = 32$ A



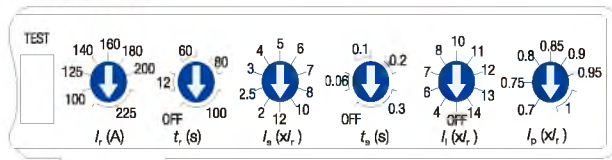
Size A $I_n = 63$ A



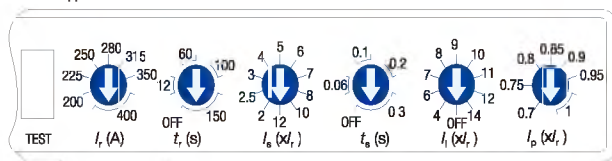
Size A $I_n = 100$ A



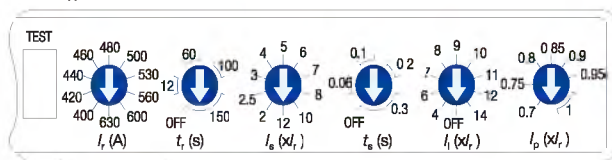
Size B $I_n = 225$ A



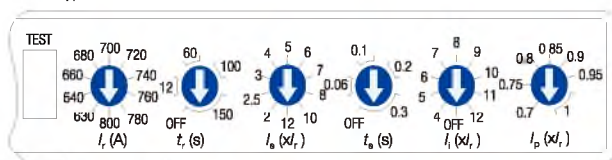
Size C $I_n = 400$ A



Size D $I_n = 630$ A



Size E $I_n = 800$ A



Due to the configured electronic trip units, 3SM8E molded case circuit breaker is enable to supply following the reliable protection and act correctly:

- Overload protection (L)
- Short-time delayed short-circuit protection (S)
- Instantaneous short-circuit protection (I)

1 I_n

Current setting range of long-time delayed overload protection

Size A	up to 32 A	16-20-25-32 A
	up to 63 A	32-36-40-45-50-55-60 A
	up to 100 A	63-65-70-75-80-85-90-95-100 A
Size B	up to 225 A	100-125-140-160-180-200-225 A
Size C	up to 400 A	200-225-250-280-315-350-400 A
Size D	up to 630 A	400-420-440-460-480-500-530-560-600-630 A
Size E	up to 800 A	630-640-660-680-700-720-740-760-780-800 A

2 t_r

Setting range of time-lag class for overload protection

Size A/B	up to 225 A	OFF, 12-60-80-100 s
Size C/D/E	up to 800 A	OFF, 12-60-100-150 s

3 $I_s = I_n \times \dots$

Current setting range of short-time delayed short-circuit protection

Size A/B/C/D/E	up to 800 A	2-2.5-3-4-5-6-7-8-10-12
----------------	-------------	-------------------------

4 t_s

Setting range of time-lag class for short-circuit protection

Size A/B/C/D/E	up to 800 A	OFF, 0.06-0.1-0.2-0.3 s
----------------	-------------	-------------------------

5 $I_i = I_n \times \dots$

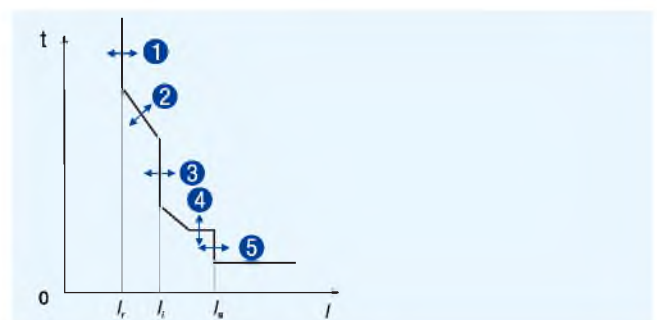
Current setting range of instantaneous short-circuit protection

Size A/B	up to 225 A	OFF, 4-6-7-8-10-11-12-13-14
Size C/D	up to 630 A	OFF, 4-6-7-8-9-10-11-12-14
Size E	up to 800 A	OFF, 4-5-6-7-8-9-10-11-12

6 $I_p = I_n \times \dots$

Current setting range of pre-alarm function

Size A/B/C/D/E	up to 800 A	0.7-0.75-0.8-0.85-0.9-0.95-1
----------------	-------------	------------------------------

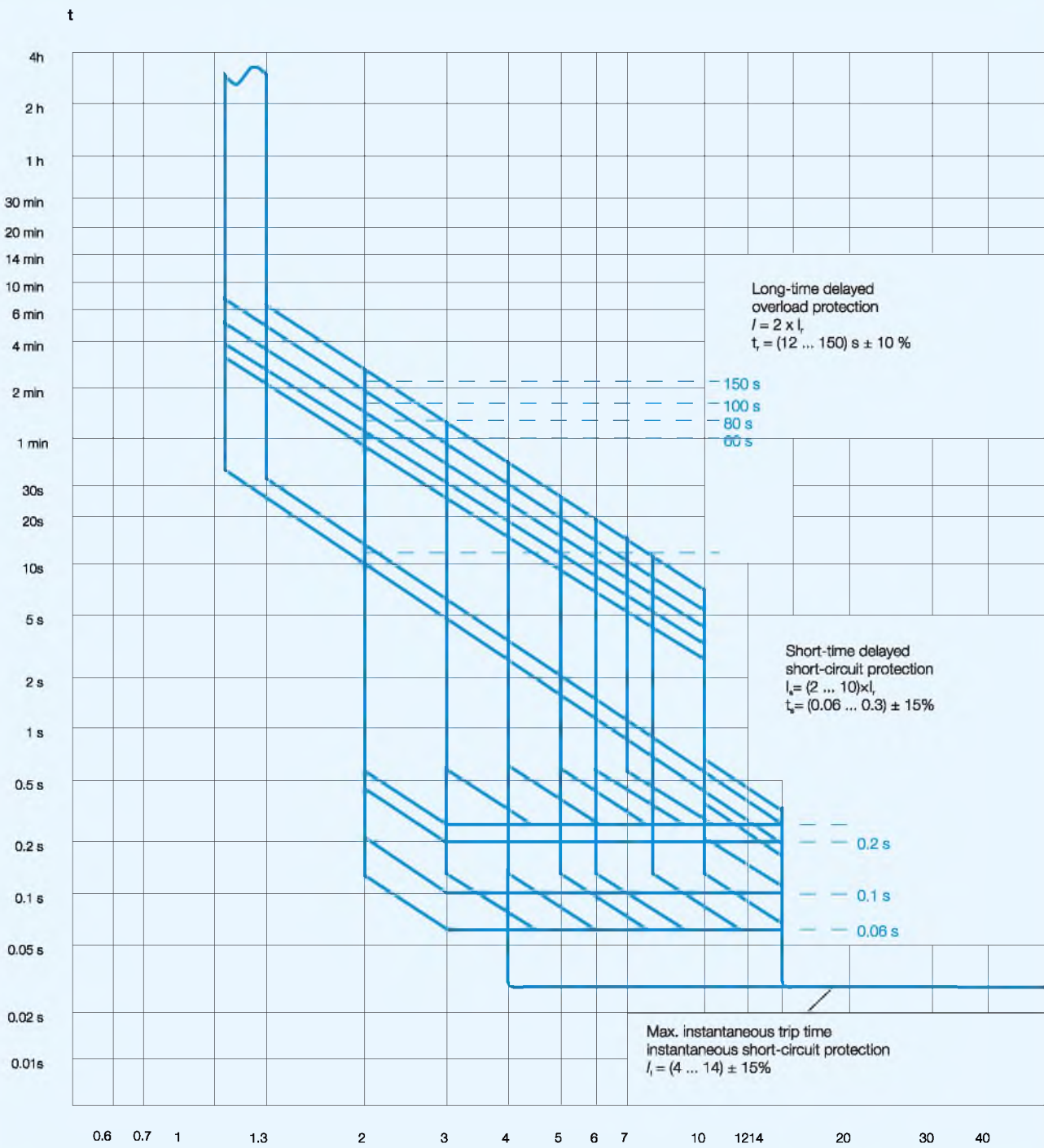


Note

"TEST" is used to test the trip performance.

Moulded Case Circuit Breakers Series 3SM8E with electronic trip unit

Characteristic curve



Moulded Case Circuit Breakers

Series 3SM8E with electronic trip unit

Selection and ordering data

1



Rated current I_n (A)	Power distribution		Motor protection	
	Type code	Order code	Type code	Order code
3-pole				
Size A				
$I_{cs} = 50 \text{ kA}, I_{cr} = 35 \text{ kA}$				
16 ... 32	M8EA 3P32M	39835	M8EA 3M32M	39844
32 ... 63	M8EA 3P63M	39836	M8EA 3M63M	39845
63 ... 100	M8EA 3P100M	39837	M8EA 3M100M	39846
$I_{cs} = 85 \text{ kA}, I_{cr} = 50 \text{ kA}$				
16 ... 32	M8EA 3P32H	39838	M8EA 3M32H	39847
32 ... 63	M8EA 3P63H	39839	M8EA 3M63H	39848
63 ... 100	M8EA 3P100H	39840	M8EA 3M100H	39849
Size B				
$I_{cs} = 50 \text{ kA}, I_{cr} = 35 \text{ kA}$				
100 ... 225	M8EB 3P225M	39853	M8EB 3M225M	39856
$I_{cs} = 85 \text{ kA}, I_{cr} = 50 \text{ kA}$				
100 ... 225	M8EB 3P225H	39854	M8EB 3M225H	39857
Size C				
$I_{cs} = 65 \text{ kA}, I_{cr} = 42 \text{ kA}$				
200 ... 400	M8EC 3P400M	39859	M8EC 3M400M	39862
$I_{cs} = 100 \text{ kA}, I_{cr} = 65 \text{ kA}$				
200 ... 400	M8EC 3P400H	39860	M8EC 3M400H	39863
Size D				
$I_{cs} = 65 \text{ kA}, I_{cr} = 42 \text{ kA}$				
400 ... 630	M8ED 3P360M	39865	M8ED 3M360M	39868
$I_{cs} = 100 \text{ kA}, I_{cr} = 65 \text{ kA}$				
400 ... 630	M8ED 3P360H	39866	M8ED 3M360H	39869
Size E				
$I_{cs} = 65 \text{ kA}, I_{cr} = 42 \text{ kA}$				
630 ... 800	M8EE 3P800M	39871	M8EE 3M800M	39874
$I_{cs} = 100 \text{ kA}, I_{cr} = 65 \text{ kA}$				
630 ... 800	M8EE 3P800H	39872	M8EE 3M800H	39875
4-pole				
Size A				
$I_{cs} = 85 \text{ kA}, I_{cr} = 50 \text{ kA}$				
16 ... 32	M8EA 4P32H	39841	M8EA 4M32H	39850
32 ... 63	M8EA 4P63H	39842	M8EA 4M63H	39851
63 ... 100	M8EA 4P100H	39843	M8EA 4M100H	39852
Size B				
$I_{cs} = 85 \text{ kA}, I_{cr} = 50 \text{ kA}$				
100 ... 225	M8EB 4P225H	39855	M8EB 4M225H	39858
Size C				
$I_{cs} = 100 \text{ kA}, I_{cr} = 65 \text{ kA}$				
200 ... 400	M8EC 4P400H	39861	M8EC 4M400H	39864
Size D				
$I_{cs} = 100 \text{ kA}, I_{cr} = 65 \text{ kA}$				
400 ... 630	M8ED 4P630H	39867	M8ED 4M630H	39870
Size E				
$I_{cs} = 100 \text{ kA}, I_{cr} = 65 \text{ kA}$				
630 ... 800	M8EE 4P800H	39873	M8EE 4M800H	39876

Moulded Case Circuit Breakers with Earth Leakage Protection Series 3SM8L

Applications and functions

- Protection of plant and equipment against overload or damage by ground faults (ground-fault protection)
- Protection against fire hazard caused by insulation faults
- Switching and protection devices for motors, transformers and capacitors
- Disconnecter units with features for stopping and switching off in an emergency in conjunction with lockable rotary operating mechanisms and terminal covers.



1

Instruction of type code

M8L	A	3	P	016	1
Series code	Frame	Poles (P): 3: 3P; 4: 4P	Protection type	Rated current (A)	Rated residual current (mA)
	A: 3SM8L-100; B: 3SM8L-225 C: 3SM8L-400; D: 3SM8L-630		P: Power protection; M: Motor protection	16, 20, 25, 32, 40, 50, 63, 80, 100 (Frame A) 100, 125, 140, 160, 180, 200, 225 (Frame B) 225, 250, 315, 350, 400 (Frame C) 400, 500, 630 (Frame D)	1: 100; 3: 300 5: 500; 10: 1000

- Here is code of N-pole type for 4 pole circuit breaker:
A: N-pole fixed without over-current release unit, it has been connected all along, and does not act with other three poles to turn on or off.
B: N-pole fixed without over-current release unit, it acts with other three poles.

Technical specifications

	A	B	C	D
Frame type	A	B	C	D
Standards	IEC 60947-2 IEC 60947-4-1	IEC 60947-2 IEC 60947-4-1	IEC 60947-2 IEC 60947-4-1	IEC 60947-2 IEC 60947-4-1
Number of poles	3, 4	3, 4	3, 4	3, 4
Frame Current I _{nm}	A	225	400	630
Rated current I _n	A	100, 125, 140, 160, 180, 200, 225	225, 250, 315, 350, 400	400, 500, 630
Rated residual currents I _{Δn}	mA	100, 300, 500, 1000	100, 300, 500, 1000	100, 300, 500, 1000
Rated insulating voltage U _i	V	800	800	800
Rated operating voltage, U _o	V	400	400	400
Rated frequency	Hz	50/60	50/60	50/60
Rated impulsive withstand voltage, U _{imp}	kV	8	8	8
Rated ultimate short-circuit breaking capacity, I _{cu} (AC) 50-60 Hz 400V O-CO	kA	35	35	80
Rated operating short-circuit breaking capacity, I _{cs} (AC) 50-60 Hz 400V O-CO-CO	kA	22	25	35
Mechanical life	times	8500	7000	4000
Electrical life	times	1500	1000	1000
Flashover distance	mm	≤50	≤50	≤100
Utilization category (IEC60947-2)	A	A	A	A
Ambient temperature	-5 to +40°C, max. 95% humidity			
Storage temperature	-40 to +75°C			
Altitude	Max	2000		

Moulded Case Circuit Breakers with Earth Leakage Protection Series 3SM8L

Tripping characteristic

- For power distribution

Test No.	Test current	I/n	Conventional time	Start status	Ambient temperature
1	Conventional non-action time	1.05	1 h ($I_n \leq 63$ A) 2 h ($I_n > 63$ A)	Cold status	+40°C
2	Conventional action time	1.30	1 h ($I_n \leq 63$ A) 2 h ($I_n > 63$ A)	Right after test No.1	+40°C

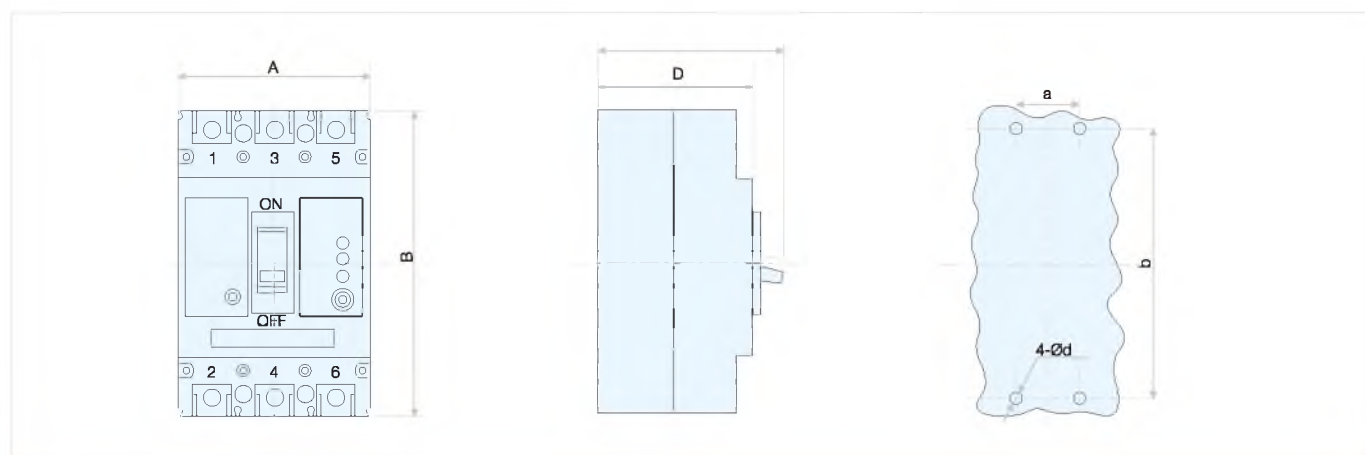
- For motor protection

Test No.	Setting current	Conventional time	Start status	Ambient temperature
1	1.05 I_n	$I_{nm} = 100$ A > 2 h no action $I_{nm} = 225$ A/400 A > 2 h no action $I_{nm} = 630$ A > 2 h no action	Cold status	+40°C
2	1.2 I_n	$I_{nm} = 100$ A ≤ 2 h action $I_{nm} = 225$ A/400 A ≤ 2 h action $I_{nm} = 630$ A ≤ 2 h action	Right after test No.1	+40°C
3	1.5 I_n	$I_{nm} = 100$ A ≤ 4 min action $I_{nm} = 225$ A/400 A ≤ 4 min action $I_{nm} = 630$ A ≤ 8 min action	Heat status	+40°C
4	7.2 I_n	$I_{nm} = 100$ A ≥ 1 s action $I_{nm} = 225$ A/400 A 4 s < T ≤ 10 s action $I_{nm} = 630$ A 6 s < T ≤ 20 s action	Cold status	+40°C

Action time of residual current protection

Residual current		1 $I_{\Delta n}$	2 $I_{\Delta n}$	5 $I_{\Delta n}$	10 $I_{\Delta n}$
Non time-delay type	Max. breaking time (s)	0.2	0.1	0.04	0.04
Time-delay type	Max. breaking time (s)	0.5/1.15/2.15	0.35/1/2	0.25/0.9/1.9	0.25/0.9/1.9
	Ultimate non-driven time Δt (s)	-	0.1/0.5/1	-	-

Outline and installation dimension.



Type	Number of poles	Outline dimensions (mm)				Installation dimensions (mm)		
		A	B	C	D	a	b	d
Frame A	3	92	150	110	92	30	129	4.5
3SW8L-100	4	122	150	110	92	60	129	4.5
Frame B	3	107	165	110	90	35	126	4.5
3SW8L-225	4	142	165	110	90	70	126	4.5
Frame C	3	150	257	146.5	106.5	44	194	7
3SW8L-400	4	198	257	146.5	106.5	88	194	7
Frame D	3	210	280	155	115.5	70	243	7
3SW8L-630	4	280	280	155	115.5	70	243	7

Moulded Case Circuit Breakers with Earth Leakage Protection

Series 3SM8L

For power distribution

	Rated current In (A)	3-pole		4-pole		
		Type code	Order code	Type code	Order code	
3SM8L-100	30 - 100 - 300 mA adjustable					
	16A	M8LA 3P016/1	25214	M8LA 4BP016/1	10412	
	20A	M8LA 3P020/1	25215	M8LA 4BP020/1	10413	
	25A	M8LA 3P025/1	25216	M8LA 4BP025/1	10414	
	32A	M8LA 3P032/1	25217	M8LA 4BP032/1	10415	
	40A	M8LA 3P040/1	25218	M8LA 4BP040/1	10416	
	50A	M8LA 3P050/1	25219	M8LA 4BP050/1	10417	
	63A	M8LA 3P063/1	25220	M8LA 4BP063/1	10418	
	80A	M8LA 3P080/1	25221	M8LA 4BP080/1	10419	
	100A	M8LA 3P100/1	25222	M8LA 4BP100/1	10420	
	100 - 300 - 500 mA adjustable					
	16A	M8LA 3P016/3	25223	M8LA 4BP016/3	10421	
	20A	M8LA 3P020/3	25224	M8LA 4BP020/3	10422	
	25A	M8LA 3P025/3	25225	M8LA 4BP025/3	10423	
	32A	M8LA 3P032/3	25226	M8LA 4BP032/3	10424	
	40A	M8LA 3P040/3	25227	M8LA 4BP040/3	10425	
	50A	M8LA 3P050/3	25228	M8LA 4BP050/3	10426	
	63A	M8LA 3P063/3	25229	M8LA 4BP063/3	10427	
	80A	M8LA 3P080/3	25230	M8LA 4BP080/3	10428	
	100A	M8LA 3P100/3	25231	M8LA 4BP100/3	10429	
	3SM8L-225	30 - 100 - 300 mA adjustable				
		100A	M8LB 3P100/1	25232	M8LB 4BP100/1	10430
		125A	M8LB 3P125/1	25233	M8LB 4BP125/1	10431
		140A	M8LB 3P140/1	25234	M8LB 4BP140/1	10432
		160A	M8LB 3P160/1	25235	M8LB 4BP160/1	10433
		180A	M8LB 3P180/1	25236	M8LB 4BP180/1	10434
200A		M8LB 3P200/1	25237	M8LB 4BP200/1	10435	
225A		M8LB 3P225/1	25238	M8LB 4BP225/1	10436	
100 - 300 - 500 mA adjustable						
100A		M8LB 3P100/3	25239	M8LB 4BP100/3	10437	
125A		M8LB 3P125/3	25240	M8LB 4BP125/3	10438	
140A		M8LB 3P140/3	25241	M8LB 4BP140/3	10439	
160A		M8LB 3P160/3	25242	M8LB 4BP160/3	10440	
180A		M8LB 3P180/3	25243	M8LB 4BP180/3	10441	
200A	M8LB 3P200/3	25244	M8LB 4BP200/3	10442		
225A	M8LB 3P225/3	25245	M8LB 4BP225/3	10443		
3SM8L-400	100 - 300 - 500 mA adjustable					
	200A	M8LC 3P200/3	25246	M8LC 4BP200/3	10444	
	225A	M8LC 3P225/3	25247	M8LC 4BP225/3	10445	
	250A	M8LC 3P250/3	25248	M8LC 4BP250/3	10446	
	315A	M8LC 3P315/3	25249	M8LC 4BP315/3	10447	
	350A	M8LC 3P350/3	25250	M8LC 4BP350/3	10448	
	400A	M8LC 3P400/3	25251	M8LC 4BP400/3	10449	
	300 - 500 - 1000 mA adjustable					
	200A	M8LC 3P200/5	25252	M8LC 4BP200/5	10450	
	225A	M8LC 3P225/5	25253	M8LC 4BP225/5	10451	
	250A	M8LC 3P250/5	25254	M8LC 4BP250/5	10452	
	315A	M8LC 3P315/5	25255	M8LC 4BP315/5	10453	
	350A	M8LC 3P350/5	25256	M8LC 4BP350/5	10454	
	400A	M8LC 3P400/5	25257	M8LC 4BP400/5	10455	
3SM8L-630	100 - 300 - 500 mA adjustable					
	400A	M8LD 3P400/3	25258	M8LD 4BP400/3	10456	
	500A	M8LD 3P500/3	25259	M8LD 4BP500/3	10457	
	630A	M8LD 3P630/3	25260	M8LD 4BP630/3	10458	
	300 - 500 - 1000 mA adjustable					
	400A	M8LD 3P400/5	25261	M8LD 4BP400/5	10459	
	500A	M8LD 3P500/5	25262	M8LD 4BP500/5	10460	
630A	M8LD 3P630/5	25263	M8LD 4BP630/5	10461		

Moulded Case Circuit Breakers with Earth Leakage Protection Series 3SM8L

For motor protection

1

	Rated current In (A)	3-pole		4-pole	
		Type code	Order code	Type code	Order code
3SM8L-100	30 - 100 - 300 mA adjustable				
	16A	M8LA 3M016/1	25264	M8LA 4BM016/1	10462
	20A	M8LA 3M020/1	25265	M8LA 4BM020/1	10463
	25A	M8LA 3M025/1	25266	M8LA 4BM025/1	10464
	32A	M8LA 3M032/1	25267	M8LA 4BM032/1	10465
	40A	M8LA 3M040/1	25268	M8LA 4BM040/1	31386
	50A	M8LA 3M050/1	25269	M8LA 4BM050/1	31387
	63A	M8LA 3M063/1	25270	M8LA 4BM063/1	31388
	80A	M8LA 3M080/1	25271	M8LA 4BM080/1	31389
	100A	M8LA 3M100/1	25272	M8LA 4BM100/1	31390
	100 - 300 - 500 mA adjustable				
	16A	M8LA 3M016/3	25273	M8LA 4BM016/3	31391
	20A	M8LA 3M020/3	25274	M8LA 4BM020/3	31392
	25A	M8LA 3M025/3	25275	M8LA 4BM025/3	31393
	32A	M8LA 3M032/3	25276	M8LA 4BM032/3	31394
	40A	M8LA 3M040/3	25277	M8LA 4BM040/3	31395
	50A	M8LA 3M050/3	25278	M8LA 4BM050/3	31396
	63A	M8LA 3M063/3	25279	M8LA 4BM063/3	31397
	80A	M8LA 3M080/3	25280	M8LA 4BM080/3	31398
	100A	M8LA 3M100/3	25281	M8LA 4BM100/3	31399
3SM8L-225	30 - 100 - 300 mA adjustable				
	100A	M8LB 3M100/1	25282	M8LB 4BM100/1	31400
	125A	M8LB 3M125/1	25283	M8LB 4BM125/1	31401
	140A	M8LB 3M140/1	25284	M8LB 4BM140/1	31402
	160A	M8LB 3M160/1	25285	M8LB 4BM160/1	31403
	180A	M8LB 3M180/1	21538	M8LB 4BM180/1	31404
	200A	M8LB 3M200/1	21539	M8LB 4BM200/1	31405
	225A	M8LB 3M225/1	21540	M8LB 4BM225/1	31406
	100 - 300 - 500 mA adjustable				
	100A	M8LB 3M100/3	21541	M8LB 4BM100/3	31407
	125A	M8LB 3M125/3	21542	M8LB 4BM125/3	31408
	140A	M8LB 3M140/3	21543	M8LB 4BM140/3	31409
	160A	M8LB 3M160/3	21544	M8LB 4BM160/3	31410
	180A	M8LB 3M180/3	21545	M8LB 4BM180/3	31411
200A	M8LB 3M200/3	21546	M8LB 4BM200/3	31412	
225A	M8LB 3M225/3	21547	M8LB 4BM225/3	31413	
3SM8L-400	100 - 300 - 500 mA adjustable				
	200A	M8LC 3M200/3	21548	M8LC 4BM200/3	31414
	225A	M8LC 3M225/3	21549	M8LC 4BM225/3	31415
	250A	M8LC 3M250/3	10396	M8LC 4BM250/3	31416
	315A	M8LC 3M315/3	10397	M8LC 4BM315/3	31417
	350A	M8LC 3M350/3	10398	M8LC 4BM350/3	31418
	400A	M8LC 3M400/3	10399	M8LC 4BM400/3	31419
	300 - 500 - 1000 mA adjustable				
	200A	M8LC 3M200/5	10400	M8LC 4BM200/5	31420
	225A	M8LC 3M225/5	10401	M8LC 4BM225/5	31421
	250A	M8LC 3M250/5	10402	M8LC 4BM250/5	31422
	315A	M8LC 3M315/5	10403	M8LC 4BM315/5	10387
	350A	M8LC 3M350/5	10404	M8LC 4BM350/5	10388
	400A	M8LC 3M400/5	10405	M8LC 4BM400/5	10389
3SM8L-630	100 - 300 - 500 mA adjustable				
	400A	M8LD 3M400/3	10406	M8LD 4BM400/3	10390
	500A	M8LD 3M500/3	10407	M8LD 4BM500/3	10391
	630A	M8LD 3M630/3	10408	M8LD 4BM630/3	10392
	300 - 500 - 1000 mA adjustable				
	400A	M8LD 3M400/5	10409	M8LD 4BM400/5	10393
	500A	M8LD 3M500/5	10410	M8LD 4BM500/5	10394
	630A	M8LD 3M630/5	10411	M8LD 4BM630/5	10395

Functions

- Making and breaking under load condition
- Providing safety isolation for terminal distribution system
- Standard: IEC 60947-3

Instruction of type code

M8G	A	3	400
			Rated current (A) 10, 16, 20, 25, 32, 40, 50, 63 (Frame A) 16, 20, 25, 32, 40, 50, 63, 80, 100 (Frame B) 100, 125, 160, 180, 200, 225 (Frame C) 225, 250, 315, 350, 400 (Frame D) 400, 500, 630 (Frame E) 630, 700, 800 (Frame F)
			Poles (P): 3: 3P; 4: 4P
			Frame A: 3SM8G-63; B: 3SM8G-100; C: 3SM8G-225 D: 3SM8G-400; E: 3SM8G-630; F: 3SM8G-800
			Series code



Technical Specifications

Type		3SM8G-63	3SM8G-100	3SM8G-225	3SM8G-400	3SM8G-630	3SM8G-800
Standards		IEC 60947-3	IEC 60947-3	IEC 60947-3	IEC 60947-3	IEC 60947-3	IEC 60947-3
Frame type		A	B	C	D	E	F
Frame Current Inm	A	63	100	225	400	630	800
Rated current In	A	10, 16, 20, 25, 32, 40, 50, 63	16, 20, 25, 32, 40, 50, 63, 80, 100	100, 125, 160, 180, 200, 225	225, 250, 315, 350, 400	400, 500, 630	630, 700, 800
Rated insulating voltage Ui	V	500	800	800	800	800	800
Rated operating voltage, Ue	V	400	400	400	400	400	400
Rated frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60
Rated impulsive withstand voltage, Uimp	kV	6	8	8	8	8	8
Rated short-time withstand current Icw/1s	A	760	1200	2700	4800	7600	9600
Mechanical life	times	8000	8000	8000	7500	7500	7500
Electrical life	times	1500	1500	1000	1000	1000	500
Utilization category (IEC 60947-3)		AC-23A	AC-23A	AC-23A	AC-23A	AC-23A	AC-23A
Under-voltage release ①		■	■	■	■	■	■
Shunt-release ①		■	■	■	■	■	■
Auxiliary contact ①		■	■	■	■	■	■
Alarm Contact ①		■	■	■	■	■	■
Ambient temperature		-5 to +40°C, max. 95% humidity					
Storage temperature		-40 to +75°C					
Altitude	Max	2000					

Note: ① The same with 3SM8 series auxiliaries.

Switch Disconnectors

Series 3SM8G

Selection and ordering data

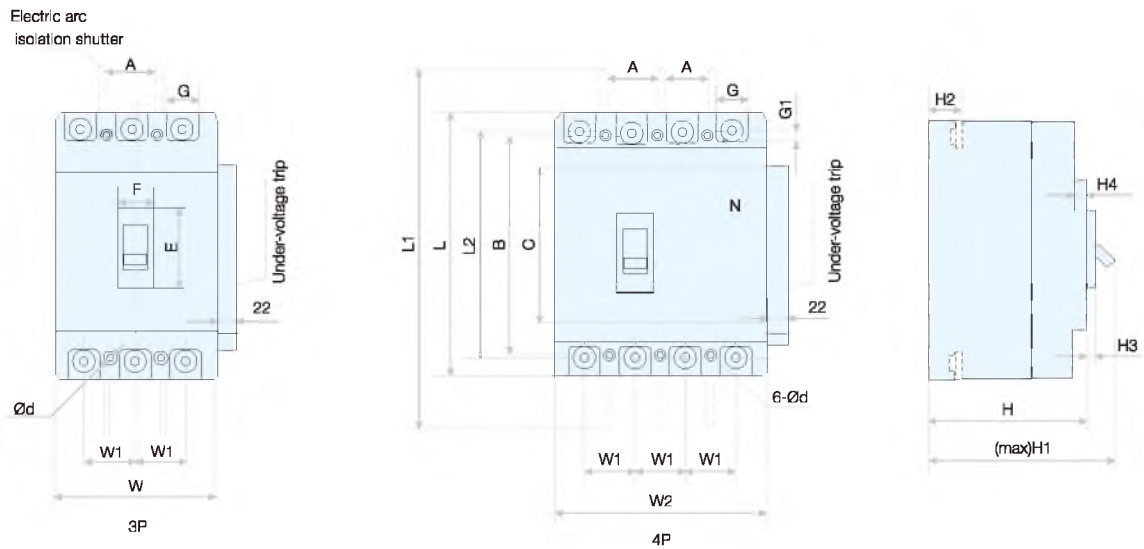
1



	Rated current In (A)	3 Poles		4 Poles	
		Type code	Order code	Type code	Order code
3SM8G-63	10	M8G A310	39131	M8G A410	39139
	16	M8G A316	39132	M8G A416	39140
	20	M8G A320	39133	M8G A420	39141
	25	M8G A325	39134	M8G A425	39142
	32	M8G A332	39135	M8G A432	39143
	40	M8G A340	39136	M8G A440	39144
	50	M8G A350	39137	M8G A450	39145
	63	M8G A363	39138	M8G A463	39146
3SM8G-100	16	M8G B3016	39147	M8G B4016	39156
	20	M8G B3020	39148	M8G B4020	39157
	25	M8G B3025	39149	M8G B4025	39158
	32	M8G B3032	39150	M8G B4032	39159
	40	M8G B3040	39151	M8G B4040	39160
	50	M8G B3050	39152	M8G B4050	39161
	63	M8G B3063	39153	M8G B4063	39162
	80	M8G B3080	39154	M8G B4080	39163
3SM8G-225	100	M8G B3100	39155	M8G B4100	39164
	125	M8G C3125	39166	M8G C4125	39172
	160	M8G C3160	39167	M8G C4160	39173
	180	M8G C3180	39168	M8G C4180	39174
	200	M8G C3200	39169	M8G C4200	39175
	225	M8G C3225	39170	M8G C4225	39176
3SM8G-400	225	M8G D3225	39177	M8G D4225	39182
	250	M8G D3250	39178	M8G D4250	39183
	315	M8G D3315	39179	M8G D4315	39184
	350	M8G D3350	39180	M8G D4350	39185
	400	M8G D3400	39181	M8G D4400	39186
3SM8G-630	400	M8G E3400	39187	M8G E4400	39190
	500	M8G E3500	39188	M8G E4500	39191
	630	M8G E3630	39189	M8G E4630	39192
3SM8G-800	630	M8G F3630	39193	M8G F4630	39196
	700	M8G F3700	39194	M8G F4700	39197
	800	M8G F3800	39195	M8G F4800	39198

Outline and installation dimensions

3SM8G-63, 100, 225 (front connection)

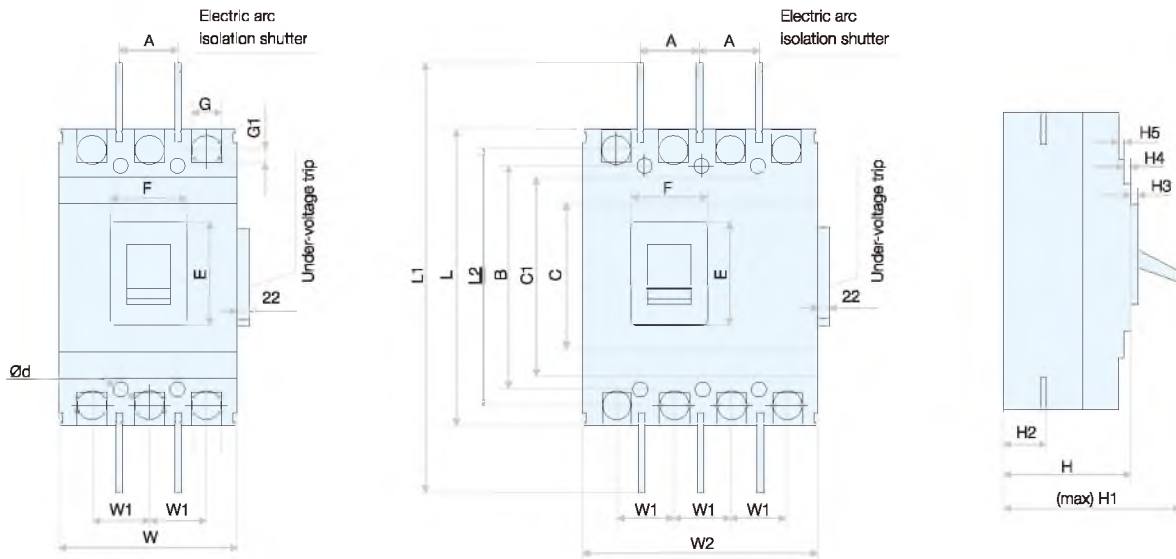


		Model		
		3SM8G-63	3SM8G-100	3SM8G-225
Dimensions	C	85	88.5	102
	E	48.5	50.5	52
	F	22	22.7	29
	G	14	17.5	24
	G1	6.5	7.5	11.5
	H	73	68	84.5
	H1	90.5	86	110
	H2	20	24	24
	H3	4.6	4	2.2
	H4	7	7	5
	L	135	150	165
	L1	172	255	295
	L2	114	132	144
W	78	92	107	
W1	25	30	35	
W2	103	122	142	
Installation Dimensions	A	25	30	35
	B	117	130	126
	Ø d	3.5	4.5X6	4.5

Switch Disconnectors Series 3SM8G

Outline and installation dimensions

3SM8G-400, 630, 800 (front connection)

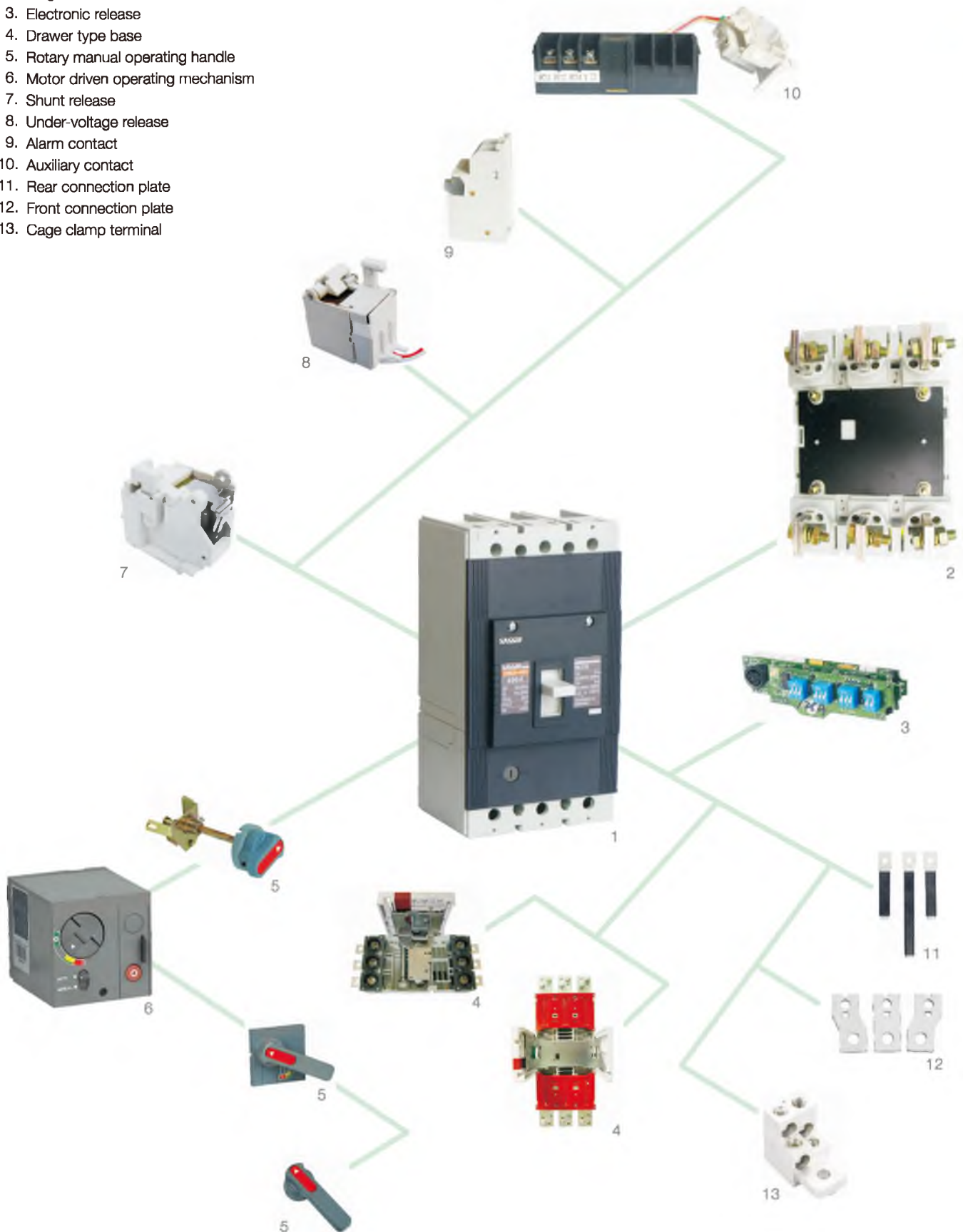


		Model	3SM8G-400	3SM8G-630	3SM8G-800
Dimensions	C	128	133.6	154	
	C1	151	184	204	
	E	89	89	81	
	F	65	65	66	
	G	30	44	44	
	G1	11	14	11	
	H	106.5	111	115.5	
	H1	146.5	160	155	
	H2	38	43	40	
	H3	6	6.8	4.5	
	H4	3.5	3.5	4.5	
	H5	4.5	4.5	8	
	L	257	270	280	
	L1	457	470	480	
L2	224	234	243		
W	148	182	210		
W1	48	58	70		
W2	198	240	280		
Installation Dimensions	A	48	58	70	
	B	194	200	243	
	Ød	7	7	7	

Moulded Case Circuit Breakers Series 3SM29

Overview

1. Body
2. Plug-in base
3. Electronic release
4. Drawer type base
5. Rotary manual operating handle
6. Motor driven operating mechanism
7. Shunt release
8. Under-voltage release
9. Alarm contact
10. Auxiliary contact
11. Rear connection plate
12. Front connection plate
13. Cage clamp terminal



Moulded Case Circuit Breakers

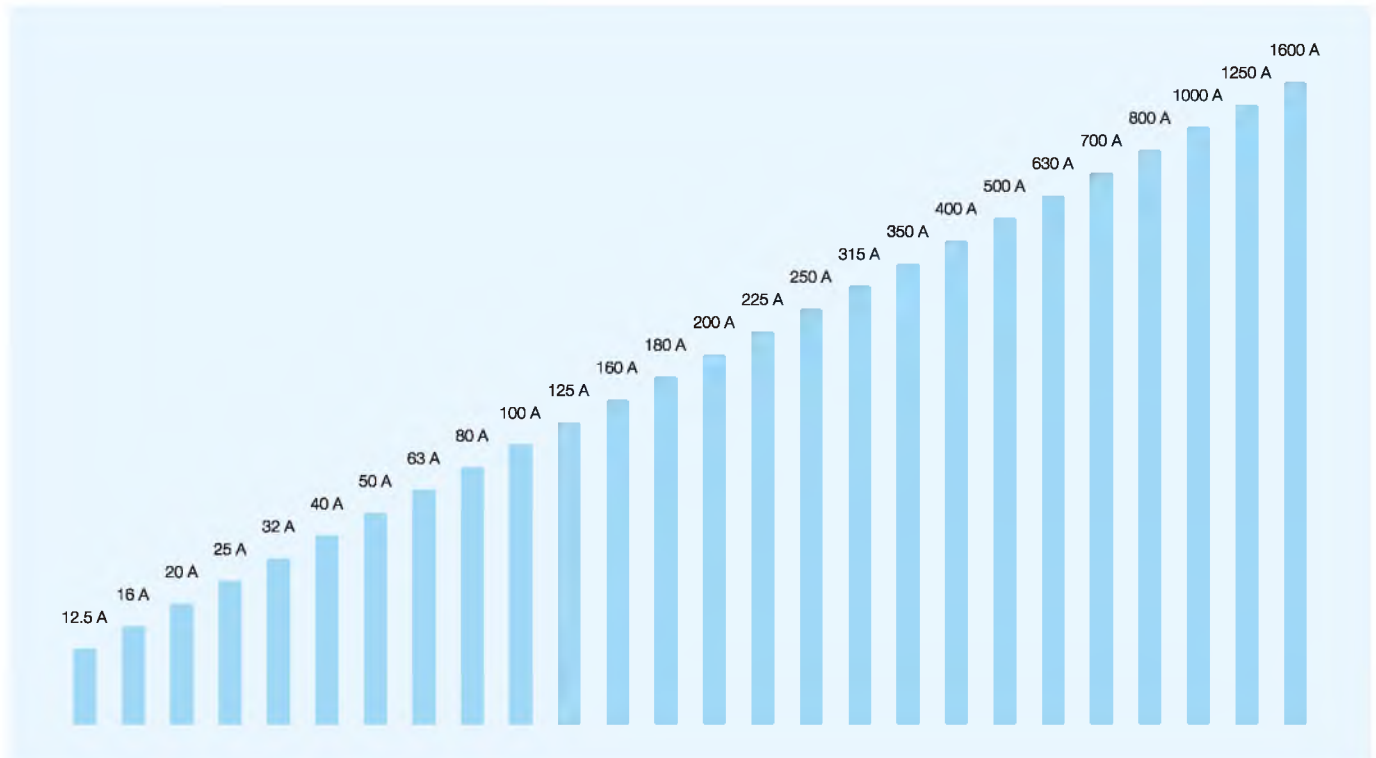
Series 3SM29

Applications and functions

- Incoming and outgoing function in distribution systems
- Switching and protection of short circuit and overload for motors, transformers and capacitors
- Stopping and switching off in an emergency in conjunction with lockable rotary operating mechanisms and terminal covers
- Available in the following versions:
 - System protection: the overload and short-circuit releases are designed for the protection of cables, leads and non-motor loads.
 - Motor protection: the overload and short-circuit releases are designed for optimized protection and direct-on-line starting of induction squirrel-cage motors.

Features

- Complete current range



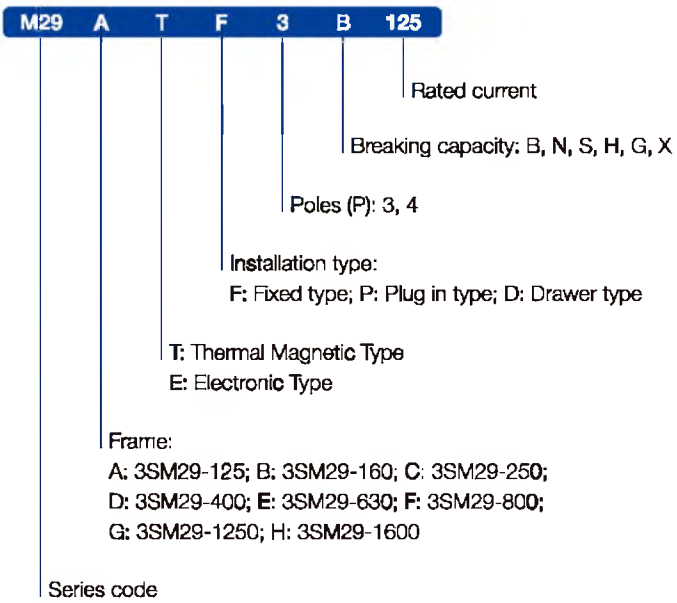
- High-breaking capacity
 - (1) B: Basic breaking capacity type
 - (2) N: Normal breaking capacity type
 - (3) S: Standard breaking capacity type
 - (4) H: High-breaking capacity type
 - (5) G: Ultrahigh breaking capacity type
 - (6) X : Current limit type

Frame rated current	Rated ultimate short circuit breaking capacity I _{cu}					
	20 kA	35 kA	50 kA	65 kA	85 kA	100 kA
A: 125 A		N				
B: 160 A	B	N	S			
C: 250 A	B	N	S	H		X
D: 400 A		N	S	H		
E: 630 A		N	S	H		
F: 800 A		N	S	H		X
G: 1250 A			S	H	G	
H: 1600 A			S	H	G	

- Microprocess controlled
 - 3SM29 series circuit breaker (I_{nm} ≥ 250) adopt advanced microprocess electronic release that can intelligentize the protection.
- Convenient installation
 - 3SM29 series circuit breaker provides three installation types as follow:
 - Fixed installation with front connection and rear connection
 - Plug-in installation with front connection and rear connection
 - Drawer installation

Moulded Case Circuit Breakers Series 3SM29

Instruction of type code

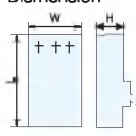


Moulded Case Circuit Breakers

Series 3SM29

Technical specifications

Type	3SM29-125			3SM29-160			3SM29-250				3SM29-400			3SM29-630, 3SM29-800				3SM29-1250, 3SM29-1600		
Standards	IEC 60947-2			IEC 60947-2			IEC 60947-2				IEC 60947-2			IEC 60947-2				IEC 60947-2		
Frame type	A			B			C				D			E, F				G, H		
Poles (No)	3, 4			3, 4			3, 4				3, 4			3, 4				3		
N-pole rated current	= In			= In			= In				= In			= In				= In		
Frame Current Inm (A)	125			160			250				400			630, 800				1250, 1600		
Rated current In (A)	12.5, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125			32, 40, 50, 63, 80, 100, 125, 160			125, 160, 180, 200, 225, 250				250, 315, 350, 400			400, 500, 630, 700, 800				800, 1000, 1250, 1600		
Rated insulating voltage Ui (V)	500			690			690				690			690				690		
Rated service voltage Ue (V)	400			400			400				400			400				400		
Rated frequency in AC (Hz)	50/60			50/60			50/60				50/60			50/60				50/60		
Rated impulsive withstand voltage Uimp (Kv)	6			6			8				8			8				8		
Class of breaking capacity	B	N		B	N	S	N	S	H	X	N	S	H	N	S	H	X	S	H	G
Rated ultimate short-circuit breaking capacity, Icu (kA)																				
(AC) 50-60 Hz 400V O-CO (kA)	20	35		20	35	50	35	50	65	100	35	50	65	35	50	65	100	50	65	85
(AC) 50-60 Hz 690V O-CO-CO	15	20		16	25	35	20	30	35	70	20	30	35	20	30	35	70	30	35	50
Rated operating short-circuit breaking capacity, Ics																				
(AC) 50-60 Hz 400V O-CO-CO (kA)	10	17.5		10	17.5	25	35	37.5	48.8	75	35	37.5	48.8	35	37.5	48.8	75	50	48.75	50
(AC) 50-60 Hz 690V O-CO-CO (kA)	-	-		5	10	15	20	30	35	50	20	30	35	20	35	30	50	35	35	35
Rated short-time withstand current for 1s (kA)	-			-			-				5			10				20		
Mechanical life (times)	8500			7000			7000				4000			4000				2500		
Electrical life (times)	1500			1000			1000				1000			1000				500		
Flashover distance (mm)	≤ 30			≤ 30			≤ 50				≤ 50			≤ 80				≤ 80		
Thermal magnetic release	■			■			■				■			■				■		
Electronic release	-			-			■				■			■				■		
Utilization category (IEC 60947-2)	A			A			A				A, B			A, B				A, B		
Motor control mechanism	■			■			■				■			■				■		
Rotary handle operation mechanism	■			■			■				■			■				■		
Shunt and under voltage release	■			■			■				■			■				■		
Auxiliary contact and alarm contact	■			■			■				■			■				■		
Dimension	W (mm)	3P	76	90			105				105			140				210		
		4P	101	120			140				140			184				280		
L (mm)	3P	120	120			170				254			254				268			
	4P	120	120			170				254			254				268			
H (mm)	3P	70	70			103.5				103.5			103.5				103.5			
	4P	70	70			103.5				103.5			103.5				103.5			
Weight	Fixed	3P/4P	0.92/1.3	1.2/1.6			2.7/3.5				5			5.1/7				9.6/12.2		
	Plug in	3P/4P	1.2/1.5	1.4/1.8			3.2/4.2				8.2			6.2/8.5				-		
	Withdrawable	3P/4P	-	-			3.6/4.6				9			6.5/8.7				12.2/15.3		
Ambient temperature	-5 ~ 40 °C, max. 95 % humidity																			
Storage temperature	-40 ~ +75 °C																			
Altitude (Max)	2,000																			



Moulded Case Circuit Breakers Series 3SM29

Selection and ordering data

Thermal Magnetic Type

	Breaking capacity	Poles	Rated current (A)	Fixed type		Plug in type		Withdrawable type			
				Type code	Order code	Type code	Order code	Type code	Order code		
3SM29-125	20 kA (B)	3	12.5	M29ATF 3B12.5	10484	M29ATP 3B12.5	10506	-	-		
			16	M29ATF 3B16	10485	M29ATP 3B16	10507	-	-		
			20	M29ATF 3B20	10486	M29ATP 3B20	10508	-	-		
			25	M29ATF 3B25	10487	M29ATP 3B25	10509	-	-		
			32	M29ATF 3B32	10488	M29ATP 3B32	10510	-	-		
			40	M29ATF 3B40	10489	M29ATP 3B40	10511	-	-		
			50	M29ATF 3B50	10490	M29ATP 3B50	10512	-	-		
			63	M29ATF 3B63	10491	M29ATP 3B63	10513	-	-		
			80	M29ATF 3B80	10492	M29ATP 3B80	10514	-	-		
			100	M29ATF 3B100	10493	M29ATP 3B100	10515	-	-		
			125	M29ATF 3B125	10494	M29ATP 3B125	10516	-	-		
					4	12.5	M29ATF 4B12.5	10528	M29ATP 4B12.5	10550	-
			16	M29ATF 4B16		10529	M29ATP 4B16	10551	-	-	
			20	M29ATF 4B20		10530	M29ATP 4B20	10552	-	-	
			25	M29ATF 4B25		10531	M29ATP 4B25	10553	-	-	
			32	M29ATF 4B32		10532	M29ATP 4B32	10554	-	-	
			40	M29ATF 4B40		10533	M29ATP 4B40	10555	-	-	
			50	M29ATF 4B50		10534	M29ATP 4B50	10556	-	-	
			63	M29ATF 4B63		10535	M29ATP 4B63	10557	-	-	
			80	M29ATF 4B80		10536	M29ATP 4B80	10558	-	-	
			100	M29ATF 4B100		10537	M29ATP 4B100	10559	-	-	
			125	M29ATF 4B125		10538	M29ATP 4B125	10560	-	-	
		35 kA (N)	3	12.5		M29ATF 3N12.5	10495	M29ATP 3N12.5	10517	-	-
					16	M29ATF 3N16	10496	M29ATP 3N16	10518	-	-
					20	M29ATF 3N20	10497	M29ATP 3N20	10519	-	-
					25	M29ATF 3N25	10498	M29ATP 3N25	10520	-	-
					32	M29ATF 3N32	10499	M29ATP 3N32	10521	-	-
					40	M29ATF 3N40	10500	M29ATP 3N40	10522	-	-
					50	M29ATF 3N50	10501	M29ATP 3N50	10523	-	-
					63	M29ATF 3N63	10502	M29ATP 3N63	10524	-	-
					80	M29ATF 3N80	10503	M29ATP 3N80	10525	-	-
					100	M29ATF 3N100	10504	M29ATP 3N100	10526	-	-
					125	M29ATF 3N125	10505	M29ATP 3N125	10527	-	-
					4	12.5	M29ATF 4N12.5	10539	M29ATP 4N12.5	10561	-
			16	M29ATF 4N16		10540	M29ATP 4N16	10562	-	-	
			20	M29ATF 4N20		10541	M29ATP 4N20	10563	-	-	
		25	M29ATF 4N25	10542		M29ATP 4N25	10564	-	-		
		32	M29ATF 4N32	10543		M29ATP 4N32	10565	-	-		
		40	M29ATF 4N40	10544		M29ATP 4N40	10566	-	-		
		50	M29ATF 4N50	10545		M29ATP 4N50	10567	-	-		
		63	M29ATF 4N63	10546		M29ATP 4N63	10568	-	-		
		80	M29ATF 4N80	10547		M29ATP 4N80	10569	-	-		
		100	M29ATF 4N100	10548		M29ATP 4N100	10570	-	-		
		125	M29ATF 4N125	10549		M29ATP 4N125	10571	-	-		
3SM29-160	20 kA (B)	3	32	M29BTF 3B32		10572	M29BTP 3B32	34331	-	-	
			40	M29BTF 3B40	10573	M29BTP 3B40	34332	-	-		
			50	M29BTF 3B50	10574	M29BTP 3B50	34333	-	-		
			63	M29BTF 3B63	10575	M29BTP 3B63	34334	-	-		
			80	M29BTF 3B80	10576	M29BTP 3B80	34335	-	-		
			100	M29BTF 3B100	10577	M29BTP 3B100	34336	-	-		
				4	32	M29BTF 4B32	34339	M29BTP 4B32	34347	-	-
					40	M29BTF 4B40	34340	M29BTP 4B40	34348	-	-
					50	M29BTF 4B50	34341	M29BTP 4B50	34349	-	-
					63	M29BTF 4B63	34342	M29BTP 4B63	34350	-	-
					80	M29BTF 4B80	34343	M29BTP 4B80	34351	-	-
					100	M29BTF 4B100	34344	M29BTP 4B100	34352	-	-
				4	125	M29BTF 4B125	34345	M29BTP 4B125	34353	-	-
					160	M29BTF 4B160	34346	M29BTP 4B160	34354	-	-



Moulded Case Circuit Breakers

Series 3SM29

Selection and ordering data

Thermal Magnetic Type

3SM29-160	Breaking capacity	Poles	Rated current (A)	Fixed type		Plug in type		Withdrawable type			
				Type code	Order code	Type code	Order code	Type code	Order code		
3SM29-160	35 kA (N)	3	32	M29BTF 3N32	10580	M29BTP 3N32	39925	-	-		
			40	M29BTF 3N40	10581	M29BTP 3N40	39926	-	-		
			50	M29BTF 3N50	10582	M29BTP 3N50	39927	-	-		
			63	M29BTF 3N63	10583	M29BTP 3N63	39928	-	-		
			80	M29BTF 3N80	10584	M29BTP 3N80	39929	-	-		
			100	M29BTF 3N100	10585	M29BTP 3N100	39930	-	-		
		125	M29BTF 3N125	10586	M29BTP 3N125	39931	-	-			
		160	M29BTF 3N160	10587	M29BTP 3N160	39932	-	-			
		4	32	M29BTF 4N32	10604	M29BTP 4N32	10612	-	-		
			40	M29BTF 4N40	10605	M29BTP 4N40	10613	-	-		
			50	M29BTF 4N50	10606	M29BTP 4N50	10614	-	-		
			63	M29BTF 4N63	10607	M29BTP 4N63	10615	-	-		
			80	M29BTF 4N80	10608	M29BTP 4N80	10616	-	-		
			100	M29BTF 4N100	10609	M29BTP 4N100	10617	-	-		
		50 kA (S)	3	32	M29BTF 3S32	10588	M29BTP 3S32	10596	-	-	
				40	M29BTF 3S40	10589	M29BTP 3S40	10597	-	-	
				50	M29BTF 3S50	10590	M29BTP 3S50	10598	-	-	
				63	M29BTF 3S63	10591	M29BTP 3S63	10599	-	-	
	80			M29BTF 3S80	10592	M29BTP 3S80	10600	-	-		
	100			M29BTF 3S100	10593	M29BTP 3S100	10601	-	-		
	125		M29BTF 3S125	10594	M29BTP 3S125	10602	-	-			
	160		M29BTF 3S160	10595	M29BTP 3S160	10603	-	-			
	4		32	M29BTF 4S32	39933	M29BTP 4S32	10620	-	-		
			40	M29BTF 4S40	39934	M29BTP 4S40	10621	-	-		
			50	M29BTF 4S50	39935	M29BTP 4S50	10622	-	-		
			63	M29BTF 4S63	39936	M29BTP 4S63	10623	-	-		
			80	M29BTF 4S80	39937	M29BTP 4S80	10624	-	-		
			100	M29BTF 4S100	39938	M29BTP 4S100	10625	-	-		
	3SM29-250		35 kA (N)	3	125	M29CTF 3N125	39941	M29CTP 3N125	10638	M29CTD 3N125	10656
					160	M29CTF 3N160	39942	M29CTP 3N160	10639	M29CTD 3N160	10657
					180	M29CTF 3N180	39943	M29CTP 3N180	10640	M29CTD 3N180	10658
					200	M29CTF 3N200	39944	M29CTP 3N200	10641	M29CTD 3N200	10659
		225			M29CTF 3N225	39945	M29CTP 3N225	10642	M29CTD 3N225	10660	
		250			M29CTF 3N250	39946	M29CTP 3N250	10643	M29CTD 3N250	10661	
		4		125	M29CTF 4N125	10674	M29CTP 4N125	10692	M29CTD 4N125	16011	
				160	M29CTF 4N160	10675	M29CTP 4N160	10693	M29CTD 4N160	16012	
180				M29CTF 4N180	10676	M29CTP 4N180	10694	M29CTD 4N180	16013		
200				M29CTF 4N200	10677	M29CTP 4N200	10695	M29CTD 4N200	16014		
225				M29CTF 4N225	10678	M29CTP 4N225	10696	M29CTD 4N225	16015		
250				M29CTF 4N250	10679	M29CTP 4N250	10697	M29CTD 4N250	16016		
50 kA (S)		3		125	M29CTF 3S125	39947	M29CTP 3S125	10644	M29CTD 3S125	10662	
				160	M29CTF 3S160	39948	M29CTP 3S160	10645	M29CTD 3S160	10663	
				180	M29CTF 3S180	10628	M29CTP 3S180	10646	M29CTD 3S180	10664	
				200	M29CTF 3S200	10629	M29CTP 3S200	10647	M29CTD 3S200	10665	
				225	M29CTF 3S225	10630	M29CTP 3S225	10648	M29CTD 3S225	10666	
				250	M29CTF 3S250	10631	M29CTP 3S250	10649	M29CTD 3S250	10667	
		4	125	M29CTF 4S125	10680	M29CTP 4S125	10698	M29CTD 4S125	16017		
			160	M29CTF 4S160	10681	M29CTP 4S160	10699	M29CTD 4S160	16018		
			180	M29CTF 4S180	10682	M29CTP 4S180	10700	M29CTD 4S180	16019		
			200	M29CTF 4S200	10683	M29CTP 4S200	16002	M29CTD 4S200	16020		
			225	M29CTF 4S225	10684	M29CTP 4S225	16003	M29CTD 4S225	16021		
			250	M29CTF 4S250	10685	M29CTP 4S250	16004	M29CTD 4S250	16022		



Moulded Case Circuit Breakers

Series 3SM29

Selection and ordering data

Thermal Magnetic Type

	Breaking capacity	Poles	Rated current (A)	Fixed type		Plug in type		Withdrawable type				
				Type code	Order code	Type code	Order code	Type code	Order code			
3SM29-250	65 kA (H)	3	125	M29CTF 3H125	10632	M29CTP 3H125	10650	M29CTD 3H125	10668			
			160	M29CTF 3H160	10633	M29CTP 3H160	10651	M29CTD 3H160	10669			
			180	M29CTF 3H180	10634	M29CTP 3H180	10652	M29CTD 3H180	10670			
			200	M29CTF 3H200	10635	M29CTP 3H200	10653	M29CTD 3H200	10671			
			225	M29CTF 3H225	10636	M29CTP 3H225	10654	M29CTD 3H225	10672			
		250	M29CTF 3H250	10637	M29CTP 3H250	10655	M29CTD 3H250	10673				
		4	125	M29CTF 4H125	10686	M29CTP 4H125	16005	M29CTD 4H125	16023			
			160	M29CTF 4H160	10687	M29CTP 4H160	16006	M29CTD 4H160	16024			
			180	M29CTF 4H180	10688	M29CTP 4H180	16007	M29CTD 4H180	16025			
			200	M29CTF 4H200	10689	M29CTP 4H200	16008	M29CTD 4H200	16026			
			225	M29CTF 4H225	10690	M29CTP 4H225	16009	M29CTD 4H225	16027			
			250	M29CTF 4H250	10691	M29CTP 4H250	16010	M29CTD 4H250	16028			
			3	125	M29CTF 3X125	34545	M29CTP 3X125	34551	M29CTD 3X125	34557		
				160	M29CTF 3X160	34546	M29CTP 3X160	34552	M29CTD 3X160	34558		
				180	M29CTF 3X180	34547	M29CTP 3X180	34553	M29CTD 3X180	34559		
	200			M29CTF 3X200	34548	M29CTP 3X200	34554	M29CTD 3X200	34560			
	225	M29CTF 3X225		34549	M29CTP 3X225	34555	M29CTD 3X225	34561				
	250	M29CTF 3X250		34550	M29CTP 3X250	34556	M29CTD 3X250	34562				
	4	125		M29CTF 4X125	34563	M29CTP 4X125	34569	M29CTD 4X125	34575			
		160		M29CTF 4X160	34564	M29CTP 4X160	34570	M29CTD 4X160	34576			
		180		M29CTF 4X180	34565	M29CTP 4X180	34571	M29CTD 4X180	34577			
		200		M29CTF 4X200	34566	M29CTP 4X200	34572	M29CTD 4X200	34578			
		225	M29CTF 4X225	34567	M29CTP 4X225	34573	M29CTD 4X225	34579				
	250	M29CTF 4X250	34568	M29CTP 4X250	34574	M29CTD 4X250	34580					
	3SM29-400	35 kA (N)	3	250	M29DTF 3N250	16029	M29DTP 3N250	16041	M29DTD 3N250	16053		
				315	M29DTF 3N315	16030	M29DTP 3N315	16042	M29DTD 3N315	16054		
				350	M29DTF 3N350	16031	M29DTP 3N350	16043	M29DTD 3N350	16055		
				400	M29DTF 3N400	16032	M29DTP 3N400	16044	M29DTD 3N400	16056		
			4	250	M29DTF 4N250	16065	M29DTP 4N250	34097	M29DTD 4N250	34109		
				315	M29DTF 4N315	16066	M29DTP 4N315	34098	M29DTD 4N315	34110		
				350	M29DTF 4N350	34087	M29DTP 4N350	34099	M29DTD 4N350	34111		
				400	M29DTF 4N400	34088	M29DTP 4N400	34100	M29DTD 4N400	34112		
				50 kA (S)	3	250	M29DTF 3S250	16033	M29DTP 3S250	16045	M29DTD 3S250	16057
						315	M29DTF 3S315	16034	M29DTP 3S315	16046	M29DTD 3S315	16058
		350	M29DTF 3S350			16035	M29DTP 3S350	16047	M29DTD 3S350	16059		
		400	M29DTF 3S400			16036	M29DTP 3S400	16048	M29DTD 3S400	16060		
		4	250		M29DTF 4S250	34089	M29DTP 4S250	34101	M29DTD 4S250	34113		
			315		M29DTF 4S315	34090	M29DTP 4S315	34102	M29DTD 4S315	34114		
			350		M29DTF 4S350	34091	M29DTP 4S350	34103	M29DTD 4S350	34115		
			400		M29DTF 4S400	34092	M29DTP 4S400	34104	M29DTD 4S400	34116		
65 kA (H)			3		250	M29DTF 3H250	16037	M29DTP 3H250	16049	M29DTD 3H250	16061	
					315	M29DTF 3H315	16038	M29DTP 3H315	16050	M29DTD 3H315	16062	
		350		M29DTF 3H350	16039	M29DTP 3H350	16051	M29DTD 3H350	16063			
		400		M29DTF 3H400	16040	M29DTP 3H400	16052	M29DTD 3H400	16064			
		4	250	M29DTF 4H250	34093	M29DTP 4H250	34105	M29DTD 4H250	34117			
			315	M29DTF 4H315	34094	M29DTP 4H315	34106	M29DTD 4H315	34118			
			350	M29DTF 4H350	34095	M29DTP 4H350	34107	M29DTD 4H350	34119			
			400	M29DTF 4H400	34096	M29DTP 4H400	34108	M29DTD 4H400	34120			
			3SM29-630	35 kA (N)	3	400	M29ETF 3N400	34124	-	-	M29ETD 3N400	34160
						500	M29ETF 3N500	34125	-	-	M29ETD 3N500	34161
630		M29ETF 3N630				34126	-	-	M29ETD 3N630	34162		
4		400			M29ETF 4N400	34178	-	-	M29ETD 4N400	34214		
		500			M29ETF 4N500	34179	-	-	M29ETD 4N500	34215		
		630			M29ETF 4N630	34180	-	-	M29ETD 4N630	34216		
50 kA (S)	3	400		M29ETF 3S400	34130	-	-	M29ETD 3S400	34166			
		500		M29ETF 3S500	34131	-	-	M29ETD 3S500	34167			
	4	630		M29ETF 3S630	34132	-	-	M29ETD 3S630	34168			
		400		M29ETF 4S400	34184	-	-	M29ETD 4S400	34220			
500	M29ETF 4S500	34185	-	-	M29ETD 4S500	34221						
630	M29ETF 4S630	34186	-	-	M29ETD 4S630	34222						



Moulded Case Circuit Breakers

Series 3SM29

Selection and ordering data

Thermal Magnetic Type

	Breaking capacity	Poles	Rated current (A)	Fixed type		Plug in type		Withdrawable type		
				Type code	Order code	Type code	Order code	Type code	Order code	
3SM29-630	65 kA (H)	3	400	M29ETF 3H400	34136	-	-	M29ETD 3H400	34172	
			500	M29ETF 3H500	34137	-	-	M29ETD 3H500	34173	
			630	M29ETF 3H630	34138	-	-	M29ETD 3H630	34174	
		4	400	M29ETF 4H400	34190	-	-	M29ETD 4H400	34226	
			500	M29ETF 4H500	34191	-	-	M29ETD 4H500	34227	
			630	M29ETF 4H630	34192	-	-	M29ETD 4H630	34228	
	100 kA (X)	3	400	M29ETF 3X400	36394	-	-	M29ETD 3X400	36400	
			500	M29ETF 3X500	36395	-	-	M29ETD 3X500	36401	
			630	M29ETF 3X630	36396	-	-	M29ETD 3X630	36402	
		4	400	M29ETF 4X400	36406	-	-	M29ETD 4X400	36412	
			500	M29ETF 4X500	36407	-	-	M29ETD 4X500	36413	
			630	M29ETF 4X630	36408	-	-	M29ETD 4X630	36414	
	3SM29-800	35 kA (N)	3	400	M29FTF 3N400	34229	-	-	M29FTD 3N400	34244
				500	M29FTF 3N500	34230	-	-	M29FTD 3N500	34245
				630	M29FTF 3N630	34231	-	-	M29FTD 3N630	34246
				700	M29FTF 3N700	34232	-	-	M29FTD 3N700	34247
			4	400	M29FTF 4N400	34259	-	-	M29FTD 4N400	34274
				500	M29FTF 4N500	34260	-	-	M29FTD 4N500	34275
630				M29FTF 4N630	34261	-	-	M29FTD 4N630	34276	
700				M29FTF 4N700	34262	-	-	M29FTD 4N700	34277	
50 kA (S)			3	400	M29FTF 3S400	34234	-	-	M29FTD 3S400	34249
				500	M29FTF 3S500	34235	-	-	M29FTD 3S500	34250
				630	M29FTF 3S630	34236	-	-	M29FTD 3S630	34251
				700	M29FTF 3S700	34237	-	-	M29FTD 3S700	34252
		4	400	M29FTF 4S400	34238	-	-	M29FTD 4S400	34253	
			500	M29FTF 4S500	34264	-	-	M29FTD 4S500	34279	
			630	M29FTF 4S630	34265	-	-	M29FTD 4S630	34280	
			700	M29FTF 4S700	34266	-	-	M29FTD 4S700	34281	
65 kA (H)		3	400	M29FTF 3H400	34267	-	-	M29FTD 3H400	34282	
			500	M29FTF 3H500	34268	-	-	M29FTD 3H500	34283	
			630	M29FTF 3H630	34268	-	-	M29FTD 3H630	34283	
			700	M29FTF 3H700	34268	-	-	M29FTD 3H700	34283	
			800	M29FTF 3H800	34268	-	-	M29FTD 3H800	34283	
			800	M29FTF 3H800	34268	-	-	M29FTD 3H800	34283	
		4	400	M29FTF 4H400	34239	-	-	M29FTD 4H400	34254	
			500	M29FTF 4H500	34240	-	-	M29FTD 4H500	34255	
			630	M29FTF 4H630	34241	-	-	M29FTD 4H630	34256	
			700	M29FTF 4H700	34242	-	-	M29FTD 4H700	34257	
			800	M29FTF 4H800	34243	-	-	M29FTD 4H800	34258	
			800	M29FTF 4H800	34269	-	-	M29FTD 4H800	34284	
		100 kA (X)	3	400	M29FTF 3X400	34270	-	-	M29FTD 3X400	34285
				500	M29FTF 3X500	34271	-	-	M29FTD 3X500	34286
	630			M29FTF 3X630	34272	-	-	M29FTD 3X630	34287	
	700			M29FTF 3X700	34273	-	-	M29FTD 3X700	34288	
	4		400	M29FTF 4X400	34581	-	-	M29FTD 4X400	34586	
			500	M29FTF 4X500	34582	-	-	M29FTD 4X500	34587	
630			M29FTF 4X630	34583	-	-	M29FTD 4X630	34588		
700			M29FTF 4X700	34584	-	-	M29FTD 4X700	34589		
3	800		M29FTF 3X800	34585	-	-	M29FTD 3X800	34590		
	400		M29FTF 4X400	34591	-	-	M29FTD 4X400	34596		
	500		M29FTF 4X500	34592	-	-	M29FTD 4X500	34597		
	630		M29FTF 4X630	34593	-	-	M29FTD 4X630	34598		
4	700	M29FTF 4X700	34594	-	-	M29FTD 4X700	34599			
	800	M29FTF 4X800	34595	-	-	M29FTD 4X800	34600			



Moulded Case Circuit Breakers

Series 3SM29

Selection and ordering data

Electronic Type

	Breaking capacity	Poles	Rated current (A)	Fixed type		Plug in type		Withdrawable type	
				Type code	Order code	Type code	Order code	Type code	Order code
3SM29-250	35 kA (N)	3	125	M29CEF 3N125	34139	M29CEP 3N125	34145	M29CED 3N125	34151
			160	M29CEF 3N160	34140	M29CEP 3N160	34146	M29CED 3N160	34152
			180	M29CEF 3N180	34141	M29CEP 3N180	34147	M29CED 3N180	34153
			200	M29CEF 3N200	34142	M29CEP 3N200	34148	M29CED 3N200	34154
			225	M29CEF 3N225	34143	M29CEP 3N225	34149	M29CED 3N225	34155
		250	M29CEF 3N250	34144	M29CEP 3N250	34150	M29CED 3N250	34156	
		4	125	M29CEF 4N125	34193	-	-	-	-
			160	M29CEF 4N160	34194	-	-	-	-
			180	M29CEF 4N180	34195	-	-	-	-
			200	M29CEF 4N200	34196	-	-	-	-
	225		M29CEF 4N225	34197	-	-	-	-	
	50 kA (S)	3	125	M29CEF 3S125	34199	M29CEP 3S125	34205	M29CED 3S125	36229
			160	M29CEF 3S160	34200	M29CEP 3S160	34206	M29CED 3S160	36230
			180	M29CEF 3S180	34201	M29CEP 3S180	34207	M29CED 3S180	36231
			200	M29CEF 3S200	34202	M29CEP 3S200	34208	M29CED 3S200	36232
			225	M29CEF 3S225	34203	M29CEP 3S225	34209	M29CED 3S225	36233
		250	M29CEF 3S250	34204	M29CEP 3S250	34210	M29CED 3S250	36234	
		4	125	M29CEF 4S125	36235	-	-	-	-
			160	M29CEF 4S160	36236	-	-	-	-
			180	M29CEF 4S180	36237	-	-	-	-
			200	M29CEF 4S200	36238	-	-	-	-
	225		M29CEF 4S225	36239	-	-	-	-	
	65 kA (H)	3	125	M29CEF 3H125	36241	M29CEP 3H125	36247	M29CED 3H125	36253
			160	M29CEF 3H160	36242	M29CEP 3H160	36248	M29CED 3H160	36254
			180	M29CEF 3H180	36243	M29CEP 3H180	36249	M29CED 3H180	36255
			200	M29CEF 3H200	36244	M29CEP 3H200	36250	M29CED 3H200	36256
			225	M29CEF 3H225	36245	M29CEP 3H225	36251	M29CED 3H225	36257
		250	M29CEF 3H250	36246	M29CEP 3H250	36252	M29CED 3H250	36258	
		4	125	M29CEF 4H125	36259	-	-	-	-
			160	M29CEF 4H160	36260	-	-	-	-
			180	M29CEF 4H180	36261	-	-	-	-
			200	M29CEF 4H200	36262	-	-	-	-
	225		M29CEF 4H225	36263	-	-	-	-	
	100 kA (X)	3	125	M29CEF 3X125	36265	M29CEP 3X125	36271	M29CED 3X125	36277
			160	M29CEF 3X160	36266	M29CEP 3X160	36272	M29CED 3X160	36278
			180	M29CEF 3X180	36267	M29CEP 3X180	36273	M29CED 3X180	36279
200			M29CEF 3X200	36268	M29CEP 3X200	36274	M29CED 3X200	36280	
225			M29CEF 3X225	36269	M29CEP 3X225	36275	M29CED 3X225	36281	
250		M29CEF 3X250	36270	M29CEP 3X250	36276	M29CED 3X250	36282		
4		125	M29CEF 4X125	36283	-	-	-	-	
		160	M29CEF 4X160	36284	-	-	-	-	
		180	M29CEF 4X180	36285	-	-	-	-	
		200	M29CEF 4X200	36286	-	-	-	-	
	225	M29CEF 4X225	36287	-	-	-	-		
3SM29-400	35 kA (N)	3	250	M29DEF 3N250	36289	M29DEP 3N250	36293	M29DED 3N250	36297
			315	M29DEF 3N315	36290	M29DEP 3N315	36294	M29DED 3N315	36298
			350	M29DEF 3N350	36291	M29DEP 3N350	36295	M29DED 3N350	36299
			400	M29DEF 3N400	36292	M29DEP 3N400	36296	M29DED 3N400	36300
		4	250	M29DEF 4N250	36301	-	-	-	-
			315	M29DEF 4N315	36302	-	-	-	-
			350	M29DEF 4N350	36303	-	-	-	-
			400	M29DEF 4N400	36304	-	-	-	-
	50 kA (S)	3	250	M29DEF 3S250	36305	M29DEP 3S250	36309	M29DED 3S250	36313
			315	M29DEF 3S315	36306	M29DEP 3S315	36310	M29DED 3S315	36314
			350	M29DEF 3S350	36307	M29DEP 3S350	36311	M29DED 3S350	36315
			400	M29DEF 3S400	36308	M29DEP 3S400	36312	M29DED 3S400	36316
		4	250	M29DEF 4S250	36317	-	-	-	-
			315	M29DEF 4S315	36318	-	-	-	-
			350	M29DEF 4S350	36319	-	-	-	-
			400	M29DEF 4S400	36320	-	-	-	-



Moulded Case Circuit Breakers

Series 3SM29

Selection and ordering data

Electronic Type

	Breaking capacity	Poles	Rated current (A)	Fixed type		Plug in type		Withdrawable type		
				Type code	Order code	Type code	Order code	Type code	Order code	
3SM29-400	65 kA (H)	3	250	M29DEF 3H250	36321	M29DEP 3H250	36325	M29DED 3H250	36329	
			315	M29DEF 3H315	36322	M29DEP 3H315	36326	M29DED 3H315	36330	
			350	M29DEF 3H350	36323	M29DEP 3H350	36327	M29DED 3H350	36331	
			400	M29DEF 3H400	36324	M29DEP 3H400	36328	M29DED 3H400	36332	
	4	250	M29DEF 4H250	36333	-	-	-	-		
		315	M29DEF 4H315	36334	-	-	-	-		
		350	M29DEF 4H350	36335	-	-	-	-		
		400	M29DEF 4H400	36336	-	-	-	-		
	3SM29-630	35 kA (N)	3	400	M29EEF 3N400	36340	-	-	M29EED 3N400	36346
				500	M29EEF 3N500	36341	-	-	M29EED 3N500	36347
				630	M29EEF 3N630	36342	-	-	M29EED 3N630	36348
		4	400	M29EEF 4N400	36352	-	-	-	-	
500			M29EEF 4N500	36353	-	-	-	-		
630			M29EEF 4N630	36354	-	-	-	-		
50 kA (S)		3	400	M29EEF 3S400	36358	-	-	M29EED 3S400	36364	
			500	M29EEF 3S500	36359	-	-	M29EED 3S500	36365	
			630	M29EEF 3S630	36360	-	-	M29EED 3S630	36366	
		4	400	M29EEF 4S400	36370	-	-	-	-	
			500	M29EEF 4S500	36371	-	-	-	-	
			630	M29EEF 4S630	36372	-	-	-	-	
65 kA (H)	3	400	M29EEF 3H400	36376	-	-	M29EED 3H400	36382		
		500	M29EEF 3H500	36377	-	-	M29EED 3H500	36383		
		630	M29EEF 3H630	36378	-	-	M29EED 3H630	36384		
	4	400	M29EEF 4H400	36388	-	-	-	-		
		500	M29EEF 4H500	36389	-	-	-	-		
		630	M29EEF 4H630	36390	-	-	-	-		
100 kA (X)	3	400	M29EEF 3X400	36418	-	-	M29EED 3X400	36424		
		500	M29EEF 3X500	36419	-	-	M29EED 3X500	36425		
		630	M29EEF 3X630	36420	-	-	M29EED 3X630	36426		
	4	400	M29EEF 4X400	36430	-	-	-	-		
		500	M29EEF 4X500	36431	-	-	-	-		
		630	M29EEF 4X630	36432	-	-	-	-		
3SM29-800	35 kA (N)	3	400	M29FEF 3N400	36433	-	-	M29FED 3N400	36438	
			500	M29FEF 3N500	36434	-	-	M29FED 3N500	36439	
			630	M29FEF 3N630	36435	-	-	M29FED 3N630	36440	
		4	400	M29FEF 4N400	36443	-	-	-	-	
			500	M29FEF 4N500	36444	-	-	-	-	
			630	M29FEF 4N630	36445	-	-	-	-	
		50 kA (S)	3	400	M29FEF 3S400	36448	-	-	M29FED 3S400	36453
				500	M29FEF 3S500	36449	-	-	M29FED 3S500	36454
				630	M29FEF 3S630	36450	-	-	M29FED 3S630	36455
	4		400	M29FEF 4S400	36458	-	-	-	-	
			500	M29FEF 4S500	36459	-	-	-	-	
			630	M29FEF 4S630	36460	-	-	-	-	
	700	3	700	M29FEF 3S700	36451	-	-	M29FED 3S700	36456	
			800	M29FEF 3S800	36452	-	-	M29FED 3S800	36457	
			800	M29FEF 4N800	36447	-	-	-	-	
		4	400	M29FEF 4S400	36458	-	-	-	-	
			500	M29FEF 4S500	36459	-	-	-	-	
			630	M29FEF 4S630	36460	-	-	-	-	
700		700	M29FEF 4S700	36461	-	-	-	-		
		800	M29FEF 4S800	36462	-	-	-	-		






Moulded Case Circuit Breakers

Series 3SM29

Selection and ordering data

Electronic Type

	Breaking capacity	Poles	Rated current (A)	Fixed type		Plug in type		Withdrawable type		
				Type code	Order code	Type code	Order code	Type code	Order code	
3SM29-800 	65 kA (H)	3	400	M29FEF 3H400	36463	-	-	M29FED 3H400	36468	
			500	M29FEF 3H500	36464	-	-	M29FED 3H500	36469	
			630	M29FEF 3H630	36465	-	-	M29FED 3H630	36470	
			700	M29FEF 3H700	36466	-	-	M29FED 3H700	36471	
		800	M29FEF 3H800	36467	-	-	M29FED 3H800	36472		
		4	400	M29FEF 4H400	36473	-	-	-	-	
			500	M29FEF 4H500	36474	-	-	-	-	
			630	M29FEF 4H630	36475	-	-	-	-	
	700		M29FEF 4H700	36476	-	-	-	-		
	100 kA (X)	3	400	M29FEF 3X400	36478	-	-	M29FED 3X400	36483	
			500	M29FEF 3X500	36479	-	-	M29FED 3X500	36484	
			630	M29FEF 3X630	36480	-	-	M29FED 3X630	36485	
			700	M29FEF 3X700	36481	-	-	M29FED 3X700	36486	
		800	M29FEF 3X800	36482	-	-	M29FED 3X800	36487		
		4	400	M29FEF 4X400	36488	-	-	-	-	
			500	M29FEF 4X500	36489	-	-	-	-	
			630	M29FEF 4X630	36490	-	-	-	-	
	700		M29FEF 4X700	36491	-	-	-	-		
	3SM29-1250 	50 kA (S)	3	800	M29GEF 3S800	34289	-	-	M29GED 3S800	34298
				1000	M29GEF 3S1000	34290	-	-	M29GED 3S1000	34299
1250				M29GEF 3S1250	34291	-	-	M29GED 3S1250	34300	
4			800	M29GEF 4S800	14130	-	-	M29GED 4S800	14133	
			1000	M29GEF 4S1000	14131	-	-	M29GED 4S1000	14134	
			1250	M29GEF 4S1250	14132	-	-	M29GED 4S1250	14135	
65 kA (H)		3	800	M29GEF 3H800	34292	-	-	M29GED 3H800	34301	
			1000	M29GEF 3H1000	34293	-	-	M29GED 3H1000	34302	
			1250	M29GEF 3H1250	34294	-	-	M29GED 3H1250	34303	
		4	800	M29GEF 4H800	14136	-	-	M29GED 4H800	14139	
			1000	M29GEF 4H1000	14137	-	-	M29GED 4H1000	14140	
			1250	M29GEF 4H1250	14138	-	-	M29GED 4H1250	14141	
85 kA (G)		3	800	M29GEF 3G800	34295	-	-	M29GED 3G800	34304	
			1000	M29GEF 3G1000	34296	-	-	M29GED 3G1000	34305	
			1250	M29GEF 3G1250	34297	-	-	M29GED 3G1250	34306	
		4	800	M29GEF 4G800	14142	-	-	M29GED 4G800	14145	
			1000	M29GEF 4G1000	14143	-	-	M29GED 4G1000	14146	
			1250	M29GEF 4G1250	14144	-	-	M29GED 4G1250	14147	
3SM29-1600 		50 kA (S)	3	800	M29HEF 3S800	34307	-	-	M29HED 3S800	34319
				1000	M29HEF 3S1000	34308	-	-	M29HED 3S1000	34320
	1250			M29HEF 3S1250	34309	-	-	M29HED 3S1250	34321	
	1600			M29HEF 3S1600	34310	-	-	M29HED 3S1600	34322	
	4		800	M29HEF 4S800	14148	-	-	M29HED 4S800	14152	
			1000	M29HEF 4S1000	14149	-	-	M29HED 4S1000	14153	
			1250	M29HEF 4S1250	14150	-	-	M29HED 4S1250	14154	
			1600	M29HEF 4S1600	14151	-	-	M29HED 4S1600	14155	
	65 kA (H)		3	800	M29HEF 3H800	34311	-	-	M29HED 3H800	34323
				1000	M29HEF 3H1000	34312	-	-	M29HED 3H1000	34324
				1250	M29HEF 3H1250	34313	-	-	M29HED 3H1250	34325
			4	1600	M29HEF 3H1600	34314	-	-	M29HED 3H1600	34326
		800		M29HEF 4H800	14156	-	-	M29HED 4H800	14160	
		1000		M29HEF 4H1000	14157	-	-	M29HED 4H1000	14161	
	85 kA (G)	3	1250	M29HEF 4H1250	14158	-	-	M29HED 4H1250	14162	
			1600	M29HEF 4H1600	14159	-	-	M29HED 4H1600	14163	
			800	M29HEF 3G800	34315	-	-	M29HED 3G800	34327	
			1000	M29HEF 3G1000	34316	-	-	M29HED 3G1000	34328	
			1250	M29HEF 3G1250	34317	-	-	M29HED 3G1250	34329	
			1600	M29HEF 3G1600	34318	-	-	M29HED 3G1600	34330	
		4	800	M29HEF 4G800	14164	-	-	M29HED 4G800	14168	
			1000	M29HEF 4G1000	14165	-	-	M29HED 4G1000	14169	
			1250	M29HEF 4G1250	14166	-	-	M29HED 4G1250	14170	
			1600	M29HEF 4G1600	14167	-	-	M29HED 4G1600	14171	

Moulded Case Circuit Breakers Series 3SM29

Motor driven mechanism




Function

- Used for opening and closing the circuit breaker remotely

Technical specifications

Model type	MD1	MD2	MD3
Application	3SM29-250, 3SM29-400	3SM29-125, 3SM29-160	3SM29-630, 3SM29-800 3SM29-1600
Operating voltage range	(85 % - 110 %) Un		
Rated control voltage	220 V AC, 380 V AC, 220 V DC, 110 V DC	220 V AC, 380 V AC, 220 V DC, 110 V DC	220 V AC, 380 V AC, 220 V DC, 110 V DC
Operating current (A)	≤ 2	≤ 0.5	≤ 7.5
Start power consumption in 220/380 V AC (VA)	510	220	660
Continuance power consumption in 220/380 V AC (VA)	360	110	110 (180)
Start power consumption in 110/220 V DC (W)	510	220	600
Continuance power consumption in 110/220 V DC (W)	360	110	180
Opening time (s)	0.1	0.1	0.1
Closing time (s)	0.1	0.1	0.3
Electrical life (times)	4000	8000	3000
Protection degree	IP40		

Selection and ordering data









Model	Application		Rated control voltage (V AC)	Type code	Order code
	Frame A	3SM29-125	220...240 V AC	M29A MM240A	10709
			380...415 V AC	M29A MM415A	32727
	Frame B	3SM29-160	220...240 V AC	M29B MM240A	10719
			380...415 V AC	M29B MM415A	32728
	Frame C	3SM29-250	220...240 V AC	M29C MM240A	10729
			380...415 V AC	M29C MM415A	32729
	Frame D	3SM29-400	220...240 V AC	M29DMM240A	10739
			380...415 V AC	M29D MM415A	32730
	Frame E/F	3SM29-630...800	220...240 V AC	M29EF MM240A	10749
			380...415 V AC	M29EF MM415A	32731
	Frame G/H	3SM29-1250...1600	220...240 V AC	M29GH MM240A	10759
			380...415 V AC	M29GH MM415A	32732

Rotary handle operation mechanism

Function

- Used for opening and closing the circuit breaker
- Used for rotating the circuit breaker, not pushing-pulling it upwards-downwards

Selection and ordering data

Installation	Operation device	Rotary handle	Suitable frame	Without interlock		With interlock					
				Type code	Order code	Type code	Order code				
 In breaker	RM2		Frame A	3SM29-125	-	-	-	-			
			Frame B	3SM29-160	-	-	-	-			
			Frame C	3SM29-250	M29C RM1	10750	M29C RM1L	10711			
			Frame D	3SM29-400	M29D RM1	10755	M29D RM1L	10712			
			Frame E/F	3SM29-630...800	M29EF RM1	10756	M29EF RM1L	10713			
			Frame G/H	3SM29-1250...1600	M29GH Rm1	10760	M29GH RM1L	10714			
 On door of switchboard	RM2 central type	Round type	Frame A	3SM29-125	-	-	-	-			
		Short handle	Frame B	3SM29-160	-	-	-	-			
			Frame C	3SM29-250	M29C RM2AS	10731	M29C RM2ASL	10751			
			Frame D	3SM29-400	M29D RM2AS	10732	M29D RM2ASL	10752			
		Round type	Frame E/F	3SM29-630...800	M29EF RM2AL	10733	M29EF RM2ALL	10753			
	Long handle	Frame G/H	3SM29-1250...1600	M29GH RM2AL	10734	M29GH RM2ALL	10754				
	 Short handle	Square type	Short handle	Frame A	3SM29-125	-	-	-	-		
				Frame B	3SM29-160	-	-	-	-		
				Frame C	3SM29-250	M29C RM2BS	32745	M29C RM2BSL	32749		
				Frame D	3SM29-400	M29D RM2BS	32746	M29D RM2BSL	32750		
	 Long handle	Square type	Long handle	Frame E/F	3SM29-630...800	M29EF RM2BL	32747	M29EF RM2BLL	32751		
				Frame G/H	3SM29-1250...1600	M29GH RM2BL	32748	M29GH RM2BLL	32752		
 Short handle				RM3 eccentricity	Round type	Frame A	3SM29-125	M29A RM3AS	32753	M29A RM3ASL	10730
						Frame B	3SM29-160	M29B RM3AS	32754	M29B RM3ASL	10736
	Frame C	3SM29-250	M29C RM3AS			32755	M29C RM3ASL	33040			
	Frame D	3SM29-400	M29D RM3AS			32756	M29D RM3ASL	33041			
 Long handle	RM3 eccentricity	Round type	Frame E/F	3SM29-630...800	M29EF RM3AL	10710	M29EF RM3ALL	33042			
			Frame G/H	3SM29-1250...1600	M29GH RM3AL	10720	M29GH RM3ALL	33043			
			 Short handle	Square type	Short handle	Frame A	3SM29-125	M29A RM3BS	33044	M29A RM3BSL	33050
						Frame B	3SM29-160	M29B RM3BS	33045	M29B RM3BSL	33051
Frame C	3SM29-250	M29C RM3BS				33046	M29C RM3BSL	33052			
Frame D	3SM29-400	M29D RM3BS				33047	M29D RM3BSL	33053			
 Long handle	Square type	Long handle	Frame E/F	3SM29-630...800	M29EF RM3BL	33048	M29EF RM3BLL	33054			
			Frame G/H	3SM29-1250...1600	M29GH RM3BL	33049	M29GH RM3BLL	33055			

Moulded Case Circuit Breakers

Series 3SM29

Shunt release




Function

- Used for opening the circuit breaker remotely

Technical specifications

Model type	SR91	SR92	SR93
Application	3SM29-125 3SM29-160	3SM29-250 3SM29-400	3SM29-630, 3SM29-800 3SM29-1600
Operating voltage range	(70 % - 110 %) Un		
Rated control voltage	220 V AC, 380 V AC, 220 V DC, 110 V DC	220 V AC, 380 V AC, 220 V DC, 110 V DC	220 V AC, 380 V AC, 220 V DC, 110 V DC
Response time (ms)	≥ 20, ≤ 60		
Power consumption in 220/380 V AC (VA)	150	150	150
Power consumption in 110/220 V DC (W)	150	150	150

Selection and ordering data

Model	Application		Rated control voltage (V AC)	Type code	Order code
	Frame A/B	3SM29-125...160	220...240 V AC	M29AB SH240A	10701
			380...415 V AC	M29AB SH415A	10702
			110 V DC	M29AB SH110D	32733
			220 V DC	M29AB SH220D	32734
	Frame C/D	3M29-250...400	220...240 V AC	M29CD SH240A	10721
			380...415 V AC	M29CD SH415A	10722
			110 V DC	M29CD SH110D	32735
			220 V DC	M29CD SH220D	32736
	Frame E/F/G/H	3SM29-630...1600	220...240 V AC	M29FEGH SH240A	10741
			380...415 V AC	M29FEGH SH415A	10742
			110 V DC	M29FEGH SH110D	32737
			220 V DC	M29FEGH SH220D	32738

Under-voltage release




Function

- Used for opening the circuit breaker when energy cuts off or voltage goes below 70 % of the operating voltage

Technical specifications

Model type	UR91	UR92	UR93
Application	3SM29-125, 3SM29-160	3SM29-250, 3SM29-400	3SM29-630, 3SM29-800, 3SM29-1600
Action voltage range	(35 % - 70 %) U _e		
Guarantee close voltage range	(85 % - 110 %) U _e		
Guarantee no-close voltage range	≤ 35 % U _e		
Rated control voltage (V)	220 V AC, 380 V AC, 220 V DC, 110 V DC	220 V AC, 380 V AC, 220 V DC, 110 V DC	220 V AC, 380 V AC, 220 V DC, 110 V DC
Response time (ms)	≥ 20, ≤ 60		
Power consumption in 220/380 V AC (VA)	10	10	10
Power consumption in 110/220 V DC (W)	4	4	4

Selection and ordering data

Model	Application		Rated control voltage (V AC)	Type code	Order code
	Frame A/B	3SM29-125...160	220...240 V AC	M29AB UV240A	10703
			380...415 V AC	M29AB UV415A	10704
			110 V DC	M29AB UV110D	32739
			220 V DC	M29AB UV220D	32740
	Frame C/D	3M29-250...400	220...240 V AC	M29CDUV240A	10723
			380...415 V AC	M29CD UV415A	10724
			110 V DC	M29CD UV110D	32741
			220 V DC	M29CD UV220D	32742
	Frame E/F/G/H	3SM29-630...1600	220...240 V AC	M29EFGH UV240A	10743
			380...415 V AC	M29EFGH UV415A	10744
			110 V DC	M29EFGH UV110D	32743
			220 V DC	M29EFGH UV220D	32744

Moulded Case Circuit Breakers





Series 3SM29

Auxiliary contact and alarm contact

Function

- Indication of contacting status
- Used for supplying electrical signal of the circuit breaker according to the operating position

Selection and ordering data

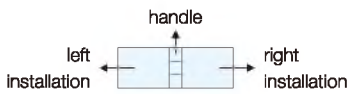
Model	Application	Function	Contact position	Type code	Order code	
	Frame A/B	3SM29-125...160	Auxiliary contact	1NO+1NC	M29AB AC11	10705
			Auxiliary contact + alarm contact	1NO+1NC+1W	M29AB CW11	10726
	Frame C/D	3M29-250...400	Auxiliary contact	1NO+1NC	M29CD AC11	10706
			Auxiliary contact + alarm contact	2NO+2NC	M29CD AC22	10715
	Frame E/F/G/H	3SM29-630...1600	Auxiliary contact	1NO+1NC	M29EFGH AC11	10716
			Auxiliary contact + alarm contact	2NO+2NC	M29EFGH AC22	10725
	Frame E/F/G/H	3SM29-630...1600	Auxiliary contact	1NO+1NC+1W	M29EFGH CW11	10745
			Auxiliary contact + alarm contact	2NO+2NC+1W	M29EFGH CW22	10746

Moulded Case Circuit Breakers Series 3SM29

Accessories introduction

Name of accessories	Accessory code		Accessory installation and lead cable method			
	Thermal magnetic release	Duplex release	3SM29-125, 3SM29-160 3P, 4P	3SM29-250, 3SM29-400 3P, 4P	3SM29-630, 3SM29-800 3P, 4P	3SM29-1250, 3SM29-1600 3P, 4P
Alarm Contact	208	308				
Shunt release	210	310				
Shunt Release Alarm Contact	218	318				
Auxiliary Contact	220	320				
Auxiliary Contact Alarm Contact	228	328				
Under voltage release	230	330				
Under voltage release Alarm Contact	238	338				
Shunt release Auxiliary Contact	240	340				
Shunt Release Under voltage release Two-sets Auxiliary Contact	248	348				
Two-sets Auxiliary Contact	260	360				
Two-sets Auxiliary Contact Alarm Contact	268	368				
Under voltage release Auxiliary Contact	270	370				
Under voltage release Auxiliary Contact Alarm Contact	278	378				

Attention:



Alarm Contact
 Auxiliary Contact

Two-sets Auxiliary Contact
 Under voltage release

Shunt release
 Lead cable direction

Moulded Case Circuit Breakers

Series 3SM29

Protection characteristic

- Variable parameters of thermal overload protection current setting
- Characteristics of thermal magnetic over-current release
- Characteristics of inverse time delay thermal releasing-ranges of current settings of thermal inverse time delay

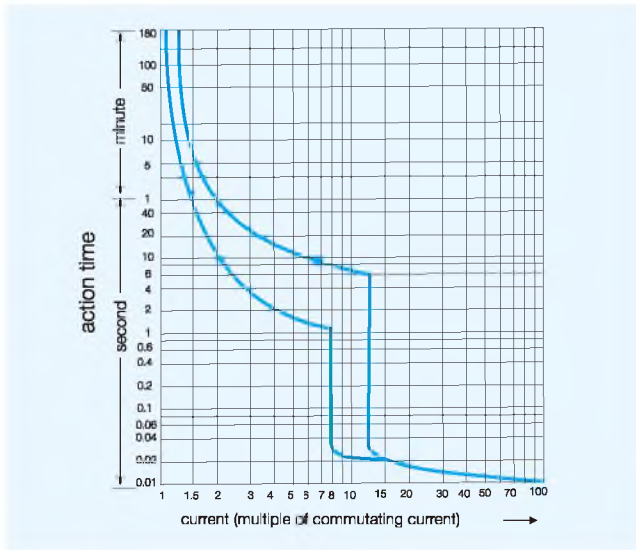
1

Frame rated current size I _m (A)	Circumstance temperature						Rated current	Current settings of inverse time delay		Adjustable instantaneous current			Instantaneous releasing current	In
	+10	+20	+30	+40	+50	+60		40 °C	Setting IRI	5 I _n	7.5 I _n	10 I _n		
	°C	°C	°C	°C	°C	°C		A/B/C phase	N pole	(A)				
125	1.19	1.03	1.06	1.0 I _n	0.93	0.87	12.5 A	12.5 A	12.5A	-	-	-	500 A	-
							16 A	16 A	16 A	-	-	-	500 A	10
							20 A	20 A	20 A	-	-	-	500 A	10
							25 A	25 A	25 A	-	-	-	500 A	10
							32 A	32 A	32 A	-	-	-	500 A	10
							40 A	40 A	40 A	-	-	-	500 A	10
							50 A	50 A	50 A	-	-	-	500 A	10
							63 A	63 A	63 A	-	-	-	630 A	12
							80 A	80 A	80 A	-	-	-	800 A	12
							100 A	100 A	100 A	-	-	-	1000 A	12
							125 A	125 A	125 A	-	-	-	1250 A	12
160	1.15	1.10	1.05	1.0 I _n	0.94	0.88	32 A	22.4 ~ 32 A	22.4 ~ 32 A	-	-	-	500 A	10
							40 A	28 ~ 40 A	28 ~ 40 A	-	-	-	500 A	10
							50 A	35 ~ 50 A	35 ~ 50 A	-	-	-	500 A	10
							63 A	44.1 ~ 63 A	44.1 ~ 63 A	-	-	-	630 A	12
							80 A	56 ~ 80 A	56 ~ 80 A	-	-	-	800 A	12
							100 A	70 ~ 100 A	70 ~ 100 A	-	-	-	1000 A	12
							125 A	87.5 ~ 125 A	87.5 ~ 125 A	-	-	-	1250 A	12
250	1.14	1.10	1.05	1.0 I _n	0.95	0.87	160 A	112 ~ 160 A	112 ~ 160 A	-	-	-	1600 A	12
							180 A	126 ~ 180 A	126 ~ 180 A	-	-	-	1800 A	12
							200 A	140 ~ 200 A	140 ~ 200 A	-	-	-	2000 A	12
							225 A	157.5 ~ 225 A	157.5 ~ 225 A	-	-	-	2250 A	12
							250 A	175 ~ 225 A	175 ~ 225 A	-	-	-	2500 A	12
							250 A	175 ~ 250 A	175 ~ 250 A	1250	1875	2500	2500 A	12
400	1.13	1.11	1.04	1.0 I _n	0.92	0.85	315 A	220.5 ~ 315 A	220.5 ~ 315 A	1575	2363	3150	3150 A	12
							350 A	245 ~ 350 A	245 ~ 350 A	1750	2625	3500	3500 A	12
							400 A	280 ~ 400 A	280 ~ 400 A	1750	2625	4000	4000 A	12
							400 A	400 A	400 A	-	-	-	4000 A	-
630 800	1.10	1.08	1.03	1.0 I _n	0.84	0.77	500 A	500 A	500 A	-	-	-	5000 A	-
							630 A	630 A	630 A	-	-	-	6300 A	-
							700 A	700 A	700 A	-	-	-	7000 A	-
							800 A	800 A	800 A	-	-	-	8000 A	-
							800 A	800 A	800 A	-	-	-	-	-
1600 1250	1.08	1.06	1.02	1.0 I _n	0.8	0.73	1000 A	1000 A	1000 A	-	-	-	-	-
							1250 A	1250 A	1250 A	-	-	-	-	-
							1600 A	1600 A	1600 A	-	-	-	-	-
							1600 A	1600 A	1600 A	-	-	-	-	-

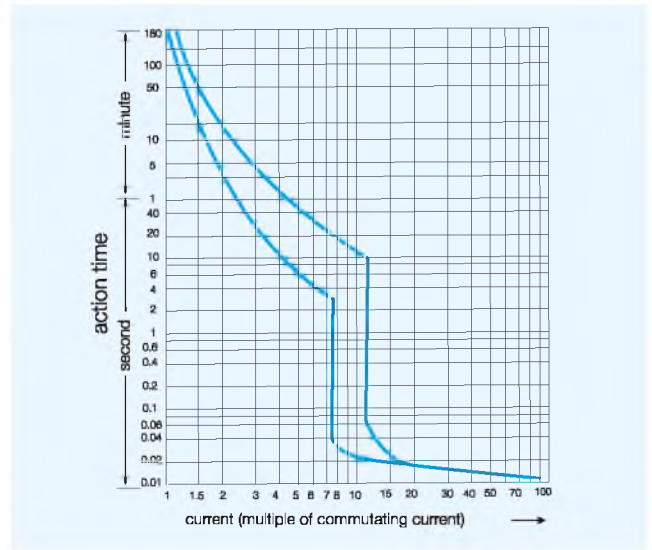
Moulded Case Circuit Breakers Series 3SM29

Tripping curve

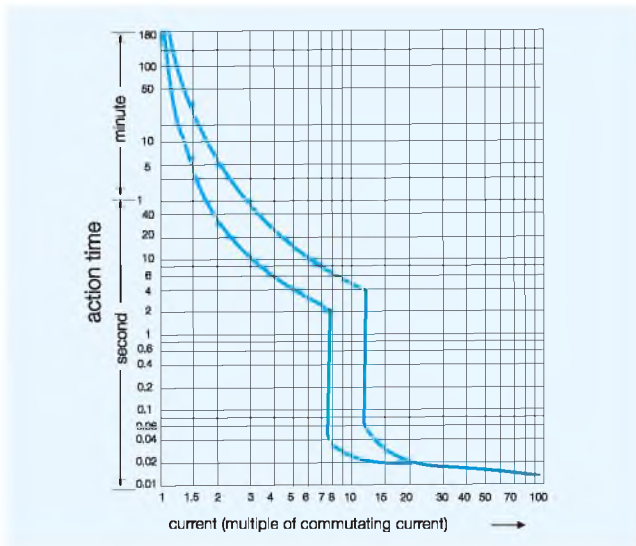
3SM29-125



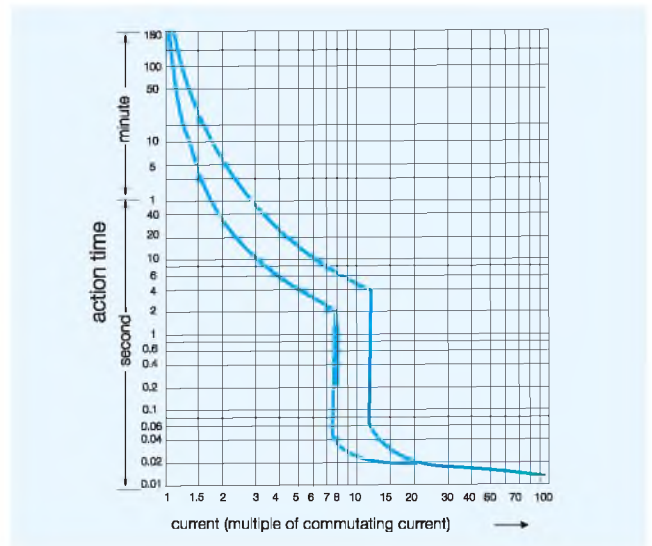
3SM29-160



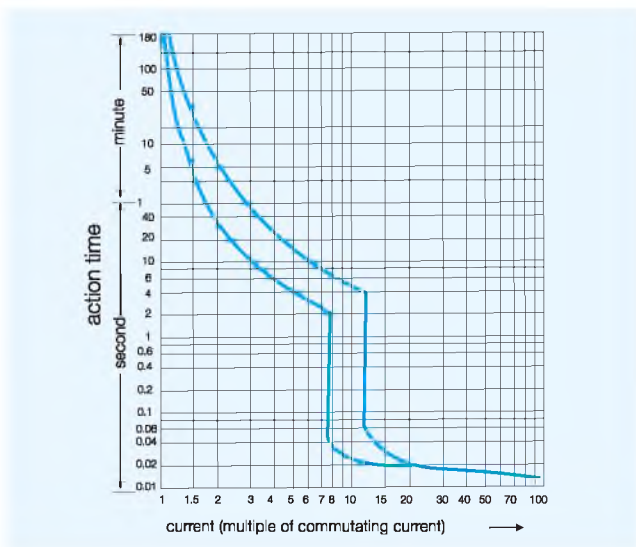
3SM29-250



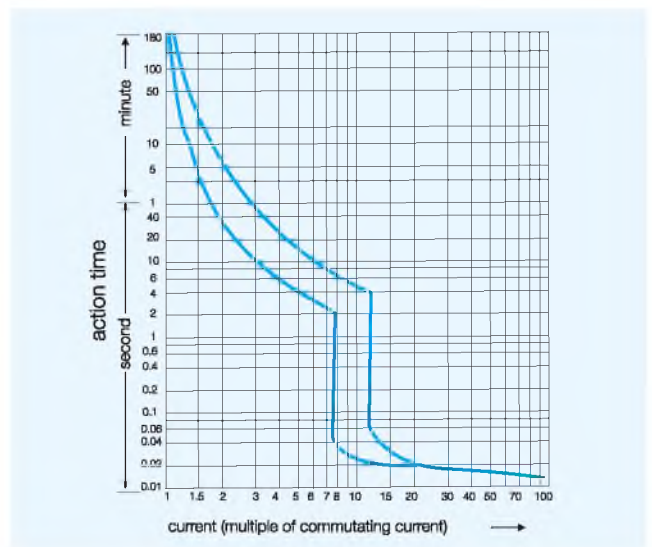
3SM29-400



3SM29-630



3SM29-800

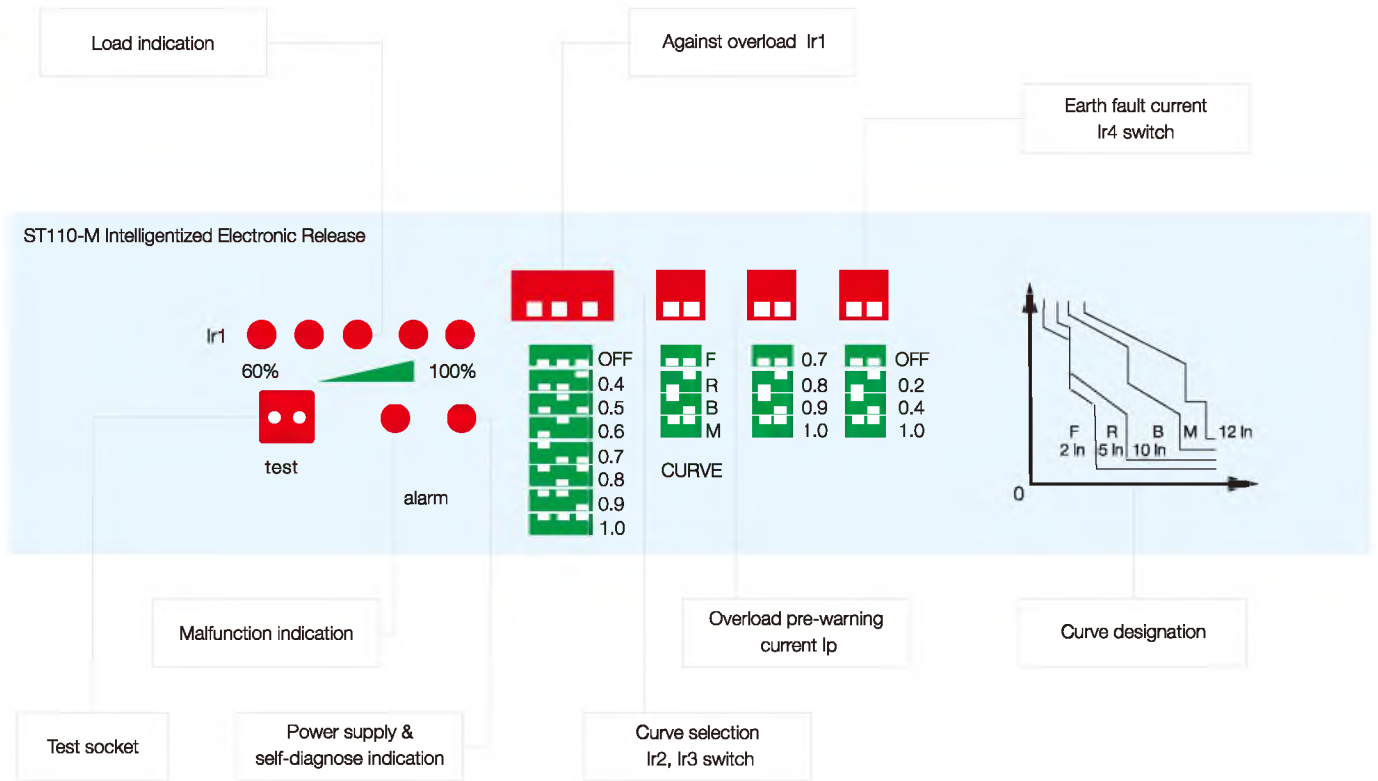


Moulded Case Circuit Breakers Series 3SM29

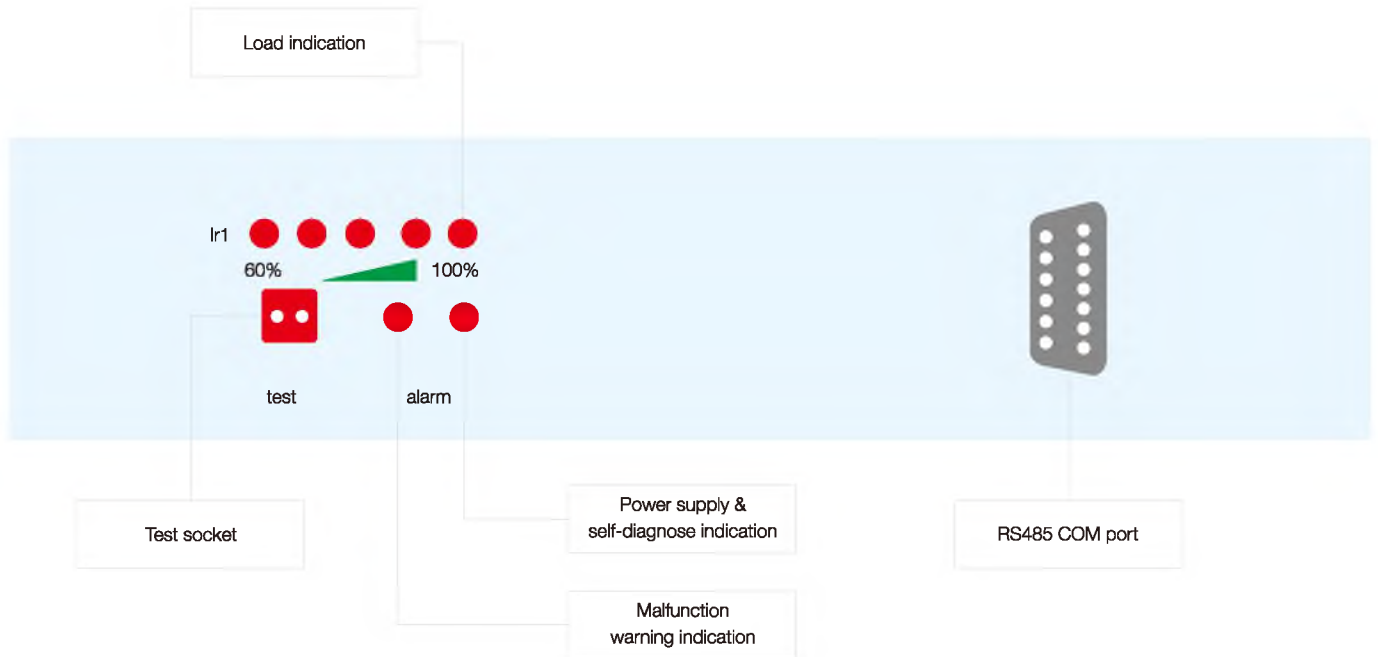
Microprocessor control panel

ST110-M (ST110-M/F) Microprocessor electronic release panel

1



ST110-H (ST110-H/F) Microprocessor electronic release's panel

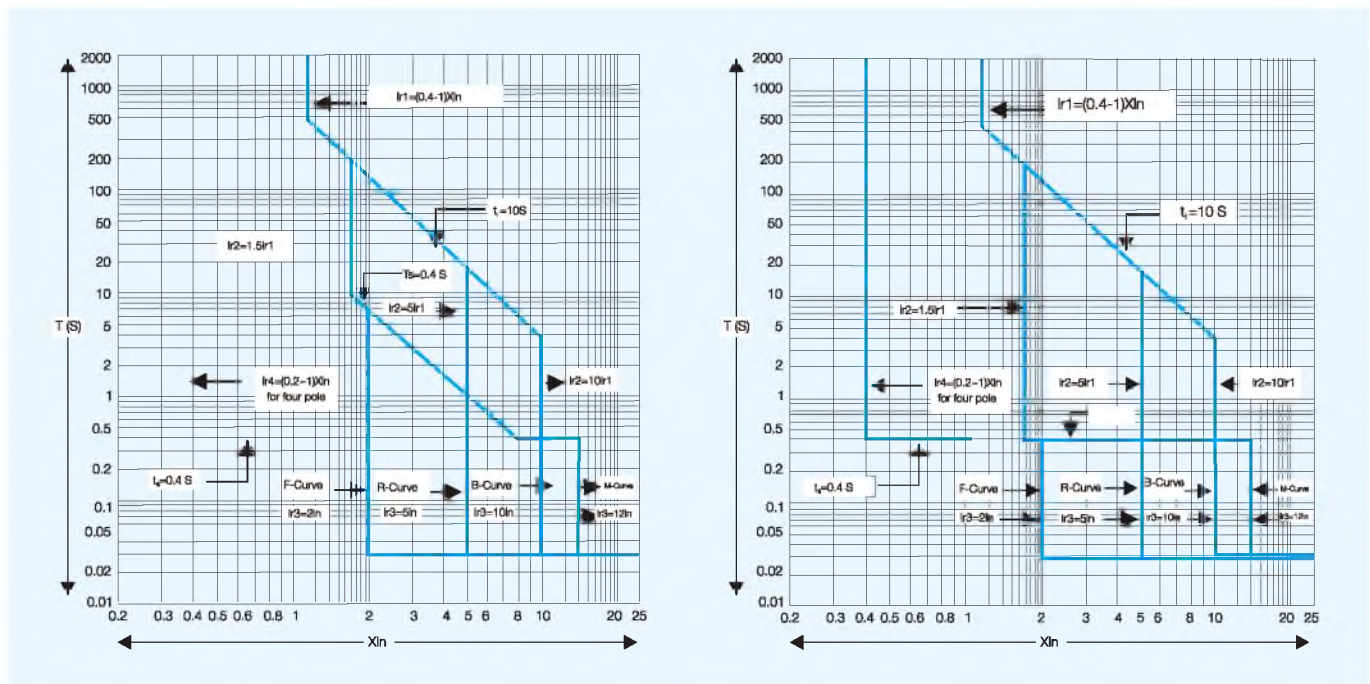


Releasing curve

Microprocessor electronic release main function

Main function of microprocessor electronic release	
Main circuit load indication	The LED in panel indicates 60 %, 80 %, 90 %, 100 %.
Power supply indication	The LED in panel indicates
Self-diagnose indication	The LED in panel indicates
Overload pre-warning indication	The LED in panel indicates
Earth fault indication	The LED in panel indicates
Thermal memory	Record over-load cumulate caloric effect
Fast set protection character curve	Basis on different purpose ,user can choose short-circuit release's character (curve F, R, B, M)
Signal output of the transition ray contact between breaker and ST-200 Intelligentized control module	Overload pre-warning releasing alarm Earth fault alarm Signal of breaker's ON / OFF
Releasing test	Test socket
Setting panel parameter	Switch commutating
User can reset the protection character when the main circuit with or without power running	Switch commutating Switch commutating Switch commutating Switch commutating

Electronic release protection character curve



Protection performance of residual current release

Protective performance of circuit breaker's residual current release for power distribution:

No.	Test current type	I/In	Engaged time endurance	Start state
1	Engaged non-release current	1.05	2 h (In > 63 A)	Cold
			1 h (In ≤ 63 A)	
2	Engaged release current	1.30	2 h (In > 63 A)	Hot
			1 h (In ≤ 63 A)	

Protective performance of circuit breaker's residual current release for motor protection:

No.	Test current type	I/In	Engaged time endurance	Start state
1	Engaged non-release current	1.0	> 2 h	Cold state
2	Engaged release current	1.2	≤ 2 h	Hot
			≤ 2 min (In ≤ 200 A)	
			≤ 4 min (200 A < In ≤ 400 A)	
			2 s < Tp ≤ 10 s (In ≤ 200 A)	Cold
4 s < Tp ≤ 10 s (200 A < In ≤ 400 A)				

Moulded Case Circuit Breakers

Series 3SM29

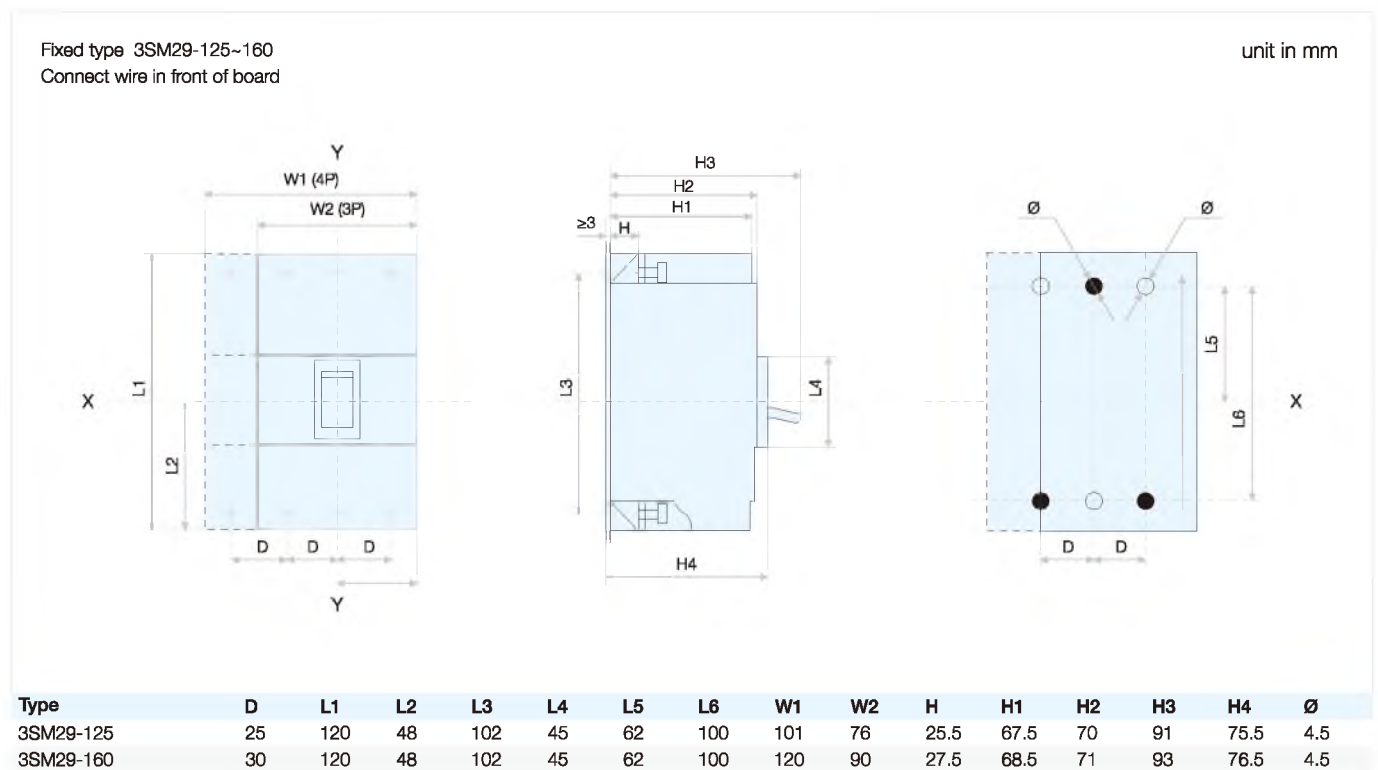
Outline and installation dimensions

Installation type: Fixed, Plug-in, Withdrawable type

1

Frame rated current	Installation					
	Fixed		Plug in		Withdrawable	
	3P	4P	3P	4P	3P	4P
125 A	■	■	■	■		
160 A	■	■	■	■		
250 A	■	■	■	■	■	■
400 A	■	■	■	■	■	■
630 A	■	■			■	■
800 A	■	■			■	■
1250 A	■				■	
1600 A	■				■	

Breaker's installation dimensions

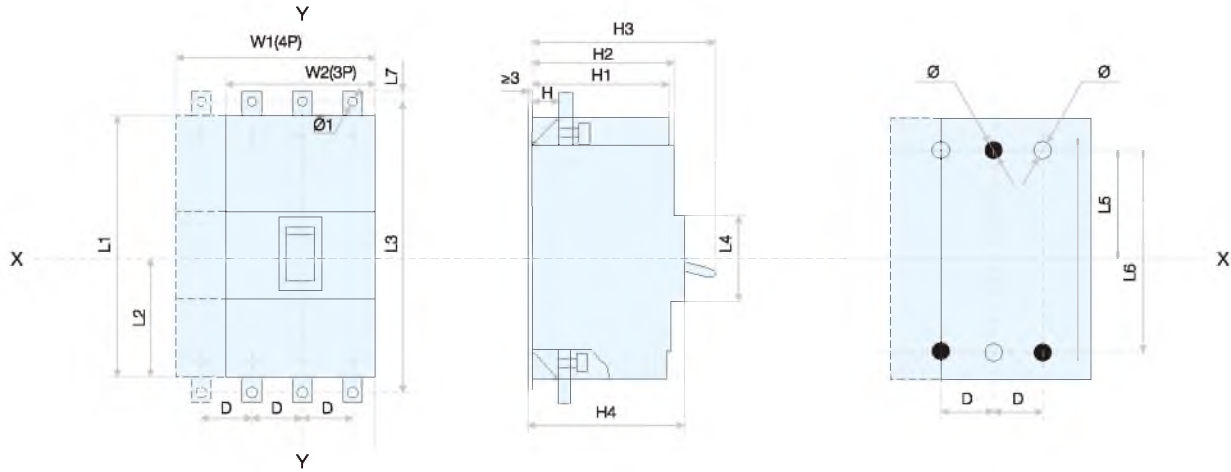


Moulded Case Circuit Breakers Series 3SM29

Outline and installation dimensions

Fixed type 3SM29-250~1600
Connect wire in front of board

unit in mm



Type	D	L1	L2	L3	L4	L5	L6	W1	W2	H	H1	H2	H3	H4	Ø	L7	Ø1
3SM29-250	35	170	87.25	206	105	73.75	139	140	105	25	101.5	103.5	135	113	5.5	10.8	8.5
3SM29X-250	35	255	87.25	278.5	105	154.5	224	140	105	25	101.5	103.5	135	113	5.5	10.8	8.5
3SM29-400	43.75	254	125.25	281	105	107.25	214	183.75	140	25	101.5	103.5	135	113	5.5	12	14
3SM29-630	70	268	142.75	241	105	109.25	375	280	210	23	101.5	103.5	167.5	115	5.5	10.0	11
3SM29-800	70	268	142.75	241	105	109.25	237	280	210	23	101.5	103.5	167.5	115	5.5	10.0	11
3SM29X-800	70	406	142.75	479	105	256.5	375	280	210	23	101.5	103.5	167.5	115	5.5	10.0	11
3SM29-1600	70	406	189	513	105	203	378	-	210	39	137	138.5	204.5	152	5.5	13.5	11

Moulded Case Circuit Breakers

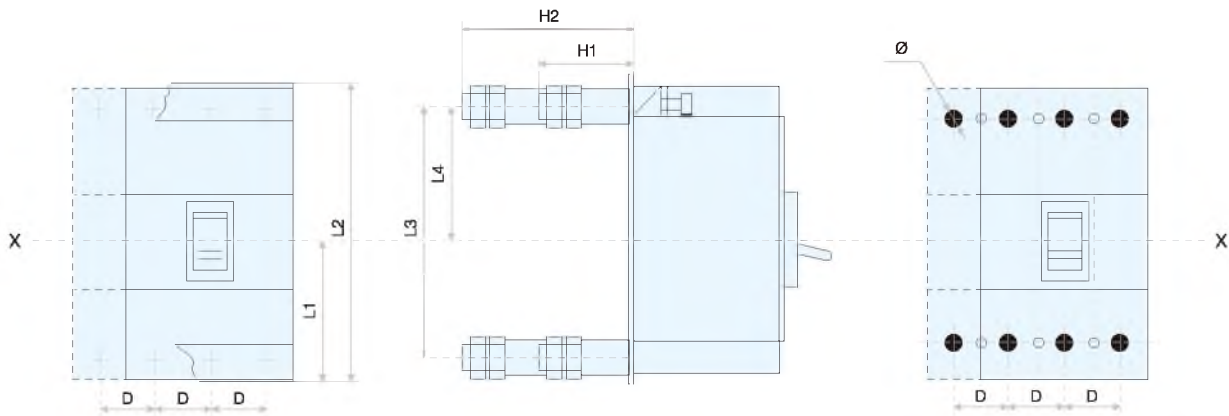
Series 3SM29

Outline and installation dimensions

1

Fixed type 3SM29-125~800
Connect wire behind board

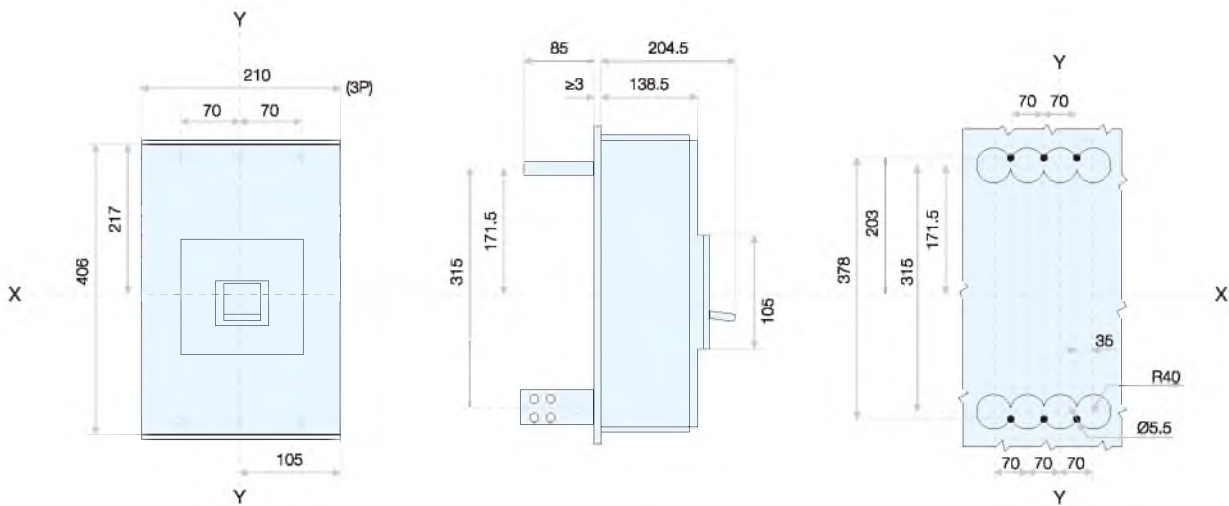
unit in mm



Type	D	L1	L2	L3	L4	H1	H2	Ø
3SM29-125	25	50	124	102	39	43	76	18
3SM29-160	30	50	124	102	39	43	76	18
3SM29-250	35	85.25	175	145	73.75	55	105	24
3SM29X-250	35	85.25	255	224	123.5	55	105	24
3SM29-400	43.75	131.25	259	218	107.25	55	105	30
3SM29-630	70	145.25	273	241	117.25	55	74.5	50
3SM29-800	70	145.25	273	241	117.25	55	74.5	50

Fixed type 3SM29-1600
Connect wire in front of board

unit in mm

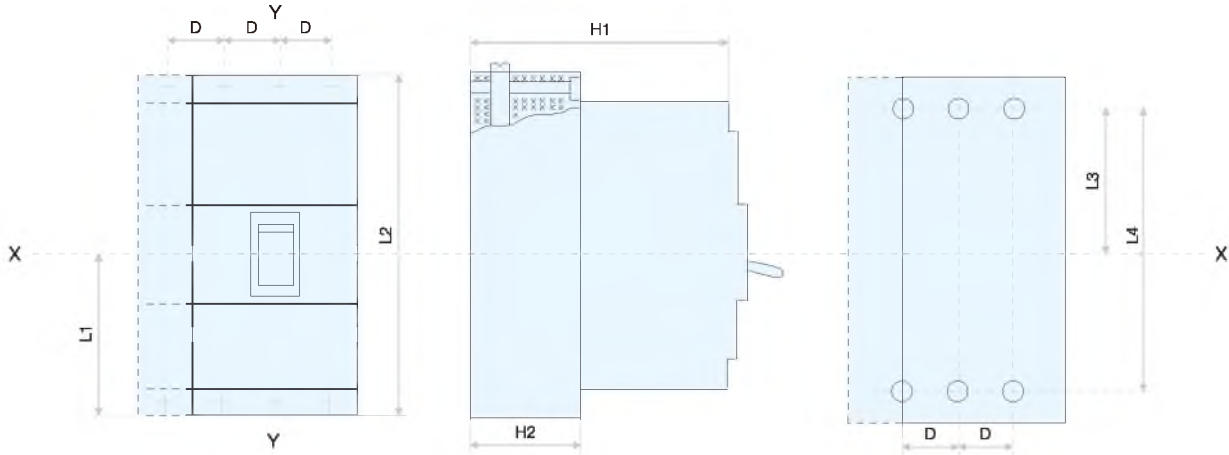


Moulded Case Circuit Breakers Series 3SM29

Outline and installation dimensions

Plug-in version 3SM29-125~160
Connect wire in front of board

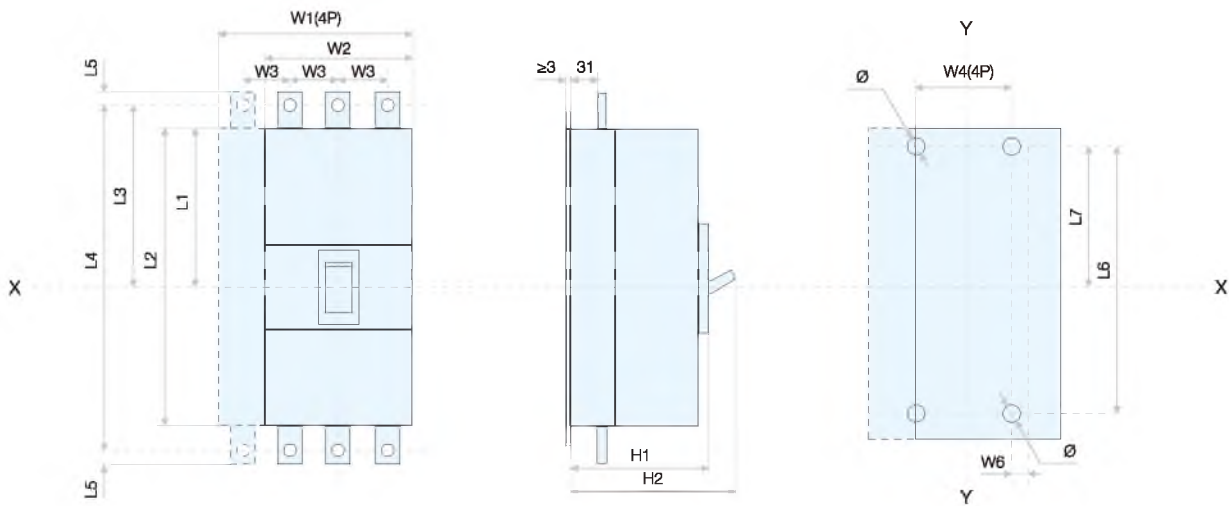
unit in mm



Type	D	L1	L2	L3	L4	H1	H2
3SM29-125	25	70	163	84	144	123	52
3SM29-160	30	70	163	84	144	123	52

Plug-in version 3SM29-250~400
Connect wire in front of board

unit in mm



Type	L1	L2	L3	L4	L5	L6	L7	W1	W2	W3	W4	W6	H1	H2	Ø
3SM29-250	89.7	175	107.25	210	10	52.25	100	140	105	35	105	25	153	184.5	5
3SM29-400	127.75	259	150.75	305	14	65.75	135	183.75	140	43.75	160	58	153	184.5	6

Moulded Case Circuit Breakers

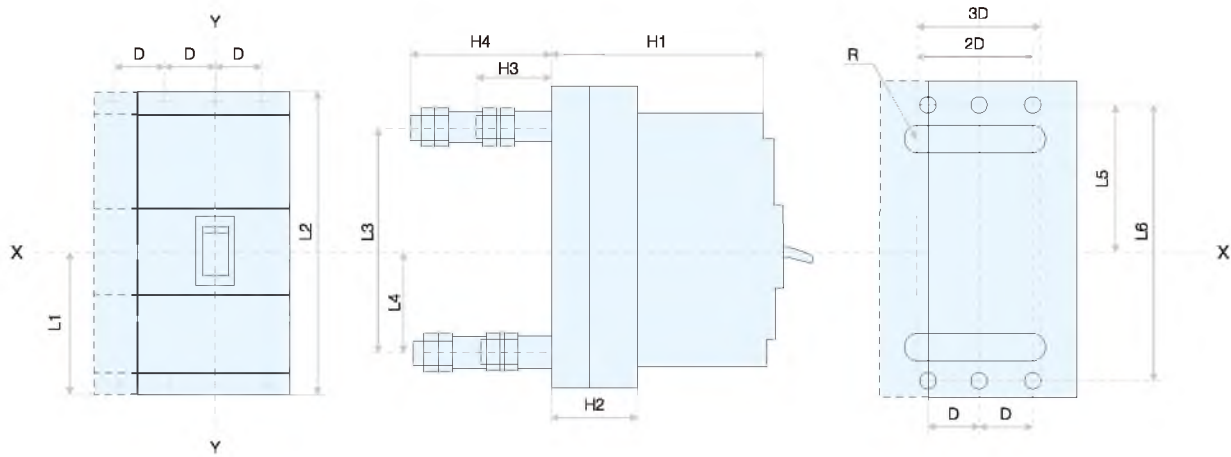
Series 3SM29

Outline and installation dimensions

1

Plug-in version 3SM29-125~400
Connect wire in front of board

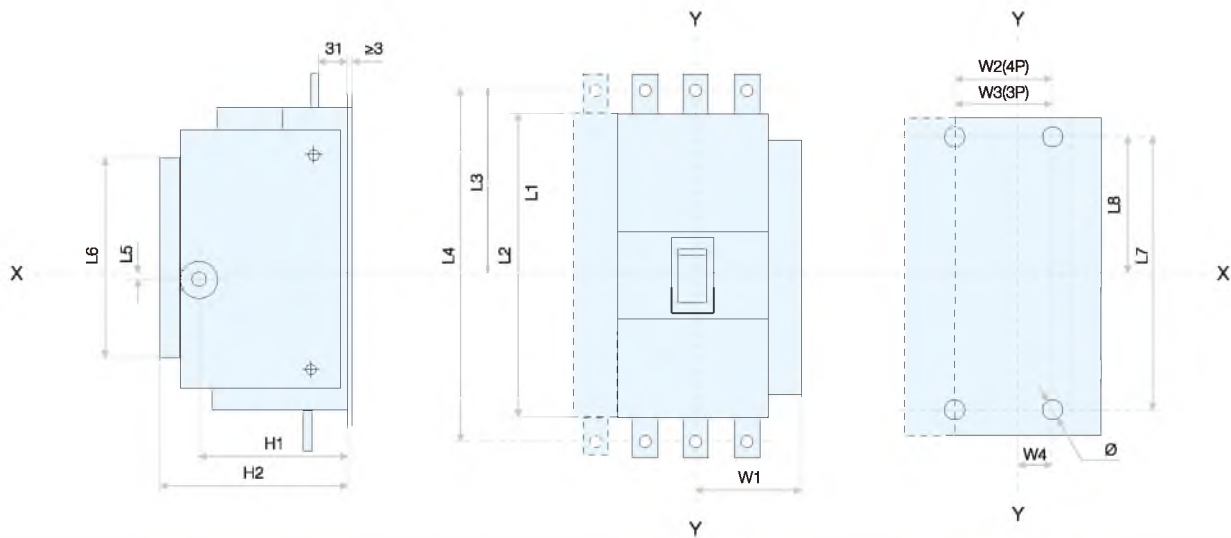
unit in mm



Type	D	L1	L2	L3	L4	L5	L6	H1	H2	H3	H4
3SM29-125	25	70	163	102	39	84	144	123	52	50	80
3SM29-160	30	70	163	102	39	84	144	123	52	50	80
3SM29-250	35	85.25	175	143	69.2	52.5	100	184.5	83	52	96
3SM29-400	43.75	131.25	259	218	110.75	107.25	218	184.5	83	55	100

Draw-out version 3SM29-250~400
Connect wire in front of board

unit in mm



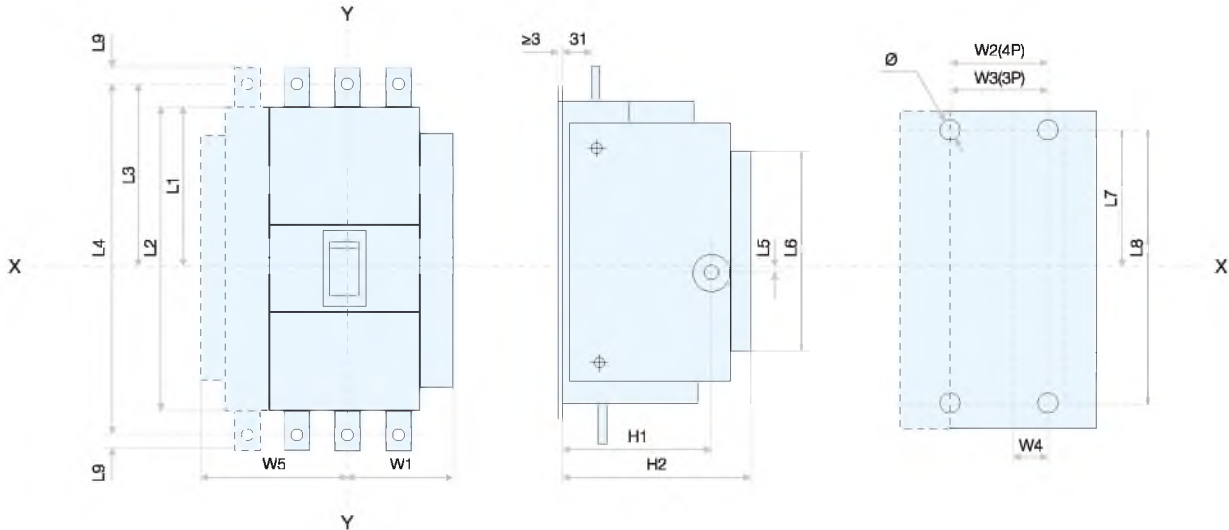
Type	L1	L2	L3	L4	L5	L6	L7	L8	W1	W2	W3	W4	H1	H2	Ø
3SM29-250	89.75	175	107.25	210	1.75	105	52.25	100	84	105	70	25	167	190	5
3SM29-400	127.75	259	150.75	305	1.75	105	65.75	135	101.5	160	115	58	167	190	6

Moulded Case Circuit Breakers Series 3SM29

Outline and installation dimensions

Draw-out version 3SM29-630~1600
Connect wire in front of board

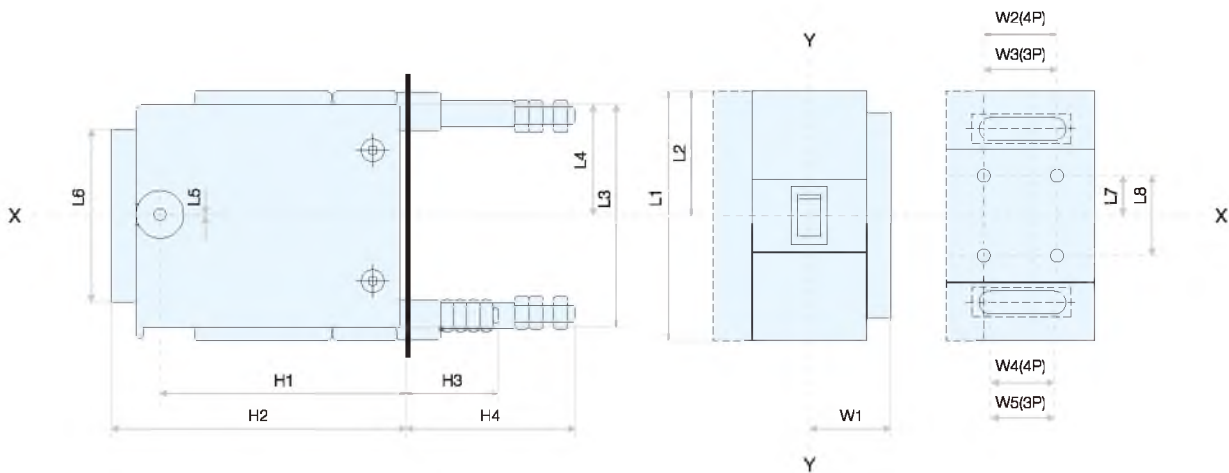
unit in mm



Type	L1	L2	L3	L4	L5	L6	L7	L8	L9	W1	W2	W3	W4	W5	H1	H2	Ø
3SM29-630	133	295	158	345	14.5	140	45.5	120	20	136.5	210	210	140	193.5	167	190	8.5
3SM29-800	133	295	158	345	14.5	140	45.5	120	20	136.5	210	210	140	193.5	167	190	8.5
3SM29-1600	211.25	406	268.25	520	8.25	140	68.25	120	-	136.5	-	210	140	-	218.5	241.5	8.5

Draw-out version
Connect wire behind board

unit in mm



Type	L1	L2	L3	L4	L5	L6	L7	L8	W1	W2	W3	W4	W5	H1	H2	H3	H4	Ø
3SM29-250	175	87.75	143	73.75	1.75	105	52.25	100	84	105	70	70	105	167	190	52	96	5
3SM29-400	259	127.75	218	107.25	1.75	105	65.75	135	101.5	160	115	87.5	131.25	167	190	55	100	6

Moulded Case Circuit Breakers

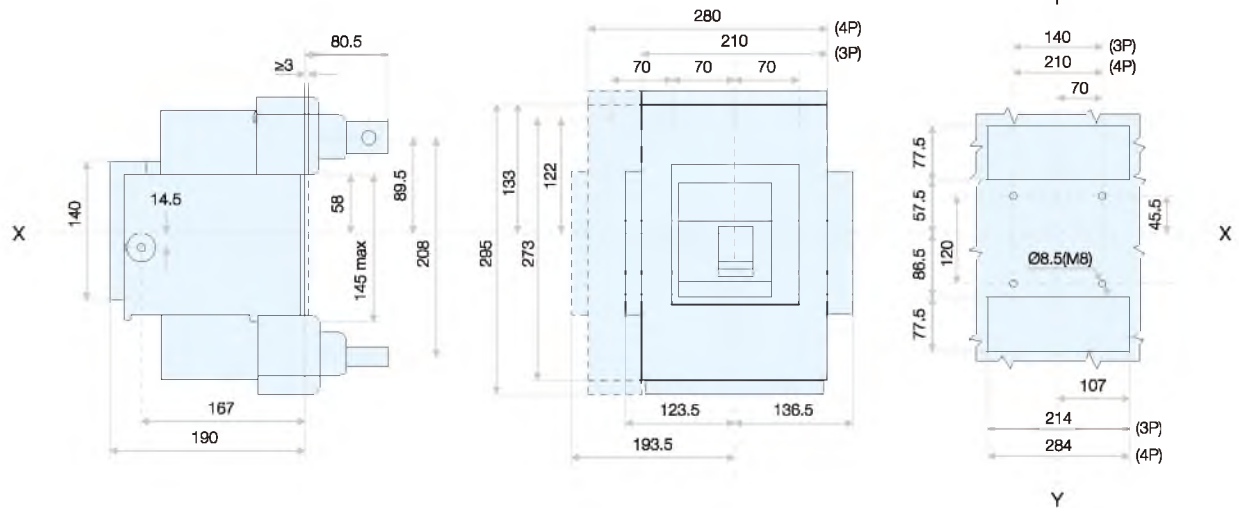
Series 3SM29

Outline and installation dimensions

1

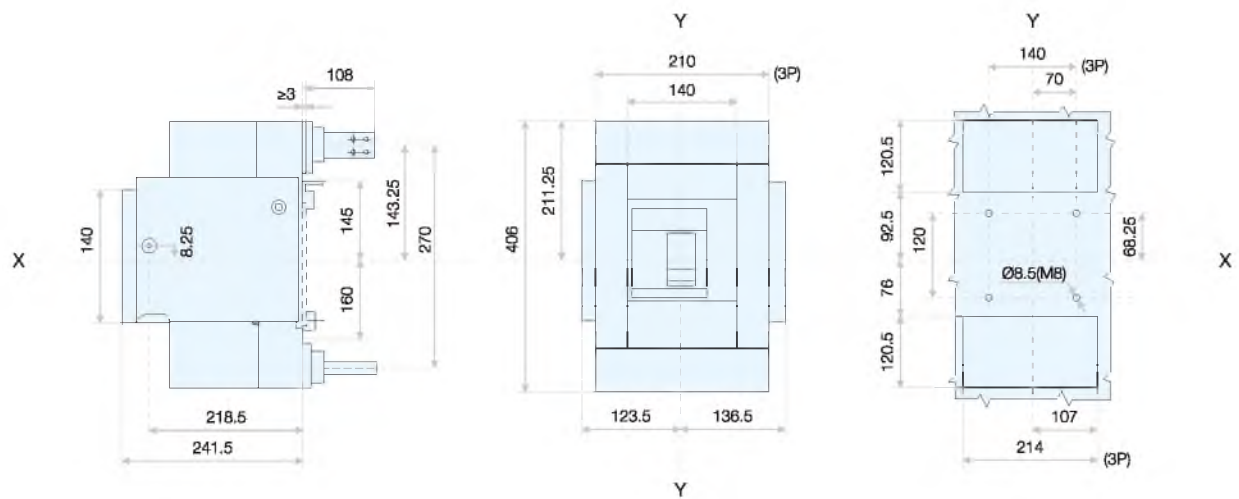
Draw-out version 3SM29-630/800
Connect wire behind board

unit in mm



Draw-out version 3SM29-1600
Connect wire behind board

unit in mm



General introduction

Continuous and reliable power distribution

- With the diversification of industrial process and IT applications, a secure and reliable electricity supply has become an important asset which is playing an important role in reducing production and maintenance costs. In emergency situations, it can become complex with mechanical devices looking after connecting, breaking, conducting and isolating power. In addition, when electricity use is restricted or the power supply is overloaded, the load may need to be transferred from one supply to another. With superior performance, SASSIN dual power automatic transfer switches meet all the above requirements to ensure continuity and security of power supply.

Reliability assurance of the device

- Automatic transfer switching equipment controller can maximize the affordability of various types of electromagnetic interference in industrial environments, and can as well as ensure the operation reliability of automatic switch by the motor drive conversion mechanism via reliability test.

Reliability assurance of electricity supply system

- When the major power supply encounters power failure, phase failure and undervoltage fault, the automatic switching equipment under the control of the controller will automatically switch to the backup power supply to ensure power system reliability.

Security assurance of electricity supply system

- Specially designed automatic transfer switch controller can automatically identify the over-current faults, the implementation original welding and mechanical failure in power supply system and place the implementation original in a safe location to ensure the security of power supply system.

Communication and signal system

- Power conversion under the conditions of non-fire special hazard should be considered in the design;
- Public power grid can be used as backup power;
- Need to use CB automatic switch device with over-current protection;
- C curve protection products in line with IEC 60896 are suggested to be used as the end conversion electrical appliances;
- Power conversion time should be less than 5s. For critical load, please install uninterrupted power supply equipment like UPS.

Air condition and temperature control device

- Power control under the conditions of non-fire special hazard should be considered in design;
- Public power grid can be used as backup power;
- Need to use CB automatic switch device with over-current protection;
- D curve protection products in line with IEC 60898 are suggested to be used as the end lighting electrical appliances;
- Power conversion time should be less than 5 s.

Fire fighting system

- Fire design includes power supply protection for terminal conditions like fire pumps, exhaust fans and fire elevators in particular disaster conditions;
- Need to use special power source like generators as backup power;
- Need to use products with neutral line of 2-pole or 4-poles involved in the transformation. Need to use PC automatic switch device without over-current protection whose rated current should be 125% greater than its load current;
- Need to use the switch products with the fire control function
- Power conversion delay time should be set to 0.

Emergency lighting in general location

- Emergency lighting under the conditions of non-fire special hazard should be considered in the distribution design;
- Another branch of public power grid can be used as backup power supply if the backup power is from same power transformer, neutral line will not participate in conversion;
- Need to use CB automatic switch device with over-current protection;
- C curve protection products in line with IEC 60898 are suggested to be used as the end lighting electrical appliances; Power conversion time should be less than 5 s.

Automatic Transfer Switches Series 3SAQ1 CB Class

Features

- Small size with simple structure
- Easy operation, long service life
- Both 3P and 4P are available
- Single electric drive, smooth and noise-free, small impact
- With mechanical interlock and electrical interlock, reliable switching, both manual and automatic switching are available
- Switch is wired with connection terminal in the internal for users, reflecting the circuit breaker status (open or closed)
- There are a variety of indicators listed on panel



Structure and performance

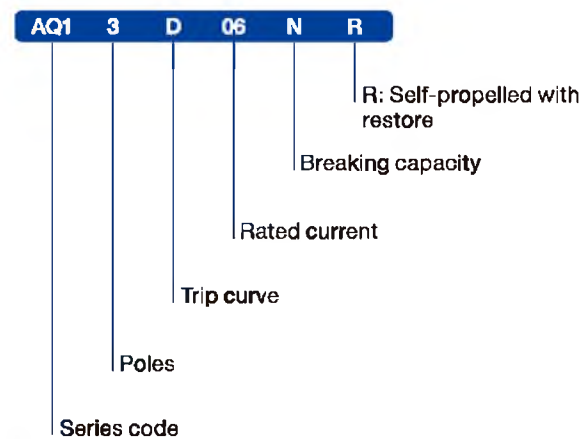
Structure

The automatic transfer switch consists of MCB, a single electric motor operating mechanism, mechanical interlocking, auxiliary systems, control circuit and other components and are closed with plastic shell. All components are installed on the same floor. There is a status indicator on the panel that accurately indicates the state of the MCB and the whole set of instructions.

Structure

- Automatic controllers (only R-type:automatic transfer with automatic restore) detect the voltage of two-way power (commonly used power and backup power) at the same time. Common power will work under the normal state. When the common power supply failure occurs, namely loss of pressure or A phase-off, the controller will automatically make the command switch switch to the backup power supply;
- When common power is restored to normal, the controller will automatically make the command switch switch to the backup power supply, and no delay;
- Simultaneous two-way power anomalies are not allowed;
- When tripping occurs due to a small circuit breaker failure, the device will remain in the trip state and let out a warning signal. Wait for maintenance, and the handle should be reset and re-closed manually after troubleshooting;
- In automatic mode, when there inputs DC 24V fire signal, the controller will command all the disconnect switch, and then if undo the fire signal, restore the original state.

Instruction of type code



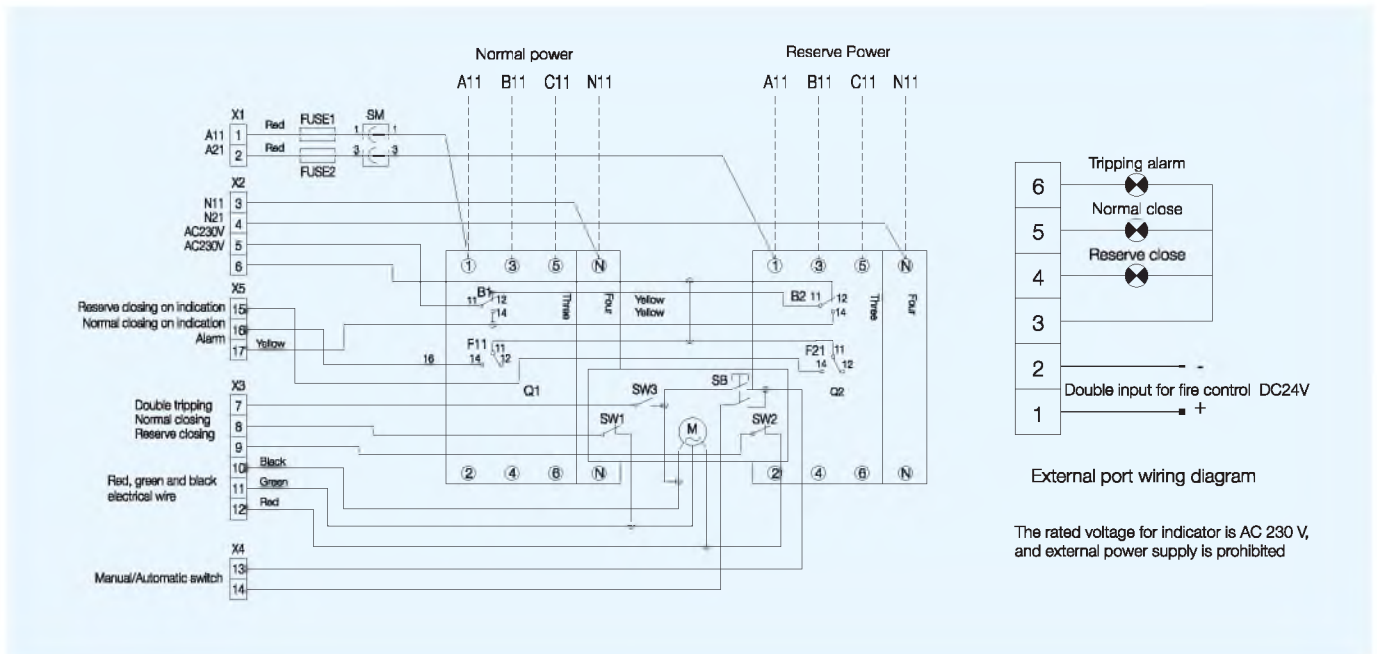
- There is only R type for 3SAQ1 series ATS at present.
- Automatic transfer with automatic restore:
If deviation of common power is monitored, ATS will automatically switch the load from the common power to backup power; if the power returns to normal, it will automatically return to common power supply.

Technical specifications

Type	3SAQ1-63
Execution circuit breaker	3SB71-63
Number of poles (P)	3, 4
Rated operating current (A)	6, 10, 16, 20, 25, 32, 40, 50, 63
Rated operating voltage (VAC)	230/400
Rated control voltage (VAC)	230
Rated insulation voltage (VAC)	500
Rated ultimate short circuit breaking capacity at 400V AC (kA)	6 10
Rated short circuit making capacity (kA)	17
Use category	AC-33IB
Mechanical life (times)	10,000
Electrical life (times)	4,000
Ambient temperature	-5~40°C, max. 95% humidity
Storage temperature	-40~+75°C
Altitude (Max.)	2,000

Automatic Transfer Switches Series 3SAQ1 CB Class

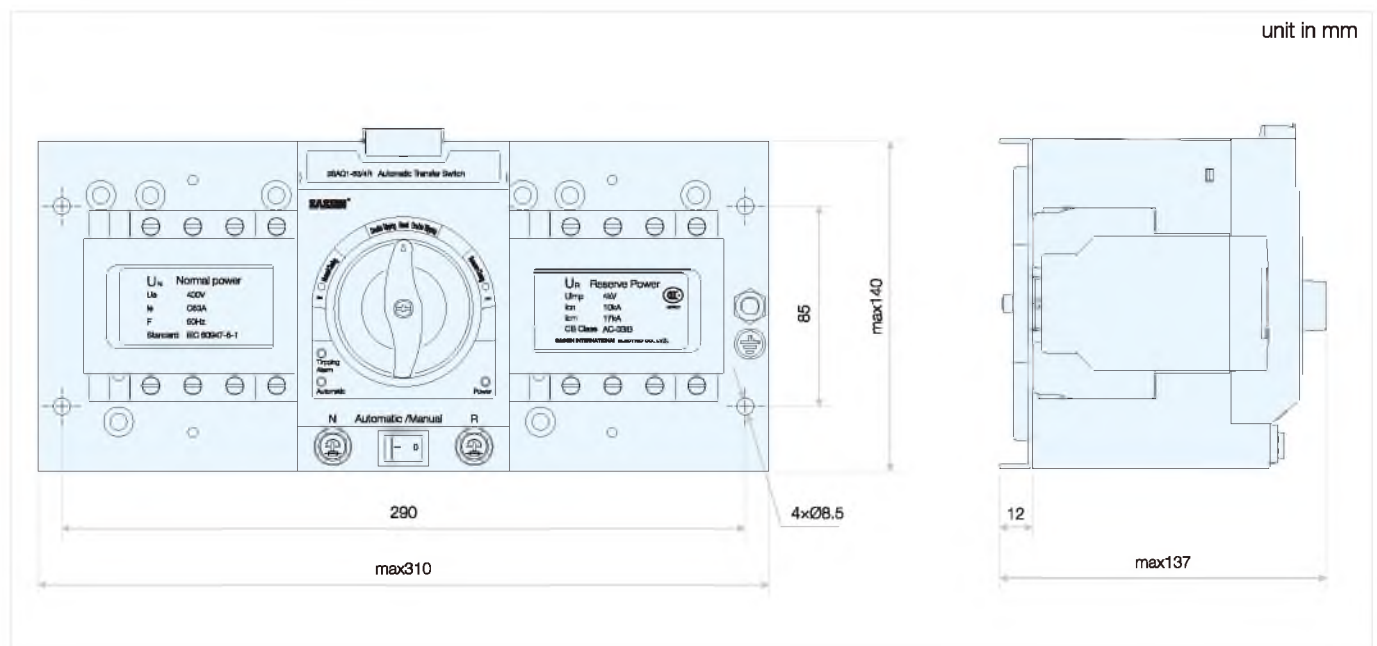
Wiring diagram



- a) Q1, Q2: MCB (Double points for the location of the icon)
 F21, B2: The right auxiliary and alarm head of circuit breaker
 SW1: Common closing limit switch in place
 SW3: Double points limit switch in place
 FU1, FU2: Fuses
 SM: Three-pin connector
- b) Dotted line is for the user to connect and the remaining for factory, for user's reference

- F11, B1: The right auxiliary and alarm head of circuit breaker
 M: Electric motor
 SW2: Backup closing limit switch in place
 X1 X2 X3 X4 X5: Connectors
 SB: Rocker Switch

Outline and installation dimensions



Automatic Transfer Switches

Series 3SAQ1 CB Class

Selection and ordering data

Rated breaking capacity (kA)	Poles (p)	Rated current (A)	Curve B		Curve C		Curve D			
			Type code	Order code	Type code	Order code	Type code	Order code		
6	3	6	AQ1 3B06NR	19809	AQ1 3C06NR	19818	AQ1 3D06NR	19827		
		10	AQ1 3B10NR	19810	AQ1 3C10NR	19819	AQ1 3D10NR	19828		
		16	AQ1 3B16NR	19811	AQ1 3C16NR	19820	AQ1 3D16NR	19829		
		20	AQ1 3B20NR	19812	AQ1 3C20NR	19821	AQ1 3D20NR	19830		
		25	AQ1 3B25NR	19813	AQ1 3C25NR	19822	AQ1 3D25NR	19831		
		32	AQ1 3B32NR	19814	AQ1 3C32NR	19823	AQ1 3D32NR	19832		
		40	AQ1 3B40NR	19815	AQ1 3C40NR	19824	AQ1 3D40NR	19833		
		50	AQ1 3B50NR	19816	AQ1 3C50NR	19825	AQ1 3D50NR	19834		
		63	AQ1 3B63NR	19817	AQ1 3C63NR	19826	AQ1 3D63NR	19835		
		4	6	AQ1 4B06NR	19836	AQ1 4C06NR	19845	AQ1 4D06NR	19854	
			10	AQ1 4B10NR	19837	AQ1 4C10NR	19846	AQ1 4D10NR	19855	
			16	AQ1 4B16NR	19838	AQ1 4C16NR	19847	AQ1 4D16NR	19856	
	20		AQ1 4B20NR	19839	AQ1 4C20NR	19848	AQ1 4D20NR	19857		
	25		AQ1 4B25NR	19840	AQ1 4C25NR	19849	AQ1 4D25NR	19858		
	32		AQ1 4B32NR	19841	AQ1 4C32NR	19850	AQ1 4D32NR	19859		
	40		AQ1 4B40NR	19842	AQ1 4C40NR	19851	AQ1 4D40NR	19860		
	50		AQ1 4B50NR	19843	AQ1 4C50NR	19852	AQ1 4D50NR	19861		
	63		AQ1 4B63NR	19844	AQ1 4C63NR	19853	AQ1 4D63NR	19862		
	10		3	6	AQ1 3B06HR	19755	AQ1 3C06HR	19764	AQ1 3D06HR	19773
				10	AQ1 3B10HR	19756	AQ1 3C10HR	19765	AQ1 3D10HR	19774
				16	AQ1 3B16HR	19757	AQ1 3C16HR	19766	AQ1 3D16HR	19775
		20		AQ1 3B20HR	19758	AQ1 3C20HR	19767	AQ1 3D20HR	19776	
		25		AQ1 3B25HR	19759	AQ1 3C25HR	19768	AQ1 3D25HR	19777	
		32		AQ1 3B32HR	19760	AQ1 3C32HR	19769	AQ1 3D32HR	19778	
40		AQ1 3B40HR		19761	AQ1 3C40HR	19770	AQ1 3D40HR	19779		
50		AQ1 3B50HR		19762	AQ1 3C50HR	19771	AQ1 3D50HR	19780		
63		AQ1 3B63HR		19763	AQ1 3C63HR	19772	AQ1 3D63HR	19781		
4		6		AQ1 4B06HR	19782	AQ1 4C06HR	19791	AQ1 4D06HR	19800	
		10		AQ1 4B10HR	19783	AQ1 4C10HR	19792	AQ1 4D10HR	19801	
		16		AQ1 4B16HR	19784	AQ1 4C16HR	19793	AQ1 4D16HR	19802	
		20	AQ1 4B20HR	19785	AQ1 4C20HR	19794	AQ1 4D20HR	19803		
		25	AQ1 4B25HR	19786	AQ1 4C25HR	19795	AQ1 4D25HR	19804		
		32	AQ1 4B32HR	19787	AQ1 4C32HR	19796	AQ1 4D32HR	19805		
		40	AQ1 4B40HR	19788	AQ1 4C40HR	19797	AQ1 4D40HR	19806		
		50	AQ1 4B50HR	19789	AQ1 4C50HR	19798	AQ1 4D50HR	19807		
		63	AQ1 4B63HR	19790	AQ1 4C63HR	19799	AQ1 4D63HR	19808		



Utilization categories:

- AC-33IB: for system loads including cage motor and resistive loads.
- AC-33B: for motor load or mixture load including motors, resistive load and 30% incandescent load.
- Standard: IEC 60947-6-1

Automatic Transfer Switches Series 3SAQ2 CB Class

Application

3SAQ2 series automatic transfer switches are made up of two pieces of 3-pole or 4-pole MCCB and accessories (including auxiliary and alarm contacts), mechanical interlocking and electronic trip unit etc. As the terminal automatic switching devices, they are applied for the grid with double power supply of AC 50 Hz or 60 Hz, the rated current up to 800 A of three phase four line (available for one phase one line also). When one power supply fails due to faults of over-voltage, under-voltage or phase loss, one or more circuits will be automatically switched from one power supply to another one, to ensure normal power supply for the circuit.

3SAQ2 series automatic transfer switches are widely used in hospitals, shopping malls, banks, chemical industry, metallurgy, high-rise buildings, military facilities and any other important places that do not allow power off. They are important electric devices to ensure continuous power supply.

There are two structures available:

Integral type: the controller and the actuator are mounted on the same base. **Split type:** the controller is mounted on the cabinet panel, the executive mechanism is mounted on the base and installed inside of the cabinet by user. The controller and the executive mechanism are connected by a cable with length about 2 meters.

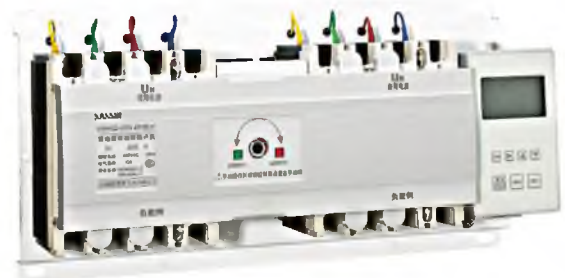
Standards

IEC 60947-6-1

Instruction of type code

AQ2	A	3	400	M	NB	R	U
							Type of structure U: Integral type S: Split type
							Control mode R: Automatic transfer and restoration S: Automatic transfer without restoration
							Type of installation NB: Grid-grid NG: Grid-generator
							Breaking capacity: Size A Size B Size C Size D Size E L: 35 35 50 50 M: 50 35 65 65 75 H: 85 85 100 100 100
							Rated current Size A Size B Size C Size D Size E 16 100 225 400 630 20 125 250 500 700 25 160 315 360 800 32 180 350 40 200 400 50 225 63 80 100
							Number of pole 3: 3-pole 4: 4-pole
							Rated current A: Size A 3SAQ2-100 B: Size B 3SAQ2-225 C: Size C 3SAQ2-400 D: Size D 3SAQ2-630 E: Size E 3SAQ2-800

Series



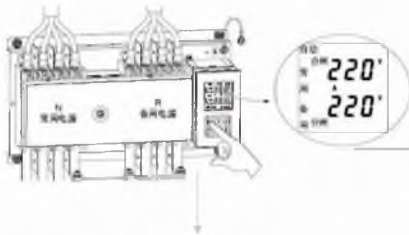
Automatic Transfer Switches Series 3SAQ2 CB Class

Features

- Small size, easy to install
- Advanced digital electronic control technology
- Driven by single motor
- Double interlock protection
- Double protection of mechanical interlock and electrical interlock prevents the two power supply from being connected at the same time. The electrical interlock adopts the way of directly indicating fuse contact position of automatic switch to achieve true electric interlock-to prevent the automatic transfer
- under conditions such as contact fusion welding, breaker handle damaged, circuit-breaker fault trip etc.
- Low power consumption and lower level noise

Frame	Power consumption
3SAQ2-1003	20W
SAQ2-2253	40W
SAQ2-400/630/800	20W

- Complete functions as shown in the following pictures



Transfer parameters is settable

Value of under-voltage transfer (fault setting is 187 V)
Time-delay of transfer
Grid-grid: mode R, mode S
Grid-generator: mode R, mode S

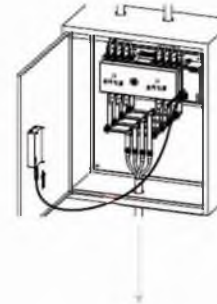
Visual management

Display voltage value of three phase
Display of status of open and closed



Kinds of auxiliary function

External terminals for indication of open and closed
Fire linkage
Signal of generator
External power supply



Integrated or split controller, easy to install

- Isolation function

Automatic Transfer Switches

Series 3SAQ2 CB Class

Technical parameter

Size	A				B				C				D				E								
Type	3SAQ2-100				3SAQ2-225				3SAQ2-400				3SAQ2-630				3SAQ2-800								
Standard	IEC 60947-6-1				IEC 60947-6-1				IEC 60947-6-1				IEC 60947-6-1				IEC 60947-6-1								
Execution circuit-breaker	3SM8N-100				3SM8N-225				3SM8N-400				3SM8N-630				3SM8N-800								
Rated current I_n	A	16				100				225				400				630							
		25				125				250				500				700							
		32				160				315				360				800							
		40				180				350															
		50				200				400															
		63				225																			
		80																							
		100																							
Rated operating voltage U_o	V a.c.	400				400				400				400											
Rated operating frequency	Hz	50/60				50/60				50/60				50/60											
Rated insulation voltage	V a.c.	800				800				800				800				800							
Rated impulse withstand voltage U_{imp}	kV	8				8				8				8				8							
Poles	pole	3				4				3				4				3				4			
Breaking capacity		L	M	H	M	L	M	H	M	L	M	H	M	L	M	H	M	L	M	H	M	L	M	H	M
Rated short-circuit breaking capacity I_{cn}	kA	35	50	85	50	35	50	85	50	50	65	100	65	50	65	100	65	75	100	165	75	100	165	220	100
Rated short-circuit making capacity I_{cm}	kA	73.5	105	187	105	73.5	105	187	105	105	143	220	143	105	143	220	143	165	220	360	165	220	360	500	220
Mechanical life	cycle	6000				6000				4000				3000				3000							
Use category		AC-33B																							
Product type		CB class																							
Protection level		IP30 (except terminals of main circuit)																							
Protection																									
Overload protection		√				√				√				√				√				√			
Short-circuit protection		√				√				√				√				√				√			

Controller

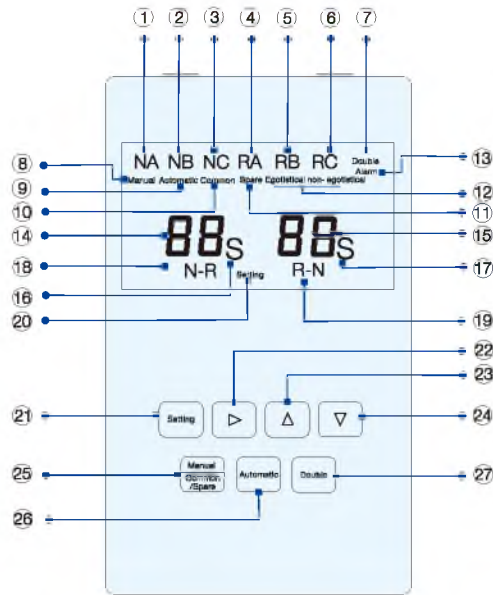
function

Manual and automatic transfer mode	√
Working position of main contact (execute circuit breaker)	
Normal power supply closed	√
Standby power supply closed	√
Double open	√
Automatic control	
Monitoring of normal power supply (three phase detection)	√
Monitoring of standby power supply (three phase detection)	√
Automatic transfer and restoration	√
Automatic transfer without restoration	√
Grid-grid	√
Grid-generator	√
Short phase or voltage loss transfer	√
Under voltage transfer	√
Over voltage transfer	√
Adjustable time-delay	√
Time-delayed transfer	0-30 s continuous adjustment
Return delay	0-30 s continuous adjustment
Generator control	√
Fire linkage	√
Indication	
Indication of closed, open and double open	√
Indication of normal power supply	√
Indication of standby power supply	√
Indication of fault trip	√
External signal terminal of indication	√
Indication of parameter setting	√
Interlock protection	
Electrical interlock	√

Automatic Transfer Switches Series 3SAQ2 CB Class

LCD display of controller

1

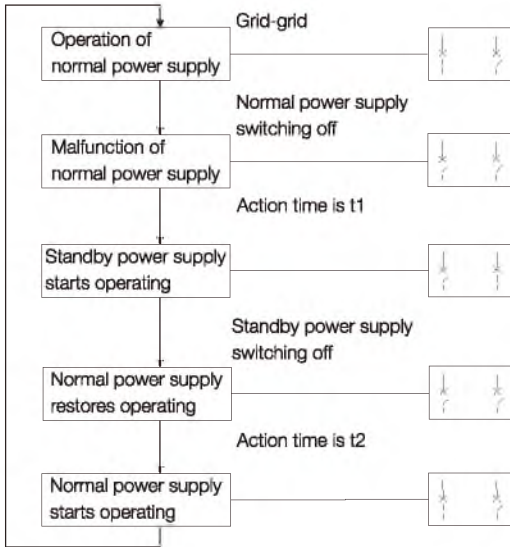


- ① Displaying the status of A phase for normal power supply. No display if abnormal.
- ② Displaying the status of B phase for normal power supply. No display if abnormal.
- ③ Displaying the status of C phase for normal power supply. No display if abnormal.
- ④ Displaying the status of A phase for standby power supply. No display if abnormal.
- ⑤ Displaying the status of B phase for standby power supply. No display if abnormal.
- ⑥ Displaying the status of C phase for standby power supply. No display if abnormal.
- ⑦ Displaying the double open status
- ⑧ Indicating the controller is in manual control mode
- ⑨ Indicating the controller is in automatic control mode
- ⑩ Indicating the normal power supply is closed
- ⑪ Indicating the standby power supply is closed
- ⑫ Display the control mode
- ⑬ Display the ATS in tripped status
- ⑭ Parameter display area of normal power supply
- ⑮ Parameter display area of standby power supply
- ⑯ Unit of time: second
- ⑰ Unit of time: second
- ⑱ Indication of time-delayed transfer
- ⑲ Indication of time-delayed return
- ⑳ Indication of settings of controller
- ㉑ Setting button: press to enter setting menu
- ㉒ Shift button: check voltage in normal use, move backwards in setting status
- ㉓ Up button: increase number in setting status
- ㉔ Down button: decrease number in setting status
- ㉕ Manual button: press to switch to manual control in normal use, and transfer between normal power supply and standby power supply if in manual control status.
- ㉖ Automatic button: press to switch to automatic control mode.
- ㉗ Double open button: press to switch to double open status in manual control mode, save and exit in setting status.

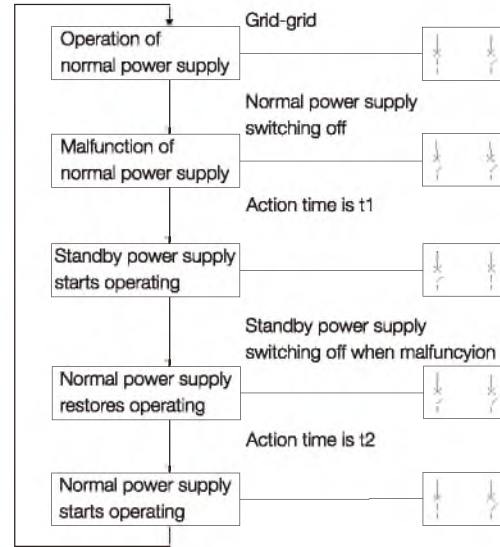
Automatic Transfer Switches Series 3SAQ2 CB Class

Diagram of control logic

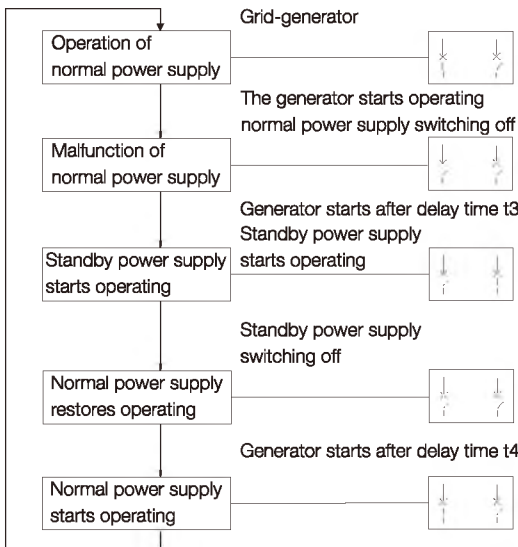
- Automatic transfer and restoration between the normal and standby power supply



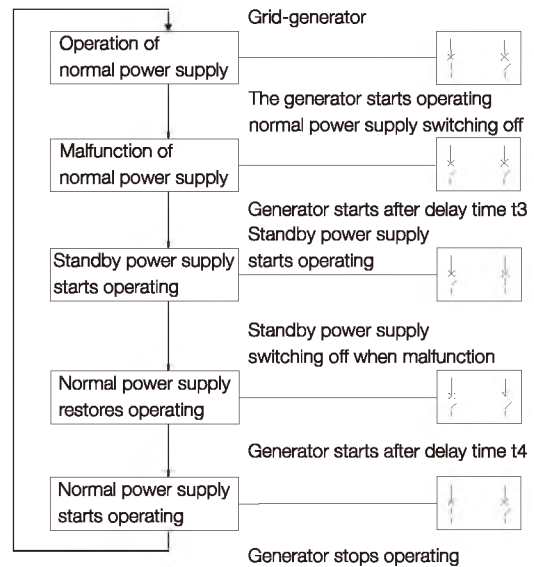
- Automatic transfer without restoration between the normal and standby power supply



- Automatic transfer and restoration between the normal and generating power supply

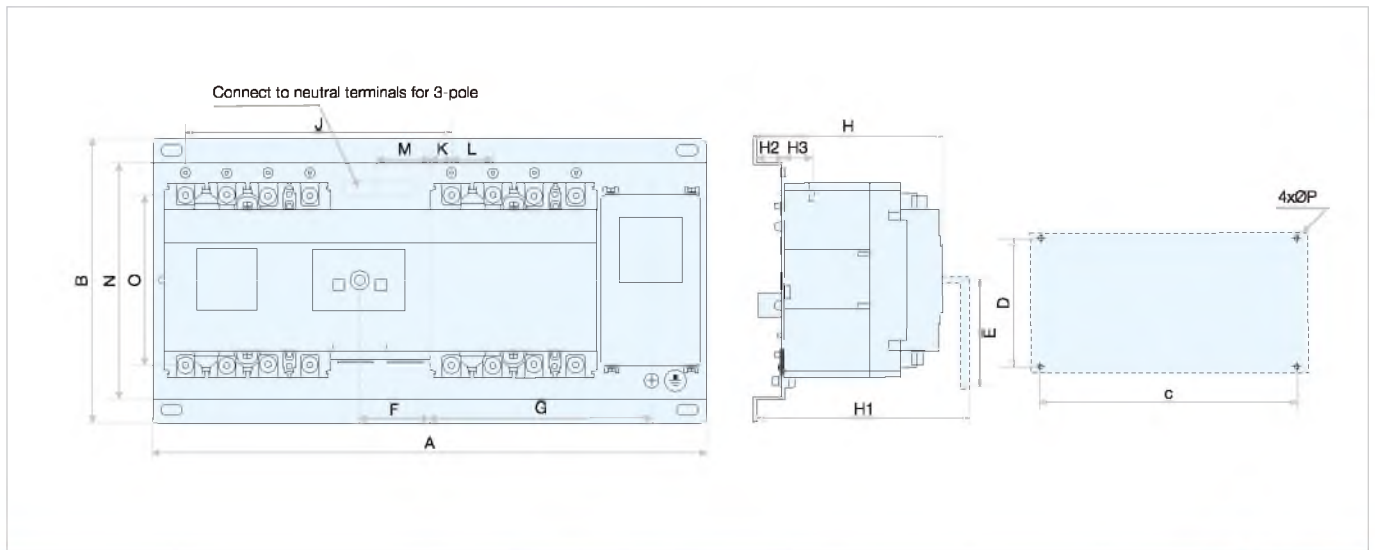


- Automatic transfer without restoration between the normal and generating power supply



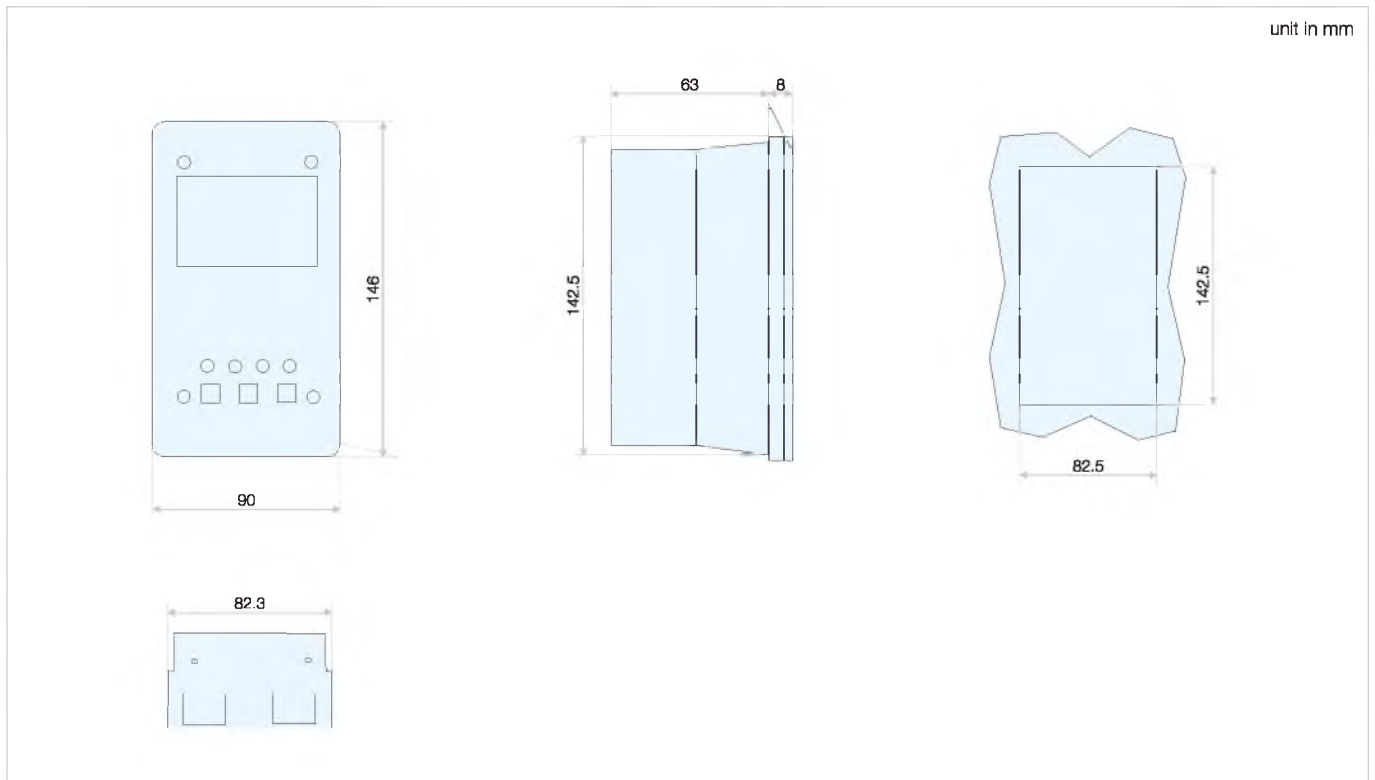
Automatic Transfer Switches Series 3SAQ2 CB Class

Outline and installation dimension diagram



	A		B	C		D	H	H1	P
	3-pole	4-pole		3-pole	4-pole				
3SAQ2-100	420	420	240	420	420	220	140	180	Ø8
3SAQ2-225	470	470	240	470	470	220	160	190	Ø8
3SAQ2-400	615	615	330	615	615	300	200	227	Ø10
3SAQ2-630	740	740	330	740	740	300	200	231	Ø10
3SAQ2-800	725	790	330	725	790	300	210	240	Ø10

Drilling dimensions of control panel



Automatic Transfer Switches

Series 3SAQ2 CB Class

Selection and ordering data

Size A: 3SAQ2-100

Automatic transfer and restoration between normal and standby power supply (NBR)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-100L	35 kA	16	AQ2A 3016LNBRU	19944	AQ2A 3016LNBRS	30341
		20	AQ2A 3020LNBRU	19945	AQ2A 3020LNBRS	30342
		25	AQ2A 3025LNBRU	19946	AQ2A 3025LNBRS	30343
		32	AQ2A 3032LNBRU	19947	AQ2A 3032LNBRS	30344
		40	AQ2A 3040LNBRU	19948	AQ2A 3040LNBRS	30345
		50	AQ2A 3050LNBRU	19949	AQ2A 3050LNBRS	30346
		63	AQ2A 3063LNBRU	19950	AQ2A 3063LNBRS	30347
		80	AQ2A 3080LNBRU	19951	AQ2A 3080LNBRS	30348
		100	AQ2A 3100LNBRU	19952	AQ2A 3100LNBRS	30349
		3SM8N-100M	50 kA	16	AQ2A 3016MNBRU	19971
20	AQ2A 3020MNBRU			19972	AQ2A 3020MNBRS	30369
25	AQ2A 3025MNBRU			19973	AQ2A 3025MNBRS	30370
32	AQ2A 3032MNBRU			19974	AQ2A 3032MNBRS	30371
40	AQ2A 3040MNBRU			19975	AQ2A 3040MNBRS	30372
50	AQ2A 3050MNBRU			19976	AQ2A 3050MNBRS	30373
63	AQ2A 3063MNBRU			19977	AQ2A 3063MNBRS	30374
80	AQ2A 3080MNBRU			19978	AQ2A 3080MNBRS	30375
100	AQ2A 3100MNBRU			19979	AQ2A 3100MNBRS	30376
3SM8N-100H	85 kA			16	AQ2A 3016HNBRU	30026
		20	AQ2A 3020HNBRU	30027	AQ2A 3020HNBRS	30423
		25	AQ2A 3025HNBRU	30028	AQ2A 3025HNBRS	30424
		32	AQ2A 3032HNBRU	30029	AQ2A 3032HNBRS	30425
		40	AQ2A 3040HNBRU	30030	AQ2A 3040HNBRS	30426
		50	AQ2A 3050HNBRU	30031	AQ2A 3050HNBRS	30427
		63	AQ2A 3063HNBRU	30032	AQ2A 3063HNBRS	30428
		80	AQ2A 3080HNBRU	30033	AQ2A 3080HNBRS	30429
		100	AQ2A 3100HNBRU	30034	AQ2A 3100HNBRS	30430
		4-pole				
3SM8N-100M	50 kA	16	AQ2A 4016MNBRU	19998	AQ2A 4016MNBRS	30395
		20	AQ2A 4020MNBRU	19999	AQ2A 4020MNBRS	30396
		25	AQ2A 4025MNBRU	30001	AQ2A 4025MNBRS	30397
		32	AQ2A 4032MNBRU	30002	AQ2A 4032MNBRS	30398
		40	AQ2A 4040MNBRU	30003	AQ2A 4040MNBRS	30399
		50	AQ2A 4050MNBRU	30004	AQ2A 4050MNBRS	30400
		63	AQ2A 4063MNBRU	30005	AQ2A 4063MNBRS	30401
		80	AQ2A 4080MNBRU	30006	AQ2A 4080MNBRS	30402
		100	AQ2A 4100MNBRU	30007	AQ2A 4100MNBRS	30403

Automatic Transfer Switches

Series 3SAQ2 CB Class

Selection and ordering data

Size A: 3SAQ2-100

Automatic transfer without restoration between normal and standby power supply (NBS)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-100L	35 kA	16	AQ2A 3016LNBSU	19953	AQ2A 3016LNBSS	30350
		20	AQ2A 3020LNBSU	19954	AQ2A 3020LNBSS	30351
		25	AQ2A 3025LNBSU	19955	AQ2A 3025LNBSS	30352
		32	AQ2A 3032LNBSU	19956	AQ2A 3032LNBSS	30353
		40	AQ2A 3040LNBSU	19957	AQ2A 3040LNBSS	30354
		50	AQ2A 3050LNBSU	19958	AQ2A 3050LNBSS	30355
		63	AQ2A 3063LNBSU	19959	AQ2A 3063LNBSS	30356
		80	AQ2A 3080LNBSU	19960	AQ2A 3080LNBSS	30357
		100	AQ2A 3100LNBSU	19961	AQ2A 3100LNBSS	30358
		3SM8N-100M	50 kA	16	AQ2A 3016MNBSU	19980
20	AQ2A 3020MNBSU			19981	AQ2A 3020MNBSS	30378
25	AQ2A 3025MNBSU			19982	AQ2A 3025MNBSS	30379
32	AQ2A 3032MNBSU			19983	AQ2A 3032MNBSS	30380
40	AQ2A 3040MNBSU			19984	AQ2A 3040MNBSS	30381
50	AQ2A 3050MNBSU			19985	AQ2A 3050MNBSS	30382
63	AQ2A 3063MNBSU			19986	AQ2A 3063MNBSS	30383
80	AQ2A 3080MNBSU			19987	AQ2A 3080MNBSS	30384
100	AQ2A 3100MNBSU			19988	AQ2A 3100MNBSS	30385
3SM8N-100H	85 kA			16	AQ2A 3016HNBSU	30035
		20	AQ2A 3020HNBSU	30036	AQ2A 3020HNBSS	30432
		25	AQ2A 3025HNBSU	30037	AQ2A 3025HNBSS	30433
		32	AQ2A 3032HNBSU	30038	AQ2A 3032HNBSS	30434
		40	AQ2A 3040HNBSU	30039	AQ2A 3040HNBSS	30435
		50	AQ2A 3050HNBSU	30040	AQ2A 3050HNBSS	30436
		63	AQ2A 3063HNBSU	30041	AQ2A 3063HNBSS	30437
		80	AQ2A 3080HNBSU	30042	AQ2A 3080HNBSS	30438
		100	AQ2A 3100HNBSU	30043	AQ2A 3100HNBSS	30439
		4-pole				
3SM8N-100M	50 kA	16	AQ2A 4016MNBSU	30008	AQ2A 4016MNBSS	30404
		20	AQ2A 4020MNBSU	30009	AQ2A 4020MNBSS	30405
		25	AQ2A 4025MNBSU	30010	AQ2A 4025MNBSS	30406
		32	AQ2A 4032MNBSU	30011	AQ2A 4032MNBSS	30407
		40	AQ2A 4040MNBSU	30012	AQ2A 4040MNBSS	30408
		50	AQ2A 4050MNBSU	30013	AQ2A 4050MNBSS	30409
		63	AQ2A 4063MNBSU	30014	AQ2A 4063MNBSS	30410
		80	AQ2A 4080MNBSU	30015	AQ2A 4080MNBSS	30411
		100	AQ2A 4100MNBSU	30016	AQ2A 4100MNBSS	30412

Automatic Transfer Switches

Series 3SAQ2 CB Class

Selection and ordering data

Size A: 3SAQ2-100

Automatic transfer and restoration between normal and generating power supply (NGP)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-100L	35 kA	16	AQ2A 3016LNGRU	19962	AQ2A 3016LNGRS	30359
		20	AQ2A 3020LNGRU	19963	AQ2A 3020LNGRS	30360
		25	AQ2A 3025LNGRU	19964	AQ2A 3025LNGRS	30361
		32	AQ2A 3032LNGRU	19965	AQ2A 3032LNGRS	30362
		40	AQ2A 3040LNGRU	19966	AQ2A 3040LNGRS	30363
		50	AQ2A 3050LNGRU	19967	AQ2A 3050LNGRS	30364
		63	AQ2A 3063LNGRU	19968	AQ2A 3063LNGRS	30365
		80	AQ2A 3080LNGRU	19969	AQ2A 3080LNGRS	30366
		100	AQ2A 3100LNGRU	19970	AQ2A 3100LNGRS	30367
		3SM8N-100M	50 kA	16	AQ2A 3016MNGRU	19989
20	AQ2A 3020MNGRU			19990	AQ2A 3020MNGRS	30387
25	AQ2A 3025MNGRU			19991	AQ2A 3025MNGRS	30388
32	AQ2A 3032MNGRU			19992	AQ2A 3032MNGRS	30389
40	AQ2A 3040MNGRU			19993	AQ2A 3040MNGRS	30390
50	AQ2A 3050MNGRU			19994	AQ2A 3050MNGRS	30391
63	AQ2A 3063MNGRU			19995	AQ2A 3063MNGRS	30392
80	AQ2A 3080MNGRU			19996	AQ2A 3080MNGRS	30393
100	AQ2A 3100MNGRU			19997	AQ2A 3100MNGRS	30394
3SM8N-100H	85 kA			16	AQ2A 3016HNGRU	30044
		20	AQ2A 3020HNGRU	30045	AQ2A 3020HNGRS	30441
		25	AQ2A 3025HNGRU	30046	AQ2A 3025HNGRS	30442
		32	AQ2A 3032HNGRU	30047	AQ2A 3032HNGRS	30443
		40	AQ2A 3040HNGRU	30048	AQ2A 3040HNGRS	30444
		50	AQ2A 3050HNGRU	30049	AQ2A 3050HNGRS	30445
		63	AQ2A 3063HNGRU	30050	AQ2A 3063HNGRS	30446
		80	AQ2A 3080HNGRU	30051	AQ2A 3080HNGRS	30447
		100	AQ2A 3100HNGRU	30052	AQ2A 3100HNGRS	30448
		4-pole				
3SM8N-100M	50 kA	16	AQ2A 4016MNGRU	30017	AQ2A 4016MNGRS	30413
		20	AQ2A 4020MNGRU	30018	AQ2A 4020MNGRS	30414
		25	AQ2A 4025MNGRU	30019	AQ2A 4025MNGRS	30415
		32	AQ2A 4032MNGRU	30020	AQ2A 4032MNGRS	30416
		40	AQ2A 4040MNGRU	30021	AQ2A 4040MNGRS	30417
		50	AQ2A 4050MNGRU	30022	AQ2A 4050MNGRS	30418
		63	AQ2A 4063MNGRU	30023	AQ2A 4063MNGRS	30419
		80	AQ2A 4080MNGRU	30024	AQ2A 4080MNGRS	30420
		100	AQ2A 4100MNGRU	30025	AQ2A 4100MNGRS	30421

Automatic Transfer Switches Series 3SAQ2 CB Class

Selection and ordering data

Size A: 3SAQ2-100

Automatic transfer without restoration between normal and generating power supply (NGS)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-100L	35 kA	16	AQ2A 3016LNGSU	19863	AQ2A 3016LNGSS	30284
		20	AQ2A 3020LNGSU	19864	AQ2A 3020LNGSS	30285
		25	AQ2A 3025LNGSU	19865	AQ2A 3025LNGSS	30286
		32	AQ2A 3032LNGSU	19866	AQ2A 3032LNGSS	30287
		40	AQ2A 3040LNGSU	19867	AQ2A 3040LNGSS	30288
		50	AQ2A 3050LNGSU	19868	AQ2A 3050LNGSS	30289
		63	AQ2A 3063LNGSU	19869	AQ2A 3063LNGSS	30290
		80	AQ2A 3080LNGSU	19870	AQ2A 3080LNGSS	30291
		100	AQ2A 3100LNGSU	19871	AQ2A 3100LNGSS	30292
		3SM8N-100M	50 kA	16	AQ2A 3016MNGSU	19872
20	AQ2A 3020MNGSU			19873	AQ2A 3020MNGSS	30294
25	AQ2A 3025MNGSU			19874	AQ2A 3025MNGSS	30295
32	AQ2A 3032MNGSU			19875	AQ2A 3032MNGSS	30296
40	AQ2A 3040MNGSU			19876	AQ2A 3040MNGSS	30297
50	AQ2A 3050MNGSU			19877	AQ2A 3050MNGSS	30298
63	AQ2A 3063MNGSU			19878	AQ2A 3063MNGSS	30299
80	AQ2A 3080MNGSU			19879	AQ2A 3080MNGSS	30300
100	AQ2A 3100MNGSU			19880	AQ2A 3100MNGSS	30301
3SM8N-100H	85 kA			16	AQ2A 3016HNGSU	19890
		20	AQ2A 3020HNGSU	19891	AQ2A 3020HNGSS	30312
		25	AQ2A 3025HNGSU	19892	AQ2A 3025HNGSS	30313
		32	AQ2A 3032HNGSU	19893	AQ2A 3032HNGSS	30314
		40	AQ2A 3040HNGSU	19894	AQ2A 3040HNGSS	30315
		50	AQ2A 3050HNGSU	19895	AQ2A 3050HNGSS	30316
		63	AQ2A 3063HNGSU	19896	AQ2A 3063HNGSS	30317
		80	AQ2A 3080HNGSU	19897	AQ2A 3080HNGSS	30318
		100	AQ2A 3100HNGSU	19898	AQ2A 3100HNGSS	30319
		4-pole				
3SM8N-100M	50 kA	16	AQ2A 4016MNGSU	19881	AQ2A 4016MNGSS	30302
		20	AQ2A 4020MNGSU	19882	AQ2A 4020MNGSS	30303
		25	AQ2A 4025MNGSU	19883	AQ2A 4025MNGSS	30304
		32	AQ2A 4032MNGSU	19884	AQ2A 4032MNGSS	30305
		40	AQ2A 4040MNGSU	19885	AQ2A 4040MNGSS	30306
		50	AQ2A 4050MNGSU	19886	AQ2A 4050MNGSS	30307
		63	AQ2A 4063MNGSU	19887	AQ2A 4063MNGSS	30308
		80	AQ2A 4080MNGSU	19888	AQ2A 4080MNGSS	30309
		100	AQ2A 4100MNGSU	19889	AQ2A 4100MNGSS	30310

Automatic Transfer Switches

Series 3SAQ2 CB Class

Selection and ordering data

Size B: 3SAQ2-225

Automatic transfer and restoration between normal and standby power supply (NBR)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-225L	35 kA	100	AQ2B 3100LNBRU	30053	AQ2B 3100LNBRS	30449
		125	AQ2B 3125LNBRU	30054	AQ2B 3125LNBRS	30450
		140	AQ2B 3140LNBRU	30055	AQ2B 3140LNBRS	30451
		160	AQ2B 3160LNBRU	30056	AQ2B 3160LNBRS	30452
		180	AQ2B 3180LNBRU	30057	AQ2B 3180LNBRS	30453
		200	AQ2B 3200LNBRU	30058	AQ2B 3200LNBRS	30454
		225	AQ2B 3225LNBRU	30059	AQ2B 3225LNBRS	30455
3SM8N-225M	50 kA	100	AQ2B 3100MNBRU	30074	AQ2B 3100MNBRS	30470
		125	AQ2B 3125MNBRU	30075	AQ2B 3125MNBRS	30471
		140	AQ2B 3140MNBRU	30076	AQ2B 3140MNBRS	30472
		160	AQ2B 3160MNBRU	30077	AQ2B 3160MNBRS	30473
		180	AQ2B 3180MNBRU	30078	AQ2B 3180MNBRS	30474
		200	AQ2B 3200MNBRU	30079	AQ2B 3200MNBRS	30475
		225	AQ2B 3225MNBRU	30080	AQ2B 3225MNBRS	30476
3SM8N-225H	85 kA	100	AQ2B 3100HNBRU	30116	AQ2B 3100HNBRS	30512
		125	AQ2B 3125HNBRU	30117	AQ2B 3125HNBRS	30513
		140	AQ2B 3140HNBRU	30118	AQ2B 3140HNBRS	30514
		160	AQ2B 3160HNBRU	30119	AQ2B 3160HNBRS	30515
		180	AQ2B 3180HNBRU	30120	AQ2B 3180HNBRS	30516
		200	AQ2B 3200HNBRU	30121	AQ2B 3200HNBRS	30517
		225	AQ2B 3225HNBRU	30122	AQ2B 3225HNBRS	30518
4-pole						
3SM8N-225M	50 kA	100	AQ2B 4100MNBRU	30095	AQ2B 4100MNBRS	30491
		125	AQ2B 4125MNBRU	30096	AQ2B 4125MNBRS	30492
		140	AQ2B 4140MNBRU	30097	AQ2B 4140MNBRS	30493
		160	AQ2B 4160MNBRU	30098	AQ2B 4160MNBRS	30494
		180	AQ2B 4180MNBRU	30099	AQ2B 4180MNBRS	30495
		200	AQ2B 4200MNBRU	30100	AQ2B 4200MNBRS	30496
		225	AQ2B 4225MNBRU	30101	AQ2B 4225MNBRS	30497

Automatic transfer without restoration between normal and standby power supply (NBS)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-225L	35 kA	100	AQ2B 3100LNBSU	30060	AQ2B 3100LNBSS	30456
		125	AQ2B 3125LNBSU	30061	AQ2B 3125LNBSS	30457
		140	AQ2B 3140LNBSU	30062	AQ2B 3140LNBSS	30458
		160	AQ2B 3160LNBSU	30063	AQ2B 3160LNBSS	30459
		180	AQ2B 3180LNBSU	30064	AQ2B 3180LNBSS	30460
		200	AQ2B 3200LNBSU	30065	AQ2B 3200LNBSS	30461
		225	AQ2B 3225LNBSU	30066	AQ2B 3225LNBSS	30462
3SM8N-225M	50 kA	100	AQ2B 3100MNBSU	30081	AQ2B 3100MNBSS	30477
		125	AQ2B 3125MNBSU	30082	AQ2B 3125MNBSS	30478
		140	AQ2B 3140MNBSU	30083	AQ2B 3140MNBSS	30479
		160	AQ2B 3160MNBSU	30084	AQ2B 3160MNBSS	30480
		180	AQ2B 3180MNBSU	30085	AQ2B 3180MNBSS	30481
		200	AQ2B 3200MNBSU	30086	AQ2B 3200MNBSS	30482
		225	AQ2B 3225MNBSU	30087	AQ2B 3225MNBSS	30483
3SM8N-225H	85 kA	100	AQ2B 3100HNBSU	30123	AQ2B 3100HNBSS	30519
		125	AQ2B 3125HNBSU	30124	AQ2B 3125HNBSS	30520
		140	AQ2B 3140HNBSU	30125	AQ2B 3140HNBSS	30521
		160	AQ2B 3160HNBSU	30126	AQ2B 3160HNBSS	30522
		180	AQ2B 3180HNBSU	30127	AQ2B 3180HNBSS	30523
		200	AQ2B 3200HNBSU	30128	AQ2B 3200HNBSS	30524
		225	AQ2B 3225HNBSU	30129	AQ2B 3225HNBSS	30525
4-pole						
3SM8N-225M	50 kA	100	AQ2B 4100MNBSU	30102	AQ2B 4100MNBSS	30498
		125	AQ2B 4125MNBSU	30103	AQ2B 4125MNBSS	30499
		140	AQ2B 4140MNBSU	30104	AQ2B 4140MNBSS	30500
		160	AQ2B 4160MNBSU	30105	AQ2B 4160MNBSS	30501
		180	AQ2B 4180MNBSU	30106	AQ2B 4180MNBSS	30502
		200	AQ2B 4200MNBSU	30107	AQ2B 4200MNBSS	30503
		225	AQ2B 4225MNBSU	30108	AQ2B 4225MNBSS	30504

Automatic Transfer Switches

Series 3SAQ2 CB Class

Selection and ordering data

Size B: 3SAQ2-225

Automatic transfer and restoration between normal and generating power supply (NGR)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-225L	35 kA	100	AQ2B 3100LNGRU	30067	AQ2B 3100LNGRS	30463
		125	AQ2B 3125LNGRU	30068	AQ2B 3125LNGRS	30464
		140	AQ2B 3140LNGRU	30069	AQ2B 3140LNGRS	30465
		160	AQ2B 3160LNGRU	30070	AQ2B 3160LNGRS	30466
		180	AQ2B 3180LNGRU	30071	AQ2B 3180LNGRS	30467
		200	AQ2B 3200LNGRU	30072	AQ2B 3200LNGRS	30468
		225	AQ2B 3225LNGRU	30073	AQ2B 3225LNGRS	30469
3SM8N-225M	50 kA	100	AQ2B 3100MNGRU	30088	AQ2B 3100MNGRS	30484
		125	AQ2B 3125MNGRU	30089	AQ2B 3125MNGRS	30485
		140	AQ2B 3140MNGRU	30090	AQ2B 3140MNGRS	30486
		160	AQ2B 3160MNGRU	30091	AQ2B 3160MNGRS	30487
		180	AQ2B 3180MNGRU	30092	AQ2B 3180MNGRS	30488
		200	AQ2B 3200MNGRU	30093	AQ2B 3200MNGRS	30489
		225	AQ2B 3225MNGRU	30094	AQ2B 3225MNGRS	30490
3SM8N-225H	85 kA	100	AQ2B 3100HNGRU	30130	AQ2B 3100HNGRS	30526
		125	AQ2B 3125HNGRU	30131	AQ2B 3125HNGRS	30527
		140	AQ2B 3140HNGRU	30132	AQ2B 3140HNGRS	30528
		160	AQ2B 3160HNGRU	30133	AQ2B 3160HNGRS	30529
		180	AQ2B 3180HNGRU	30134	AQ2B 3180HNGRS	30530
		200	AQ2B 3200HNGRU	30135	AQ2B 3200HNGRS	30531
		225	AQ2B 3225HNGRU	30136	AQ2B 3225HNGRS	30532
4-pole						
3SM8N-225M	50 kA	100	AQ2B 4100MNGRU	30109	AQ2B 4100MNGRS	30505
		125	AQ2B 4125MNGRU	30110	AQ2B 4125MNGRS	30506
		140	AQ2B 4140MNGRU	30111	AQ2B 4140MNGRS	30507
		160	AQ2B 4160MNGRU	30112	AQ2B 4160MNGRS	30508
		180	AQ2B 4180MNGRU	30113	AQ2B 4180MNGRS	30509
		200	AQ2B 4200MNGRU	30114	AQ2B 4200MNGRS	30510
		225	AQ2B 4225MNGRU	30115	AQ2B 4225MNGRS	30511

Automatic transfer without restoration between normal and generating power supply (NGS)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-225L	35 kA	100	AQ2B 3100LNGSU	19899	AQ2B 3100LNGSS	30320
		125	AQ2B 3125LNGSU	19900	AQ2B 3125LNGSS	30321
		140	AQ2B 3140LNGSU	19901	AQ2B 3140LNGSS	30322
		160	AQ2B 3160LNGSU	19902	AQ2B 3160LNGSS	30323
		180	AQ2B 3180LNGSU	19903	AQ2B 3180LNGSS	30324
		200	AQ2B 3200LNGSU	19904	AQ2B 3200LNGSS	30325
		225	AQ2B 3225LNGSU	19905	AQ2B 3225LNGSS	30326
3SM8N-225M	50 kA	100	AQ2B 3100MNGSU	19906	AQ2B 3100MNGSS	30327
		125	AQ2B 3125MNGSU	19907	AQ2B 3125MNGSS	30328
		140	AQ2B 3140MNGSU	19908	AQ2B 3140MNGSS	30329
		160	AQ2B 3160MNGSU	19909	AQ2B 3160MNGSS	30330
		180	AQ2B 3180MNGSU	19910	AQ2B 3180MNGSS	30331
		200	AQ2B 3200MNGSU	19911	AQ2B 3200MNGSS	30332
		225	AQ2B 3225MNGSU	19912	AQ2B 3225MNGSS	30333
3SM8N-225H	85 kA	100	AQ2B 3100HNGSU	19920	AQ2B 3100HNGSS	14011
		125	AQ2B 3125HNGSU	19921	AQ2B 3125HNGSS	14012
		140	AQ2B 3140HNGSU	19922	AQ2B 3140HNGSS	14013
		160	AQ2B 3160HNGSU	19923	AQ2B 3160HNGSS	14014
		180	AQ2B 3180HNGSU	19924	AQ2B 3180HNGSS	14015
		200	AQ2B 3200HNGSU	19925	AQ2B 3200HNGSS	14016
		225	AQ2B 3225HNGSU	19926	AQ2B 3225HNGSS	14017
4-pole						
3SM8N-225M	50 kA	100	AQ2B 4100MNGSU	19913	AQ2B 4100MNGSS	30334
		125	AQ2B 4125MNGSU	19914	AQ2B 4125MNGSS	30335
		140	AQ2B 4140MNGSU	19915	AQ2B 4140MNGSS	30336
		160	AQ2B 4160MNGSU	19916	AQ2B 4160MNGSS	30337
		180	AQ2B 4180MNGSU	19917	AQ2B 4180MNGSS	30338
		200	AQ2B 4200MNGSU	19918	AQ2B 4200MNGSS	30339
		225	AQ2B 4225MNGSU	19919	AQ2B 4225MNGSS	30340

Automatic Transfer Switches

Series 3SAQ2 CB Class

Selection and ordering data

Size C: 3SAQ2-400

Automatic transfer and restoration between normal and standby power supply (NBR)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-400L	50 kA	225	AQ2C 3225LNBRU	30137	AQ2C 3225LNBRS	30533
		250	AQ2C 3250LNBRU	30138	AQ2C 3250LNBRS	30534
		315	AQ2C 3315LNBRU	30139	AQ2C 3315LNBRS	30535
		350	AQ2C 3350LNBRU	30140	AQ2C 3350LNBRS	30536
		400	AQ2C 3400LNBRU	30141	AQ2C 3400LNBRS	30537
3SM8N-400M	65 kA	225	AQ2C 3225MNBRU	30152	AQ2C 3225MNBRS	30548
		250	AQ2C 3250MNBRU	30153	AQ2C 3250MNBRS	30549
		315	AQ2C 3315MNBRU	30154	AQ2C 3315MNBRS	30550
		350	AQ2C 3350MNBRU	30155	AQ2C 3350MNBRS	30551
		400	AQ2C 3400MNBRU	30156	AQ2C 3400MNBRS	30552
3SM8N-400H	100 kA	225	AQ2C 3225HNBRU	30182	AQ2C 3225HNBRS	30578
		250	AQ2C 3250HNBRU	30183	AQ2C 3250HNBRS	30579
		315	AQ2C 3315HNBRU	30184	AQ2C 3315HNBRS	30580
		350	AQ2C 3350HNBRU	30185	AQ2C 3350HNBRS	30581
		400	AQ2C 3400HNBRU	30186	AQ2C 3400HNBRS	30582
4-pole						
3SM8N-400M	65 kA	225	AQ2C 4225MNBRU	30167	AQ2C 4225MNBRS	30563
		250	AQ2C 4250MNBRU	30168	AQ2C 4250MNBRS	30564
		315	AQ2C 4315MNBRU	30169	AQ2C 4315MNBRS	30565
		350	AQ2C 4350MNBRU	30170	AQ2C 4350MNBRS	30566
		400	AQ2C 4400MNBRU	30171	AQ2C 4400MNBRS	30567

Automatic transfer without restoration between normal and standby power supply (NBS)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-400L	50 kA	225	AQ2C 3225LNBSU	30142	AQ2C 3225LNBSS	30538
		250	AQ2C 3250LNBSU	30143	AQ2C 3250LNBSS	30539
		315	AQ2C 3315LNBSU	30144	AQ2C 3315LNBSS	30540
		350	AQ2C 3350LNBSU	30145	AQ2C 3350LNBSS	30541
		400	AQ2C 3400LNBSU	30146	AQ2C 3400LNBSS	30542
3SM8N-400M	65 kA	225	AQ2C 3225MNBSU	30157	AQ2C 3225MNBSS	30553
		250	AQ2C 3250MNBSU	30158	AQ2C 3250MNBSS	30554
		315	AQ2C 3315MNBSU	30159	AQ2C 3315MNBSS	30555
		350	AQ2C 3350MNBSU	30160	AQ2C 3350MNBSS	30556
		400	AQ2C 3400MNBSU	30161	AQ2C 3400MNBSS	30557
3SM8N-400H	100 kA	225	AQ2C 3225HNBSU	30187	AQ2C 3225HNBSS	30583
		250	AQ2C 3250HNBSU	30188	AQ2C 3250HNBSS	30584
		315	AQ2C 3315HNBSU	30189	AQ2C 3315HNBSS	30585
		350	AQ2C 3350HNBSU	30190	AQ2C 3350HNBSS	30586
		400	AQ2C 3400HNBSU	30191	AQ2C 3400HNBSS	30587
4-pole						
3SM8N-400M	65 kA	225	AQ2C 4225MNBSU	30172	AQ2C 4225MNBSS	30568
		250	AQ2C 4250MNBSU	30173	AQ2C 4250MNBSS	30569
		315	AQ2C 4315MNBSU	30174	AQ2C 4315MNBSS	30570
		350	AQ2C 4350MNBSU	30175	AQ2C 4350MNBSS	30571
		400	AQ2C 4400MNBSU	30176	AQ2C 4400MNBSS	30572

Automatic Transfer Switches Series 3SAQ2 CB Class

Selection and ordering data

Size C: 3SAQ2-400

Automatic transfer and restoration between normal and generating power supply (NGR)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-400L	50 kA	225	AQ2C 3225LNGRU	30147	AQ2C 3225LNGRS	30543
		250	AQ2C 3250LNGRU	30148	AQ2C 3250LNGRS	30544
		315	AQ2C 3315LNGRU	30149	AQ2C 3315LNGRS	30545
		350	AQ2C 3350LNGRU	30150	AQ2C 3350LNGRS	30546
		400	AQ2C 3400LNGRU	30151	AQ2C 3400LNGRS	30547
3SM8N-400M	65 kA	225	AQ2C 3225MNGRU	30162	AQ2C 3225MNGRS	30558
		250	AQ2C 3250MNGRU	30163	AQ2C 3250MNGRS	30559
		315	AQ2C 3315MNGRU	30164	AQ2C 3315MNGRS	30560
		350	AQ2C 3350MNGRU	30165	AQ2C 3350MNGRS	30561
		400	AQ2C 3400MNGRU	30166	AQ2C 3400MNGRS	30562
3SM8N-400H	100 kA	225	AQ2C 3225HNGRU	30192	AQ2C 3225HNGRS	30588
		250	AQ2C 3250HNGRU	30193	AQ2C 3250HNGRS	30589
		315	AQ2C 3315HNGRU	30194	AQ2C 3315HNGRS	30590
		350	AQ2C 3350HNGRU	30195	AQ2C 3350HNGRS	30591
		400	AQ2C 3400HNGRU	30196	AQ2C 3400HNGRS	30592
4-pole						
3SM8N-400M	65 kA	225	AQ2C 4225MNGRU	30177	AQ2C 4225MNGRS	30573
		250	AQ2C 4250MNGRU	30178	AQ2C 4250MNGRS	30574
		315	AQ2C 4315MNGRU	30179	AQ2C 4315MNGRS	30575
		350	AQ2C 4350MNGRU	30180	AQ2C 4350MNGRS	30576
		400	AQ2C 4400MNGRU	30181	AQ2C 4400MNGRS	30577

Automatic transfer without restoration between normal and generating power supply (NGS)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-400L	50 kA	225	AQ2C 3225LNGSU	19927	AQ2C 3225LNSS	14018
		250	AQ2C 3250LNGSU	19928	AQ2C 3250LNSS	14019
		315	AQ2C 3315LNGSU	19929	AQ2C 3315LNSS	14020
		350	AQ2C 3350LNGSU	19930	AQ2C 3350LNSS	14021
		400	AQ2C 3400LNGSU	19931	AQ2C 3400LNSS	14022
3SM8N-400M	65 kA	225	AQ2C 3225MNGSU	19932	AQ2C 3225MNGSS	14023
		250	AQ2C 3250MNGSU	19933	AQ2C 3250MNGSS	14024
		315	AQ2C 3315MNGSU	19934	AQ2C 3315MNGSS	14025
		350	AQ2C 3350MNGSU	19935	AQ2C 3350MNGSS	14026
		400	AQ2C 3400MNGSU	19936	AQ2C 3400MNGSS	14027
3SM8N-400H	100 kA	225	AQ2C 3225HNGSU	19942	AQ2C 3225HNGSS	14033
		250	AQ2C 3250HNGSU	19943	AQ2C 3250HNGSS	14034
		315	AQ2C 3315HNGSU	30260	AQ2C 3315HNGSS	14035
		350	AQ2C 3350HNGSU	30261	AQ2C 3350HNGSS	14036
		400	AQ2C 3400HNGSU	30262	AQ2C 3400HNGSS	14037
4-pole						
3SM8N-400M	65 kA	225	AQ2C 4225MNGSU	19937	AQ2C 4225MNGSS	14028
		250	AQ2C 4250MNGSU	19938	AQ2C 4250MNGSS	14029
		315	AQ2C 4315MNGSU	19939	AQ2C 4315MNGSS	14030
		350	AQ2C 4350MNGSU	19940	AQ2C 4350MNGSS	14031
		400	AQ2C 4400MNGSU	19941	AQ2C 4400MNGSS	14032

Automatic Transfer Switches

Series 3SAQ2 CB Class

Selection and ordering data

Size D: 3SAQ2-630

Automatic transfer and restoration between normal and standby power supply (NBR)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-630L	50 kA	400	AQ2D 3400LNBRU	30197	AQ2D 3400LNBRS	30593
		500	AQ2D 3500LNBRU	30198	AQ2D 3500LNBRS	30594
		630	AQ2D 3630LNBRU	30199	AQ2D 3630LNBRS	30595
3SM8N-630M	65 kA	400	AQ2D 3400MNBRU	30206	AQ2D 3400MNBRS	30602
		500	AQ2D 3500MNBRU	30207	AQ2D 3500MNBRS	30603
		630	AQ2D 3630MNBRU	30208	AQ2D 3630MNBRS	30604
3SM8N-630H	100 kA	400	AQ2D 3400HNBRU	30224	AQ2D 3400HNBRS	30620
		500	AQ2D 3500HNBRU	30225	AQ2D 3500HNBRS	30621
		630	AQ2D 3630HNBRU	30226	AQ2D 3630HNBRS	30622
4-pole						
3SM8N-630M	65 kA	400	AQ2D 4400MNBRU	30215	AQ2D 4400MNBRS	30611
		500	AQ2D 4500MNBRU	30216	AQ2D 4500MNBRS	30612
		630	AQ2D 4630MNBRU	30217	AQ2D 4630MNBRS	30613

Automatic transfer without restoration between normal and standby power supply (NBS)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-630L	50 kA	400	AQ2D 3400LNBSU	30200	AQ2D 3400LNBSS	30596
		500	AQ2D 3500LNBSU	30201	AQ2D 3500LNBSS	30597
		630	AQ2D 3630LNBSU	30202	AQ2D 3630LNBSS	30598
3SM8N-630M	65 kA	400	AQ2D 3400MNBSU	30209	AQ2D 3400MNBSS	30605
		500	AQ2D 3500MNBSU	30210	AQ2D 3500MNBSS	30606
		630	AQ2D 3630MNBSU	30211	AQ2D 3630MNBSS	30607
3SM8N-630H	100 kA	400	AQ2D 3400HNBSU	30227	AQ2D 3400HNBSS	30623
		500	AQ2D 3500HNBSU	30228	AQ2D 3500HNBSS	30624
		630	AQ2D 3630HNBSU	30229	AQ2D 3630HNBSS	30625
4-pole						
3SM8N-630M	65 kA	400	AQ2D 4400MNBSU	30218	AQ2D 4400MNBSS	30614
		500	AQ2D 4500MNBSU	30219	AQ2D 4500MNBSS	30615
		630	AQ2D 4630MNBSU	30220	AQ2D 4630MNBSS	30616

Automatic Transfer Switches Series 3SAQ2 CB Class

Selection and ordering data

Size D: 3SAQ2-630

Automatic transfer and restoration between normal and generating power supply (NGR)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-630L	50 kA	400	AQ2D 3400LNGRU	30203	AQ2D 3400LNGRS	30599
		500	AQ2D 3500LNGRU	30204	AQ2D 3500LNGRS	30600
		630	AQ2D 3630LNGRU	30205	AQ2D 3630LNGRS	30601
3SM8N-630M	65 kA	400	AQ2D 3400MNGRU	30212	AQ2D 3400MNGRS	30608
		500	AQ2D 3500MNGRU	30213	AQ2D 3500MNGRS	30609
		630	AQ2D 3630MNGRU	30214	AQ2D 3630MNGRS	30610
3SM8N-630H	100 kA	400	AQ2D 3400HNGRU	30230	AQ2D 3400HNGRS	30626
		500	AQ2D 3500HNGRU	30231	AQ2D 3500HNGRS	30627
		630	AQ2D 3630HNGRU	30232	AQ2D 3630HNGRS	30628
4-pole						
3SM8N-630M	65 kA	400	AQ2D 4400MNGRU	30221	AQ2D 4400MNGRS	30617
		500	AQ2D 4500MNGRU	30222	AQ2D 4500MNGRS	30618
		630	AQ2D 4630MNGRU	30223	AQ2D 4630MNGRS	30619

Automatic transfer without restoration between normal and generating power supply (NGS)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-630L	50 kA	400	AQ2D 3400LNGSU	30263	AQ2D 3400LNGSS	14038
		500	AQ2D 3500LNGSU	30264	AQ2D 3500LNGSS	14039
		630	AQ2D 3630LNGSU	30265	AQ2D 3630LNGSS	14040
3SM8N-630M	65 kA	400	AQ2D 3400MNGSU	30266	AQ2D 3400MNGSS	14041
		500	AQ2D 3500MNGSU	30267	AQ2D 3500MNGSS	14042
		630	AQ2D 3630MNGSU	30268	AQ2D 3630MNGSS	14043
3SM8N-630H	100 kA	400	AQ2D 3400HNGSU	30272	AQ2D 3400HNGSS	14047
		500	AQ2D 3500HNGSU	30273	AQ2D 3500HNGSS	14048
		630	AQ2D 3630HNGSU	30274	AQ2D 3630HNGSS	14049
4-pole						
3SM8N-630M	65 kA	400	AQ2D 4400MNGSU	30269	AQ2D 4400MNGSS	14044
		500	AQ2D 4500MNGSU	30270	AQ2D 4500MNGSS	14045
		630	AQ2D 4630MNGSU	30271	AQ2D 4630MNGSS	14046

Automatic Transfer Switches

Series 3SAQ2 CB Class

Selection and ordering data

Size E: 3SAQ2-800

Automatic transfer and restoration between normal and standby power supply (NBR)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-800M	75 kA	630	AQ2E 3630MNBRU	30233	AQ2E 3630MNBRS	30629
		700	AQ2E 3700MNBRU	30234	AQ2E 3700MNBRS	30630
		800	AQ2E 3800MNBRU	30235	AQ2E 3800MNBRS	30631
3SM8N-800H	100 kA	630	AQ2E 3630HNBRU	30251	AQ2E 3630HNBRS	30647
		700	AQ2E 3700HNBRU	30252	AQ2E 3700HNBRS	30648
		800	AQ2E 3800HNBRU	30253	AQ2E 3800HNBRS	30649
4-pole						
3SM8N-800M	75 kA	630	AQ2E 4630MNBRU	30242	AQ2E 4630MNBRS	30638
		700	AQ2E 4700MNBRU	30243	AQ2E 4700MNBRS	30639
		800	AQ2E 4800MNBRU	30244	AQ2E 4800MNBRS	30640

Automatic transfer without restoration between normal and standby power supply (NBS)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-800M	75 kA	630	AQ2E 3630MNBSU	30236	AQ2E 3630MNBSS	30632
		700	AQ2E 3700MNBSU	30237	AQ2E 3700MNBSS	30633
		800	AQ2E 3800MNBSU	30238	AQ2E 3800MNBSS	30634
3SM8N-800H	100 kA	630	AQ2E 3630HNBSU	30254	AQ2E 3630HNBSS	30650
		700	AQ2E 3700HNBSU	30255	AQ2E 3700HNBSS	30651
		800	AQ2E 3800HNBSU	30256	AQ2E 3800HNBSS	30652
4-pole						
3SM8N-800M	75 kA	630	AQ2E 4630MNBSU	30245	AQ2E 4630MNBSS	30641
		700	AQ2E 4700MNBSU	30246	AQ2E 4700MNBSS	30642
		800	AQ2E 4800MNBSU	30247	AQ2E 4800MNBSS	30643

Automatic transfer and restoration between normal and generating power supply (NGR)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-800M	75 kA	630	AQ2E 3630MNGRU	30239	AQ2E 3630MNGRS	30635
		700	AQ2E 3700MNGRU	30240	AQ2E 3700MNGRS	30636
		800	AQ2E 3800MNGRU	30241	AQ2E 3800MNGRS	30637
3SM8N-800H	100 kA	630	AQ2E 3630HNGRU	30257	AQ2E 3630HNGRS	30653
		700	AQ2E 3700HNGRU	30258	AQ2E 3700HNGRS	30654
		800	AQ2E 3800HNGRU	30259	AQ2E 3800HNGRS	14970
4-pole						
3SM8N-800M	75 kA	630	AQ2E 4630MNGRU	30248	AQ2E 4630MNGRS	30644
		700	AQ2E 4700MNGRU	30249	AQ2E 4700MNGRS	30645
		800	AQ2E 4800MNGRU	30250	AQ2E 4800MNGRS	30646

Automatic transfer without restoration between normal and generating power supply (NGS)

Circuit-breaker of main circuit	Breaking capacity I _{cn} at 400 V AC	Rated current (A)	Unitary type		Split type	
			Type code	Order code	Type code	Order code
3-pole						
3SM8N-800M	75 kA	630	AQ2E 3630MNGSU	30275	AQ2E 3630MNGSS	14050
		700	AQ2E 3700MNGSU	30276	AQ2E 3700MNGSS	14051
		800	AQ2E 3800MNGSU	30277	AQ2E 3800MNGSS	14052
3SM8N-800H	100 kA	630	AQ2E 3630HNGSU	30281	AQ2E 3630HNGSS	14056
		700	AQ2E 3700HNGSU	30282	AQ2E 3700HNGSS	14057
		800	AQ2E 3800HNGSU	30283	AQ2E 3800HNGSS	14058
4-pole						
3SM8N-800M	75 kA	630	AQ2E 4630MNGSU	30278	AQ2E 4630MNGSS	14053
		700	AQ2E 4700MNGSU	30279	AQ2E 4700MNGSS	14054
		800	AQ2E 4800MNGSU	30280	AQ2E 4800MNGSS	14055

Automatic Transfer Switches Series 3SAQ3 PC Class

Features

- Small volume, convenient installation
- With the controller, the setting can transfer between the manual and automatic transfer with restoration or automatic transfer without restoration
- Under-voltage, over-voltage, phase-loss protection
- Reliable and safe interlock, operation parameter could be adjusted
- Rated voltage of 400 V, rated current is from 20 A to 5000 A
- Low malfunction, easy maintenance

Versions

There are two available versions:

- M2 I: 2-stage, Power supply A $\leftarrow \rightarrow$ Power supply B; M2 I automatic transfer switch is instantaneously switch type (without internal or external controller unit). If the switches are under maintenance or damaged condition where continuous power supply is required, it is possible to operate the handle by manual and identify the failure point by observing the switching actions.
- M3 II: 3-stage, Power supply A $\leftarrow \rightarrow$ Middle position $\leftarrow \rightarrow$ Power supply B; M3 II automatic transfer switch has following functions:
 - Interchange of automatic between manual operation;
 - Voltage detection for three-phase four-line of power supply A and B;
 - Over-voltage, under-voltage and phase-loss protection;
 - Automatic switching between power supply A and B;
 - Automatic fault handling;
 - Remote start/stop generator;
 - Over-current protection after connect; to an over-current relay via additional expansion interface

For both versions, if the automatic transfer switches are under maintenance or damaged condition while the continuous power supply is required, it is possible to operate the handle slowly by manual to identify the failure point by carefully observing the switching actions.



Instruction of type code

AQ3	M3II	3	NB	R	125	L
						Type of controller unit N: No controller unit L: Built-in controller unit C: LCD controller unit J: J-type controller unit
						Rated current 20, 25, 32, 40, 50, 63, 80, 100, 125, 160, 180, 200, 225, 250, 315, 350, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 3150, 4000, 5000
						Control model R: Model R S: Model S
						Switch model NB: Grid-grid NG: Grid-generator
						Number of poles 2: 2-pole 3: 3-pole 4: 4-pole
						Version M2I: M2 I version M3II: M3 II version
						Series code

Version	M2 I	M3 II
Rated operation current	20 ... 500 A	20 ... 5000 A
Rated limit short-circuit current (depending on the current)	12.5 ... 30 kA	12.5 ... 25 kA
Short-time withstand (current depending on the current)	5 ... 12 kA	5 ... 50 kA
Transfer time (exclude the delay time)	20 - 90 ms	20 - 230 ms
Available controller unit		
Configured inside	-	■
External LCD controller unit	-	■
External J-type controller unit	■	■
Start the generator automatically	-	■
Control model		
Model R: Automatic transfer with restoration	■	■
Model S: Automatic transfer without restoration	■	-
Connection type		
Front connection	■	■ (≤ 500 A)
Rear connection	-	■ (> 500 A)

- Available
- Not available

Automatic Transfer Switches Series 3SAQ3 PC Class

Technical specifications

Version M2 I

1



3SAQ3-125 M2 I



External LCD controller unit



External J-type controller unit

Version	M2 I											
Standard	IEC 60947- 6- 1											
Rated frame current (A)	125			250			500					
Rated operating current (A)	20, 25, 32, 40, 50, 63, 80, 100, 125			160, 180, 200, 225, 250			315, 350, 400, 500					
Number of poles (P)	2	3	4	2	3	4	3	4				
Operating current at AC 230V (A)	1.5	1.5	1.5	1.5	2	2.5	2.5		3.5			
Rated operating voltage (VAC)	400			400			400					
Rated control voltage (VAC)	230			230			230					
Rated frequency (Hz)	50/60			50/60			50/60					
Rated limit short-circuit current (kA)	35			25			30					
Short-time withstand current (kA)	22			10			12					
Transfer time at side of power supply A	Connect (ms)	55		Disconnect (ms)	20		Connect (ms)	80		Disconnect (ms)	20	
Transfer time at side of power supply B	Connect (ms)	80		Disconnect (ms)	20		Connect (ms)	90		Disconnect (ms)	25	
Available controller unit	Built-in	-		Built-in	-		Built-in	-		Built-in	-	
	LCD	-		LCD	-		LCD	-		LCD	-	
	J-type	■		J-type	■		J-type	■		J-type	■	
	Model R	■		Model R	■		Model R	■		Model R	■	
Control mode	Model S	■		Model S	■		Model S	■		Model S	■	
	Model S	■		Model S	■		Model S	■		Model S	■	
Making and breaking capacity	10 I _e making, 8 I _e breaking, cosφ=0.35											
Application category				AC-33B								
Mechanical life (Cycles)	10000			10000			3000					
Electrical life (Cycles)	2500			2500			1000					
Allowable operation cycles per hour (Cycles)	120			120			120					
Connection	Front connection			Front connection			Front connection					
Capacity of auxiliary switch at AC 230 V (A)	250			250			250					
Weight (kg)	5	5.5	5.5	6	8	10	14		18			
Ambient temperature (°C)	-5 to +40, max. 95% humidity											
Storage temperature (°C)	-40 to +75											
Altitude (Max.) (m)	2000											

■ Available
- Not available

Automatic Transfer Switches Series 3SAQ3 PC Class

Technical specifications

Version M3 II



3SAQ3-125 M3 II



External LCD controller unit



External J-type controller unit

1

Version	M3 II									
Standard	IEC 60947-6-1									
Rated frame current (A)	125			250			500			
Rated operating current (A)	20, 25, 32, 40, 50, 63, 80, 100, 125 160, 180, 200, 225, 250 315, 350, 400, 500									
Number of poles (P)	2	3	4	2	3	4	3	4		
Operating current at AC 230V (A)	1.5	1.5	1.5	1.5	2	2.5	2.5	3.5		
Trip current at AC 230 V	0.5			0.5			0.7			
Rated operating voltage (VAC)	400			400			400			
Rated control voltage (VAC)	230			230			230			
Rated frequency (Hz)	50/60			50/60			50/60			
Rated limit short-circuit current (kA)	35			25			30			
Short-time withstand current (kA)	22			10			12			
Transfer time at side of power supply A	Connect (ms)	55			55			60		
	Disconnect (ms)	20			20			25		
Transfer time at side of power supply B	Connect (ms)	80			80			90		
	Disconnect (ms)	20			20			25		
Available controller unit	Built-in	■			■			■		
	LCD	■			■			■		
	J-type	■			■			■		
Control mode	Model R	■			■			■		
	Model S	■			■			■		
Making and breaking capacity	10 I _e making, 8 I _e breaking, cosφ =0.35									
Application category	AC-33B									
Mechanical life (Cycles)	10000			10000			3000			
Electrical life (Cycles)	2500			2500			1000			
Allowable operation cycles per hour (Cycles)	60			60			60			
Connection	Front connection			Front connection			Front connection			
Capacity of auxiliary switch at AC 230 V (A)	250			250			250			
Weight (kg)	5	5.5	5.5	6	8	10	14	18		
Ambient temperature (°C)	-5 to +40, max.95% humidity									
Storage temperature (°C)	-40 to +75									
Altitude (Max.) (m)	2000									

■ Available
- Not available

Automatic Transfer Switches Series 3SAQ3 PC Class

Technical specifications

Version M3 II

1



3SAQ3-125 M3 II



External LCD controller unit



External J-type controller unit

Version	M3 II															
Standard	IEC 60947-6-1															
Rated frame current (A)	800		1000		1250		1600		2000		3150		4000		5000	
Rated operating current (A)	630, 800		1000		1250		1600		2000		3150		4000		5000	
Number of poles (P)	3	4	3	4	3	4	3	3	3	4	3	4	3	3	3	
Operating current at AC 230V (A)	3	3	3	3	3	4	4	4	5	6	7	8	8	8	9	
Trip current at AC 230 V	1		1		1		1		1		1		1		1	
Rated operating voltage (VAC)	400		400		400		400		400		400		400		400	
Rated control voltage (VAC)	230		230		230		230		230		230		230		230	
Rated frequency (Hz)	50/60		50/60		50/60		50/60		50/60		50/60		50/60		50/60	
Rated limit short-circuit current (kA)	37.5		50		50		55		65		80		100		120	
Short-time withstand current (kA)	15		22		22		25		35		50		50		50	
Transfer time at side of power supply A	Connect (ms)	100	115	115	115	115	115	140	140	180	180	200	200	200	200	200
	Disconnect (ms)	30	25	25	25	25	25	25	25	30	30	30	30	35	35	35
Transfer time at side of power supply B	Connect (ms)	135	145	145	145	150	150	190	190	220	220	220	220	230	230	230
	Disconnect (ms)	30	25	25	25	25	25	25	25	30	30	30	30	30	30	30
Available controller unit	Built-in	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	LCD	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	J-type	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Control mode	Model R	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Model S	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Making and breaking capacity	10 I _e making, 8 I _e breaking, cosφ =0.35															
Application category	AC-33B															
Mechanical life (Cycles)	3000		2500		2500		2500		1500		1500		1500		1500	
Electrical life (Cycles)	1000		500		500		500		500		500		500		500	
Allowable operation cycles per hour (Cycles)	60		20		20		20		10		10		10		10	
Connection	Rear connection															
Capacity of auxiliary switch at AC 230 V (A)	250		250		250		250		250		250		250		250	
Weight (kg)	33	42	39	49	40	51	47	51	115	135	152	192	207	207	265	265
Ambient temperature (°C)	-5 to +40, max.95% humidity															
Storage temperature (°C)	-40 to +75															
Altitude (Max.) (m)	2000															

■ Available
- Not available

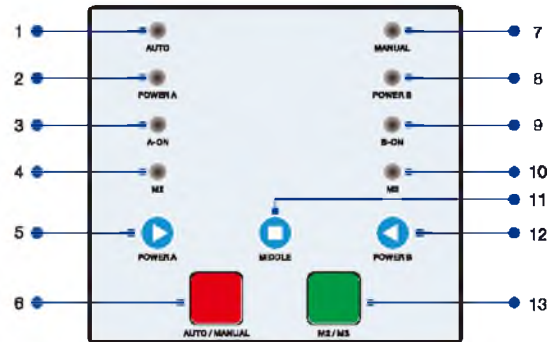
Automatic Transfer Switches Series 3SAQ3 PC Class

External controller unit

There are two types available external controller units

J-type external controller unit

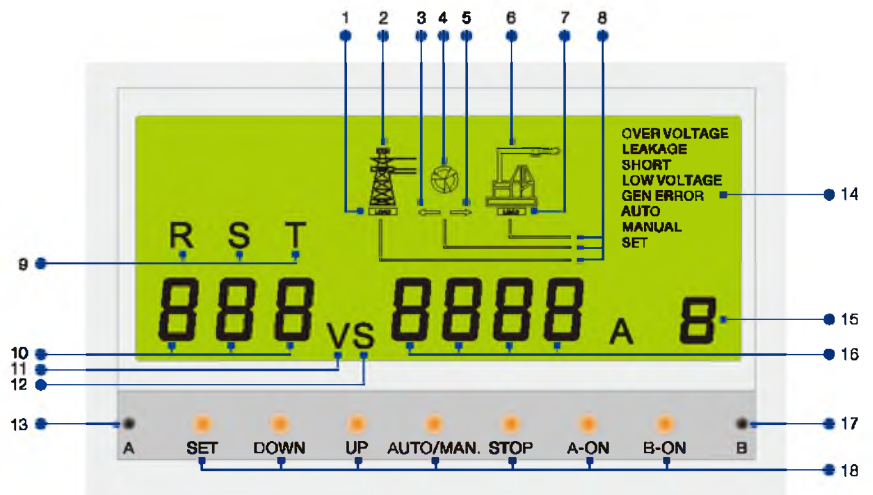
J-type external controller unit is available for both versions of M2 I and M3 II.



1. Automatic operating Indicator
2. Power supply A indicator
3. A-ON indicator
4. M2 version indicator
5. Key for Power supply A
6. Button of AUTO/MANUAL exchange

7. Manual operating Indicator
8. Power supply B indicator
9. B-ON indicator
10. M3 version indicator
11. Key for middle position
12. Key for Power supply B
13. Button of M2/M3 exchange

External controller unit with LCD display



1. Flash when switching to normal power supply
2. Symbol of normal power supply A, light when running
3. Switching to normal power supply A
4. Middle position, rotates when switching
5. Switching to standby power supply B
6. Symbol of standby power supply, light when running
7. Flash when switching to standby power supply
8. Switch is at OFF position
9. R/S/T poles in 3-phase 4-line system

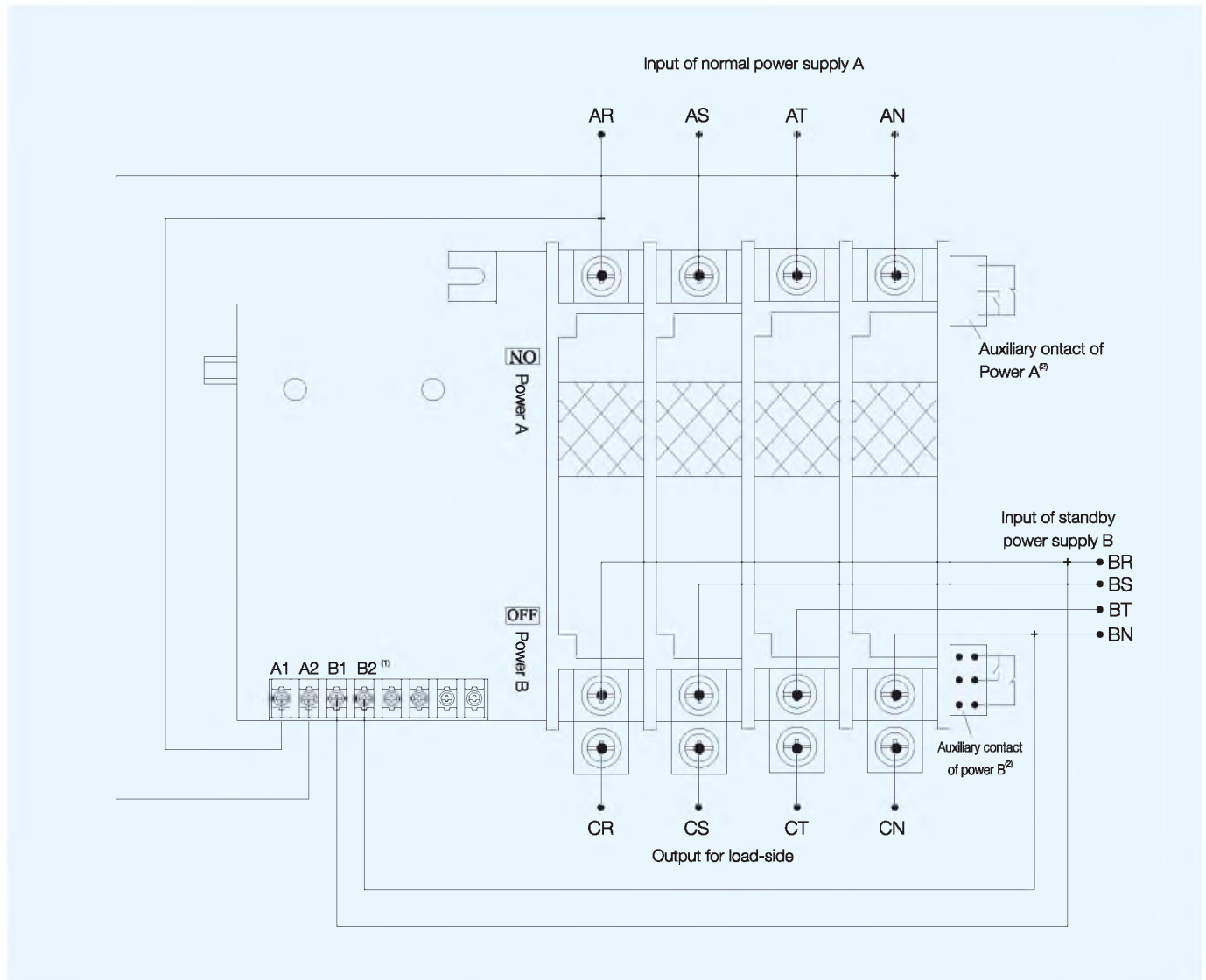
10. Value of voltage or settings
11. Voltage unit
12. Second for delay time
13. Normal indicator of normal power supply A
14. Error info. and tips of settings and auto/man etc.
15. Code position for setting, 0 when normal
16. Error information and 3-D when normal
17. Normal indicator of standby power supply B
18. Setting buttons

Automatic Transfer Switches Series 3SAQ3 PC Class

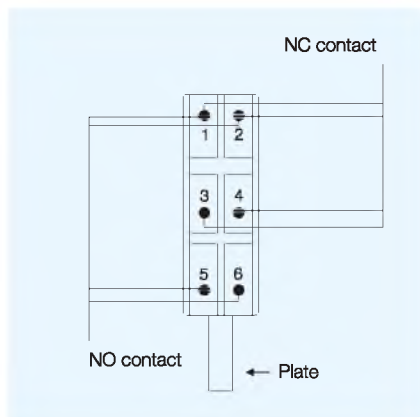
Wiring diagram

- M2 I version without controller unit

1



Auxiliary contact



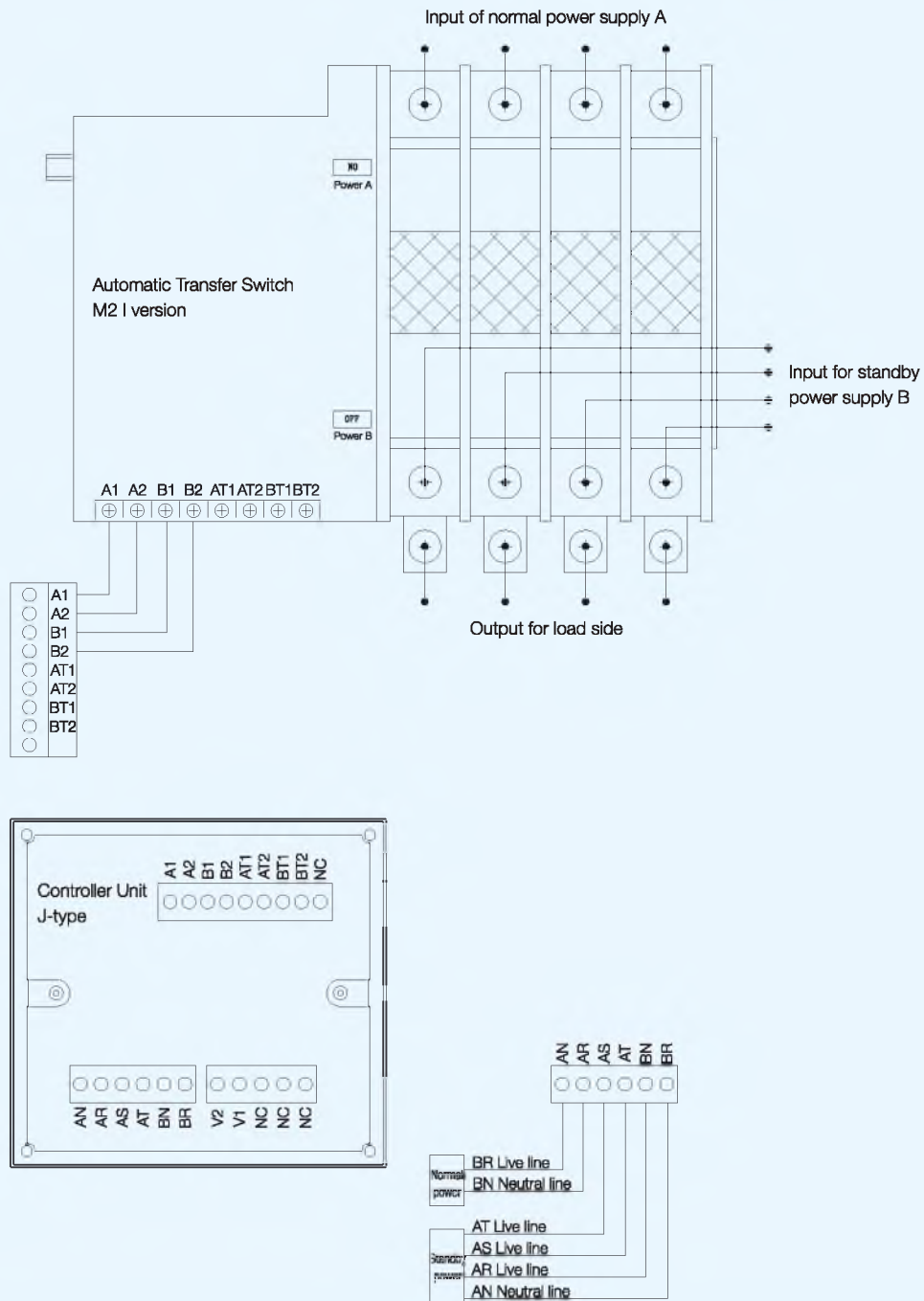
Note:

1. A1/A2 is for input signal of power supply A, AC 220 V;
B1/B2 is for input signal of power supply B, AC 220 V;
2. Auxiliary contacts can be connected to indications, alarm or signals depending on needs.

Automatic Transfer Switches Series 3SAQ3 PC Class

Wiring diagram

- M2 I version with external J-type controller unit

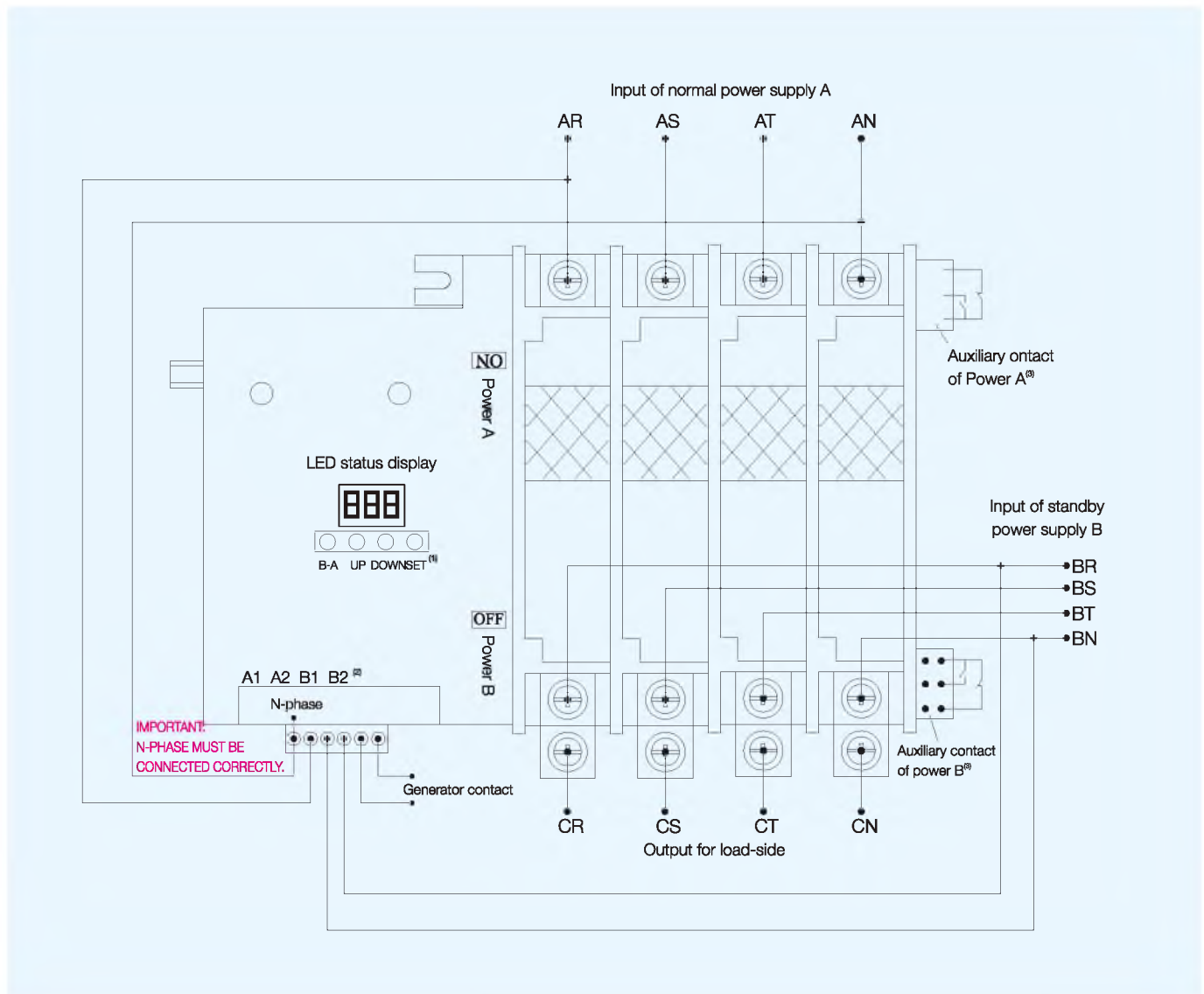


Automatic Transfer Switches Series 3SAQ3 PC Class

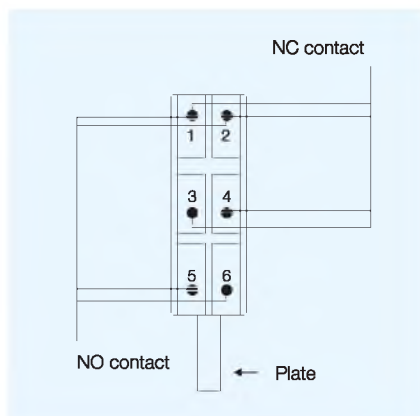
Wiring diagram

- M3 II version with internal controller unit

1



Auxiliary contact



Note:

1. Instruction of function buttons

Set: Settings for delay time of A-B, B-A or generator stop;

- Down: Reduction when setting;

Display B-phase voltage when automatical operating;

Switching to power supply B when manual operating;

- UP: Increase when setting;

Display A-phase voltage when automatical operating;

Switching to power supply A when manual operating;

- B-A: For exchange between Automatic operation and manual operation by pressing the buttons of SET and B-A at the same time (manual operation is available when LED flashing);

- Setting the reference voltage of power supply A and B (LED display U-A and U-B)

2. A1/A2 is for input signal of power supply A, AC 220 V;

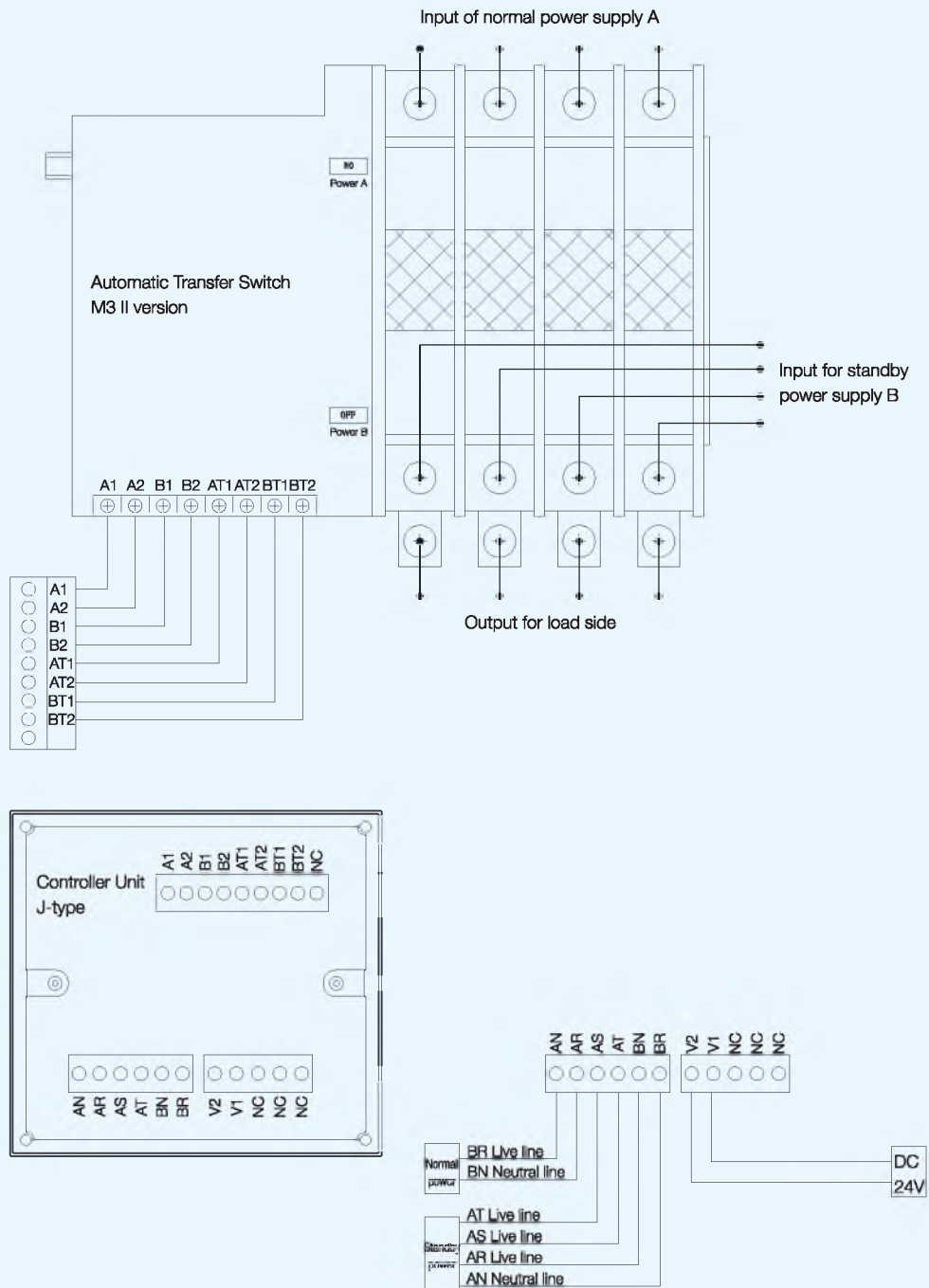
3. B1/B2 is for input signal of power supply B, AC 220 V;

Auxiliary contacts can be connected to indications, alarm or signals depending on needs.

Automatic Transfer Switches Series 3SAQ3 PC Class

Wiring diagram

- M3 II version with external J-type controller unit

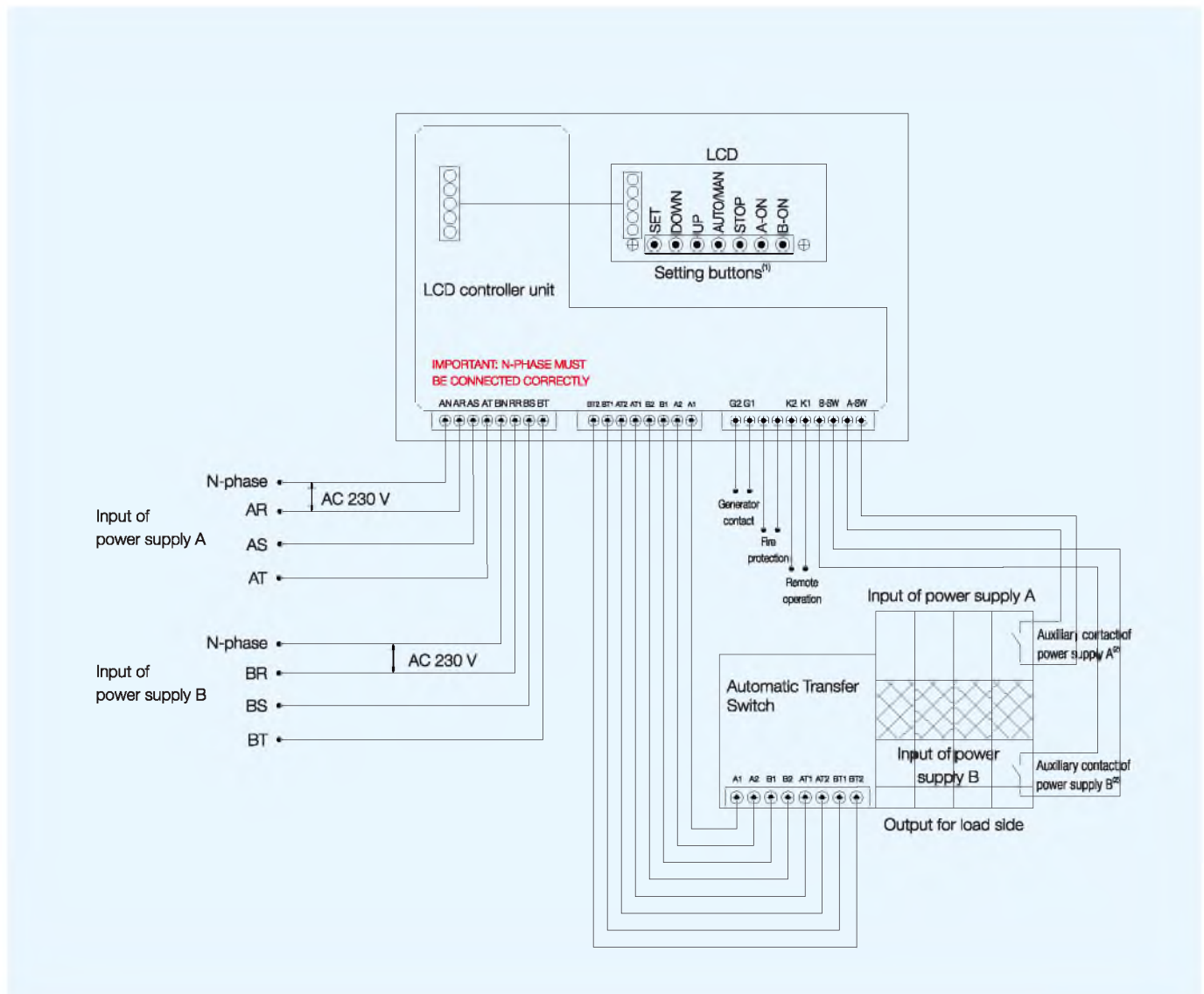


Automatic Transfer Switches Series 3SAQ3 PC Class

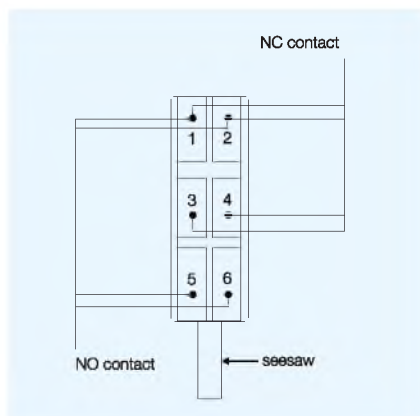
Wiring diagram

- M3 II version with external controller unit with LCD display

1



Auxiliary contact



Notice:

1. Instruction of function buttons

- SET: Settings for low and high voltage range of power supply A and B, delay time of OFF-A, OFF-B, B-OFF, generator stop, problem of A and B, timing for generator starting; Codes are 1, 2, ... 9, C and D.
- DOWN / UP: Reduction (or increase) when setting;
- AUTO/MAN: For exchange between Automatic operation and manual operation; Setting the reference voltage of phase R/R/T for power supply A and B by pressing it for 3 seconds when manual operation.
- STOP: Cut off from power supply A and B, switch to OFF position and entering standby;
- A-ON: Switch to power supply A at manual mode; Display the voltage of phase R/S/T of power supply A at modes of automatic or stop;
- B-ON: Switch to power supply B at manual mode; Display the voltage of phase R/S/T of power supply B at modes of automatic or stop;

2. Auxiliary contacts can be connected to indications, alarm or signals depending on needs.

Automatic Transfer Switches Series 3SAQ3 PC Class

Selection and ordering data

M2 I versions without controller unit

Rated current (A)	2P		3P		4P	
	Type code	Order code	Type code	Order code	Type code	Order code
Grid-Grid (NB)						
Model R: Automatic transfer with restoration						
20	Aq3 M2I 2NBR20N	10761	Aq3 M2I 3NBR20N	10815	Aq3 M2I 4NBR20N	10869
25	AQ3 M2I 2NBR25N	10762	AQ3 M2I 3NBR25N	10816	AQ3 M2I 4NBR25N	10870
32	AQ3 M2I 2NBR32N	10763	AQ3 M2I 3NBR32N	10817	AQ3 M2I 4NBR32N	10871
40	AQ3 M2I 2NBR40N	10764	AQ3 M2I 3NBR40N	10818	AQ3 M2I 4NBR40N	10872
50	AQ3 M2I 2NBR50N	10765	AQ3 M2I 3NBR50N	10819	AQ3 M2I 4NBR50N	10873
63	AQ3 M2I 2NBR63N	10766	AQ3 M2I 3NBR63N	10820	AQ3 M2I 4NBR63N	10874
80	AQ3 M2I 2NBR80N	10767	AQ3 M2I 3NBR80N	10821	AQ3 M2I 4NBR80N	10875
100	AQ3 M2I 2NBR100N	10768	AQ3 M2I 3NBR100N	10822	AQ3 M2I 4NBR100N	10876
125	AQ3 M2I 2NBR125N	10769	AQ3 M2I 3NBR125N	10823	AQ3 M2I 4NBR125N	10877
160	AQ3 M2I 2NBR160N	30954	AQ3 M2I 3NBR160N	30984	AQ3 M2I 4NBR160N	31014
180	AQ3 M2I 2NBR180N	30955	AQ3 M2I 3NBR180N	30985	AQ3 M2I 4NBR180N	31015
200	AQ3 M2I 2NBR200N	30956	AQ3 M2I 3NBR200N	30986	AQ3 M2I 4NBR200N	31016
225	AQ3 M2I 2NBR225N	30957	AQ3 M2I 3NBR225N	30987	AQ3 M2I 4NBR225N	31017
250	AQ3 M2I 2NBR250N	30958	AQ3 M2I 3NBR250N	30988	AQ3 M2I 4NBR250N	31018
315	AQ3 M2I 2NBR315N	31134	AQ3 M2I 3NBR315N	31158	AQ3 M2I 4NBR315N	31182
350	AQ3 M2I 2NBR350N	31135	AQ3 M2I 3NBR350N	31159	AQ3 M2I 4NBR350N	31183
400	AQ3 M2I 2NBR400N	31136	AQ3 M2I 3NBR400N	31160	AQ3 M2I 4NBR400N	31184
500	AQ3 M2I 2NBR500N	31137	AQ3 M2I 3NBR500N	31161	AQ3 M2I 4NBR500N	31185
Model S: Automatic transfer without restoration						
20	AQ3 M2I 2NBS20N	10779	AQ3 M2I 3NBS20N	10833	AQ3 M2I 4NBS20N	10887
25	AQ3 M2I 2NBS25N	10780	AQ3 M2I 3NBS25N	10834	AQ3 M2I 4NBS25N	10888
32	AQ3 M2I 2NBS32N	10781	AQ3 M2I 3NBS32N	10835	AQ3 M2I 4NBS32N	10889
40	AQ3 M2I 2NBS40N	10782	AQ3 M2I 3NBS40N	10836	AQ3 M2I 4NBS40N	10890
50	AQ3 M2I 2NBS50N	10783	AQ3 M2I 3NBS50N	10837	AQ3 M2I 4NBS50N	10891
63	AQ3 M2I 2NBS63N	10784	AQ3 M2I 3NBS63N	10838	AQ3 M2I 4NBS63N	10892
80	AQ3 M2I 2NBS80N	10785	AQ3 M2I 3NBS80N	10839	AQ3 M2I 4NBS80N	10893
100	AQ3 M2I 2NBS100N	10786	AQ3 M2I 3NBS100N	10840	AQ3 M2I 4NBS100N	10894
125	AQ3 M2I 2NBS125N	10787	AQ3 M2I 3NBS125N	10841	AQ3 M2I 4NBS125N	10895
160	AQ3 M2I 2NBS160N	30964	AQ3 M2I 3NBS160N	30994	AQ3 M2I 4NBS160N	31024
180	AQ3 M2I 2NBS180N	30965	AQ3 M2I 3NBS180N	30995	AQ3 M2I 4NBS180N	31025
200	AQ3 M2I 2NBS200N	30966	AQ3 M2I 3NBS200N	30996	AQ3 M2I 4NBS200N	31026
225	AQ3 M2I 2NBS225N	30967	AQ3 M2I 3NBS225N	30997	AQ3 M2I 4NBS225N	31027
250	AQ3 M2I 2NBS250N	30968	AQ3 M2I 3NBS250N	30998	AQ3 M2I 4NBS250N	31028
315	AQ3 M2I 2NBS315N	31142	AQ3 M2I 3NBS315N	31166	AQ3 M2I 4NBS315N	31190
350	AQ3 M2I 2NBS350N	31143	AQ3 M2I 3NBS350N	31167	AQ3 M2I 4NBS350N	31191
400	AQ3 M2I 2NBS400N	31144	AQ3 M2I 3NBS400N	31168	AQ3 M2I 4NBS400N	31192
500	AQ3 M2I 2NBS500N	31145	AQ3 M2I 3NBS500N	31169	AQ3 M2I 4NBS500N	31193
Grid-Generator (NG)						
Model R: Automatic transfer with restoration						
20	AQ3 M2I 2NGR20N	10797	AQ3 M2I 3NGR20N	10851	AQ3 M2I 4NGR20N	10905
25	AQ3 M2I 2NGR25N	10798	AQ3 M2I 3NGR25N	10852	AQ3 M2I 4NGR25N	10906
32	AQ3 M2I 2NGR32N	10799	AQ3 M2I 3NGR32N	10853	AQ3 M2I 4NGR32N	10907
40	AQ3 M2I 2NGR40N	10800	AQ3 M2I 3NGR40N	10854	AQ3 M2I 4NGR40N	10908
50	AQ3 M2I 2NGR50N	10801	AQ3 M2I 3NGR50N	10855	AQ3 M2I 4NGR50N	10909
63	AQ3 M2I 2NGR63N	10802	AQ3 M2I 3NGR63N	10856	AQ3 M2I 4NGR63N	10910
80	AQ3 M2I 2NGR80N	10803	AQ3 M2I 3NGR80N	10857	AQ3 M2I 4NGR80N	10911
100	AQ3 M2I 2NGR100N	10804	AQ3 M2I 3NGR100N	10858	AQ3 M2I 4NGR100N	10912
125	AQ3 M2I 2NGR125N	10805	AQ3 M2I 3NGR125N	10859	AQ3 M2I 4NGR125N	10913
160	AQ3 M2I 2NGR160N	30974	AQ3 M2I 3NGR160N	31004	AQ3 M2I 4NGR160N	31034
180	AQ3 M2I 2NGR180N	30975	AQ3 M2I 3NGR180N	31005	AQ3 M2I 4NGR180N	31035
200	AQ3 M2I 2NGR200N	30976	AQ3 M2I 3NGR200N	31006	AQ3 M2I 4NGR200N	31036
225	AQ3 M2I 2NGR225N	30977	AQ3 M2I 3NGR225N	31007	AQ3 M2I 4NGR225N	31037
250	AQ3 M2I 2NGR250N	30978	AQ3 M2I 3NGR250N	31008	AQ3 M2I 4NGR250N	31038
315	AQ3 M2I 2NGR315N	31150	AQ3 M2I 3NGR315N	31174	AQ3 M2I 4NGR315N	31198
350	AQ3 M2I 2NGR350N	31151	AQ3 M2I 3NGR350N	31175	AQ3 M2I 4NGR350N	31199
400	AQ3 M2I 2NGR400N	31152	AQ3 M2I 3NGR400N	31176	AQ3 M2I 4NGR400N	31200
500	AQ3 M2I 2NGR500N	31153	AQ3 M2I 3NGR500N	31177	AQ3 M2I 4NGR500N	31201



Automatic Transfer Switches

Series 3SAQ3 PC Class

Selection and ordering data

M2 I versions equipped with external J-type controller unit

Rated current (A)	2P		3P		4P	
	Type code	Order code	Type code	Order code	Type code	Order code
Grid-Grid (NB)						
Model R: Automatic transfer with restoration						
20	Aq3 M2I 2NBR20J	10770	Aq3 M2I 3NBR20J	10824	Aq3 M2I 4NBR20J	10878
25	AQ3 M2I 2NBR25J	10771	AQ3 M2I 3NBR25J	10825	AQ3 M2I 4NBR25J	10879
32	AQ3 M2I 2NBR32J	10772	AQ3 M2I 3NBR32J	10826	AQ3 M2I 4NBR32J	10880
40	AQ3 M2I 2NBR40J	10773	AQ3 M2I 3NBR40J	10827	AQ3 M2I 4NBR40J	10881
50	AQ3 M2I 2NBR50J	10774	AQ3 M2I 3NBR50J	10828	AQ3 M2I 4NBR50J	10882
63	AQ3 M2I 2NBR63J	10775	AQ3 M2I 3NBR63J	10829	AQ3 M2I 4NBR63J	10883
80	AQ3 M2I 2NBR80J	10776	AQ3 M2I 3NBR80J	10830	AQ3 M2I 4NBR80J	10884
100	AQ3 M2I 2NBR100J	10777	AQ3 M2I 3NBR100J	10831	AQ3 M2I 4NBR100J	10885
125	AQ3 M2I 2NBR125J	10778	AQ3 M2I 3NBR125J	10832	AQ3 M2I 4NBR125J	10886
160	AQ3 M2I 2NBR160J	30959	AQ3 M2I 3NBR160J	30989	AQ3 M2I 4NBR160J	31019
180	AQ3 M2I 2NBR180J	30960	AQ3 M2I 3NBR180J	30990	AQ3 M2I 4NBR180J	31020
200	AQ3 M2I 2NBR200J	30961	AQ3 M2I 3NBR200J	30991	AQ3 M2I 4NBR200J	31021
225	AQ3 M2I 2NBR225J	30962	AQ3 M2I 3NBR225J	30992	AQ3 M2I 4NBR225J	31022
250	AQ3 M2I 2NBR250J	30963	AQ3 M2I 3NBR250J	30993	AQ3 M2I 4NBR250J	31023
315	AQ3 M2I 2NBR315J	31138	AQ3 M2I 3NBR315J	31162	AQ3 M2I 4NBR315J	31186
350	AQ3 M2I 2NBR350J	31139	AQ3 M2I 3NBR350J	31163	AQ3 M2I 4NBR350J	31187
400	AQ3 M2I 2NBR400J	31140	AQ3 M2I 3NBR400J	31164	AQ3 M2I 4NBR400J	31188
500	AQ3 M2I 2NBR500J	31141	AQ3 M2I 3NBR500J	31165	AQ3 M2I 4NBR500J	31189



Model S: Automatic transfer without restoration

20	AQ3 M2I 2NBS20J	10788	AQ3 M2I 3NBS20J	10842	AQ3 M2I 4NBS20J	10896
25	AQ3 M2I 2NBS25J	10789	AQ3 M2I 3NBS25J	10843	AQ3 M2I 4NBS25J	10897
32	AQ3 M2I 2NBS32J	10790	AQ3 M2I 3NBS32J	10844	AQ3 M2I 4NBS32J	10898
40	AQ3 M2I 2NBS40J	10791	AQ3 M2I 3NBS40J	10845	AQ3 M2I 4NBS40J	10899
50	AQ3 M2I 2NBS50J	10792	AQ3 M2I 3NBS50J	10846	AQ3 M2I 4NBS50J	10900
63	AQ3 M2I 2NBS63J	10793	AQ3 M2I 3NBS63J	10847	AQ3 M2I 4NBS63J	10901
80	AQ3 M2I 2NBS80J	10794	AQ3 M2I 3NBS80J	10848	AQ3 M2I 4NBS80J	10902
100	AQ3 M2I 2NBS100J	10795	AQ3 M2I 3NBS100J	10849	AQ3 M2I 4NBS100J	10903
125	AQ3 M2I 2NBS125J	10796	AQ3 M2I 3NBS125J	10850	AQ3 M2I 4NBS125J	10904
160	AQ3 M2I 2NBS160J	30969	AQ3 M2I 3NBS160J	30999	AQ3 M2I 4NBS160J	31029
180	AQ3 M2I 2NBS180J	30970	AQ3 M2I 3NBS180J	31000	AQ3 M2I 4NBS180J	31030
200	AQ3 M2I 2NBS200J	30971	AQ3 M2I 3NBS200J	31001	AQ3 M2I 4NBS200J	31031
225	AQ3 M2I 2NBS225J	30972	AQ3 M2I 3NBS225J	31002	AQ3 M2I 4NBS225J	31032
250	AQ3 M2I 2NBS250J	30973	AQ3 M2I 3NBS250J	31003	AQ3 M2I 4NBS250J	31033
315	AQ3 M2I 2NBS315J	31146	AQ3 M2I 3NBS315J	31170	AQ3 M2I 4NBS315J	31194
350	AQ3 M2I 2NBS350J	31147	AQ3 M2I 3NBS350J	31171	AQ3 M2I 4NBS350J	31195
400	AQ3 M2I 2NBS400J	31148	AQ3 M2I 3NBS400J	31172	AQ3 M2I 4NBS400J	31196
500	AQ3 M2I 2NBS500J	31149	AQ3 M2I 3NBS500J	31173	AQ3 M2I 4NBS500J	31197

Grid-Generator (NG)

Model R: Automatic transfer with restoration

20	AQ3 M2I 2NGR20J	10806	AQ3 M2I 3NGR20J	10860	AQ3 M2I 4NGR20J	10914
25	AQ3 M2I 2NGR25J	10807	AQ3 M2I 3NGR25J	10861	AQ3 M2I 4NGR25J	10915
32	AQ3 M2I 2NGR32J	10808	AQ3 M2I 3NGR32J	10862	AQ3 M2I 4NGR32J	10916
40	AQ3 M2I 2NGR40J	10809	AQ3 M2I 3NGR40J	10863	AQ3 M2I 4NGR40J	10917
50	AQ3 M2I 2NGR50J	10810	AQ3 M2I 3NGR50J	10864	AQ3 M2I 4NGR50J	10918
63	AQ3 M2I 2NGR63J	10811	AQ3 M2I 3NGR63J	10865	AQ3 M2I 4NGR63J	30788
80	AQ3 M2I 2NGR80J	10812	AQ3 M2I 3NGR80J	10866	AQ3 M2I 4NGR80J	30789
100	AQ3 M2I 2NGR100J	10813	AQ3 M2I 3NGR100J	10867	AQ3 M2I 4NGR100J	30790
125	AQ3 M2I 2NGR125J	10814	AQ3 M2I 3NGR125J	10868	AQ3 M2I 4NGR125J	30791
160	AQ3 M2I 2NGR160J	30979	AQ3 M2I 3NGR160J	31009	AQ3 M2I 4NGR160J	31039
180	AQ3 M2I 2NGR180J	30980	AQ3 M2I 3NGR180J	31010	AQ3 M2I 4NGR180J	31040
200	AQ3 M2I 2NGR200J	30981	AQ3 M2I 3NGR200J	31011	AQ3 M2I 4NGR200J	31041
225	AQ3 M2I 2NGR225J	30982	AQ3 M2I 3NGR225J	31012	AQ3 M2I 4NGR225J	31042
250	AQ3 M2I 2NGR250J	30983	AQ3 M2I 3NGR250J	31013	AQ3 M2I 4NGR250J	31043
315	AQ3 M2I 2NGR315J	31154	AQ3 M2I 3NGR315J	31178	AQ3 M2I 4NGR315J	31202
350	AQ3 M2I 2NGR350J	31155	AQ3 M2I 3NGR350J	31179	AQ3 M2I 4NGR350J	31203
400	AQ3 M2I 2NGR400J	31156	AQ3 M2I 3NGR400J	31180	AQ3 M2I 4NGR400J	31204
500	AQ3 M2I 2NGR500J	31157	AQ3 M2I 3NGR500J	31181	AQ3 M2I 4NGR500J	31205

Automatic Transfer Switches Series 3SAQ3 PC Class

Selection and ordering data

M3 II versions equipped with internal controller unit

Rated current (A)	2P		3P		4P	
	Type code	Order code	Type code	Order code	Type code	Order code
Grid-Grid (NB)						
Model R: Automatic transfer with restoration						
20	Aq3 M3II 2NBR20L	30792	Aq3 M3II 3NBR20L	30846	Aq3 M3II 4NBR20L	30900
25	AQ3 M3II 2NBR25L	30793	AQ3 M3II 3NBR25L	30847	AQ3 M3II 4NBR25L	30901
32	AQ3 M3II 2NBR32L	30794	AQ3 M3II 3NBR32L	30848	AQ3 M3II 4NBR32L	30902
40	AQ3 M3II 2NBR40L	30795	AQ3 M3II 3NBR40L	30849	AQ3 M3II 4NBR40L	30903
50	AQ3 M3II 2NBR50L	30796	AQ3 M3II 3NBR50L	30850	AQ3 M3II 4NBR50L	30904
63	AQ3 M3II 2NBR63L	30797	AQ3 M3II 3NBR63L	30851	AQ3 M3II 4NBR63L	30905
80	AQ3 M3II 2NBR80L	30798	AQ3 M3II 3NBR80L	30852	AQ3 M3II 4NBR80L	30906
100	AQ3 M3II 2NBR100L	30799	AQ3 M3II 3NBR100L	30853	AQ3 M3II 4NBR100L	30907
125	AQ3 M3II 2NBR125L	30800	AQ3 M3II 3NBR125L	30854	AQ3 M3II 4NBR125L	30908
160	AQ3 M3II 2NBR160L	31044	AQ3 M3II 3NBR160L	31074	AQ3 M3II 4NBR160L	31104
180	AQ3 M3II 2NBR180L	31045	AQ3 M3II 3NBR180L	31075	AQ3 M3II 4NBR180L	31105
200	AQ3 M3II 2NBR200L	31046	AQ3 M3II 3NBR200L	31076	AQ3 M3II 4NBR200L	31106
225	AQ3 M3II 2NBR225L	31047	AQ3 M3II 3NBR225L	31077	AQ3 M3II 4NBR225L	31107
250	AQ3 M3II 2NBR250L	31048	AQ3 M3II 3NBR250L	31078	AQ3 M3II 4NBR250L	31108
315	AQ3 M3II 2NBR315L	31206	AQ3 M3II 3NBR315L	31230	AQ3 M3II 4NBR315L	31254
350	AQ3 M3II 2NBR350L	31207	AQ3 M3II 3NBR350L	31231	AQ3 M3II 4NBR350L	31255
400	AQ3 M3II 2NBR400L	31208	AQ3 M3II 3NBR400L	31232	AQ3 M3II 4NBR400L	31256
500	AQ3 M3II 2NBR500L	31209	AQ3 M3II 3NBR500L	31233	AQ3 M3II 4NBR500L	31257
630	-	-	AQ3 M3II 3NBR630L	31278	AQ3 M3II 4NBR630L	31290
800	-	-	AQ3 M3II 3NBR800L	31279	AQ3 M3II 4NBR800L	31291
1000	-	-	AQ3 M3II 3NBR1000L	31302	AQ3 M3II 4NBR1000L	31344
1250	-	-	AQ3 M3II 3NBR1250L	31303	AQ3 M3II 4NBR1250L	31345
1600	-	-	AQ3 M3II 3NBR1600L	31304	AQ3 M3II 4NBR1600L	31346
2000	-	-	AQ3 M3II 3NBR2000L	31305	AQ3 M3II 4NBR2000L	31347
3150	-	-	AQ3 M3II 3NBR3150L	31306	AQ3 M3II 4NBR3150L	31348
4000	-	-	AQ3 M3II 3NBR4000L	31307	AQ3 M3II 4NBR4000L	31349
5000	-	-	AQ3 M3II 3NBR5000L	31308	AQ3 M3II 4NBR5000L	31350
Grid-Generator (NG)						
Model R: Automatic transfer with restoration						
20	AQ3 M3II 2NGR20L	30819	AQ3 M3II 3NGR20L	30873	AQ3 M3II 4NGR20L	30927
25	AQ3 M3II 2NGR25L	30820	AQ3 M3II 3NGR25L	30874	AQ3 M3II 4NGR25L	30928
32	AQ3 M3II 2NGR32L	30821	AQ3 M3II 3NGR32L	30875	AQ3 M3II 4NGR32L	30929
40	AQ3 M3II 2NGR40L	30822	AQ3 M3II 3NGR40L	30876	AQ3 M3II 4NGR40L	30930
50	AQ3 M3II 2NGR50L	30823	AQ3 M3II 3NGR50L	30877	AQ3 M3II 4NGR50L	30931
63	AQ3 M3II 2NGR63L	30824	AQ3 M3II 3NGR63L	30878	AQ3 M3II 4NGR63L	30932
80	AQ3 M3II 2NGR80L	30825	AQ3 M3II 3NGR80L	30879	AQ3 M3II 4NGR80L	30933
100	AQ3 M3II 2NGR100L	30826	AQ3 M3II 3NGR100L	30880	AQ3 M3II 4NGR100L	30934
125	AQ3 M3II 2NGR125L	30827	AQ3 M3II 3NGR125L	30881	AQ3 M3II 4NGR125L	30935
160	AQ3 M3II 2NGR160L	31059	AQ3 M3II 3NGR160L	31089	AQ3 M3II 4NGR160L	31119
180	AQ3 M3II 2NGR180L	31060	AQ3 M3II 3NGR180L	31090	AQ3 M3II 4NGR180L	31120
200	AQ3 M3II 2NGR200L	31061	AQ3 M3II 3NGR200L	31091	AQ3 M3II 4NGR200L	31121
225	AQ3 M3II 2NGR225L	31062	AQ3 M3II 3NGR225L	31092	AQ3 M3II 4NGR225L	31122
250	AQ3 M3II 2NGR250L	31063	AQ3 M3II 3NGR250L	31093	AQ3 M3II 4NGR250L	31123
315	AQ3 M3II 2NGR315L	31218	AQ3 M3II 3NGR315L	31242	AQ3 M3II 4NGR315L	31266
350	AQ3 M3II 2NGR350L	31219	AQ3 M3II 3NGR350L	31243	AQ3 M3II 4NGR350L	31267
400	AQ3 M3II 2NGR400L	31220	AQ3 M3II 3NGR400L	31244	AQ3 M3II 4NGR400L	31268
500	AQ3 M3II 2NGR500L	31221	AQ3 M3II 3NGR500L	31245	AQ3 M3II 4NGR500L	31269
630	-	-	AQ3 M3II 3NGR630L	31284	AQ3 M3II 4NGR630L	31296
800	-	-	AQ3 M3II 3NGR800L	31285	AQ3 M3II 4NGR800L	31297
1000	-	-	AQ3 M3II 3NGR1000L	31323	AQ3 M3II 4NGR1000L	31365
1250	-	-	AQ3 M3II 3NGR1250L	31324	AQ3 M3II 4NGR1250L	31366
1600	-	-	AQ3 M3II 3NGR1600L	31325	AQ3 M3II 4NGR1600L	31367
2000	-	-	AQ3 M3II 3NGR2000L	31326	AQ3 M3II 4NGR2000L	31368
3150	-	-	AQ3 M3II 3NGR3150L	31327	AQ3 M3II 4NGR3150L	31369
4000	-	-	AQ3 M3II 3NGR4000L	31328	AQ3 M3II 4NGR4000L	31370
5000	-	-	AQ3 M3II 3NGR5000L	31329	AQ3 M3II 4NGR5000L	31371

- Not available

Automatic Transfer Switches

Series 3SAQ3 PC Class

Selection and ordering data

M3 II versions equipped with external J-type controller unit

Rated current (A)	2P		3P		4P	
	Type code	Order code	Type code	Order code	Type code	Order code
Grid-Grid (NB)						
Model R: Automatic transfer with restoration						
20	Aq3 M3II 2NBR20J	30801	Aq3 M3II 3NBR20J	30855	Aq3 M3II 4NBR20J	30909
25	AQ3 M3II 2NBR25J	30802	AQ3 M3II 3NBR25J	30856	AQ3 M3II 4NBR25J	30910
32	AQ3 M3II 2NBR32J	30803	AQ3 M3II 3NBR32J	30857	AQ3 M3II 4NBR32J	30911
40	AQ3 M3II 2NBR40J	30804	AQ3 M3II 3NBR40J	30858	AQ3 M3II 4NBR40J	30912
50	AQ3 M3II 2NBR50J	30805	AQ3 M3II 3NBR50J	30859	AQ3 M3II 4NBR50J	30913
63	AQ3 M3II 2NBR63J	30806	AQ3 M3II 3NBR63J	30860	AQ3 M3II 4NBR63J	30914
80	AQ3 M3II 2NBR80J	30807	AQ3 M3II 3NBR80J	30861	AQ3 M3II 4NBR80J	30915
100	AQ3 M3II 2NBR100J	30808	AQ3 M3II 3NBR100J	30862	AQ3 M3II 4NBR100J	30916
125	AQ3 M3II 2NBR125J	30809	AQ3 M3II 3NBR125J	30863	AQ3 M3II 4NBR125J	30917
160	AQ3 M3II 2NBR160J	31049	AQ3 M3II 3NBR160J	31079	AQ3 M3II 4NBR160J	31109
180	AQ3 M3II 2NBR180J	31050	AQ3 M3II 3NBR180J	31080	AQ3 M3II 4NBR180J	31110
200	AQ3 M3II 2NBR200J	31051	AQ3 M3II 3NBR200J	31081	AQ3 M3II 4NBR200J	31111
225	AQ3 M3II 2NBR225J	31052	AQ3 M3II 3NBR225J	31082	AQ3 M3II 4NBR225J	31112
250	AQ3 M3II 2NBR250J	31053	AQ3 M3II 3NBR250J	31083	AQ3 M3II 4NBR250J	31113
315	AQ3 M3II 2NBR315J	31210	AQ3 M3II 3NBR315J	31234	AQ3 M3II 4NBR315J	31258
350	AQ3 M3II 2NBR350J	31211	AQ3 M3II 3NBR350J	31235	AQ3 M3II 4NBR350J	31259
400	AQ3 M3II 2NBR400J	31212	AQ3 M3II 3NBR400J	31236	AQ3 M3II 4NBR400J	31260
500	AQ3 M3II 2NBR500J	31213	AQ3 M3II 3NBR500J	31237	AQ3 M3II 4NBR500J	31261
630	-	-	AQ3 M3II 3NBR630J	31280	AQ3 M3II 4NBR630J	31292
800	-	-	AQ3 M3II 3NBR800J	31281	AQ3 M3II 4NBR800J	31293
1000	-	-	AQ3 M3II 3NBR1000J	31309	AQ3 M3II 4NBR1000J	31351
1250	-	-	AQ3 M3II 3NBR1250J	31310	AQ3 M3II 4NBR1250J	31352
1600	-	-	AQ3 M3II 3NBR1600J	31311	AQ3 M3II 4NBR1600J	31353
2000	-	-	AQ3 M3II 3NBR2000J	31312	AQ3 M3II 4NBR2000J	31354
3150	-	-	AQ3 M3II 3NBR3150J	31313	AQ3 M3II 4NBR3150J	31355
4000	-	-	AQ3 M3II 3NBR4000J	31314	AQ3 M3II 4NBR4000J	31356
5000	-	-	AQ3 M3II 3NBR5000J	31315	AQ3 M3II 4NBR5000J	31357
Grid-Generator (NG)						
Model R: Automatic transfer with restoration						
20	AQ3 M3II 2NGR20J	30828	AQ3 M3II 3NGR20J	30882	AQ3 M3II 4NGR20J	30936
25	AQ3 M3II 2NGR25J	30829	AQ3 M3II 3NGR25J	30883	AQ3 M3II 4NGR25J	30937
32	AQ3 M3II 2NGR32J	30830	AQ3 M3II 3NGR32J	30884	AQ3 M3II 4NGR32J	30938
40	AQ3 M3II 2NGR40J	30831	AQ3 M3II 3NGR40J	30885	AQ3 M3II 4NGR40J	30939
50	AQ3 M3II 2NGR50J	30832	AQ3 M3II 3NGR50J	30886	AQ3 M3II 4NGR50J	30940
63	AQ3 M3II 2NGR63J	30833	AQ3 M3II 3NGR63J	30887	AQ3 M3II 4NGR63J	30941
80	AQ3 M3II 2NGR80J	30834	AQ3 M3II 3NGR80J	30888	AQ3 M3II 4NGR80J	30942
100	AQ3 M3II 2NGR100J	30835	AQ3 M3II 3NGR100J	30889	AQ3 M3II 4NGR100J	30943
125	AQ3 M3II 2NGR125J	30836	AQ3 M3II 3NGR125J	30890	AQ3 M3II 4NGR125J	30944
160	AQ3 M3II 2NGR160J	31064	AQ3 M3II 3NGR160J	31094	AQ3 M3II 4NGR160J	31124
180	AQ3 M3II 2NGR180J	31065	AQ3 M3II 3NGR180J	31095	AQ3 M3II 4NGR180J	31125
200	AQ3 M3II 2NGR200J	31066	AQ3 M3II 3NGR200J	31096	AQ3 M3II 4NGR200J	31126
225	AQ3 M3II 2NGR225J	31067	AQ3 M3II 3NGR225J	31097	AQ3 M3II 4NGR225J	31127
250	AQ3 M3II 2NGR250J	31068	AQ3 M3II 3NGR250J	31098	AQ3 M3II 4NGR250J	31128
315	AQ3 M3II 2NGR315J	31222	AQ3 M3II 3NGR315J	31246	AQ3 M3II 4NGR315J	31270
350	AQ3 M3II 2NGR350J	31223	AQ3 M3II 3NGR350J	31247	AQ3 M3II 4NGR350J	31271
400	AQ3 M3II 2NGR400J	31224	AQ3 M3II 3NGR400J	31248	AQ3 M3II 4NGR400J	31272
500	AQ3 M3II 2NGR500J	31225	AQ3 M3II 3NGR500J	31249	AQ3 M3II 4NGR500J	31273
630	-	-	AQ3 M3II 3NGR630J	31286	AQ3 M3II 4NGR630J	31298
800	-	-	AQ3 M3II 3NGR800J	31287	AQ3 M3II 4NGR800J	31299
1000	-	-	AQ3 M3II 3NGR1000J	31330	AQ3 M3II 4NGR1000J	31372
1250	-	-	AQ3 M3II 3NGR1250J	31331	AQ3 M3II 4NGR1250J	31373
1600	-	-	AQ3 M3II 3NGR1600J	31332	AQ3 M3II 4NGR1600J	31374
2000	-	-	AQ3 M3II 3NGR2000J	31333	AQ3 M3II 4NGR2000J	31375
3150	-	-	AQ3 M3II 3NGR3150J	31334	AQ3 M3II 4NGR3150J	31376
4000	-	-	AQ3 M3II 3NGR4000J	31335	AQ3 M3II 4NGR4000J	31377
5000	-	-	AQ3 M3II 3NGR5000J	31336	AQ3 M3II 4NGR5000J	31378

- Not available



Automatic Transfer Switches Series 3SAQ3 PC Class

Selection and ordering data

M3 II versions equipped with external LCD display controller unit

Rated current (A)	2P		3P		4P	
	Type code	Order code	Type code	Order code	Type code	Order code
Grid-Grid (NB)						
Model R: Automatic transfer with restoration						
20	Aq3 M3II 2NBR20C	30810	Aq3 M3II 3NBR20C	30864	Aq3 M3II 4NBR20C	30918
25	AQ3 M3II 2NBR25C	30811	AQ3 M3II 3NBR25C	30865	AQ3 M3II 4NBR25C	30919
32	AQ3 M3II 2NBR32C	30812	AQ3 M3II 3NBR32C	30866	AQ3 M3II 4NBR32C	30920
40	AQ3 M3II 2NBR40C	30813	AQ3 M3II 3NBR40C	30867	AQ3 M3II 4NBR40C	30921
50	AQ3 M3II 2NBR50C	30814	AQ3 M3II 3NBR50C	30868	AQ3 M3II 4NBR50C	30922
63	AQ3 M3II 2NBR63C	30815	AQ3 M3II 3NBR63C	30869	AQ3 M3II 4NBR63C	30923
80	AQ3 M3II 2NBR80C	30816	AQ3 M3II 3NBR80C	30870	AQ3 M3II 4NBR80C	30924
100	AQ3 M3II 2NBR100C	30817	AQ3 M3II 3NBR100C	30871	AQ3 M3II 4NBR100C	30925
125	AQ3 M3II 2NBR125C	30818	AQ3 M3II 3NBR125C	30872	AQ3 M3II 4NBR125C	30926
160	AQ3 M3II 2NBR160C	31054	AQ3 M3II 3NBR160C	31084	AQ3 M3II 4NBR160C	31114
180	AQ3 M3II 2NBR180C	31055	AQ3 M3II 3NBR180C	31085	AQ3 M3II 4NBR180C	31115
200	AQ3 M3II 2NBR200C	31056	AQ3 M3II 3NBR200C	31086	AQ3 M3II 4NBR200C	31116
225	AQ3 M3II 2NBR225C	31057	AQ3 M3II 3NBR225C	31087	AQ3 M3II 4NBR225C	31117
250	AQ3 M3II 2NBR250C	31058	AQ3 M3II 3NBR250C	31088	AQ3 M3II 4NBR250C	31118
315	AQ3 M3II 2NBR315C	31214	AQ3 M3II 3NBR315C	31238	AQ3 M3II 4NBR315C	31262
350	AQ3 M3II 2NBR350C	31215	AQ3 M3II 3NBR350C	31239	AQ3 M3II 4NBR350C	31263
400	AQ3 M3II 2NBR400C	31216	AQ3 M3II 3NBR400C	31240	AQ3 M3II 4NBR400C	31264
500	AQ3 M3II 2NBR500C	31217	AQ3 M3II 3NBR500C	31241	AQ3 M3II 4NBR500C	31265
630	-	-	AQ3 M3II 3NBR630C	31282	AQ3 M3II 4NBR630C	31294
800	-	-	AQ3 M3II 3NBR800C	31283	AQ3 M3II 4NBR800C	31295
1000	-	-	AQ3 M3II 3NBR1000C	31316	AQ3 M3II 4NBR1000C	31358
1250	-	-	AQ3 M3II 3NBR1250C	31317	AQ3 M3II 4NBR1250C	31359
1600	-	-	AQ3 M3II 3NBR1600C	31318	AQ3 M3II 4NBR1600C	31360
2000	-	-	AQ3 M3II 3NBR2000C	31319	AQ3 M3II 4NBR2000C	31361
3150	-	-	AQ3 M3II 3NBR3150C	31320	AQ3 M3II 4NBR3150C	31362
4000	-	-	AQ3 M3II 3NBR4000C	31321	AQ3 M3II 4NBR4000C	31363
5000	-	-	AQ3 M3II 3NBR5000C	31322	AQ3 M3II 4NBR5000C	31364
Grid-Generator (NG)						
Model R: Automatic transfer with restoration						
20	AQ3 M3II 2NGR20C	30837	AQ3 M3II 3NGR20C	30891	AQ3 M3II 4NGR20C	30945
25	AQ3 M3II 2NGR25C	30838	AQ3 M3II 3NGR25C	30892	AQ3 M3II 4NGR25C	30946
32	AQ3 M3II 2NGR32C	30839	AQ3 M3II 3NGR32C	30893	AQ3 M3II 4NGR32C	30947
40	AQ3 M3II 2NGR40C	30840	AQ3 M3II 3NGR40C	30894	AQ3 M3II 4NGR40C	30948
50	AQ3 M3II 2NGR50C	30841	AQ3 M3II 3NGR50C	30895	AQ3 M3II 4NGR50C	30949
63	AQ3 M3II 2NGR63C	30842	AQ3 M3II 3NGR63C	30896	AQ3 M3II 4NGR63C	30950
80	AQ3 M3II 2NGR80C	30843	AQ3 M3II 3NGR80C	30897	AQ3 M3II 4NGR80C	30951
100	AQ3 M3II 2NGR100C	30844	AQ3 M3II 3NGR100C	30898	AQ3 M3II 4NGR100C	30952
125	AQ3 M3II 2NGR125C	30845	AQ3 M3II 3NGR125C	30899	AQ3 M3II 4NGR125C	30953
160	AQ3 M3II 2NGR160C	31069	AQ3 M3II 3NGR160C	31099	AQ3 M3II 4NGR160C	31129
180	AQ3 M3II 2NGR180C	31070	AQ3 M3II 3NGR180C	31100	AQ3 M3II 4NGR180C	31130
200	AQ3 M3II 2NGR200C	31071	AQ3 M3II 3NGR200C	31101	AQ3 M3II 4NGR200C	31131
225	AQ3 M3II 2NGR225C	31072	AQ3 M3II 3NGR225C	31102	AQ3 M3II 4NGR225C	31132
250	AQ3 M3II 2NGR250C	31073	AQ3 M3II 3NGR250C	31103	AQ3 M3II 4NGR250C	31133
315	AQ3 M3II 2NGR315C	31226	AQ3 M3II 3NGR315C	31250	AQ3 M3II 4NGR315C	31274
350	AQ3 M3II 2NGR350C	31227	AQ3 M3II 3NGR350C	31251	AQ3 M3II 4NGR350C	31275
400	AQ3 M3II 2NGR400C	31228	AQ3 M3II 3NGR400C	31252	AQ3 M3II 4NGR400C	31276
500	AQ3 M3II 2NGR500C	31229	AQ3 M3II 3NGR500C	31253	AQ3 M3II 4NGR500C	31277
630	-	-	AQ3 M3II 3NGR630C	31288	AQ3 M3II 4NGR630C	31300
800	-	-	AQ3 M3II 3NGR800C	31289	AQ3 M3II 4NGR800C	31301
1000	-	-	AQ3 M3II 3NGR1000C	31337	AQ3 M3II 4NGR1000C	31379
1250	-	-	AQ3 M3II 3NGR1250C	31338	AQ3 M3II 4NGR1250C	31380
1600	-	-	AQ3 M3II 3NGR1600C	31339	AQ3 M3II 4NGR1600C	31381
2000	-	-	AQ3 M3II 3NGR2000C	31340	AQ3 M3II 4NGR2000C	31382
3150	-	-	AQ3 M3II 3NGR3150C	31341	AQ3 M3II 4NGR3150C	31383
4000	-	-	AQ3 M3II 3NGR4000C	31342	AQ3 M3II 4NGR4000C	31384
5000	-	-	AQ3 M3II 3NGR5000C	31343	AQ3 M3II 4NGR5000C	31385

- Not available

Load Break Switches Series 3SGL

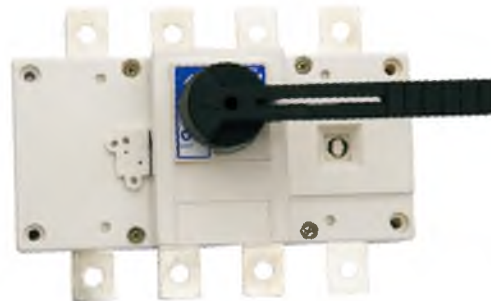
Applications and functions

- Making, breaking and disconnecting under load conditions
- Providing safety isolation for any low voltage circuit

1

Instruction of type code

GL	125	A	I	F	3
Series code	Conventional thermal current	Operating voltage type poles	Handle type	Operation type	Poles: 3: 3P; 4: 4P
	125 160 250 400 630	A: AC voltage	I: Internal handle E: External handle	F: Front operation	




Technical specifications

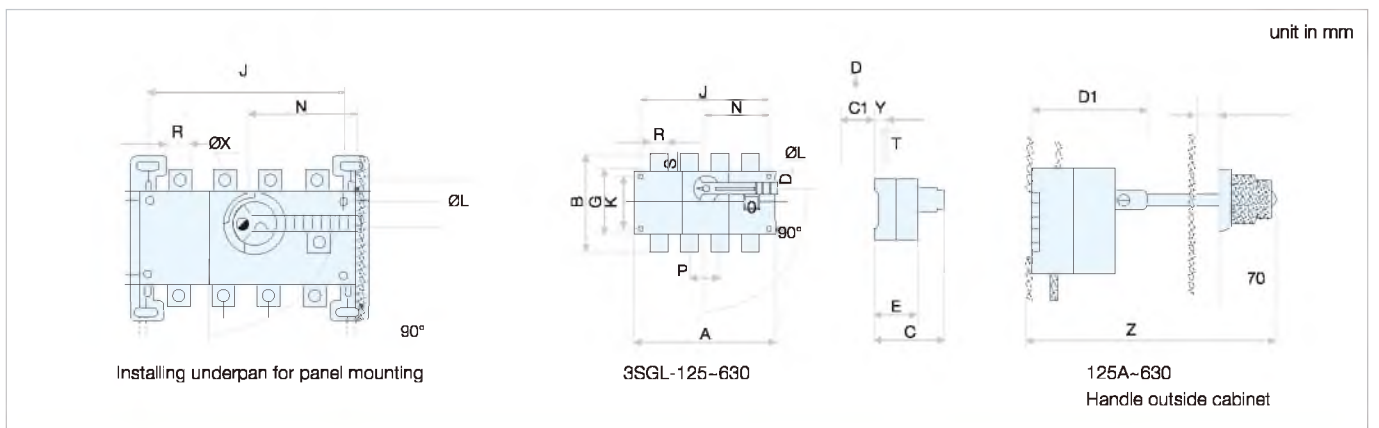
Type	3SGL-125	3SGL-160	3SGL-250	3SGL-400	3SGL-630
Standard	IEC60947-3				
Conventional thermal current Ith (A)	125	160	250	400	630
Rated voltage (V)	400				
Rated insulation voltage (V)	800				
Number of poles	3, 4	3, 4	3, 4	3, 4	3, 4
Rated frequency (Hz)	50/60	50/60	50/60	50/60	50/60
400V,AC22B	125	160	250	400	630
690V,AC21B	125	160	250	315	500
400V,DC22	125	160	250	400	630
690V,DC21	125	160	200	315	500
Rated short-time with stand current Icw (kA) for 1 S	10	10	12	20	25
Rated making capability I _m in AC23 400V (A)	1250	1250	2000	4000	4000
Rated breaking capability I _{bn} in AC23 400V (A)	1000	1000	1600	2500	3200
Mechanical life (times)	10000	10000	8000	5500	5500
Degree of protection (operator side)	IP20				
Operation torque (Nm)	6.5	6.5	10	14.5	14.5
Ambient temperature	-5 to +40°C, max. 95% humidity				
Storage temperature	-40 to +75°C				
Altitude (Max)	2000				

Load Break Switches Series 3SGL

Selection and ordering data

	Number of poles	Rated current In (A)	Type Code	Order Code	
	Handle in cabinet	3	GL125AIF3	31428	
			GL160AIF3	10919	
			GL250AIF3	10920	
		4	GL400AIF3	10921	
			GL630AIF3	10922	
			GL125AIF4	31429	
	Handle outside cabinet	3	125	GL125AEF3	31430
				GL160AEF3	10937
				GL250AEF3	10938
			4	GL400AEF3	10939
				GL630AEF3	10940
				GL125AEF4	31431
4		160	GL160AEF4	10946	
			GL250AEF4	10947	
			GL400AEF4	10948	
		630	GL630AEF4	10949	

Outline and installation dimensions



Current	Poles	A	B	C	D	E	φL	J	D	N	P	R	U	ØX	Y	Z
125-160 A	3P	140	135	125	27	73	5.5	120	65	85	36	20	85	9	25	226
	4P	170	135	125	27	73	5.5	150	65	85	36	20	85	9	25	226
250 A	3P	180	170	138	35	86	5.5	160	90	115	50	25	110	11	25	236
	4P	230	170	138	35	86	5.5	210	90	115	50	25	110	11	25	236
400 A	3P	230	240	169	50	113	7	210	140	145	65	32	160	11	37	276
	4P	230	260	169	50	113	7	210	140	145	65	40	160	11	37	276
630 A	3P	290	240	169	50	113	7	270	140	145	65	32	160	11	37	276
	4P	290	260	169	50	113	7	270	140	145	65	32	160	13	37	276

Fuse Combination Switches

Series 3SGLR

Applications and functions

- Breaking or switching off on load
- Safety isolation and protection against over current for any low voltage electrical circuit
- Providing a guarantee of reliable breaking and protection from power distribution to motor protection

Instruction of type code

GLR	160	A	I	F	3
					Poles: 3: 3P; 4: 4P
					Operation type F: Front operation
					Handle type I: Internal handle E: External handle
					Operating voltage type poles A: AC voltage
					Conventional thermal current 160 250 400 630
					Series code




Technical specifications

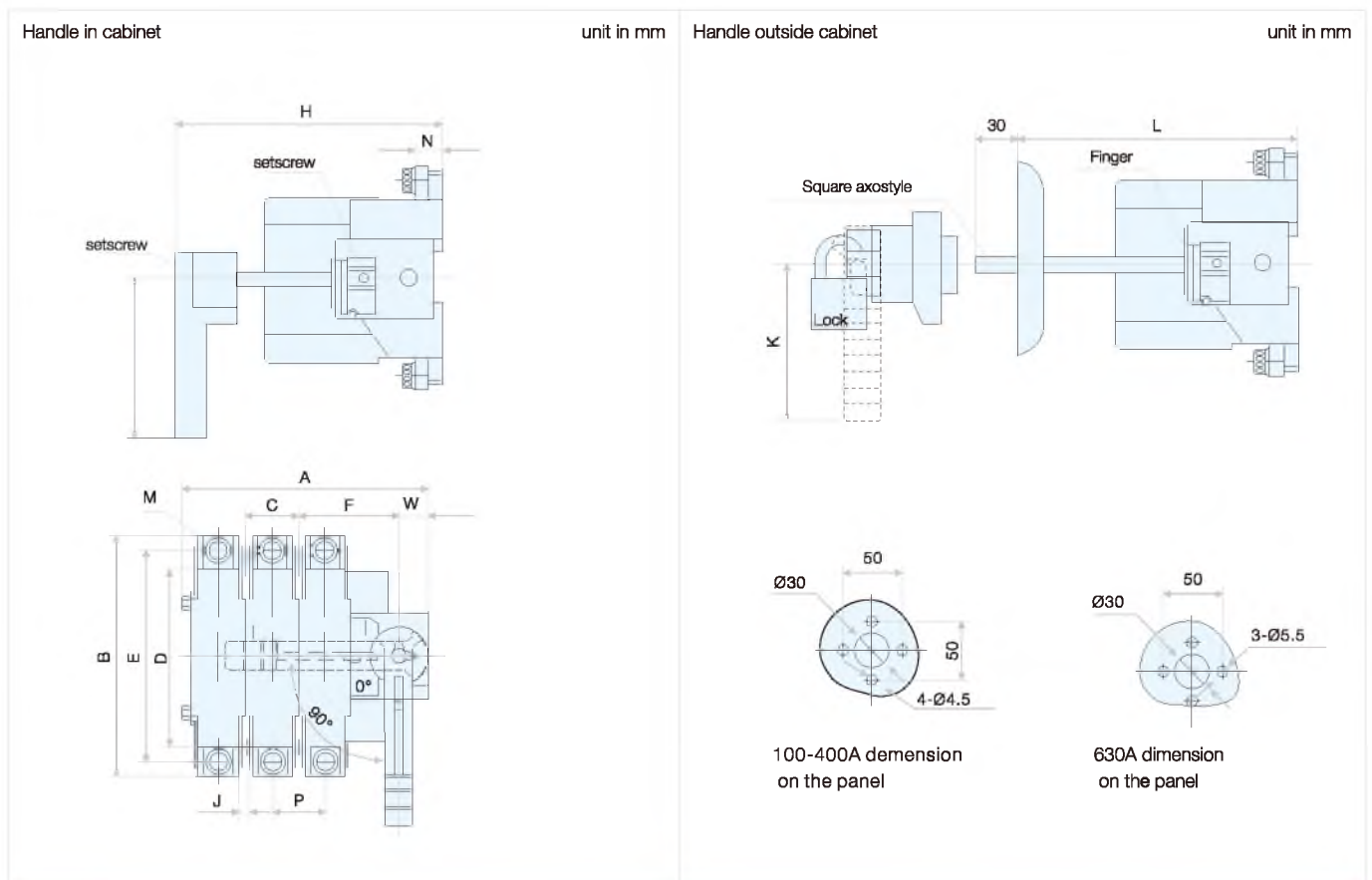
Type	3SGLR-160	3SGLR-250	3SGLR-400	3SGLR-630
Standard	IEC60947-3			
Conventional thermal current Ith (A)	160	250	400	630
Rated voltage (V)	400			
Rated insulation voltage (V)	690			
Number of poles	3, 4	3, 4	3, 4	3, 4
Rated frequency (Hz)	50/60	50/60	50/60	50/60
Associated fuse (Size)	00	1	12	13
Associated current (A)				
400V,AC21B (A)	160	250	400	630
400V,AC22B (A)	160	250	400	630
690V,AC22B (A)	100	250	315	425
690V,AC22B (A)	100	250	315	425
230V,DC21 (A)	160	250	400	630
230V,DC22 (A)	160	250	400	630
440V,DC21 (A)	100	250	315	425
440V,DC22 (A)	100	250	315	425
Rated breaking capability Icn in AC23 401V (kA)	10	10	20	35
Mechanical life (times)	10000	8000	5500	5500
Degree of protection (operator side)				
Operation torque (N.m)	6.5	10	14.5	14.5
Ambient temperature	-5 to +40 °C , max. 95% humidity			
Storage temperature	-40 to +75 °C			
Altitude (Max)	2000			

Fuse Combination Switches Series 3SGLR

Selection and ordering data

	Number of poles	Rated current In (A)	LV HRC Fuse links (size)	Type code		
				Type code	Order code	
	Handle in cabinet	3	160	00	GLR160AIF3	11010
			250	1	GLR250AIF3	11011
			400	2	GLR400AIF3	11012
			630	3	GLR630AIF3	11013
	4	160	00	GLR160AIF4	11014	
		250	1	GLR250AIF4	11015	
		400	2	GLR400AIF4	11016	
		630	3	GLR630AIF4	11017	
Handle outside cabinet	3	160	00	GLR160AEF3	11021	
		250	1	GLR250AEF3	11022	
		400	2	GLR400AEF3	11023	
		630	3	GLR630AEF3	11024	
	4	160	00	GLR160AEF4	11025	
		250	1	GLR250AEF4	11026	
		400	2	GLR400AEF4	11027	
		630	3	GLR630AEF4	11028	

Outline and installation dimensions



Specification	A	B	C	D	E	F	H	I	J	L	M	N	W	P	K
3SGLR-160/3	165	162	36	120	142	67.5	190	5.5	115	205~325	8	19	21	36	126
3SGLR-160/4	202	162	36	120	142	67.5	190	5.5	115	205~325	8	19	21	36	126
3SGLR-250/3	240	195	60	160	166	91.5	210	5.5	145	205~325	10	19	21	60	126
3SGLR-250/4	300	195	60	160	166	91.5	210	5.5	145	205~325	10	19	21	60	126
3SGLR-400/3	280	205	66	170	176	122	210	5.5	145	205~325	10	25	21	66	126
3SGLR-400/4	346	205	66	170	176	122	210	5.5	145	205~325	10	25	21	66	126
3SGLR-630/3	346	300	250	250	288	39	350	Ø9	190	330~440	12	72	37	80	190
3SGLR-630/4	426	300	250	250	288	39	350	Ø9	190	330~440	12	72	37	80	190

Fuse Disconnecter Switches Series 3SHR17

Applications and functions

- Short circuit protection in the distribution and motor circuit
- To be power switch, isolating switch, emergency switch
- Used in the distribution circuit and motor circuit



Instruction of type code

HR17	160	3	0
Series code	Conventional thermal current	Poles: 3: 3P; 4: 4P	Micro-switch 0: Without micro-switch
	160		
	250		
	400		
	630		

Technical specifications

Type	3SHR17-160	3SHR17-250	3SHR17-400	3SHR17-630
Standard	IEC60947-3			
Conventional thermal current Ith (A)	160	250	400	630
Rated insulation voltage (V)	800	800	800	800
Rated current (A)	160	250	400	630
Associated fuse (SIZE)	0	1	2	3
Number of poles	3,4	3,4	3,4	3,4
Rated frequency (HZ)	50/60	50/60	50/60	50/60
Rated operational voltage Ue (VAC)	690	690	690	690
Rated Insulation voltage Ui (VAC)	800	800	800	800
Rated conditional short-circuit current with fuses (size/A)	00/160	1/250	2/400	3/630
Rated breaking capacity at 500/690 V AC (KA)	50	50	50	50
Utilization category	AC-21B (690V) AC-22B (500V) AC-23B (400V)	AC-21B (690V) AC-22B (500V) AC-23B (400V)	AC-21B (690V) AC-22B (500V) AC-23B (400V)	AC-21B (690V) AC-22B (500V) AC-23B (400V)
Rated making capacity (A)	725V 240A 525V 480A 420V 1600A	725V 375A 525V 750A 420V 2500A	725V 600A 525V 1200A 420V 4000A	725V 945A 525V 1890A 420V 6300A
Rated breaking capacity	725V 240A 525V 480A 420V 1280A	725V 375A 525V 750A 420V 2000A	725V 600A 525V 1200A 420V 3200A	725V 945A 525V 1890A 420V 6300A
Power consumption of fuse (W)	12	24	34	48
Permissible ambient temperature	-5 ... +45 for operation, -45 ... +60 during storage			
Mechanical endurance ,operating cycles	1000	800	800	800
Degree of protection (operator side)	IP20			

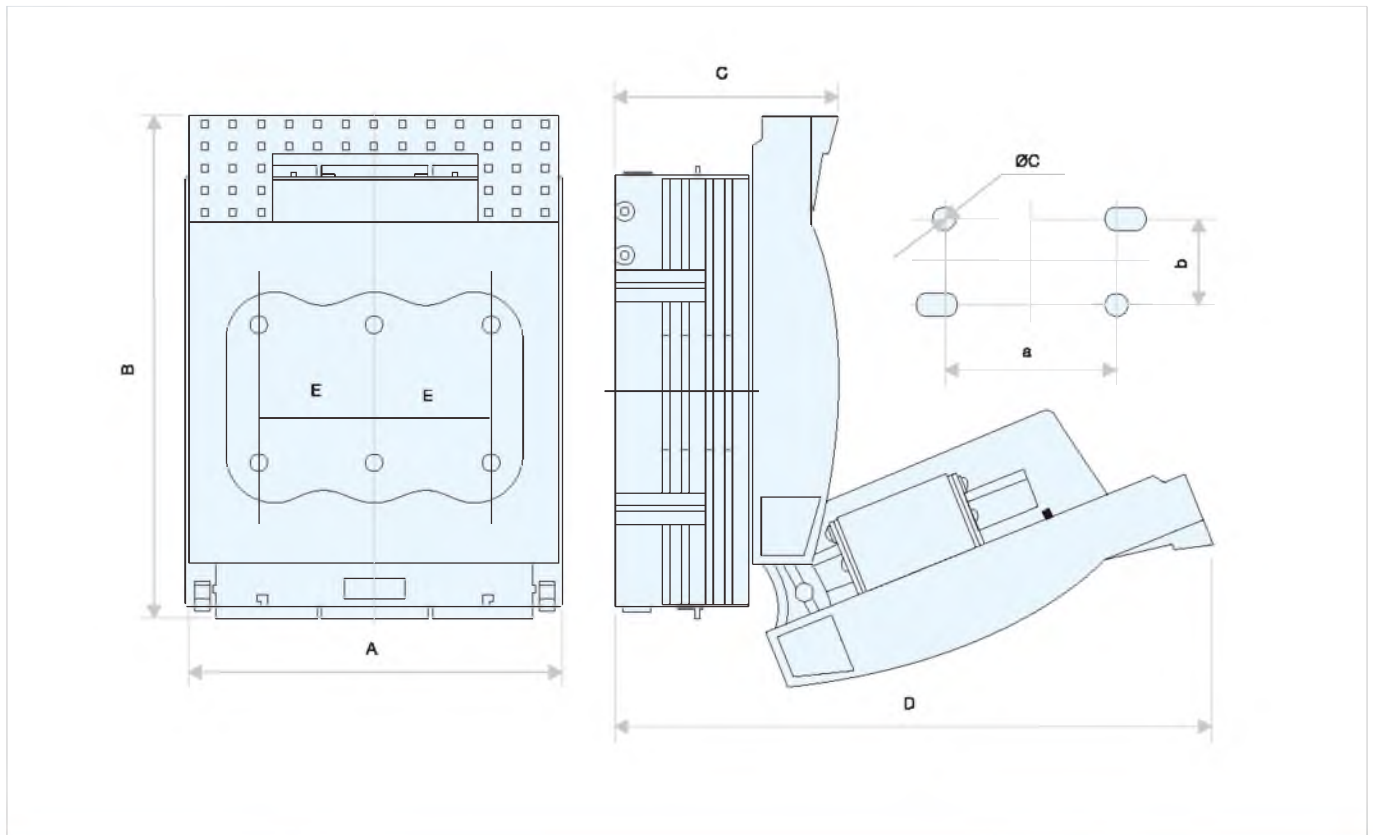
Fuse Disconnecter Switches Series 3SHR17

Selection and ordering data



Number of poles	Rated current In (A)	LV HRC fuse links (Size)	Ordering data	
			Type code	Order code
3P	160	00	HR1716030	11037
	250	1	HR1725030	11038
	400	2	HR1740030	11039
	630	3	HR1763030	11040
4P	160	00	HR1716040	11043
	250	1	HR1725040	11044
	400	2	HR1740040	11045
	630	3	HR1763040	11046

Mounting dimensions



Type		Overall size (mm)					Mounting dimensions (mm)		
		A	B	C	D	E	a	b	c
3SHR17-160	3P	106	200	83	205	33	66	25	Ø 7
	4P	138	200	83	205	33	100	25	Ø 7
3SHR17-250	3P	185	247	110	295	57	114	50	Ø 11
	4P	242	247	110	295	57	172	50	Ø 11
3SHR17-400	3P	210	290	125	340	65	130	50	Ø 11
	4P	276	290	125	340	65	195	50	Ø 11
3SHR17-630	3P	256	300	145	360	81	162	50	Ø 11
	4P	340	300	145	360	81	243	50	Ø 11

Low Voltage Fuses

Series RT16

Applications and functions

- Connecting and disconnecting circuits under load
- Protection against overloads and short circuits Used for installation systems in non-residential, commercial and industrial buildings as well as in systems of power supply companies.

1

Instruction of type code

10 Rt16 G 00C

Blade size
00C, 00, 0, 1, 2, 3, 4

Protection type
G: Circuit protection

Series code

Rated current

10, 16, 20, 25, 32, 40, 50, 63, 80, 100 (Size 00C)
 10, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160 (Size 00)
 10, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160 (Size 0)
 63, 80, 100, 125, 160, 200, 225, 250 (Size 1)
 125, 160, 200, 225, 250, 300, 315, 355, 400 (Size 2)
 160, 200, 225, 250, 300, 315, 355, 400, 500, 630 (Size 3)
 800, 1000 (Size 4)



Technical specifications








Size	00C	00	0	1	2	3	4
Standard	IEC60269						
Frame current I _{nm} (A)	160	160	160	250	400	630	1000
Rated current I _n (A)	10, 16, 20, 25 32, 40, 50, 63 80, 100	10, 16, 20, 25 32, 40, 50, 63 80, 100, 125	10, 16, 20, 25 32, 40, 50, 63 80, 100, 125, 160	63, 80, 100 125, 160, 200 225, 250	125, 160, 200 225, 250, 300 315, 355, 630	160, 200, 225, 250, 300, 315, 355, 400, 500, 630	800, 100
Rated voltage U _n (V AC)	500/660						
Rated frequency (Hz)	50/60						
Rated breaking capacity (KA)	120	120	120	120	120	120	120
Ambient temperature	-5 to +40°C, max. 95% humidity						
Storage temperature	-40 to +75°C						

Selection and ordering data

LV HRC fuse bases	Size	Matched fuse	Maximum rated voltage (V)	Rated current I _n (A)	Type code	Order code
	RT16G00/00C	Blade Size 00/00C	500	60	RT16-00-B	24679
	RT16G0	Blade Size 0	500	160	RT16-0-B	24680
	RT16G1	Blade Size 1	500	250	RT16-1-B	24681
	RT16G2	Blade Size 2	500	400	RT16-2-B	24682
	RT16G3	Blade Size 3	500	630	RT16-3-B	24683
	RT16G4	Blade Size 4	500	1000	RT16-4-B	24684

Low Voltage Fuses Series RT16

Selection and ordering data

LV HRC fuse core	Fuse type	Matched fuse base	Maximum rated voltage (V)	Rated current	
				In (A)	Type code Order code
	Blade Size 00C	RT16-00-B	500/660	10	10RT16G00C 24611
				16	16RT16G00C 24612
				20	20RT16G00C 24613
				25	25RT16G00C 24614
				32	32RT16G00C 24615
				40	40RT16G00C 24616
				50	50RT16G00C 24617
				63	63RT16G00C 24618
				80	80RT16G00C 24619
				100	100RT16G00C 24620
	Blade Size 00	RT16-00-B	500/660	10	10RT16G00 24623
				16	16RT16G00 24624
				20	20RT16G00 24625
				25	25RT16G00 24626
				32	32RT16G00 24627
				40	40RT16G00 24628
				50	50RT16G00 24629
				63	63RT16G00 24630
				80	80RT16G00 24631
				100	100RT16G00 24632
	Blade Size 0	RT16-0-B	500/660	10	10RT16G0 24635
				16	16RT16G0 24636
				20	20RT16G0 24637
				25	25RT16G0 24638
				32	32RT16G0 24639
				40	40RT16G0 24640
				50	50RT16G0 24641
				63	63RT16G0 24642
				80	80RT16G0 24643
				100	100RT16G0 24644
	Blade Size 1	RT16-1-B	500/660	125	125RT16G0 24645
				160	160RT16G0 24646
				63	63RT16G1 24647
				80	80RT16G1 24648
				100	100RT16G1 24649
				125	125RT16G1 24650
				160	160RT16G1 24651
				200	200RT16G1 24652
				225	225RT16G1 24653
				250	250RT16G1 24654
	Blade Size 2	RT16-2-B	500/660	125	125RT15G2 24655
				160	160RT16G2 24656
				200	200RT16G2 24657
				225	225RT16G2 24658
				250	250RT16G2 24659
				300	300RT16G2 24660
				315	315RT16G2 24661
				355	355RT16G2 24662
				400	400RT16G2 24663
					Blade Size 3
200	200RT16G3 24665				
225	225RT16G3 24666				
250	250RT16G3 24667				
300	300RT16G3 24668				
315	315RT16G3 24669				
355	355RT16G3 24670				
400	400RT16G3 24671				
500	500RT16G3 24672				
630	630RT16G3 24673				
	Blade Size 4	RT16-4-B	500/660	800	800RT16G4 24675
				1000	1000RT16G4 24676

Low Voltage Fuses Series RT16

Outline and installation dimensions

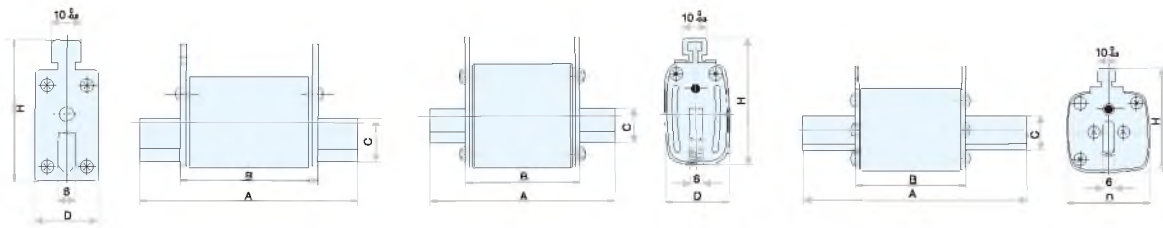


Fig 1

Fig 2

Fig3

Carrier Fuse

SASSIN	Overall dimension (mm)					
	Drawing	A	B	C	D	H
RT16-00C	Fig 1	78	49	15	21	52.5
RT16-00	Fig 2	78	49	15	29	56
RT16-0	Fig 2	125	68	15	29	56
RT16-1	Fig 3	135	68	20	48	60
RT16-2	Fig 3	150	68	26	60	70
RT16-3	Fig 3	150	68	32	67	82
RT16-4	Fig 3	200	68	50	90	120

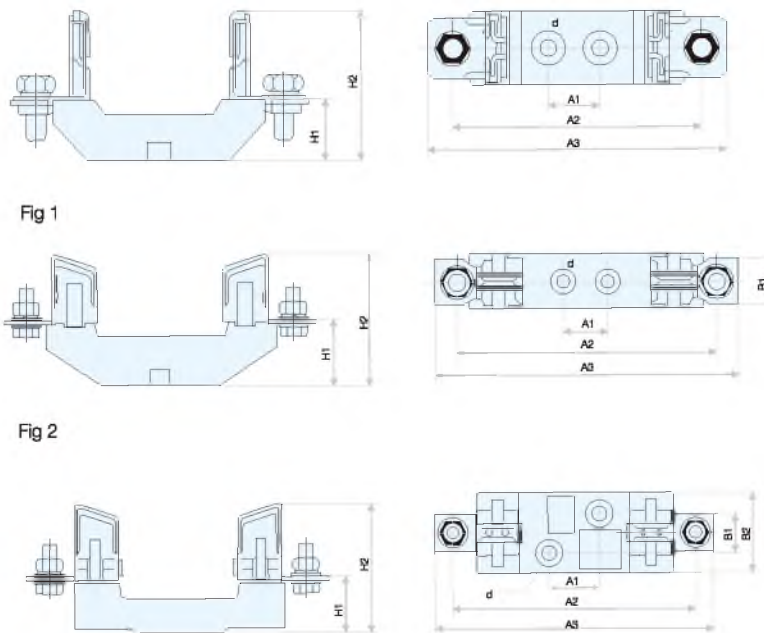


Fig 1

Fig 2

Fig3

Base

Products model	Overall dimension (mm)								
	Drawing	A1	A2	A3	B1	B2	H1	H2	Ø d
RT16-00-B	Fig 1	25	100	120	-	-	25	60	7.5
RT16-0-B	Fig 2	25	100	120	30	-	25	60	7.5
RT16-1-B	Fig 3	25	175	200	30	58	38	84	10.5
RT16-2-B	Fig 3	25	200	225	30	60	38	84	10.5
RT16-3-B	Fig 3	25	210	250	30	60	40	105	10.5
RT16-4-B	Fig 3	25	264	300	30	88	40	137	9

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
10139	M8NA 3M16L	1-118	10214	M8NC 4*M160M	1-119	10410	M8LD 3M500/5	1-138
10140	M8NA 3M20L	1-118	10215	M8NC 4*M180M	1-119	10411	M8LD 3M630/5	1-138
10141	M8NA 3M25L	1-118	10216	M8NC 4*M200M	1-119	10412	M8LA 4BP016/1	1-137
10142	M8NA 3M32L	1-118	10217	M8NC 4*M225M	1-119	10413	M8LA 4BP020/1	1-137
10143	M8NA 3M40L	1-118	10218	M8NC 3M100H	1-119	10414	M8LA 4BP025/1	1-137
10144	M8NA 3M50L	1-118	10219	M8NC 3M125H	1-119	10415	M8LA 4BP032/1	1-137
10145	M8NA 3M63L	1-118	10220	M8NC 3M160H	1-119	10416	M8LA 4BP040/1	1-137
10148	M8NA 3M16M	1-118	10221	M8NC 3M180H	1-119	10417	M8LA 4BP050/1	1-137
10149	M8NA 3M20M	1-118	10222	M8NC 3M200H	1-119	10418	M8LA 4BP063/1	1-137
10150	M8NA 3M25M	1-118	10223	M8NC 3M225H	1-119	10419	M8LA 4BP080/1	1-137
10151	M8NA 3M32M	1-118	10224	M8ND 3M225L	1-119	10420	M8LA 4BP100/1	1-137
10152	M8NA 3M40M	1-118	10225	M8ND 3M250L	1-119	10421	M8LA 4BP016/3	1-137
10153	M8NA 3M50M	1-118	10226	M8ND 3M315L	1-119	10422	M8LA 4BP020/3	1-137
10154	M8NA 3M63M	1-118	10227	M8ND 3M350L	1-119	10423	M8LA 4BP025/3	1-137
10157	M8NA 4*M16M	1-118	10228	M8ND 3M400L	1-119	10424	M8LA 4BP032/3	1-137
10158	M8NA 4*M20M	1-118	10229	M8ND 3M225M	1-119	10425	M8LA 4BP040/3	1-137
10159	M8NA 4*M25M	1-118	10230	M8ND 3M250M	1-119	10426	M8LA 4BP050/3	1-137
10160	M8NA 4*M32M	1-118	10231	M8ND 3M315M	1-119	10427	M8LA 4BP063/3	1-137
10161	M8NA 4*M40M	1-118	10232	M8ND 3M350M	1-119	10428	M8LA 4BP080/3	1-137
10162	M8NA 4*M50M	1-118	10233	M8ND 3M400M	1-119	10429	M8LA 4BP100/3	1-137
10163	M8NA 4*M63M	1-118	10234	M8ND 4*M225M	1-119	10430	M8LB 4BP100/1	1-137
10164	M8NB 3M016L	1-118	10235	M8ND 4*M250M	1-119	10431	M8LB 4BP125/1	1-137
10165	M8NB 3M020L	1-118	10236	M8ND 4*M315M	1-119	10432	M8LB 4BP140/1	1-137
10166	M8NB 3M025L	1-118	10237	M8ND 4*M350M	1-119	10433	M8LB 4BP160/1	1-137
10167	M8NB 3M032L	1-118	10238	M8ND 4*M400M	1-119	10434	M8LB 4BP180/1	1-137
10168	M8NB 3M040L	1-118	10239	M8ND 3M225H	1-120	10435	M8LB 4BP200/1	1-137
10169	M8NB 3M050L	1-118	10240	M8ND 3M250H	1-120	10436	M8LB 4BP225/1	1-137
10170	M8NB 3M063L	1-118	10241	M8ND 3M315H	1-120	10437	M8LB 4BP100/3	1-137
10171	M8NB 3M080L	1-118	10242	M8ND 3M350H	1-120	10438	M8LB 4BP125/3	1-137
10172	M8NB 3M100L	1-118	10243	M8ND 3M400H	1-120	10439	M8LB 4BP140/3	1-137
10173	M8NB 3M016M	1-118	10244	M8A SH110D	1-121	10440	M8LB 4BP160/3	1-137
10174	M8NB 3M020M	1-118	10245	M8B SH110D	1-121	10441	M8LB 4BP180/3	1-137
10175	M8NB 3M025M	1-118	10246	M8C SH110D	1-121	10442	M8LB 4BP200/3	1-137
10176	M8NB 3M032M	1-118	10247	M8D SH110D	1-121	10443	M8LB 4BP225/3	1-137
10177	M8NB 3M040M	1-118	10248	M8E SH110D	1-121	10444	M8LC 4BP200/3	1-137
10178	M8NB 3M050M	1-118	10249	M8F SH110D	1-121	10445	M8LC 4BP225/3	1-137
10179	M8NB 3M063M	1-118	10250	M8A SH220D	1-121	10446	M8LC 4BP250/3	1-137
10180	M8NB 3M080M	1-118	10251	M8B SH220D	1-121	10447	M8LC 4BP315/3	1-137
10181	M8NB 3M100M	1-118	10252	M8C SH220D	1-121	10448	M8LC 4BP350/3	1-137
10182	M8NB 4*M016M	1-118	10253	M8D SH220D	1-121	10449	M8LC 4BP400/3	1-137
10183	M8NB 4*M020M	1-118	10254	M8E SH220D	1-121	10450	M8LC 4BP200/5	1-137
10184	M8NB 4*M025M	1-118	10255	M8F SH220D	1-121	10451	M8LC 4BP225/5	1-137
10185	M8NB 4*M032M	1-118	10256	M8A AUR	1-121	10452	M8LC 4BP250/5	1-137
10186	M8NB 4*M040M	1-118	10257	M8B AUR	1-121	10453	M8LC 4BP315/5	1-137
10187	M8NB 4*M050M	1-118	10258	M8C AUR	1-121	10454	M8LC 4BP350/5	1-137
10188	M8NB 4*M063M	1-118	10259	M8D AUR	1-121	10455	M8LC 4BP400/5	1-137
10189	M8NB 4*M080M	1-118	10260	M8E AUR	1-121	10456	M8LD 4BP400/3	1-137
10190	M8NB 4*M100M	1-118	10261	M8F AUR	1-121	10457	M8LD 4BP500/3	1-137
10191	M8NB 3M016H	1-119	10387	M8LC 4BM315/5	1-138	10458	M8LD 4BP630/3	1-137
10192	M8NB 3M020H	1-119	10388	M8LC 4BM350/5	1-138	10459	M8LD 4BP400/5	1-137
10193	M8NB 3M025H	1-119	10389	M8LC 4BM400/5	1-138	10460	M8LD 4BP500/5	1-137
10194	M8NB 3M032H	1-119	10390	M8LD 4BM400/3	1-138	10461	M8LD 4BP630/5	1-137
10195	M8NB 3M040H	1-119	10391	M8LD 4BM500/3	1-138	10462	M8LA 4BM016/1	1-138
10196	M8NB 3M050H	1-119	10392	M8LD 4BM630/3	1-138	10463	M8LA 4BM020/1	1-138
10197	M8NB 3M063H	1-119	10393	M8LD 4BM400/5	1-138	10464	M8LA 4BM025/1	1-138
10198	M8NB 3M080H	1-119	10394	M8LD 4BM500/5	1-138	10465	M8LA 4BM032/1	1-138
10199	M8NB 3M100H	1-119	10395	M8LD 4BM630/5	1-138	10484	M29ATF 3B12.5	1-147
10200	M8NC 3M100L	1-119	10396	M8LC 3M250/3	1-138	10485	M29ATF 3B16	1-147
10201	M8NC 3M125L	1-119	10397	M8LC 3M315/3	1-138	10486	M29ATF 3B20	1-147
10202	M8NC 3M160L	1-119	10398	M8LC 3M350/3	1-138	10487	M29ATF 3B25	1-147
10203	M8NC 3M180L	1-119	10399	M8LC 3M400/3	1-138	10488	M29ATF 3B32	1-147
10204	M8NC 3M200L	1-119	10400	M8LC 3M200/5	1-138	10489	M29ATF 3B40	1-147
10205	M8NC 3M225L	1-119	10401	M8LC 3M225/5	1-138	10490	M29ATF 3B50	1-147
10206	M8NC 3M100M	1-119	10402	M8LC 3M250/5	1-138	10491	M29ATF 3B63	1-147
10207	M8NC 3M125M	1-119	10403	M8LC 3M315/5	1-138	10492	M29ATF 3B80	1-147
10208	M8NC 3M160M	1-119	10404	M8LC 3M350/5	1-138	10493	M29ATF 3B100	1-147
10209	M8NC 3M180M	1-119	10405	M8LC 3M400/5	1-138	10494	M29ATF 3B125	1-147
10210	M8NC 3M200M	1-119	10406	M8LD 3M400/3	1-138	10495	M29ATF 3N12.5	1-147
10211	M8NC 3M225M	1-119	10407	M8LD 3M500/3	1-138	10496	M29ATF 3N16	1-147
10212	M8NC 4*M100M	1-119	10408	M8LD 3M630/3	1-138	10497	M29ATF 3N20	1-147
10213	M8NC 4*M125M	1-119	10409	M8LD 3M400/5	1-138	10498	M29ATF 3N25	1-147

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
10499	M29ATF 3N32	1-147	10570	M29ATP 4N100	1-147	10641	M29CTP 3N200	1-148
10500	M29ATF 3N40	1-147	10571	M29ATP 4N125	1-147	10642	M29CTP 3N225	1-148
10501	M29ATF 3N50	1-147	10572	M29BTF 3B32	1-147	10643	M29CTP 3N250	1-148
10502	M29ATF 3N63	1-147	10573	M29BTF 3B40	1-147	10644	M29CTP 3S125	1-148
10503	M29ATF 3N80	1-147	10574	M29BTF 3B50	1-147	10645	M29CTP 3S160	1-148
10504	M29ATF 3N100	1-147	10575	M29BTF 3B63	1-147	10646	M29CTP 3S180	1-148
10505	M29ATF 3N125	1-147	10576	M29BTF 3B80	1-147	10647	M29CTP 3S200	1-148
10506	M29ATP 3B12.5	1-147	10577	M29BTF 3B100	1-147	10648	M29CTP 3S225	1-148
10507	M29ATP 3B16	1-147	10578	M29BTF 3B125	1-147	10649	M29CTP 3S250	1-148
10508	M29ATP 3B20	1-147	10579	M29BTF 3B160	1-147	10650	M29CTP 3H125	1-149
10509	M29ATP 3B25	1-147	10580	M29BTF 3N32	1-148	10651	M29CTP 3H160	1-149
10510	M29ATP 3B32	1-147	10581	M29BTF 3N40	1-148	10652	M29CTP 3H180	1-149
10511	M29ATP 3B40	1-147	10582	M29BTF 3N50	1-148	10653	M29CTP 3H200	1-149
10512	M29ATP 3B50	1-147	10583	M29BTF 3N63	1-148	10654	M29CTP 3H225	1-149
10513	M29ATP 3B63	1-147	10584	M29BTF 3N80	1-148	10655	M29CTP 3H250	1-149
10514	M29ATP 3B80	1-147	10585	M29BTF 3N100	1-148	10656	M29CTD 3N125	1-148
10515	M29ATP 3B100	1-147	10586	M29BTF 3N125	1-148	10657	M29CTD 3N160	1-148
10516	M29ATP 3B125	1-147	10587	M29BTF 3N160	1-148	10658	M29CTD 3N180	1-148
10517	M29ATP 3N12.5	1-147	10588	M29BTF 3S32	1-148	10659	M29CTD 3N200	1-148
10518	M29ATP 3N16	1-147	10589	M29BTF 3S40	1-148	10660	M29CTD 3N225	1-148
10519	M29ATP 3N20	1-147	10590	M29BTF 3S50	1-148	10661	M29CTD 3N250	1-148
10520	M29ATP 3N25	1-147	10591	M29BTF 3S63	1-148	10662	M29CTD 3S125	1-148
10521	M29ATP 3N32	1-147	10592	M29BTF 3S80	1-148	10663	M29CTD 3S160	1-148
10522	M29ATP 3N40	1-147	10593	M29BTF 3S100	1-148	10664	M29CTD 3S180	1-148
10523	M29ATP 3N50	1-147	10594	M29BTF 3S125	1-148	10665	M29CTD 3S200	1-148
10524	M29ATP 3N63	1-147	10595	M29BTF 3S160	1-148	10666	M29CTD 3S225	1-148
10525	M29ATP 3N80	1-147	10596	M29BTF 3S32	1-148	10667	M29CTD 3S250	1-148
10526	M29ATP 3N100	1-147	10597	M29BTF 3S40	1-148	10668	M29CTD 3H125	1-149
10527	M29ATP 3N125	1-147	10598	M29BTF 3S50	1-148	10669	M29CTD 3H160	1-149
10528	M29ATF 4B12.5	1-147	10599	M29BTF 3S63	1-148	10670	M29CTD 3H180	1-149
10529	M29ATF 4B16	1-147	10600	M29BTF 3S80	1-148	10671	M29CTD 3H200	1-149
10530	M29ATF 4B20	1-147	10601	M29BTF 3S100	1-148	10672	M29CTD 3H225	1-149
10531	M29ATF 4B25	1-147	10602	M29BTF 3S125	1-148	10673	M29CTD 3H250	1-149
10532	M29ATF 4B32	1-147	10603	M29BTF 3S160	1-148	10674	M29CTF 4N125	1-148
10533	M29ATF 4B40	1-147	10604	M29BTF 4N32	1-148	10675	M29CTF 4N160	1-148
10534	M29ATF 4B50	1-147	10605	M29BTF 4N40	1-148	10676	M29CTF 4N180	1-148
10535	M29ATF 4B63	1-147	10606	M29BTF 4N50	1-148	10677	M29CTF 4N200	1-148
10536	M29ATF 4B80	1-147	10607	M29BTF 4N63	1-148	10678	M29CTF 4N225	1-148
10537	M29ATF 4B100	1-147	10608	M29BTF 4N80	1-148	10679	M29CTF 4N250	1-148
10538	M29ATF 4B125	1-147	10609	M29BTF 4N100	1-148	10680	M29CTF 4S125	1-148
10539	M29ATF 4N12.5	1-147	10610	M29BTF 4N125	1-148	10681	M29CTF 4S160	1-148
10540	M29ATF 4N16	1-147	10611	M29BTF 4N160	1-148	10682	M29CTF 4S180	1-148
10541	M29ATF 4N20	1-147	10612	M29BTF 4N180	1-148	10683	M29CTF 4S200	1-148
10542	M29ATF 4N25	1-147	10613	M29BTF 4N200	1-148	10684	M29CTF 4S225	1-148
10543	M29ATF 4N32	1-147	10614	M29BTF 4N250	1-148	10685	M29CTF 4S250	1-148
10544	M29ATF 4N40	1-147	10615	M29BTF 4N32	1-148	10686	M29CTF 4H125	1-149
10545	M29ATF 4N50	1-147	10616	M29BTF 4N40	1-148	10687	M29CTF 4H160	1-149
10546	M29ATF 4N63	1-147	10617	M29BTF 4N50	1-148	10688	M29CTF 4H180	1-149
10547	M29ATF 4N80	1-147	10618	M29BTF 4N63	1-148	10689	M29CTF 4H200	1-149
10548	M29ATF 4N100	1-147	10619	M29BTF 4N80	1-148	10690	M29CTF 4H225	1-149
10549	M29ATF 4N125	1-147	10620	M29BTF 4N100	1-148	10691	M29CTF 4H250	1-149
10550	M29ATP 4B12.5	1-147	10621	M29BTF 4S32	1-148	10692	M29CTF 4N125	1-148
10551	M29ATP 4B16	1-147	10622	M29BTF 4S40	1-148	10693	M29CTP 4N160	1-148
10552	M29ATP 4B20	1-147	10623	M29BTF 4S50	1-148	10694	M29CTP 4N180	1-148
10553	M29ATP 4B25	1-147	10624	M29BTF 4S63	1-148	10695	M29CTP 4N200	1-148
10554	M29ATP 4B32	1-147	10625	M29BTF 4S80	1-148	10696	M29CTP 4N225	1-148
10555	M29ATP 4B40	1-147	10626	M29BTF 4S100	1-148	10697	M29CTP 4N250	1-148
10556	M29ATP 4B50	1-147	10627	M29BTF 4S125	1-148	10698	M29CTP 4S125	1-148
10557	M29ATP 4B63	1-147	10628	M29BTF 4S160	1-148	10699	M29CTP 4S160	1-148
10558	M29ATP 4B80	1-147	10629	M29BTF 3S180	1-148	10700	M29CTP 4S180	1-148
10559	M29ATP 4B80	1-147	10630	M29BTF 3S200	1-148	10701	M29AB SH240A	1-156
10560	M29ATP 4B100	1-147	10631	M29BTF 3S225	1-148	10702	M29AB SH415A	1-156
10561	M29ATP 4B125	1-147	10632	M29BTF 3S250	1-148	10703	M29AB UV240A	1-157
10562	M29ATP 4N12.5	1-147	10633	M29BTF 3H125	1-149	10704	M29AB UV415A	1-157
10563	M29ATP 4N16	1-147	10634	M29BTF 3H160	1-149	10705	M29AB AC11	1-158
10564	M29ATP 4N20	1-147	10635	M29BTF 3H180	1-149	10706	M29CD AC11	1-158
10565	M29ATP 4N25	1-147	10636	M29BTF 3H200	1-149	10709	M29A MM240A	1-154
10566	M29ATP 4N32	1-147	10637	M29BTF 3H225	1-149	10710	M29EF RM3AL	1-155
10567	M29ATP 4N40	1-147	10638	M29BTF 3H250	1-149	10711	M29C RM1L	1-155
10568	M29ATP 4N50	1-147	10639	M29BTF 3N125	1-148	10712	M29D RM1L	1-155
10569	M29ATP 4N63	1-147	10640	M29BTF 3N160	1-148	10713	M29EF RM1L	1-155

Index / Order Code

Order code	Type code	Page
10714	M29GH RM1L	1-155
10715	M29CD AC22	1-158
10716	M29EFGH AC11	1-158
10719	M29B MM240A	1-154
10720	M29GH RM3AL	1-155
10721	M29CD SH240A	1-156
10722	M29CD SH415A	1-156
10723	M29CD UV240A	1-157
10724	M29CD UV415A	1-157
10725	M29EFGH AC22	1-158
10726	M29AB CW11	1-158
10729	M29C MM240A	1-154
10730	M29A RM3ASL	1-155
10731	M29C RM2AS	1-155
10732	M29D RM2AS	1-155
10733	M29EF RM2AL	1-155
10734	M29GH RM2AL	1-155
10735	M29CD CW11	1-158
10736	M29B RM3ASL	1-155
10739	M29D MM240A	1-154
10740	M29CD CW22	1-158
10741	M29EFGH SH240A	1-156
10742	M29EFGH SH415A	1-156
10743	M29EFGH UV240A	1-157
10744	M29EFGH UV415A	1-157
10745	M29EFGH CW11	1-158
10746	M29EFGH CW22	1-158
10749	M29EF MM240A	1-154
10750	M29C RM1	1-155
10751	M29C RM2ASL	1-155
10752	M29D RM2ASL	1-155
10753	M29EF RM2ALL	1-155
10754	M29GH RM2ALL	1-155
10755	M29D RM1	1-155
10756	M29EF RM1	1-155
10759	M29GH MM240A	1-154
10760	M29GH RM1	1-155
10761	AQ3 M2I 2NBR20N	1-203
10762	AQ3 M2I 2NBR25N	1-203
10763	AQ3 M2I 2NBR32N	1-203
10764	AQ3 M2I 2NBR40N	1-203
10765	AQ3 M2I 2NBR50N	1-203
10766	AQ3 M2I 2NBR63N	1-203
10767	AQ3 M2I 2NBR80N	1-203
10768	AQ3 M2I 2NBR100N	1-203
10769	AQ3 M2I 2NBR125N	1-203
10770	AQ3 M2I 2NBR20J	1-204
10771	AQ3 M2I 2NBR25J	1-204
10772	AQ3 M2I 2NBR32J	1-204
10773	AQ3 M2I 2NBR40J	1-204
10774	AQ3 M2I 2NBR50J	1-204
10775	AQ3 M2I 2NBR63J	1-204
10776	AQ3 M2I 2NBR80J	1-204
10777	AQ3 M2I 2NBR100J	1-204
10778	AQ3 M2I 2NBR125J	1-204
10779	AQ3 M2I 2NBS20N	1-203
10780	AQ3 M2I 2NBS25N	1-203
10781	AQ3 M2I 2NBS32N	1-203
10782	AQ3 M2I 2NBS40N	1-203
10783	AQ3 M2I 2NBS50N	1-203
10784	AQ3 M2I 2NBS63N	1-203
10785	AQ3 M2I 2NBS80N	1-203
10786	AQ3 M2I 2NBS100N	1-203
10787	AQ3 M2I 2NBS125N	1-203
10788	AQ3 M2I 2NBS20J	1-204
10789	AQ3 M2I 2NBS25J	1-204
10790	AQ3 M2I 2NBS32J	1-204
10791	AQ3 M2I 2NBS40J	1-204
10792	AQ3 M2I 2NBS50J	1-204
10793	AQ3 M2I 2NBS63J	1-204
10794	AQ3 M2I 2NBS80J	1-204

Order code	Type code	Page
10795	AQ3 M2I 2NBS100J	1-204
10796	AQ3 M2I 2NBS125J	1-204
10797	AQ3 M2I 2NGR20N	1-203
10798	AQ3 M2I 2NGR25N	1-203
10799	AQ3 M2I 2NGR32N	1-203
10800	AQ3 M2I 2NGR40N	1-203
10801	AQ3 M2I 2NGR50N	1-203
10802	AQ3 M2I 2NGR63N	1-203
10803	AQ3 M2I 2NGR80N	1-203
10804	AQ3 M2I 2NGR100N	1-203
10805	AQ3 M2I 2NGR125N	1-203
10806	AQ3 M2I 2NGR20J	1-204
10807	AQ3 M2I 2NGR25J	1-204
10808	AQ3 M2I 2NGR32J	1-204
10809	AQ3 M2I 2NGR40J	1-204
10810	AQ3 M2I 2NGR50J	1-204
10811	AQ3 M2I 2NGR63J	1-204
10812	AQ3 M2I 2NGR80J	1-204
10813	AQ3 M2I 2NGR100J	1-204
10814	AQ3 M2I 2NGR125J	1-204
10815	AQ3 M2I 3NBR20N	1-203
10816	AQ3 M2I 3NBR25N	1-203
10817	AQ3 M2I 3NBR32N	1-203
10818	AQ3 M2I 3NBR40N	1-203
10819	AQ3 M2I 3NBR50N	1-203
10820	AQ3 M2I 3NBR63N	1-203
10821	AQ3 M2I 3NBR80N	1-203
10822	AQ3 M2I 3NBR100N	1-203
10823	AQ3 M2I 3NBR125N	1-203
10824	AQ3 M2I 3NBR20J	1-204
10825	AQ3 M2I 3NBR25J	1-204
10826	AQ3 M2I 3NBR32J	1-204
10827	AQ3 M2I 3NBR40J	1-204
10828	AQ3 M2I 3NBR50J	1-204
10829	AQ3 M2I 3NBR63J	1-204
10830	AQ3 M2I 3NBR80J	1-204
10831	AQ3 M2I 3NBR100J	1-204
10832	AQ3 M2I 3NBR125J	1-204
10833	AQ3 M2I 3NBS20N	1-203
10834	AQ3 M2I 3NBS25N	1-203
10835	AQ3 M2I 3NBS32N	1-203
10836	AQ3 M2I 3NBS40N	1-203
10837	AQ3 M2I 3NBS50N	1-203
10838	AQ3 M2I 3NBS63N	1-203
10839	AQ3 M2I 3NBS80N	1-203
10840	AQ3 M2I 3NBS100N	1-203
10841	AQ3 M2I 3NBS125N	1-203
10842	AQ3 M2I 3NBS20J	1-204
10843	AQ3 M2I 3NBS25J	1-204
10844	AQ3 M2I 3NBS32J	1-204
10845	AQ3 M2I 3NBS40J	1-204
10846	AQ3 M2I 3NBS50J	1-204
10847	AQ3 M2I 3NBS63J	1-204
10848	AQ3 M2I 3NBS80J	1-204
10849	AQ3 M2I 3NBS100J	1-204
10850	AQ3 M2I 3NBS125J	1-204
10851	AQ3 M2I 3NGR20N	1-203
10852	AQ3 M2I 3NGR25N	1-203
10853	AQ3 M2I 3NGR32N	1-203
10854	AQ3 M2I 3NGR40N	1-203
10855	AQ3 M2I 3NGR50N	1-203
10856	AQ3 M2I 3NGR63N	1-203
10857	AQ3 M2I 3NGR80N	1-203
10858	AQ3 M2I 3NGR100N	1-203
10859	AQ3 M2I 3NGR125N	1-203
10860	AQ3 M2I 3NGR20J	1-204
10861	AQ3 M2I 3NGR25J	1-204
10862	AQ3 M2I 3NGR32J	1-204
10863	AQ3 M2I 3NGR40J	1-204
10864	AQ3 M2I 3NGR50J	1-204
10865	AQ3 M2I 3NGR63J	1-204

Order code	Type code	Page
10866	AQ3 M2I 3NGR80J	1-204
10867	AQ3 M2I 3NGR100J	1-204
10868	AQ3 M2I 3NGR125J	1-204
10869	AQ3 M2I 4NBR20N	1-203
10870	AQ3 M2I 4NBR25N	1-203
10871	AQ3 M2I 4NBR32N	1-203
10872	AQ3 M2I 4NBR40N	1-203
10873	AQ3 M2I 4NBR50N	1-203
10874	AQ3 M2I 4NBR63N	1-203
10875	AQ3 M2I 4NBR80N	1-203
10876	AQ3 M2I 4NBR100N	1-203
10877	AQ3 M2I 4NBR125N	1-203
10878	AQ3 M2I 4NBR20J	1-204
10879	AQ3 M2I 4NBR25J	1-204
10880	AQ3 M2I 4NBR32J	1-204
10881	AQ3 M2I 4NBR40J	1-204
10882	AQ3 M2I 4NBR50J	1-204
10883	AQ3 M2I 4NBR63J	1-204
10884	AQ3 M2I 4NBR80J	1-204
10885	AQ3 M2I 4NBR100J	1-204
10886	AQ3 M2I 4NBR125J	1-204
10887	AQ3 M2I 4NBS20N	1-203
10888	AQ3 M2I 4NBS25N	1-203
10889	AQ3 M2I 4NBS32N	1-203
10890	AQ3 M2I 4NBS40N	1-203
10891	AQ3 M2I 4NBS50N	1-203
10892	AQ3 M2I 4NBS63N	1-203
10893	AQ3 M2I 4NBS80N	1-203
10894	AQ3 M2I 4NBS100N	1-203
10895	AQ3 M2I 4NBS125N	1-203
10896	AQ3 M2I 4NBS20J	1-204
10897	AQ3 M2I 4NBS25J	1-204
10898	AQ3 M2I 4NBS32J	1-204
10899	AQ3 M2I 4NBS40J	1-204
10900	AQ3 M2I 4NBS50J	1-204
10901	AQ3 M2I 4NBS63J	1-204
10902	AQ3 M2I 4NBS80J	1-204
10903	AQ3 M2I 4NBS100J	1-204
10904	AQ3 M2I 4NBS125J	1-204
10905	AQ3 M2I 4NGR20N	1-203
10906	AQ3 M2I 4NGR25N	1-203
10907	AQ3 M2I 4NGR32N	1-203
10908	AQ3 M2I 4NGR40N	1-203
10909	AQ3 M2I 4NGR50N	1-203
10910	AQ3 M2I 4NGR63N	1-203
10911	AQ3 M2I 4NGR80N	1-203
10912	AQ3 M2I 4NGR100N	1-203
10913	AQ3 M2I 4NGR125N	1-203
10914	AQ3 M2I 4NGR20J	1-204
10915	AQ3 M2I 4NGR25J	1-204
10916	AQ3 M2I 4NGR32J	1-204
10917	AQ3 M2I 4NGR40J	1-204
10918	AQ3 M2I 4NGR50J	1-204
10919	GL160AIF3	1-209
10920	GL250AIF3	1-209
10921	GL400AIF3	1-209
10922	GL630AIF3	1-209
10928	GL160AIF4	1-209
10929	GL250AIF4	1-209
10930	GL400AIF4	1-209
10931	GL630AIF4	1-209
10937	GL160AEF3	1-209
10938	GL250AEF3	1-209
10939	GL400AEF3	1-209
10940	GL630AEF3	1-209
10946	GL160AEF4	1-209
10947	GL250AEF4	1-209
10948	GL400AEF4	1-209
10949	GL630AEF4	1-209
11010	GRL160AIF3	1-211
11011	GRL250AIF3	1-211

Index / Order Code

1

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
11012	GLR400AIF3	1-211	13947	W68DD 4S5000BM4	1-84	14018	AQ2C 3225LNGSS	1-189
11013	GLR630AIF3	1-211	13948	W68DD 4S6300BM4	1-84	14019	AQ2C 3250LNGSS	1-189
11014	GLR160AIF4	1-211	13949	W68DD 4S4000BHP	1-84	14020	AQ2C 3315LNGSS	1-189
11015	GLR250AIF4	1-211	13950	W68DD 4S5000BHP	1-84	14021	AQ2C 3350LNGSS	1-189
11016	GLR400AIF4	1-211	13951	W68DD 4S6300BHP	1-84	14022	AQ2C 3400LNGSS	1-189
11017	GLR630AIF4	1-211	13952	W68DD 4S4000BHQ	1-84	14023	AQ2C 3225MNGSS	1-189
11021	GLR160AEF3	1-211	13953	W68DD 4S5000BHQ	1-84	14024	AQ2C 3250MNGSS	1-189
11022	GLR250AEF3	1-211	13954	W68DD 4S6300BHQ	1-84	14025	AQ2C 3315MNGSS	1-189
11023	GLR400AEF3	1-211	13955	W68DD 4S4000BHG	1-84	14026	AQ2C 3350MNGSS	1-189
11024	GLR630AEF3	1-211	13956	W68DD 4S5000BHG	1-84	14027	AQ2C 3400MNGSS	1-189
11025	GLR160AEF4	1-211	13957	W68DD 4S6300BHG	1-84	14028	AQ2C 4225MNGSS	1-189
11026	GLR250AEF4	1-211	13958	W68D DFF	1-86	14029	AQ2C 4250MNGSS	1-189
11027	GLR400AEF4	1-211	13959	W68A CST	1-86	14030	AQ2C 4315MNGSS	1-189
11028	GLR630AEF4	1-211	13960	W68B CST	1-86	14031	AQ2C 4350MNGSS	1-189
11037	HR1716030	1-213	13961	W68 SLD	1-86	14032	AQ2C 4400MNGSS	1-189
11038	HR1725030	1-213	13962	W68A TPL	1-86	14033	AQ2C 3225HNGSS	1-189
11039	HR1740030	1-213	13963	W68B TPL	1-86	14034	AQ2C 3250HNGSS	1-189
11040	HR1763030	1-213	13964	W68 PLD	1-86	14035	AQ2C 3315HNGSS	1-189
11043	HR1716040	1-213	13965	W68 PDOC	1-86	14036	AQ2C 3350HNGSS	1-189
11044	HR1725040	1-213	13966	W68 KLO	1-86	14037	AQ2C 3400HNGSS	1-189
11045	HR1740040	1-213	13967	W68 ISD	1-86	14038	AQ2D 3400LNGSS	1-191
11046	HR1763040	1-213	13968	W68 PKL	1-86	14039	AQ2D 3500LNGSS	1-191
13698	W68DD 4N4000BL4	1-83	13969	W68 BDI	1-86	14040	AQ2D 3630LNGSS	1-191
13899	W68DD 4N5000BL4	1-83	13970	W68A BRF31	1-86	14041	AQ2D 3400MNGSS	1-191
13900	W68DD 4N6300BL4	1-83	13971	W68A BRF32	1-86	14042	AQ2D 3500MNGSS	1-191
13901	W68DD 4N4000BM3	1-83	13972	W68B BRF31	1-86	14043	AQ2D 3630MNGSS	1-191
13902	W68DD 4N5000BM3	1-83	13973	W68B BRF32	1-86	14044	AQ2D 4400MNGSS	1-191
13903	W68DD 4N6300BM3	1-83	13974	W68C BRF31	1-86	14045	AQ2D 4500MNGSS	1-191
13904	W68DD 4N4000BM4	1-83	13975	W68C BRF32	1-86	14046	AQ2D 4630MNGSS	1-191
13905	W68DD 4N5000BM4	1-83	13976	W68A BRF41	1-86	14047	AQ2D 3400HNGSS	1-191
13906	W68DD 4N6300BM4	1-83	13977	W68A BRF42	1-86	14048	AQ2D 3500HNGSS	1-191
13907	W68DD 4N4000BHP	1-83	13978	W68B BRF41	1-86	14049	AQ2D 3630HNGSS	1-191
13908	W68DD 4N5000BHP	1-83	13979	W68B BRF42	1-86	14050	AQ2E 3630MNGSS	1-192
13909	W68DD 4N6300BHP	1-83	13980	W68C BRF41	1-86	14051	AQ2E 3700MNGSS	1-192
13910	W68DD 4N4000BHQ	1-83	13981	W68C BRF42	1-86	14052	AQ2E 3800MNGSS	1-192
13911	W68DD 4N5000BHQ	1-83	13982	W68A BRE31	1-86	14053	AQ2E 4630MNGSS	1-192
13912	W68DD 4N6300BHQ	1-83	13983	W68A BRE32	1-86	14054	AQ2E 4700MNGSS	1-192
13913	W68DD 4N4000BHG	1-83	13984	W68A BRE41	1-86	14055	AQ2E 4800MNGSS	1-192
13914	W68DD 4N5000BHG	1-83	13985	W68A BRE42	1-86	14056	AQ2E 3630HNGSS	1-192
13915	W68DD 4N6300BHG	1-83	13986	W68 LMC	1-86	14057	AQ2E 3700HNGSS	1-192
13916	W68DD 4H4000BL3	1-84	13987	W68 LML	1-86	14058	AQ2E 3800HNGSS	1-192
13917	W68DD 4H5000BL3	1-84	13988	W68 PSM220D	1-87	14130	M29GF 4S800	1-153
13918	W68DD 4H6300BL3	1-84	13989	W68 PSM110D	1-87	14131	M29GF 4S1000	1-153
13919	W68DD 4H4000BL4	1-84	13990	W68A CTN1	1-87	14132	M29GF 4S1250	1-153
13920	W68DD 4H5000BL4	1-84	13991	W68A CTN2	1-87	14133	M29GD 4S800	1-153
13921	W68DD 4H6300BL4	1-84	13992	W68B CTN1	1-87	14134	M29GD 4S1000	1-153
13922	W68DD 4H4000BM3	1-84	13993	W68B CTN2	1-87	14135	M29GD 4S1250	1-153
13923	W68DD 4H5000BM3	1-84	13994	W68C CTN1	1-87	14136	M29GF 4H800	1-153
13924	W68DD 4H6300BM3	1-84	13995	W68C CTN2	1-87	14137	M29GF 4H1000	1-153
13925	W68DD 4H4000BM4	1-84	13996	W68D CTN	1-87	14138	M29GF 4H1250	1-153
13926	W68DD 4H5000BM4	1-84	13997	W68A CTE1	1-87	14139	M29GD 4H800	1-153
13927	W68DD 4H6300BM4	1-84	13998	W68A CTE2	1-87	14140	M29GD 4H1000	1-153
13928	W68DD 4H4000BHP	1-84	13999	W68B CTE1	1-87	14141	M29GD 4H1250	1-153
13929	W68DD 4H5000BHP	1-84	14000	W68B CTE2	1-87	14142	M29GF 4G800	1-153
13930	W68DD 4H6300BHP	1-84	14001	W68C CTE1	1-87	14143	M29GF 4G1000	1-153
13931	W68DD 4H4000BHQ	1-84	14002	W68C CTE2	1-87	14144	M29GF 4G1250	1-153
13932	W68DD 4H5000BHQ	1-84	14003	W68D CTE	1-87	14145	M29GD 4G800	1-153
13933	W68DD 4H6300BHQ	1-84	14004	W68A CTD1	1-87	14146	M29GD 4G1000	1-153
13934	W68DD 4H4000BHG	1-84	14005	W68A CTD2	1-87	14147	M29GD 4G1250	1-153
13935	W68DD 4H5000BHG	1-84	14006	W68B CTD1	1-87	14148	M29HF 4S800	1-153
13936	W68DD 4H6300BHG	1-84	14007	W68B CTD2	1-87	14149	M29HF 4S1000	1-153
13937	W68DD 4S4000BL3	1-84	14008	W68C CTD1	1-87	14150	M29HF 4S1250	1-153
13938	W68DD 4S5000BL3	1-84	14009	W68C CTD2	1-87	14151	M29HF 4S1600	1-153
13939	W68DD 4S6300BL3	1-84	14010	W68D CTD	1-87	14152	M29HD 4S800	1-153
13940	W68DD 4S4000BL4	1-84	14011	AQ2B 3100HNGSS	1-187	14153	M29HD 4S1000	1-153
13941	W68DD 4S5000BL4	1-84	14012	AQ2B 3125HNGSS	1-187	14154	M29HD 4S1250	1-153
13942	W68DD 4S6300BL4	1-84	14013	AQ2B 3140HNGSS	1-187	14155	M29HD 4S1600	1-153
13943	W68DD 4S4000BM3	1-84	14014	AQ2B 3160HNGSS	1-187	14156	M29HF 4H800	1-153
13944	W68DD 4S5000BM3	1-84	14015	AQ2B 3180HNGSS	1-187	14157	M29HF 4H1000	1-153
13945	W68DD 4S6300BM3	1-84	14016	AQ2B 3200HNGSS	1-187	14158	M29HF 4H1250	1-153
13946	W68DD 4S4000BM4	1-84	14017	AQ2B 3225HNGSS	1-187	14159	M29HF 4H1600	1-153

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
14160	M29HD 4H800	1-153	16060	M29DTD 3S400	1-149	18278	W68BD 4H800BL3	1-77
14161	M29HD 4H1000	1-153	16061	M29DTD 3H250	1-149	18279	W68BD 4H1000BL3	1-77
14162	M29HD 4H1250	1-153	16062	M29DTD 3H315	1-149	18280	W68BD 4H1250BL3	1-77
14163	M29HD 4H1600	1-153	16063	M29DTD 3H350	1-149	18281	W68BD 4H1600BL3	1-77
14164	M29HF 4G800	1-153	16064	M29DTD 3H400	1-149	18282	W68BD 4H2000BL3	1-77
14165	M29HF 4G1000	1-153	16065	M29DTF 4N250	1-149	18283	W68BD 4H2500BL3	1-77
14166	M29HF 4G1250	1-153	16066	M29DTF 4N315	1-149	18284	W68BD 4H630BL4	1-77
14167	M29HF 4G1600	1-153	18214	W68BD 3H630BHQ	1-77	18285	W68BD 4H800BL4	1-77
14168	M29HD 4G800	1-153	18215	W68BD 3H800BHQ	1-77	18286	W68BD 4H1000BL4	1-77
14169	M29HD 4G1000	1-153	18216	W68BD 3H1000BHQ	1-77	18287	W68BD 4H1250BL4	1-77
14170	M29HD 4G1250	1-153	18217	W68BD 3H1250BHQ	1-77	18288	W68BD 4H1600BL4	1-77
14171	M29HD 4G1600	1-153	18218	W68BD 3H1600BHQ	1-77	18289	W68BD 4H2000BL4	1-77
14970	AQ2E 3800HNGRS	1-192	18219	W68BD 3H2000BHQ	1-77	18290	W68BD 4H2500BL4	1-77
16002	M29CTP 4S200	1-148	18220	W68BD 3H2500BHQ	1-77	18291	W68BD 4H630BM3	1-77
16003	M29CTP 4S225	1-148	18221	W68BD 3H630BHG	1-77	18292	W68BD 4H800BM3	1-77
16004	M29CTP 4S250	1-148	18222	W68BD 3H800BHG	1-77	18293	W68BD 4H1000BM3	1-77
16005	M29CTP 4H125	1-149	18223	W68BD 3H1000BHG	1-77	18294	W68BD 4H1250BM3	1-77
16006	M29CTP 4H160	1-149	18224	W68BD 3H1250BHG	1-77	18295	W68BD 4H1600BM3	1-77
16007	M29CTP 4H180	1-149	18225	W68BD 3H1600BHG	1-77	18296	W68BD 4H2000BM3	1-77
16008	M29CTP 4H200	1-149	18226	W68BD 3H2000BHG	1-77	18297	W68BD 4H2500BM3	1-77
16009	M29CTP 4H225	1-149	18227	W68BD 3H2500BHG	1-77	18298	W68BD 4H630BM4	1-77
16010	M29CTP 4H250	1-149	18228	W68BD 4N630BL3	1-76	18299	W68BD 4H800BM4	1-77
16011	M29CTD 4N125	1-148	18229	W68BD 4N800BL3	1-76	18300	W68BD 4H1000BM4	1-77
16012	M29CTD 4N160	1-148	18230	W68BD 4N1000BL3	1-76	18301	W68BD 4H1250BM4	1-77
16013	M29CTD 4N180	1-148	18231	W68BD 4N1250BL3	1-76	18302	W68BD 4H1600BM4	1-77
16014	M29CTD 4N200	1-148	18232	W68BD 4N1600BL3	1-76	18303	W68BD 4H2000BM4	1-77
16015	M29CTD 4N225	1-148	18233	W68BD 4N2000BL3	1-76	18304	W68BD 4H2500BM4	1-77
16016	M29CTD 4N250	1-148	18234	W68BD 4N2500BL3	1-76	18305	W68BD 4H630BHP	1-77
16017	M29CTD 4S125	1-148	18235	W68BD 4N630BL4	1-76	18306	W68BD 4H800BHP	1-77
16018	M29CTD 4S160	1-148	18236	W68BD 4N800BL4	1-76	18307	W68BD 4H1000BHP	1-77
16019	M29CTD 4S180	1-148	18237	W68BD 4N1000BL4	1-76	18308	W68BD 4H1250BHP	1-77
16020	M29CTD 4S200	1-148	18238	W68BD 4N1250BL4	1-76	18309	W68BD 4H1600BHP	1-77
16021	M29CTD 4S225	1-148	18239	W68BD 4N1600BL4	1-76	18310	W68BD 4H2000BHP	1-77
16022	M29CTD 4S250	1-148	18240	W68BD 4N2000BL4	1-76	18311	W68BD 4H2500BHP	1-77
16023	M29CTD 4H125	1-149	18241	W68BD 4N2500BL4	1-76	18312	W68BD 4H630BHQ	1-77
16024	M29CTD 4H160	1-149	18242	W68BD 4N630BM3	1-76	18313	W68BD 4H800BHQ	1-77
16025	M29CTD 4H180	1-149	18243	W68BD 4N800BM3	1-76	18314	W68BD 4H1000BHQ	1-77
16026	M29CTD 4H200	1-149	18244	W68BD 4N1000BM3	1-76	18315	W68BD 4H1250BHQ	1-77
16027	M29CTD 4H225	1-149	18245	W68BD 4N1250BM3	1-76	18316	W68BD 4H1600BHQ	1-77
16028	M29CTD 4H250	1-149	18246	W68BD 4N1600BM3	1-76	18317	W68BD 4H2000BHQ	1-77
16029	M29DTF 3N250	1-149	18247	W68BD 4N2000BM3	1-76	18318	W68BD 4H2500BHQ	1-77
16030	M29DTF 3N315	1-149	18248	W68BD 4N2500BM3	1-76	18319	W68BD 4H630BHG	1-77
16031	M29DTF 3N350	1-149	18249	W68BD 4N630BM4	1-76	18320	W68BD 4H800BHG	1-77
16032	M29DTF 3N400	1-149	18250	W68BD 4N800BM4	1-76	18321	W68BD 4H1000BHG	1-77
16033	M29DTF 3S250	1-149	18251	W68BD 4N1000BM4	1-76	18322	W68BD 4H1250BHG	1-77
16034	M29DTF 3S315	1-149	18252	W68BD 4N1250BM4	1-76	18323	W68BD 4H1600BHG	1-77
16035	M29DTF 3S350	1-149	18253	W68BD 4N1600BM4	1-76	18324	W68BD 4H2000BHG	1-77
16036	M29DTF 3S400	1-149	18254	W68BD 4N2000BM4	1-76	18325	W68BD 4H2500BHG	1-77
16037	M29DTF 3H250	1-149	18255	W68BD 4N2500BM4	1-76	18326	W68CF 3N2000BL3	1-78
16038	M29DTF 3H315	1-149	18256	W68BD 4N630BHP	1-76	18327	W68CF 3N2500BL3	1-78
16039	M29DTF 3H350	1-149	18257	W68BD 4N800BHP	1-76	18328	W68CF 3N2900BL3	1-78
16040	M29DTF 3H400	1-149	18258	W68BD 4N1000BHP	1-76	18329	W68CF 3N3200BL3	1-78
16041	M29DTP 3N250	1-149	18259	W68BD 4N1250BHP	1-76	18330	W68CF 3N3600BL3	1-78
16042	M29DTP 3N315	1-149	18260	W68BD 4N1600BHP	1-76	18331	W68CF 3N4000BL3	1-78
16043	M29DTP 3N350	1-149	18261	W68BD 4N2000BHP	1-76	18332	W68CF 3N2000BL4	1-78
16044	M29DTP 3N400	1-149	18262	W68BD 4N2500BHP	1-76	18333	W68CF 3N2500BL4	1-78
16045	M29DTP 3S250	1-149	18263	W68BD 4N630BHQ	1-76	18334	W68CF 3N2900BL4	1-78
16046	M29DTP 3S315	1-149	18264	W68BD 4N800BHQ	1-76	18335	W68CF 3N3200BL4	1-78
16047	M29DTP 3S350	1-149	18265	W68BD 4N1000BHQ	1-76	18336	W68CF 3N3600BL4	1-78
16048	M29DTP 3S400	1-149	18266	W68BD 4N1250BHQ	1-76	18337	W68CF 3N4000BL4	1-78
16049	M29DTP 3H250	1-149	18267	W68BD 4N1600BHQ	1-76	18338	W68CF 3N2000BM3	1-78
16050	M29DTP 3H315	1-149	18268	W68BD 4N2000BHQ	1-76	18339	W68CF 3N2500BM3	1-78
16051	M29DTP 3H350	1-149	18269	W68BD 4N2500BHQ	1-76	18340	W68CF 3N2900BM3	1-78
16052	M29DTP 3H400	1-149	18270	W68BD 4N630BHG	1-76	18341	W68CF 3N3200BM3	1-78
16053	M29DTD 3N250	1-149	18271	W68BD 4N800BHG	1-76	18342	W68CF 3N3600BM3	1-78
16054	M29DTD 3N315	1-149	18272	W68BD 4N1000BHG	1-76	18343	W68CF 3N4000BM3	1-78
16055	M29DTD 3N350	1-149	18273	W68BD 4N1250BHG	1-76	18344	W68CF 3N2000BM4	1-78
16056	M29DTD 3N400	1-149	18274	W68BD 4N1600BHG	1-76	18345	W68CF 3N2500BM4	1-78
16057	M29DTD 3S250	1-149	18275	W68BD 4N2000BHG	1-76	18346	W68CF 3N2900BM4	1-78
16058	M29DTD 3S315	1-149	18276	W68BD 4N2500BHG	1-76	18347	W68CF 3N3200BM4	1-78
16059	M29DTD 3S350	1-149	18277	W68BD 4H630BL3	1-77	18348	W68CF 3N3600BM4	1-78

Index / Order Code

1

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
18349	W68CF 3N4000BM4	1-78	18420	W68CF 34N3600BL4	1-78	18491	W68CF 34H3200BHG	1-79
18350	W68CF 3N2000BHP	1-78	18421	W68CF 34N4000BL4	1-78	18492	W68CF 34H3600BHG	1-79
18351	W68CF 3N2500BHP	1-78	18422	W68CF 34N2000BM3	1-78	18493	W68CF 34H4000BHG	1-79
18352	W68CF 3N2900BHP	1-78	18423	W68CF 34N2500BM3	1-78	18494	W68CD 3N2000NBL3	1-80
18353	W68CF 3N3200BHP	1-78	18424	W68CF 34N2900BM3	1-78	18495	W68CD 3N2500NBL3	1-80
18354	W68CF 3N3600BHP	1-78	18425	W68CF 34N3200BM3	1-78	18496	W68CD 3N2900NBL3	1-80
18355	W68CF 3N4000BHP	1-78	18426	W68CF 34N3600BM3	1-78	18497	W68CD 3N3200NBL3	1-80
18356	W68CF 3N2000BHQ	1-78	18427	W68CF 34N4000BM3	1-78	18498	W68CD 3N3600NBL3	1-80
18357	W68CF 3N2500BHQ	1-78	18428	W68CF 34N2000BM4	1-78	18499	W68CD 3N4000NBL3	1-80
18358	W68CF 3N2900BHQ	1-78	18429	W68CF 34N2500BM4	1-78	18500	W68CD 3N2000NBL4	1-80
18359	W68CF 3N3200BHQ	1-78	18430	W68CF 34N2900BM4	1-78	18501	W68CD 3N2500NBL4	1-80
18360	W68CF 3N3600BHQ	1-78	18431	W68CF 34N3200BM4	1-78	19755	AQ1 3B06HR	1-174
18361	W68CF 3N4000BHQ	1-78	18432	W68CF 34N3600BM4	1-78	19756	AQ1 3B10HR	1-174
18362	W68CF 3N2000BHG	1-78	18433	W68CF 34N4000BM4	1-78	19757	AQ1 3B16HR	1-174
18363	W68CF 3N2500BHG	1-78	18434	W68CF 34N2000BH4P	1-78	19758	AQ1 3B20HR	1-174
18364	W68CF 3N2900BHG	1-78	18435	W68CF 34N2500BH4P	1-78	19759	AQ1 3B25HR	1-174
18365	W68CF 3N3200BHG	1-78	18436	W68CF 34N2900BH4P	1-78	19760	AQ1 3B32HR	1-174
18366	W68CF 3N3600BHG	1-78	18437	W68CF 34N3200BH4P	1-78	19761	AQ1 3B40HR	1-174
18367	W68CF 3N4000BHG	1-78	18438	W68CF 34N3600BH4P	1-78	19762	AQ1 3B50HR	1-174
18368	W68CF 3H2000BL3	1-79	18439	W68CF 34N4000BH4P	1-78	19763	AQ1 3B63HR	1-174
18369	W68CF 3H2500BL3	1-79	18440	W68CF 34N2000BHQ	1-78	19764	AQ1 3C06HR	1-174
18370	W68CF 3H2900BL3	1-79	18441	W68CF 34N2500BHQ	1-78	19765	AQ1 3C10HR	1-174
18371	W68CF 3H3200BL3	1-79	18442	W68CF 34N2900BHQ	1-78	19766	AQ1 3C16HR	1-174
18372	W68CF 3H3600BL3	1-79	18443	W68CF 34N3200BHQ	1-78	19767	AQ1 3C20HR	1-174
18373	W68CF 3H4000BL3	1-79	18444	W68CF 34N3600BHQ	1-78	19768	AQ1 3C25HR	1-174
18374	W68CF 3H2000BL4	1-79	18445	W68CF 34N4000BHQ	1-78	19769	AQ1 3C32HR	1-174
18375	W68CF 3H2500BL4	1-79	18446	W68CF 34N2000BHG	1-78	19770	AQ1 3C40HR	1-174
18376	W68CF 3H2900BL4	1-79	18447	W68CF 34N2500BHG	1-78	19771	AQ1 3C50HR	1-174
18377	W68CF 3H3200BL4	1-79	18448	W68CF 34N2900BHG	1-78	19772	AQ1 3C63HR	1-174
18378	W68CF 3H3600BL4	1-79	18449	W68CF 34N3200BHG	1-78	19773	AQ1 3D06HR	1-174
18379	W68CF 3H4000BL4	1-79	18450	W68CF 34N3600BHG	1-78	19774	AQ1 3D10HR	1-174
18380	W68CF 3H2000BM3	1-79	18451	W68CF 34N4000BHG	1-78	19775	AQ1 3D16HR	1-174
18381	W68CF 3H2500BM3	1-79	18452	W68CF 34H2000BL3	1-79	19776	AQ1 3D20HR	1-174
18382	W68CF 3H2900BM3	1-79	18453	W68CF 34H2500BL3	1-79	19777	AQ1 3D25HR	1-174
18383	W68CF 3H3200BM3	1-79	18454	W68CF 34H2900BL3	1-79	19778	AQ1 3D32HR	1-174
18384	W68CF 3H3600BM3	1-79	18455	W68CF 34H3200BL3	1-79	19779	AQ1 3D40HR	1-174
18385	W68CF 3H4000BM3	1-79	18456	W68CF 34H3600BL3	1-79	19780	AQ1 3D50HR	1-174
18386	W68CF 3H2000BM4	1-79	18457	W68CF 34H4000BL3	1-79	19781	AQ1 3D63HR	1-174
18387	W68CF 3H2500BM4	1-79	18458	W68CF 34H2000BL4	1-79	19782	AQ1 4B06HR	1-174
18388	W68CF 3H2900BM4	1-79	18459	W68CF 34H2500BL4	1-79	19783	AQ1 4B10HR	1-174
18389	W68CF 3H3200BM4	1-79	18460	W68CF 34H2900BL4	1-79	19784	AQ1 4B16HR	1-174
18390	W68CF 3H3600BM4	1-79	18461	W68CF 34H3200BL4	1-79	19785	AQ1 4B20HR	1-174
18391	W68CF 3H4000BM4	1-79	18462	W68CF 34H3600BL4	1-79	19786	AQ1 4B25HR	1-174
18392	W68CF 3H2000BHP	1-79	18463	W68CF 34H4000BL4	1-79	19787	AQ1 4B32HR	1-174
18393	W68CF 3H2500BHP	1-79	18464	W68CF 34H2000BM3	1-79	19788	AQ1 4B40HR	1-174
18394	W68CF 3H2900BHP	1-79	18465	W68CF 34H2500BM3	1-79	19789	AQ1 4B50HR	1-174
18395	W68CF 3H3200BHP	1-79	18466	W68CF 34H2900BM3	1-79	19790	AQ1 4B63HR	1-174
18396	W68CF 3H3600BHP	1-79	18467	W68CF 34H3200BM3	1-79	19791	AQ1 4C06HR	1-174
18397	W68CF 3H4000BHP	1-79	18468	W68CF 34H3600BM3	1-79	19792	AQ1 4C10HR	1-174
18398	W68CF 3H2000BHQ	1-79	18469	W68CF 34H4000BM3	1-79	19793	AQ1 4C16HR	1-174
18399	W68CF 3H2500BHQ	1-79	18470	W68CF 34H2000BM4	1-79	19794	AQ1 4C20HR	1-174
18400	W68CF 3H2900BHQ	1-79	18471	W68CF 34H2500BM4	1-79	19795	AQ1 4C25HR	1-174
18401	W68CF 3H3200BHQ	1-79	18472	W68CF 34H2900BM4	1-79	19796	AQ1 4C32HR	1-174
18402	W68CF 3H3600BHQ	1-79	18473	W68CF 34H3200BM4	1-79	19797	AQ1 4C40HR	1-174
18403	W68CF 3H4000BHQ	1-79	18474	W68CF 34H3600BM4	1-79	19798	AQ1 4C50HR	1-174
18404	W68CF 3H2000BHG	1-79	18475	W68CF 34H4000BM4	1-79	19799	AQ1 4C63HR	1-174
18405	W68CF 3H2500BHG	1-79	18476	W68CF 34H2000BH4P	1-79	19800	AQ1 4D06HR	1-174
18406	W68CF 3H2900BHG	1-79	18477	W68CF 34H2500BH4P	1-79	19801	AQ1 4D10HR	1-174
18407	W68CF 3H3200BHG	1-79	18478	W68CF 34H2900BH4P	1-79	19802	AQ1 4D16HR	1-174
18408	W68CF 3H3600BHG	1-79	18479	W68CF 34H3200BH4P	1-79	19803	AQ1 4D20HR	1-174
18409	W68CF 3H4000BHG	1-79	18480	W68CF 34H3600BH4P	1-79	19804	AQ1 4D25HR	1-174
18410	W68CF 34N2000BL3	1-78	18481	W68CF 34H4000BH4P	1-79	19805	AQ1 4D32HR	1-174
18411	W68CF 34N2500BL3	1-78	18482	W68CF 34H2000BHQ	1-79	19806	AQ1 4D40HR	1-174
18412	W68CF 34N2900BL3	1-78	18483	W68CF 34H2500BHQ	1-79	19807	AQ1 4D50HR	1-174
18413	W68CF 34N3200BL3	1-78	18484	W68CF 34H2900BHQ	1-79	19808	AQ1 4D63HR	1-174
18414	W68CF 34N3600BL3	1-78	18485	W68CF 34H3200BHQ	1-79	19809	AQ1 3B06NR	1-174
18415	W68CF 34N4000BL3	1-78	18486	W68CF 34H3600BHQ	1-79	19810	AQ1 3B10NR	1-174
18416	W68CF 34N2000BL4	1-78	18487	W68CF 34H4000BHQ	1-79	19811	AQ1 3B16NR	1-174
18417	W68CF 34N2500BL4	1-78	18488	W68CF 34H2000BHG	1-79	19812	AQ1 3B20NR	1-174
18418	W68CF 34N2900BL4	1-78	18489	W68CF 34H2500BHG	1-79	19813	AQ1 3B25NR	1-174
18419	W68CF 34N3200BL4	1-78	18490	W68CF 34H2900BHG	1-79	19814	AQ1 3B32NR	1-174

Index / Order Code

Order code	Type code	Page
19815	AQ1 3B40NR	1-174
19816	AQ1 3B50NR	1-174
19817	AQ1 3B63NR	1-174
19818	AQ1 3C06NR	1-174
19819	AQ1 3C10NR	1-174
19820	AQ1 3C16NR	1-174
19821	AQ1 3C20NR	1-174
19822	AQ1 3C25NR	1-174
19823	AQ1 3C32NR	1-174
19824	AQ1 3C40NR	1-174
19825	AQ1 3C50NR	1-174
19826	AQ1 3C63NR	1-174
19827	AQ1 3D06NR	1-174
19828	AQ1 3D10NR	1-174
19829	AQ1 3D16NR	1-174
19830	AQ1 3D20NR	1-174
19831	AQ1 3D25NR	1-174
19832	AQ1 3D32NR	1-174
19833	AQ1 3D40NR	1-174
19834	AQ1 3D50NR	1-174
19835	AQ1 3D63NR	1-174
19836	AQ1 4B06NR	1-174
19837	AQ1 4B10NR	1-174
19838	AQ1 4B16NR	1-174
19839	AQ1 4B20NR	1-174
19840	AQ1 4B25NR	1-174
19841	AQ1 4B32NR	1-174
19842	AQ1 4B40NR	1-174
19843	AQ1 4B50NR	1-174
19844	AQ1 4B63NR	1-174
19845	AQ1 4C06NR	1-174
19846	AQ1 4C10NR	1-174
19847	AQ1 4C16NR	1-174
19848	AQ1 4C20NR	1-174
19849	AQ1 4C25NR	1-174
19850	AQ1 4C32NR	1-174
19851	AQ1 4C40NR	1-174
19852	AQ1 4C50NR	1-174
19853	AQ1 4C63NR	1-174
19854	AQ1 4D06NR	1-174
19855	AQ1 4D10NR	1-174
19856	AQ1 4D16NR	1-174
19857	AQ1 4D20NR	1-174
19858	AQ1 4D25NR	1-174
19859	AQ1 4D32NR	1-174
19860	AQ1 4D40NR	1-174
19861	AQ1 4D50NR	1-174
19862	AQ1 4D63NR	1-174
19863	AQ2A 3016LNNGSU	1-185
19864	AQ2A 3020LNNGSU	1-185
19865	AQ2A 3025LNNGSU	1-185
19866	AQ2A 3032LNNGSU	1-185
19867	AQ2A 3040LNNGSU	1-185
19868	AQ2A 3050LNNGSU	1-185
19869	AQ2A 3063LNNGSU	1-185
19870	AQ2A 3080LNNGSU	1-185
19871	AQ2A 3100LNNGSU	1-185
19872	AQ2A 3016MNGSU	1-185
19873	AQ2A 3020MNGSU	1-185
19874	AQ2A 3025MNGSU	1-185
19875	AQ2A 3032MNGSU	1-185
19876	AQ2A 3040MNGSU	1-185
19877	AQ2A 3050MNGSU	1-185
19878	AQ2A 3063MNGSU	1-185
19879	AQ2A 3080MNGSU	1-185
19880	AQ2A 3100MNGSU	1-185
19881	AQ2A 4016MNGSU	1-185
19882	AQ2A 4020MNGSU	1-185
19883	AQ2A 4025MNGSU	1-185
19884	AQ2A 4032MNGSU	1-185
19885	AQ2A 4040MNGSU	1-185

Order code	Type code	Page
19886	AQ2A 4050MNGSU	1-185
19887	AQ2A 4063MNGSU	1-185
19888	AQ2A 4080MNGSU	1-185
19889	AQ2A 4100MNGSU	1-185
19890	AQ2A 3016HNNGSU	1-185
19891	AQ2A 3020HNNGSU	1-185
19892	AQ2A 3025HNNGSU	1-185
19893	AQ2A 3032HNNGSU	1-185
19894	AQ2A 3040HNNGSU	1-185
19895	AQ2A 3050HNNGSU	1-185
19896	AQ2A 3063HNNGSU	1-185
19897	AQ2A 3080HNNGSU	1-185
19898	AQ2A 3100HNNGSU	1-185
19899	AQ2B 3100LNNGSU	1-187
19900	AQ2B 3125LNNGSU	1-187
19901	AQ2B 3140LNNGSU	1-187
19902	AQ2B 3160LNNGSU	1-187
19903	AQ2B 3180LNNGSU	1-187
19904	AQ2B 3200LNNGSU	1-187
19905	AQ2B 3225LNNGSU	1-187
19906	AQ2B 3100MNGSU	1-187
19907	AQ2B 3125MNGSU	1-187
19908	AQ2B 3140MNGSU	1-187
19909	AQ2B 3160MNGSU	1-187
19910	AQ2B 3180MNGSU	1-187
19911	AQ2B 3200MNGSU	1-187
19912	AQ2B 3225MNGSU	1-187
19913	AQ2B 4100MNGSU	1-187
19914	AQ2B 4125MNGSU	1-187
19915	AQ2B 4140MNGSU	1-187
19916	AQ2B 4160MNGSU	1-187
19917	AQ2B 4180MNGSU	1-187
19918	AQ2B 4200MNGSU	1-187
19919	AQ2B 4225MNGSU	1-187
19920	AQ2B 3100HNNGSU	1-187
19921	AQ2B 3125HNNGSU	1-187
19922	AQ2B 3140HNNGSU	1-187
19923	AQ2B 3160HNNGSU	1-187
19924	AQ2B 3180HNNGSU	1-187
19925	AQ2B 3200HNNGSU	1-187
19926	AQ2B 3225HNNGSU	1-187
19927	AQ2C 3225LNNGSU	1-189
19928	AQ2C 3250LNNGSU	1-189
19929	AQ2C 3315LNNGSU	1-189
19930	AQ2C 3350LNNGSU	1-189
19931	AQ2C 3400LNNGSU	1-189
19932	AQ2C 3225MNGSU	1-189
19933	AQ2C 3250MNGSU	1-189
19934	AQ2C 3315MNGSU	1-189
19935	AQ2C 3350MNGSU	1-189
19936	AQ2C 3400MNGSU	1-189
19937	AQ2C 4225MNGSU	1-189
19938	AQ2C 4250MNGSU	1-189
19939	AQ2C 4315MNGSU	1-189
19940	AQ2C 4350MNGSU	1-189
19941	AQ2C 4400MNGSU	1-189
19942	AQ2C 3225HNNGSU	1-189
19943	AQ2C 3250HNNGSU	1-189
19944	AQ2A 3016LNBRU	1-182
19945	AQ2A 3020LNBRU	1-182
19946	AQ2A 3025LNBRU	1-182
19947	AQ2A 3032LNBRU	1-182
19948	AQ2A 3040LNBRU	1-182
19949	AQ2A 3050LNBRU	1-182
19950	AQ2A 3063LNBRU	1-182
19951	AQ2A 3080LNBRU	1-182
19952	AQ2A 3100LNBRU	1-182
19953	AQ2A 3016LNBSU	1-183
19954	AQ2A 3020LNBSU	1-183
19955	AQ2A 3025LNBSU	1-183
19956	AQ2A 3032LNBSU	1-183

Order code	Type code	Page
19957	AQ2A 3040LNBSU	1-183
19958	AQ2A 3050LNBSU	1-183
19959	AQ2A 3063LNBSU	1-183
19960	AQ2A 3080LNBSU	1-183
19961	AQ2A 3100LNBSU	1-183
19962	AQ2A 3016LNGRU	1-184
19963	AQ2A 3020LNGRU	1-184
19964	AQ2A 3025LNGRU	1-184
19965	AQ2A 3032LNGRU	1-184
19966	AQ2A 3040LNGRU	1-184
19967	AQ2A 3050LNGRU	1-184
19968	AQ2A 3063LNGRU	1-184
19969	AQ2A 3080LNGRU	1-184
19970	AQ2A 3100LNGRU	1-184
19971	AQ2A 3016MNBRU	1-182
19972	AQ2A 3020MNBRU	1-182
19973	AQ2A 3025MNBRU	1-182
19974	AQ2A 3032MNBRU	1-182
19975	AQ2A 3040MNBRU	1-182
19976	AQ2A 3050MNBRU	1-182
19977	AQ2A 3063MNBRU	1-182
19978	AQ2A 3080MNBRU	1-182
19979	AQ2A 3100MNBRU	1-182
19980	AQ2A 3016MNBSU	1-183
19981	AQ2A 3020MNBSU	1-183
19982	AQ2A 3025MNBSU	1-183
19983	AQ2A 3032MNBSU	1-183
19984	AQ2A 3040MNBSU	1-183
19985	AQ2A 3050MNBSU	1-183
19986	AQ2A 3063MNBSU	1-183
19987	AQ2A 3080MNBSU	1-183
19988	AQ2A 3100MNBSU	1-183
19989	AQ2A 3016MNGRU	1-184
19990	AQ2A 3020MNGRU	1-184
19991	AQ2A 3025MNGRU	1-184
19992	AQ2A 3032MNGRU	1-184
19993	AQ2A 3040MNGRU	1-184
19994	AQ2A 3050MNGRU	1-184
19995	AQ2A 3063MNGRU	1-184
19996	AQ2A 3080MNGRU	1-184
19997	AQ2A 3100MNGRU	1-184
19998	AQ2A 4016MNBRU	1-182
19999	AQ2A 4020MNBRU	1-182
21538	M8LB 3M180/1	1-138
21539	M8LB 3M200/1	1-138
21540	M8LB 3M225/1	1-138
21541	M8LB 3M100/3	1-138
21542	M8LB 3M125/3	1-138
21543	M8LB 3M140/3	1-138
21544	M8LB 3M160/3	1-138
21545	M8LB 3M180/3	1-138
21546	M8LB 3M200/3	1-138
21547	M8LB 3M225/3	1-138
21548	M8LC 3M200/3	1-138
21549	M8LC 3M225/3	1-138
24611	10RT16G00C	1-215
24612	16RT16G00C	1-215
24613	20RT16G00C	1-215
24614	25RT16G00C	1-215
24615	32RT16G00C	1-215
24616	40RT16G00C	1-215
24617	50RT16G00C	1-215
24618	63RT16G00C	1-215
24619	80RT16G00C	1-215
24620	100RT16G00C	1-215
24623	10RT16G00	1-215
24624	16RT16G01	1-215
24625	20RT16G02	1-215
24626	25RT16G03	1-215
24627	32RT16G04	1-215
24628	40RT16G05	1-215

Index / Order Code

1

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
24629	50RT16G06	1-215	25038	M8NA 4*P40M	1-118	25109	M8ND 3P350M	1-119
24630	63RT16G07	1-215	25039	M8NA 4*P50M	1-118	25110	M8ND 3P400M	1-119
24631	80RT16G08	1-215	25040	M8NA 4*P63M	1-118	25111	M8ND 4*P225M	1-119
24632	100RT16G09	1-215	25041	M8NB 3P016L	1-118	25112	M8ND 4*P250M	1-119
24633	125RT16G10	1-215	25042	M8NB 3P020L	1-118	25113	M8ND 4*P315M	1-119
24634	160RT16G11	1-215	25043	M8NB 3P025L	1-118	25114	M8ND 4*P350M	1-119
24635	10RT16G0	1-215	25044	M8NB 3P032L	1-118	25115	M8ND 4*P400M	1-119
24636	16RT16G0	1-215	25045	M8NB 3P040L	1-118	25116	M8ND 3P225H	1-120
24637	20RT16G0	1-215	25046	M8NB 3P050L	1-118	25117	M8ND 3P250H	1-120
24638	25RT16G0	1-215	25047	M8NB 3P063L	1-118	25118	M8ND 3P315H	1-120
24639	32RT16G0	1-215	25048	M8NB 3P080L	1-118	25119	M8ND 3P350H	1-120
24640	40RT16G0	1-215	25049	M8NB 3P100L	1-118	25120	M8ND 3P400H	1-120
24641	50RT16G0	1-215	25050	M8NB 3P016M	1-118	25121	M8NE 3P400L	1-120
24642	63RT16G0	1-215	25051	M8NB 3P020M	1-118	25122	M8NE 3P500L	1-120
24643	80RT16G0	1-215	25052	M8NB 3P025M	1-118	25123	M8NE 3P630L	1-120
24644	100RT16G0	1-215	25053	M8NB 3P032M	1-118	25124	M8NE 3P400M	1-120
24645	125RT16G0	1-215	25054	M8NB 3P040M	1-118	25125	M8NE 3P500M	1-120
24646	160RT16G0	1-215	25055	M8NB 3P050M	1-118	25126	M8NE 3P630M	1-120
24647	63RT16G1	1-215	25056	M8NB 3P063M	1-118	25127	M8NE 4*P400M	1-120
24648	80RT16G1	1-215	25057	M8NB 3P080M	1-118	25128	M8NE 4*P500M	1-120
24649	100RT16G1	1-215	25058	M8NB 3P100M	1-118	25129	M8NE 4*P630M	1-120
24650	125RT16G1	1-215	25059	M8NB 4*P16M	1-118	25130	M8NE 3P400H	1-120
24651	160RT16G1	1-215	25060	M8NB 4*P20M	1-118	25131	M8NE 3P500H	1-120
24652	200RT16G1	1-215	25061	M8NB 4*P25M	1-118	25132	M8NE 3P630H	1-120
24653	225RT16G1	1-215	25062	M8NB 4*P32M	1-118	25133	M8NF 3P630M	1-120
24654	250RT16G1	1-215	25063	M8NB 4*P40M	1-118	25134	M8NF 3P700M	1-120
24655	125RT16G2	1-215	25064	M8NB 4*P50M	1-118	25135	M8NF 3P800M	1-120
24656	160RT16G2	1-215	25065	M8NB 4*P63M	1-118	25136	M8NF 4*P630M	1-120
24657	200RT16G2	1-215	25066	M8NB 4*P80M	1-118	25137	M8NF 4*P700M	1-120
24658	225RT16G2	1-215	25067	M8NB 4*P100M	1-118	25138	M8NF 4*P800M	1-120
24659	250RT16G2	1-215	25068	M8NB 3P016H	1-119	25139	M8NF 3P630H	1-120
24660	300RT16G2	1-215	25069	M8NB 3P020H	1-119	25140	M8NF 3P700H	1-120
24661	315RT16G2	1-215	25070	M8NB 3P025H	1-119	25141	M8NF 3P800H	1-120
24662	355RT16G2	1-215	25071	M8NB 3P032H	1-119	25142	M8A SH230A	1-121
24663	400RT16G2	1-215	25072	M8NB 3P040H	1-119	25143	M8B SH230A	1-121
24664	160RT16G3	1-215	25073	M8NB 3P050H	1-119	25144	M8C SH230A	1-121
24665	200RT16G3	1-215	25074	M8NB 3P063H	1-119	25145	M8D SH230A	1-121
24666	225RT16G3	1-215	25075	M8NB 3P080H	1-119	25146	M8E SH230A	1-121
24667	250RT16G3	1-215	25076	M8NB 3P100H	1-119	25147	M8F SH230A	1-121
24668	300RT16G3	1-215	25077	M8NC 3P100L	1-119	25148	M8A SH400A	1-121
24669	315RT16G3	1-215	25078	M8NC 3P125L	1-119	25149	M8B SH400A	1-121
24670	355RT16G3	1-215	25079	M8NC 3P160L	1-119	25150	M8C SH400A	1-121
24671	400RT16G3	1-215	25080	M8NC 3P180L	1-119	25151	M8D SH400A	1-121
24672	500RT16G3	1-215	25081	M8NC 3P200L	1-119	25152	M8E SH400A	1-121
24673	630RT16G3	1-215	25082	M8NC 3P225L	1-119	25153	M8F SH400A	1-121
24675	800RT16G4	1-215	25083	M8NC 3P100M	1-119	25154	M8A UV230A	1-120
24676	100RT16G4	1-215	25084	M8NC 3P125M	1-119	25155	M8B UV230A	1-120
24679	RT16-00-B	1-214	25085	M8NC 3P160M	1-119	25156	M8C UV230A	1-120
24680	RT16-0-B	1-214	25086	M8NC 3P180M	1-119	25157	M8D UV230A	1-120
24681	RT16-1-B	1-214	25087	M8NC 3P200M	1-119	25158	M8E UV230A	1-120
24682	RT16-2-B	1-214	25088	M8NC 3P225M	1-119	25159	M8F UV230A	1-120
24683	RT16-3-B	1-214	25089	M8NC 4*P100M	1-119	25160	M8A UV400A	1-120
24684	RT16-4-B	1-214	25090	M8NC 4*P125M	1-119	25161	M8B UV400A	1-120
25016	M8NA 3P16L	1-118	25091	M8NC 4*P160M	1-119	25162	M8C UV400A	1-120
25017	M8NA 3P20L	1-118	25092	M8NC 4*P180M	1-119	25163	M8D UV400A	1-120
25018	M8NA 3P25L	1-118	25093	M8NC 4*P200M	1-119	25164	M8E UV400A	1-120
25019	M8NA 3P32L	1-118	25094	M8NC 4*P225M	1-119	25165	M8F UV400A	1-120
25020	M8NA 3P40L	1-118	25095	M8NC 3P100H	1-119	25166	M8A AUL	1-121
25021	M8NA 3P50L	1-118	25096	M8NC 3P125H	1-119	25167	M8B AUL	1-121
25022	M8NA 3P63L	1-118	25097	M8NC 3P160H	1-119	25168	M8C AUL	1-121
25025	M8NA 3P16M	1-118	25098	M8NC 3P180H	1-119	25169	M8D AUL	1-121
25026	M8NA 3P20M	1-118	25099	M8NC 3P200H	1-119	25170	M8E AUL	1-121
25027	M8NA 3P25M	1-118	25100	M8NC 3P225H	1-119	25171	M8F AUL	1-121
25028	M8NA 3P32M	1-118	25101	M8ND 3P225L	1-119	25172	M8A AR	1-121
25029	M8NA 3P40M	1-118	25102	M8ND 3P250L	1-119	25173	M8B AR	1-121
25030	M8NA 3P50M	1-118	25103	M8ND 3P315L	1-119	25174	M8C AR	1-121
25031	M8NA 3P63M	1-118	25104	M8ND 3P350L	1-119	25175	M8D AR	1-121
25034	M8NA 4*P16M	1-118	25105	M8ND 3P400L	1-119	25176	M8E AR	1-121
25035	M8NA 4*P20M	1-118	25106	M8ND 3P225M	1-119	25177	M8F AR	1-121
25036	M8NA 4*P25M	1-118	25107	M8ND 3P250M	1-119	25214	M8LA 3P016/1	1-137
25037	M8NA 4*P32M	1-118	25108	M8ND 3P315M	1-119	25215	M8LA 3P020/1	1-137

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
25216	M8LA 3P025/1	1-137	27802	W8AD 3MV400	1-104	27890	W8AD 4HV800	1-104
25217	M8LA 3P032/1	1-137	27803	W8AD 3MH630	1-103	27892	W8AD 4HV1000	1-104
25218	M8LA 3P040/1	1-137	27804	W8AD 3MV630	1-104	27894	W8AD 4HV1250	1-104
25219	M8LA 3P050/1	1-137	27805	W8AD 3MH800	1-103	27896	W8AD 4HV1600	1-104
25220	M8LA 3P063/1	1-137	27806	W8AD 3MV800	1-104	27898	W8AD 4HV2000	1-104
25221	M8LA 3P080/1	1-137	27807	W8AD 3MH1000	1-103	27900	W8AF 4HV400	1-104
25222	M8LA 3P100/1	1-137	27808	W8AD 3MV1000	1-104	27902	W8AF 4HV630	1-104
25223	M8LA 3P016/3	1-137	27809	W8AD 3MH1250	1-103	27904	W8AF 4HV800	1-104
25224	M8LA 3P020/3	1-137	27810	W8AD 3MV1250	1-104	27906	W8AF 4HV1000	1-104
25225	M8LA 3P025/3	1-137	27811	W8AD 3MH1600	1-103	27908	W8AF 4HV1250	1-104
25226	M8LA 3P032/3	1-137	27812	W8AD 3MV1600	1-104	27910	W8AF 4HV1600	1-104
25227	M8LA 3P040/3	1-137	27813	W8AD 3MH2000	1-103	27912	W8AF 4HV2000	1-104
25228	M8LA 3P050/3	1-137	27814	W8AD 3MV2000	1-104	27913	W8BD 3MH2000	1-105
25229	M8LA 3P063/3	1-137	27815	W8AF 3MH400	1-103	27914	W8BD 3MV2000	1-105
25230	M8LA 3P080/3	1-137	27816	W8AF 3MV400	1-104	27915	W8BD 3MH2500	1-105
25231	M8LA 3P100/3	1-137	27817	W8AF 3MH630	1-103	27916	W8BD 3MV2500	1-105
25232	M8LB 3P100/1	1-137	27818	W8AF 3MV630	1-104	27917	W8BD 3MH2900	1-105
25233	M8LB 3P125/1	1-137	27819	W8AF 3MH800	1-103	27918	W8BD 3MV2900	1-105
25234	M8LB 3P140/1	1-137	27820	W8AF 3MV800	1-104	27919	W8BD 3MH3200	1-105
25235	M8LB 3P160/1	1-137	27821	W8AF 3MH1000	1-103	27920	W8BD 3MV3200	1-105
25236	M8LB 3P180/1	1-137	27822	W8AF 3MV1000	1-104	27921	W8BF 3MH2000	1-105
25237	M8LB 3P200/1	1-137	27823	W8AF 3MH1250	1-103	27922	W8BF 3MV2000	1-105
25238	M8LB 3P225/1	1-137	27824	W8AF 3MV1250	1-104	27923	W8BF 3MH2500	1-105
25239	M8LB 3P100/3	1-137	27825	W8AF 3MH1600	1-103	27924	W8BF 3MV2500	1-105
25240	M8LB 3P125/3	1-137	27826	W8AF 3MV1600	1-104	27925	W8BF 3MH2900	1-105
25241	M8LB 3P140/3	1-137	27827	W8AF 3MH2000	1-103	27926	W8BF 3MV2900	1-105
25242	M8LB 3P160/3	1-137	27828	W8AF 3MV2000	1-104	27927	W8BF 3MH3200	1-105
25243	M8LB 3P180/3	1-137	27829	W8AD 4MH400	1-103	27928	W8BF 3MV3200	1-105
25244	M8LB 3P200/3	1-137	27830	W8AD 4MV400	1-104	27929	W8BD 4MH2000	1-105
25245	M8LB 3P225/3	1-137	27831	W8AD 4MH630	1-103	27930	W8BD 4MV2000	1-105
25246	M8LC 3P200/3	1-137	27832	W8AD 4MV630	1-104	27931	W8BD 4MH2500	1-105
25247	M8LC 3P225/3	1-137	27833	W8AD 4MH800	1-103	27932	W8BD 4MV2500	1-105
25248	M8LC 3P250/3	1-137	27834	W8AD 4MV800	1-104	27933	W8BD 4MH2900	1-105
25249	M8LC 3P315/3	1-137	27835	W8AD 4MH1000	1-103	27934	W8BD 4MV2900	1-105
25250	M8LC 3P350/3	1-137	27836	W8AD 4MV1000	1-104	27935	W8BD 4MH3200	1-105
25251	M8LC 3P400/3	1-137	27837	W8AD 4MH1250	1-103	27936	W8BD 4MV3200	1-105
25252	M8LC 3P200/5	1-137	27838	W8AD 4MV1250	1-104	27937	W8BF 4MH2000	1-105
25253	M8LC 3P225/5	1-137	27839	W8AD 4MH1600	1-103	27938	W8BF 4MV2000	1-105
25254	M8LC 3P250/5	1-137	27840	W8AD 4MV1600	1-104	27939	W8BF 4MH2500	1-105
25255	M8LC 3P315/5	1-137	27841	W8AD 4MH2000	1-103	27940	W8BF 4MV2500	1-105
25256	M8LC 3P350/5	1-137	27842	W8AD 4MV2000	1-104	27941	W8BF 4MH2900	1-105
25257	M8LC 3P400/5	1-137	27843	W8AF 4MH400	1-103	27942	W8BF 4MV2900	1-105
25258	M8LD 3P400/3	1-137	27844	W8AF 4MV400	1-104	27943	W8BF 4MH3200	1-105
25259	M8LD 3P500/3	1-137	27845	W8AF 4MH630	1-103	27944	W8BF 4MV3200	1-105
25260	M8LD 3P630/3	1-137	27846	W8AF 4MV630	1-104	27945	W8BD 3HH2000	1-106
25261	M8LD 3P400/5	1-137	27847	W8AF 4MH800	1-103	27946	W8BD 3HV2000	1-106
25262	M8LD 3P500/5	1-137	27848	W8AF 4MV800	1-104	27947	W8BD 3HH2500	1-106
25263	M8LD 3P630/5	1-137	27849	W8AF 4MH1000	1-103	27948	W8BD 3HV2500	1-106
25264	M8LA 3M016/1	1-138	27850	W8AF 4MV1000	1-104	27949	W8BD 3HH2900	1-105
25265	M8LA 3M020/1	1-138	27851	W8AF 4MH1250	1-103	27950	W8BD 3HV2900	1-106
25266	M8LA 3M025/1	1-138	27852	W8AF 4MV1250	1-104	27951	W8BD 3HH3200	1-105
25267	M8LA 3M032/1	1-138	27853	W8AF 4MH1600	1-103	27952	W8BD 3HV3200	1-106
25268	M8LA 3M040/1	1-138	27854	W8AF 4MV1600	1-104	27953	W8BF 3HH2000	1-105
25269	M8LA 3M050/1	1-138	27855	W8AF 4MH2000	1-103	27954	W8BF 3HV2000	1-106
25270	M8LA 3M063/1	1-138	27856	W8AF 4MV2000	1-104	27955	W8BF 3HH2500	1-105
25271	M8LA 3M080/1	1-138	27858	W8AD 3HV400	1-104	27956	W8BF 3HV2500	1-106
25272	M8LA 3M100/1	1-138	27860	W8AD 3HV630	1-104	27957	W8BF 3HH2900	1-105
25273	M8LA 3M016/3	1-138	27862	W8AD 3HV800	1-104	27958	W8BF 3HV2900	1-106
25274	M8LA 3M020/3	1-138	27864	W8AD 3HV1000	1-104	27959	W8BF 3HH3200	1-105
25275	M8LA 3M025/3	1-138	27866	W8AD 3HV1250	1-104	27960	W8BF 3HV3200	1-106
25276	M8LA 3M032/3	1-138	27868	W8AD 3HV1600	1-104	27961	W8BD 4HH2000	1-105
25277	M8LA 3M040/3	1-138	27870	W8AD 3HV2000	1-104	27962	W8BD 4HV2000	1-106
25278	M8LA 3M050/3	1-138	27872	W8AF 3HV400	1-104	27963	W8BD 4HH2500	1-105
25279	M8LA 3M063/3	1-138	27874	W8AF 3HV630	1-104	27964	W8BD 4HV2500	1-106
25280	M8LA 3M080/3	1-138	27876	W8AF 3HV800	1-104	27965	W8BD 4HH2900	1-105
25281	M8LA 3M100/3	1-138	27878	W8AF 3HV1000	1-104	27966	W8BD 4HV2900	1-106
25282	M8LB 3M100/1	1-138	27880	W8AF 3HV1250	1-104	27967	W8BD 4HH3200	1-105
25283	M8LB 3M125/1	1-138	27882	W8AF 3HV1600	1-104	27968	W8BD 4HV3200	1-106
25284	M8LB 3M140/1	1-138	27884	W8AF 3HV2000	1-104	27969	W8BF 4HH2000	1-105
25285	M8LB 3M160/1	1-138	27886	W8AD 4HV400	1-104	27970	W8BF 4HV2000	1-106
27801	W8AD 3MH400	1-103	27888	W8AD 4HV630	1-104	27971	W8BF 4HH2500	1-105

Index / Order Code

1

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
27972	W8BF 4HV2500	1-106	28083	W68AF 3N1250AM4	1-70	28154	W68AF 4N1600AM4	1-70
27973	W8BF 4HH2900	1-105	28084	W68AF 3N1600AM4	1-70	28155	W68AF 4N200AH	1-70
27974	W8BF 4HV2900	1-106	28085	W68AF 3N200AH	1-70	28156	W68AF 4N400AH	1-70
27975	W8BF 4HH3200	1-105	28086	W68AF 3N400AH	1-70	28157	W68AF 4N630AH	1-70
27976	W8BF 4HV3200	1-106	28087	W68AF 3N630AH	1-70	28158	W68AF 4N800AH	1-70
27977	W8AD 3LH400	1-103	28088	W68AF 3N800AH	1-70	28159	W68AF 4N1000AH	1-70
27978	W8AD 3LV400	1-103	28089	W68AF 3N1000AH	1-70	28160	W68AF 4N1250AH	1-70
27979	W8BD 3MH4000	1-105	28090	W68AF 3N1250AH	1-70	28161	W68AF 4N1600AH	1-70
27980	W8BD 3MV4000	1-105	28091	W68AF 3N1600AH	1-70	28162	W68AF 4H200AL3	1-71
27981	W8AD 3LH630	1-103	28092	W68AF 3H200AL3	1-71	28163	W68AF 4H400AL3	1-71
27982	W8AD 3LV630	1-103	28093	W68AF 3H400AL3	1-71	28164	W68AF 4H630AL3	1-71
27985	W8AD 3LH800	1-103	28094	W68AF 3H630AL3	1-71	28165	W68AF 4H800AL3	1-71
27986	W8AD 3LV800	1-103	28095	W68AF 3H800AL3	1-71	28166	W68AF 4H1000AL3	1-71
27987	W8AD 3LH1000	1-103	28096	W68AF 3H1000AL3	1-71	28167	W68AF 4H1250AL3	1-71
27988	W8AD 3LV1000	1-103	28097	W68AF 3H1250AL3	1-71	28168	W68AF 4H1600AL3	1-71
27989	W8AD 3LH1250	1-103	28098	W68AF 3H1600AL3	1-71	28169	W68AF 4H200AL4	1-71
27990	W8AD 3LV1250	1-103	28099	W68AF 3H200AL4	1-71	28170	W68AF 4H400AL4	1-71
27991	W8AD 3LH1600	1-103	28100	W68AF 3H400AL4	1-71	28171	W68AF 4H630AL4	1-71
27992	W8AD 3LV1600	1-103	28101	W68AF 3H630AL4	1-71	28172	W68AF 4H800AL4	1-71
27993	W8AD 3LH2000	1-103	28102	W68AF 3H800AL4	1-71	28173	W68AF 4H1000AL4	1-71
27994	W8AD 3LV2000	1-103	28103	W68AF 3H1000AL4	1-71	28174	W68AF 4H1250AL4	1-71
27995	W8BD 3HH4000	1-105	28104	W68AF 3H1250AL4	1-71	28175	W68AF 4H1600AL4	1-71
27996	W8BD 3HV4000	1-106	28105	W68AF 3H1600AL4	1-71	28176	W68AF 4H200AM3	1-71
27997	W8AF 3LH400	1-103	28106	W68AF 3H200AM3	1-71	28177	W68AF 4H400AM3	1-71
27998	W8AF 3LV400	1-103	28107	W68AF 3H400AM3	1-71	28178	W68AF 4H630AM3	1-71
28011	W8CD 3MH5000	1-106	28108	W68AF 3H630AM3	1-71	28179	W68AF 4H800AM3	1-71
28012	W8CD 3MV5000	1-106	28109	W68AF 3H800AM3	1-71	28180	W68AF 4H1000AM3	1-71
28013	W8CD 3MH6300	1-106	28110	W68AF 3H1000AM3	1-71	28181	W68AF 4H1250AM3	1-71
28014	W8CD 3MV6300	1-106	28111	W68AF 3H1250AM3	1-71	28182	W68AF 4H1600AM3	1-71
28021	W8CD 4MH4000	1-106	28112	W68AF 3H1600AM3	1-71	28183	W68AF 4H200AM4	1-71
28022	W8CD 4MV4000	1-106	28113	W68AF 3H200AM4	1-71	28184	W68AF 4H400AM4	1-71
28023	W8CD 4MH5000	1-106	28114	W68AF 3H400AM4	1-71	28185	W68AF 4H630AM4	1-71
28024	W8CD 4MV5000	1-106	28115	W68AF 3H630AM4	1-71	28186	W68AF 4H800AM4	1-71
28025	W8CD 4MH6300	1-106	28116	W68AF 3H800AM4	1-71	28187	W68AF 4H1000AM4	1-71
28026	W8CD 4MV6300	1-106	28117	W68AF 3H1000AM4	1-71	28188	W68AF 4H1250AM4	1-71
28035	W8CD 3HH5000	1-106	28118	W68AF 3H1250AM4	1-71	28189	W68AF 4H1600AM4	1-71
28036	W8CD 3HV5000	1-106	28119	W68AF 3H1600AM4	1-71	28190	W68AF 4H200AH	1-71
28037	W8CD 3HH6300	1-106	28120	W68AF 3H200AH	1-71	28191	W68AF 4H400AH	1-71
28038	W8CD 3HV6300	1-106	28121	W68AF 3H400AH	1-71	28192	W68AF 4H630AH	1-71
28045	W8CD 4HH4000	1-106	28122	W68AF 3H630AH	1-71	28193	W68AF 4H800AH	1-71
28046	W8CD 4HV4000	1-106	28123	W68AF 3H800AH	1-71	28194	W68AF 4H1000AH	1-71
28047	W8CD 4HH5000	1-106	28124	W68AF 3H1000AH	1-71	28195	W68AF 4H1250AH	1-71
28048	W8CD 4HV5000	1-106	28125	W68AF 3H1250AH	1-71	28196	W68AF 4H1600AH	1-71
28049	W8CD 4HH6300	1-106	28126	W68AF 3H1600AH	1-71	28197	W68AD 3N200AL3	1-72
28050	W8CD 4HV6300	1-106	28127	W68AF 4N200AL3	1-70	28198	W68AD 3N400AL3	1-72
28057	W68AF 3N200AL3	1-70	28128	W68AF 4N400AL3	1-70	28199	W68AD 3N630AL3	1-72
28058	W68AF 3N400AL3	1-70	28129	W68AF 4N630AL3	1-70	28200	W68AD 3N800AL3	1-72
28059	W68AF 3N630AL3	1-70	28130	W68AF 4N800AL3	1-70	28201	W68AD 3N1000AL3	1-72
28060	W68AF 3N800AL3	1-70	28131	W68AF 4N1000AL3	1-70	28202	W68AD 3N1250AL3	1-72
28061	W68AF 3N1000AL3	1-70	28132	W68AF 4N1250AL3	1-70	28203	W68AD 3N1600AL3	1-72
28062	W68AF 3N1250AL3	1-70	28133	W68AF 4N1600AL3	1-70	28204	W68AD 3N200AL4	1-72
28063	W68AF 3N1600AL3	1-70	28134	W68AF 4N200AL4	1-70	28205	W68AD 3N400AL4	1-72
28064	W68AF 3N200AL4	1-70	28135	W68AF 4N400AL4	1-70	28206	W68AD 3N630AL4	1-72
28065	W68AF 3N400AL4	1-70	28136	W68AF 4N630AL4	1-70	28207	W68AD 3N800AL4	1-72
28066	W68AF 3N630AL4	1-70	28137	W68AF 4N800AL4	1-70	28208	W68AD 3N1000AL4	1-72
28067	W68AF 3N800AL4	1-70	28138	W68AF 4N1000AL4	1-70	28209	W68AD 3N1250AL4	1-72
28068	W68AF 3N1000AL4	1-70	28139	W68AF 4N1250AL4	1-70	28210	W68AD 3N1600AL4	1-72
28069	W68AF 3N1250AL4	1-70	28140	W68AF 4N1600AL4	1-70	28211	W68AD 3N200AM3	1-72
28070	W68AF 3N1600AL4	1-70	28141	W68AF 4N200AM3	1-70	28212	W68AD 3N400AM3	1-72
28071	W68AF 3N200AM3	1-70	28142	W68AF 4N400AM3	1-70	28213	W68AD 3N630AM3	1-72
28072	W68AF 3N400AM3	1-70	28143	W68AF 4N630AM3	1-70	28214	W68AD 3N800AM3	1-72
28073	W68AF 3N630AM3	1-70	28144	W68AF 4N800AM3	1-70	28215	W68AD 3N1000AM3	1-72
28074	W68AF 3N800AM3	1-70	28145	W68AF 4N1000AM3	1-70	28216	W68AD 3N1250AM3	1-72
28075	W68AF 3N1000AM3	1-70	28146	W68AF 4N1250AM3	1-70	28217	W68AD 3N1600AM3	1-72
28076	W68AF 3N1250AM3	1-70	28147	W68AF 4N1600AM3	1-70	28218	W68AD 3N200AM4	1-72
28077	W68AF 3N1600AM3	1-70	28148	W68AF 4N200AM4	1-70	28219	W68AD 3N400AM4	1-72
28078	W68AF 3N200AM4	1-70	28149	W68AF 4N400AM4	1-70	28220	W68AD 3N630AM4	1-72
28079	W68AF 3N400AM4	1-70	28150	W68AF 4N630AM4	1-70	28221	W68AD 3N800AM4	1-72
28080	W68AF 3N630AM4	1-70	28151	W68AF 4N800AM4	1-70	28222	W68AD 3N1000AM4	1-72
28081	W68AF 3N800AM4	1-70	28152	W68AF 4N1000AM4	1-70	28223	W68AD 3N1250AM4	1-72
28082	W68AF 3N1000AM4	1-70	28153	W68AF 4N1250AM4	1-70	28224	W68AD 3N1600AM4	1-72

Order code	Type code	Page
28225	W68AD 3N200AH	1-72
28226	W68AD 3N400AH	1-72
28227	W68AD 3N630AH	1-72
28228	W68AD 3N800AH	1-72
28229	W68AD 3N1000AH	1-72
28230	W68AD 3N1250AH	1-72
28231	W68AD 3N1600AH	1-72
28232	W68AD 3H200AL3	1-73
28233	W68AD 3H400AL3	1-73
28234	W68AD 3H630AL3	1-73
28235	W68AD 3H800AL3	1-73
28236	W68AD 3H1000AL3	1-73
28237	W68AD 3H1250AL3	1-73
28238	W68AD 3H1600AL3	1-73
28239	W68AD 3H200AL4	1-73
28240	W68AD 3H400AL4	1-73
28241	W68AD 3H630AL4	1-73
28242	W68AD 3H800AL4	1-73
28243	W68AD 3H1000AL4	1-73
28244	W68AD 3H1250AL4	1-73
28245	W68AD 3H1600AL4	1-73
28246	W68AD 3H200AM3	1-73
28247	W68AD 3H400AM3	1-73
28248	W68AD 3H630AM3	1-73
28249	W68AD 3H800AM3	1-73
28250	W68AD 3H1000AM3	1-73
28251	W68AD 3H1250AM3	1-73
28252	W68AD 3H1600AM3	1-73
28253	W68AD 3H200AM4	1-73
28254	W68AD 3H400AM4	1-73
28255	W68AD 3H630AM4	1-73
28256	W68AD 3H800AM4	1-73
28257	W68AD 3H1000AM4	1-73
28258	W68AD 3H1250AM4	1-73
28259	W68AD 3H1600AM4	1-73
28260	W68AD 3H200AH	1-73
28261	W68AD 3H400AH	1-73
28262	W68AD 3H630AH	1-73
28263	W68AD 3H800AH	1-73
28264	W68AD 3H1000AH	1-73
28265	W68AD 3H1250AH	1-73
28266	W68AD 3H1600AH	1-73
28267	W68AD 4N200AL3	1-72
28268	W68AD 4N400AL3	1-72
28269	W68AD 4N630AL3	1-72
28270	W68AD 4N800AL3	1-72
28271	W68AD 4N1000AL3	1-72
28272	W68AD 4N1250AL3	1-72
28273	W68AD 4N1600AL3	1-72
28274	W68AD 4N200AL4	1-72
28275	W68AD 4N400AL4	1-72
28276	W68AD 4N630AL4	1-72
28277	W68AD 4N800AL4	1-72
28278	W68AD 4N1000AL4	1-72
28279	W68AD 4N1250AL4	1-72
28280	W68AD 4N1600AL4	1-72
28281	W68AD 4N200AM3	1-72
28282	W68AD 4N400AM3	1-72
28283	W68AD 4N630AM3	1-72
28284	W68AD 4N800AM3	1-72
28285	W68AD 4N1000AM3	1-72
28286	W68AD 4N1250AM3	1-72
28287	W68AD 4N1600AM3	1-72
28288	W68AD 4N200AM4	1-72
28289	W68AD 4N400AM4	1-72
28290	W68AD 4N630AM4	1-72
28291	W68AD 4N800AM4	1-72
28292	W68AD 4N1000AM4	1-72
28293	W68AD 4N1250AM4	1-72
28294	W68AD 4N1600AM4	1-72
28295	W68AD 4N200AH	1-72

Order code	Type code	Page
28296	W68AD 4N400AH	1-72
28297	W68AD 4N630AH	1-72
28298	W68AD 4N800AH	1-72
28299	W68AD 4N1000AH	1-72
28300	W68AD 4N1250AH	1-72
28301	W68AD 4N1600AH	1-72
28302	W68AD 4H200AL3	1-73
28303	W68AD 4H400AL3	1-73
28304	W68AD 4H630AL3	1-73
28305	W68AD 4H800AL3	1-73
28306	W68AD 4H1000AL3	1-73
28307	W68AD 4H1250AL3	1-73
28308	W68AD 4H1600AL3	1-73
28309	W68AD 4H200AL4	1-73
28310	W68AD 4H400AL4	1-73
28311	W68AD 4H630AL4	1-73
28312	W68AD 4H800AL4	1-73
28313	W68AD 4H1000AL4	1-73
28314	W68AD 4H1250AL4	1-73
28315	W68AD 4H1600AL4	1-73
28316	W68AD 4H200AM3	1-73
28317	W68AD 4H400AM3	1-73
28318	W68AD 4H630AM3	1-73
28319	W68AD 4H800AM3	1-73
28320	W68AD 4H1000AM3	1-73
28321	W68AD 4H1250AM3	1-73
28322	W68AD 4H1600AM3	1-73
28323	W68AD 4H200AM4	1-73
28324	W68AD 4H400AM4	1-73
28325	W68AD 4H630AM4	1-73
28326	W68AD 4H800AM4	1-73
28327	W68AD 4H1000AM4	1-73
28328	W68AD 4H1250AM4	1-73
28329	W68AD 4H1600AM4	1-73
28330	W68AD 4H200AH	1-73
28331	W68AD 4H400AH	1-73
28332	W68AD 4H630AH	1-73
28333	W68AD 4H800AH	1-73
28334	W68AD 4H1000AH	1-73
28335	W68AD 4H1250AH	1-73
28336	W68AD 4H1600AH	1-73
28337	W68BF 3N630BL3	1-74
28338	W68BF 3N800BL3	1-74
28339	W68BF 3N1000BL3	1-74
28340	W68BF 3N1250BL3	1-74
28341	W68BF 3N1600BL3	1-74
28342	W68BF 3N2000BL3	1-74
28343	W68BF 3N2500BL3	1-74
28344	W68BF 3N630BL4	1-74
28345	W68BF 3N800BL4	1-74
28346	W68BF 3N1000BL4	1-74
28347	W68BF 3N1250BL4	1-74
28348	W68BF 3N1600BL4	1-74
28349	W68BF 3N2000BL4	1-74
28350	W68BF 3N2500BL4	1-74
28351	W68BF 3N630BM3	1-74
28352	W68BF 3N800BM3	1-74
28353	W68BF 3N1000BM3	1-74
28354	W68BF 3N1250BM3	1-74
28355	W68BF 3N1600BM3	1-74
28356	W68BF 3N2000BM3	1-74
28357	W68BF 3N2500BM3	1-74
28358	W68BF 3N630BM4	1-74
28359	W68BF 3N800BM4	1-74
28360	W68BF 3N1000BM4	1-74
28361	W68BF 3N1250BM4	1-74
28362	W68BF 3N1600BM4	1-74
28363	W68BF 3N2000BM4	1-74
28364	W68BF 3N2500BM4	1-74
28365	W68BF 3N630BHP	1-74
28366	W68BF 3N800BHP	1-74

Order code	Type code	Page
28367	W68BF 3N1000BHP	1-74
28368	W68BF 3N1250BHP	1-74
28369	W68BF 3N1600BHP	1-74
28370	W68BF 3N2000BHP	1-74
28371	W68BF 3N2500BHP	1-74
28372	W68BF 3N630BHQ	1-74
28373	W68BF 3N800BHQ	1-74
28374	W68BF 3N1000BHQ	1-74
28375	W68BF 3N1250BHQ	1-74
28376	W68BF 3N1600BHQ	1-74
28377	W68BF 3N2000BHQ	1-74
28378	W68BF 3N2500BHQ	1-74
28379	W68BF 3N630BHG	1-74
28380	W68BF 3N800BHG	1-74
28381	W68BF 3N1000BHG	1-74
28382	W68BF 3N1250BHG	1-74
28383	W68BF 3N1600BHG	1-74
28384	W68BF 3N2000BHG	1-74
28385	W68BF 3N2500BHG	1-74
28386	W68BF 3H630BL3	1-75
28387	W68BF 3H800BL3	1-75
28388	W68BF 3H1000BL3	1-75
28389	W68BF 3H1250BL3	1-75
28390	W68BF 3H1600BL3	1-75
28391	W68BF 3H2000BL3	1-75
28392	W68BF 3H2500BL3	1-75
28393	W68BF 3H630BL4	1-75
28394	W68BF 3H800BL4	1-75
28395	W68BF 3H1000BL4	1-75
28396	W68BF 3H1250BL4	1-75
28397	W68BF 3H1600BL4	1-75
28398	W68BF 3H2000BL4	1-75
28399	W68BF 3H2500BL4	1-75
28400	W68BF 3H630BM3	1-75
28401	W68BF 3H800BM3	1-75
28402	W68BF 3H1000BM3	1-75
28403	W68BF 3H1250BM3	1-75
28404	W68BF 3H1600BM3	1-75
28405	W68BF 3H2000BM3	1-75
28406	W68BF 3H2500BM3	1-75
28407	W68BF 3H630BM4	1-75
28408	W68BF 3H800BM4	1-75
28409	W68BF 3H1000BM4	1-75
28410	W68BF 3H1250BM4	1-75
28411	W68BF 3H1600BM4	1-75
28412	W68BF 3H2000BM4	1-75
28413	W68BF 3H2500BM4	1-75
28414	W68BF 3H630BHP	1-75
28415	W68BF 3H800BHP	1-75
28416	W68BF 3H1000BHP	1-75
28417	W68BF 3H1250BHP	1-75
28418	W68BF 3H1600BHP	1-75
28419	W68BF 3H2000BHP	1-75
28420	W68BF 3H2500BHP	1-75
28421	W68BF 3H630BHQ	1-75
28422	W68BF 3H800BHQ	1-75
28423	W68BF 3H1000BHQ	1-75
28424	W68BF 3H1250BHQ	1-75
28425	W68BF 3H1600BHQ	1-75
28426	W68BF 3H2000BHQ	1-75
28427	W68BF 3H2500BHQ	1-75
28428	W68BF 3H630BHG	1-75
28429	W68BF 3H800BHG	1-75
28430	W68BF 3H1000BHG	1-75
28431	W68BF 3H1250BHG	1-75
28432	W68BF 3H1600BHG	1-75
28433	W68BF 3H2000BHG	1-75
28434	W68BF 3H2500BHG	1-75
28435	W68BF 4N630BL3	1-74
28436	W68BF 4N800BL3	1-74
28437	W68BF 4N1000BL3	1-74

Index / Order Code

1

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
28438	W68BF 4N1250BL3	1-74	28509	W68BF 4H1600BM4	1-75	28580	W68BD 3N2000BHG	1-76
28439	W68BF 4N1600BL3	1-74	28510	W68BF 4H2000BM4	1-75	28581	W68BD 3N2500BHG	1-76
28440	W68BF 4N2000BL3	1-74	28511	W68BF 4H2500BM4	1-75	28582	W68BD 3H630BL3	1-77
28441	W68BF 4N2500BL3	1-74	28512	W68BF 4H630BHP	1-75	28583	W68BD 3H800BL3	1-77
28442	W68BF 4N630BL4	1-74	28513	W68BF 4H800BHP	1-75	28584	W68BD 3H1000BL3	1-77
28443	W68BF 4N800BL4	1-74	28514	W68BF 4H1000BHP	1-75	28585	W68BD 3H1250BL3	1-77
28444	W68BF 4N1000BL4	1-74	28515	W68BF 4H1250BHP	1-75	28586	W68BD 3H1600BL3	1-77
28445	W68BF 4N1250BL4	1-74	28516	W68BF 4H1600BHP	1-75	28587	W68BD 3H2000BL3	1-77
28446	W68BF 4N1600BL4	1-74	28517	W68BF 4H2000BHP	1-75	28588	W68BD 3H2500BL3	1-77
28447	W68BF 4N2000BL4	1-74	28518	W68BF 4H2500BHP	1-75	28589	W68BD 3H630BL4	1-77
28448	W68BF 4N2500BL4	1-74	28519	W68BF 4H630BHQ	1-75	28590	W68BD 3H800BL4	1-77
28449	W68BF 4N630BM3	1-74	28520	W68BF 4H800BHQ	1-75	28591	W68BD 3H1000BL4	1-77
28450	W68BF 4N800BM3	1-74	28521	W68BF 4H1000BHQ	1-75	28592	W68BD 3H1250BL4	1-77
28451	W68BF 4N1000BM3	1-74	28522	W68BF 4H1250BHQ	1-75	28593	W68BD 3H1600BL4	1-77
28452	W68BF 4N1250BM3	1-74	28523	W68BF 4H1600BHQ	1-75	28594	W68BD 3H2000BL4	1-77
28453	W68BF 4N1600BM3	1-74	28524	W68BF 4H2000BHQ	1-75	28595	W68BD 3H2500BL4	1-77
28454	W68BF 4N2000BM3	1-74	28525	W68BF 4H2500BHQ	1-75	28596	W68BD 3H630BM3	1-77
28455	W68BF 4N2500BM3	1-74	28526	W68BF 4H630BHG	1-75	28597	W68BD 3H800BM3	1-77
28456	W68BF 4N630BM4	1-74	28527	W68BF 4H800BHG	1-75	28598	W68BD 3H1000BM3	1-77
28457	W68BF 4N800BM4	1-74	28528	W68BF 4H1000BHG	1-75	28599	W68BD 3H1250BM3	1-77
28458	W68BF 4N1000BM4	1-74	28529	W68BF 4H1250BHG	1-75	28600	W68BD 3H1600BM3	1-77
28459	W68BF 4N1250BM4	1-74	28530	W68BF 4H1600BHG	1-75	28601	W68BD 3H2000BM3	1-77
28460	W68BF 4N1600BM4	1-74	28531	W68BF 4H2000BHG	1-75	28602	W68BD 3H2500BM3	1-77
28461	W68BF 4N2000BM4	1-74	28532	W68BF 4H2500BHG	1-75	28603	W68BD 3H630BM4	1-77
28462	W68BF 4N2500BM4	1-74	28533	W68BD 3N630BL3	1-76	28604	W68BD 3H800BM4	1-77
28463	W68BF 4N630BHP	1-74	28534	W68BD 3N800BL3	1-76	28605	W68BD 3H1000BM4	1-77
28464	W68BF 4N800BHP	1-74	28535	W68BD 3N1000BL3	1-76	28606	W68BD 3H1250BM4	1-77
28465	W68BF 4N1000BHP	1-74	28536	W68BD 3N1250BL3	1-76	28607	W68BD 3H1600BM4	1-77
28466	W68BF 4N1250BHP	1-74	28537	W68BD 3N1600BL3	1-76	28608	W68BD 3H2000BM4	1-77
28467	W68BF 4N1600BHP	1-74	28538	W68BD 3N2000BL3	1-76	28609	W68BD 3H2500BM4	1-77
28468	W68BF 4N2000BHP	1-74	28539	W68BD 3N2500BL3	1-76	28610	W68BD 3H630BHP	1-77
28469	W68BF 4N2500BHP	1-74	28540	W68BD 3N630BL4	1-76	28611	W68BD 3H800BHP	1-77
28470	W68BF 4N630BHQ	1-74	28541	W68BD 3N800BL4	1-76	28612	W68BD 3H1000BHP	1-77
28471	W68BF 4N800BHQ	1-74	28542	W68BD 3N1000BL4	1-76	28613	W68BD 3H1250BHP	1-77
28472	W68BF 4N1000BHQ	1-74	28543	W68BD 3N1250BL4	1-76	28614	W68BD 3H1600BHP	1-77
28473	W68BF 4N1250BHQ	1-74	28544	W68BD 3N1600BL4	1-76	28615	W68BD 3H2000BHP	1-77
28474	W68BF 4N1600BHQ	1-74	28545	W68BD 3N2000BL4	1-76	28616	W68BD 3H2500BHP	1-77
28475	W68BF 4N2000BHQ	1-74	28546	W68BD 3N2500BL4	1-76	30001	AQ2A 4025MNBRU	1-182
28476	W68BF 4N2500BHQ	1-74	28547	W68BD 3N630BM3	1-76	30002	AQ2A 4032MNBRU	1-182
28477	W68BF 4N630BHG	1-74	28548	W68BD 3N800BM3	1-76	30003	AQ2A 4040MNBRU	1-182
28478	W68BF 4N800BHG	1-74	28549	W68BD 3N1000BM3	1-76	30004	AQ2A 4050MNBRU	1-182
28479	W68BF 4N1000BHG	1-74	28550	W68BD 3N1250BM3	1-76	30005	AQ2A 4063MNBRU	1-182
28480	W68BF 4N1250BHG	1-74	28551	W68BD 3N1600BM3	1-76	30006	AQ2A 4080MNBRU	1-182
28481	W68BF 4N1600BHG	1-74	28552	W68BD 3N2000BM3	1-76	30007	AQ2A 4100MNBRU	1-182
28482	W68BF 4N2000BHG	1-74	28553	W68BD 3N2500BM3	1-76	30008	AQ2A 4016MNBSU	1-183
28483	W68BF 4N2500BHG	1-74	28554	W68BD 3N630BM4	1-76	30009	AQ2A 4020MNBSU	1-183
28484	W68BF 4H630BL3	1-75	28555	W68BD 3N800BM4	1-76	30010	AQ2A 4025MNBSU	1-183
28485	W68BF 4H800BL3	1-75	28556	W68BD 3N1000BM4	1-76	30011	AQ2A 4032MNBSU	1-183
28486	W68BF 4H1000BL3	1-75	28557	W68BD 3N1250BM4	1-76	30012	AQ2A 4040MNBSU	1-183
28487	W68BF 4H1250BL3	1-75	28558	W68BD 3N1600BM4	1-76	30013	AQ2A 4050MNBSU	1-183
28488	W68BF 4H1600BL3	1-75	28559	W68BD 3N2000BM4	1-76	30014	AQ2A 4063MNBSU	1-183
28489	W68BF 4H2000BL3	1-75	28560	W68BD 3N2500BM4	1-76	30015	AQ2A 4080MNBSU	1-183
28490	W68BF 4H2500BL3	1-75	28561	W68BD 3N630BHP	1-76	30016	AQ2A 4100MNBSU	1-183
28491	W68BF 4H630BL4	1-75	28562	W68BD 3N800BHP	1-76	30017	AQ2A 4016MNGRU	1-184
28492	W68BF 4H800BL4	1-75	28563	W68BD 3N1000BHP	1-76	30018	AQ2A 4020MNGRU	1-184
28493	W68BF 4H1000BL4	1-75	28564	W68BD 3N1250BHP	1-76	30019	AQ2A 4025MNGRU	1-184
28494	W68BF 4H1250BL4	1-75	28565	W68BD 3N1600BHP	1-76	30020	AQ2A 4032MNGRU	1-184
28495	W68BF 4H1600BL4	1-75	28566	W68BD 3N2000BHP	1-76	30021	AQ2A 4040MNGRU	1-184
28496	W68BF 4H2000BL4	1-75	28567	W68BD 3N2500BHP	1-76	30022	AQ2A 4050MNGRU	1-184
28497	W68BF 4H2500BL4	1-75	28568	W68BD 3N630BHQ	1-76	30023	AQ2A 4063MNGRU	1-184
28498	W68BF 4H630BM3	1-75	28569	W68BD 3N800BHQ	1-76	30024	AQ2A 4080MNGRU	1-184
28499	W68BF 4H800BM3	1-75	28570	W68BD 3N1000BHQ	1-76	30025	AQ2A 4100MNGRU	1-184
28500	W68BF 4H1000BM3	1-75	28571	W68BD 3N1250BHQ	1-76	30026	AQ2A 3016HNBRU	1-182
28501	W68BF 4H1250BM3	1-75	28572	W68BD 3N1600BHQ	1-76	30027	AQ2A 3020HNBRU	1-182
28502	W68BF 4H1600BM3	1-75	28573	W68BD 3N2000BHQ	1-76	30028	AQ2A 3025HNBRU	1-182
28503	W68BF 4H2000BM3	1-75	28574	W68BD 3N2500BHQ	1-76	30029	AQ2A 3032HNBRU	1-182
28504	W68BF 4H2500BM3	1-75	28575	W68BD 3N630BHG	1-76	30030	AQ2A 3040HNBRU	1-182
28505	W68BF 4H630BM4	1-75	28576	W68BD 3N800BHG	1-76	30031	AQ2A 3050HNBRU	1-182
28506	W68BF 4H800BM4	1-75	28577	W68BD 3N1000BHG	1-76	30032	AQ2A 3063HNBRU	1-182
28507	W68BF 4H1000BM4	1-75	28578	W68BD 3N1250BHG	1-76	30033	AQ2A 3080HNBRU	1-182
28508	W68BF 4H1250BM4	1-75	28579	W68BD 3N1600BHG	1-76	30034	AQ2A 3100HNBRU	1-182

Index / Order Code

1

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
30035	AQ2A 3016HNBSU	1-183	30106	AQ2B 4180MNBSU	1-186	30177	AQ2C 4225MNGRU	1-189
30036	AQ2A 3020HNBSU	1-183	30107	AQ2B 4200MNBSU	1-186	30178	AQ2C 4250MNGRU	1-189
30037	AQ2A 3025HNBSU	1-183	30108	AQ2B 4225MNBSU	1-186	30179	AQ2C 4315MNGRU	1-189
30038	AQ2A 3032HNBSU	1-183	30109	AQ2B 4100MNGRU	1-187	30180	AQ2C 4350MNGRU	1-189
30039	AQ2A 3040HNBSU	1-183	30110	AQ2B 4125MNGRU	1-187	30181	AQ2C 4400MNGRU	1-189
30040	AQ2A 3050HNBSU	1-183	30111	AQ2B 4140MNGRU	1-187	30182	AQ2C 3225HNBRU	1-188
30041	AQ2A 3063HNBSU	1-183	30112	AQ2B 4160MNGRU	1-187	30183	AQ2C 3250HNBRU	1-188
30042	AQ2A 3080HNBSU	1-183	30113	AQ2B 4180MNGRU	1-187	30184	AQ2C 3315HNBRU	1-188
30043	AQ2A 3100HNBSU	1-183	30114	AQ2B 4200MNGRU	1-187	30185	AQ2C 3350HNBRU	1-188
30044	AQ2A 3016HNGRU	1-184	30115	AQ2B 4225MNGRU	1-187	30186	AQ2C 3400HNBRU	1-188
30045	AQ2A 3020HNGRU	1-184	30116	AQ2B 3100HNBRU	1-186	30187	AQ2C 3225HNBSU	1-188
30046	AQ2A 3025HNGRU	1-184	30117	AQ2B 3125HNBRU	1-186	30188	AQ2C 3250HNBSU	1-188
30047	AQ2A 3032HNGRU	1-184	30118	AQ2B 3140HNBRU	1-186	30189	AQ2C 3315HNBSU	1-188
30048	AQ2A 3040HNGRU	1-184	30119	AQ2B 3160HNBRU	1-186	30190	AQ2C 3350HNBSU	1-188
30049	AQ2A 3050HNGRU	1-184	30120	AQ2B 3180HNBRU	1-186	30191	AQ2C 3400HNBSU	1-188
30050	AQ2A 3063HNGRU	1-184	30121	AQ2B 3200HNBRU	1-186	30192	AQ2C 3225HNGRU	1-189
30051	AQ2A 3080HNGRU	1-184	30122	AQ2B 3225HNBRU	1-186	30193	AQ2C 3250HNGRU	1-189
30052	AQ2A 3100HNGRU	1-184	30123	AQ2B 3100HNBSU	1-186	30194	AQ2C 3315HNGRU	1-189
30053	AQ2B 3100LNBRU	1-186	30124	AQ2B 3125HNBSU	1-186	30195	AQ2C 3350HNGRU	1-189
30054	AQ2B 3125LNBRU	1-186	30125	AQ2B 3140HNBSU	1-186	30196	AQ2C 3400HNGRU	1-189
30055	AQ2B 3140LNBRU	1-186	30126	AQ2B 3160HNBSU	1-186	30197	AQ2D 3400LNBRU	1-190
30056	AQ2B 3160LNBRU	1-186	30127	AQ2B 3180HNBSU	1-186	30198	AQ2D 3500LNBRU	1-190
30057	AQ2B 3180LNBRU	1-186	30128	AQ2B 3200HNBSU	1-186	30199	AQ2D 3630LNBRU	1-190
30058	AQ2B 3200LNBRU	1-186	30129	AQ2B 3225HNBSU	1-186	30200	AQ2D 3400LNBSU	1-190
30059	AQ2B 3225LNBRU	1-186	30130	AQ2B 3100HNGRU	1-187	30201	AQ2D 3500LNBSU	1-190
30060	AQ2B 3100LNBSU	1-186	30131	AQ2B 3125HNGRU	1-187	30202	AQ2D 3630LNBSU	1-190
30061	AQ2B 3125LNBSU	1-186	30132	AQ2B 3140HNGRU	1-187	30203	AQ2D 3400LNGRU	1-191
30062	AQ2B 3140LNBSU	1-186	30133	AQ2B 3160HNGRU	1-187	30204	AQ2D 3500LNGRU	1-191
30063	AQ2B 3160LNBSU	1-186	30134	AQ2B 3180HNGRU	1-187	30205	AQ2D 3630LNGRU	1-191
30064	AQ2B 3180LNBSU	1-186	30135	AQ2B 3200HNGRU	1-187	30206	AQ2D 3400MNBRU	1-190
30065	AQ2B 3200LNBSU	1-186	30136	AQ2B 3225HNGRU	1-187	30207	AQ2D 3500MNBRU	1-190
30066	AQ2B 3225LNBSU	1-186	30137	AQ2C 3225LNBRU	1-188	30208	AQ2D 3630MNBRU	1-190
30067	AQ2B 3100LNGRU	1-187	30138	AQ2C 3250LNBRU	1-188	30209	AQ2D 3400MNBSU	1-190
30068	AQ2B 3125LNGRU	1-187	30139	AQ2C 3315LNBRU	1-188	30210	AQ2D 3500MNBSU	1-190
30069	AQ2B 3140LNGRU	1-187	30140	AQ2C 3350LNBRU	1-188	30211	AQ2D 3630MNBSU	1-190
30070	AQ2B 3160LNGRU	1-187	30141	AQ2C 3400LNBRU	1-188	30212	AQ2D 3400MNGRU	1-191
30071	AQ2B 3180LNGRU	1-187	30142	AQ2C 3225LNBSU	1-188	30213	AQ2D 3500MNGRU	1-191
30072	AQ2B 3200LNGRU	1-187	30143	AQ2C 3250LNBSU	1-188	30214	AQ2D 3630MNGRU	1-191
30073	AQ2B 3225LNGRU	1-187	30144	AQ2C 3315LNBSU	1-188	30215	AQ2D 4400MNBRU	1-190
30074	AQ2B 3100MNBRU	1-186	30145	AQ2C 3350LNBSU	1-188	30216	AQ2D 4500MNBRU	1-190
30075	AQ2B 3125MNBRU	1-186	30146	AQ2C 3400LNBSU	1-188	30217	AQ2D 4630MNBRU	1-190
30076	AQ2B 3140MNBRU	1-186	30147	AQ2C 3225LNGRU	1-189	30218	AQ2D 4400MNBSU	1-190
30077	AQ2B 3160MNBRU	1-186	30148	AQ2C 3250LNGRU	1-189	30219	AQ2D 4500MNBSU	1-190
30078	AQ2B 3180MNBRU	1-186	30149	AQ2C 3315LNGRU	1-189	30220	AQ2D 4630MNBSU	1-190
30079	AQ2B 3200MNBRU	1-186	30150	AQ2C 3350LNGRU	1-189	30221	AQ2D 4400MNGRU	1-191
30080	AQ2B 3225MNBRU	1-186	30151	AQ2C 3400LNGRU	1-189	30222	AQ2D 4500MNGRU	1-191
30081	AQ2B 3100MNBSU	1-186	30152	AQ2C 3225MNBRU	1-188	30223	AQ2D 4630MNGRU	1-191
30082	AQ2B 3125MNBSU	1-186	30153	AQ2C 3250MNBRU	1-188	30224	AQ2D 3400HNBRU	1-190
30083	AQ2B 3140MNBSU	1-186	30154	AQ2C 3315MNBRU	1-188	30225	AQ2D 3500HNBRU	1-190
30084	AQ2B 3160MNBSU	1-186	30155	AQ2C 3350MNBRU	1-188	30226	AQ2D 3630HNBRU	1-190
30085	AQ2B 3180MNBSU	1-186	30156	AQ2C 3400MNBRU	1-188	30227	AQ2D 3400HNBSU	1-190
30086	AQ2B 3200MNBSU	1-186	30157	AQ2C 3225MNBSU	1-188	30228	AQ2D 3500HNBSU	1-190
30087	AQ2B 3225MNBSU	1-186	30158	AQ2C 3250MNBSU	1-188	30229	AQ2D 3630HNBSU	1-190
30088	AQ2B 3100MNGRU	1-187	30159	AQ2C 3315MNBSU	1-188	30230	AQ2D 3400HNGRU	1-191
30089	AQ2B 3125MNGRU	1-187	30160	AQ2C 3350MNBSU	1-188	30231	AQ2D 3500HNGRU	1-191
30090	AQ2B 3140MNGRU	1-187	30161	AQ2C 3400MNBSU	1-188	30232	AQ2D 3630HNGRU	1-191
30091	AQ2B 3160MNGRU	1-187	30162	AQ2C 3225MNGRU	1-189	30233	AQ2E 3630MNBRU	1-192
30092	AQ2B 3180MNGRU	1-187	30163	AQ2C 3250MNGRU	1-189	30234	AQ2E 3700MNBRU	1-192
30093	AQ2B 3200MNGRU	1-187	30164	AQ2C 3315MNGRU	1-189	30235	AQ2E 3800MNBRU	1-192
30094	AQ2B 3225MNGRU	1-187	30165	AQ2C 3350MNGRU	1-189	30236	AQ2E 3630MNBSU	1-192
30095	AQ2B 4100MNBRU	1-186	30166	AQ2C 3400MNGRU	1-189	30237	AQ2E 3700MNBSU	1-192
30096	AQ2B 4125MNBRU	1-186	30167	AQ2C 4225MNBRU	1-188	30238	AQ2E 3800MNBSU	1-192
30097	AQ2B 4140MNBRU	1-186	30168	AQ2C 4250MNBRU	1-188	30239	AQ2E 3630MNGRU	1-192
30098	AQ2B 4160MNBRU	1-186	30169	AQ2C 4315MNBRU	1-188	30240	AQ2E 3700MNGRU	1-192
30099	AQ2B 4180MNBRU	1-186	30170	AQ2C 4350MNBRU	1-188	30241	AQ2E 3800MNGRU	1-192
30100	AQ2B 4200MNBRU	1-186	30171	AQ2C 4400MNBRU	1-188	30242	AQ2E 4630MNBRU	1-192
30101	AQ2B 4225MNBRU	1-186	30172	AQ2C 4225MNBSU	1-188	30243	AQ2E 4700MNBRU	1-192
30102	AQ2B 4100MNBSU	1-186	30173	AQ2C 4250MNBSU	1-188	30244	AQ2E 4800MNBRU	1-192
30103	AQ2B 4125MNBSU	1-186	30174	AQ2C 4315MNBSU	1-188	30245	AQ2E 4630MNBSU	1-192
30104	AQ2B 4140MNBSU	1-186	30175	AQ2C 4350MNBSU	1-188	30246	AQ2E 4700MNBSU	1-192
30105	AQ2B 4160MNBSU	1-186	30176	AQ2C 4400MNBSU	1-188	30247	AQ2E 4800MNBSU	1-192

Index / Order Code

1

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
30248	AQ2E 4630MNGGRU	1-192	30319	AQ2A 3100HNGSS	1-185	30390	AQ2A 3040MNGGRS	1-184
30249	AQ2E 4700MNGGRU	1-192	30320	AQ2B 3100LNGSS	1-187	30391	AQ2A 3050MNGGRS	1-184
30250	AQ2E 4800MNGGRU	1-192	30321	AQ2B 3125LNGSS	1-187	30392	AQ2A 3063MNGGRS	1-184
30251	AQ2E 3630HNBRU	1-192	30322	AQ2B 3140LNGSS	1-187	30393	AQ2A 3080MNGGRS	1-184
30252	AQ2E 3700HNBRU	1-192	30323	AQ2B 3160LNGSS	1-187	30394	AQ2A 3100MNGGRS	1-184
30253	AQ2E 3800HNBRU	1-192	30324	AQ2B 3180LNGSS	1-187	30395	AQ2A 4016MNBRS	1-182
30254	AQ2E 3630HNBSU	1-192	30325	AQ2B 3200LNGSS	1-187	30396	AQ2A 4020MNBRS	1-182
30255	AQ2E 3700HNBSU	1-192	30326	AQ2B 3225LNGSS	1-187	30397	AQ2A 4025MNBRS	1-182
30256	AQ2E 3800HNBSU	1-192	30327	AQ2B 3100MNGSS	1-187	30398	AQ2A 4032MNBRS	1-182
30257	AQ2E 3630HNGRU	1-192	30328	AQ2B 3125MNGSS	1-187	30399	AQ2A 4040MNBRS	1-182
30258	AQ2E 3700HNGRU	1-192	30329	AQ2B 3140MNGSS	1-187	30400	AQ2A 4050MNBRS	1-182
30259	AQ2E 3800HNGRU	1-192	30330	AQ2B 3160MNGSS	1-187	30401	AQ2A 4063MNBRS	1-182
30260	AQ2C 3315HNGSU	1-189	30331	AQ2B 3180MNGSS	1-187	30402	AQ2A 4080MNBRS	1-182
30261	AQ2C 3350HNGSU	1-189	30332	AQ2B 3200MNGSS	1-187	30403	AQ2A 4100MNBRS	1-182
30262	AQ2C 3400HNGSU	1-189	30333	AQ2B 3225MNGSS	1-187	30404	AQ2A 4016MNBSS	1-183
30263	AQ2D 3400LNGSU	1-191	30334	AQ2B 4100MNGSS	1-187	30405	AQ2A 4020MNBSS	1-183
30264	AQ2D 3500LNGSU	1-191	30335	AQ2B 4125MNGSS	1-187	30406	AQ2A 4025MNBSS	1-183
30265	AQ2D 3630LNGSU	1-191	30336	AQ2B 4140MNGSS	1-187	30407	AQ2A 4032MNBSS	1-183
30266	AQ2D 3400MNGSU	1-191	30337	AQ2B 4160MNGSS	1-187	30408	AQ2A 4040MNBSS	1-183
30267	AQ2D 3500MNGSU	1-191	30338	AQ2B 4180MNGSS	1-187	30409	AQ2A 4050MNBSS	1-183
30268	AQ2D 3630MNGSU	1-191	30339	AQ2B 4200MNGSS	1-187	30410	AQ2A 4063MNBSS	1-183
30269	AQ2D 4400MNGSU	1-191	30340	AQ2B 4225MNGSS	1-187	30411	AQ2A 4080MNBSS	1-183
30270	AQ2D 4500MNGSU	1-191	30341	AQ2A 3016LNBRS	1-182	30412	AQ2A 4100MNBSS	1-183
30271	AQ2D 4630MNGSU	1-191	30342	AQ2A 3020LNBRS	1-182	30413	AQ2A 4016MNGRS	1-184
30272	AQ2D 3400HNGSU	1-191	30343	AQ2A 3025LNBRS	1-182	30414	AQ2A 4020MNGRS	1-184
30273	AQ2D 3500HNGSU	1-191	30344	AQ2A 3032LNBRS	1-182	30415	AQ2A 4025MNGRS	1-184
30274	AQ2D 3630HNGSU	1-191	30345	AQ2A 3040LNBRS	1-182	30416	AQ2A 4032MNGRS	1-184
30275	AQ2E 3630MNGSU	1-192	30346	AQ2A 3050LNBRS	1-182	30417	AQ2A 4040MNGRS	1-184
30276	AQ2E 3700MNGSU	1-192	30347	AQ2A 3063LNBRS	1-182	30418	AQ2A 4050MNGRS	1-184
30277	AQ2E 3800MNGSU	1-192	30348	AQ2A 3080LNBRS	1-182	30419	AQ2A 4063MNGRS	1-184
30278	AQ2E 4630MNGSU	1-192	30349	AQ2A 3100LNBRS	1-182	30420	AQ2A 4080MNGRS	1-184
30279	AQ2E 4700MNGSU	1-192	30350	AQ2A 3016LNBSS	1-183	30421	AQ2A 4100MNGRS	1-184
30280	AQ2E 4800MNGSU	1-192	30351	AQ2A 3020LNBSS	1-183	30422	AQ2A 3016HNBRS	1-182
30281	AQ2E 3630HNGSU	1-192	30352	AQ2A 3025LNBSS	1-183	30423	AQ2A 3020HNBRS	1-182
30282	AQ2E 3700HNGSU	1-192	30353	AQ2A 3032LNBSS	1-183	30424	AQ2A 3025HNBRS	1-182
30283	AQ2E 3800HNGSU	1-192	30354	AQ2A 3040LNBSS	1-183	30425	AQ2A 3032HNBRS	1-182
30284	AQ2A 3016LNGSS	1-185	30355	AQ2A 3050LNBSS	1-183	30426	AQ2A 3040HNBRS	1-182
30285	AQ2A 3020LNGSS	1-185	30356	AQ2A 3063LNBSS	1-183	30427	AQ2A 3050HNBRS	1-182
30286	AQ2A 3025LNGSS	1-185	30357	AQ2A 3080LNBSS	1-183	30428	AQ2A 3063HNBRS	1-182
30287	AQ2A 3032LNGSS	1-185	30358	AQ2A 3100LNBSS	1-183	30429	AQ2A 3080HNBRS	1-182
30288	AQ2A 3040LNGSS	1-185	30359	AQ2A 3016LNGRS	1-184	30430	AQ2A 3100HNBRS	1-182
30289	AQ2A 3050LNGSS	1-185	30360	AQ2A 3020LNGRS	1-184	30431	AQ2A 3016HNBSS	1-183
30290	AQ2A 3063LNGSS	1-185	30361	AQ2A 3025LNGRS	1-184	30432	AQ2A 3020HNBSS	1-183
30291	AQ2A 3080LNGSS	1-185	30362	AQ2A 3032LNGRS	1-184	30433	AQ2A 3025HNBSS	1-183
30292	AQ2A 3100LNGSS	1-185	30363	AQ2A 3040LNGRS	1-184	30434	AQ2A 3032HNBSS	1-183
30293	AQ2A 3016MNGSS	1-185	30364	AQ2A 3050LNGRS	1-184	30435	AQ2A 3040HNBSS	1-183
30294	AQ2A 3020MNGSS	1-185	30365	AQ2A 3063LNGRS	1-184	30436	AQ2A 3050HNBSS	1-183
30295	AQ2A 3025MNGSS	1-185	30366	AQ2A 3080LNGRS	1-184	30437	AQ2A 3063HNBSS	1-183
30296	AQ2A 3032MNGSS	1-185	30367	AQ2A 3100LNGRS	1-184	30438	AQ2A 3080HNBSS	1-183
30297	AQ2A 3040MNGSS	1-185	30368	AQ2A 3016MNBRS	1-182	30439	AQ2A 3100HNBSS	1-183
30298	AQ2A 3050MNGSS	1-185	30369	AQ2A 3020MNBRS	1-182	30440	AQ2A 3016HNGRS	1-184
30299	AQ2A 3063MNGSS	1-185	30370	AQ2A 3025MNBRS	1-182	30441	AQ2A 3020HNGRS	1-184
30300	AQ2A 3080MNGSS	1-185	30371	AQ2A 3032MNBRS	1-182	30442	AQ2A 3025HNGRS	1-184
30301	AQ2A 3100MNGSS	1-185	30372	AQ2A 3040MNBRS	1-182	30443	AQ2A 3032HNGRS	1-184
30302	AQ2A 4016MNGSS	1-185	30373	AQ2A 3050MNBRS	1-182	30444	AQ2A 3040HNGRS	1-184
30303	AQ2A 4020MNGSS	1-185	30374	AQ2A 3063MNBRS	1-182	30445	AQ2A 3050HNGRS	1-184
30304	AQ2A 4025MNGSS	1-185	30375	AQ2A 3080MNBRS	1-182	30446	AQ2A 3063HNGRS	1-184
30305	AQ2A 4032MNGSS	1-185	30376	AQ2A 3100MNBRS	1-182	30447	AQ2A 3080HNGRS	1-184
30306	AQ2A 4040MNGSS	1-185	30377	AQ2A 3016MNBSS	1-183	30448	AQ2A 3100HNGRS	1-184
30307	AQ2A 4050MNGSS	1-185	30378	AQ2A 3020MNBSS	1-183	30449	AQ2B 3100LNBRS	1-186
30308	AQ2A 4063MNGSS	1-185	30379	AQ2A 3025MNBSS	1-183	30450	AQ2B 3125LNBRS	1-186
30309	AQ2A 4080MNGSS	1-185	30380	AQ2A 3032MNBSS	1-183	30451	AQ2B 3140LNBRS	1-186
30310	AQ2A 4100MNGSS	1-185	30381	AQ2A 3040MNBSS	1-183	30452	AQ2B 3160LNBRS	1-186
30311	AQ2A 3016HNGSS	1-185	30382	AQ2A 3050MNBSS	1-183	30453	AQ2B 3180LNBRS	1-186
30312	AQ2A 3020HNGSS	1-185	30383	AQ2A 3063MNBSS	1-183	30454	AQ2B 3200LNBRS	1-186
30313	AQ2A 3025HNGSS	1-185	30384	AQ2A 3080MNBSS	1-183	30455	AQ2B 3225LNBRS	1-186
30314	AQ2A 3032HNGSS	1-185	30385	AQ2A 3100MNBSS	1-183	30456	AQ2B 3100LNBSS	1-186
30315	AQ2A 3040HNGSS	1-185	30386	AQ2A 3016MNGRS	1-184	30457	AQ2B 3125LNBSS	1-186
30316	AQ2A 3050HNGSS	1-185	30387	AQ2A 3020MNGRS	1-184	30458	AQ2B 3140LNBSS	1-186
30317	AQ2A 3063HNGSS	1-185	30388	AQ2A 3025MNGRS	1-184	30459	AQ2B 3160LNBSS	1-186
30318	AQ2A 3080HNGSS	1-185	30389	AQ2A 3032MNGRS	1-184	30460	AQ2B 3180LNBSS	1-186

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
30461	AQ2B 3200LNBSS	1-186	30532	AQ2B 3225HNGRS	1-187	30603	AQ2D 3500MNBRS	1-190
30462	AQ2B 3225LNBSS	1-186	30533	AQ2C 3225LNBRS	1-188	30604	AQ2D 3630MNBRS	1-190
30463	AQ2B 3100LNGRS	1-187	30534	AQ2C 3250LNBRS	1-188	30605	AQ2D 3400MNBSS	1-190
30464	AQ2B 3125LNGRS	1-187	30535	AQ2C 3315LNBRS	1-188	30606	AQ2D 3500MNBSS	1-190
30465	AQ2B 3140LNGRS	1-187	30536	AQ2C 3350LNBRS	1-188	30607	AQ2D 3630MNBSS	1-190
30466	AQ2B 3160LNGRS	1-187	30537	AQ2C 3400LNBRS	1-188	30608	AQ2D 3400MNGRS	1-191
30467	AQ2B 3180LNGRS	1-187	30538	AQ2C 3225LNBSS	1-188	30609	AQ2D 3500MNGRS	1-191
30468	AQ2B 3200LNGRS	1-187	30539	AQ2C 3250LNBSS	1-188	30610	AQ2D 3630MNGRS	1-191
30469	AQ2B 3225LNGRS	1-187	30540	AQ2C 3315LNBSS	1-188	30611	AQ2D 4400MNBRS	1-190
30470	AQ2B 3100MNBRS	1-186	30541	AQ2C 3350LNBSS	1-188	30612	AQ2D 4500MNBRS	1-190
30471	AQ2B 3125MNBRS	1-186	30542	AQ2C 3400LNBSS	1-188	30613	AQ2D 4630MNBRS	1-190
30472	AQ2B 3140MNBRS	1-186	30543	AQ2C 3225LNGRS	1-189	30614	AQ2D 4400MNBSS	1-190
30473	AQ2B 3160MNBRS	1-186	30544	AQ2C 3250LNGRS	1-189	30615	AQ2D 4500MNBSS	1-190
30474	AQ2B 3180MNBRS	1-186	30545	AQ2C 3315LNGRS	1-189	30616	AQ2D 4630MNBSS	1-190
30475	AQ2B 3200MNBRS	1-186	30546	AQ2C 3350LNGRS	1-189	30617	AQ2D 4400MNGRS	1-191
30476	AQ2B 3225MNBRS	1-186	30547	AQ2C 3400LNGRS	1-189	30618	AQ2D 4500MNGRS	1-191
30477	AQ2B 3100MNBSS	1-186	30548	AQ2C 3225MNBRS	1-188	30619	AQ2D 4630MNGRS	1-191
30478	AQ2B 3125MNBSS	1-186	30549	AQ2C 3250MNBRS	1-188	30620	AQ2D 3400HNBRS	1-190
30479	AQ2B 3140MNBSS	1-186	30550	AQ2C 3315MNBRS	1-188	30621	AQ2D 3500HNBRS	1-190
30480	AQ2B 3160MNBSS	1-186	30551	AQ2C 3350MNBRS	1-188	30622	AQ2D 3630HNBRS	1-190
30481	AQ2B 3180MNBSS	1-186	30552	AQ2C 3400MNBRS	1-188	30623	AQ2D 3400HNBSS	1-190
30482	AQ2B 3200MNBSS	1-186	30553	AQ2C 3225MNBSS	1-188	30624	AQ2D 3500HNBSS	1-190
30483	AQ2B 3225MNBSS	1-186	30554	AQ2C 3250MNBSS	1-188	30625	AQ2D 3630HNBSS	1-190
30484	AQ2B 3100MNGRS	1-187	30555	AQ2C 3315MNBSS	1-188	30626	AQ2D 3400HNGRS	1-191
30485	AQ2B 3125MNGRS	1-187	30556	AQ2C 3350MNBSS	1-188	30627	AQ2D 3500HNGRS	1-191
30486	AQ2B 3140MNGRS	1-187	30557	AQ2C 3400MNBSS	1-188	30628	AQ2D 3630HNGRS	1-191
30487	AQ2B 3160MNGRS	1-187	30558	AQ2C 3225MNGRS	1-189	30629	AQ2E 3630MNBRS	1-192
30488	AQ2B 3180MNGRS	1-187	30559	AQ2C 3250MNGRS	1-189	30630	AQ2E 3700MNBRS	1-192
30489	AQ2B 3200MNGRS	1-187	30560	AQ2C 3315MNGRS	1-189	30631	AQ2E 3800MNBRS	1-192
30490	AQ2B 3225MNGRS	1-187	30561	AQ2C 3350MNGRS	1-189	30632	AQ2E 3630MNBSS	1-192
30491	AQ2B 4100MNBRS	1-186	30562	AQ2C 3400MNGRS	1-189	30633	AQ2E 3700MNBSS	1-192
30492	AQ2B 4125MNBRS	1-186	30563	AQ2C 4225MNBRS	1-188	30634	AQ2E 3800MNBSS	1-192
30493	AQ2B 4140MNBRS	1-186	30564	AQ2C 4250MNBRS	1-188	30635	AQ2E 3630MNGRS	1-192
30494	AQ2B 4160MNBRS	1-186	30565	AQ2C 4315MNBRS	1-188	30636	AQ2E 3700MNGRS	1-192
30495	AQ2B 4180MNBRS	1-186	30566	AQ2C 4350MNBRS	1-188	30637	AQ2E 3800MNGRS	1-192
30496	AQ2B 4200MNBRS	1-186	30567	AQ2C 4400MNBRS	1-188	30638	AQ2E 4630MNBRS	1-192
30497	AQ2B 4225MNBRS	1-186	30568	AQ2C 4225MNBSS	1-188	30639	AQ2E 4700MNBRS	1-192
30498	AQ2B 4100MNBSS	1-186	30569	AQ2C 4250MNBSS	1-188	30640	AQ2E 4800MNBRS	1-192
30499	AQ2B 4125MNBSS	1-186	30570	AQ2C 4315MNBSS	1-188	30641	AQ2E 4630MNBSS	1-192
30500	AQ2B 4140MNBSS	1-186	30571	AQ2C 4350MNBSS	1-188	30642	AQ2E 4700MNBSS	1-192
30501	AQ2B 4160MNBSS	1-186	30572	AQ2C 4400MNBSS	1-188	30643	AQ2E 4800MNBSS	1-192
30502	AQ2B 4180MNBSS	1-186	30573	AQ2C 4225MNGRS	1-189	30644	AQ2E 4630MNGRS	1-192
30503	AQ2B 4200MNBSS	1-186	30574	AQ2C 4250MNGRS	1-189	30645	AQ2E 4700MNGRS	1-192
30504	AQ2B 4225MNBSS	1-186	30575	AQ2C 4315MNGRS	1-189	30646	AQ2E 4800MNGRS	1-192
30505	AQ2B 4100MNGRS	1-187	30576	AQ2C 4350MNGRS	1-189	30647	AQ2E 3630HNBRS	1-192
30506	AQ2B 4125MNGRS	1-187	30577	AQ2C 4400MNGRS	1-189	30648	AQ2E 3700HNBRS	1-192
30507	AQ2B 4140MNGRS	1-187	30578	AQ2C 3225HNBRS	1-188	30649	AQ2E 3800HNBRS	1-192
30508	AQ2B 4160MNGRS	1-187	30579	AQ2C 3250HNBRS	1-188	30650	AQ2E 3630HNBSS	1-192
30509	AQ2B 4180MNGRS	1-187	30580	AQ2C 3315HNBRS	1-188	30651	AQ2E 3700HNBSS	1-192
30510	AQ2B 4200MNGRS	1-187	30581	AQ2C 3350HNBRS	1-188	30652	AQ2E 3800HNBSS	1-192
30511	AQ2B 4225MNGRS	1-187	30582	AQ2C 3400HNBRS	1-188	30653	AQ2E 3630HNGRS	1-192
30512	AQ2B 3100HNBRS	1-186	30583	AQ2C 3225HNBSS	1-188	30654	AQ2E 3700HNGRS	1-192
30513	AQ2B 3125HNBRS	1-186	30584	AQ2C 3250HNBSS	1-188	30788	AQ3 M2I 4NGR63J	1-204
30514	AQ2B 3140HNBRS	1-186	30585	AQ2C 3315HNBSS	1-188	30789	AQ3 M2I 4NGR80J	1-204
30515	AQ2B 3160HNBRS	1-186	30586	AQ2C 3350HNBSS	1-188	30790	AQ3 M2I 4NGR100J	1-204
30516	AQ2B 3180HNBRS	1-186	30587	AQ2C 3400HNBSS	1-188	30791	AQ3 M2I 4NGR125J	1-204
30517	AQ2B 3200HNBRS	1-186	30588	AQ2C 3225HNGRS	1-189	30792	AQ3 M3II 2NBR20L	1-205
30518	AQ2B 3225HNBRS	1-186	30589	AQ2C 3250HNGRS	1-189	30793	AQ3 M3II 2NBR25L	1-205
30519	AQ2B 3100HNBSS	1-186	30590	AQ2C 3315HNGRS	1-189	30794	AQ3 M3II 2NBR32L	1-205
30520	AQ2B 3125HNBSS	1-186	30591	AQ2C 3350HNGRS	1-189	30795	AQ3 M3II 2NBR40L	1-205
30521	AQ2B 3140HNBSS	1-186	30592	AQ2C 3400HNGRS	1-189	30796	AQ3 M3II 2NBR50L	1-205
30522	AQ2B 3160HNBSS	1-186	30593	AQ2D 3400LNBRS	1-190	30797	AQ3 M3II 2NBR63L	1-205
30523	AQ2B 3180HNBSS	1-186	30594	AQ2D 3500LNBRS	1-190	30798	AQ3 M3II 2NBR80L	1-205
30524	AQ2B 3200HNBSS	1-186	30595	AQ2D 3630LNBRS	1-190	30799	AQ3 M3II 2NBR100L	1-205
30525	AQ2B 3225HNBSS	1-186	30596	AQ2D 3400LNBSS	1-190	30800	AQ3 M3II 2NBR125L	1-205
30526	AQ2B 3100HNGRS	1-187	30597	AQ2D 3500LNBSS	1-190	30801	AQ3 M3II 2NBR20J	1-206
30527	AQ2B 3125HNGRS	1-187	30598	AQ2D 3630LNBSS	1-190	30802	AQ3 M3II 2NBR25J	1-206
30528	AQ2B 3140HNGRS	1-187	30599	AQ2D 3400LNGRS	1-191	30803	AQ3 M3II 2NBR32J	1-206
30529	AQ2B 3160HNGRS	1-187	30600	AQ2D 3500LNGRS	1-191	30804	AQ3 M3II 2NBR40J	1-206
30530	AQ2B 3180HNGRS	1-187	30601	AQ2D 3630LNGRS	1-191	30805	AQ3 M3II 2NBR50J	1-206
30531	AQ2B 3200HNGRS	1-187	30602	AQ2D 3400MNBRS	1-190	30806	AQ3 M3II 2NBR63J	1-206

Index / Order Code

Order code	Type code	Page
30807	AQ3 M3II 2NBR80J	1-206
30808	AQ3 M3II 2NBR100J	1-206
30809	AQ3 M3II 2NBR125J	1-206
30810	AQ3 M3II 2NBR20C	1-207
30811	AQ3 M3II 2NBR25C	1-207
30812	AQ3 M3II 2NBR32C	1-207
30813	AQ3 M3II 2NBR40C	1-207
30814	AQ3 M3II 2NBR50C	1-207
30815	AQ3 M3II 2NBR63C	1-207
30816	AQ3 M3II 2NBR80C	1-207
30817	AQ3 M3II 2NBR100C	1-207
30818	AQ3 M3II 2NBR125C	1-207
30819	AQ3 M3II 2NGR20L	1-205
30820	AQ3 M3II 2NGR25L	1-205
30821	AQ3 M3II 2NGR32L	1-205
30822	AQ3 M3II 2NGR40L	1-205
30823	AQ3 M3II 2NGR50L	1-205
30824	AQ3 M3II 2NGR63L	1-205
30825	AQ3 M3II 2NGR80L	1-205
30826	AQ3 M3II 2NGR100L	1-205
30827	AQ3 M3II 2NGR125L	1-205
30828	AQ3 M3II 2NGR20J	1-206
30829	AQ3 M3II 2NGR25J	1-206
30830	AQ3 M3II 2NGR32J	1-206
30831	AQ3 M3II 2NGR40J	1-206
30832	AQ3 M3II 2NGR50J	1-206
30833	AQ3 M3II 2NGR63J	1-206
30834	AQ3 M3II 2NGR80J	1-206
30835	AQ3 M3II 2NGR100J	1-206
30836	AQ3 M3II 2NGR125J	1-206
30837	AQ3 M3II 2NGR20C	1-207
30838	AQ3 M3II 2NGR25C	1-207
30839	AQ3 M3II 2NGR32C	1-207
30840	AQ3 M3II 2NGR40C	1-207
30841	AQ3 M3II 2NGR50C	1-207
30842	AQ3 M3II 2NGR63C	1-207
30843	AQ3 M3II 2NGR80C	1-207
30844	AQ3 M3II 2NGR100C	1-207
30845	AQ3 M3II 2NGR125C	1-207
30846	AQ3 M3II 3NBR20L	1-205
30847	AQ3 M3II 3NBR25L	1-205
30848	AQ3 M3II 3NBR32L	1-205
30849	AQ3 M3II 3NBR40L	1-205
30850	AQ3 M3II 3NBR50L	1-205
30851	AQ3 M3II 3NBR63L	1-205
30852	AQ3 M3II 3NBR80L	1-205
30853	AQ3 M3II 3NBR100L	1-205
30854	AQ3 M3II 3NBR125L	1-205
30855	AQ3 M3II 3NBR20J	1-206
30856	AQ3 M3II 3NBR25J	1-206
30857	AQ3 M3II 3NBR32J	1-206
30858	AQ3 M3II 3NBR40J	1-206
30859	AQ3 M3II 3NBR50J	1-206
30860	AQ3 M3II 3NBR63J	1-206
30861	AQ3 M3II 3NBR80J	1-206
30862	AQ3 M3II 3NBR100J	1-206
30863	AQ3 M3II 3NBR125J	1-206
30864	AQ3 M3II 3NBR20C	1-207
30865	AQ3 M3II 3NBR25C	1-207
30866	AQ3 M3II 3NBR32C	1-207
30867	AQ3 M3II 3NBR40C	1-207
30868	AQ3 M3II 3NBR50C	1-207
30869	AQ3 M3II 3NBR63C	1-207
30870	AQ3 M3II 3NBR80C	1-207
30871	AQ3 M3II 3NBR100C	1-207
30872	AQ3 M3II 3NBR125C	1-207
30873	AQ3 M3II 3NGR20L	1-205
30874	AQ3 M3II 3NGR25L	1-205
30875	AQ3 M3II 3NGR32L	1-205
30876	AQ3 M3II 3NGR40L	1-205
30877	AQ3 M3II 3NGR50L	1-205

Order code	Type code	Page
30878	AQ3 M3II 3NGR63L	1-205
30879	AQ3 M3II 3NGR80L	1-205
30880	AQ3 M3II 3NGR100L	1-205
30881	AQ3 M3II 3NGR125L	1-205
30882	AQ3 M3II 3NGR20J	1-206
30883	AQ3 M3II 3NGR25J	1-206
30884	AQ3 M3II 3NGR32J	1-206
30885	AQ3 M3II 3NGR40J	1-206
30886	AQ3 M3II 3NGR50J	1-206
30887	AQ3 M3II 3NGR63J	1-206
30888	AQ3 M3II 3NGR80J	1-206
30889	AQ3 M3II 3NGR100J	1-206
30890	AQ3 M3II 3NGR125J	1-206
30891	AQ3 M3II 3NGR20C	1-207
30892	AQ3 M3II 3NGR25C	1-207
30893	AQ3 M3II 3NGR32C	1-207
30894	AQ3 M3II 3NGR40C	1-207
30895	AQ3 M3II 3NGR50C	1-207
30896	AQ3 M3II 3NGR63C	1-207
30897	AQ3 M3II 3NGR80C	1-207
30898	AQ3 M3II 3NGR100C	1-207
30899	AQ3 M3II 3NGR125C	1-207
30900	AQ3 M3II 4NBR20L	1-205
30901	AQ3 M3II 4NBR25L	1-205
30902	AQ3 M3II 4NBR32L	1-205
30903	AQ3 M3II 4NBR40L	1-205
30904	AQ3 M3II 4NBR50L	1-205
30905	AQ3 M3II 4NBR63L	1-205
30906	AQ3 M3II 4NBR80L	1-205
30907	AQ3 M3II 4NBR100L	1-205
30908	AQ3 M3II 4NBR125L	1-205
30909	AQ3 M3II 4NBR20J	1-206
30910	AQ3 M3II 4NBR25J	1-206
30911	AQ3 M3II 4NBR32J	1-206
30912	AQ3 M3II 4NBR40J	1-206
30913	AQ3 M3II 4NBR50J	1-206
30914	AQ3 M3II 4NBR63J	1-206
30915	AQ3 M3II 4NBR80J	1-206
30916	AQ3 M3II 4NBR100J	1-206
30917	AQ3 M3II 4NBR125J	1-206
30918	AQ3 M3II 4NBR20C	1-207
30919	AQ3 M3II 4NBR25C	1-207
30920	AQ3 M3II 4NBR32C	1-207
30921	AQ3 M3II 4NBR40C	1-207
30922	AQ3 M3II 4NBR50C	1-207
30923	AQ3 M3II 4NBR63C	1-207
30924	AQ3 M3II 4NBR80C	1-207
30925	AQ3 M3II 4NBR100C	1-207
30926	AQ3 M3II 4NBR125C	1-207
30927	AQ3 M3II 4NGR20L	1-205
30928	AQ3 M3II 4NGR25L	1-205
30929	AQ3 M3II 4NGR32L	1-205
30930	AQ3 M3II 4NGR40L	1-205
30931	AQ3 M3II 4NGR50L	1-205
30932	AQ3 M3II 4NGR63L	1-205
30933	AQ3 M3II 4NGR80L	1-205
30934	AQ3 M3II 4NGR100L	1-205
30935	AQ3 M3II 4NGR125L	1-205
30936	AQ3 M3II 4NGR20J	1-206
30937	AQ3 M3II 4NGR25J	1-206
30938	AQ3 M3II 4NGR32J	1-206
30939	AQ3 M3II 4NGR40J	1-206
30940	AQ3 M3II 4NGR50J	1-206
30941	AQ3 M3II 4NGR63J	1-206
30942	AQ3 M3II 4NGR80J	1-206
30943	AQ3 M3II 4NGR100J	1-206
30944	AQ3 M3II 4NGR125J	1-206
30945	AQ3 M3II 4NGR20C	1-207
30946	AQ3 M3II 4NGR25C	1-207
30947	AQ3 M3II 4NGR32C	1-207
30948	AQ3 M3II 4NGR40C	1-207

Order code	Type code	Page
30949	AQ3 M3II 4NGR50C	1-207
30950	AQ3 M3II 4NGR63C	1-207
30951	AQ3 M3II 4NGR80C	1-207
30952	AQ3 M3II 4NGR100C	1-207
30953	AQ3 M3II 4NGR125C	1-207
30954	AQ3 M2I 2NBR160N	1-203
30955	AQ3 M2I 2NBR180N	1-203
30956	AQ3 M2I 2NBR200N	1-203
30957	AQ3 M2I 2NBR225N	1-203
30958	AQ3 M2I 2NBR250N	1-203
30959	AQ3 M2I 2NBR160J	1-204
30960	AQ3 M2I 2NBR180J	1-204
30961	AQ3 M2I 2NBR200J	1-204
30962	AQ3 M2I 2NBR225J	1-204
30963	AQ3 M2I 2NBR250J	1-204
30964	AQ3 M2I 2NBS160N	1-203
30965	AQ3 M2I 2NBS180N	1-203
30966	AQ3 M2I 2NBS200N	1-203
30967	AQ3 M2I 2NBS225N	1-203
30968	AQ3 M2I 2NBS250N	1-203
30969	AQ3 M2I 2NBS160J	1-204
30970	AQ3 M2I 2NBS180J	1-204
30971	AQ3 M2I 2NBS200J	1-204
30972	AQ3 M2I 2NBS225J	1-204
30973	AQ3 M2I 2NBS250J	1-204
30974	AQ3 M2I 2NGR160N	1-203
30975	AQ3 M2I 2NGR180N	1-203
30976	AQ3 M2I 2NGR200N	1-203
30977	AQ3 M2I 2NGR225N	1-203
30978	AQ3 M2I 2NGR250N	1-203
30979	AQ3 M2I 2NGR160J	1-204
30980	AQ3 M2I 2NGR180J	1-204
30981	AQ3 M2I 2NGR200J	1-204
30982	AQ3 M2I 2NGR225J	1-204
30983	AQ3 M2I 2NGR250J	1-204
30984	AQ3 M2I 3NBR160N	1-203
30985	AQ3 M2I 3NBR180N	1-203
30986	AQ3 M2I 3NBR200N	1-203
30987	AQ3 M2I 3NBR225N	1-203
30988	AQ3 M2I 3NBR250N	1-203
30989	AQ3 M2I 3NBR160J	1-204
30990	AQ3 M2I 3NBR180J	1-204
30991	AQ3 M2I 3NBR200J	1-204
30992	AQ3 M2I 3NBR225J	1-204
30993	AQ3 M2I 3NBR250J	1-204
30994	AQ3 M2I 3NBS160N	1-203
30995	AQ3 M2I 3NBS180N	1-203
30996	AQ3 M2I 3NBS200N	1-203
30997	AQ3 M2I 3NBS225N	1-203
30998	AQ3 M2I 3NBS250N	1-203
30999	AQ3 M2I 3NBS160J	1-204
31000	AQ3 M2I 3NBS180J	1-204
31001	AQ3 M2I 3NBS200J	1-204
31002	AQ3 M2I 3NBS225J	1-204
31003	AQ3 M2I 3NBS250J	1-204
31004	AQ3 M2I 3NGR160N	1-203
31005	AQ3 M2I 3NGR180N	1-203
31006	AQ3 M2I 3NGR200N	1-203
31007	AQ3 M2I 3NGR225N	1-203
31008	AQ3 M2I 3NGR250N	1-203
31009	AQ3 M2I 3NGR160J	1-204
31010	AQ3 M2I 3NGR180J	1-204
31011	AQ3 M2I 3NGR200J	1-204
31012	AQ3 M2I 3NGR225J	1-204
31013	AQ3 M2I 3NGR250J	1-204
31014	AQ3 M2I 4NBR160N	1-203
31015	AQ3 M2I 4NBR180N	1-203
31016	AQ3 M2I 4NBR200N	1-203
31017	AQ3 M2I 4NBR225N	1-203
31018	AQ3 M2I 4NBR250N	1-203
31019	AQ3 M2I 4NBR160J	1-204

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
31020	AQ3 M2I 4NBR180J	1-204	31091	AQ3 M3II 3NGR200L	1-205	31162	AQ3 M2I 3NBR315J	1-204
31021	AQ3 M2I 4NBR200J	1-204	31092	AQ3 M3II 3NGR225L	1-205	31163	AQ3 M2I 3NBR350J	1-204
31022	AQ3 M2I 4NBR225J	1-204	31093	AQ3 M3II 3NGR250L	1-205	31164	AQ3 M2I 3NBR400J	1-204
31023	AQ3 M2I 4NBR250J	1-204	31094	AQ3 M3II 3NGR160J	1-206	31165	AQ3 M2I 3NBR500J	1-204
31024	AQ3 M2I 4NBS160N	1-203	31095	AQ3 M3II 3NGR180J	1-206	31166	AQ3 M2I 3NBS315N	1-203
31025	AQ3 M2I 4NBS180N	1-203	31096	AQ3 M3II 3NGR200J	1-206	31167	AQ3 M2I 3NBS350N	1-203
31026	AQ3 M2I 4NBS200N	1-203	31097	AQ3 M3II 3NGR225J	1-206	31168	AQ3 M2I 3NBS400N	1-203
31027	AQ3 M2I 4NBS225N	1-203	31098	AQ3 M3II 3NGR250J	1-206	31169	AQ3 M2I 3NBS500N	1-203
31028	AQ3 M2I 4NBS250N	1-203	31099	AQ3 M3II 3NGR160C	1-207	31170	AQ3 M2I 3NBS315J	1-204
31029	AQ3 M2I 4NBS160J	1-204	31100	AQ3 M3II 3NGR180C	1-207	31171	AQ3 M2I 3NBS350J	1-204
31030	AQ3 M2I 4NBS180J	1-204	31101	AQ3 M3II 3NGR200C	1-207	31172	AQ3 M2I 3NBS400J	1-204
31031	AQ3 M2I 4NBS200J	1-204	31102	AQ3 M3II 3NGR225C	1-207	31173	AQ3 M2I 3NBS500J	1-204
31032	AQ3 M2I 4NBS225J	1-204	31103	AQ3 M3II 3NGR250C	1-207	31174	AQ3 M2I 3NGR315N	1-203
31033	AQ3 M2I 4NBS250J	1-204	31104	AQ3 M3II 4NBR160L	1-205	31175	AQ3 M2I 3NGR350N	1-203
31034	AQ3 M2I 4NBR160N	1-203	31105	AQ3 M3II 4NBR180L	1-205	31176	AQ3 M2I 3NGR400N	1-203
31035	AQ3 M2I 4NBR180N	1-203	31106	AQ3 M3II 4NBR200L	1-205	31177	AQ3 M2I 3NGR500N	1-203
31036	AQ3 M2I 4NBR200N	1-203	31107	AQ3 M3II 4NBR225L	1-205	31178	AQ3 M2I 3NGR315J	1-204
31037	AQ3 M2I 4NBR225N	1-203	31108	AQ3 M3II 4NBR250L	1-205	31179	AQ3 M2I 3NGR350J	1-204
31038	AQ3 M2I 4NBR250N	1-203	31109	AQ3 M3II 4NBR160J	1-206	31180	AQ3 M2I 3NGR400J	1-204
31039	AQ3 M2I 4NBR160J	1-204	31110	AQ3 M3II 4NBR180J	1-206	31181	AQ3 M2I 3NGR500J	1-204
31040	AQ3 M2I 4NBR180J	1-204	31111	AQ3 M3II 4NBR200J	1-206	31182	AQ3 M2I 4NBR315N	1-203
31041	AQ3 M2I 4NBR200J	1-204	31112	AQ3 M3II 4NBR225J	1-206	31183	AQ3 M2I 4NBR350N	1-203
31042	AQ3 M2I 4NBR225J	1-204	31113	AQ3 M3II 4NBR250J	1-206	31184	AQ3 M2I 4NBR400N	1-203
31043	AQ3 M2I 4NBR250J	1-204	31114	AQ3 M3II 4NBR160C	1-207	31185	AQ3 M2I 4NBR500N	1-203
31044	AQ3 M3II 2NBR160L	1-205	31115	AQ3 M3II 4NBR180C	1-207	31186	AQ3 M2I 4NBR315J	1-204
31045	AQ3 M3II 2NBR180L	1-205	31116	AQ3 M3II 4NBR200C	1-207	31187	AQ3 M2I 4NBR350J	1-204
31046	AQ3 M3II 2NBR200L	1-205	31117	AQ3 M3II 4NBR225C	1-207	31188	AQ3 M2I 4NBR400J	1-204
31047	AQ3 M3II 2NBR225L	1-205	31118	AQ3 M3II 4NBR250C	1-207	31189	AQ3 M2I 4NBR500J	1-204
31048	AQ3 M3II 2NBR250L	1-205	31119	AQ3 M3II 4NGR160L	1-205	31190	AQ3 M2I 4NBS315N	1-203
31049	AQ3 M3II 2NBR160J	1-206	31120	AQ3 M3II 4NGR180L	1-205	31191	AQ3 M2I 4NBS350N	1-203
31050	AQ3 M3II 2NBR180J	1-206	31121	AQ3 M3II 4NGR200L	1-205	31192	AQ3 M2I 4NBS400N	1-203
31051	AQ3 M3II 2NBR200J	1-206	31122	AQ3 M3II 4NGR225L	1-205	31193	AQ3 M2I 4NBS500N	1-203
31052	AQ3 M3II 2NBR225J	1-206	31123	AQ3 M3II 4NGR250L	1-205	31194	AQ3 M2I 4NBS315J	1-204
31053	AQ3 M3II 2NBR250J	1-206	31124	AQ3 M3II 4NGR160J	1-206	31195	AQ3 M2I 4NBS350J	1-204
31054	AQ3 M3II 2NBR160C	1-207	31125	AQ3 M3II 4NGR180J	1-206	31196	AQ3 M2I 4NBS400J	1-204
31055	AQ3 M3II 2NBR180C	1-207	31126	AQ3 M3II 4NGR200J	1-206	31197	AQ3 M2I 4NBS500J	1-204
31056	AQ3 M3II 2NBR200C	1-207	31127	AQ3 M3II 4NGR225J	1-206	31198	AQ3 M2I 4NGR315N	1-203
31057	AQ3 M3II 2NBR225C	1-207	31128	AQ3 M3II 4NGR250J	1-206	31199	AQ3 M2I 4NGR350N	1-203
31058	AQ3 M3II 2NBR250C	1-207	31129	AQ3 M3II 4NGR160C	1-207	31200	AQ3 M2I 4NGR400N	1-203
31059	AQ3 M3II 2NGR160L	1-205	31130	AQ3 M3II 4NGR180C	1-207	31201	AQ3 M2I 4NGR500N	1-203
31060	AQ3 M3II 2NGR180L	1-205	31131	AQ3 M3II 4NGR200C	1-207	31202	AQ3 M2I 4NGR315J	1-204
31061	AQ3 M3II 2NGR200L	1-205	31132	AQ3 M3II 4NGR225C	1-207	31203	AQ3 M2I 4NGR350J	1-204
31062	AQ3 M3II 2NGR225L	1-205	31133	AQ3 M3II 4NGR250C	1-207	31204	AQ3 M2I 4NGR400J	1-204
31063	AQ3 M3II 2NGR250L	1-205	31134	AQ3 M2I 2NBR315N	1-203	31205	AQ3 M2I 4NGR500J	1-204
31064	AQ3 M3II 2NGR160J	1-206	31135	AQ3 M2I 2NBR350N	1-203	31206	AQ3 M3II 2NBR315L	1-205
31065	AQ3 M3II 2NGR180J	1-206	31136	AQ3 M2I 2NBR400N	1-203	31207	AQ3 M3II 2NBR350L	1-205
31066	AQ3 M3II 2NGR200J	1-206	31137	AQ3 M2I 2NBR500N	1-203	31208	AQ3 M3II 2NBR400L	1-205
31067	AQ3 M3II 2NGR225J	1-206	31138	AQ3 M2I 2NBR315J	1-204	31209	AQ3 M3II 2NBR500L	1-205
31068	AQ3 M3II 2NGR250J	1-206	31139	AQ3 M2I 2NBR350J	1-204	31210	AQ3 M3II 2NBR315J	1-206
31069	AQ3 M3II 2NGR160C	1-207	31140	AQ3 M2I 2NBR400J	1-204	31211	AQ3 M3II 2NBR350J	1-206
31070	AQ3 M3II 2NGR180C	1-207	31141	AQ3 M2I 2NBR500J	1-204	31212	AQ3 M3II 2NBR400J	1-206
31071	AQ3 M3II 2NGR200C	1-207	31142	AQ3 M2I 2NBS315N	1-203	31213	AQ3 M3II 2NBR500J	1-206
31072	AQ3 M3II 2NGR225C	1-207	31143	AQ3 M2I 2NBS350N	1-203	31214	AQ3 M3II 2NBR315C	1-207
31073	AQ3 M3II 2NGR250C	1-207	31144	AQ3 M2I 2NBS400N	1-203	31215	AQ3 M3II 2NBR350C	1-207
31074	AQ3 M3II 3NBR160L	1-205	31145	AQ3 M2I 2NBS500N	1-203	31216	AQ3 M3II 2NBR400C	1-207
31075	AQ3 M3II 3NBR180L	1-205	31146	AQ3 M2I 2NBS315J	1-204	31217	AQ3 M3II 2NBR500C	1-207
31076	AQ3 M3II 3NBR200L	1-205	31147	AQ3 M2I 2NBS350J	1-204	31218	AQ3 M3II 2NGR315L	1-205
31077	AQ3 M3II 3NBR225L	1-205	31148	AQ3 M2I 2NBS400J	1-204	31219	AQ3 M3II 2NGR350L	1-205
31078	AQ3 M3II 3NBR250L	1-205	31149	AQ3 M2I 2NBS500J	1-204	31220	AQ3 M3II 2NGR400L	1-205
31079	AQ3 M3II 3NBR160J	1-206	31150	AQ3 M2I 2NGR315N	1-203	31221	AQ3 M3II 2NGR500L	1-205
31080	AQ3 M3II 3NBR180J	1-206	31151	AQ3 M2I 2NGR350N	1-203	31222	AQ3 M3II 2NGR315J	1-206
31081	AQ3 M3II 3NBR200J	1-206	31152	AQ3 M2I 2NGR400N	1-203	31223	AQ3 M3II 2NGR350J	1-206
31082	AQ3 M3II 3NBR225J	1-206	31153	AQ3 M2I 2NGR500N	1-203	31224	AQ3 M3II 2NGR400J	1-206
31083	AQ3 M3II 3NBR250J	1-206	31154	AQ3 M2I 2NGR315J	1-204	31225	AQ3 M3II 2NGR500J	1-206
31084	AQ3 M3II 3NBR160C	1-207	31155	AQ3 M2I 2NGR350J	1-204	31226	AQ3 M3II 2NGR315C	1-207
31085	AQ3 M3II 3NBR180C	1-207	31156	AQ3 M2I 2NGR400J	1-204	31227	AQ3 M3II 2NGR350C	1-207
31086	AQ3 M3II 3NBR200C	1-207	31157	AQ3 M2I 2NGR500J	1-204	31228	AQ3 M3II 2NGR400C	1-207
31087	AQ3 M3II 3NBR225C	1-207	31158	AQ3 M2I 3NBR315N	1-203	31229	AQ3 M3II 2NGR500C	1-207
31088	AQ3 M3II 3NBR250C	1-207	31159	AQ3 M2I 3NBR350N	1-203	31230	AQ3 M3II 3NBR315L	1-205
31089	AQ3 M3II 3NGR160L	1-205	31160	AQ3 M2I 3NBR400N	1-203	31231	AQ3 M3II 3NBR350L	1-205
31090	AQ3 M3II 3NGR180L	1-205	31161	AQ3 M2I 3NBR500N	1-203	31232	AQ3 M3II 3NBR400L	1-205

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
31233	AQ3 M3II 3NBR500L	1-205	31304	AQ3 M3II 3NBR1600L	1-205	31375	AQ3 M3II 4NGR2000J	1-206
31234	AQ3 M3II 3NBR315J	1-206	31305	AQ3 M3II 3NBR2000L	1-205	31376	AQ3 M3II 4NGR3150J	1-206
31235	AQ3 M3II 3NBR350J	1-206	31306	AQ3 M3II 3NBR3150L	1-205	31377	AQ3 M3II 4NGR4000J	1-206
31236	AQ3 M3II 3NBR400J	1-206	31307	AQ3 M3II 3NBR4000L	1-205	31378	AQ3 M3II 4NGR5000J	1-206
31237	AQ3 M3II 3NBR500J	1-206	31308	AQ3 M3II 3NBR5000L	1-205	31379	AQ3 M3II 4NGR1000C	1-207
31238	AQ3 M3II 3NBR315C	1-207	31309	AQ3 M3II 3NBR1000J	1-206	31380	AQ3 M3II 4NGR1250C	1-207
31239	AQ3 M3II 3NBR350C	1-207	31310	AQ3 M3II 3NBR1250J	1-206	31381	AQ3 M3II 4NGR1600C	1-207
31240	AQ3 M3II 3NBR400C	1-207	31311	AQ3 M3II 3NBR1600J	1-206	31382	AQ3 M3II 4NGR2000C	1-207
31241	AQ3 M3II 3NBR500C	1-207	31312	AQ3 M3II 3NBR2000J	1-206	31383	AQ3 M3II 4NGR3150C	1-207
31242	AQ3 M3II 3NBR315L	1-205	31313	AQ3 M3II 3NBR3150J	1-206	31384	AQ3 M3II 4NGR4000C	1-207
31243	AQ3 M3II 3NGR350L	1-205	31314	AQ3 M3II 3NBR4000J	1-206	31385	AQ3 M3II 4NGR5000C	1-207
31244	AQ3 M3II 3NGR400L	1-205	31315	AQ3 M3II 3NBR5000J	1-206	31386	M8LA 4BM040/1	1-138
31245	AQ3 M3II 3NGR500L	1-205	31316	AQ3 M3II 3NBR1000C	1-207	31387	M8LA 4BM050/1	1-138
31246	AQ3 M3II 3NGR315J	1-206	31317	AQ3 M3II 3NBR1250C	1-207	31388	M8LA 4BM063/1	1-138
31247	AQ3 M3II 3NGR350J	1-206	31318	AQ3 M3II 3NBR1600C	1-207	31389	M8LA 4BM080/1	1-138
31248	AQ3 M3II 3NGR400J	1-206	31319	AQ3 M3II 3NBR2000C	1-207	31390	M8LA 4BM100/1	1-138
31249	AQ3 M3II 3NGR500J	1-206	31320	AQ3 M3II 3NBR3150C	1-207	31391	M8LA 4BM016/3	1-138
31250	AQ3 M3II 3NGR315C	1-207	31321	AQ3 M3II 3NBR4000C	1-207	31392	M8LA 4BM020/3	1-138
31251	AQ3 M3II 3NGR350C	1-207	31322	AQ3 M3II 3NBR5000C	1-207	31393	M8LA 4BM025/3	1-138
31252	AQ3 M3II 3NGR400C	1-207	31323	AQ3 M3II 3NGR1000L	1-205	31394	M8LA 4BM032/3	1-138
31253	AQ3 M3II 3NGR500C	1-207	31324	AQ3 M3II 3NGR1250L	1-205	31395	M8LA 4BM040/3	1-138
31254	AQ3 M3II 4NBR315L	1-205	31325	AQ3 M3II 3NGR1600L	1-205	31396	M8LA 4BM050/3	1-138
31255	AQ3 M3II 4NBR350L	1-205	31326	AQ3 M3II 3NGR2000L	1-205	31397	M8LA 4BM063/3	1-138
31256	AQ3 M3II 4NBR400L	1-205	31327	AQ3 M3II 3NGR3150L	1-205	31398	M8LA 4BM080/3	1-138
31257	AQ3 M3II 4NBR500L	1-205	31328	AQ3 M3II 3NGR4000L	1-205	31399	M8LA 4BM100/3	1-138
31258	AQ3 M3II 4NBR315J	1-206	31329	AQ3 M3II 3NGR5000L	1-205	31400	M8LB 4BM100/1	1-138
31259	AQ3 M3II 4NBR350J	1-206	31330	AQ3 M3II 3NGR1000J	1-206	31401	M8LB 4BM125/1	1-138
31260	AQ3 M3II 4NBR400J	1-206	31331	AQ3 M3II 3NGR1250J	1-206	31402	M8LB 4BM140/1	1-138
31261	AQ3 M3II 4NBR500J	1-206	31332	AQ3 M3II 3NGR1600J	1-206	31403	M8LB 4BM160/1	1-138
31262	AQ3 M3II 4NBR315C	1-207	31333	AQ3 M3II 3NGR2000J	1-206	31404	M8LB 4BM180/1	1-138
31263	AQ3 M3II 4NBR350C	1-207	31334	AQ3 M3II 3NGR3150J	1-206	31405	M8LB 4BM200/1	1-138
31264	AQ3 M3II 4NBR400C	1-207	31335	AQ3 M3II 3NGR4000J	1-206	31406	M8LB 4BM225/1	1-138
31265	AQ3 M3II 4NBR500C	1-207	31336	AQ3 M3II 3NGR5000J	1-206	31407	M8LB 4BM100/3	1-138
31266	AQ3 M3II 4NGR315L	1-205	31337	AQ3 M3II 3NGR1000C	1-207	31408	M8LB 4BM125/3	1-138
31267	AQ3 M3II 4NGR350L	1-205	31338	AQ3 M3II 3NGR1250C	1-207	31409	M8LB 4BM140/3	1-138
31268	AQ3 M3II 4NGR400L	1-205	31339	AQ3 M3II 3NGR1600C	1-207	31410	M8LB 4BM160/3	1-138
31269	AQ3 M3II 4NGR500L	1-205	31340	AQ3 M3II 3NGR2000C	1-207	31411	M8LB 4BM180/3	1-138
31270	AQ3 M3II 4NGR315J	1-206	31341	AQ3 M3II 3NGR3150C	1-207	31412	M8LB 4BM200/3	1-138
31271	AQ3 M3II 4NGR350J	1-206	31342	AQ3 M3II 3NGR4000C	1-207	31413	M8LB 4BM225/3	1-138
31272	AQ3 M3II 4NGR400J	1-206	31343	AQ3 M3II 3NGR5000C	1-207	31414	M8LC 4BM200/3	1-138
31273	AQ3 M3II 4NGR500J	1-206	31344	AQ3 M3II 4NBR1000L	1-205	31415	M8LC 4BM225/3	1-138
31274	AQ3 M3II 4NGR315C	1-207	31345	AQ3 M3II 4NBR1250L	1-205	31416	M8LC 4BM250/3	1-138
31275	AQ3 M3II 4NGR350C	1-207	31346	AQ3 M3II 4NBR1600L	1-205	31417	M8LC 4BM315/3	1-138
31276	AQ3 M3II 4NGR400C	1-207	31347	AQ3 M3II 4NBR2000L	1-205	31418	M8LC 4BM350/3	1-138
31277	AQ3 M3II 4NGR500C	1-207	31348	AQ3 M3II 4NBR3150L	1-205	31419	M8LC 4BM400/3	1-138
31278	AQ3 M3II 3NBR630L	1-205	31349	AQ3 M3II 4NBR4000L	1-205	31420	M8LC 4BM200/5	1-138
31279	AQ3 M3II 3NBR800L	1-205	31350	AQ3 M3II 4NBR5000L	1-205	31421	M8LC 4BM225/5	1-138
31280	AQ3 M3II 3NBR630J	1-206	31351	AQ3 M3II 4NBR1000J	1-206	31422	M8LC 4BM250/5	1-138
31281	AQ3 M3II 3NBR800J	1-206	31352	AQ3 M3II 4NBR1250J	1-206	31428	GL0125AIF3	1-209
31282	AQ3 M3II 3NBR630C	1-207	31353	AQ3 M3II 4NBR1600J	1-206	31429	GL0125AIF4	1-209
31283	AQ3 M3II 3NBR800C	1-207	31354	AQ3 M3II 4NBR2000J	1-206	31430	GL0125AEF3	1-209
31284	AQ3 M3II 3NGR630L	1-205	31355	AQ3 M3II 4NBR3150J	1-206	31431	GL0125AEF4	1-209
31285	AQ3 M3II 3NGR800L	1-205	31356	AQ3 M3II 4NBR4000J	1-206	32069	W68CD 3N2900NBL4	1-80
31286	AQ3 M3II 3NGR630J	1-206	31357	AQ3 M3II 4NBR5000J	1-206	32070	W68CD 3N3200NBL4	1-80
31287	AQ3 M3II 3NGR800J	1-206	31358	AQ3 M3II 4NBR1000C	1-207	32071	W68CD 3N3600NBL4	1-80
31288	AQ3 M3II 3NGR630C	1-207	31359	AQ3 M3II 4NBR1250C	1-207	32072	W68CD 3N4000NBL4	1-80
31289	AQ3 M3II 3NGR800C	1-207	31360	AQ3 M3II 4NBR1600C	1-207	32073	W68CD 3N2000NBM3	1-80
31290	AQ3 M3II 4NBR630L	1-205	31361	AQ3 M3II 4NBR2000C	1-207	32074	W68CD 3N2500NBM3	1-80
31291	AQ3 M3II 4NBR800L	1-205	31362	AQ3 M3II 4NBR3150C	1-207	32075	W68CD 3N2900NBM3	1-80
31292	AQ3 M3II 4NBR630J	1-206	31363	AQ3 M3II 4NBR4000C	1-207	32076	W68CD 3N3200NBM3	1-80
31293	AQ3 M3II 4NBR800J	1-206	31364	AQ3 M3II 4NBR5000C	1-207	32077	W68CD 3N3600NBM3	1-80
31294	AQ3 M3II 4NBR630C	1-207	31365	AQ3 M3II 4NGR1000L	1-205	32078	W68CD 3N4000NBM3	1-80
31295	AQ3 M3II 4NBR800C	1-207	31366	AQ3 M3II 4NGR1250L	1-205	32079	W68CD 3N2000NBM4	1-80
31296	AQ3 M3II 4NGR630L	1-205	31367	AQ3 M3II 4NGR1600L	1-205	32080	W68CD 3N2500NBM4	1-80
31297	AQ3 M3II 4NGR800L	1-205	31368	AQ3 M3II 4NGR2000L	1-205	32081	W68CD 3N2900NBM4	1-80
31298	AQ3 M3II 4NGR630J	1-206	31369	AQ3 M3II 4NGR3150L	1-205	32082	W68CD 3N3200NBM4	1-80
31299	AQ3 M3II 4NGR800J	1-206	31370	AQ3 M3II 4NGR4000L	1-205	32083	W68CD 3N3600NBM4	1-80
31300	AQ3 M3II 4NGR630C	1-207	31371	AQ3 M3II 4NGR5000L	1-205	32084	W68CD 3N4000NBM4	1-80
31301	AQ3 M3II 4NGR800C	1-207	31372	AQ3 M3II 4NGR1000J	1-206	32085	W68CD 3N2000NBHP	1-80
31302	AQ3 M3II 3NBR1000L	1-205	31373	AQ3 M3II 4NGR1250J	1-206	32086	W68CD 3N2500NBHP	1-80
31303	AQ3 M3II 3NBR1250L	1-205	31374	AQ3 M3II 4NGR1600J	1-206	32087	W68CD 3N2900NBHP	1-80

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
32088	W68CD 3N3200NBHP	1-80	32159	W68CD 34N2900NBM3	1-80	32230	W68DF 3N5000BL3	1-82
32089	W68CD 3N3600NBHP	1-80	32160	W68CD 34N3200NBM3	1-80	32231	W68DF 3N6300BL3	1-82
32090	W68CD 3N4000NBHP	1-80	32161	W68CD 34N3600NBM3	1-80	32232	W68DF 3N4000BL4	1-82
32091	W68CD 3N2000NBHQ	1-80	32162	W68CD 34N4000NBM3	1-80	32233	W68DF 3N5000BL4	1-82
32092	W68CD 3N2500NBHQ	1-80	32163	W68CD 34N2000NBM4	1-80	32234	W68DF 3N6300BL4	1-82
32093	W68CD 3N2900NBHQ	1-80	32164	W68CD 34N2500NBM4	1-80	32235	W68DF 3N4000BM3	1-82
32094	W68CD 3N3200NBHQ	1-80	32165	W68CD 34N2900NBM4	1-80	32236	W68DF 3N5000BM3	1-82
32095	W68CD 3N3600NBHQ	1-80	32166	W68CD 34N3200NBM4	1-80	32237	W68DF 3N6300BM3	1-82
32096	W68CD 3N4000NBHQ	1-80	32167	W68CD 34N3600NBM4	1-80	32238	W68DF 3N4000BM4	1-82
32097	W68CD 3N2000NBHG	1-80	32168	W68CD 34N4000NBM4	1-80	32239	W68DF 3N5000BM4	1-82
32098	W68CD 3N2500NBHG	1-80	32169	W68CD 34N2000NBH4P	1-80	32240	W68DF 3N6300BM4	1-82
32099	W68CD 3N2900NBHG	1-80	32170	W68CD 34N2500NBH4P	1-80	32241	W68DF 3N4000BHP	1-82
32100	W68CD 3N3200NBHG	1-80	32171	W68CD 34N2900NBH4P	1-80	32242	W68DF 3N5000BHP	1-82
32101	W68CD 3N3600NBHG	1-80	32172	W68CD 34N3200NBH4P	1-80	32243	W68DF 3N6300BHP	1-82
32102	W68CD 3N4000NBHG	1-80	32173	W68CD 34N3600NBH4P	1-80	32244	W68DF 3N4000BHQ	1-82
32103	W68CD 3H2000NBL3	1-81	32174	W68CD 34N4000NBH4P	1-80	32245	W68DF 3N5000BHQ	1-82
32104	W68CD 3H2500NBL3	1-81	32175	W68CD 34N2000NBHQ	1-80	32246	W68DF 3N6300BHQ	1-82
32105	W68CD 3H2900NBL3	1-81	32176	W68CD 34N2500NBHQ	1-80	32247	W68DF 3N4000BHG	1-82
32106	W68CD 3H3200NBL3	1-81	32177	W68CD 34N2900NBHQ	1-80	32248	W68DF 3N5000BHG	1-82
32107	W68CD 3H3600NBL3	1-81	32178	W68CD 34N3200NBHQ	1-80	32249	W68DF 3N6300BHG	1-82
32108	W68CD 3H4000NBL3	1-81	32179	W68CD 34N3600NBHQ	1-80	32250	W68DF 3H4000BL3	1-82
32109	W68CD 3H2000NBL4	1-81	32180	W68CD 34N4000NBHQ	1-80	32251	W68DF 3H5000BL3	1-82
32110	W68CD 3H2500NBL4	1-81	32181	W68CD 34N2000NBHG	1-80	32252	W68DF 3H6300BL3	1-82
32111	W68CD 3H2900NBL4	1-81	32182	W68CD 34N2500NBHG	1-80	32253	W68DF 3H4000BL4	1-82
32112	W68CD 3H3200NBL4	1-81	32183	W68CD 34N2900NBHG	1-80	32254	W68DF 3H5000BL4	1-82
32113	W68CD 3H3600NBL4	1-81	32184	W68CD 34N3200NBHG	1-80	32255	W68DF 3H6300BL4	1-82
32114	W68CD 3H4000NBL4	1-81	32185	W68CD 34N3600NBHG	1-80	32256	W68DF 3H4000BM3	1-82
32115	W68CD 3H2000NBM3	1-81	32186	W68CD 34N4000NBHG	1-80	32257	W68DF 3H5000BM3	1-82
32116	W68CD 3H2500NBM3	1-81	32187	W68CD 34H2000NBL3	1-81	32258	W68DF 3H6300BM3	1-82
32117	W68CD 3H2900NBM3	1-81	32188	W68CD 34H2500NBL3	1-81	32259	W68DF 3H4000BM4	1-82
32118	W68CD 3H3200NBM3	1-81	32189	W68CD 34H2900NBL3	1-81	32260	W68DF 3H5000BM4	1-82
32119	W68CD 3H3600NBM3	1-81	32190	W68CD 34H3200NBL3	1-81	32261	W68DF 3H6300BM4	1-82
32120	W68CD 3H4000NBM3	1-81	32191	W68CD 34H3600NBL3	1-81	32262	W68DF 3H4000BHP	1-82
32121	W68CD 3H2000NBM4	1-81	32192	W68CD 34H4000NBL3	1-81	32263	W68DF 3H5000BHP	1-82
32122	W68CD 3H2500NBM4	1-81	32193	W68CD 34H2000NBL4	1-81	32264	W68DF 3H6300BHP	1-82
32123	W68CD 3H2900NBM4	1-81	32194	W68CD 34H2500NBL4	1-81	32265	W68DF 3H4000BHQ	1-82
32124	W68CD 3H3200NBM4	1-81	32195	W68CD 34H2900NBL4	1-81	32266	W68DF 3H5000BHQ	1-82
32125	W68CD 3H3600NBM4	1-81	32196	W68CD 34H3200NBL4	1-81	32267	W68DF 3H6300BHQ	1-82
32126	W68CD 3H4000NBM4	1-81	32197	W68CD 34H3600NBL4	1-81	32268	W68DF 3H4000BHG	1-82
32127	W68CD 3H2000NBHP	1-81	32198	W68CD 34H4000NBL4	1-81	32269	W68DF 3H5000BHG	1-82
32128	W68CD 3H2500NBHP	1-81	32199	W68CD 34H2000NBM3	1-81	32270	W68DF 3H6300BHG	1-82
32129	W68CD 3H2900NBHP	1-81	32200	W68CD 34H2500NBM3	1-81	32271	W68DF 3S4000BL3	1-83
32130	W68CD 3H3200NBHP	1-81	32201	W68CD 34H2900NBM3	1-81	32272	W68DF 3S5000BL3	1-83
32131	W68CD 3H3600NBHP	1-81	32202	W68CD 34H3200NBM3	1-81	32273	W68DF 3S6300BL3	1-83
32132	W68CD 3H4000NBHP	1-81	32203	W68CD 34H3600NBM3	1-81	32274	W68DF 3S4000BL4	1-83
32133	W68CD 3H2000NBHQ	1-81	32204	W68CD 34H4000NBM3	1-81	32275	W68DF 3S5000BL4	1-83
32134	W68CD 3H2500NBHQ	1-81	32205	W68CD 34H2000NBM4	1-81	32276	W68DF 3S6300BL4	1-83
32135	W68CD 3H2900NBHQ	1-81	32206	W68CD 34H2500NBM4	1-81	32277	W68DF 3S4000BM3	1-83
32136	W68CD 3H3200NBHQ	1-81	32207	W68CD 34H2900NBM4	1-81	32278	W68DF 3S5000BM3	1-83
32137	W68CD 3H3600NBHQ	1-81	32208	W68CD 34H3200NBM4	1-81	32279	W68DF 3S6300BM3	1-83
32138	W68CD 3H4000NBHQ	1-81	32209	W68CD 34H3600NBM4	1-81	32280	W68DF 3S4000BM4	1-83
32139	W68CD 3H2000NBHG	1-81	32210	W68CD 34H4000NBM4	1-81	32281	W68DF 3S5000BM4	1-83
32140	W68CD 3H2500NBHG	1-81	32211	W68CD 34H2000NBH4P	1-81	32282	W68DF 3S6300BM4	1-83
32141	W68CD 3H2900NBHG	1-81	32212	W68CD 34H2500NBH4P	1-81	32283	W68DF 3S4000BHP	1-83
32142	W68CD 3H3200NBHG	1-81	32213	W68CD 34H2900NBH4P	1-81	32284	W68DF 3S5000BHP	1-83
32143	W68CD 3H3600NBHG	1-81	32214	W68CD 34H3200NBH4P	1-81	32285	W68DF 3S6300BHP	1-83
32144	W68CD 3H4000NBHG	1-81	32215	W68CD 34H3600NBH4P	1-81	32286	W68DF 3S4000BHQ	1-83
32145	W68CD 34N2000NBL3	1-80	32216	W68CD 34H4000NBH4P	1-81	32287	W68DF 3S5000BHQ	1-83
32146	W68CD 34N2500NBL3	1-80	32217	W68CD 34H2000NBHQ	1-81	32288	W68DF 3S6300BHQ	1-83
32147	W68CD 34N2900NBL3	1-80	32218	W68CD 34H2500NBHQ	1-81	32289	W68DF 3S4000BHG	1-83
32148	W68CD 34N3200NBL3	1-80	32219	W68CD 34H2900NBHQ	1-81	32290	W68DF 3S5000BHG	1-83
32149	W68CD 34N3600NBL3	1-80	32220	W68CD 34H3200NBHQ	1-81	32291	W68DF 3S6300BHG	1-83
32150	W68CD 34N4000NBL3	1-80	32221	W68CD 34H3600NBHQ	1-81	32292	W68DF 4N4000BL3	1-82
32151	W68CD 34N2000NBL4	1-80	32222	W68CD 34H4000NBHQ	1-81	32293	W68DF 4N5000BL3	1-82
32152	W68CD 34N2500NBL4	1-80	32223	W68CD 34H2000NBHG	1-81	32294	W68DF 4N6300BL3	1-82
32153	W68CD 34N2900NBL4	1-80	32224	W68CD 34H2500NBHG	1-81	32295	W68DF 4N4000BL4	1-82
32154	W68CD 34N3200NBL4	1-80	32225	W68CD 34H2900NBHG	1-81	32296	W68DF 4N5000BL4	1-82
32155	W68CD 34N3600NBL4	1-80	32226	W68CD 34H3200NBHG	1-81	32297	W68DF 4N6300BL4	1-82
32156	W68CD 34N4000NBL4	1-80	32227	W68CD 34H3600NBHG	1-81	32298	W68DF 4N4000BM3	1-82
32157	W68CD 34N2000NBM3	1-80	32228	W68CD 34H4000NBHG	1-81	32299	W68DF 4N5000BM3	1-82
32158	W68CD 34N2500NBM3	1-80	32229	W68DF 3N4000BL3	1-82	32300	W68DF 4N6300BM3	1-82

Index / Order Code

1

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
32301	W68DF 4N4000BM4	1-82	32372	W68DD 3N6300BHQ	1-83	32448	W8AF 4LH800	1-103
32302	W68DF 4N5000BM4	1-82	32373	W68DD 3N4000BHG	1-83	32449	W8AF 4LV800	1-103
32303	W68DF 4N6300BM4	1-82	32374	W68DD 3N5000BHG	1-83	32450	W8AF 4LH1000	1-103
32304	W68DF 4N4000BHP	1-82	32375	W68DD 3N6300BHG	1-83	32451	W8AF 4LV1000	1-103
32305	W68DF 4N5000BHP	1-82	32376	W68DD 3H4000BL3	1-84	32452	W8AF 4LH1250	1-103
32306	W68DF 4N6300BHP	1-82	32377	W68DD 3H5000BL3	1-84	32453	W8AF 4LV1250	1-103
32307	W68DF 4N4000BHQ	1-82	32378	W68DD 3H6300BL3	1-84	32454	W8AF 4LH1600	1-103
32308	W68DF 4N5000BHQ	1-82	32379	W68DD 3H4000BL4	1-84	32455	W8AF 4LV1600	1-103
32309	W68DF 4N6300BHQ	1-82	32380	W68DD 3H5000BL4	1-84	32456	W8AF 4LH2000	1-103
32310	W68DF 4N4000BHG	1-82	32381	W68DD 3H6300BL4	1-84	32457	W8AF 4LV2000	1-103
32311	W68DF 4N5000BHG	1-82	32382	W68DD 3H4000BM3	1-84	32458	W8BD 3LH2000	1-105
32312	W68DF 4N6300BHG	1-82	32383	W68DD 3H5000BM3	1-84	32459	W8BD 3LV2000	1-105
32313	W68DF 4H4000BL3	1-82	32384	W68DD 3H6300BM3	1-84	32460	W8BD 3LH2500	1-105
32314	W68DF 4H5000BL3	1-82	32385	W68DD 3H4000BM4	1-84	32461	W8BD 3LV2500	1-105
32315	W68DF 4H6300BL3	1-82	32386	W68DD 3H5000BM4	1-84	32462	W8BD 3LH2900	1-105
32316	W68DF 4H4000BL4	1-82	32387	W68DD 3H6300BM4	1-84	32463	W8BD 3LV2900	1-105
32317	W68DF 4H5000BL4	1-82	32388	W68DD 3H4000BHP	1-84	32464	W8BD 3LH3200	1-105
32318	W68DF 4H6300BL4	1-82	32389	W68DD 3H5000BHP	1-84	32465	W8BD 3LV3200	1-105
32319	W68DF 4H4000BM3	1-82	32390	W68DD 3H6300BHP	1-84	32466	W8BF 3LH2000	1-105
32320	W68DF 4H5000BM3	1-82	32391	W68DD 3H4000BHQ	1-84	32467	W8BF 3LV2000	1-105
32321	W68DF 4H6300BM3	1-82	32392	W68DD 3H5000BHQ	1-84	32468	W8BF 3LH2500	1-105
32322	W68DF 4H4000BM4	1-82	32393	W68DD 3H6300BHQ	1-84	32469	W8BF 3LV2500	1-105
32323	W68DF 4H5000BM4	1-82	32394	W68DD 3H4000BHG	1-84	32470	W8BF 3LH2900	1-105
32324	W68DF 4H6300BM4	1-82	32395	W68DD 3H5000BHG	1-84	32471	W8BF 3LV2900	1-105
32325	W68DF 4H4000BHP	1-82	32396	W68DD 3H6300BHG	1-84	32472	W8BF 3LH3200	1-105
32326	W68DF 4H5000BHP	1-82	32397	W68DD 3S4000BL3	1-84	32473	W8BF 3LV3200	1-105
32327	W68DF 4H6300BHP	1-82	32398	W68DD 3S5000BL3	1-84	32474	W8BD 4LH2000	1-105
32328	W68DF 4H4000BHQ	1-82	32399	W68DD 3S6300BL3	1-84	32475	W8BD 4LV2000	1-105
32329	W68DF 4H5000BHQ	1-82	32400	W68DD 3S4000BL4	1-84	32476	W8BD 4LH2500	1-105
32330	W68DF 4H6300BHQ	1-82	32401	W68DD 3S5000BL4	1-84	32477	W8BD 4LV2500	1-105
32331	W68DF 4H4000BHG	1-82	32402	W68DD 3S6300BL4	1-84	32478	W8BD 4LH2900	1-105
32332	W68DF 4H5000BHG	1-82	32403	W68DD 3S4000BM3	1-84	32479	W8BD 4LV2900	1-105
32333	W68DF 4H6300BHG	1-82	32404	W68DD 3S5000BM3	1-84	32480	W8BD 4LH3200	1-105
32334	W68DF 4S4000BL3	1-83	32405	W68DD 3S6300BM3	1-84	32481	W8BD 4LV3200	1-105
32335	W68DF 4S5000BL3	1-83	32406	W68DD 3S4000BM4	1-84	32482	W8BF 4LH2000	1-105
32336	W68DF 4S6300BL3	1-83	32407	W68DD 3S5000BM4	1-84	32483	W8BF 4LV2000	1-105
32337	W68DF 4S4000BL4	1-83	32408	W68DD 3S6300BM4	1-84	32484	W8BF 4LH2500	1-105
32338	W68DF 4S5000BL4	1-83	32409	W68DD 3S4000BHP	1-84	32485	W8BF 4LV2500	1-105
32339	W68DF 4S6300BL4	1-83	32410	W68DD 3S5000BHP	1-84	32486	W8BF 4LH2900	1-105
32340	W68DF 4S4000BM3	1-83	32411	W68DD 3S6300BHP	1-84	32487	W8BF 4LV2900	1-105
32341	W68DF 4S5000BM3	1-83	32412	W68DD 3S4000BHQ	1-84	32488	W8BF 4LH3200	1-105
32342	W68DF 4S6300BM3	1-83	32413	W68DD 3S5000BHQ	1-84	32489	W8BF 4LV3200	1-105
32343	W68DF 4S4000BM4	1-83	32414	W68DD 3S6300BHQ	1-84	32490	W68B DFF	1-86
32344	W68DF 4S5000BM4	1-83	32415	W68DD 3S4000BHG	1-84	32491	W68C DFF	1-86
32345	W68DF 4S6300BM4	1-83	32416	W68DD 3S5000BHG	1-84	32492	W8CD 3LH5000	1-106
32346	W68DF 4S4000BHP	1-83	32417	W68DD 3S6300BHG	1-84	32493	W8CD 3LV5000	1-106
32347	W68DF 4S5000BHP	1-83	32418	W68DD 4N4000BL3	1-83	32494	W8CD 3LH6300	1-106
32348	W68DF 4S6300BHP	1-83	32419	W68DD 4N5000BL3	1-83	32495	W8CD 3LV6300	1-106
32349	W68DF 4S4000BHQ	1-83	32420	W68DD 4N6300BL3	1-83	32502	W8CD 4LH4000	1-106
32350	W68DF 4S5000BHQ	1-83	32426	W8AF 3LH1600	1-103	32503	W8CD 4LV4000	1-106
32351	W68DF 4S6300BHQ	1-83	32427	W8AF 3LV1600	1-103	32504	W8CD 4LH5000	1-106
32352	W68DF 4S4000BHG	1-83	32428	W8AF 3LH2000	1-103	32505	W8CD 4LV5000	1-106
32353	W68DF 4S5000BHG	1-83	32429	W8AF 3LV2000	1-103	32506	W8CD 4LH6300	1-106
32354	W68DF 4S6300BHG	1-83	32430	W8AD 4LH400	1-103	32507	W8CD 4LV6300	1-106
32355	W68DD 3N4000BL3	1-83	32431	W8AD 4LV400	1-103	32508	W8AF 3LH630	1-103
32356	W68DD 3N5000BL3	1-83	32432	W8AD 4LH630	1-103	32509	W8AF 3LV630	1-103
32357	W68DD 3N6300BL3	1-83	32433	W8AD 4LV630	1-103	32510	W8AF 3LH800	1-103
32358	W68DD 3N4000BL4	1-83	32434	W8AD 4LH800	1-103	32511	W8AF 3LV800	1-103
32359	W68DD 3N5000BL4	1-83	32435	W8AD 4LV800	1-103	32512	W8AF 3LH1000	1-103
32360	W68DD 3N6300BL4	1-83	32436	W8AD 4LH1000	1-103	32513	W8AF 3LV1000	1-103
32361	W68DD 3N4000BM3	1-83	32437	W8AD 4LV1000	1-103	32514	W8BD 3LH4000	1-105
32362	W68DD 3N5000BM3	1-83	32438	W8AD 4LH1250	1-103	32515	W8BD 3LV4000	1-105
32363	W68DD 3N6300BM3	1-83	32439	W8AD 4LV1250	1-103	32516	W8AF 3LH1250	1-103
32364	W68DD 3N4000BM4	1-83	32440	W8AD 4LH1600	1-103	32517	W8AF 3LV1250	1-103
32365	W68DD 3N5000BM4	1-83	32441	W8AD 4LV1600	1-103	32727	M29A MM415A	1-154
32366	W68DD 3N6300BM4	1-83	32442	W8AD 4LH2000	1-103	32728	M29B MM415A	1-154
32367	W68DD 3N4000BHP	1-83	32443	W8AD 4LV2000	1-103	32729	M29C MM415A	1-154
32368	W68DD 3N5000BHP	1-83	32444	W8AF 4LH400	1-103	32730	M29D MM415A	1-154
32369	W68DD 3N6300BHP	1-83	32445	W8AF 4LV400	1-103	32731	M29EF MM415A	1-154
32370	W68DD 3N4000BHQ	1-83	32446	W8AF 4LH630	1-103	32732	M29GH MM415A	1-154
32371	W68DD 3N5000BHQ	1-83	32447	W8AF 4LV630	1-103	32733	M29AB SH110D	1-156

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
32734	M29AB SH220D	1-156	34119	M29DTD 4H350	1-149	34226	M29ETD 4H400	1-150
32735	M29CD SH110D	1-156	34120	M29DTD 4H400	1-149	34227	M29ETD 4H500	1-150
32736	M29CD SH220D	1-156	34124	M29ETF 3N400	1-149	34228	M29ETD 4H630	1-150
32737	M29EFGH SH110D	1-156	34125	M29ETF 3N500	1-149	34229	M29FTF 3N400	1-150
32738	M29EFGH SH220D	1-156	34126	M29ETF 3N630	1-149	34230	M29FTF 3N500	1-150
32739	M29AB UV110D	1-157	34130	M29ETF 3S400	1-149	34231	M29FTF 3N630	1-150
32740	M29AB UV220D	1-157	34131	M29ETF 3S500	1-149	34234	M29FTF 3S400	1-150
32741	M29CD UV110D	1-157	34132	M29ETF 3S630	1-149	34235	M29FTF 3S500	1-150
32742	M29CD UV220D	1-157	34136	M29ETF 3H400	1-150	34236	M29FTF 3S630	1-150
32743	M29EFGH UV110D	1-157	34137	M29ETF 3H500	1-150	34239	M29FTF 3H400	1-150
32744	M29EFGH UV220D	1-157	34138	M29ETF 3H630	1-150	34240	M29FTF 3H500	1-150
32745	M29C RM2BS	1-155	34139	M29CEF 3N125	1-151	34241	M29FTF 3H630	1-150
32746	M29D RM2BS	1-155	34140	M29CEP 3N160	1-151	34244	M29FTD 3N400	1-150
32747	M29EF RM2BL	1-155	34141	M29CEP 3N180	1-151	34245	M29FTD 3N500	1-150
32748	M29GH RM2BL	1-155	34142	M29CEP 3N200	1-151	34246	M29FTD 3N630	1-150
32749	M29C RM2BSL	1-155	34143	M29CEP 3N225	1-151	34249	M29FTD 3S400	1-150
32750	M29D RM2BSL	1-155	34144	M29CEP 3N250	1-151	34250	M29FTD 3S500	1-150
32751	M29EF RM2BLL	1-155	34145	M29CEP 3N125	1-151	34251	M29FTD 3S630	1-150
32752	M29GH RM2BLL	1-155	34146	M29CEP 3N160	1-151	34254	M29FTD 3H400	1-150
32753	M29A RM3AS	1-155	34147	M29CEP 3N180	1-151	34255	M29FTD 3H500	1-150
32754	M29B RM3AS	1-155	34148	M29CEP 3N200	1-151	34256	M29FTD 3H630	1-150
32755	M29C RM3AS	1-155	34149	M29CEP 3N225	1-151	34259	M29FTF 4N400	1-150
32756	M29D RM3AS	1-155	34150	M29CEP 3N250	1-151	34260	M29FTF 4N500	1-150
33040	M29C RM3ASL	1-155	34151	M29CEP 3N125	1-151	34261	M29FTF 4N630	1-150
33041	M29D RM3ASL	1-155	34152	M29CED 3N160	1-151	34264	M29FTF 4S400	1-150
33042	M29EF RM3ALL	1-155	34153	M29CED 3N180	1-151	34265	M29FTF 4S500	1-150
33043	M29GH RM3ALL	1-155	34154	M29CED 3N200	1-151	34266	M29FTF 4S630	1-150
33044	M29A RM3BS	1-155	34155	M29CED 3N225	1-151	34269	M29FTF 4H400	1-150
33045	M29B RM3BS	1-155	34156	M29CED 3N250	1-151	34270	M29FTF 4H500	1-150
33046	M29C RM3BS	1-155	34160	M29ETD 3N400	1-149	34271	M29FTF 4H630	1-150
33047	M29D RM3BS	1-155	34161	M29ETD 3N500	1-149	34274	M29FTD 4N400	1-150
33048	M29EF RM3BL	1-155	34162	M29ETD 3N630	1-149	34275	M29FTD 4N500	1-150
33049	M29GH RM3BL	1-155	34166	M29ETD 3S400	1-149	34276	M29FTD 4N630	1-150
33050	M29A RM3BSL	1-155	34167	M29ETD 3S500	1-149	34279	M29FTD 4S400	1-150
33051	M29B RM3BSL	1-155	34168	M29ETD 3S630	1-149	34280	M29FTD 4S500	1-150
33052	M29C RM3BSL	1-155	34172	M29ETD 3H400	1-150	34281	M29FTD 4S630	1-150
33053	M29D RM3BSL	1-155	34173	M29ETD 3H500	1-150	34284	M29FTD 4H400	1-150
33054	M29EF RM3BLL	1-155	34174	M29ETD 3H630	1-150	34285	M29FTD 4H500	1-150
33055	M29GH RM3BLL	1-155	34178	M29ETF 4N400	1-149	34286	M29FTD 4H630	1-150
34087	M29DTF 4N350	1-149	34179	M29ETF 4N500	1-149	34289	M29GEF 3S800	1-153
34088	M29DTF 4N400	1-149	34180	M29ETF 4N630	1-149	34290	M29GEF 3S1000	1-153
34089	M29DTF 4S250	1-149	34184	M29ETF 4S400	1-149	34291	M29GEF 3S1250	1-153
34090	M29DTF 4S315	1-149	34185	M29ETF 4S500	1-149	34292	M29GEF 3H800	1-153
34091	M29DTF 4S350	1-149	34186	M29ETF 4S630	1-149	34293	M29GEF 3H1000	1-153
34092	M29DTF 4S400	1-149	34190	M29ETF 4H400	1-150	34294	M29GEF 3H1250	1-153
34093	M29DTF 4H250	1-149	34191	M29ETF 4H500	1-150	34295	M29GEF 3G800	1-153
34094	M29DTF 4H315	1-149	34192	M29ETF 4H630	1-150	34296	M29GEF 3G1000	1-153
34095	M29DTF 4H350	1-149	34193	M29CEP 4N125	1-151	34297	M29GEF 3G1250	1-153
34096	M29DTF 4H400	1-149	34194	M29CEP 4N160	1-151	34298	M29GED 3S800	1-153
34097	M29DTP 4N250	1-149	34195	M29CEP 4N180	1-151	34299	M29GED 3S1000	1-153
34098	M29DTP 4N315	1-149	34196	M29CEP 4N200	1-151	34300	M29GED 3S1250	1-153
34099	M29DTP 4N350	1-149	34197	M29CEP 4N225	1-151	34301	M29GED 3H800	1-153
34100	M29DTP 4N400	1-149	34198	M29CEP 4N250	1-151	34302	M29GED 3H1000	1-153
34101	M29DTP 4S250	1-149	34199	M29CEP 3S125	1-151	34303	M29GED 3H1250	1-153
34102	M29DTP 4S315	1-149	34200	M29CEP 3S160	1-151	34304	M29GED 3G800	1-153
34103	M29DTP 4S350	1-149	34201	M29CEP 3S180	1-151	34305	M29GED 3G1000	1-153
34104	M29DTP 4S400	1-149	34202	M29CEP 3S200	1-151	34306	M29GED 3G1250	1-153
34105	M29DTP 4H250	1-149	34203	M29CEP 3S225	1-151	34307	M29HEF 3S800	1-153
34106	M29DTP 4H315	1-149	34204	M29CEP 3S250	1-151	34308	M29HEF 3S1000	1-153
34107	M29DTP 4H350	1-149	34205	M29CEP 3S125	1-151	34309	M29HEF 3S1250	1-153
34108	M29DTP 4H400	1-149	34206	M29CEP 3S160	1-151	34310	M29HEF 3S1600	1-153
34109	M29DTD 4N250	1-149	34207	M29CEP 3S180	1-151	34311	M29HEF 3H800	1-153
34110	M29DTD 4N315	1-149	34208	M29CEP 3S200	1-151	34312	M29HEF 3H1000	1-153
34111	M29DTD 4N350	1-149	34209	M29CEP 3S225	1-151	34313	M29HEF 3H1250	1-153
34112	M29DTD 4N400	1-149	34210	M29CEP 3S250	1-151	34314	M29HEF 3H1600	1-153
34113	M29DTD 4S250	1-149	34214	M29ETD 4N400	1-149	34315	M29HEF 3G800	1-153
34114	M29DTD 4S315	1-149	34215	M29ETD 4N500	1-149	34316	M29HEF 3G1000	1-153
34115	M29DTD 4S350	1-149	34216	M29ETD 4N630	1-149	34317	M29HEF 3G1250	1-153
34116	M29DTD 4S400	1-149	34220	M29ETD 4S400	1-149	34318	M29HEF 3G1600	1-153
34117	M29DTD 4H250	1-149	34221	M29ETD 4S500	1-149	34319	M29HED 3S800	1-153
34118	M29DTD 4H315	1-149	34222	M29ETD 4S630	1-149	34320	M29HED 3S1000	1-153

Index / Order Code

1

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
34321	M29HED 3S1250	1-153	34582	M29FTF 3X500	1-150	36289	M29DEF 3N250	1-151
34322	M29HED 3S1600	1-153	34583	M29FTF 3X630	1-150	36290	M29DEF 3N315	1-151
34323	M29HED 3H800	1-153	34586	M29FTD 3X400	1-150	36291	M29DEF 3N350	1-151
34324	M29HED 3H1000	1-153	34587	M29FTD 3X500	1-150	36292	M29DEF 3N400	1-151
34325	M29HED 3H1250	1-153	34588	M29FTD 3X630	1-150	36293	M29DEF 3N250	1-151
34326	M29HED 3H1600	1-153	34591	M29FTF 4X400	1-150	36294	M29DEF 3N315	1-151
34327	M29HED 3G800	1-153	34592	M29FTF 4X500	1-150	36295	M29DEF 3N350	1-151
34328	M29HED 3G1000	1-153	34593	M29FTF 4X630	1-150	36296	M29DEF 3N400	1-151
34329	M29HED 3G1250	1-153	34596	M29FTD 4X400	1-150	36297	M29DED 3N250	1-151
34330	M29HED 3G1600	1-153	34597	M29FTD 4X500	1-150	36298	M29DED 3N315	1-151
34331	M29BTP 3B32	1-147	34598	M29FTD 4X630	1-150	36299	M29DED 3N350	1-151
34332	M29BTP 3B40	1-147	36229	M29CED 3S125	1-151	36300	M29DED 3N400	1-151
34333	M29BTP 3B50	1-147	36230	M29CED 3S160	1-151	36301	M29DEF 4N250	1-151
34334	M29BTP 3B63	1-147	36231	M29CED 3S180	1-151	36302	M29DEF 4N315	1-151
34335	M29BTP 3B80	1-147	36232	M29CED 3S200	1-151	36303	M29DEF 4N350	1-151
34336	M29BTP 3B100	1-147	36233	M29CED 3S225	1-151	36304	M29DEF 4N400	1-151
34337	M29BTP 3B125	1-147	36234	M29CED 3S250	1-151	36305	M29DEF 3S250	1-151
34338	M29BTP 3B160	1-147	36235	M29CEF 4S125	1-151	36306	M29DEF 3S315	1-151
34339	M29BTF 4B32	1-147	36236	M29CEF 4S160	1-151	36307	M29DEF 3S350	1-151
34340	M29BTF 4B40	1-147	36237	M29CEF 4S180	1-151	36308	M29DEF 3S400	1-151
34341	M29BTF 4B50	1-147	36238	M29CEF 4S200	1-151	36309	M29DEF 3S250	1-151
34342	M29BTF 4B63	1-147	36239	M29CEF 4S225	1-151	36310	M29DEF 3S315	1-151
34343	M29BTF 4B80	1-147	36240	M29CEF 4S250	1-151	36311	M29DEF 3S350	1-151
34344	M29BTF 4B100	1-147	36241	M29CEF 3H125	1-151	36312	M29DEF 3S400	1-151
34345	M29BTF 4B125	1-147	36242	M29CEF 3H160	1-151	36313	M29DED 3S250	1-151
34346	M29BTF 4B160	1-147	36243	M29CEF 3H180	1-151	36314	M29DED 3S315	1-151
34347	M29BTP 4B32	1-147	36244	M29CEF 3H200	1-151	36315	M29DED 3S350	1-151
34348	M29BTP 4B40	1-147	36245	M29CEF 3H225	1-151	36316	M29DED 3S400	1-151
34349	M29BTP 4B50	1-147	36246	M29CEF 3H250	1-151	36317	M29DEF 4S250	1-151
34350	M29BTP 4B63	1-147	36247	M29CEP 3H125	1-151	36318	M29DEF 4S315	1-151
34351	M29BTP 4B80	1-147	36248	M29CEP 3H160	1-151	36319	M29DEF 4S350	1-151
34352	M29BTP 4B100	1-147	36249	M29CEP 3H180	1-151	36320	M29DEF 4S400	1-151
34353	M29BTP 4B125	1-147	36250	M29CEP 3H200	1-151	36321	M29DEF 3H250	1-152
34354	M29BTP 4B160	1-147	36251	M29CEP 3H225	1-151	36322	M29DEF 3H315	1-152
34545	M29CTF 3X125	1-149	36252	M29CEP 3H250	1-151	36323	M29DEF 3H350	1-152
34546	M29CTF 3X160	1-149	36253	M29CED 3H125	1-151	36324	M29DEF 3H400	1-152
34547	M29CTF 3X180	1-149	36254	M29CED 3H160	1-151	36325	M29DEF 3H250	1-152
34548	M29CTF 3X200	1-149	36255	M29CED 3H180	1-151	36326	M29DEF 3H315	1-152
34549	M29CTF 3X225	1-149	36256	M29CED 3H200	1-151	36327	M29DEF 3H350	1-152
34550	M29CTF 3X250	1-149	36257	M29CED 3H225	1-151	36328	M29DEF 3H400	1-152
34551	M29CTP 3X125	1-149	36258	M29CED 3H250	1-151	36329	M29DED 3H250	1-152
34552	M29CTP 3X160	1-149	36259	M29CEF 4H125	1-151	36330	M29DED 3H315	1-152
34553	M29CTP 3X180	1-149	36260	M29CEF 4H160	1-151	36331	M29DED 3H350	1-152
34554	M29CTP 3X200	1-149	36261	M29CEF 4H180	1-151	36332	M29DED 3H400	1-152
34555	M29CTP 3X225	1-149	36262	M29CEF 4H200	1-151	36333	M29DEF 4H250	1-152
34556	M29CTP 3X250	1-149	36263	M29CEF 4H225	1-151	36334	M29DEF 4H315	1-152
34557	M29CTD 3X125	1-149	36264	M29CEF 4H250	1-151	36335	M29DEF 4H350	1-152
34558	M29CTD 3X160	1-149	36265	M29CEF 3X125	1-151	36336	M29DEF 4H400	1-152
34559	M29CTD 3X180	1-149	36266	M29CEF 3X160	1-151	36340	M29EEF 3N400	1-152
34560	M29CTD 3X200	1-149	36267	M29CEF 3X180	1-151	36341	M29EEF 3N500	1-152
34561	M29CTD 3X225	1-149	36268	M29CEF 3X200	1-151	36342	M29EEF 3N630	1-152
34562	M29CTD 3X250	1-149	36269	M29CEF 3X225	1-151	36346	M29EED 3N400	1-152
34563	M29CTF 4X125	1-149	36270	M29CEF 3X250	1-151	36347	M29EED 3N500	1-152
34564	M29CTF 4X160	1-149	36271	M29CEP 3X125	1-151	36348	M29EED 3N630	1-152
34565	M29CTF 4X180	1-149	36272	M29CEP 3X160	1-151	36352	M29EEF 4N400	1-152
34566	M29CTF 4X200	1-149	36273	M29CEP 3X180	1-151	36353	M29EEF 4N500	1-152
34567	M29CTF 4X225	1-149	36274	M29CEP 3X200	1-151	36354	M29EEF 4N630	1-152
34568	M29CTF 4X250	1-149	36275	M29CEP 3X225	1-151	36358	M29EEF 3S400	1-152
34569	M29CTP 4X125	1-149	36276	M29CEP 3X250	1-151	36359	M29EEF 3S500	1-152
34570	M29CTP 4X160	1-149	36277	M29CED 3X125	1-151	36360	M29EEF 3S630	1-152
34571	M29CTP 4X180	1-149	36278	M29CED 3X160	1-151	36364	M29EED 3S400	1-152
34572	M29CTP 4X200	1-149	36279	M29CED 3X180	1-151	36365	M29EED 3S500	1-152
34573	M29CTP 4X225	1-149	36280	M29CED 3X200	1-151	36366	M29EED 3S630	1-152
34574	M29CTP 4X250	1-149	36281	M29CED 3X225	1-151	36370	M29EEF 4S400	1-152
34575	M29CTD 4X125	1-149	36282	M29CED 3X250	1-151	36371	M29EEF 4S500	1-152
34576	M29CTD 4X160	1-149	36283	M29CEF 4X125	1-151	36372	M29EEF 4S630	1-152
34577	M29CTD 4X180	1-149	36284	M29CEF 4X160	1-151	36376	M29EEF 3H400	1-152
34578	M29CTD 4X200	1-149	36285	M29CEF 4X180	1-151	36377	M29EEF 3H500	1-152
34579	M29CTD 4X225	1-149	36286	M29CEF 4X200	1-151	36378	M29EEF 3H630	1-152
34580	M29CTD 4X250	1-149	36287	M29CEF 4X225	1-151	36382	M29EED 3H400	1-152
34581	M29FTF 3X400	1-150	36288	M29CEF 4X250	1-151	36383	M29EED 3H500	1-152

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
36384	M29EED 3H630	1-152	39141	M8G A420	1-140	39697	W68 SH400A	1-85
36388	M29EEF 4H400	1-152	39142	M8G A425	1-140	39698	W68 SH110D	1-85
36389	M29EEF 4H500	1-152	39143	M8G A432	1-140	39699	W68 SH220D	1-85
36390	M29EEF 4H630	1-152	39144	M8G A440	1-140	39700	W68 UV230A	1-85
36394	M29ETF 3X400	1-150	39145	M8G A450	1-140	39701	W68 UV400A	1-85
36395	M29ETF 3X500	1-150	39146	M8G A463	1-140	39702	W68 UVD230A	1-85
36396	M29ETF 3X630	1-150	39147	M8G B3016	1-140	39703	W68 UVD400A	1-85
36400	M29ETD 3X400	1-150	39148	M8G B3020	1-140	39704	W68A AU4X230A	1-85
36401	M29ETD 3X500	1-150	39149	M8G B3025	1-140	39705	W68A AU4X400A	1-85
36402	M29ETD 3X630	1-150	39150	M8G B3032	1-140	39706	W68A AU4X110D	1-85
36406	M29ETF 4X400	1-150	39151	M8G B3040	1-140	39707	W68A AU4X220D	1-85
36407	M29ETF 4X500	1-150	39152	M8G B3050	1-140	39708	W68A AU44230A	1-85
36408	M29ETF 4X630	1-150	39153	M8G B3063	1-140	39709	W68A AU44400A	1-85
36412	M29ETD 4X400	1-150	39154	M8G B3080	1-140	39710	W68A AU44110D	1-85
36413	M29ETD 4X500	1-150	39155	M8G B3100	1-140	39711	W68A AU44220D	1-85
36414	M29ETD 4X630	1-150	39156	M8G B4016	1-140	39712	W68A AU66230A	1-85
36418	M29EEF 3X400	1-152	39157	M8G B4020	1-140	39713	W68A AU66400A	1-85
36419	M29EEF 3X500	1-152	39158	M8G B4025	1-140	39714	W68A AU66110D	1-85
36420	M29EEF 3X630	1-152	39159	M8G B4032	1-140	39715	W68A AU66220D	1-85
36424	M29EED 3X400	1-152	39160	M8G B4040	1-140	39716	W68B AU4X230A	1-85
36425	M29EED 3X500	1-152	39161	M8G B4050	1-140	39717	W68B AU4X400A	1-85
36426	M29EED 3X630	1-152	39162	M8G B4063	1-140	39718	W68B AU4X415A	1-85
36430	M29EEF 4X400	1-152	39163	M8G B4080	1-140	39719	W68B AU4X110D	1-85
36431	M29EEF 4X500	1-152	39164	M8G B4100	1-140	39720	W68B AU4X220D	1-85
36432	M29EEF 4X630	1-152	39165	M8G C3100	1-140	39721	W68B AU4X250D	1-85
36433	M29FEF 3N400	1-152	39166	M8G C3125	1-140	39722	W68B AU44230A	1-85
36434	M29FEF 3N500	1-152	39167	M8G C3160	1-140	39723	W68B AU44400A	1-85
36435	M29FEF 3N630	1-152	39168	M8G C3180	1-140	39724	W68B AU44415A	1-85
36438	M29FED 3N400	1-152	39169	M8G C3200	1-140	39725	W68B AU44110D	1-85
36439	M29FED 3N500	1-152	39170	M8G C3225	1-140	39726	W68B AU44220D	1-85
36440	M29FED 3N630	1-152	39171	M8G C4100	1-140	39727	W68B AU44250D	1-85
36443	M29FEF 4N400	1-152	39172	M8G C4125	1-140	39728	W68B AU66230A	1-85
36444	M29FEF 4N500	1-152	39173	M8G C4160	1-140	39729	W68B AU66400A	1-85
36445	M29FEF 4N630	1-152	39174	M8G C4180	1-140	39730	W68B AU66415A	1-85
36448	M29FEF 3S400	1-152	39175	M8G C4200	1-140	39731	W68B AU66110D	1-85
36449	M29FEF 3S500	1-152	39176	M8G C4225	1-140	39732	W68B AU66220D	1-85
36450	M29FEF 3S630	1-152	39177	M8G D3225	1-140	39733	W68B AU66250D	1-85
36453	M29FED 3S400	1-152	39178	M8G D3250	1-140	39734	W68A AUP	1-85
36454	M29FED 3S500	1-152	39179	M8G D3315	1-140	39735	W68B AUP	1-85
36455	M29FED 3S630	1-152	39180	M8G D3350	1-140	39736	W68 CRK	1-86
36458	M29FEF 4S400	1-152	39181	M8G D3400	1-140	39737	W68 OPC	1-86
36459	M29FEF 4S500	1-152	39182	M8G D4225	1-140	39738	W68 PUC	1-86
36460	M29FEF 4S630	1-152	39183	M8G D4250	1-140	39739	W68A PSB3	1-86
36463	M29FEF 3H400	1-153	39184	M8G D4315	1-140	39740	W68A PSB4	1-86
36464	M29FEF 3H500	1-153	39185	M8G D4350	1-140	39741	W68B PSB3	1-86
36465	M29FEF 3H630	1-153	39186	M8G D4400	1-140	39742	W68B PSB4	1-86
36468	M29FED 3H400	1-153	39187	M8G E3400	1-140	39743	MOC	1-86
36469	M29FED 3H500	1-153	39188	M8G E3500	1-140	39744	W68A DFD	1-86
36470	M29FED 3H630	1-153	39189	M8G E3630	1-140	39745	W68B DFD	1-86
36473	M29FEF 4H400	1-153	39190	M8G E4400	1-140	39746	W68C DFD	1-86
36474	M29FEF 4H500	1-153	39191	M8G E4500	1-140	39747	W68D DFD	1-86
36475	M29FEF 4H630	1-153	39192	M8G E4630	1-140	39748	W68A DFF	1-86
36478	M29FEF 3X400	1-153	39193	M8G F3630	1-140	39835	M8EA 3P32M	1-134
36479	M29FEF 3X500	1-153	39194	M8G F3700	1-140	39836	M8EA 3P63M	1-134
36480	M29FEF 3X630	1-153	39195	M8G F3800	1-140	39837	M8EA 3P100M	1-134
36483	M29FED 3X400	1-153	39196	M8G F4630	1-140	39838	M8EA 3P32H	1-134
36484	M29FED 3X500	1-153	39197	M8G F4700	1-140	39839	M8EA 3P63H	1-134
36485	M29FED 3X630	1-153	39198	M8G F4800	1-140	39840	M8EA 3P100H	1-134
36488	M29FEF 4X400	1-153	39684	W68A EM230A	1-85	39841	M8EA 4P32H	1-134
36489	M29FEF 4X500	1-153	39685	W68A EM400A	1-85	39842	M8EA 4P63H	1-134
36490	M29FEF 4X630	1-153	39686	W68A EM110D	1-85	39843	M8EA 4P100H	1-134
39131	M8G A310	1-140	39687	W68A EM220D	1-85	39844	M8EA 3M32M	1-134
39132	M8G A316	1-140	39688	W68B EM230A	1-85	39845	M8EA 3M63M	1-134
39133	M8G A320	1-140	39689	W68B EM400A	1-85	39846	M8EA 3M100M	1-134
39134	M8G A325	1-140	39690	W68B EM110D	1-85	39847	M8EA 3M32H	1-134
39135	M8G A332	1-140	39691	W68B EM220D	1-85	39848	M8EA 3M63H	1-134
39136	M8G A340	1-140	39692	W68 CM230A	1-85	39849	M8EA 3M100H	1-134
39137	M8G A350	1-140	39693	W68 CM400A	1-85	39850	M8EA 4M32H	1-134
39138	M8G A363	1-140	39694	W68 CM110D	1-85	39851	M8EA 4M63H	1-134
39139	M8G A410	1-140	39695	W68 CM220D	1-85	39852	M8EA 4M100H	1-134
39140	M8G A416	1-140	39696	W68 SH230A	1-85	39853	M8EB 3P225M	1-134

Index / Order Code

1

Order code	Type code	Page
39854	M8EB 3P225H	1-134
39855	M8EB 4P225H	1-134
39856	M8EB 3M225M	1-134
39857	M8EB 3M225H	1-134
39858	M8EB 4M225H	1-134
39859	M8EC 3P400M	1-134
39860	M8EC 3P400H	1-134
39861	M8EC 4P400H	1-134
39862	M8EC 3M400M	1-134
39863	M8EC 3M400H	1-134
39864	M8EC 4M400H	1-134
39865	M8ED 3P630M	1-134
39866	M8ED 3P630H	1-134
39867	M8ED 4P630H	1-134
39868	M8ED 3M630M	1-134
39869	M8ED 3M630H	1-134
39870	M8ED 4M630H	1-134
39871	M8EE 3P800M	1-134
39872	M8EE 3P800H	1-134
39873	M8EE 4P800H	1-134
39874	M8EE 3M800M	1-134
39875	M8EE 3M800H	1-134
39876	M8EE 4M800H	1-134
39925	M29BTP 3N32	1-148
39926	M29BTP 3N40	1-148
39927	M29BTP 3N50	1-148
39928	M29BTP 3N63	1-148
39929	M29BTP 3N80	1-148
39930	M29BTP 3N100	1-148
39931	M29BTP 3N125	1-148
39932	M29BTP 3N160	1-148
39933	M29BTF 4S32	1-148
39934	M29BTF 4S40	1-148
39935	M29BTF 4S50	1-148
39936	M29BTF 4S63	1-148
39937	M29BTF 4S80	1-148
39938	M29BTF 4S100	1-148
39939	M29BTF 4S125	1-148
39940	M29BTF 4S160	1-148
39941	M29CTF 3N125	1-148
39942	M29CTF 3N160	1-148
39943	M29CTF 3N180	1-148
39944	M29CTF 3N200	1-148
39945	M29CTF 3N225	1-148
39946	M29CTF 3N250	1-148
39947	M29CTF 3S125	1-148
39948	M29CTF 3S160	1-148

SASSIN

Modular DIN-rail Devices



Modular DIN-rail Devices

Miniature circuit breakers

- P 1-9 3SB71-63, up to 63 A, 10 ~ 16 kA
- P 10-13 3SB6, up to 63 A, 6 kA
- P 14-18 3SB5, up to 63 A,
- P 19-20 3SB66, 1P+N in 1 modular width
- P 21-23 3SB71Z-63, for DC applications
- P 24-26 3SB71-125, up to 125 A
- P 27-28 3SB1-125, up to 125 A

Residual current devices

- RCCBs
- P 29-30 3SL71, up to 100 A
- P 31-32 3SL66, up to 100 A
- P 33-34 3SL6, up to 63 A
- P 35-38 3SL52, up to 63 A
- RCCBs
- P 39-41 3SL71N, 1P+N, up to 40 A
- P 42-45 3SB71LN, up to 40 A
- P 46 3SB72LE-25, 1P+N in 1 modular width
- P 47-48 3SB71L-50, with earthing cable
- RCD blocks
- P 49-51 3SB71LB

Additional components for MCBs and RCDs

- P 52-54 Additional components for series 3SB71
- P 55 Additional components for series 3SB5, 3SB52, 3SB1

Switch disconnectors

- P 56 3SB71G
- P 57 3SG6

Surge protective devices

- P 58-60 3SU71
- P 61-64 3SU1

Modular contactors

- P 65-68 3SCH8

Modular socket

- P 69 MS71

Modular pushbuttons and indicators

- P 70-71 3SB71PD
- P 72 3SB1D

Over-Voltage and Under-Voltage Protectors

- P 73 3SVP6

Modular bell and transformer

- P 74 3SU213
- P 74 BT8

- P 75 **Modular time switches**

Distribution boxes

- P 76-80 3SD5 & 3SD6, plastic
- P 81-82 3SD8, plastic
- P 83 3SD7N, modular boxes
- P 84 3SHT & 3SHA,
- P 85 3SD5T, metal base
- P 86 TY3, metal
- P 87 3SD22, metal
- P 88-91 3SD23, load center
- P 92 Junction boxes

- P 93-95 **Accessories**

- P 96-109 **Index order code**

Functions

- Overload protection
- Short circuit protection
- Isolation
- Controlling
- Used in residential building, non-residential building, industry, energy and infrastructure.

Technical specifications

- Standards: IEC 60898-1, IEC 60947-2
- Rated current I_n (A) : 2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63
- Rated voltage U_n (VAC): 230/400
- Operational voltage (VAC): Min. 24 Max. 250/440
- Rated frequency (Hz): 50/60
- Rated insulation voltage (VAC): 500
- Number of poles: 1, 2, 3, 4

Tripping characteristic	IEC 60898-1	IEC 60947-2
Characteristic curve B (In)	3-5	4
Characteristic curve C (In)	5-10	8
Characteristic curve D (In)	10-20	12

- Thermal operating limit (In): 1.13 - 1.45
- Rated switching capacity I_{cn} (kA): 10
- Degree of protection: IP20, with connected conductors
- Electrical life (times): 10,000
- Mechanical life (times): 20,000
- Breaking Capacity:

Model	Rated voltage		Acc. to IEC 60898-1		Acc. to IEC 60947-2	
		(V)	I_{cn} (kA)	I_{cs} (kA)	I_{cu} (kA)	I_{cs} (kA)
3SB71-63	1P	230/400	16	12	15	7.5
	2-4P	400	16	12	15	7.5
3SB71-63H	1P	230/400	10	7.5	10	7.5
	2-4P	400	10	7.5	10	7.5

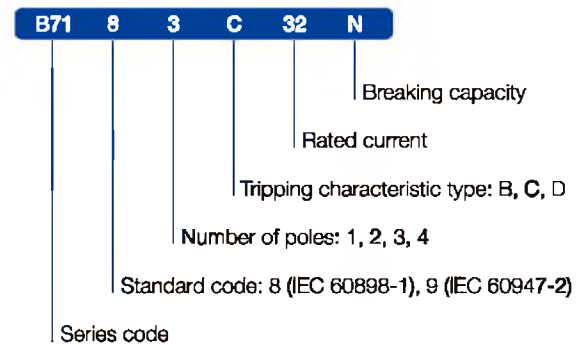
- Fire resistance according to UL 94: V0
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm²): 0.75-35
- Finely stranded with end sleeve (mm²): 0.75-25
- Terminal tightening torque (N·m): 2.8
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max 2,000

References

- Additional components: page 40 ~ 42



Instruction of type code

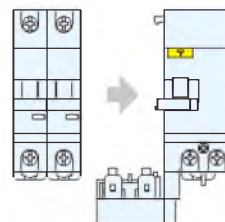


Features

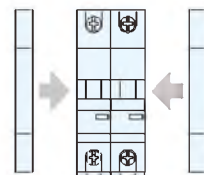
- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- The handle provides a clear indication of the contact position
- Adequate printing of all data on the front provides long-term identification
- Energy limiting class: 3
- The emission of ionized gases is limited to the severest restrictions: 45 mm grid distance
- This MCB for household in accordance with: IEC 60898 -1, B, C and D tripping characteristics
- This MCB for industry in accordance with IEC 60947-2 instantaneous tripping characteristics with release B: 4 In, release C: 8 In, release D: 12 In
- This MCB may be extended with:
 - A wide range of RCDs
 - Full sets of accessories

Add-on devices

Add-on RCD



Auxiliaries

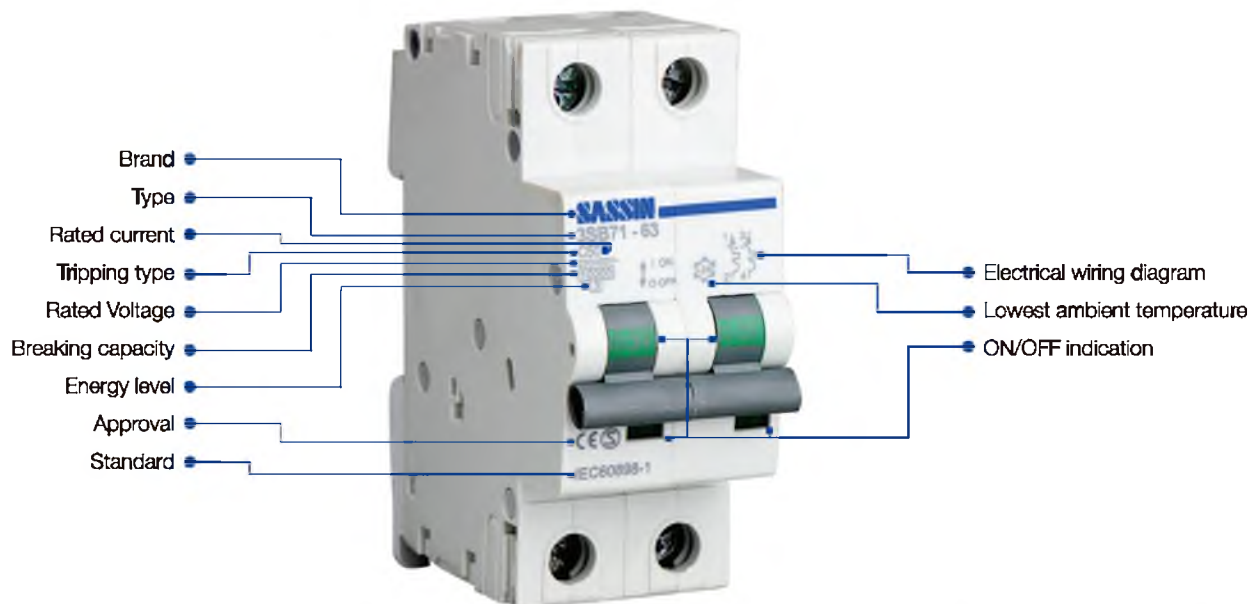


Miniature Circuit Breakers Series 3SB71-63

Benefits

- Attractive device design
- Easily recognizable, color-coded switching position
- Indication integrated in the handle.

2



Well matched with RCCB 3SL71



Extended with add-on RCD block 3SB71LB



both on the left and right sides of the MCB.



Safety terminal: easy wiring; protection degree IP20.
Pozidriv and slot screw head.
Torque up to 2.8 N·m.



MCB's and RCCB's can be connected with PIN type busbar both at the top and bottom terminals, with easy DIN-rail extraction











MCB's and RCCB's can be connected with FORK type busbar both at the top and bottom terminals, with easy DIN-rail extraction

Miniature Circuit Breakers Series 3SB71-63

Selection and ordering data

IEC 60898-1 16 kA

	Number of poles	Rated current In (A)	Curve B		Curve C		Curve D		Pack.
			Type code	Order code	Type code	Order code	Type code	Order code	
	1	6	B71 81B06	13702	B71 81C06	13713	B71 81D06	13724	12
		10	B71 81B10	13703	B71 81C10	13714	B71 81D10	13725	12
		16	B71 81B16	13704	B71 81C16	13715	B71 81D16	13726	12
		20	B71 81B20	13705	B71 81C20	13716	B71 81D20	13727	12
		25	B71 81B25	13706	B71 81C25	13717	B71 81D25	13728	12
		32	B71 81B32	13707	B71 81C32	13718	B71 81D32	13729	12
		40	B71 81B40	13708	B71 81C40	13719	B71 81D40	13730	12
		50	B71 81B50	13709	B71 81C50	13720	B71 81D50	13731	12
		63	B71 81B63	13710	B71 81C63	13721	B71 81D63	13732	12
									
	2	6	B71 82B06	13735	B71 82C06	13746	B71 82D06	13757	6
		10	B71 82B10	13736	B71 82C10	13747	B71 82D10	13758	6
		16	B71 82B16	13737	B71 82C16	13748	B71 82D16	13759	6
		20	B71 82B20	13738	B71 82C20	13749	B71 82D20	13760	6
		25	B71 82B25	13739	B71 82C25	13750	B71 82D25	13761	6
		32	B71 82B32	13740	B71 82C32	13751	B71 82D32	13762	6
		40	B71 82B40	13741	B71 82C40	13752	B71 82D40	13763	6
		50	B71 82B50	13742	B71 82C50	13753	B71 82D50	13764	6
		63	B71 82B63	13743	B71 82C63	13754	B71 82D63	13765	6
									
	3	6	B71 83B06	13768	B71 83C06	13779	B71 83D06	13790	4
		10	B71 83B10	13769	B71 83C10	13780	B71 83D10	13791	4
		16	B71 83B16	13770	B71 83C16	13781	B71 83D16	13792	4
		20	B71 83B20	13771	B71 83C20	13782	B71 83D20	13793	4
		25	B71 83B25	13772	B71 83C25	13783	B71 83D25	13794	4
		32	B71 83B32	13773	B71 83C32	13784	B71 83D32	13795	4
		40	B71 83B40	13774	B71 83C40	13785	B71 83D40	13796	4
		50	B71 83B50	13775	B71 83C50	13786	B71 83D50	13797	4
		63	B71 83B63	13776	B71 83C63	13787	B71 83D63	13798	4
									
	4	6	B71 84B06	13801	B71 84C06	13812	B71 84D06	13823	3
		10	B71 84B10	13802	B71 84C10	13813	B71 84D10	13824	3
		16	B71 84B16	13803	B71 84C16	13814	B71 84D16	13825	3
		20	B71 84B20	13804	B71 84C20	13815	B71 84D20	13826	3
		25	B71 84B25	13805	B71 84C25	13816	B71 84D25	13827	3
		32	B71 84B32	13806	B71 84C32	13817	B71 84D32	13828	3
		40	B71 84B40	13807	B71 84C40	13818	B71 84D40	13829	3
		50	B71 84B50	13808	B71 84C50	13819	B71 84D50	13830	3
		63	B71 84B63	13809	B71 84C63	13820	B71 84D63	13831	3
									





Miniature Circuit Breakers

Series 3SB71-63

Selection and ordering data

IEC 60898-1 10 kA





2

	Number of poles	Rated current In (A)	Curve B		Curve C		Curve D		Pack.
			Type code	Order code	Type code	Order code	Type code	Order code	
	1	2	B71 81B02H	19251	B71 81C02H	19271	B71 81D02H	19291	12
		4	B71 81B04H	19253	B71 81C04H	19273	B71 81D04H	19293	12
		6	B71 81B06H	20001	B71 81C06H	20046	B71 81D06H	20091	12
		10	B71 81B10H	20002	B71 81C10H	20047	B71 81D10H	20092	12
		16	B71 81B16H	20003	B71 81C16H	20048	B71 81D16H	20093	12
		20	B71 81B20H	20004	B71 81C20H	20049	B71 81D20H	20094	12
		25	B71 81B25H	20005	B71 81C25H	20050	B71 81D25H	20095	12
		32	B71 81B32H	20006	B71 81C32H	20051	B71 81D32H	20096	12
		40	B71 81B40H	20007	B71 81C40H	20052	B71 81D40H	20097	12
		50	B71 81B50H	20008	B71 81C50H	20053	B71 81D50H	20098	12
		63	B71 81B63H	20009	B71 81C63H	20054	B71 81D63H	20099	12
	2	2	B71 82B02H	19255	B71 82C02H	19275	B71 82D02H	19295	6
		4	B71 82B04H	19257	B71 82C04H	19277	B71 82D04H	19297	6
		6	B71 82B06H	20010	B71 82C06H	20055	B71 82D06H	20100	6
		10	B71 82B10H	20011	B71 82C10H	20056	B71 82D10H	20101	6
		16	B71 82B16H	20012	B71 82C16H	20057	B71 82D16H	20102	6
		20	B71 82B20H	20013	B71 82C20H	20058	B71 82D20H	20103	6
		25	B71 82B25H	20014	B71 82C25H	20059	B71 82D25H	20104	6
		32	B71 82B32H	20015	B71 82C32H	20060	B71 82D32H	20105	6
		40	B71 82B40H	20016	B71 82C40H	20061	B71 82D40H	20106	6
		50	B71 82B50H	20017	B71 82C50H	20062	B71 82D50H	20107	6
		63	B71 82B63H	20018	B71 82C63H	20063	B71 82D63H	20108	6
	3	2	B71 83B02H	19259	B71 83C02H	19279	B71 83D02H	19299	4
		4	B71 83B04H	19261	B71 83C04H	19281	B71 83D04H	19301	4
		6	B71 83B06H	20019	B71 83C06H	20064	B71 83D06H	20109	4
		10	B71 83B10H	20020	B71 83C10H	20065	B71 83D10H	20110	4
		16	B71 83B16H	20021	B71 83C16H	20066	B71 83D16H	20111	4
		20	B71 83B20H	20022	B71 83C20H	20067	B71 83D20H	20112	4
		25	B71 83B25H	20023	B71 83C25H	20068	B71 83D25H	20113	4
		32	B71 83B32H	20024	B71 83C32H	20069	B71 83D32H	20114	4
		40	B71 83B40H	20025	B71 83C40H	20070	B71 83D40H	20115	4
		50	B71 83B50H	20026	B71 83C50H	20071	B71 83D50H	20116	4
		63	B71 83B63H	20027	B71 83C63H	20072	B71 83D63H	20117	4
	4	2	B71 84B02H	19267	B71 84C02H	19287	B71 84D02H	19307	3
		4	B71 84B04H	19269	B71 84C04H	19289	B71 84D04H	19309	3
		6	B71 84B06H	20037	B71 84C06H	20082	B71 84D06H	20127	3
		10	B71 84B10H	20038	B71 84C10H	20083	B71 84D10H	20128	3
		16	B71 84B16H	20039	B71 84C16H	20084	B71 84D16H	20129	3
		20	B71 84B20H	20040	B71 84C20H	20085	B71 84D20H	20130	3
		25	B71 84B25H	20041	B71 84C25H	20086	B71 84D25H	20131	3
		32	B71 84B32H	20042	B71 84C32H	20087	B71 84D32H	20132	3
		40	B71 84B40H	20043	B71 84C40H	20088	B71 84D40H	20133	3
		50	B71 84B50H	20044	B71 84C50H	20089	B71 84D50H	20134	3
		63	B71 84B63H	20045	B71 84C63H	20090	B71 84D63H	20135	3

Miniature Circuit Breakers Series 3SB71-63

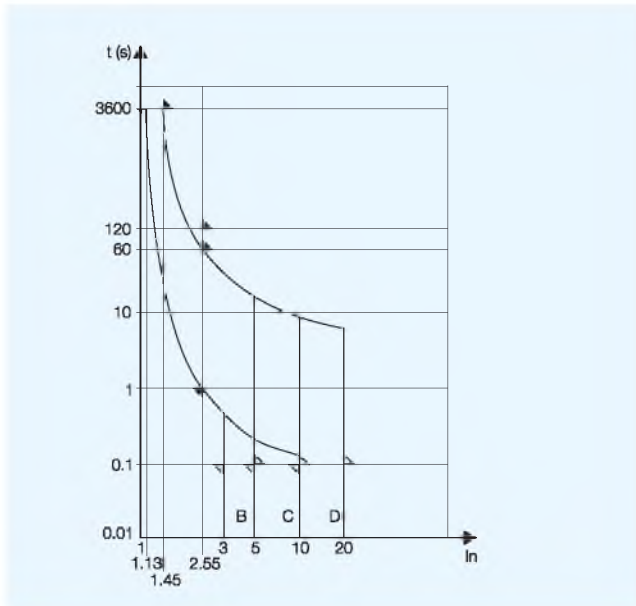
Selection and ordering data

IEC 60947-2 15 kA

	Number of poles	Rated current In (A)	Curve B		Curve C		Curve D		Pack.
			Type code	Order code	Type code	Order code	Type code	Order code	
	1	2	B71 91B02F	19371	B71 91C02F	19391	B71 91D02F	19411	12
		4	B71 91B04F	19373	B71 91C04F	19393	B71 91D04F	19413	12
		6	B71 91B06F	18980	B71 91C06F	19025	B71 91D06F	19070	12
		10	B71 91B10F	18981	B71 91C10F	19026	B71 91D10F	19071	12
		16	B71 91B16F	18982	B71 91C16F	19027	B71 91D16F	19072	12
		20	B71 91B20F	18983	B71 91C20F	19028	B71 91D20F	19073	12
		25	B71 91B25F	18984	B71 91C25F	19029	B71 91D25F	19074	12
		32	B71 91B32F	18985	B71 91C32F	19030	B71 91D32F	19075	12
		40	B71 91B40F	18986	B71 91C40F	19031	B71 91D40F	19076	12
		50	B71 91B50F	18987	B71 91C50F	19032	B71 91D50F	19077	12
		63	B71 91B63F	18988	B71 91C63F	19033	B71 91D63F	19078	12
	2	2	B71 92B02F	19375	B71 92C02F	19395	B71 92D02F	19415	6
		4	B71 92B04F	19377	B71 92C04F	19397	B71 92D04F	19417	6
		6	B71 92B06F	18989	B71 92C06F	19034	B71 92D06F	19079	6
		10	B71 92B10F	18990	B71 92C10F	19035	B71 92D10F	19080	6
		16	B71 92B16F	18991	B71 92C16F	19036	B71 92D16F	19081	6
		20	B71 92B20F	18992	B71 92C20F	19037	B71 92D20F	19082	6
		25	B71 92B25F	18993	B71 92C25F	19038	B71 92D25F	19083	6
		32	B71 92B32F	18994	B71 92C32F	19039	B71 92D32F	19084	6
		40	B71 92B40F	18995	B71 92C40F	19040	B71 92D40F	19085	6
		50	B71 92B50F	18996	B71 92C50F	19041	B71 92D50F	19086	6
		63	B71 92B63F	18997	B71 92C63F	19042	B71 92D63F	19087	6
	3	2	B71 93B02F	19379	B71 93C02F	19399	B71 93D02F	19419	4
		4	B71 93B04F	19381	B71 93C04F	19401	B71 93D04F	19421	4
		6	B71 93B06F	18998	B71 93C06F	19043	B71 93D06F	19088	4
		10	B71 93B10F	18999	B71 93C10F	19044	B71 93D10F	19089	4
		16	B71 93B16F	19000	B71 93C16F	19045	B71 93D16F	19090	4
		20	B71 93B20F	19001	B71 93C20F	19046	B71 93D20F	19091	4
		25	B71 93B25F	19002	B71 93C25F	19047	B71 93D25F	19092	4
		32	B71 93B32F	19003	B71 93C32F	19048	B71 93D32F	19093	4
		40	B71 93B40F	19004	B71 93C40F	19049	B71 93D40F	19094	4
		50	B71 93B50F	19005	B71 93C50F	19050	B71 93D50F	19095	4
		63	B71 93B63F	19006	B71 93C63F	19051	B71 93D63F	19096	4
	4	2	B71 94B02F	19387	B71 94C02F	19407	B71 94D02F	19427	3
		4	B71 94B04F	19389	B71 94C04F	19409	B71 94D04F	19429	3
		6	B71 94B06F	19016	B71 94C06F	19061	B71 94D06F	19106	3
		10	B71 94B10F	19017	B71 94C10F	19062	B71 94D10F	19107	3
		16	B71 94B16F	19018	B71 94C16F	19063	B71 94D16F	19108	3
		20	B71 94B20F	19019	B71 94C20F	19064	B71 94D20F	19109	3
		25	B71 94B25F	19020	B71 94C25F	19065	B71 94D25F	19110	3
		32	B71 94B32F	19021	B71 94C32F	19066	B71 94D32F	19111	3
		40	B71 94B40F	19022	B71 94C40F	19067	B71 94D40F	19112	3
		50	B71 94B50F	19023	B71 94C50F	19068	B71 94D50F	19113	3
		63	B71 94B63F	19024	B71 94C63F	19069	B71 94D63F	19114	3

Tripping characteristic curves

IEC 60898-1 Standard



Magnetic release

An electromagnet with plunger ensures instantaneous tripping in case of short circuit. The IEC 60898-1 distinguishes three different types, following the current for instantaneous release: type B, C, D

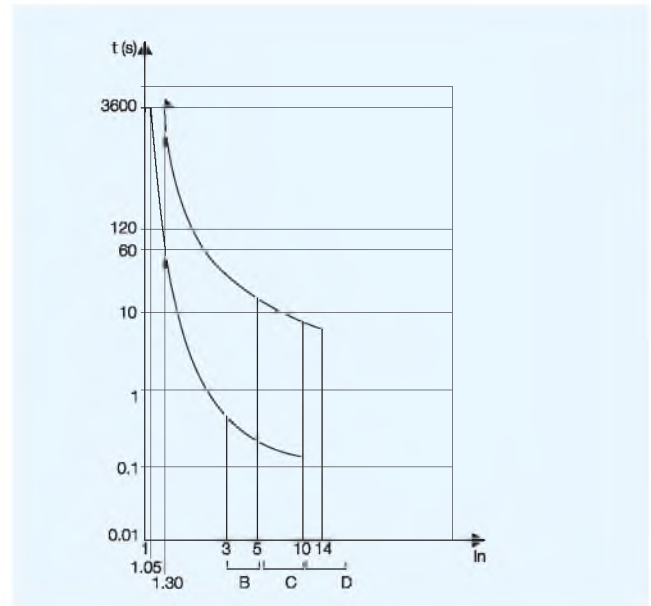
Test current	Tripping time	Applications
B 3 In	0.1 < t < 45 s (In ≤ 32 A) 0.1 < t < 90 s (In > 32 A)	Only for resistive loads such as: - electrical heating - water heater - stoves
5 In	t < 0.1 s	
C 5 In	0.1 < t < 15 s (In ≤ 32 A) 0.1 < t < 30 s (In > 32 A)	Usual loads such as: - lighting - socket outlets - small motors
10 In	t < 0.1 s	
D 10 In	0.1 < t < 4 s (In ≤ 32 A) 0.1 < t < 8 s (In > 32 A)	Control and protection of circuits having important transient inrush currents (large motors)
20 In	t < 0.1 s	

Thermal release

- The release is initiated by a bimetal strip in case of overload
- The standard defines the range of release for specific overload values
- Reference ambient temperature is 30 °C

Test current	Tripping time
1.13 In	t ≥ 1 h (In ≤ 63 A)
1.45 In	t < 1 h (In ≤ 63 A)
2.55 In	1 s < t < 60 s (In ≤ 32 A) 1 s < t < 120 s (In > 32 A)

IEC 60947-2 Standard



Magnetic release

- An electromagnet with plunger ensures instantaneous tripping in case of short circuit.
- The standard leaves the calibration of magnetic release to manufacturer's decision.
- Sassin MCB series 3SB71-63 offers instantaneous tripping ranges
 - release B: 4 In
 - release C: 8 In
 - release D: 12 In

Thermal release

- The release is initiated by a bimetal strip in case of overload.
- The standard defines the range of release for two specific overload values.
- Reference ambient temperature is 30 °C.

Test current	Tripping time
1.05 In	t ≥ 1 h (In ≤ 63 A)
1.30 In	t < 1 h (In ≤ 63 A)

Miniature Circuit Breakers

Series 3SB71-63

Selectivity

Load side: 3SB71-63, Curve B,C	Rated current I _n (A)	Power supply side: RT16-00 (fuse)								
		20	25	36	50	63	80	100	125	160
		I _s (kA)								
	≤ 2	1.2	4	12	12	12	12	12	12	12
	3	0.7	1.2	3.8	5.3	6	6	6	6	6
	4	0.6	0.9	2.5	3.8	6	6	6	6	6
	6	0.5	0.8	1.9	2.5	4.5	5	6	6	6
	10		0.7	1.4	2.2	3.2	3.6	6	6	6
	16			1.2	1.8	2.6	3	5.6	6	6
	20				1.5	2.2	2.5	4.6	6	6
	25				1.3	2	2.2	4.1	5.5	6
	32					1.7	1.9	3.8	4.5	6
	40						1.7	3	4	5
	50						1.5	2.6	3.5	4.5
	63							2.4	3.3	4.5

Load side: 3SB71-63, Curve B,C	Rated current I _n (A)	Power supply side: 3SM29-125								
		16	20	25	32	40	50	63	80	100
		I _s (kA)								
	≤ 10	0.19	0.019	0.3	0.4	0.5	0.5	0.5	0.63	0.8
	16			0.3	0.4	0.5	0.5	0.5	0.63	0.8
	20					0.5	0.5	0.5	0.63	0.8
	25						0.5	0.5	0.63	0.8
	32						0.5	0.5	0.63	0.8
	40									
	50									
	63									

Back up protection

Load side: 3SB71-63, Curve B,C	Rated current I _n (A)	Power supply side: RT16 series						
		40	50	63	80	100	125	160
		I _s (kA)						
	1~6	40	40	40	40	40	40	40
	8~10	40	40	40	40	40	40	40
	13	40	40	40	40	35	35	35
	16	40	40	40	40	30	30	30
	20	40	40	40	40	30	30	30
	25	40	40	40	40	30	30	30
	32	40	40	40	40	30	30	30
	40	40	40	40	40	30	30	30
	50	30	30	30	30	30	30	30
	63	20	20	20	20	15	15	15

Load side: 3SB71-63, Curve B,C	Rated current I _n (A)	Power supply side: 3SM29					
		3SM29-125S	3SM29-125H	3SM29-125R	3SM29-250S	3SM29-250H	3SM29-250R
		I _s (kA)					
	1~6	15	18	18	15	15	15
	10~20	12	15	15	12	12	12
	32~40	12	15	15	12	12	12
	50~60	12	15	15	12	12	12

Miniature Circuit Breakers Series 3SB71-63

Temperature derating

The maximum permissible current in a circuit breaker depends on the ambient temperature where the circuit breaker is placed. Ambient temperature is the temperature inside the enclosure or switchboard in which the circuit breakers are installed.

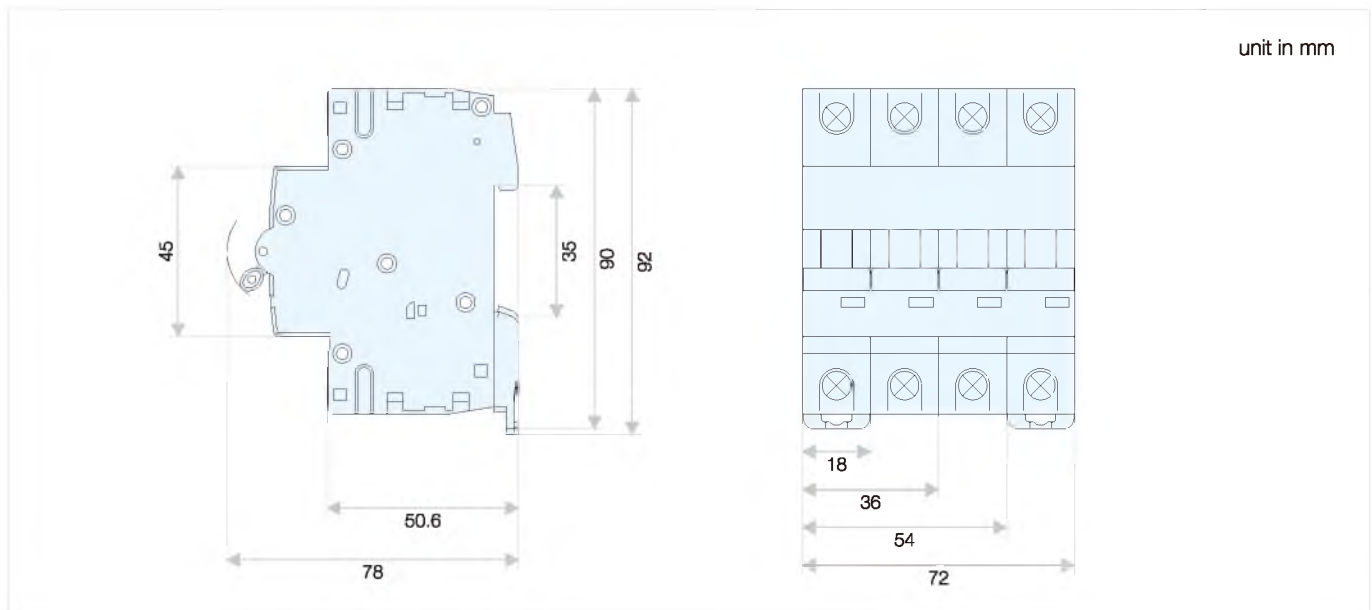
The reference temperature is 30 °C

Ambient temperature Rated current (A)	-35	-30	-20	-10	0	10	20	30	40	50	60
	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C	°C
2	2.60	2.52	2.46	2.38	2.28	2.20	2.08	2.00	1.92	1.86	1.76
4	5.20	2.04	4.92	4.76	4.56	4.40	4.16	4.00	3.84	3.76	3.52
6	7.80	7.56	7.38	7.14	6.84	6.60	6.24	6.00	5.76	5.64	5.28
10	13.20	12.70	2.50	12.00	11.50	11.10	10.60	10.00	9.60	9.30	8.90
16	21.12	20.48	20.00	19.20	18.40	17.76	16.96	16.00	15.36	4.88	14.24
20	26.40	25.60	25.00	24.00	23.00	22.20	21.20	20.00	19.20	8.60	17.80
25	33.00	32.00	31.25	30.00	28.75	27.75	26.50	25.00	24.00	23.25	22.25
32	42.56	41.28	40.00	38.72	37.12	35.52	33.92	32.00	30.72	29.76	28.16
40	53.20	51.20	50.00	48.00	46.40	44.80	42.40	40.00	38.40	37.20	35.60
50	67.00	65.50	63.00	60.50	58.00	56.00	53.00	50.00	48.00	46.50	44.00
63	83.79	81.90	80.01	76.86	73.71	70.56	66.78	63.00	60.48	58.90	55.44

When several simultaneously operating circuit breakers are mounted side by side in a small enclosure, the temperature rise inside the enclosure causes a reduction in current rating. you must then assign the rating (already derated if necessary according to ambient temperature) a downrating factor of 0.8.

Outline and installation dimensions

3SB71-63 is installed on DIN rail.



Miniature Circuit Breakers

Series 3SB6

Functions

- Overload protection
- Short circuit protection
- Isolation
- Controlling
- Used in residential building, non-residential building, industry, energy and infrastructure.

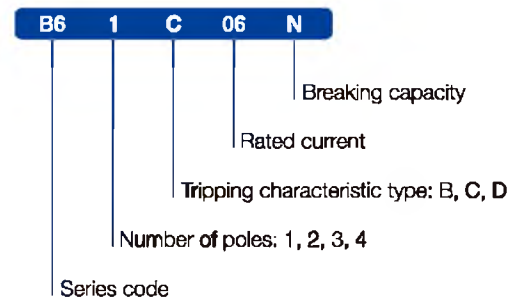
2

Technical specifications

- Standards: IEC 60898-1
- Rated current I_n (A): 6, 10, 16, 20, 25, 32, 40, 50, 63
- Rated voltage U_n (VAC): 1P: 230/400; 2-4P: 400
- Operational voltage (V AC): Min. : 24; Max. : 250/440
- Rated frequency (Hz): 50/60
- Rated insulation voltage (V AC):
 - Phase to ground: 250
 - Phase to phase: 500
- Number of poles (P): 1, 2, 3, 4
- Tripping characteristic:
 - Characteristic curve B (I_n): 3-5
 - Characteristic curve C (I_n): 5-10
 - Characteristic curve D (I_n): 10-20
- Thermal operating limit (I_n): 1.13 - 1.45
- Degree of protection: IP20, with connected conductors
- Electrical endurance (Cycles): 4,000
- Mechanical endurance (Cycles): 10,000
- Breaking Capacity: 6 kA
- Fire resistance according to IEC 60695: 960 °C
- Busbar connection: Pin type
- Mounting position: Any
- Conductor cross-sections
 - Solid and stranded (mm^2): 1-35
 - Finely stranded with end sleeve (mm^2): 1-16
- Terminal tightening torque (N·m): 2.5
- Ambient temperature (°C): -5 – +40, max. 95 % humidity
- Altitude (meters): Max. 2,000



Instruction of type code







Features

- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- The handle provides a clear indication of the contact position
- Adequate printing of all data on the front provides long-term identification
- Energy limiting class: 3
- The emission of ionized gases is limited to the severest restrictions: 45 mm grid distance
- This MCB for household in accordance with: IEC 60898-1, B, C and D tripping characteristics

Miniature Circuit Breakers Series 3SB6

Selection and ordering data

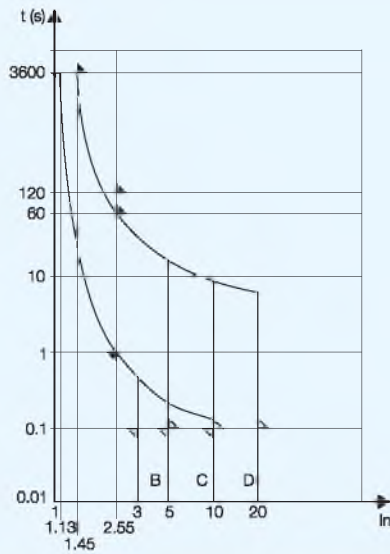
IEC 60898-1 6 kA

	Number of poles	Rated current In (A)	Curve B		Curve C		Curve D		Pack.
			Type code	Order code	Type code	Order code	Type code	Order code	
	1	8	B6 1B06N	29859	B6 1C06N	29872	B6 1D06N	29885	12
		10	B6 1B10N	29860	B6 1C10N	29873	B6 1D10N	29886	12
		16	B6 1B16N	29861	B6 1C16N	29874	B6 1D16N	29887	12
		20	B6 1B20N	29862	B6 1C20N	29875	B6 1D20N	29888	12
		25	B6 1B25N	29863	B6 1C25N	29876	B6 1D25N	29889	12
		32	B6 1B32N	29864	B6 1C32N	29877	B6 1D32N	29890	12
		40	B6 1B40N	29865	B6 1C40N	29878	B6 1D40N	29891	12
		50	B6 1B50N	29866	B6 1C50N	29879	B6 1D50N	29892	12
		63	B6 1B63N	29867	B6 1C63N	29880	B6 1D63N	29893	12
	2	6	B6 2B06N	29898	B6 2C06N	29911	B6 2D06N	29924	6
		10	B6 2B10N	29899	B6 2C10N	29912	B6 2D10N	29925	6
		16	B6 2B16N	29900	B6 2C16N	29913	B6 2D16N	29926	6
		20	B6 2B20N	29901	B6 2C20N	29914	B6 2D20N	29927	6
		25	B6 2B25N	29902	B6 2C25N	29915	B6 2D25N	29928	6
		32	B6 2B32N	29903	B6 2C32N	29916	B6 2D32N	29929	6
		40	B6 2B40N	29904	B6 2C40N	29917	B6 2D40N	29930	6
		50	B6 2B50N	29905	B6 2C50N	29918	B6 2D50N	29931	6
		63	B6 2B63N	29906	B6 2C63N	29919	B6 2D63N	29932	6
	3	6	B6 3B06N	29937	B6 3C06N	29950	B6 3D06N	29963	4
		10	B6 3B10N	29938	B6 3C10N	29951	B6 3D10N	29964	4
		16	B6 3B16N	29939	B6 3C16N	29952	B6 3D16N	29965	4
		20	B6 3B20N	29940	B6 3C20N	29953	B6 3D20N	29966	4
		25	B6 3B25N	29941	B6 3C25N	29954	B6 3D25N	29967	4
		32	B6 3B32N	29942	B6 3C32N	29955	B6 3D32N	29968	4
		40	B6 3B40N	29943	B6 3C40N	29956	B6 3D40N	29969	4
		50	B6 3B50N	29944	B6 3C50N	29957	B6 3D50N	29970	4
		63	B6 3B63N	29945	B6 3C63N	29958	B6 3D63N	29971	4
	4	6	B6 4B06N	29976	B6 4C06N	29989	B6 4D06N	10003	3
		10	B6 4B10N	29977	B6 4C10N	29990	B6 4D10N	10004	3
		16	B6 4B16N	29978	B6 4C16N	29991	B6 4D16N	10005	3
		20	B6 4B20N	29979	B6 4C20N	29992	B6 4D20N	10006	3
		25	B6 4B25N	29980	B6 4C25N	29993	B6 4D25N	10007	3
		32	B6 4B32N	29981	B6 4C32N	29994	B6 4D32N	10008	3
		40	B6 4B40N	29982	B6 4C40N	29995	B6 4D40N	10009	3
		50	B6 4B50N	29983	B6 4C50N	29996	B6 4D50N	10010	3
		63	B6 4B63N	29984	B6 4C63N	29997	B6 4D63N	10011	3

Miniature Circuit Breakers Series 3SB6

Tripping characteristic curves

IEC 60898-1 Standard



Magnetic release

An electromagnet with plunger ensures instantaneous tripping in case of short circuit. The IEC 60898-1 distinguishes three different types, following the current for instantaneous release: type B, C, D

Test current	Tripping time	Applications
B 3 In	0.1 < t < 45 s (In ≤ 32 A)	Only for resistive loads such as: - electrical heating - water heater - stoves
	0.1 < t < 90 s (In > 32 A)	
5 In	t < 0.1 s	
C 5 In	0.1 < t < 15 s (In ≤ 32 A)	Usual loads such as: - lighting - socket outlets - small motors
	0.1 < t < 30 s (In > 32 A)	
10 In	t < 0.1 s	
D 10 In	0.1 < t < 4 s (In ≤ 32 A)	Control and protection of circuits having important transient inrush currents (large motors)
	0.1 < t < 8 s (In > 32 A)	
20 In	t < 0.1 s	

Thermal release

- The release is initiated by a bimetal strip in case of overload
- The standard defines the range of release for specific overload values
- Reference ambient temperature is 30 °C

Test current	Tripping time
1.13 In	t ≥ 1 h (In ≤ 63 A)
1.45 In	t < 1 h (In ≤ 63 A)
2.55 In	1s < t < 60 s (In ≤ 32 A)
	1s < t < 120 s (In > 32 A)

Temperature derating

The maximum permissible current in a circuit breaker depends on the ambient temperature where the circuit breaker is placed. Ambient temperature is the temperature inside the enclosure or switchboard in which the circuit breakers are installed.

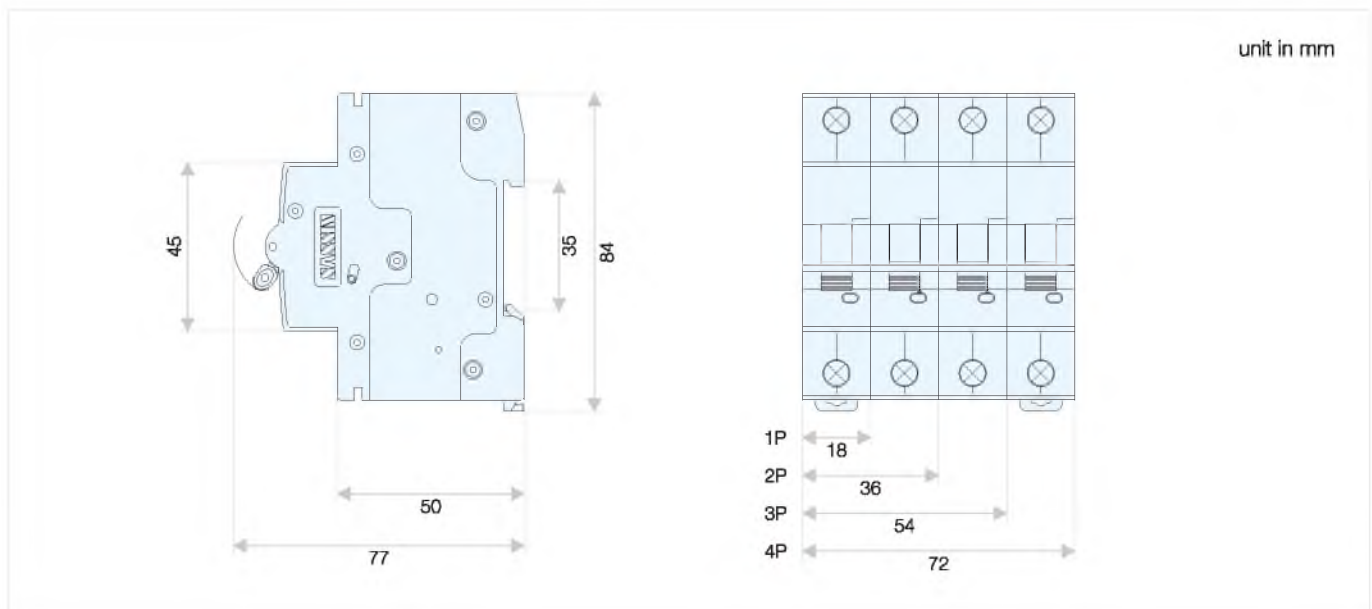
The reference temperature is 30 °C

Rated current In (A)	Temperature compensation coefficient under various operational temperature									
	-10 °C	0 °C	10 °C	20 °C	30 °C	40 °C	50 °C	55 °C	60 °C	
16	1.20	1.14	1.09	1.05	1.00	0.96	0.80	0.75	0.70	
10~32	1.18	1.12	1.08	1.04	1.00	0.96	0.92	0.88	0.84	
40~60	1.16	1.12	1.07	1.03	1.00	0.97	0.87	0.83	0.80	

When several simultaneously operating circuit breakers are mounted side by side in a small enclosure, the temperature rise inside the enclosure causes a reduction in current rating. you must then assign the rating (already derated if necessary according to ambient temperature) a downrating factor of 0.8.

Outline and installation dimensions

3SB6 is installed on DIN rail.



Miniature Circuit Breakers

Series 3SB5

Functions

- Overload protection
- Short circuit protection
- Isolation
- Controlling
- Used in residential building, non-residential building, energy sources, industry and infrastructure.

Technical specifications

- Standard: IEC 60898-1
- Rated current I_n (A): 1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63
- Rated voltage U_n (V AC): 230/400
- Operational voltage (V AC):
 - Min.: 24
 - Max.: 250/440
- Rated insulation voltage (V AC): 500
- Number of poles: 1, 2, 3, 4
- Tripping characteristics: B, C, D
- Characteristic curve B (I_n): 3-5
- Characteristic curve C (I_n): 5-10
- Characteristic curve D (I_n): 10-20
- Thermal operating limit (I_n): 1.13 - 1.45
- Rated switching capacity I_{cn} (kA): 6
- Degree of protection: IP20, with connected conductors
- Electrical life (times): 4,000
- Mechanical life (times): 10,000
- Breaking Capacity:

Model	Rated voltage		Rated Current (A)	Acc. to IEC 60898-1	
	(V)			I_{cn} (kA)	I_{cs} (kA)
3SB5T	1P	230/400	1-63	3	3
	2-4P	400	1-63	3	3
3SB5D	1P	230/400	6-40	6	6
			50-63	4.5	4.5
	2-4P	400	6-40	6	6
			50-63	4.5	4.5

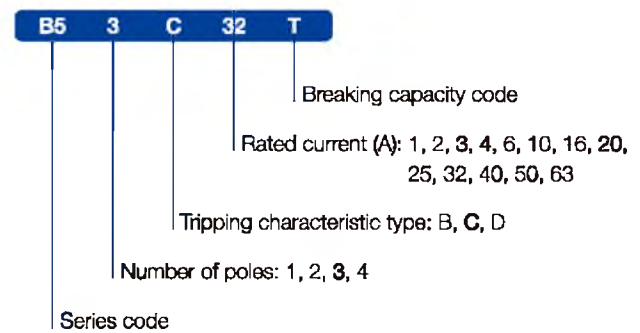
- Mounting position: Any
- Conductor cross-sections
 - Solid and stranded (mm²): 0.75-35
 - Finely stranded with end sleeve (mm²): 0.75-25
- Terminal tightening torque (N·m): 2.5
- Ambient temperature (°C): -5~+45, max. 95 % humidity
- Storage temperature (°C): -40~+75
- Altitude (meters): Max. 2,000

References

- Additional components: page 87
- Accessories: page 114~116



Instruction of type code

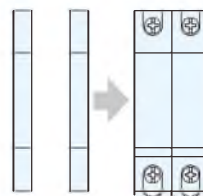


Features

- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON/OFF)
- Adequate printing of all data on the front provides long-term identification
- This MCB for household in accordance with: IEC 60898-1, B, C and D tripping characteristics
- This MCB may be extended with:
 - Full sets of additional components
 - Full sets of accessories

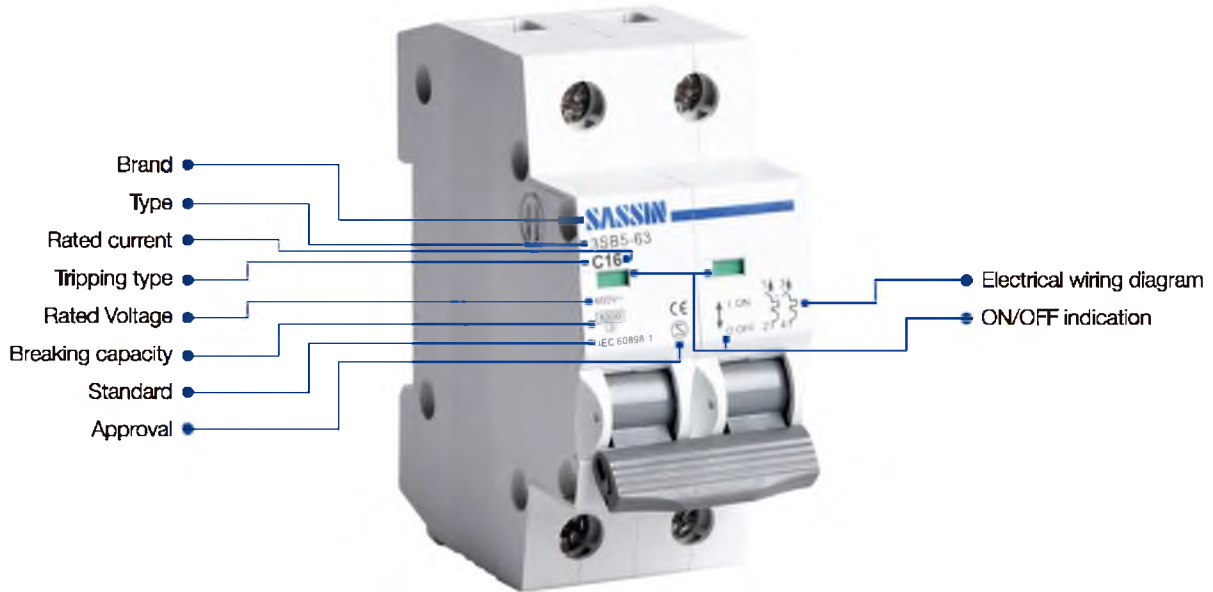
Add-on devices

Auxiliaries



Benefits

- Attractive device design
- Easily recognizable, color-coded switching position
- Indication integrated in the handle.



Well matched with RCCB 3SL52



Auxiliary contacts can be added on the left hand side of the MCB



Groove designed on both sides to lower temperature rise



Safety terminal:
easy wiring
protection degree IP20.



MCB's and RCCB's can be connected with PIN type busbar both at the top and bottom terminals, with easy DIN-rail extraction.



Ergonomic handle for user- friendly switching
Square terminal version for joint accommodation of pin busbars with cables









Miniature Circuit Breakers

Series 3SB5

Selection and ordering data

IEC 60898-1 3 kA


2

	Number of poles	Rated current In (A)	Curve B		Curve C		Curve D		Pack.
			Type code	Order code	Type code	Order code	Type code	Order code	
	1	1	B5 1B01T	18590	B5 1C01T	18642	B5 1D01T	18694	12
		2	B5 1B02T	18591	B5 1C02T	18643	B5 1D02T	18695	12
		3	B5 1B03T	18592	B5 1C03T	18644	B5 1D03T	18696	12
		4	B5 1B04T	18593	B5 1C04T	18645	B5 1D04T	18697	12
		6	B5 1B06T	18594	B5 1C06T	18646	B5 1D06T	18698	12
		10	B5 1B10T	18595	B5 1C10T	18647	B5 1D10T	18699	12
		16	B5 1B16T	18596	B5 1C16T	18648	B5 1D16T	18700	12
		20	B5 1B20T	18597	B5 1C20T	18649	B5 1D20T	18701	12
		25	B5 1B25T	18598	B5 1C25T	18650	B5 1D25T	18702	12
		32	B5 1B32T	18599	B5 1C32T	18651	B5 1D32T	18703	12
		40	B5 1B40T	18600	B5 1C40T	18652	B5 1D40T	18704	12
		50	B5 1B50T	18601	B5 1C50T	18653	B5 1D50T	18705	12
		63	B5 1B63T	18602	B5 1C63T	18654	B5 1D63T	18706	12
									
	2	1	B5 2B01T	18603	B5 2C01T	18655	B5 2D01T	18707	6
		2	B5 2B02T	18604	B5 2C02T	18656	B5 2D02T	18708	6
		3	B5 2B03T	18605	B5 2C03T	18657	B5 2D03T	18709	6
		4	B5 2B04T	18606	B5 2C04T	18658	B5 2D04T	18710	6
		6	B5 2B06T	18607	B5 2C06T	18659	B5 2D06T	18711	6
		10	B5 2B10T	18608	B5 2C10T	18660	B5 2D10T	18712	6
		16	B5 2B16T	18609	B5 2C16T	18661	B5 2D16T	18713	6
		20	B5 2B20T	18610	B5 2C20T	18662	B5 2D20T	18714	6
		25	B5 2B25T	18611	B5 2C25T	18663	B5 2D25T	18715	6
		32	B5 2B32T	18612	B5 2C32T	18664	B5 2D32T	18716	6
		40	B5 2B40T	18613	B5 2C40T	18665	B5 2D40T	18717	6
		50	B5 2B50T	18614	B5 2C50T	18666	B5 2D50T	18718	6
		63	B5 2B63T	18615	B5 2C63T	18667	B5 2D63T	18719	6
									
	3	1	B5 3B01T	18616	B5 3C01T	18668	B5 3D01T	18720	4
		2	B5 3B02T	18617	B5 3C02T	18669	B5 3D02T	18721	4
		3	B5 3B03T	18618	B5 3C03T	18670	B5 3D03T	18722	4
		4	B5 3B04T	18619	B5 3C04T	18671	B5 3D04T	18723	4
		6	B5 3B06T	18620	B5 3C06T	18672	B5 3D06T	18724	4
		10	B5 3B10T	18621	B5 3C10T	18673	B5 3D10T	18725	4
		16	B5 3B16T	18622	B5 3C16T	18674	B5 3D16T	18726	4
		20	B5 3B20T	18623	B5 3C20T	18675	B5 3D20T	18727	4
		25	B5 3B25T	18624	B5 3C25T	18676	B5 3D25T	18728	4
		32	B5 3B32T	18625	B5 3C32T	18677	B5 3D32T	18729	4
		40	B5 3B40T	18626	B5 3C40T	18678	B5 3D40T	18730	4
		50	B5 3B50T	18627	B5 3C50T	18679	B5 3D50T	18731	4
		63	B5 3B63T	18628	B5 3C63T	18680	B5 3D63T	18732	4
									
	4	1	B5 4B01T	18629	B5 4C01T	18681	B5 4D01T	18733	3
		2	B5 4B02T	18630	B5 4C02T	18682	B5 4D02T	18734	3
		3	B5 4B03T	18631	B5 4C03T	18683	B5 4D03T	18735	3
		4	B5 4B04T	18632	B5 4C04T	18684	B5 4D04T	18736	3
		6	B5 4B06T	18633	B5 4C06T	18685	B5 4D06T	18737	3
		10	B5 4B10T	18634	B5 4C10T	18686	B5 4D10T	18738	3
		16	B5 4B16T	18635	B5 4C16T	18687	B5 4D16T	18739	3
		20	B5 4B20T	18636	B5 4C20T	18688	B5 4D20T	18740	3
		25	B5 4B25T	18637	B5 4C25T	18689	B5 4D25T	18741	3
		32	B5 4B32T	18638	B5 4C32T	18690	B5 4D32T	18742	3
		40	B5 4B40T	18639	B5 4C40T	18691	B5 4D40T	18743	3
		50	B5 4B50T	18640	B5 4C50T	18692	B5 4D50T	18744	3
		63	B5 4B63T	18641	B5 4C63T	18693	B5 4D63T	18745	3
									





Miniature Circuit Breakers Series 3SB5

Selection and ordering data

IEC 60898-1 4.5 kA

Number of poles	Rated current In (A)	Curve B		Curve C		Curve D		Pack.
		Type code	Order code	Type code	Order code	Type code	Order code	
	50	B5 1B50D	18757	B5 1C50D	18809	B5 1D50D	18861	12
	63	B5 1B63D	18758	B5 1C63D	18810	B5 1D63D	18862	12
2	50	B5 2B50D	18770	B5 2C50D	18822	B5 2D50D	18874	8
	63	B5 2B63D	18771	B5 2C63D	18823	B5 2D63D	18875	6
3	50	B5 3B50D	18783	B5 3C50D	18835	B5 3D50D	18887	4
	63	B5 3B63D	18784	B5 3C63D	18836	B5 3D63D	18888	4
4	50	B5 4B50D	18796	B5 4C50D	18848	B5 4D50D	18900	3
	63	B5 4B63D	18797	B5 4C63D	18849	B5 4D63D	18901	3

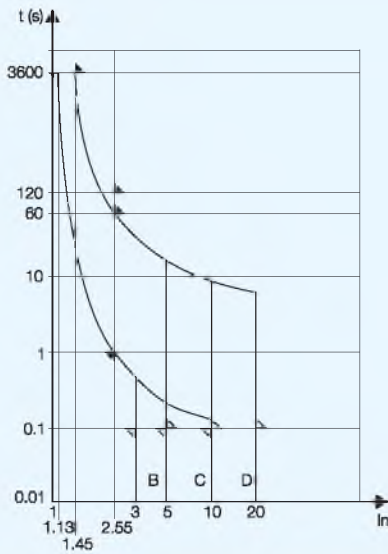
IEC 60898-1 6 kA

Number of poles	Rated current In (A)	Curve B		Curve C		Curve D		Pack.
		Type code	Order code	Type code	Order code	Type code	Order code	
	6	B5 1B06N	36547	B5 1C06N	36591	B5 1D06N	36635	12
	10	B5 1B10N	36548	B5 1C10N	36592	B5 1D10N	36636	12
	16	B5 1B16N	36549	B5 1C16N	36593	B5 1D16N	36637	12
	20	B5 1B20N	36550	B5 1C20N	36594	B5 1D20N	36638	12
	25	B5 1B25N	36551	B5 1C25N	36595	B5 1D25N	36639	12
	32	B5 1B32N	36552	B5 1C32N	36596	B5 1D32N	36640	12
	40	B5 1B40N	36553	B5 1C40N	36597	B5 1D40N	36641	12
2 	6	B5 2B06N	36558	B5 2C06N	36602	B5 2D06N	36646	8
	10	B5 2B10N	36559	B5 2C10N	36603	B5 2D10N	36647	8
	16	B5 2B16N	36560	B5 2C16N	36604	B5 2D16N	36648	8
	20	B5 2B20N	36561	B5 2C20N	36605	B5 2D20N	36649	6
	25	B5 2B25N	36562	B5 2C25N	36606	B5 2D25N	36650	6
	32	B5 2B32N	36563	B5 2C32N	36607	B5 2D32N	36651	6
	40	B5 2B40N	36564	B5 2C40N	36608	B5 2D40N	36652	6
3 	6	B5 3B06N	36569	B5 3C06N	36613	B5 3D06N	36657	4
	10	B5 3B10N	36570	B5 3C10N	36614	B5 3D10N	36658	4
	16	B5 3B16N	36571	B5 3C16N	36615	B5 3D16N	36659	4
	20	B5 3B20N	36572	B5 3C20N	36616	B5 3D20N	36660	4
	25	B5 3B25N	36573	B5 3C25N	36617	B5 3D25N	36661	4
	32	B5 3B32N	36574	B5 3C32N	36618	B5 3D32N	36662	4
	40	B5 3B40N	36575	B5 3C40N	36619	B5 3D40N	36663	4
4 	6	B5 4B06N	36580	B5 4C06N	36624	B5 4D06N	36668	3
	10	B5 4B10N	36581	B5 4C10N	36625	B5 4D10N	36669	3
	16	B5 4B16N	36582	B5 4C16N	36626	B5 4D16N	36670	3
	20	B5 4B20N	36583	B5 4C20N	36627	B5 4D20N	36671	3
	25	B5 4B25N	36584	B5 4C25N	36628	B5 4D25N	36672	3
	32	B5 4B32N	36585	B5 4C32N	36629	B5 4D32N	36673	3
	40	B5 4B40N	36586	B5 4C40N	36630	B5 4D40N	36674	3

Miniature Circuit Breakers Series 3SB5

Tripping characteristic curves

IEC 60898-1 Standard



Magnetic release

An electromagnet with plunger ensures instantaneous tripping in case of short circuit. The IEC 60898-1 distinguishes three different types, following the current for instantaneous release: type B, C, D

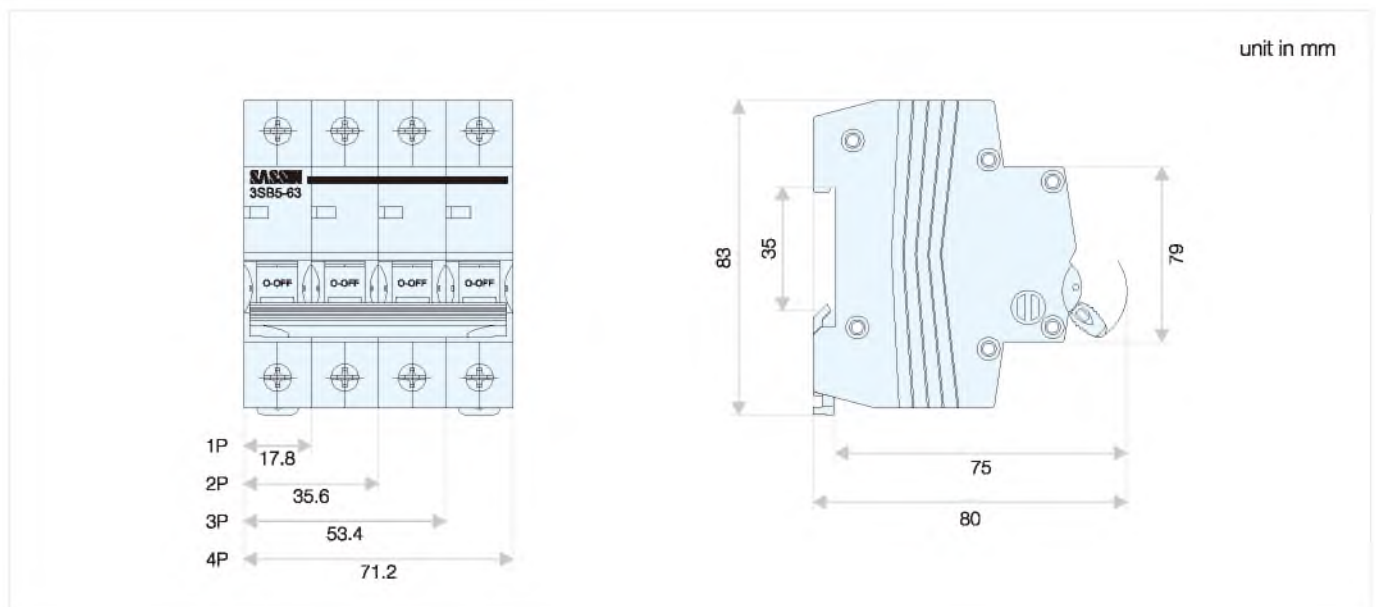
Test current	Tripping time	Applications
B 3 In	$0.1 < t < 45 \text{ s}$ ($I_n \leq 32 \text{ A}$) $0.1 < t < 90 \text{ s}$ ($I_n > 32 \text{ A}$)	Only for resistive loads such as: - electrical heating - water heater - stoves
C 5 In	$0.1 < t < 15 \text{ s}$ ($I_n \leq 32 \text{ A}$) $0.1 < t < 30 \text{ s}$ ($I_n > 32 \text{ A}$)	Usual loads such as: - lighting - socket outlets - small motors
D 10 In	$0.1 < t < 4 \text{ s}$ ($I_n \leq 32 \text{ A}$) $0.1 < t < 8 \text{ s}$ ($I_n > 32 \text{ A}$)	Control and protection of circuits having important transient inrush currents (large motors)
20 In	$t < 0.1 \text{ s}$	

Thermal release

- The release is initiated by a bimetal strip in case of overload
- The standard defines the range of release for specific overload values
- Reference ambient temperature is 30 °C

Test current	Tripping time
1.13 In	$t \geq 1 \text{ h}$ ($I_n \leq 63 \text{ A}$)
1.45 In	$t < 1 \text{ h}$ ($I_n \leq 63 \text{ A}$)
2.55 In	$1 \text{ s} < t < 60 \text{ s}$ ($I_n \leq 32 \text{ A}$) $1 \text{ s} < t < 120 \text{ s}$ ($I_n > 32 \text{ A}$)

Outline and installation dimensions



DPN Miniature Circuit Breakers Series 3SB66

Functions

- Overload protection
- Short circuit protection
- Isolation both for phase and neutral line
- Controlling
- Used for the protection of plants with switched neutral
- Used in residential building

Technical specifications

- Standard: IEC 60898-1
- Rated current I_n (A): 6, 10, 16, 20, 25, 32, 40
- Rated voltage U_n (V AC): 230
- Rated frequency (Hz): 50/60
- Operational voltage Min / Max (V AC): 24 / 250
- Number of pole: 1P+N (1 modular width)
- Tripping characteristic: B, C
- Characteristic curve B (I_n): 3-5
- Characteristic curve C (I_n): 5-10
- Thermal operating limit (I_n): 1.13-1.45
- Rated switching capacity I_{cn} (kA): 6
- Degree of protection: IP20, with connected conductors
- Electrical life(times): 4,000
- Mechanical life (times): 10,000
- Breaking Capacity:

Model	Rated voltage		Acc. to IEC 60898-1	
	(V)		I_{cu} (kA)	I_{cs} (kA)
3SB66	1P+N	230	6	6

- Fire resistance according to UL 94: V0
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm²): 0.75-16
- Finely stranded with end sleeve (mm²): 0.75-16
- Terminal tightening torque (N·m): 2.0
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2,000
- Connection Capacity (mm²): 1-16

References

- Additional components: page 40 ~ 42

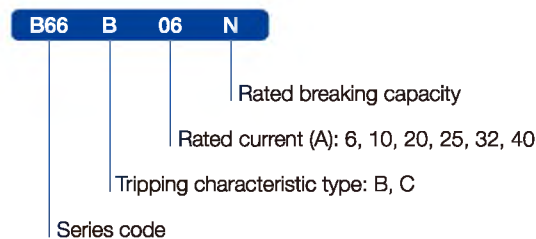
Selection and ordering data

IEC 60898-2 10 kA

	Number of poles	Rated current I_n (A)	Curve B		Curve C		Pack.
			Type code	Order code	Type code	Order code	
			1P+N	6	B66 B06N	21284	
		10	B66 B10N	21285	B66 C10N	21292	12
		16	B66 B16N	21286	B66 C16N	21293	12
		20	B66 B20N	21287	B66 C20N	21294	12
		25	B66 B25N	21288	B66 C25N	21295	12
		32	B66 B32N	21289	B66 C32N	21296	12
		40	B66 B40N	21290	B66 C40N	21297	12



Instruction of type code



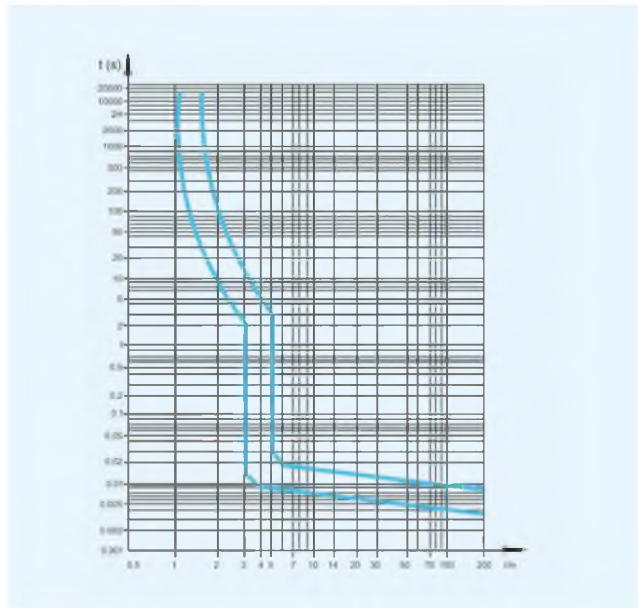
Features

- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON/OFF)
- The handle provides a clear indication of the contact position
- Adequate printing of all data on the front provides long-term identification
- Energy limiting class: 3
- The emission of ionized gases is limited to the severest restrictions: 45 mm grid distance
- This MCB for household in accordance with: IEC 60898-1, B, C tripping characteristics
- Full sets of accessories

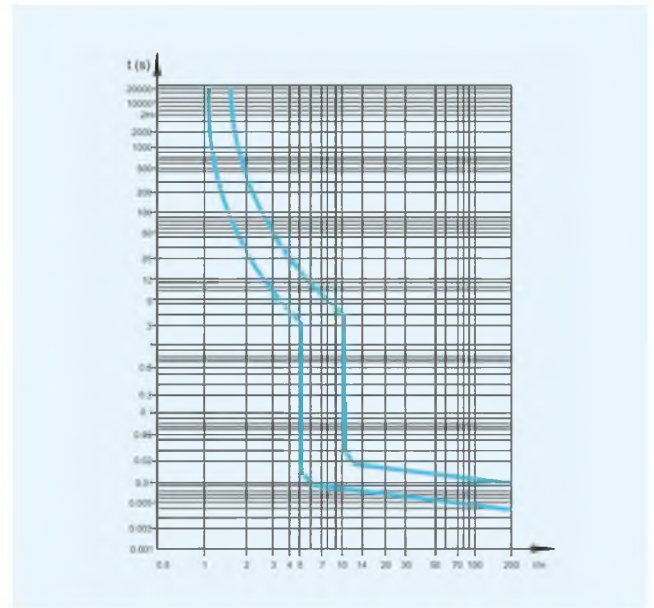
DPN Miniature Circuit Breakers Series 3SB66

Tripping characteristic curves

Curve B



Curve C



2

Magnetic release

An electromagnet with plunger ensures instantaneous tripping in case of short circuit. The IEC 60898-1 distinguishes three different types, following the current for instantaneous release: type B, C, D

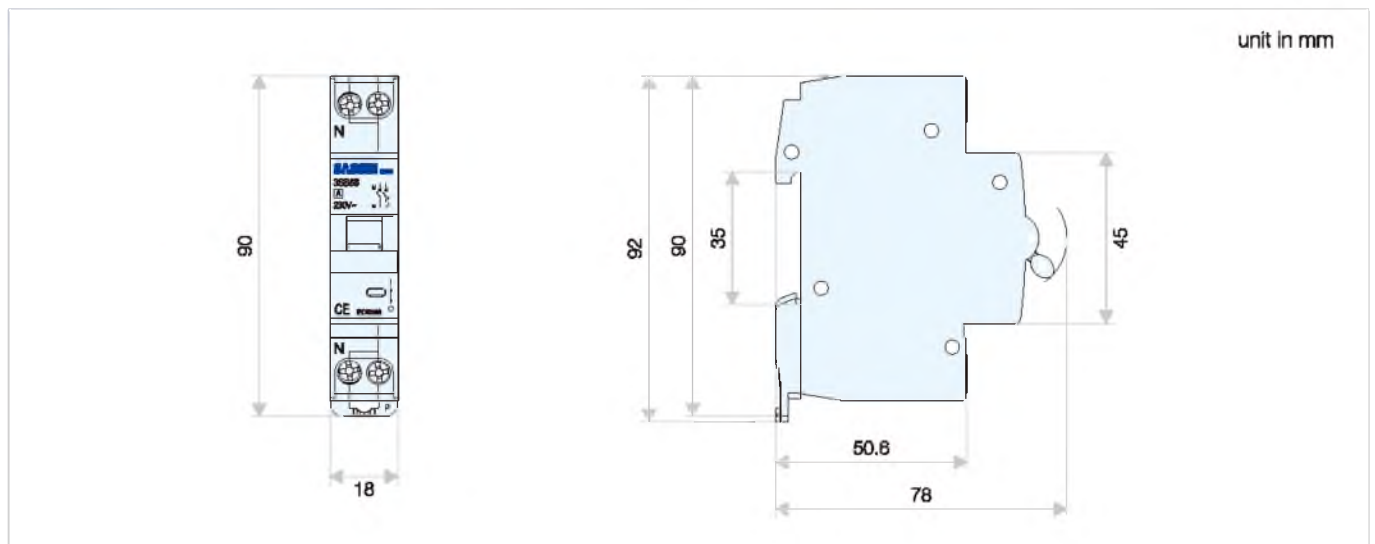
Test current	Tripping time	Applications
B 3 In	0.1 < t < 45 s (In ≤ 32 A)	Only for resistive loads such as: - electrical heating - water heater - stoves
	0.1 < t < 80 s (In > 32 A)	
5 In	t < 0.1 s	
C 5 In	0.1 < t < 15 s (In ≤ 32 A)	Usual loads such as: - lighting - socket outlets - small motors
	0.1 < t < 30 s (In > 32 A)	
10 In	t < 0.1 s	

Thermal release

- The release is initiated by a bimetal strip in case of overload
- The standard defines the range of release for specific overload values
- Reference ambient temperature is 30 °C

Test current	Tripping time
1.13 In	t ≥ 1 h (In ≤ 63 A)
1.45 In	t < 1 h (In ≤ 63 A)
2.55 In	1s < t < 60 s (In ≤ 32 A) 1s < t < 120 s (In > 32 A)

Outline and installation dimensions



Miniature Circuit Breakers for DC Applications Series 3SB71Z-63

Functions

- Overload protection
- Short circuit protection
- Controlling
- Protection for people and big length cables in TN and IT systems
- DC string protection: Protects the PV module from dangerous high DC back current
- Application in direct current circuit, like motors, auxiliary, circuits and photovoltaic.
- Used in industry and new energy

Technical specifications

- Standard: IEC 60898-2
- Rated current I_n (A): 6, 10, 16, 20, 25, 32, 40, 50, 63
- Number of poles: 1, 2
- Rated voltage U_e (V DC):
 - 1P: 220
 - 2P: 440
- Operational voltage U_b (V DC):
 - Min. : 12
 - Max. : 1P: 250; 2P: 500
- Rated insulation voltage (V AC): 500
- Rated frequency (Hz): 50/60
- Rated impulse withstand voltage (kA): 5
- Tripping characteristic: B, C
 - Characteristic curve B (I_n): 4~7
 - Characteristic curve C (I_n): 7~15
- Thermal operating limit (I_n): 1.13~1.45
- Rated breaking capacity:

Model	Rated voltage		Acc. to IEC 60898-2	
	(V)		I_{cn} (kA)	I_{cs} (kA)
3SB71Z-63	1P	220 V DC	10	7.5
	2P	400 V DC	10	7.5

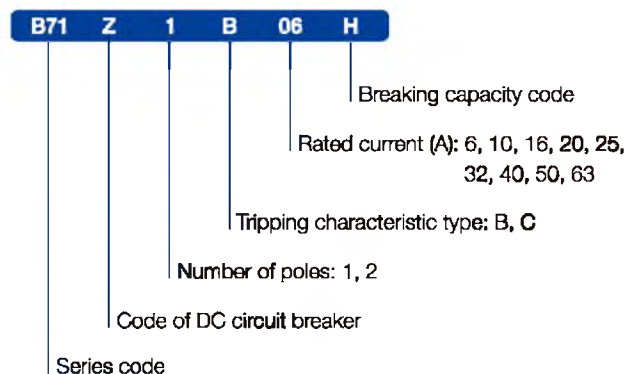
- Fire resistance according to UL 94: V0
- Mounting position: Any
- Conductor cross-sections
 - Solid and stranded (mm²): 0.75-35
 - Finely stranded with end sleeve (mm²): 0.75-25
- Terminal tightening torque (N·m): 2.8
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2,000
- Connection Capacity (mm²): 1-25

References

- Additional components: page 40 ~ 42



Instruction of type code

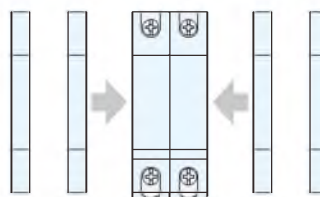


Features

- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- The handle provides a clear indication of the contact position
- Adequate printing of all data on the front provides long-term identification
- Energy limiting class: 3
- The emission of ionized gases is limited to the severest restrictions: 45 mm grid distance
- This MCB for household in accordance with IEC 60898-2, B, C tripping characteristics
- This MCB may be extended with:
 - Full sets additional components
 - Full sets of accessories

Add-on devices

Auxiliaries



Miniature Circuit Breakers for DC Applications Series 3SB71Z-63

Selection and ordering data

IEC 60898-2 10 kA

2



Number of poles	Rated current I _n (A)	Curve B		Curve C		Pack.
		Type code	Order code	Type code	Order code	
1	6	B71Z 1B06H	17618	B71Z 1C06H	17654	12
	10	B71Z 1B10H	17619	B71Z 1C10H	17655	12
	16	B71Z 1B16H	17620	B71Z 1C16H	17656	12
	20	B71Z 1B20H	17621	B71Z 1C20H	17657	12
	25	B71Z 1B25H	17622	B71Z 1C25H	17658	12
	32	B71Z 1B32H	17623	B71Z 1C32H	17659	12
	40	B71Z 1B40H	17624	B71Z 1C40H	17660	12
	50	B71Z 1B50H	17625	B71Z 1C50H	17661	12
	63	B71Z 1B63H	17626	B71Z 1C63H	17662	12



2	6	B71Z 2B06H	17627	B71Z 2C06H	17663	6
	10	B71Z 2B10H	17628	B71Z 2C10H	17664	6
	16	B71Z 2B16H	17629	B71Z 2C16H	17665	6
	20	B71Z 2B20H	17630	B71Z 2C20H	17666	6
	25	B71Z 2B25H	17631	B71Z 2C25H	17667	6
	32	B71Z 2B32H	17632	B71Z 2C32H	17668	6
	40	B71Z 2B40H	17633	B71Z 2C40H	17669	6
	50	B71Z 2B50H	17634	B71Z 2C50H	17670	6
	63	B71Z 2B63H	17635	B71Z 2C63H	17671	6



Miniature Circuit Breakers for DC Applications Series 3SB71Z-63

Magnetic release

An electromagnet with plunger ensures instantaneous tripping in case of short circuit. The IEC 60898-1 distinguishes three different types, following the current for instantaneous release: type B, C

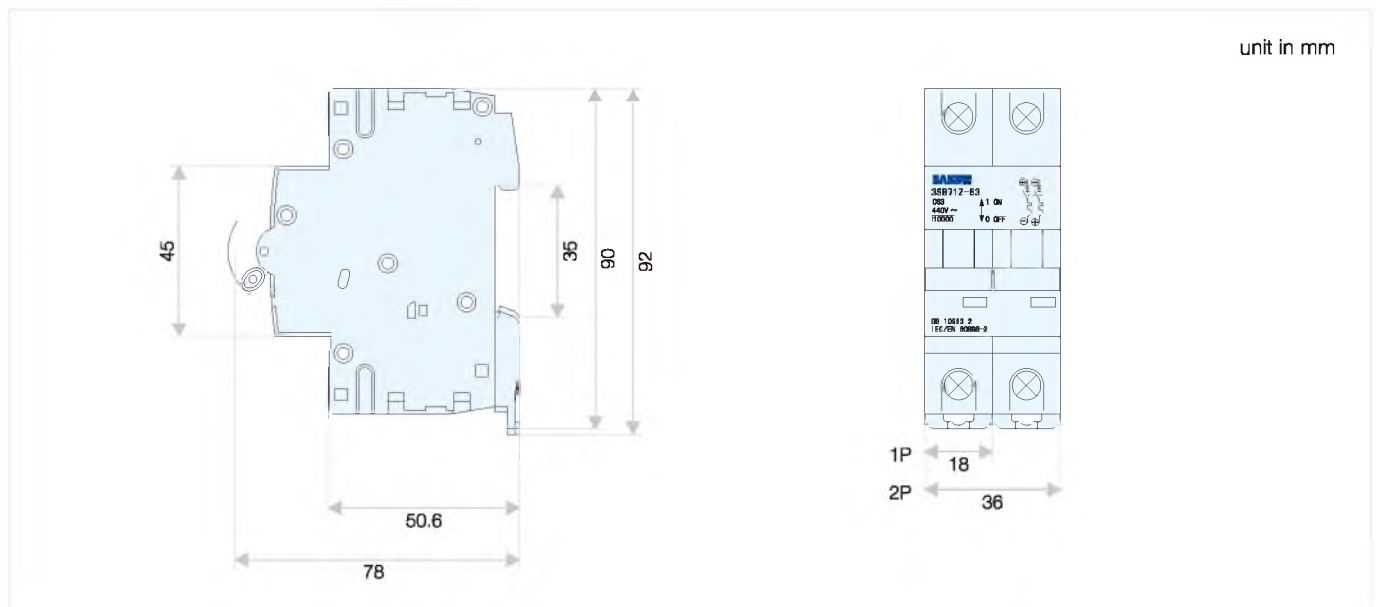
	Test current	Tripping time	Applications
B	4 I _n	0.1 < t < 45 s (I _n ≤ 32 A)	Only for resistive loads such as: - electrical heating - water heater - stoves
	7 I _n	t < 0.1 s	
C	7 I _n	0.1 < t < 15 s (I _n ≤ 32 A)	Usual loads such as: - lighting - socket outlets - small motors
		0.1 < t < 30 s (I _n > 32 A)	
	15 I _n	t < 0.1 s	

Thermal release

- The release is initiated by a bimetal strip in case of overload.
- The standard defines the range of release for specific overload values.
- Reference ambient temperature is 30 °C

Test current	Tripping time
1.13 I _n	t ≥ 1 h (I _n ≤ 63 A)
1.45 I _n	t < 1 h (I _n ≤ 63 A)
2.55 I _n	1s < t < 60 s (I _n ≤ 32 A) 1s < t < 120 s (I _n > 32 A)

Outline and installation dimensions



Miniature Circuit Breakers

Series 3SB71-125

Functions

- Overload protection
- Short circuit protection
- Isolation
- Controlling
- Used in residential building, non-residential building, industry, energy and infrastructure.

Technical specifications

- Standard: IEC 60947-2
- Rated current I_n (A): 80, 100, 125
- Rated voltage U_n (V AC): 230/400
- Operational voltage (V AC): Min: 24; Max: 250/440
- Number of poles: 1, 2, 3, 4
- Trip characteristic: C, D
- Characteristic curve C (I_n): 8
- Characteristic curve D (I_n): 12
- Thermal operating limit (I_n): (1.05-1.3)
- Degree of protection: IP20, with connected conductors
- Electrical life (times): 4,000
- Mechanical life (times): 10,000
- Breaking Capacity:

Model	Rated voltage		Acc. to IEC 60947-2	
	(V)		I_{cu} (kA)	I_{cs} (kA)
3SB71-125	1P	230/400	10	7.5
	2-4P	400	10	7.5

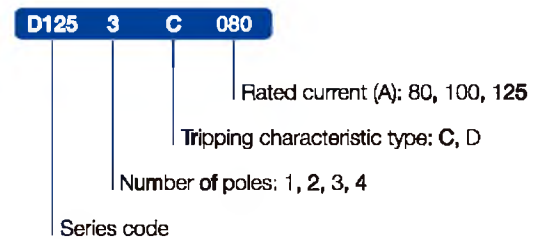
- Fire resistance according to UL 94: V0
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm^2): 1-50
- Finely stranded with end sleeve (mm^2): 1-35
- Terminal tightening torque (N·m): 2.8
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max 2,000

References

- Additional components: page 40 ~ 42



Instruction of type code

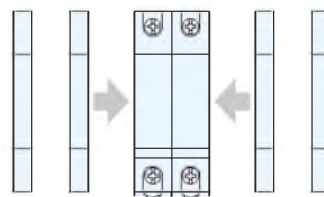


Features

- Rated current up to 125A
- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- The handle provides a clear indication of the contact position
- Adequate printing of all data on the front provides long-term identification
- Energy limiting class: 3
- The emission of ionized gases is limited to the severest restrictions: 45 mm grid distance
- This MCB for industry in accordance with IEC 60947-2 instantaneous tripping characteristic release B 4 I_n , release C 8 I_n , release D 12 I_n .
- This MCB may be extended with:
 - A wide range of RCDs and RCBO
 - Full sets of additional components
 - Full sets of accessories

Add-on devices





Auxiliaries



Miniature Circuit Breakers Series 3SB71-125

Selection and ordering data

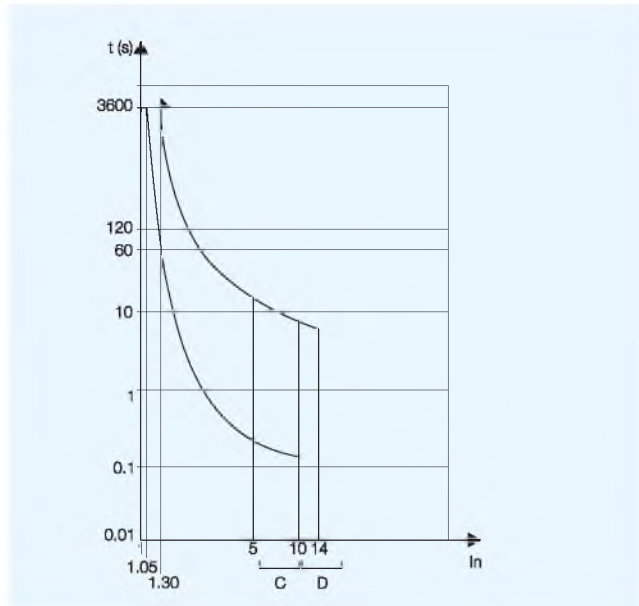
IEC 60947-2 10 kA

	Number of poles	Rated current I _n (A)	Curve C		Curve D		Pack.
			Type code	Order code	Type code	Order code	
	1	80	D125 1C080	16161	D125 1D080	16173	12
		100	D125 1C100	16162	D125 1D100	16174	12
		125	D125 1C125	16163	D125 1D125	16175	12
	2	80	D125 2C080	16164	D125 2D080	16176	6
		100	D125 2C100	16165	D125 2D100	16177	6
		125	D125 2C125	16166	D125 2D125	16178	6
	3	80	D125 3C080	16167	D125 3D080	16179	4
		100	D125 3C100	16168	D125 3D100	16180	4
		125	D125 3C125	16169	D125 3D125	16181	4
	4	80	D125 4C080	16170	D125 4D080	16182	3
		100	D125 4C100	16171	D125 4D100	16183	3
		125	D125 4C125	16172	D125 4D125	16184	3

Miniature Circuit Breakers Series 3SB71-125

Tripping characteristic curves

IEC 60947-2 Standard



Magnetic release

- An electromagnet with plunger ensures instantaneous tripping in case of short circuit.
- The standard leaves the calibration of magnetic release to manufacturer's decision.
- Sassin MCB series 3SB71-125 offers instantaneous tripping ranges
 - release C: $8 I_n$
 - release D: $12 I_n$

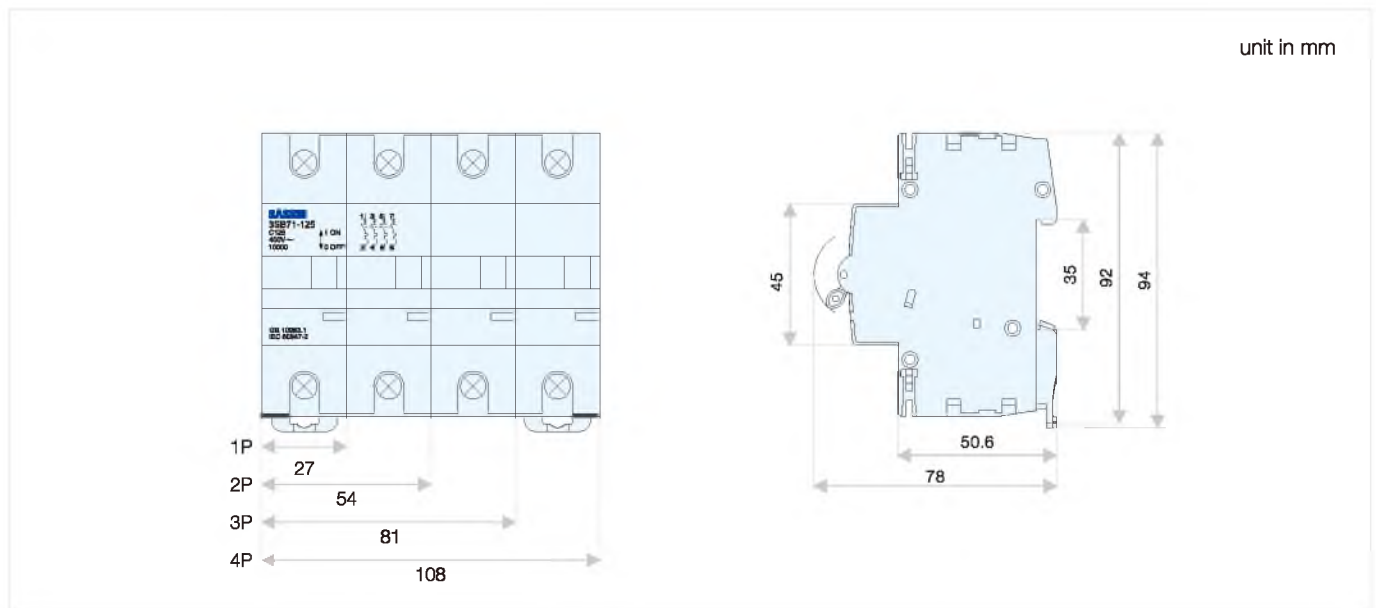
Thermal release

- The release is initiated by a bimetal strip in case of overload.
- The standard defines the range of release for two specific overload values.
- Reference ambient temperature is $30\text{ }^\circ\text{C}$.

Test current	Tripping time
$1.05 I_n$	$t \geq 2\text{ h}$ ($I_n > 63\text{ A}$)
$1.30 I_n$	$t < 2\text{ h}$ ($I_n > 63\text{ A}$)

Outline and installation dimensions

3SB71-125 is installed on DIN rail



Functions

- Overload protection
- Short circuit protection
- Isolation
- Used in residential building, non-residential building, energy sources, industry and infrastructure.

Technical specifications

- Standard: IEC 60947-2
- Rated current I_n (A): 63, 80, 100, 125
- Rated voltage U_n (V AC): 230/400
- Operational voltage (V AC):
 - Min.: 24
 - Max.: 250/440
- Rated insulation voltage (V AC): 500
- Number of poles: 1, 2, 3, 4
- Tripping characteristics: B, C, D
 - release B (I_n): 4
 - release C (I_n): 8
 - release D (I_n): 14
- Thermal operating limit (I_n): 1.05 - 1.30
- Electrical life (times): 4,000
- Mechanical life (times): 20,000
- Breaking Capacity:

Model	Rated voltage		Acc. to IEC 60947-2	
	(V)		I_{cn} (kA)	I_{cs} (kA)
3SB1-125	1P	230/400	6	6
	2-4P	400	6	6

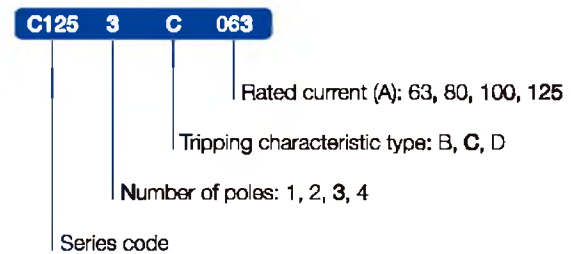
- Degree of protection: IP20, with connected conductors
- Mounting position: Any
- Conductor cross-sections
 - Solid and stranded (mm^2): 1-50
 - Finely stranded with end sleeve (mm^2): 1-35
- Terminal tightening torque (N·m): 3.5
- Ambient temperature (°C): -5 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2,000
- Connection Capacity (mm^2): 1-35

References

- Additional components: page 67
- Accessories: page 114-116



Instruction of type code

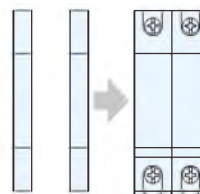


Features

- Rated current up to 125 A
- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- Adequate printing of all data on the front provides long-term identification
- This MCB for industry in accordance with: IEC 60947-2 instantaneous tripping release ranges B: 4 I_n , release C: 8 I_n , release D: 12 I_n
- This MCB may be extended with:
 - Full sets of additional components
 - Full sets of accessories

Add-on devices









Auxiliaries



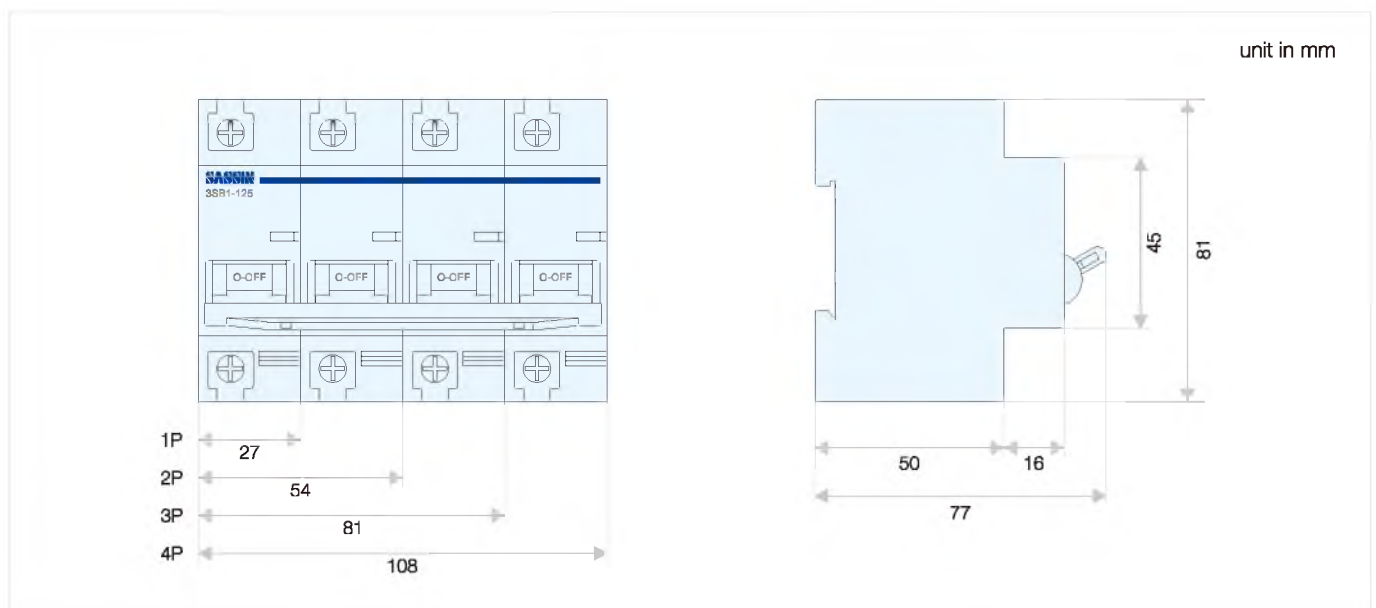
Miniature Circuit Breakers Series 3SB1-125

Selection and ordering data

IEC 60947-2 6 kA

	Number of poles	Rated current In (A)	Curve B		Curve C		Curve D		Pack.
			Type code	Order code	Type code	Order code	Type code	Order code	
 	1	63	C125 1B063	21140	C125 1C063	21152	C125 1D063	21164	12
		80	C125 1B080	21141	C125 1C080	21153	C125 1D080	21165	12
		100	C125 1B100	21142	C125 1C100	21154	C125 1D100	21166	12
		125	C125 1B125	23577	C125 1C125	23581	C125 1D125	23585	12
 	2	63	C125 2B063	21143	C125 2C063	21155	C125 2D063	21167	6
		80	C125 2B080	21144	C125 2C080	21156	C125 2D080	21168	6
		100	C125 2B100	21145	C125 2C100	21157	C125 2D100	21169	6
		125	C125 2B125	23578	C125 2C125	23582	C125 2D125	23586	6
 	3	63	C125 3B063	21146	C125 3C063	21158	C125 3D063	21170	4
		80	C125 3B080	21147	C125 3C080	21159	C125 3D080	21171	4
		100	C125 3B100	21148	C125 3C100	21160	C125 3D100	21172	4
		125	C125 3B125	23579	C125 3C125	23583	C125 3D125	23587	4
 	4	63	C125 4B063	21149	C125 4C063	21161	C125 4D063	21173	3
		80	C125 4B080	21150	C125 4C080	21162	C125 4D080	21174	3
		100	C125 4B100	21151	C125 4C100	21163	C125 4D100	21175	3
		125	C125 4B125	23580	C125 4C125	23584	C125 4D125	23588	3

Outline and installation dimensions



Residual Current Circuit Breakers Series 3SL71

Functions

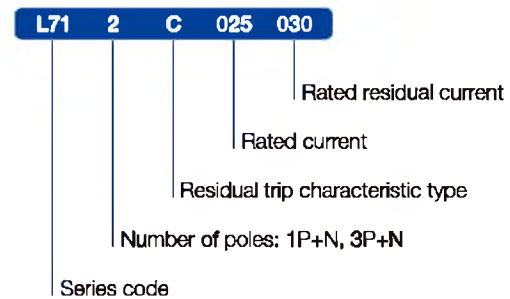
- Switching and isolation function
- Controlling
- Protection against the effects of sinusoidal alternating earth fault currents
- Protection against indirect contacts and additional protection against direct contacts.
- Protection against fire hazard caused by insulation faults
- Used in residential building, non-residential building, energy sources, industry and infrastructure.
- Combination with auxiliary elements: auxiliary contact, signal contact, shunt trip, undervoltage release



Technical specifications

- Standard: IEC 61008-1
- Type (wave form of the earth leakage sensed): AC, A
- Trip time type: instantaneous, selectivity S
- Number of poles: 1P+N, 3P+N
- Rated current I_n (A): 16, 25, 40, 63, 80, 100
- Rated voltage U_e (V AC): 230/400
- Rated insulation voltage U_i (V AC): 500
- Rated Frequency F_n (Hz): 50/60
- Rated residual currents $I_{\Delta n}$ (mA): 10 (2P 16 A), 30, 100, 300
- Rated conditional short-circuit current:
 $I_{nc} = I_{\Delta c} = 6000$ A SCPD fuse 100A Gg
- Making and breaking capacity I_m (A): 1000
- Rated residual breaking capacity $I_{\Delta m}$ (A): 1000
- Degree of protection: IP20, with connected conductors
- Terminals
- Terminal tightening torque (N·m): 3
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity

Instruction of type code



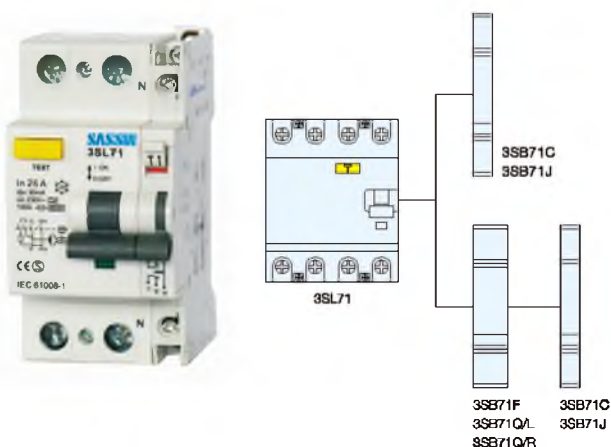
Features

- Electromagnetic type, voltage independent.
- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- The handle provides a clear indication of the contact position
- Adequate printing of all data on the front provides long-term identification

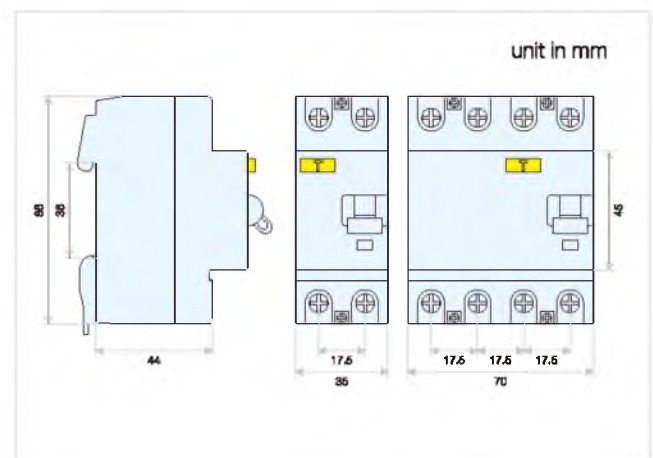
References

- Additional components: page 40 ~ 42

Combination of auxiliary elements with 3SL71



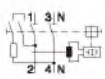
Outline and installation dimensions



Residual Current Circuit Breakers Series 3SL71

Selection and ordering data

Number of poles	Rated residual current $I_{\Delta n}$ (mA)	Rated current (A)	Type AC		Type A		Type S+AC		Type S+A	
			Type code	Order code	Type code	Order code	Type code	Order code	Type code	Order code
1P+N	10	16	L71 2C016/010	36067	L71 2A016/010	36104	-	-	-	-
		30	L71 2C016/030	36068	L71 2A016/030	36105	-	-	-	-
		25	L71 2C025/030	36069	L71 2A025/030	36106	-	-	-	-
		40	L71 2C040/030	36070	L71 2A040/030	36107	-	-	-	-
		63	L71 2C063/030	36071	L71 2A063/030	36108	-	-	-	-
		80	L71 2C080/030	36072	L71 2A080/030	36109	-	-	-	-
	100	100	L71 2C100/030	36073	L71 2A100/030	36110	-	-	-	-
		16	L71 2C016/100	36074	L71 2A016/100	36111	L71 2SC016/100	36141	L71 2SA016/100	36165
		25	L71 2C025/100	36075	L71 2A025/100	36112	L71 2SC025/100	36142	L71 2SA025/100	36166
		40	L71 2C040/100	36076	L71 2A040/100	36113	L71 2SC040/100	36143	L71 2SA040/100	36167
		63	L71 2C063/100	36077	L71 2A063/100	36114	L71 2SC063/100	36144	L71 2SA063/100	36168
		80	L71 2C080/100	36078	L71 2A080/100	36115	L71 2SC080/100	36145	L71 2SA080/100	36169
	300	100	L71 2C100/100	36079	L71 2A100/100	36116	L71 2SC100/100	36146	L71 2SA100/100	36170
		16	L71 2C016/300	36080	L71 2A016/300	36117	L71 2SC016/300	36147	L71 2SA016/300	36171
		25	L71 2C025/300	36081	L71 2A025/300	36118	L71 2SC025/300	36148	L71 2SA025/300	36172
		40	L71 2C040/300	36082	L71 2A040/300	36119	L71 2SC040/300	36149	L71 2SA040/300	36173
		63	L71 2C063/300	36083	L71 2A063/300	36120	L71 2SC063/300	36150	L71 2SA063/300	36174
		80	L71 2C080/300	36084	L71 2A080/300	36121	L71 2SC080/300	36151	L71 2SA080/300	36175
3P+N	30	16	L71 4C016/030	36086	L71 4A016/030	36123	-	-	-	
		25	L71 4C025/030	36087	L71 4A025/030	36124	-	-	-	
		40	L71 4C040/030	36088	L71 4A040/030	36125	-	-	-	
		63	L71 4C063/030	36089	L71 4A063/030	36126	-	-	-	
		80	L71 4C080/030	36090	L71 4A080/030	36127	-	-	-	
		100	L71 4C100/030	36091	L71 4A100/030	36128	-	-	-	
	100	16	L71 4C016/100	36092	L71 4A016/100	36129	L71 4SC016/100	36153	L71 4SA016/100	36177
		25	L71 4C025/100	36093	L71 4A025/100	36130	L71 4SC025/100	36154	L71 4SA025/100	36178
		40	L71 4C040/100	36094	L71 4A040/100	36131	L71 4SC040/100	36155	L71 4SA040/100	36179
		63	L71 4C063/100	36095	L71 4A063/100	36132	L71 4SC063/100	36156	L71 4SA063/100	36180
		80	L71 4C080/100	36096	L71 4A080/100	36133	L71 4SC080/100	36157	L71 4SA080/100	36181
		100	L71 4C100/100	36097	L71 4A100/100	36134	L71 4SC100/100	36158	L71 4SA100/100	36182
	300	16	L71 4C016/300	36098	L71 4A016/300	36135	L71 4SC016/300	36159	L71 4SA016/300	36183
		25	L71 4C025/300	36099	L71 4A025/300	36136	L71 4SC025/300	36160	L71 4SA025/300	36184
		40	L71 4C040/300	36100	L71 4A040/300	36137	L71 4SC040/300	36161	L71 4SA040/300	36185
		63	L71 4C063/300	36101	L71 4A063/300	36138	L71 4SC063/300	36162	L71 4SA063/300	36186
		80	L71 4C080/300	36102	L71 4A080/300	36139	L71 4SC080/300	36163	L71 4SA080/300	36187
		100	L71 4C100/300	36103	L71 4A100/300	36140	L71 4SC100/300	36164	L71 4SA100/300	36188



Types

Both RCCBs and RCBOs are further divided into types depending on the operating function:

- Type AC : For which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising.
- Type A : For which tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents, whether suddenly applied or slowly rising.
- Type S : For selectivity, with time delay.
- Type S : For selectivity, with time delay.

Tripping sensitivity data

- RCD with a rated residual current of maximum 30 mA are used for personnel, material and fire protection, as well as for protection against direct contact.
- RCD with a rated residual current of maximum 300 mA are used as preventative fire protection in case of insulation faults.
- RCD with a rated residual current of 100 mA co-ordinated with the earth system according to the formula $I_{\Delta n} < 50/R$, to provide protection against indirect contacts.
- RCD with a rated residual current of 10 mA are primarily used in areas that represent an exist risk for personnel.

Residual Current Circuit Breakers Series 3SL66

Functions

- Switching and isolation function
- Controlling
- Protection against the effects of sinusoidal alternating earth fault currents
- Protection against indirect contacts and additional protection against direct contacts.
- Protection against fire hazard caused by insulation faults
- Used in residential building , non-residential building, energy sources, industry and infrastructure.

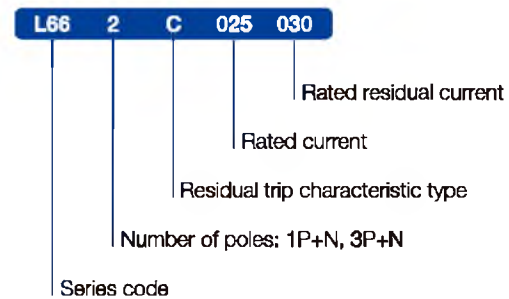
Technical specifications

- Standard: IEC 61008-1
- Type (wave form of the earth leakage sensed): AC, A
- Trip time type: instantaneous, selectivity S
- Number of poles: 1P+N, 3P+N
- Rated current I_n (A): 16, 25, 40, 63, 80, 100
- Rated voltage U_e (V AC): 230/400
- Rated insulation voltage U_i (V AC): 500
- Rated Frequency F_n (Hz): 50/60
- Rated residual currents $I_{\Delta n}$ (mA): 10 (2P 16 A), 30, 100, 300
- Rated conditional short-circuit current:
 $I_{nc} = I_{\Delta c} = 6000$ A SCPD fuse 100 A Gg
- Making and breaking capacity I_m (A): 1000
- Rated residual breaking capacity $I_{\Delta m}$ (A): 1000
- Rated impulse withstand voltage (1.2/50) U_{imp} (kV): 8
- Dielectric test voltage at ind. freq. for 1 min. (kV): 2.5
- Electrical life (times): 10,000
- Mechanical life (times): 20,000
- Degree of protection: IP20, with connected conductors
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm²): 0.75-35
- Finely stranded with end sleeve (mm²): 0.75-25
- Terminals
- Terminal tightening torque (N·m): 3
- Ambient temperature (°C): -5 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2,000



2

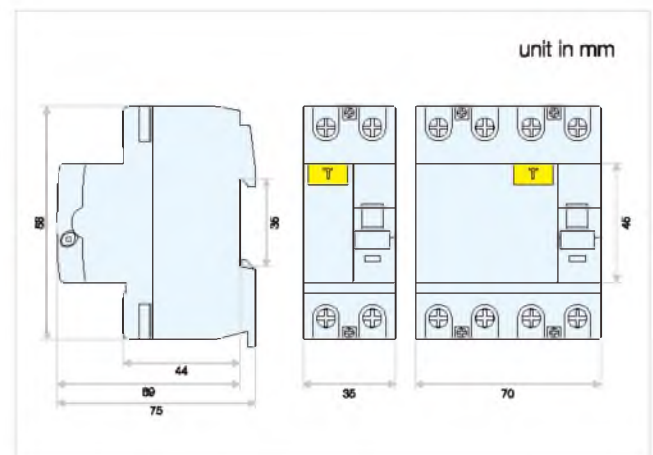
Instruction of type code



Features

- Electromagnetic type, voltage independent.
- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- Adequate printing of all data on the front provides long-term identification




Outline and installation dimensions



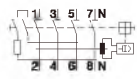
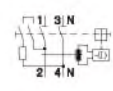
Residual Current Circuit Breakers

Series 3SL66

Selection and ordering data




Number of poles	Rated residual current $I\Delta n$ (mA)	Rated current I_n (A)	Type AC 		Type A 		Type S+AC 	
			Type code	Order code	Type code	Order code	Type code	Order code
1P+N	10	16	L66 2C016/010	19496	L66 2A016/010	19497	-	-
		30	L66 2C016/030	23648	L66 2A016/030	23654	-	-
		25	L66 2C025/030	23073	L66 2A025/030	23088	-	-
		40	L66 2C040/030	23074	L66 2A040/030	23089	-	-
		63	L66 2C063/030	23075	L66 2A063/030	23090	-	-
		80	L66 2C080/030	23076	L66 2A080/030	23091	-	-
		100	L66 2C100/030	23077	L66 2A100/030	23092	-	-
	100	16	L66 2C016/100	23666	L66 2A016/100	23672	L66 2S016/100	23678
		25	L66 2C025/100	23078	L66 2A025/100	23093	L66 2S025/100	23622
		40	L66 2C040/100	23079	L66 2A040/100	23094	L66 2S040/100	23623
		63	L66 2C063/100	23080	L66 2A063/100	23095	L66 2S063/100	23624
		80	L66 2C080/100	23081	L66 2A080/100	23096	L66 2S080/100	23625
		100	L66 2C100/100	23082	L66 2A100/100	23097	L66 2S100/100	23626
		300	16	L66 2C016/300	23684	L66 2A016/300	23690	L66 2S016/300
25	L66 2C025/300		23083	L66 2A025/300	23098	L66 2S025/300	23627	
40	L66 2C040/300		23084	L66 2A040/300	23099	L66 2S040/300	23628	
63	L66 2C063/300		23085	L66 2A063/300	23100	L66 2S063/300	23629	
80	L66 2C080/300		23086	L66 2A080/300	23101	L66 2S080/300	23630	
100	L66 2C100/300		23087	L66 2A100/300	23102	L66 2S100/300	23631	
3P+N	30		16	L66 4C016/030	23651	L66 4A016/030	23657	-
		25	L66 4C025/030	23103	L66 4A025/030	23118	-	-
		40	L66 4C040/030	23104	L66 4A040/030	23119	-	-
		63	L66 4C063/030	23105	L66 4A063/030	23120	-	-
		80	L66 4C080/030	23106	L66 4A080/030	23121	-	-
		100	L66 4C100/030	23107	L66 4A100/030	23122	-	-
		100	16	L66 4C016/100	23669	L66 4A016/100	23675	L66 4S016/100
	25		L66 4C025/100	23108	L66 4A025/100	23123	L66 4S025/100	23681
	40		L66 4C040/100	23109	L66 4A040/100	23124	L66 4S040/100	23638
	63		L66 4C063/100	23110	L66 4A063/100	23125	L66 4S063/100	23639
	80		L66 4C080/100	23111	L66 4A080/100	23126	L66 4S080/100	23640
	100		L66 4C100/100	23112	L66 4A100/100	23127	L66 4S100/100	23641
	300		16	L66 4C016/300	23687	L66 4A016/300	23693	L66 4S016/300
		25	L66 4C025/300	23113	L66 4A025/300	23128	L66 4S025/300	23642
40		L66 4C040/300	23114	L66 4A040/300	23129	L66 4S040/300	23643	
63		L66 4C063/300	23115	L66 4A063/300	23130	L66 4S063/300	23644	
80		L66 4C080/300	23116	L66 4A080/300	23131	L66 4S080/300	23645	
100		L66 4C100/300	23117	L66 4A100/300	23132	L66 4S100/300	23646	

2



Types

Both RCCBs and RCBOs are further divided into types depending on the operating function:

- Type AC : For which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising.
- Type A : For which tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents, whether suddenly applied or slowly rising.
- Type S : For selectivity, with time delay.

Tripping sensitivity data

- RCD with a rated residual current of maximum 30 mA are used for personnel, material and fire protection, as well as for protection against direct contact.
- RCD with a rated residual current of maximum 300 mA are used as preventative fire protection in case of insulation faults.
- RCD with a rated residual current of 100 mA co-ordinated with the earth system according to the formula $I\Delta n < 50/R$, to provide protection against indirect contacts.
- RCD with a rated residual current of 10 mA are primarily used in areas that represent an exist risk for personnel.

Residual Current Circuit Breakers Series 3SL6

Functions

- Switching and isolation function
- Controlling
- Protection against the effects of sinusoidal alternating earth fault currents
- Protection against indirect contacts and additional protection against direct contacts.
- Protection against fire hazard caused by insulation faults
- Used in residential building , non-residential building, energy sources, industry and infrastructure.
- Anti false wiring design to ensure safe wiring

Technical specifications

- Standard: IEC 61008-1
- Type (wave form of the earth leakage sensed): AC, A
- Trip time type: instantaneous, selectivity S
- Number of poles (P): 1+N, 3+N
- Rated current I_n (A): 16, 25, 40, 63
- Rated voltage U_e (V AC): 1P+N: 230/400; 3P+N: 400
- Rated insulation voltage U_i (V AC): 500
- Rated Frequency f_n (Hz): 50/60
- Rated residual currents $I_{\Delta n}$ (mA): 30, 100, 300
- Rated conditional short-circuit current ;
 $I_{nc} = I_{\Delta c} = 6000$ A SCPD fuse 100 A Gg
- Making and breaking capacity I_m (A): 1000
- Rated residual breaking capacity $I_{\Delta m}$ (A): 1000
- Degree of protection: IP20, with connected conductors
- Conductor cross-section
- Solid and stranded (mm²): 1-35
- Finely stranded with end sleeve (mm²): 1-25
- Electrical endurance (Cycles): 4,000
- Mechanical endurance (Cycles): 10,000
- Fire resistance according to IEC 60695: 960 °C
- Mounting position: Any
- Busbar connection: Pin type
- Terminal tightening torque (N·m): 2.5
- Ambient temperature (°C): -5 – +40, max. 95 % humidity

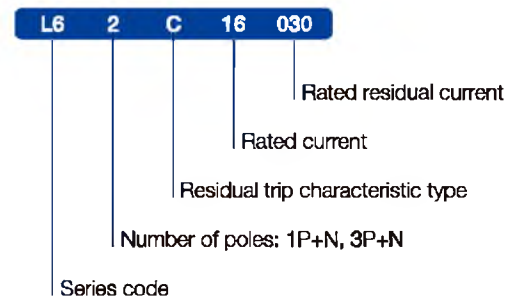
Features

- Electromagnetic type, voltage independent.
- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- Adequate printing of all data on the front provides long-term identification

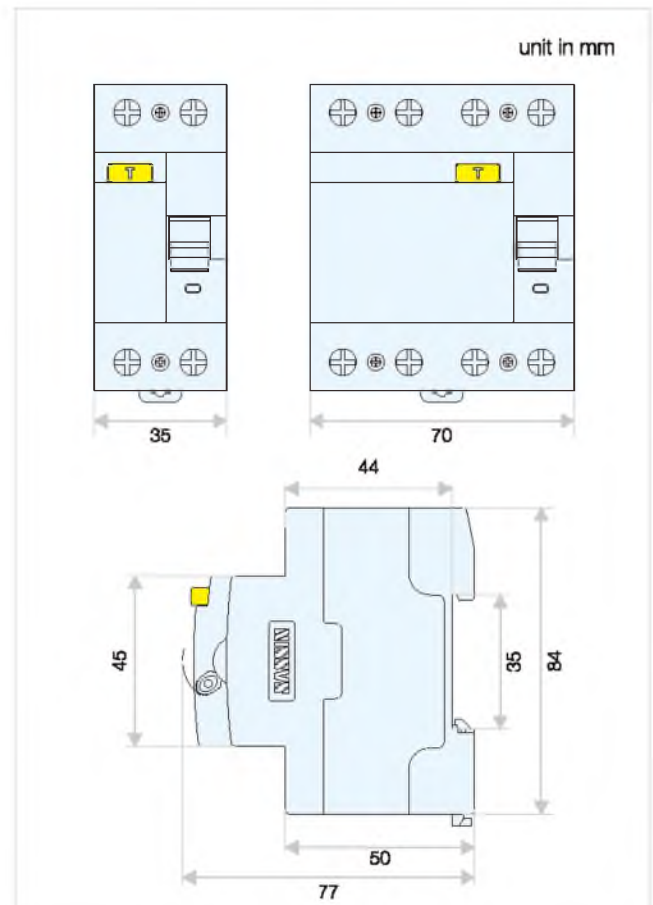


2

Instruction of type code







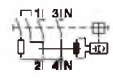
Outline and installation dimensions



Residual Current Circuit Breakers




Series 3SL6

Selection and ordering data

Number of poles	Rated residual current $I_{\Delta n}$ (mA)	Rated current I_n (A)	Type AC 		Type A 		Type S+AC 		
			Type code	Order code	Type code	Order code	Type code	Order code	
 	30	16	L6 2C16/030	21179	L6 2A16/030	21196	-	-	
		25	L6 2C25/030	21180	L6 2A25/030	21197	-	-	
		40	L6 2C40/030	21181	L6 2A40/030	21198	-	-	
		63	L6 2C63/030	21182	L6 2A63/030	21199	-	-	
		100	16	L6 2C16/100	21184	L6 2A16/100	21201	L6 2SC16/100	21211
			25	L6 2C25/100	21185	L6 2A25/100	21202	L6 2SC25/100	21212
	40		L6 2C40/100	21186	L6 2A40/100	21203	L6 2SC40/100	21213	
	300	16	L6 2C16/300	21189	L6 2A16/300	21206	L6 2SC16/300	21216	
		25	L6 2C25/300	21190	L6 2A25/300	21207	L6 2SC25/300	21217	
		40	L6 2C40/300	21191	L6 2A40/300	21208	L6 2SC40/300	21218	
		63	L6 2C63/300	21192	L6 2A63/300	21209	L6 2SC63/300	21219	
		3P+N	16	L6 4C16/030	21233	L6 4A16/030	21250	-	-
25			L6 4C25/030	21234	L6 4A25/030	21251	-	-	
40	L6 4C40/030		21235	L6 4A40/030	21252	-	-		
63	L6 4C63/030		21236	L6 4A63/030	21253	-	-		
100	16		L6 4C16/100	21238	L6 4A16/100	21255	L6 4SC16/100	21265	
	25		L6 4C25/100	21239	L6 4A25/100	21256	L6 4SC25/100	21266	
	40	L6 4C40/100	21240	L6 4A40/100	21257	L6 4SC40/100	21267		
300	16	L6 4C16/300	21241	L6 4A63/100	21258	L6 4SC63/100	21268		
	25	L6 4C25/300	21243	L6 4A16/300	21260	L6 4SC16/300	21270		
	40	L6 4C40/300	21244	L6 4A25/300	21261	L6 4SC25/300	21271		
	63	L6 4C63/300	21245	L6 4A40/300	21262	L6 4SC40/300	21272		
	63	L6 4C63/300	21246	L6 4A63/300	21263	L6 4SC63/300	21273		

Types

Both RCCBs and RCBOs are further divided into types depending on the operating function:

- Type AC : For which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising.
- Type A : For which tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents, whether suddenly applied or slowly rising.
- Type S : For selectivity, with time delay.

Tripping sensitivity data

- RCD with a rated residual current of maximum 30 mA are used for personnel, material and fire protection, as well as for protection against direct contact.
- RCD with a rated residual current of maximum 300 mA are used as preventative fire protection in case of insulation faults.
- RCD with a rated residual current of 100 mA co-ordinated with the earth system according to the formula $I_{\Delta n} < 50/R$, to provide protection against indirect contacts.

Benefits



Same groove design with MCB 3SB52 series. Well matched during installation.



Venting grooves improve heat dissipation even in multiple-pole configurations.



MCB's and RCCB's can be connected with both PIN type busbar and FORK type busbar at the top and bottom terminals.



N pole mark, quick and easy identification.



Anti false wiring design to ensure safe wiring.

Residual Current Circuit Breakers Series 3SL52

Functions

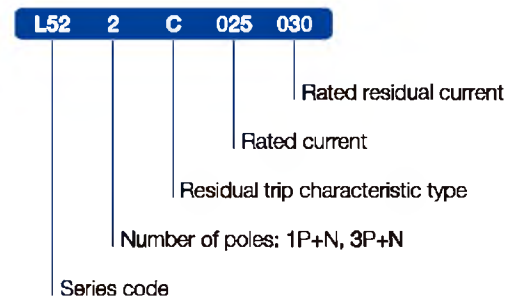
- Switching and isolation function
- Controlling
- Protection against the effects of sinusoidal alternating earth fault currents
- Protection against indirect contacts and additional protection against direct contacts.
- Protection against fire hazard caused by insulation faults
- Used in residential building, non-residential building, energy sources, industry and infrastructure.

Technical specifications

- Standard: IEC 61008-1
- Type (wave form of the earth leakage sensed): AC, A
- Trip time type: instantaneous, selectivity S
- Number of poles: 1P+N, 3P+N
- Rated current I_n (A): 16, 25, 40, 63
- Rated voltage U_e (V AC): 230/400
- Rated insulation voltage U_i (V AC): 500
- Rated Frequency F_n (Hz): 50/60
- Rated residual currents $I_{\Delta n}$ (mA): 10 (2P 16 A), 30, 100, 300
- Rated conditional short-circuit current :
 $I_{nc} = I_{\Delta c} = 6000$ A SCPD fuse 100 A Gg
- Making and breaking capacity I_m (A): 1,000
- Rated residual breaking capacity $I_{\Delta m}$ (A): 1,000
- Rated impulse withstand voltage (1.2/50) U_{imp} (kV): 8
- Dielectric test voltage at ind. freq. for 1 min. (kV): 2.5
- Electrical life (times): 10,000
- Mechanical life (times): 20,000
- Degree of protection: IP20, with connected conductors
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm²): 0.75-16
- Finely stranded with end sleeve (mm²): 0.75-10
- Terminals
- Terminal tightening torque (N·m): 2.8
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2,000



Instruction of type code





Features

- Electromagnetic type, voltage independent.
- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- Adequate printing of all data on the front provides long-term identification

Residual Current Circuit Breakers Series 3SL52

Selection and ordering data





	Number of poles	Rated residual current $I_{\Delta n}$ (mA)	Rated current I_n (A)	Type AC		Type A		Type S+AC		
				Type code	Order code	Type code	Order code	Type code	Order code	
N connection, right										
	1P+N	10	16	L52 2C16/010	19490	L52 2A16/010	19491	-	-	
			30	L52 2C16/030	24278	L52 2A16/030	24320	-	-	
			25	L52 2C25/030	24279	L52 2A25/030	24321	-	-	
			40	L52 2C40/030	24281	L52 2A40/030	24323	-	-	
			63	L52 2C63/030	24283	L52 2A63/030	24325	-	-	
	100	16	L52 2C16/100	24285	L52 2A16/100	24327	L52 2S16/100	24369		
		25	L52 2C25/100	24286	L52 2A25/100	24328	L52 2S25/100	24370		
		40	L52 2C40/100	24288	L52 2A40/100	24330	L52 2S40/100	24372		
		63	L52 2C63/100	24290	L52 2A63/100	24332	L52 2S63/100	24374		
		300	16	L52 2C16/300	24292	L52 2A16/300	24334	L52 2S16/300	24376	
	300	25	L52 2C25/300	24293	L52 2A25/300	24335	L52 2S25/300	24377		
		40	L52 2C40/300	24295	L52 2A40/300	24337	L52 2S40/300	24379		
		63	L52 2C63/300	24297	L52 2A63/300	24339	L52 2S63/300	24381		
		3P+N	10	16	L52 4C16/010	19493	L52 4A16/010	19494	-	-
			30	16	L52 4C16/030	24299	L52 4A16/030	24341	-	-
25	L52 4C25/030			24300	L52 4A25/030	24342	-	-		
40	L52 4C40/030			24302	L52 4A40/030	24344	-	-		
63	L52 4C63/030			24304	L52 4A63/030	24346	-	-		
100	16	L52 4C16/100	24306	L52 4A16/100	24348	L52 4S16/100	24390			
	25	L52 4C25/100	24307	L52 4A25/100	24349	L52 4S25/100	24391			
	40	L52 4C40/100	24309	L52 4A40/100	24351	L52 4S40/100	24393			
	63	L52 4C63/100	24311	L52 4A63/100	24353	L52 4S63/100	24395			
	300	16	L52 4C16/300	24313	L52 4A16/300	24355	L52 4S16/300	24397		
300	25	L52 4C25/300	24314	L52 4A25/300	24356	L52 4S25/300	24398			
	40	L52 4C40/300	24316	L52 4A40/300	24358	L52 4S40/300	24400			
	63	L52 4C63/300	24318	L52 4A63/300	24360	L52 4S63/300	24402			
	N connection, left									
		1P+N	10	16	L52 2C16/010L	37071	L52 2A16/010L	37072	-	-
30				L52 2C16/030L	36946	L52 2A16/030L	36988	-	-	
25				L52 2C25/030L	36947	L52 2A25/030L	36989	-	-	
40				L52 2C40/030L	36949	L52 2A40/030L	36991	-	-	
63				L52 2C63/030L	36951	L52 2A63/030L	36993	-	-	
100		16	L52 2C16/100L	36953	L52 2A16/100L	36995	L52 2S16/100L	37037		
		25	L52 2C25/100L	36954	L52 2A25/100L	36996	L52 2S25/100L	37038		
		40	L52 2C40/100L	36956	L52 2A40/100L	36998	L52 2S40/100L	37040		
		63	L52 2C63/100L	36958	L52 2A63/100L	37000	L52 2S63/100L	37042		
		300	16	L52 2C16/300L	36960	L52 2A16/300L	37002	L52 2S16/300L	37044	
300		25	L52 2C25/300L	36961	L52 2A25/300L	37003	L52 2S25/300L	37045		
		40	L52 2C40/300L	36963	L52 2A40/300L	37005	L52 2S40/300L	37047		
		63	L52 2C63/300L	36965	L52 2A63/300L	37007	L52 2S63/300L	37049		
		3P+N	10	16	L52 4C16/010L	37074	L52 4A16/010L	37075	-	-
			30	16	L52 4C16/030L	36967	L52 4A16/030L	37009	-	-
25	L52 4C25/030L			36968	L52 4A25/030L	37010	-	-		
40	L52 4C40/030L			36970	L52 4A40/030L	37012	-	-		
63	L52 4C63/030L			36972	L52 4A63/030L	37014	-	-		
100	16	L52 4C16/100L	36974	L52 4A16/100L	37016	L52 4S16/100L	37058			
	25	L52 4C25/100L	36975	L52 4A25/100L	37017	L52 4S25/100L	37059			
	40	L52 4C40/100L	36977	L52 4A40/100L	37019	L52 4S40/100L	37061			
	63	L52 4C63/100L	36979	L52 4A63/100L	37021	L52 4S63/100L	37063			
	300	16	L52 4C16/300L	36981	L52 4A16/300L	37023	L52 4S16/300L	37065		
300	25	L52 4C25/300L	36982	L52 4A25/300L	37024	L52 4S25/300L	37066			
	40	L52 4C40/300L	36984	L52 4A40/300L	37026	L52 4S40/300L	37068			
	63	L52 4C63/300L	36986	L52 4A63/300L	37028	L52 4S63/300L	37070			

Residual Current Circuit Breakers

Series 3SL52

Types

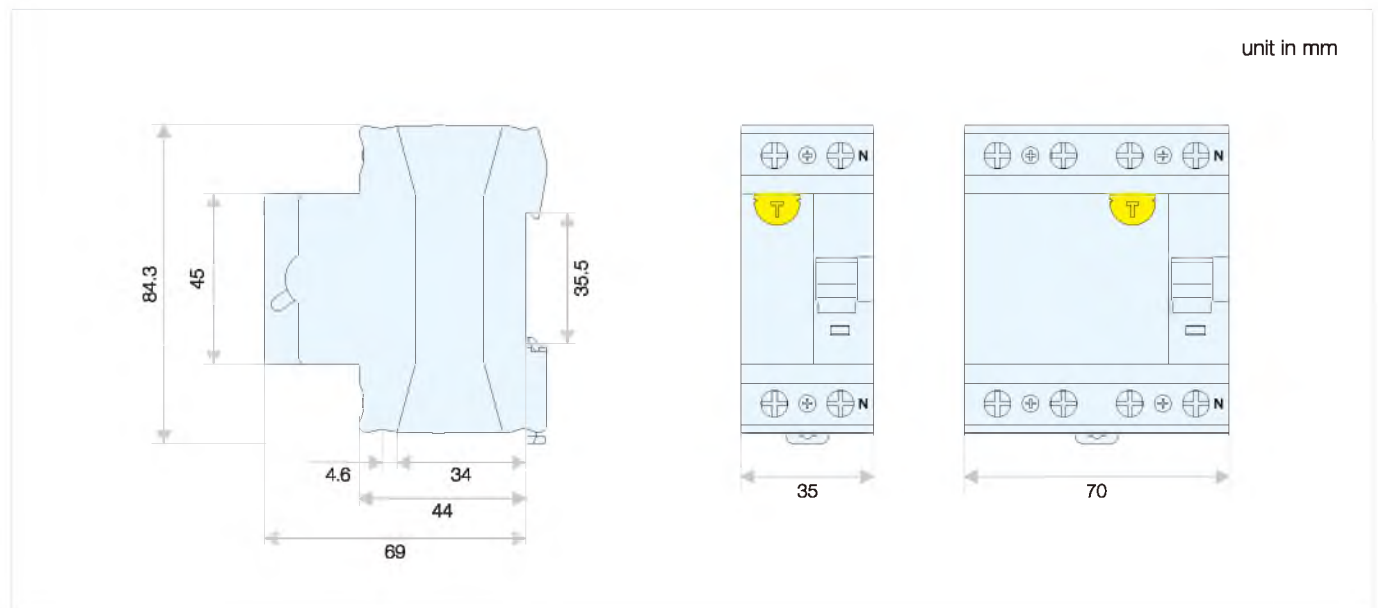
Both RCCBs and RCBOs are further divided into types depending on the operating function:

- Type AC : For which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising.
- Type A : For which tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents, whether suddenly applied or slowly rising.
- Type S  : For selectivity, with time delay.

Tripping sensitivity data

- RCD with a rated residual current of maximum 30 mA are used for personnel, material and fire protection, as well as for protection against direct contact.
- RCD with a rated residual current of maximum 300 mA are used as preventative fire protection in case of insulation faults.
- RCD with a rated residual current of 100 mA co-ordinated with the earth system according to the formula $I\Delta n < 50/R$, to provide protection against indirect contacts.
- RCD with a rated residual current of 10 mA are primarily used in areas that represent an exist risk for personnel.

Outline and installation dimensions



Residual Current Circuit Breakers with Overcurrent Protection Series 3SL71N-40

Functions

- Switching and isolation function
- Protection against overload and short-circuit currents
- Protection against the effects of sinusoidal alternating earth fault currents
- Protection against indirect contacts and additional protection against direct contacts.
- Protection against fire hazard caused by insulation faults
- Used in residential building

Technical specifications

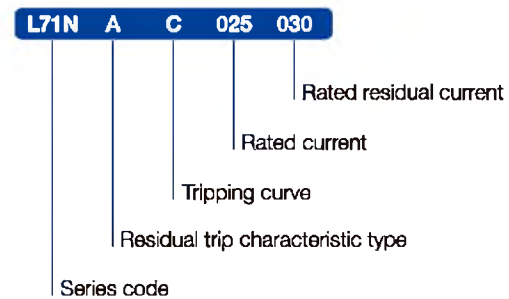
- Standard: IEC 61009-1
- Type (wave form of the earth leakage sensed): AC, A
- Number of pole: 1P+N
- Rated current I_n (A): 6, 10, 16, 20, 25, 32, 40
- Rated voltage U_e (V AC): 230
- Rated insulation voltage U_i (V AC): 500
- Rated Frequency F_n (Hz): 50/60
- Rated residual currents $I_{\Delta n}$ (mA): 30, 100, 300
- Rated breaking capacity acc.to IEC 61009-1 ultimate I_{cn} (kA): 6
- Rated breaking capacity acc.to IEC 60947-2 ultimate I_{cu} (kA): 10
- Rated residual breaking capacity $I_{\Delta m}$ (kA): 6
- Rated impulse withstand voltage (1.2/50) U_{imp} (kV): 8
- Dielectric test voltage at ind. freq. for 1 min. (kV): 2.5
- Surge current resistance (wave 8/20) (A): 3000
- Tripping characteristic: B, C
- Characteristic B (I_n): 3-5
- Characteristic C (I_n): 5-10
- Electrical life (times): 4,000
- Mechanical life (times): 10,000
- Degree of protection: IP20, with connected conductors
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm²): 0.75-35
- Finely stranded with end sleeve (mm²): 0.75-25
- Terminals
- Terminal tightening torque (N·m): 2.8
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2000

References

- Additional components: page 40 ~ 42



Instruction of type code

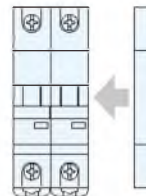


Features

- The combination of an RCCB and a miniature circuit breaker in a compact design for personnel, fire and line protection.
- Electromagnetic type, voltage independent.
- The MCB part protects lines against overload and short circuits and is available in characteristics B and C.
- The handle provides a clear indication of the contact position.
- The earth reference cable ensures protection against earth leakage in case of loss of supply neutral.

Add-on devices

Auxiliaries



Residual Current Circuit Breakers with Overcurrent Protection Series 3SL71N-40

Selection and ordering data

Type AC

Number of poles	Rated residual current I _{Δn} (mA)	Rated current I _n (A)	B Curve		C Curve	
			Type code	Order code	Type code	Order code
1P+N	30	6	L71NC B06/030	20276	L71NC C06/030	20283
		10	L71NC B10/030	20277	L71NC C10/030	20284
		16	L71NC B16/030	20278	L71NC C16/030	20285
		20	L71NC B20/030	20279	L71NC C20/030	20286
		25	L71NC B25/030	20280	L71NC C25/030	20287
		32	L71NC B32/030	20281	L71NC C32/030	20288
		40	L71NC B40/030	20282	L71NC C40/030	20289
		100	6	L71NC B06/100	20304	L71NC C06/100
	10		L71NC B10/100	20305	L71NC C10/100	20312
	16		L71NC B16/100	20306	L71NC C16/100	20313
	20		L71NC B20/100	20307	L71NC C20/100	20314
	25		L71NC B25/100	20308	L71NC C25/100	20315
	32		L71NC B32/100	20309	L71NC C32/100	20316
	40		L71NC B40/100	20310	L71NC C40/100	20317
	300		6	L71NC B06/300	20332	L71NC C06/300
		10	L71NC B10/300	20333	L71NC C10/300	20340
		16	L71NC B16/300	20334	L71NC C16/300	20341
		20	L71NC B20/300	20335	L71NC C20/300	20342
		25	L71NC B25/300	20336	L71NC C25/300	20343
		32	L71NC B32/300	20337	L71NC C32/300	20344
		40	L71NC B40/300	20338	L71NC C40/300	20345



Type A

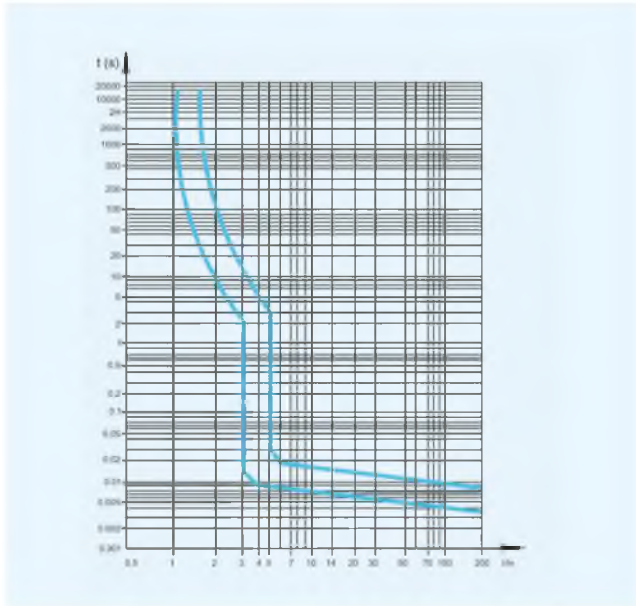
Number of poles	Rated residual current I _{Δn} (mA)	Rated current I _n (A)	B Curve		C Curve	
			Type code	Order code	Type code	Order code
1P+N	30	6	L71NA B06/030	20290	L71NA C06/030	20297
		10	L71NA B10/030	20291	L71NA C10/030	20298
		16	L71NA B16/030	20292	L71NA C16/030	20299
		20	L71NA B20/030	20293	L71NA C20/030	20300
		25	L71NA B25/030	20294	L71NA C25/030	20301
		32	L71NA B32/030	20295	L71NA C32/030	20302
		40	L71NA B40/030	20296	L71NA C40/030	20303
		100	6	L71NA B06/100	20318	L71NA C06/100
	10		L71NA B10/100	20319	L71NA C10/100	20326
	16		L71NA B16/100	20320	L71NA C16/100	20327
	20		L71NA B20/100	20321	L71NA C20/100	20328
	25		L71NA B25/100	20322	L71NA C25/100	20329
	32		L71NA B32/100	20323	L71NA C32/100	20330
	40		L71NA B40/100	20324	L71NA C40/100	20331
	300		6	L71NA B06/300	20346	L71NA C06/300
		10	L71NA B10/300	20347	L71NA C10/300	20354
		16	L71NA B16/300	20348	L71NA C16/300	20355
		20	L71NA B20/300	20349	L71NA C20/300	20356
		25	L71NA B25/300	20350	L71NA C25/300	20357
		32	L71NA B32/300	20351	L71NA C32/300	20358
		40	L71NA B40/300	20352	L71NA C40/300	20359



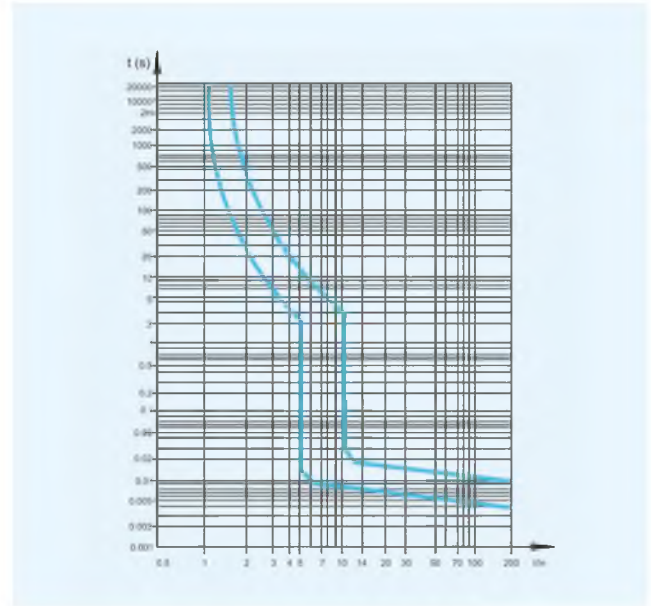
Residual Current Circuit Breakers with Overcurrent Protection Series 3SL71N-40

Tripping characteristic curves

Curve B





Curve C



2

Types

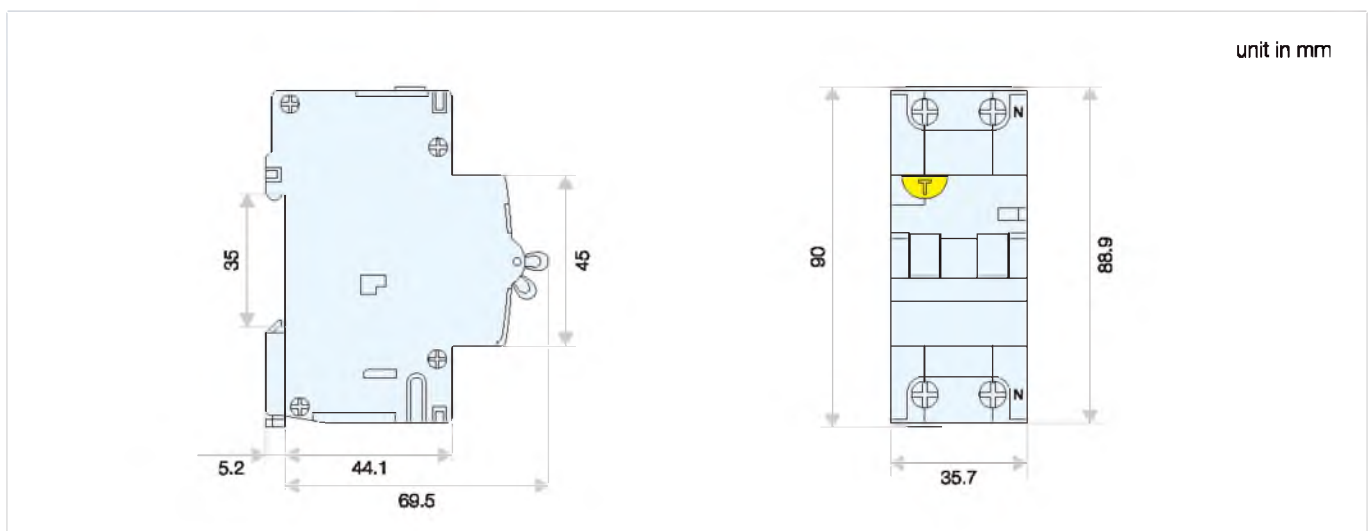
Both RCCBs and RCBOs are further divided into types depending on the operating function:

- Type AC : For which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising.
- Type A : For which tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents, whether suddenly applied or slowly rising.

Tripping sensitivity data

- RCD with a rated residual current of maximum 30 mA are used for personnel, material and fire protection, as well as for protection against direct contact.
- RCD with a rated residual current of maximum 300 mA are used as preventative fire protection in case of insulation faults.
- RCD with a rated residual current of 100 mA co-ordinated with the earth system according to the formula $I\Delta n < 50/R$, to provide protection against indirect contacts.

Outline and installation dimensions



Residual Current Circuit Breakers with Overcurrent Protection Series 3SB71LN

Functions

- Switching and isolation function
- Protection against overload and short-circuit currents
- Protection against the effects of sinusoidal alternating earth fault currents
- Protection against indirect contacts and additional protection against direct contacts.
- Protection against fire hazard caused by insulation faults
- Used in residential building

Technical specifications

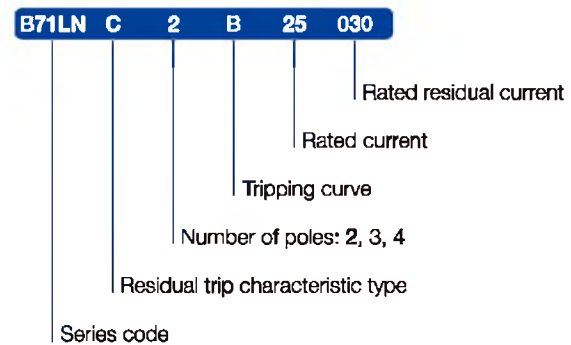
- Standard: IEC 61009-1
- Type (wave form of the earth leakage sensed): AC, A
- Number of pole: **2, 3, 4**
- Rated current I_n (A): **6, 10, 16, 20, 25, 32, 40**
- Rated voltage U_e (V AC): 230/400
- Rated insulation voltage U_i (V AC): 500
- Rated Frequency F_n (Hz): 50/60
- Rated residual currents $I_{\Delta n}$ (mA): 30, 100, 300
- Rated breaking capacity acc. to IEC 61009-1 ultimate I_{cn} (kA): 10
- Rated breaking capacity acc. to IEC 60947-2 ultimate I_{cu} (kA): 10
- Rated residual breaking capacity $I_{\Delta m}$ (kA): 6
- Rated impulse withstand voltage (1.2/50) U_{imp} (kV): 8
- Dielectric test voltage at ind. freq. for 1 min. (kV): 2.5
- Surge current resistance (wave 8/20) (A): 3000
- Tripping characteristic: B, C, D
- Characteristic B (I_n): 3-5
- Characteristic C (I_n): 5-10
- Characteristic D (I_n): 10-14
- Electrical life (times): 4,000
- Mechanical life (times): 10,000
- Degree of protection: IP20, with connected conductors
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm²): 0.75-35
- Finely stranded with end sleeve (mm²): 0.75-25
- Terminals
- Terminal tightening torque (N·m): 2.5
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2000

References

- Additional components: page 40 ~ 42



Instruction of type code

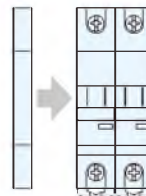


Features

- The combination of an RCCB and a miniature circuit breaker in a compact design for personnel, fire and line protection.
- Electromagnetic type, voltage independent.
- The MCB part protects lines against overload and short circuits and is available in characteristics B, C and D.
- The handle provides a clear indication of the contact position.

Add-on devices

Auxiliaries



Residual Current Circuit Breakers with Overcurrent Protection

Series 3SB71LN

Selection and ordering data




Type AC

	Number of poles	Rated residual current I _{Δn} (mA)	Rated current I _n (A)	B Curve		C Curve		D Curve		
				Type code	Order code	Type code	Order code	Type code	Order code	
	2	30	6	B71LNC 2B06/030H	16947	B71LNC 2C06/030H	16968	B71LNC 2D06/030H	16989	
			10	B71LNC 2B10/030H	16948	B71LNC 2C10/030H	16969	B71LNC 2D10/030H	16990	
			16	B71LNC 2B16/030H	16949	B71LNC 2C16/030H	16970	B71LNC 2D16/030H	16991	
			20	B71LNC 2B20/030H	16950	B71LNC 2C20/030H	16971	B71LNC 2D20/030H	16992	
			25	B71LNC 2B25/030H	16951	B71LNC 2C25/030H	16972	B71LNC 2D25/030H	16993	
			32	B71LNC 2B32/030H	16952	B71LNC 2C32/030H	16973	B71LNC 2D32/030H	16994	
			40	B71LNC 2B40/030H	16953	B71LNC 2C40/030H	16974	B71LNC 2D40/030H	16995	
			100	6	B71LNC 2B06/100H	17010	B71LNC 2C06/100H	17031	B71LNC 2D06/100H	17052
				10	B71LNC 2B10/100H	17011	B71LNC 2C10/100H	17032	B71LNC 2D10/100H	17053
				16	B71LNC 2B16/100H	17012	B71LNC 2C16/100H	17033	B71LNC 2D16/100H	17054
		20		B71LNC 2B20/100H	17013	B71LNC 2C20/100H	17034	B71LNC 2D20/100H	17055	
		25		B71LNC 2B25/100H	17014	B71LNC 2C25/100H	17035	B71LNC 2D25/100H	17056	
		32		B71LNC 2B32/100H	17015	B71LNC 2C32/100H	17036	B71LNC 2D32/100H	17057	
		300	40	B71LNC 2B40/100H	17016	B71LNC 2C40/100H	17037	B71LNC 2D40/100H	17058	
			6	B71LNC 2B06/300H	17073	B71LNC 2C06/300H	17094	B71LNC 2D06/300H	17115	
			10	B71LNC 2B10/300H	17074	B71LNC 2C10/300H	17095	B71LNC 2D10/300H	17116	
			16	B71LNC 2B16/300H	17075	B71LNC 2C16/300H	17096	B71LNC 2D16/300H	17117	
			20	B71LNC 2B20/300H	17076	B71LNC 2C20/300H	17097	B71LNC 2D20/300H	17118	
			25	B71LNC 2B25/300H	17077	B71LNC 2C25/300H	17098	B71LNC 2D25/300H	17119	
			32	B71LNC 2B32/300H	17078	B71LNC 2C32/300H	17099	B71LNC 2D32/300H	17120	
40	B71LNC 2B40/300H		17079	B71LNC 2C40/300H	17100	B71LNC 2D40/300H	17121			
	3	30	6	B71LNC 3B06/030H	16954	B71LNC 3C06/030H	16975	B71LNC 3D06/030H	16996	
			10	B71LNC 3B10/030H	16955	B71LNC 3C10/030H	16976	B71LNC 3D10/030H	16997	
			16	B71LNC 3B16/030H	16956	B71LNC 3C16/030H	16977	B71LNC 3D16/030H	16998	
			20	B71LNC 3B20/030H	16957	B71LNC 3C20/030H	16978	B71LNC 3D20/030H	16999	
			25	B71LNC 3B25/030H	16958	B71LNC 3C25/030H	16979	B71LNC 3D25/030H	17000	
			32	B71LNC 3B32/030H	16959	B71LNC 3C32/030H	16980	B71LNC 3D32/030H	17001	
			40	B71LNC 3B40/030H	16960	B71LNC 3C40/030H	16981	B71LNC 3D40/030H	17002	
			100	6	B71LNC 3B06/100H	17017	B71LNC 3C06/100H	17038	B71LNC 3D06/100H	17059
				10	B71LNC 3B10/100H	17018	B71LNC 3C10/100H	17039	B71LNC 3D10/100H	17060
				16	B71LNC 3B16/100H	17019	B71LNC 3C16/100H	17040	B71LNC 3D16/100H	17061
		20		B71LNC 3B20/100H	17020	B71LNC 3C20/100H	17041	B71LNC 3D20/100H	17062	
		25		B71LNC 3B25/100H	17021	B71LNC 3C25/100H	17042	B71LNC 3D25/100H	17063	
		32		B71LNC 3B32/100H	17022	B71LNC 3C32/100H	17043	B71LNC 3D32/100H	17064	
		300	40	B71LNC 3B40/100H	17023	B71LNC 3C40/100H	17044	B71LNC 3D40/100H	17065	
			6	B71LNC 3B06/300H	17080	B71LNC 3C06/300H	17101	B71LNC 3D06/300H	17122	
			10	B71LNC 3B10/300H	17081	B71LNC 3C10/300H	17102	B71LNC 3D10/300H	17123	
			16	B71LNC 3B16/300H	17082	B71LNC 3C16/300H	17103	B71LNC 3D16/300H	17124	
			20	B71LNC 3B20/300H	17083	B71LNC 3C20/300H	17104	B71LNC 3D20/300H	17125	
			25	B71LNC 3B25/300H	17084	B71LNC 3C25/300H	17105	B71LNC 3D25/300H	17126	
			32	B71LNC 3B32/300H	17085	B71LNC 3C32/300H	17106	B71LNC 3D32/300H	17127	
40	B71LNC 3B40/300H		17086	B71LNC 3C40/300H	17107	B71LNC 3D40/300H	17128			
	4	30	6	B71LNC 4B06/030H	16961	B71LNC 4C06/030H	16982	B71LNC 4D06/030H	17003	
			10	B71LNC 4B10/030H	16962	B71LNC 4C10/030H	16983	B71LNC 4D10/030H	17004	
			16	B71LNC 4B16/030H	16963	B71LNC 4C16/030H	16984	B71LNC 4D16/030H	17194	
			20	B71LNC 4B20/030H	16964	B71LNC 4C20/030H	16985	B71LNC 4D20/030H	17195	
			25	B71LNC 4B25/030H	16965	B71LNC 4C25/030H	16986	B71LNC 4D25/030H	17196	
			32	B71LNC 4B32/030H	16966	B71LNC 4C32/030H	16987	B71LNC 4D32/030H	17197	
			40	B71LNC 4B40/030H	16967	B71LNC 4C40/030H	16988	B71LNC 4D40/030H	17198	
			100	6	B71LNC 4B06/100H	17024	B71LNC 4C06/100H	17045	B71LNC 4D06/100H	17066
				10	B71LNC 4B10/100H	17025	B71LNC 4C10/100H	17046	B71LNC 4D10/100H	17067
				16	B71LNC 4B16/100H	17026	B71LNC 4C16/100H	17047	B71LNC 4D16/100H	17257
		20		B71LNC 4B20/100H	17027	B71LNC 4C20/100H	17048	B71LNC 4D20/100H	17258	
		25		B71LNC 4B25/100H	17028	B71LNC 4C25/100H	17049	B71LNC 4D25/100H	17259	
		32		B71LNC 4B32/100H	17029	B71LNC 4C32/100H	17050	B71LNC 4D32/100H	17260	
		300	40	B71LNC 4B40/100H	17030	B71LNC 4C40/100H	17051	B71LNC 4D40/100H	17261	
			6	B71LNC 4B06/300H	17087	B71LNC 4C06/300H	17108	B71LNC 4D06/300H	17129	
			10	B71LNC 4B10/300H	17088	B71LNC 4C10/300H	17109	B71LNC 4D10/300H	17130	
			16	B71LNC 4B16/300H	17089	B71LNC 4C16/300H	17110	B71LNC 4D16/300H	17320	
			20	B71LNC 4B20/300H	17090	B71LNC 4C20/300H	17111	B71LNC 4D20/300H	17321	
			25	B71LNC 4B25/300H	17091	B71LNC 4C25/300H	17112	B71LNC 4D25/300H	17322	
			32	B71LNC 4B32/300H	17092	B71LNC 4C32/300H	17113	B71LNC 4D32/300H	17323	
40	B71LNC 4B40/300H		17093	B71LNC 4C40/300H	17114	B71LNC 4D40/300H	17324			

Residual Current Circuit Breakers with Overcurrent Protection Series 3SB71LN

Selection and ordering data

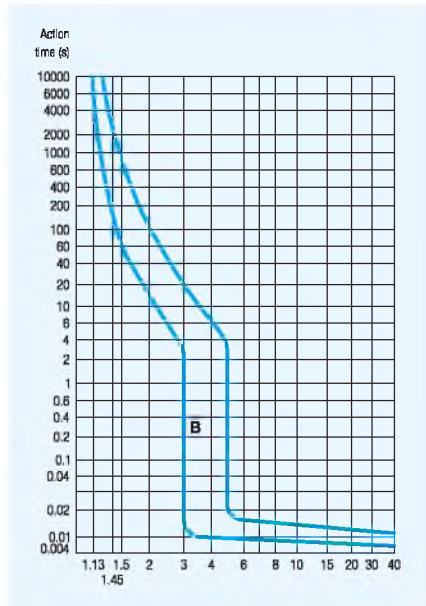
Type A

Number of poles	Rated residual current IΔn (mA)	Rated current In (A)	B Curve		C Curve		D Curve		
			Type code	Order code	Type code	Order code	Type code	Order code	
	30	6	B71LNA 2B06/030H	17136	B71LNA 2C06/030H	17157	B71LNA 2D06/030H	17178	
			10	B71LNA 2B10/030H	17137	B71LNA 2C10/030H	17158	B71LNA 2D10/030H	17179
		16	B71LNA 2B16/030H	17138	B71LNA 2C16/030H	17159	B71LNA 2D16/030H	17180	
			20	B71LNA 2B20/030H	17139	B71LNA 2C20/030H	17160	B71LNA 2D20/030H	17181
		25	B71LNA 2B25/030H	17140	B71LNA 2C25/030H	17161	B71LNA 2D25/030H	17182	
		32	B71LNA 2B32/030H	17141	B71LNA 2C32/030H	17162	B71LNA 2D32/030H	17183	
		40	B71LNA 2B40/030H	17142	B71LNA 2C40/030H	17163	B71LNA 2D40/030H	17184	
		100	6	B71LNA 2B06/100H	17199	B71LNA 2C06/100H	17220	B71LNA 2D06/100H	17241
				10	B71LNA 2B10/100H	17200	B71LNA 2C10/100H	17221	B71LNA 2D10/100H
			16	B71LNA 2B16/100H	17201	B71LNA 2C16/100H	17222	B71LNA 2D16/100H	17243
				20	B71LNA 2B20/100H	17202	B71LNA 2C20/100H	17223	B71LNA 2D20/100H
			25	B71LNA 2B25/100H	17203	B71LNA 2C25/100H	17224	B71LNA 2D25/100H	17245
	32		B71LNA 2B32/100H	17204	B71LNA 2C32/100H	17225	B71LNA 2D32/100H	17246	
	300	6	B71LNA 2B06/300H	17262	B71LNA 2C06/300H	17283	B71LNA 2D06/300H	17304	
			10	B71LNA 2B10/300H	17263	B71LNA 2C10/300H	17284	B71LNA 2D10/300H	17305
		16	B71LNA 2B16/300H	17264	B71LNA 2C16/300H	17285	B71LNA 2D16/300H	17306	
			20	B71LNA 2B20/300H	17265	B71LNA 2C20/300H	17286	B71LNA 2D20/300H	17307
		25	B71LNA 2B25/300H	17266	B71LNA 2C25/300H	17287	B71LNA 2D25/300H	17308	
		32	B71LNA 2B32/300H	17267	B71LNA 2C32/300H	17288	B71LNA 2D32/300H	17309	
		30	6	B71LNA 3B06/030H	17143	B71LNA 3C06/030H	17164	B71LNA 3D06/030H	17185
				10	B71LNA 3B10/030H	17144	B71LNA 3C10/030H	17165	B71LNA 3D10/030H
			16	B71LNA 3B16/030H	17145	B71LNA 3C16/030H	17166	B71LNA 3D16/030H	17187
				20	B71LNA 3B20/030H	17146	B71LNA 3C20/030H	17167	B71LNA 3D20/030H
			25	B71LNA 3B25/030H	17147	B71LNA 3C25/030H	17168	B71LNA 3D25/030H	17189
32			B71LNA 3B32/030H	17148	B71LNA 3C32/030H	17169	B71LNA 3D32/030H	17190	
40			B71LNA 3B40/030H	17149	B71LNA 3C40/030H	17170	B71LNA 3D40/030H	17191	
100			6	B71LNA 3B06/100H	17206	B71LNA 3C06/100H	17227	B71LNA 3D06/100H	17248
				10	B71LNA 3B10/100H	17207	B71LNA 3C10/100H	17228	B71LNA 3D10/100H
			16	B71LNA 3B16/100H	17208	B71LNA 3C16/100H	17229	B71LNA 3D16/100H	17250
				20	B71LNA 3B20/100H	17209	B71LNA 3C20/100H	17230	B71LNA 3D20/100H
			25	B71LNA 3B25/100H	17210	B71LNA 3C25/100H	17231	B71LNA 3D25/100H	17252
		32	B71LNA 3B32/100H	17211	B71LNA 3C32/100H	17232	B71LNA 3D32/100H	17253	
300		6	B71LNA 3B06/300H	17269	B71LNA 3C06/300H	17290	B71LNA 3D06/300H	17311	
			10	B71LNA 3B10/300H	17270	B71LNA 3C10/300H	17291	B71LNA 3D10/300H	17312
		16	B71LNA 3B16/300H	17271	B71LNA 3C16/300H	17292	B71LNA 3D16/300H	17313	
			20	B71LNA 3B20/300H	17272	B71LNA 3C20/300H	17293	B71LNA 3D20/300H	17314
		25	B71LNA 3B25/300H	17273	B71LNA 3C25/300H	17294	B71LNA 3D25/300H	17315	
		32	B71LNA 3B32/300H	17274	B71LNA 3C32/300H	17295	B71LNA 3D32/300H	17316	
		30	6	B71LNA 4B06/030H	17150	B71LNA 4C06/030H	17171	B71LNA 4D06/030H	17192
				10	B71LNA 4B10/030H	17151	B71LNA 4C10/030H	17172	B71LNA 4D10/030H
			16	B71LNA 4B16/030H	17152	B71LNA 4C16/030H	17173	B71LNA 4D16/030H	17194
				20	B71LNA 4B20/030H	17153	B71LNA 4C20/030H	17174	B71LNA 4D20/030H
			25	B71LNA 4B25/030H	17154	B71LNA 4C25/030H	17175	B71LNA 4D25/030H	17196
	32		B71LNA 4B32/030H	17155	B71LNA 4C32/030H	17176	B71LNA 4D32/030H	17197	
	40		B71LNA 4B40/030H	17156	B71LNA 4C40/030H	17177	B71LNA 4D40/030H	17198	
	100		6	B71LNA 4B06/100H	17213	B71LNA 4C06/100H	17234	B71LNA 4D06/100H	17255
				10	B71LNA 4B10/100H	17214	B71LNA 4C10/100H	17235	B71LNA 4D10/100H
			16	B71LNA 4B16/100H	17215	B71LNA 4C16/100H	17236	B71LNA 4D16/100H	17257
				20	B71LNA 4B20/100H	17216	B71LNA 4C20/100H	17237	B71LNA 4D20/100H
			25	B71LNA 4B25/100H	17217	B71LNA 4C25/100H	17238	B71LNA 4D25/100H	17259
		32	B71LNA 4B32/100H	17218	B71LNA 4C32/100H	17239	B71LNA 4D32/100H	17260	
	300	6	B71LNA 4B06/300H	17276	B71LNA 4C06/300H	17297	B71LNA 4D06/300H	17318	
			10	B71LNA 4B10/300H	17277	B71LNA 4C10/300H	17298	B71LNA 4D10/300H	17319
		16	B71LNA 4B16/300H	17278	B71LNA 4C16/300H	17299	B71LNA 4D16/300H	17320	
			20	B71LNA 4B20/300H	17279	B71LNA 4C20/300H	17300	B71LNA 4D20/300H	17321
		25	B71LNA 4B25/300H	17280	B71LNA 4C25/300H	17301	B71LNA 4D25/300H	17322	
		32	B71LNA 4B32/300H	17281	B71LNA 4C32/300H	173023	B71LNA 4D32/300H	17323	
	40	B71LNA 4B40/300H	17282	B71LNA 4C40/300H	17303	B71LNA 4D40/300H	17324		

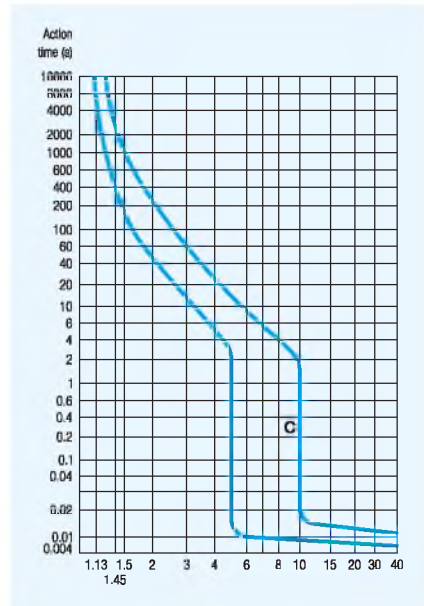
Residual Current Circuit Breakers with Overcurrent Protection Series 3SB71LN

Tripping characteristic curves

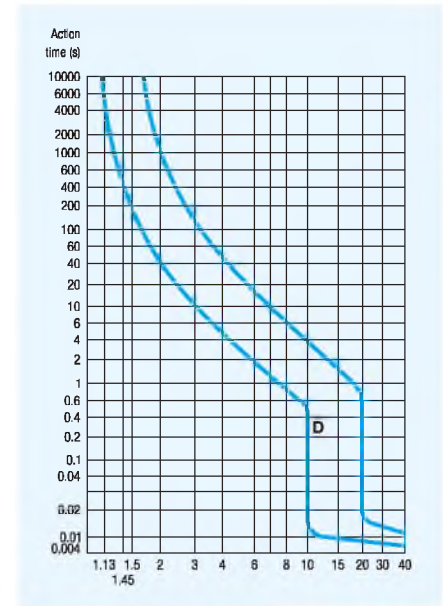
Curve B



Curve C





Curve D



Types

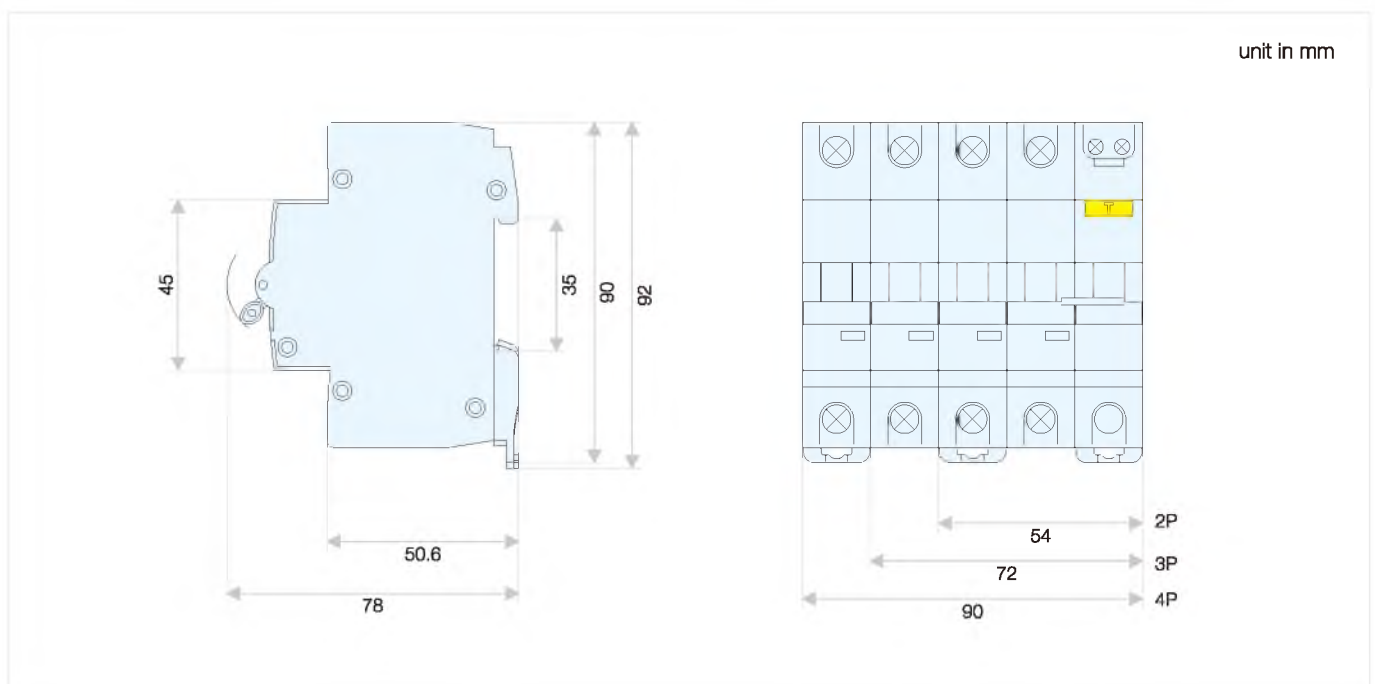
Both RCCBs and RCBOs are further divided into types depending on the operating function:

- Type AC : For which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising.
- Type A : For which tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents, whether suddenly applied or slowly rising.

Tripping sensitivity data

- RCD with a rated residual current of maximum 30 mA are used for personnel, material and fire protection, as well as for protection against direct contact.
- RCD with a rated residual current of maximum 300 mA are used as preventative fire protection in case of insulation faults.
- RCD with a rated residual current of 100 mA co-ordinated with the earth system according to the formula $I\Delta n < 50/R$, to provide protection against indirect contacts.

Outline and installation dimensions



Residual Current Circuit Breakers with Overcurrent Protection

Series 3SB72LE-25

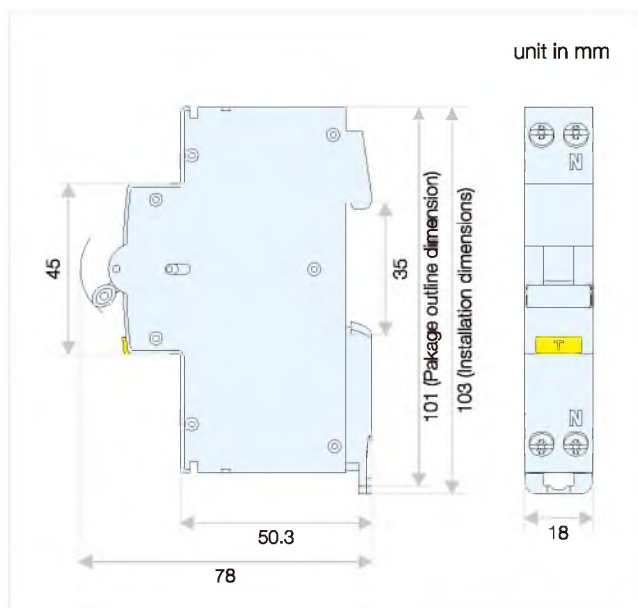
Functions

- 3SB72LE-25 RCBO (Residual current circuit breakers with overcurrent protection), is newly developed, which applies to circuit of AC 50/60 Hz, rated voltage to 230 V, and rated current up to 25 A.
- 3SB72LE-25 series RCBO are widely used in residual building with the function of switching and isolating, overload protection, short-circuit protection and protection against the effects of sinusoidal alternating earth fault currents.

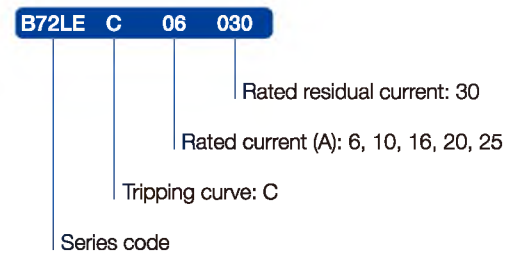
Technical specifications

- Standard: IEC 61009-1
- Number of poles (P): 1+N
- Rated current I_n (A): 6, 10, 16, 20, 25
- Rated frequency (Hz): 50/60
- Rated operating voltage U_e (V): AC230
- Rated insulation voltage U_i (V): 500
- Rated residual operating current $I_{\Delta n}$ (mA): 30
- Rated breaking capacity I_{cn} (kA): 6
- Rated residual breaking capacity $I_{\Delta m}$ (kA): 4.5
- Electrical life: 4000 (240 times/hour)
- Tripping characteristic type: C
- Agreed non-tripping current: $1.13I_n$ (h): 1
- Agreed tripping current:
 - $1.45 I_n$ (h): 1
 - $2.55 I_n$ (s): $1 < t < 60$
- Instantaneous non-tripping current: $t \leq 0.1$ s: $5 I_n$
- Instantaneous tripping current: $t < 0.1$ s: $10 I_n$
- Degree of protection: IP20
- Energy limiting class: 3
- Class of pollution: 2
- Mounting class: II, III
- Installation way: DIN-Rail 35 mm
- Connecting wire (Min/Max) (mm²): 1/16
- Terminal tightening torque (N·m): 1.8
- Upper /lower incoming line: upper incoming line
- Insulation function: yes

Outline and installation dimensions



Instruction of type code



Selection and ordering data

Number of poles (P)	Rated residual current $I_{\Delta n}$ (mA)	Rated current I_n (A)	Type code	Order code
			B72LE C06/030	15331
1P+N	30	6	B72LE C10/030	15332
		10	B72LE C16/030	15333
		16	B72LE C20/030	15334
		20	B72LE C25/030	15335



Residual Current Circuit Breakers with Overcurrent Protection

Series 3SB71L-50

Functions

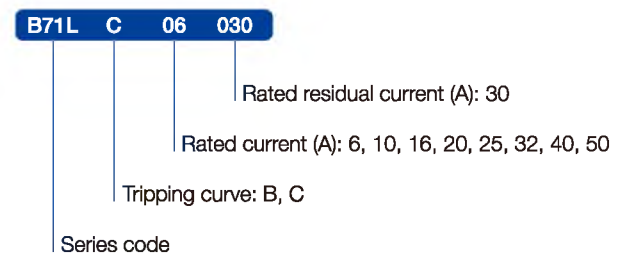
- Switching and isolation function.
- Protection against overload and short-circuit currents.
- protection against the effects of sinusoidal alternating earth fault currents
- protection against indirect contacts and additional protection against direct contacts.
- Protection against fire hazard caused by insulation faults.
- Used in residential building and distribution boards.

Technical specifications

- Standard: IEC 61009-1
- Type (wave form of the earth leakage sensed): AC
- Number of pole: 1+N (1 module)
- Rated current I_n (A): 6, 10, 16, 20, 25, 32, 40, 50
- Rated voltage U_e (V AC): 230
- Rated insulation voltage U_i (V AC): 500
- Rated Frequency F_n (Hz): 50/60
- Rated residual currents ΔI_n (mA): 30
- Rated breaking capacity acc. to IEC 61009-1 ultimate I_{cn} (kA): 10
- Rated breaking capacity acc. to IEC 60947-2 ultimate I_{cu} (kA): 10
- Rated residual breaking capacity ΔI_m (kA): 10
- Rated impulse withstand voltage (1.2/50) U_{imp} (kV): 4
- Dielectric test voltage at ind. freq. for 1 min. (kV): 2
- Surge current resistance (wave 8/20) (A): 3000
- Tripping characteristic: B, C
- Characteristic B (I_n): 3-5
- Characteristic C (I_n): 5-10
- Electrical life (times): 4,000
- Mechanical life (times): 10,000
- Degree of protection: IP20, with connected conductors
- Mounting position: Any
- Conductor cross-sections
 - Solid and stranded (mm²): 0.75-35
 - Finely stranded with end sleeve (mm²): 0.75-25
- Terminals
 - Terminal tightening torque (N·m): 2.5
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2000



Instruction of type code


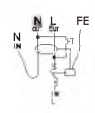


Features

- The combination of an RCCB and a miniature circuit breaker in a compact design.
- The MCB part protects lines against overload and short circuits and is available in characteristics curve B and C.
- Electronic Type, voltage dependent
- The handle provides a clear indication of the contact position.
- The earth reference cable ensures protection against earth leakage in case of loss of supply neutral.

Selection and ordering data

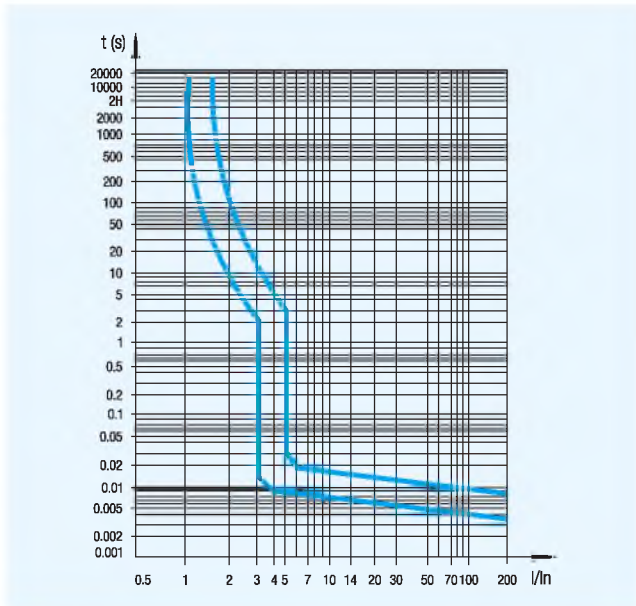
Type AC

	Number of poles	Rated residual current ΔI_n (mA)	Rated current I_n (A)	B Curve		C Curve	
				Type code	Order code	Type code	Order code
 	1P+N	30	6	B71L B06/030	23589	B71L C06/030	23597
			10	B71L B10/030	23590	B71L C10/030	23598
			16	B71L B16/030	23591	B71L C16/030	23599
			20	B71L B20/030	23592	B71L C20/030	23600
			25	B71L B25/030	23593	B71L C25/030	23601
			32	B71L B32/030	23594	B71L C32/030	23602
			40	B71L B40/030	23595	B71L C40/030	23603
			50	B71L B50/030	23596	B71L C50/030	23604

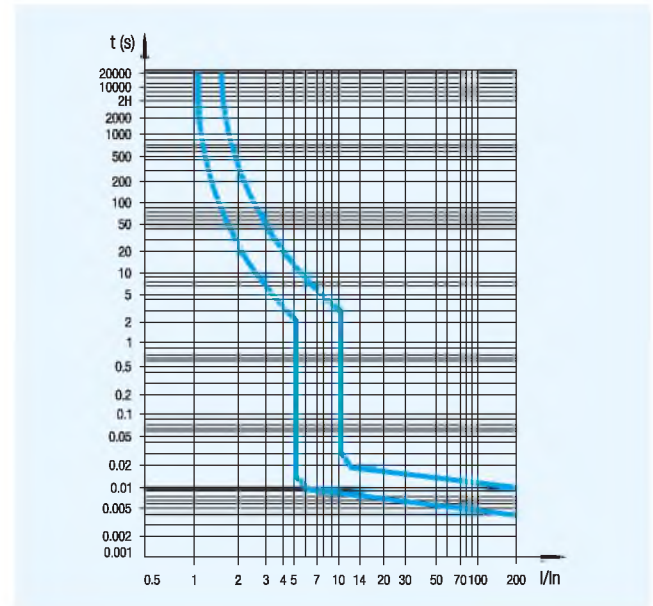
Residual Current Circuit Breakers with Overcurrent Protection Series 3SB71L-50

Tripping characteristic curves

Curve B




Curve C



2

Types

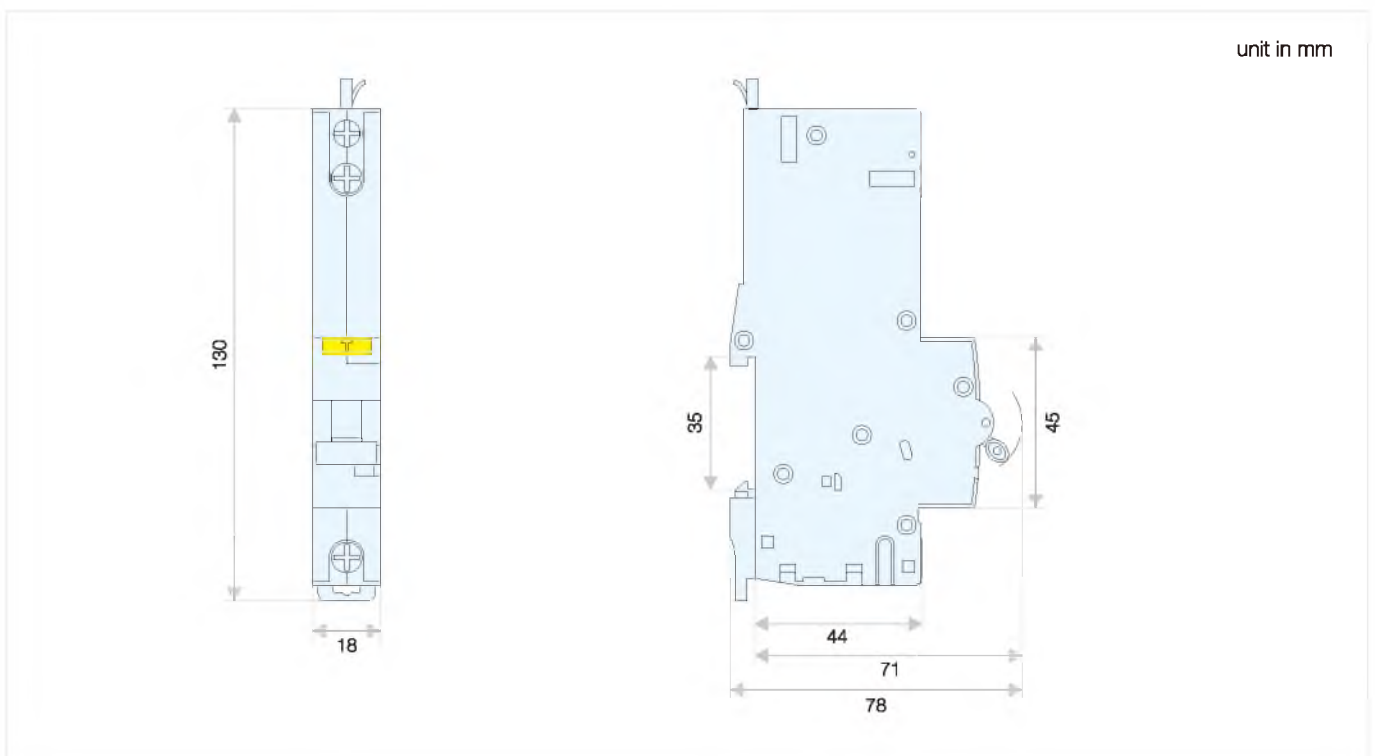
Both RCCBs and RCBOs are further divided into types depending on the operating function:

- Type AC : For which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising.

Tripping sensitivity data

- RCD with a rated residual current of maximum 30 mA are used for personnel, material and fire protection, as well as for protection against direct contact.

Outline and installation dimensions



Functions

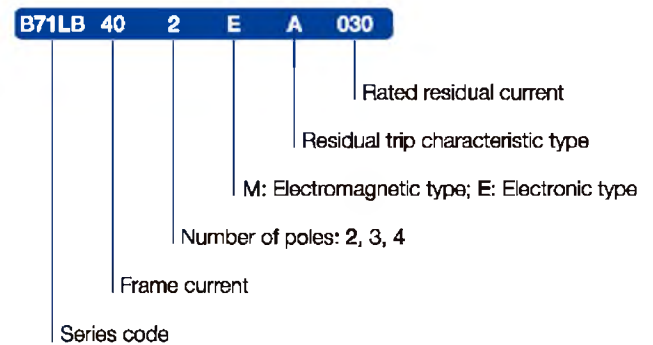
- Assembly on side with MCBs
- Protection against the effects of sinusoidal alternating earth fault currents
- Protection against indirect contacts and additional protection against direct contacts

Technical specifications

- Standard: IEC 61009-1
- Type (wave form of the earth leakage sensed): AC, A
- Number of pole: 2, 3, 4
- Rated current I_n (A): 40, 63
- Rated voltage U_e (V AC): 230/400
- Rated insulation voltage U_i (V AC): 500
- Rated Frequency F_n (Hz): 50/60
- Rated residual currents $I_{\Delta n}$ (mA): 30, 100, 300
- Rated breaking capacity (I_{cn}) : I_{cn} of the associated MCB
- Rated residual breaking capacity I_{m} : I_{cn} of the associated MCB
- Electrical life (times): 4,000
- Mechanical life (times): 10,000
- Degree of protection: IP20, with connected conductors
- Mounting position: Any
- Conductor cross-sections
 - Solid and stranded (mm²): 0.75-35
 - Finely stranded with end sleeve (mm²): 0.75-25
- Terminals
 - Terminal tightening torque (N·m): 2.8
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2000



Instruction of type code



Features




- Electronic Type, voltage dependent and Electromagnetic type, voltage independent.
- Assembly on side with MCBs 3SB71 series.

RCD Blocks




Series 3SB71LB

Selection and ordering data

Electronic Type

	Number of poles	Rated residual current I _{Δn} (mA)	Rated current In (A)	Type A	
				Type code	Order code
	2	30	40	B71LB40 2EA030	19538
		100	40	B71LB40 2EA100	19539
		300	40	B71LB40 2EA300	19540
		30	63	B71LB63 2EA030	19541
		100	63	B71LB63 2EA100	19542
		300	63	B71LB63 2EA300	19543
	3	30	40	B71LB40 3EA030	19544
		100	40	B71LB40 3EA100	19545
		300	40	B71LB40 3EA300	19546
		30	63	B71LB63 3EA030	19547
		100	63	B71LB63 3EA100	19548
		300	63	B71LB63 3EA300	19549
	4	30	40	B71LB40 4EA030	19550
		100	40	B71LB40 4EA100	19551
		300	40	B71LB40 4EA300	19552
		30	63	B71LB63 4EA030	19553
		100	63	B71LB63 4EA100	19554
		300	63	B71LB63 4EA300	19555

Electromagnetic type

	Number of poles	Rated residual current I _{Δn} (mA)	Rated current In (A)	Type AC		Type A	
				Type code	Order code	Type code	Order code
	2	30	40	B71LB40 2MC030	19502	B71LB40 2MA030	19508
		100	40	B71LB40 2MC100	19503	B71LB40 2MA100	19509
		300	40	B71LB40 2MC300	19504	B71LB40 2MA300	19510
		30	63	B71LB63 2MC030	19505	B71LB63 2MA030	19511
		100	63	B71LB63 2MC100	19506	B71LB63 2MA100	19512
		300	63	B71LB63 2MC300	19507	B71LB63 2MA300	19513
	3	30	40	B71LB40 3MC030	19514	B71LB40 3MA030	19520
		100	40	B71LB40 3MC100	19515	B71LB40 3MA100	19521
		300	40	B71LB40 3MC300	19516	B71LB40 3MA300	19522
		30	63	B71LB63 3MC030	19517	B71LB63 3MA030	19523
		100	63	B71LB63 3MC100	19518	B71LB63 3MA100	19524
		300	63	B71LB63 3MC300	19519	B71LB63 3MA300	19525
	4	30	40	B71LB40 4MC030	19526	B71LB40 4MA030	19532
		100	40	B71LB40 4MC100	19527	B71LB40 4MA100	19533
		300	40	B71LB40 4MC300	19528	B71LB40 4MA300	19534
		30	63	B71LB63 4MC030	19529	B71LB63 4MA030	19535
		100	63	B71LB63 4MC100	19530	B71LB63 4MA100	19536
		300	63	B71LB63 4MC300	19531	B71LB63 4MA300	19537

Types

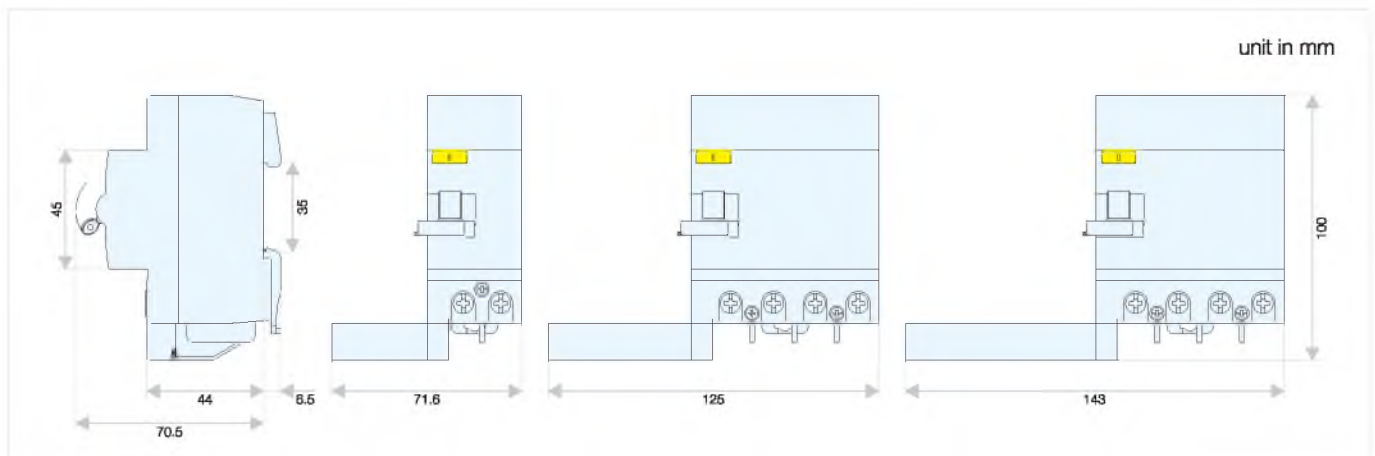
Both RCCBs and RCBOs are further divided into types depending on the operating function:

- Type AC \square : For which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising.
- Type A \square : For which tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents, whether suddenly applied or slowly rising.

Tripping sensitivity data

- RCD with a rated residual current of maximum 30 mA are used for personnel, material and fire protection, as well as for protection against direct contact.
- RCD with a rated residual current of maximum 300 mA are used as preventative fire protection in case of insulation faults.
- RCD with a rated residual current of 100 mA co-ordinated with the earth system according to the formula $I\Delta n < 50/R$, to provide protection against indirect contacts.

Outline and installation dimensions



Assembly diagram



Additional Components for Series 3SB71 3SB71DD

Descriptions

- Remote control with manual buttons
- Matched with 3SB71 series MCB and 3SL71 series RCCB
- Operate the handle to switch on and off by bidirectional controllable permanent magnet synchronous motor
- Widely used in the advanced residential building, communication field and the industrial automation, as well as the smart power grid.

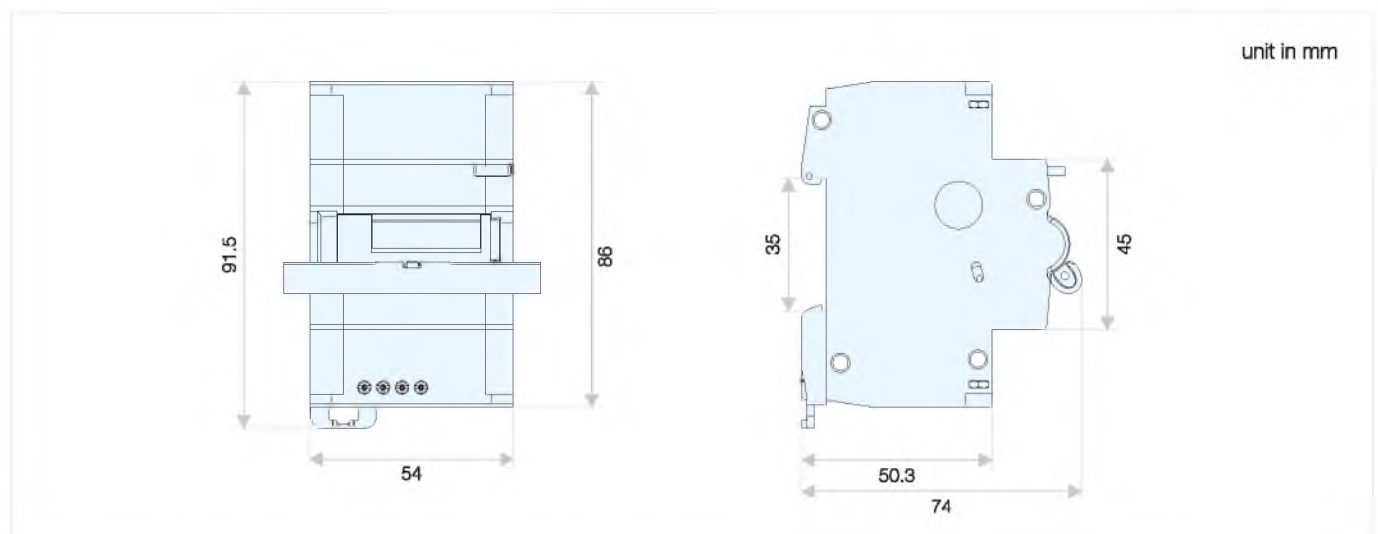
Technical specifications

- Standard: IEC 60947-2
- Match
- Miniature circuit breaker 3SB71 (1P, 2P, 3P, 4P);
Residual current operation circuit breaker 3SL71 (1P+N, 3P+N)
- Rated insulation voltage (Ui): AC 500 V
- Rated voltage (Un): AC 230 V
- Operational voltage: 0.85~1.1 Un
- Rated frequency: 50 Hz
- Power consumption: 20 VA (operating)
- Electrical life: 4000 times
- Time to switch on or off: < 1 s
- Mounting class: II
- Degree of protection: IP20
- Installation: DIN-rail of 35 mm
- Connecting wire: 0.5~2.5 mm² Cord


Working conditions

- Pollution degree: II
- Ambient temperature: -5 °C ~ +40 °C, and the average of 24 hours should be under +35 °C
- Altitude (Meters): Max 2000
- Atmospheric conditions: The relative humidity of the air is 50% when +40 °C, and the relative humidity can be higher at lower temperatures.
- Shape and installation size:

Outline and installation dimensions



Selection and ordering data

	Voltage	Type code	Order code
	(V)		
	AC 230	B71 DD	31423

Additional Components for Series 3SB71

3SB71C, 3SB71J, 3SB71CC/CJ, 3SB71Q, 3SB71F

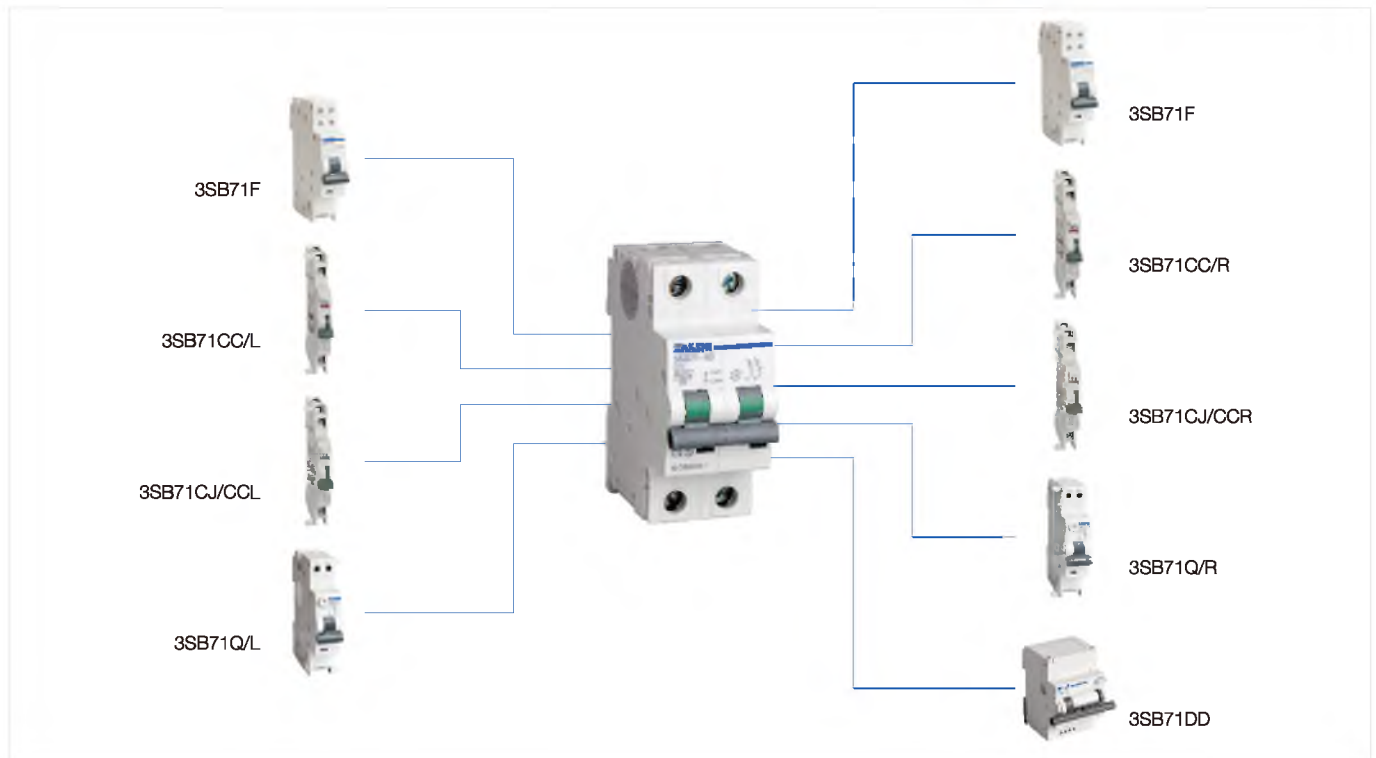
Functions

- 3SB71C Auxiliary contact: indication of the position of MCB and RCD
- 3SB71J Auxiliary alarm: signaling of status making or breaking of MCB and RCD through Alarm
- 3SB71CC/CJ Auxiliary contact & alarm: combination of auxiliary contact and alarm
- 3SB71Q Under voltage release: protection of the load in the event of a voltage drop (between 70% and 35% of its rated value)
- 3SB71F Shunt release: remote opening of the device when a voltage is applied
- Suitable for MCB Series: 3SB71-63, 3SB71-125, 3SB71Z, RCBO Series: 3SL71N-40, 3SB71LN



Technical specifications






- Standard: IEC 60947-2
- Rated insulation voltage (V AC): 500
- Rated frequency (Hz): 50/60
- Utilization category: AC14
- Mechanical life (times): 4,000
- Conductor cross-sections
 - Solid and stranded (mm²): 2.5
- Ambient temperature (°C): -5 ~ +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Terminal tightening torque (N·m): 0.5
- Dielectric Strength: 2,000
- Wire square: 2.5



Additional Components for Series 3SB71


3SB71C, 3SB71J, 3SB71CC/CJ, 3SB71Q, 3SB71F

Selection and ordering data

	Rated current	Voltage	Coil voltage	Installation side	Type code	Order code	Packing Unit pc
	(A)	(V)	(V)				
3SB71CC Auxiliary contact							
	5	AC 230	-	R	B71CR	20271	12
	5	AC 230	-	L	B71CL	20272	12
3SB71J Auxillary alarm contact							
	5	AC 230	-	R	B71JR	20273	12
	5	AC 230	-	L	B71JL	20274	12
3SB71CJ/CC Auxiliary contact & Auxillary alarm contact							
	5	AC 230	-	R	B71CJR	10467	12
	5	AC 230	-	L	B71CJL	10466	12
3SB71Q Under voltage release							
	5	-	12 V	R	B71QR12	16078	12
	5	-	24 V	R	B71QR24	16079	12
	5	-	48 V	R	B71QR48	16080	12
	5	-	127 V DC	R	B71QRD127	16081	12
	5	-	230 V DC	R	B71QRD230	16082	12
	5	-	127 V AC	R	B71QRA127	16083	12
	5	-	230 V AC	R	B71QRA230	16084	12
	5	-	12 V	L	B71QL12	16085	12
	5	-	24 V	L	B71QL24	16086	12
	5	-	48 V	L	B71QL48	16087	12
	5	-	127 V DC	L	B71QLD127	16088	12
	5	-	230 V DC	L	B71QLD230	16089	12
	5	-	127 V AC	L	B71QLA127	16090	12
	5	-	230 V AC	L	B71QLA230	16091	12
3SB71F Shunt release							
	5	AC 24-60 DC 16-48	-	R	B71FR2	17726	12
	5	AC 110-415 DC 110-125	-	R	B71FR1	20275	12
	5	AC 24-60 DC 16-48	-	L	B71FL2	26330	12
	5	AC 110-415 DC 110-125	-	L	B71FL1	26329	12

Padlock for MCBs and switches

Prevents unauthorised or dangerous operation of the operating lever. An adaptor makes it possible to block the operating lever when switched ON or OFF. The key lock should be provided by user.

	Application	Type code	Order code
	 3SB71 series MCBs, 3SL71 series RCCBs, 3SL71N-40 series RCBOs, 3SB71LN-40 series RCBOs, 3SB72LE-25 series RCBOs, 3SB71LB series RCD blocks, 3SB71G series switch disconnectors	PL3	32961

Additional Components for Series 3SB5, 3SB52, 3SB1 OF, OFN, SD, S2, U2+O2


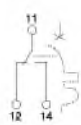



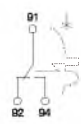
Functions

- OF and OFN Auxiliary contact: indication of the position of the device's contacts
- SD Auxiliary alarm: signaling of the position of the device's contacts by alarm only after the automatic release of the
- MCBs and RCDs due to an overload or a short-circuit S2 Shunt Release: remote opening of the device when a voltage is applied
- U2+O2 Under voltage release: protection of the load in the event of a voltage drop (between 70% and 35% of its rated value)
- Suitable for MCB series 3SB5, 3SB52, 3SB1-63N, 3SB1-125

Technical specifications

- Standard: IEC 60947-5-1
- Rated insulation voltage (V AC): 500
- Rated frequency (Hz): 50/60
- Rated impulse withstand voltage (kA): 5
- Utilization category: AC14, AC15
- Mechanical life (times): 10,000
- Conductor cross-sections
- Solid and stranded (mm²): 2-2.5
- Ambient temperature (°C): -5 ~ +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75

Selection and ordering data


	Rated current In (A)	Type code	Order code
OF Auxiliary contact	6	OF	10468
 			Application: 3SB52, 3SB1-125
OFN Auxiliary contact	6	OFN	34355
 			Application: 3SB5, 3SB1-63N
SD Auxiliary alarm	6	SD	10472
 			



	Rated voltage (V)	Type code	Order code
S2 Shunt release	230 AC	S223A	10476
	400 AC	S240A	10477
	24 DC	S224D	10478
	48 DC	S248D	10479
U2 & O2 Under voltage / Over voltage release	230 AC	UO23A	10480
	400 AC	UO40A	10481
	24 DC	UO24D	10482
	48 DC	UO48D	10483

Padlock for MCBs and switches

Prevents unauthorised or dangerous operation of the operating lever. An adaptor makes it possible to block the operating lever when switched ON or OFF

Discription	Application	Type code	Order code
	3SB5, 3SB52, 3SB1-63N	PL1	32959
	3SB1-125	PL2	32960

Switch Disconnectors

Series 3SB71G

Functions

- Making and breaking under load condition
- Providing safety isolation for terminal distribution system
- Used in residential building, non-residential building

2

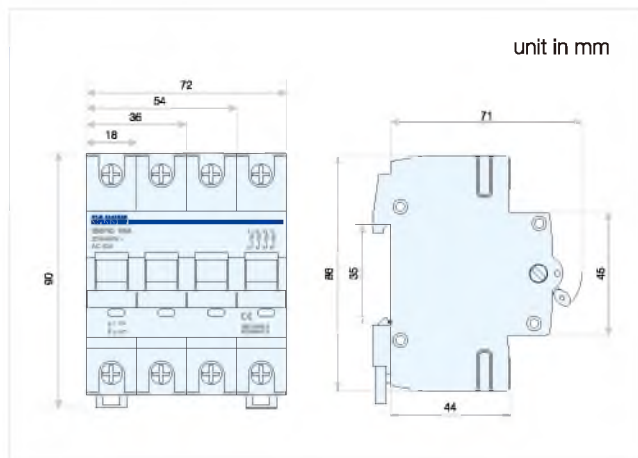
Technical specifications

- Standard: IEC 60947-3
- Rated current I_n (A): 32, 63, 100, 125
- Rated voltage U_n (V AC): 230/400
- Rated insulation voltage (V AC): 500
- Number of poles: 1, 2, 3, 4
- Rated short-time withstand current $20 I_n$: 1 s
- Degree of protection: IP20, with connected conductors
- Electrical life (times): 10,000
- Mechanical life (times): 20,000
- Fire resistance according to UL 94: V0
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm²): 0.75-35
- Finely stranded with end sleeve (mm²): 0.75-25
- Terminal tightening torque (N·m): 2-2.5
- Ambient temperature (°C): -25 ~ +45, max. 95% humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2,000

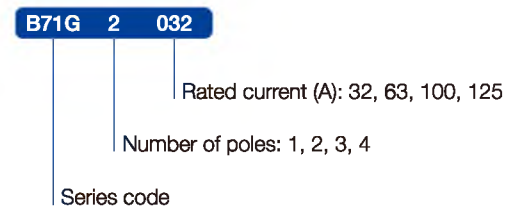
Features

- The handle provides a clear indication of the contact position
- Adequate printing of all data on the front provides longterm identification
- Based on the technology of MCB series 3SB71, similar design to series 3SB71
- Matched with series 3SB71





Outline and installation dimensions



Instruction of type code



Selection and ordering data

	Number of poles (P)	Rated current I_n (A)	Type code		Pack.
			Type code	Order code	
	1	32	B71G 1032	22899	12
		63	B71G 1063	22900	12
		100	B71G 1100	22901	12
		125	B71G 1125	38876	12
	2	32	B71G 2032	22902	6
		63	B71G 2063	22903	6
		100	B71G 2100	22904	6
		125	B71G 2125	38877	6
	3	32	B71G 3032	22905	4
		63	B71G 3063	22906	4
		100	B71G 3100	22907	4
		125	B71G 3125	38878	4
	4	32	B71G 4032	22908	3
		63	B71G 4063	22909	3
		100	B71G 4100	22910	3
		125	B71G 4125	38879	3

Switch Disconnectors Series 3SG6

Functions

- Making and breaking under load condition
- Providing safety isolation for terminal distribution system
- Used in residential building, non-residential building

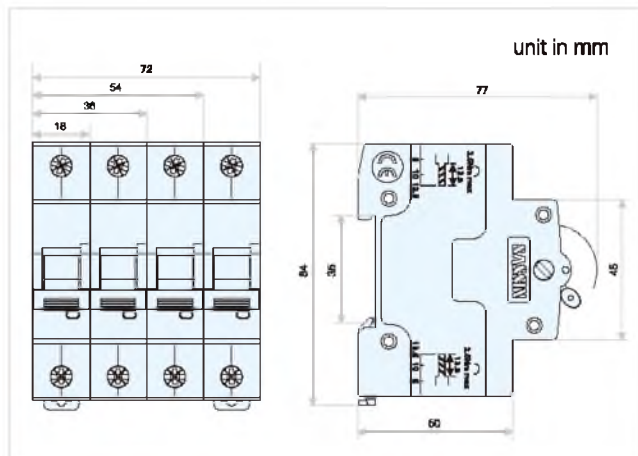
Technical specifications

- Standard: IEC 60947-3
- Rated current I_n (A): 25, 40, 63, 80, 100
- Rated voltage U_n (V AC): 1P: 230/400; 2-4P: 400
- Rated insulation voltage (V AC): 500
- Number of poles (P): 1, 2, 3, 4
- Rated short-time withstand current 20 I_n : 1 s
- Degree of protection: IP20, with connected conductors
- Electrical endurance (Cycles): 4,000
- Mechanical endurance (Cycles): 10,000
- Fire resistance according to IEC 60695: 960 °C
- Mounting position: Any
- Busbar Connection: Pin type
- Conductor cross-sections
 - Solid and stranded (mm²): 1-35
 - Finely stranded with end sleeve (mm²): 1-25
- Terminal tightening torque (N·m): 2.5
- Ambient temperature (°C): -5 ~ +45, max. 95% humidity
- Altitude (meters): Max. 2,000

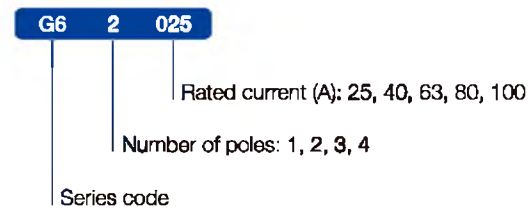
Features

- Adequate printing of all data on the front provides long term identification
- Matched with series 3SB6

Outline and installation dimensions



Instruction of type code



Selection and ordering data

Number of poles (P)	Rated current I_n (A)	Type code		Pack.
		Type code	Order code	
1	25	G6 1025	39949	12
	40	G6 1040	39950	12
	63	G6 1063	39951	12
	80	G6 1080	39952	12
	100	G6 1100	39953	12
2	25	G6 2025	39954	6
	40	G6 2040	39955	6
	63	G6 2063	39956	6
	80	G6 2080	39957	6
	100	G6 2100	39958	6
3	25	G6 3025	39959	4
	40	G6 3040	39960	4
	63	G6 3063	39961	4
	80	G6 3080	39962	4
	100	G6 3100	39963	4
4	25	G6 4025	39964	3
	40	G6 4040	39965	3
	63	G6 4063	39966	3
	80	G6 4080	39967	3
	100	G6 4100	39968	3

Surge Protective Devices Series 3SU71

Functions

- Types 2 surge arresters
- Handling energy from distant/ indirect lightning strikes or from switching operations
- Feature lower protection level (Up)
- Recommended at the incoming of installation for locations with no exposure to direct lightning impulses

Technical specifications

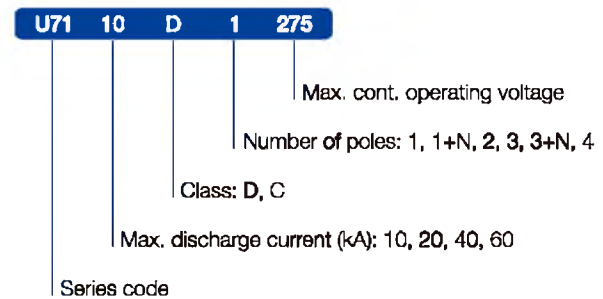
- Standard: IEC 61643-1
- Type / test class: 2 / II
- Number of poles: 1P, 1P+NPE, 2P, 2P+NPE, 3P, 3P+NPE, 4P
- Type of current: AC
- Frequency (Hz): 50/60
- Rated voltage U_n (V): 230/400
- Max. Cont. operating voltage U_c (V): 140, 275, 320, 385, 420
- Max. discharge current I_{max} (8/20) per pole (kA): 10, 20, 40, 60
- Nominal discharge current I_n (8/20) per pole (kA): 5, 10, 15, 20
- Voltage protection level U_p (kV): 1.0, 1.2, 1.2, 1.5
- T_{ov} (Temporary overvoltage) withstand U_T (5 s.) (V): 440
- Continuous operating current I_c (mA): < 1
- Degree of protection: IP20, with connected conductors
- Pluggable cartridge: Yes
- State Indicator: Yes
- Integrated auxiliary contact: Yes
- Conductor cross-sections
- Solid and stranded (mm²): 2-35
- Finely stranded with end sleeve (mm²): 2-25
- Terminals
- Terminal tightening torque (N·m): 2.8
- Ambient temperature (°C): -5 ~ +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Connection Capacity (mm²): 1-25

Technical specification of the integrated auxiliary contact

- Contact complement: 1 NO +1 NC
- Min. load: 24 V DC - 10 mA
- Max. load: 240 V AC - 1 A






Instruction of type code





Surge Protective Devices Series 3SU71

Selection and ordering data

	Max. Cont. operating voltage U_c (V)	Auxiliary contact	Number of poles	Max. discharge current I_{max} (8/20) per pole (kA)	Nominal discharge current I_n (8/20) per pole (kA)	Type code	Order code
	140	with	1P	10	5	U71C 10D1/140	34823
			1P+N	10	5	U71C 10D1N/140	38093
			2P	10	5	U71C 10D2/140	34828
			3P	10	5	U71C 10D3/140	34833
			3P+N	10	5	U71C 10D3N/140	38098
	275	with	1P	10	5	U71 C10D1/275	34824
				20	10	U71C 20D1/275	34843
				40	20	U71 C40D1/275	34859
				60	30	U71 C60D1/275	34875
			1P+N	10	5	U71C 10D1N/275	38094
				20	10	U71 C20D1N/275	38103
				40	20	U71C 40C1N/275	38111
				60	30	U71 C60C1N/275	38119
			2P	10	5	U71 C10D2/275	34829
				20	10	U71C 20D2/275	34847
				40	20	U71 C40C2/275	34863
				60	30	U71 C60C2/275	34879
			3P	10	5	U71C 10D3/275	34834
				20	10	U71 C20D3/275	34851
				40	20	U71C 40C3/275	34867
				60	30	U71 C60C3/275	34883
3P+N	10	5	U71C 10D3N/275	38099			
	20	10	U71C 20D3N/275	38107			
	40	20	U71 C40C3N/275	38115			
	60	30	U71C 60C3N/275	38123			
	320	with	1P	10	5	U71 C10D1/320	34825
				20	10	U71 C20D1/320	34845
				40	20	U71C 40D1/320	34860
				60	30	U71C 60D1/320	34876
			1P+N	10	5	U71C 10D1N/320	38095
				20	10	U71C 20D1N/320	38104
				40	20	U71 C40C1N/320	38112
				60	30	U71C 60C1N/320	38120
			2P	10	5	U71C 10D2/320	34830
				20	10	U71C 20D2/320	34848
				40	20	U71C 40C2/320	34864
				60	30	U71C 60C2/320	34880
			3P	10	5	U71C 10D3/320	34835
				20	10	U71C 20D3/320	34852
				40	20	U71C 40C3/320	34868
				60	30	U71C 60C3/320	34884
3P+N	10	5	U71C 10D3N/320	38100			
	20	10	U71C 20D3N/320	38108			
	40	20	U71C 40C3N/320	38116			
	60	30	U71C 60C3N/320	38124			
4P	10	5	U71C 10D4/320	34840			
	20	10	U71C 20D4/320	34856			
	40	20	U71C 40C4/320	34872			
	60	30	U71C 60C4/320	34888			

Surge Protective Devices Series 3SU71

Selection and ordering data

	Max. Cont. operating voltage U_c (V)	Auxiliary contact	Number of poles	Max. discharge current I_{max} (8/20) per pole (kA)	Nominal discharge current I_n (8/20) per pole (kA)	Type code	Order code
	385	with	1P	10	5	U71C 10D1/385	34826
				20	10	U71C 20D1/385	34845
				40	20	U71C 40D1/385	34861
				60	30	U71C 60D1/385	34877
			1P+N	10	5	U71C 10D1N/385	38096
				20	10	U71C 20D1N/385	38105
				40	20	U71C 40C1N/385	38113
				60	30	U71C 60C1N/385	38121
			2P	10	5	U71C 10D2/385	34831
				20	10	U71C 20D2/385	34849
				40	20	U71C 40C2/385	34865
				60	30	U71C 60C2/385	34881
			3P	10	5	U71C 10D3/385	34836
				20	10	U71C 20D3/385	34853
				40	20	U71C 40C3/385	34869
				60	30	U71C 60C3/385	34885
			3P+N	10	5	U71C 10D3N/385	38101
				20	10	U71C 20D3N/385	38109
				40	20	U71C 40C3N/385	38117
				60	30	U71C 60C3N/385	38125
			4P	10	5	U71C 10D4/385	34841
				20	10	U71C 20D4/385	34857
				40	20	U71C 40C4/385	34873
				60	30	U71C 60C4/385	34889
	420	with	1P	10	5	U71C 10D1/420	34827
				20	10	U71C 20D1/420	34846
				40	20	U71C 40D1/420	34862
				60	30	U71C 60D1/420	34878
			1P+N	10	5	U71C 10D1N/420	38097
				20	10	U71C 20D1N/420	38106
				40	20	U71C 40C1N/420	38114
				60	30	U71C 60C1N/420	38122
			2P	10	5	U71C 10D2/420	34832
				20	10	U71C 20D2/420	34850
				40	20	U71C 40C2/420	34866
				60	30	U71C 60C2/420	34882
			3P	10	5	U71C 10D3/420	34837
				20	10	U71C 20D3/420	34854
				40	20	U71C 40C3/420	34870
				60	30	U71C 60C3/420	34886
			3P+N	10	5	U71C 10D3N/420	38102
				20	10	U71C 20D3N/420	38110
				40	20	U71C 40C3N/420	38118
				60	30	U71C 60C3N/420	38126
			4P	10	5	U71C 10D4/420	34842
				20	10	U71C 20D4/420	34858
				40	20	U71C 40C4/420	34874
				60	30	U71C 60C4/420	34890

Functions

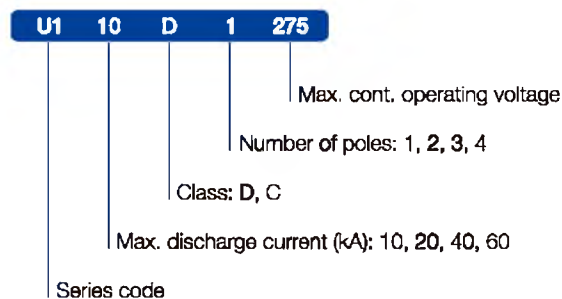
- Types 2 surge arresters
- Handling energy from distant / indirect lightning strikes or from switching operations
- Feature lower protection level (Up)
- Recommended at the incoming of installation for locations with no exposure to direct lightning impulses
- 3SU1 DC provide protection for equipment on photovoltaic connected system, against transient overvoltages that occur on the electrical network

Technical specifications

- Standard: IEC 61643-1
- Type / test class: 2 / II
- Number of poles: 1P, 1P+N, 2P, 2P+N, 3P, 3P+N, 4P
- Type of current: AC
- Frequency (Hz): 50/60
- Rated voltage U_n (V): 230/400
- Max. Cont. operating voltage U_c (V): 400
- Max. discharge current I_{max} (8/20) per pole (kA): 10, 20, 40, 60
- Nominal discharge current I_n (8/20) per pole (kA): 5, 10, 15, 20
- Voltage protection level U_p (kV): 1.0, 1.2, 1.2, 1.5
- T_{ov} (Temporary overvoltage) withstand U_T (5 s.) (V): 440
- Continuous operating current I_c (mA): <1
- Degree of protection: P20, with connected conductors
- Pluggable cartridge: Yes
- State indicator: Yes
- Integrated auxiliary contact: Yes
- Conductor cross-sections
- Solid and stranded (mm²): 2-35
- Finely stranded with end sleeve (mm²): 2-25
- Terminal tightening torque (N · m): 2.8
- Ambient temperature (°C): -5 ~ +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Connection Capacity (mm²): 1-25



Instruction of type code













Technical specification of the integrated auxiliary contact

- Contact complement: 1 NO +1 NC
- Min. load: 24 V DC - 10 mA
- Max. load: 240 V AC - 1 A










Surge Protective Devices Series 3SU1

Selection and ordering data

	Auxiliary contact	Number of poles	Max. Cont. operating voltage U_c (V)	Max. discharge current I_{max} (8/20) per pole (kA)	Nominal discharge current I_n (8/20) per pole (kA)	Voltage protection level U_p (kV)	Type code	Order code
	without	1P	275	10	5	1	U1 10D1/275	29039
				20	10	1.2	U1 20D1/275	29053
				40	20	1.2	U1 40C1/275	29067
				60	30	1.5	U1 60C1/275	29074
	without	1P+N	275	10	5	1	U1 10D1N/275	29043
				20	10	1.2	U1 20D1N/275	29057
				40	20	1.2	U1 40C1N/275	29071
				60	30	1.5	U1 60C1N/275	29078
	with	1P	275	10	5	1	U1C 10D1/275	32683
				20	10	1.2	U1C 20D1/275	32687
				40	20	1.2	U1C 40C1/275	32691
				60	30	1.5	U1C 60C1/275	32695
	without	2P	275	10	5	1	U1 10D2/275	29040
				20	10	1.2	U1 20D2/275	29054
				40	20	1.2	U1 40C2/275	29068
				60	30	1.5	U1 60C2/275	29075
	with	2P	275	10	5	1	U1C 10D2/275	32684
				20	10	1.2	U1C 20D2/275	32688
				40	20	1.2	U1C 40C2/275	32692
				60	30	1.5	U1C 60C2/275	32696
	without	3P	275	10	5	1	U1 10D3/275	29041
				20	10	1.2	U1 20D3/275	29055
				40	20	1.2	U1 40C3/275	29069
				60	30	1.5	U1 60C3/275	29076
	without	3P+N	275	10	5	1	U1 10D3N/275	29045
				20	10	1.2	U1 20D3N/275	29059
				40	20	1.2	U1 40C3N/275	29073
				60	30	1.5	U1 60C3N/275	29080
	with	3P	275	10	5	1	U1C 10D3/275	32685
				20	10	1.2	U1C 20D3/275	32689
				40	20	1.2	U1C 40C3/275	32693
				60	30	1.5	U1C 60C3/275	32697
	without	4P	275	10	5	1	U1 10D4/275	29042
				20	10	1.2	U1 20D4/275	29056
				40	20	1.2	U1 40C4/275	29070
				60	30	1.5	U1 60C4/275	29077
	with	4P	275	10	5	1	U1C 10D4/275	32686
				20	10	1.2	U1C 20D4/275	32690
				40	20	1.2	U1C 40C4/275	32694
				60	30	1.5	U1C 60C4/275	32698

Surge Protective Devices Series 3SU1


Selection and ordering data

	Auxiliary contact	Number of poles	Max. Cont. operating voltage U_c (V)	Max. discharge current I_{max} (8/20) per pole (kA)	Nominal discharge current I_n (8/20) per pole (kA)	Voltage protection level U_p (kV)	Type code	Order code
	without	1P	400	10	5	1	U1 10D1/400	29312
				20	10	1.2	U1 20D1/400	29326
				40	20	1.2	U1 40C1/400	29340
				60	30	1.5	U1 60C1/400	29347
	without	1P+N	400	10	5	1	U1 10D1N/400	29316
				20	10	1.2	U1 20D1N/400	29330
				40	20	1.2	U1 40C1N/400	29344
				60	30	1.5	U1 60C1N/400	29351
				with	1P	400	10	5
	with	1P	400	20	10	1.2	U1C 20D1/400	32703
				40	20	1.2	U1C 40C1/400	32707
				60	30	1.5	U1C 60C1/400	32711
	without	2P	400	10	5	1	U1 10D2/400	29313
				20	10	1.2	U1 20D2/400	29327
				40	20	1.2	U1 40C2/400	29341
				60	30	1.5	U1 60C2/400	29348
	with	2P	400	10	5	1	U1C 10D2/400	32700
				20	10	1.2	U1C 20D2/400	32704
				40	20	1.2	U1C 40C2/400	32708
				60	30	1.5	U1C 60C2/400	32712
	without	3P	400	10	5	1	U1 10D3/400	29314
				20	10	1.2	U1 20D3/400	29328
				40	20	1.2	U1 40C3/400	29342
				60	30	1.5	U1 60C3/400	29349
	without	3P+N	400	10	5	1	U1 10D3N/400	29318
				20	10	1.2	U1 20D3N/400	29332
				40	20	1.2	U1 40C3N/400	29346
				60	30	1.5	U1 60C3N/400	29353
	with	3P	400	10	5	1	U1C 10D3/400	32701
				20	10	1.2	U1C 20D3/400	32705
				40	20	1.2	U1C 40C3/400	32709
				60	30	1.5	U1C 60C3/400	32713
	without	4P	400	10	5	1	U1 10D4/400	29315
				20	10	1.2	U1 20D4/400	29329
				40	20	1.2	U1 40C4/400	29343
				60	30	1.5	U1 60C4/400	29350
	with	4P	400	10	5	1	U1C 10D4/400	32702
				20	10	1.2	U1C 20D4/400	32706
				40	20	1.2	U1C 40C4/400	32710
				60	30	1.5	U1C 60C4/400	32714

Surge Protective Devices Series 3SU1

Selection and ordering data

Replacement cartridges for surge protective devices type 2

	Number of poles	Max. Cont. operating voltage U _c (V)	Max. discharge current I _{max} (8/20) per pole (kA)	Nominal discharge current I _n (8/20) per pole (kA)	Voltage protection level U _p (kV)	Type code	Order code	
	1P	275	10	5	1	U1RP 27510	32962	
			20	10	1.2	U1RP 27520	32963	
			40	20	1.2	U1RP 27540	32964	
			60	30	1.5	U1RP 27560	32965	
	320	10	20	10	5	1	U1RP 32010	32966
				20	10	1.2	U1RP 32020	32967
				40	20	1.2	U1RP 32040	32968
				60	30	1.5	U1RP 32060	32969
	385	10	20	10	5	1	U1RP 38510	32970
				20	10	1.2	U1RP 38520	32971
				40	20	1.2	U1RP 38540	32972
				60	30	1.5	U1RP 38560	32973
	400	10	20	10	5	1	U1RP 40010	32974
				20	10	1.2	U1RP 40020	32975
				40	20	1.2	U1RP 40040	32976
				60	30	1.5	U1RP 40060	32977
	440	10	20	10	5	1	U1RP 44010	32978
				20	10	1.2	U1RP 44020	32979
				40	20	1.2	U1RP 44040	32980
				60	30	1.5	U1RP 44060	32981

Modular Contactors Series 3SCH8

Functions

- Remote switching and controlling of power circuits
- Used in building automation, controlling of small pumps, ventilations, heating systems, lighting systems, and so on

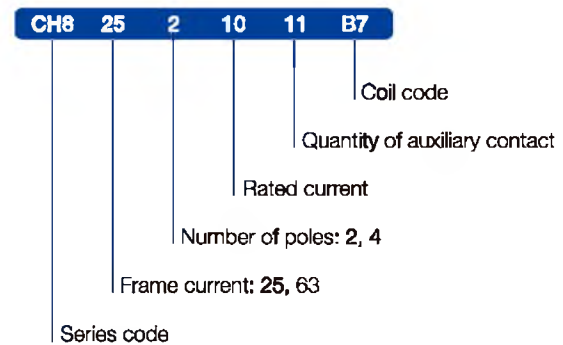
Technical specifications

Type	3SCH8-25	3SCH8-63
Standards	IEC 61095	IEC 60947-4-1
Number of poles	2, 4	
Type of current	AC	
Frequency (Hz)	50/60	
Rated voltage Un (V)	230/400	
Rated current In in AC-7a / AC1 (A)	10, 16, 20, 25	25, 32, 40, 63
Rated current In in AC-7b / AC1 (A)	4, 5.5, 7, 8.5	8.5, 12, 15, 25
Rated power in AC3 (Kw)		
230 V	2-5	5-13
400 V	6-13	15-40
Control circuit voltage (V)	24, 230	
Mechanical life (times)	300,000	
Electrical life (times)		
AC-7a / AC1	10,000	80,000
AC-7b / AC1	50,000	40,000
Degree of protection	IP20, with connected conductors	
Conductor cross-sections		
Solid and stranded (mm ²)	2-25	
Finely stranded with end sleeve (mm ²)	2-25	
Terminals		
Terminal tightening torque (N·m)	0,8-2,4	
Ambient temperature (°C)	-5 ~ +40, max. 95 % humidity	
Storage temperature (°C)	-40 ~ +75	
Connection Capacity (mm ²)	1-25	



2



Instruction of type code



Modular Contactors

Series 3SCH8

Selection and ordering data

	Number of poles	Width 18 mm mode	Rated current In		Contact position	Control voltage (V ac)	Rated control Power in		Type code	Order code			
			AC-7a	AC-7b			AC-7a	AC-7b					
			AC (A)	AC (A)			/230 V	/230 V					
	2	1	10	4	1NO+1NC	24	2	0.75	CH825 210 11B7	25896			
			10	4	2NO	24	2	0.75	CH825 210 20B7	25897			
			16	5.5	1NO+1NC	24	3.2	1.0	CH825 216 11B7	25898			
			16	5.5	2NO	24	3.2	1.0	CH825 216 20B7	25899			
			20	7	1NO+1NC	24	4	1.2	CH825 220 11B7	25900			
			20	7	2NO	24	4	1.2	CH825 220 20B7	25901			
			25	8.5	1NO+1NC	24	5	1.4	CH825 225 11B7	25902			
			25	8.5	2NO	24	5	1.4	CH825 225 20B7	25903			
			10	4	1NO+1NC	230	2	0.75	CH825 210 11P7	26156			
			10	4	2NO	230	2	0.75	CH825 210 20P7	26157			
			16	5.5	1NO+1NC	230	3.2	1.0	CH825 216 11P7	26158			
			16	5.5	2NO	230	3.2	1.0	CH825 216 20P7	26159			
			20	7	1NO+1NC	230	4	1.2	CH825 220 11P7	26160			
			20	7	2NO	230	4	1.2	CH825 220 20P7	26161			
			25	8.5	1NO+1NC	230	5	1.4	CH825 225 11P7	26162			
			25	8.5	2NO	230	5	1.4	CH825 225 20P7	26163			
				4	2	10	4	2NO+2NC	24	6.2	2.2	CH825 410 22B7	25904
						10	4	3NO+1NC	24	6.2	2.2	CH825 410 31B7	25905
10	4	4NO				24	6.2	2.2	CH825 410 40B7	25906			
10	4	4NC				24	6.2	2.2	CH825 410 04B7	25907			
16	5.5	2NO+2NC				24	10	3	CH825 416 22B7	25908			
16	5.5	3NO+1NC				24	10	3	CH825 416 31B7	25909			
16	5.5	4NO				24	10	3	CH825 416 40B7	25910			
16	5.5	4NC				24	10	3	CH825 416 04B7	25911			
20	7	2NO+2NC				24	13	3.5	CH825 420 22B7	25912			
20	7	3NO+1NC				24	13	3.5	CH825 420 31B7	25913			
20	7	4NO				24	13	3.5	CH825 420 40B7	25914			
20	7	4NC				24	13	3.5	CH825 420 04B7	25915			
25	8.5	2NO+2NC				24	15	4	CH825 425 22B7	25916			
25	8.5	3NO+1NC				24	15	4	CH825 425 31B7	25917			
25	8.5	4NO				24	15	4	CH825 425 40B7	25918			
25	8.5	4NC				24	15	4	CH825 425 04B7	25919			
10	4	2NO+2NC				230	6.2	2.2	CH825 410 22P7	26164			
10	4	3NO+1NC				230	6.2	2.2	CH825 410 31P7	26165			
10	4	4NO				230	6.2	2.2	CH825 410 40P7	26166			
10	4	4NC				230	6.2	2.2	CH825 410 04P7	26167			
16	5.5	2NO+2NC				230	10	3	CH825 416 22P7	26168			
16	5.5	3NO+1NC				230	10	3	CH825 416 31P7	26169			
16	5.5	4NO				230	10	3	CH825 416 40P7	26170			
16	5.5	4NC				230	10	3	CH825 416 04P7	26171			
20	7	2NO+2NC	230	13	3.5	CH825 420 22P7	26172						
20	7	3NO+1NC	230	13	3.5	CH825 420 31P7	26173						
20	7	4NO	230	13	3.5	CH825 420 40P7	26174						
20	7	4NC	230	13	3.5	CH825 420 04P7	26175						
25	8.5	2NO+2NC	230	15	4	CH825 425 22P7	26176						
25	8.5	3NO+1NC	230	15	4	CH825 425 31P7	26177						
25	8.5	4NO	230	15	4	CH825 425 40P7	26178						
25	8.5	4NC	230	15	4	CH825 425 04P7	26179						

(1) Please contact us if any other coil voltage required

Modular Contactors Series 3SCH8

Selection and ordering data

Number of poles	Width 18 mm mods	Rated current In		Contact position	Control voltage (V ac)	Rated control Power in		Type code	Order code
		AC-7a AC (A)	AC-7b AC			AC-7a /230 V (kW)	AC-7b /230 V		
2	2	25	8.5	1NO+1NC	24	5	1.4	CH863 225 11B7	25920
	2	25	8.5	2NO	24	5	1.4	CH863 225 20B7	25921
	2	25	8.5	2NC	24	5	1.4	CH863 225 02B7	25922
	2	32	12	1NO+1NC	24	6.5	2	CH863 232 11B7	25923
	2	32	12	2NO	24	6.5	2	CH863 232 20B7	25924
	2	32	12	2NC	24	6.5	2	CH863 232 02B7	25925
	2	40	15	1NO+1NC	24	8.5	2.5	CH863 240 11B7	25926
	2	40	15	2NO	24	8.5	2.5	CH863 240 20B7	25927
	2	40	15	2NC	24	8.5	2.5	CH863 240 02B7	25928
	2	63	25	1NO+1NC	24	13	4	CH863 263 11B7	25929
	2	63	25	2NO	24	13	4	CH863 263 20B7	25930
	2	63	25	2NC	24	13	4	CH863 263 02B7	25931
	2	25	8.5	1NO+1NC	230	5	1.4	CH863 225 11P7	26180
	2	25	8.5	2NO	230	5	1.4	CH863 225 20P7	26181
	2	25	8.5	2NC	230	5	1.4	CH863 225 02P7	26182
	2	32	12	1NO+1NC	230	6.5	2	CH863 232 11P7	26183
	2	32	12	2NO	230	6.5	2	CH863 232 20P7	26184
	2	32	12	2NC	230	6.5	2	CH863 232 02P7	26185
	2	40	15	1NO+1NC	230	8.5	2.5	CH863 240 11P7	26186
	2	40	15	2NO	230	8.5	2.5	CH863 240 20P7	26187
2	40	15	2NC	230	8.5	2.5	CH863 240 02P7	26188	
2	63	25	1NO+1NC	230	13	4	CH863 263 11P7	26189	
2	63	25	2NO	230	13	4	CH863 263 20P7	26190	
2	63	25	2NC	230	13	4	CH863 263 02P7	26191	
4	3	25	8.5	2NO+2NC	24	15	4	CH863 425 22B7	25932
	3	25	8.5	3NO+1NC	24	15	4	CH863 425 31B7	25933
	3	25	8.5	4NO	24	15	4	CH863 425 40B7	25934
	3	25	8.5	4NC	24	15	4	CH863 425 04B7	25935
	3	32	12	2NO+2NC	24	21	6.5	CH863 432 22B7	25936
	3	32	12	3NO+1NC	24	21	6.5	CH863 432 31B7	25937
	3	32	12	4NO	24	21	6.5	CH863 432 40B7	25938
	3	32	12	4NC	24	21	6.5	CH863 432 04B7	25939
	3	40	15	2NO+2NC	24	26	7.5	CH863 440 22B7	25940
	3	40	15	3NO+1NC	24	26	7.5	CH863 440 31B7	25941
	3	40	15	4NO	24	26	7.5	CH863 440 40B7	25942
	3	40	15	4NC	24	26	7.5	CH863 440 04B7	25943
	3	63	25	2NO+2NC	24	40	13	CH863 463 22B7	25944
	3	63	25	3NO+1NC	24	40	13	CH863 463 31B7	25945
	3	63	25	4NO	24	40	13	CH863 463 40B7	25946
	3	63	25	4NC	24	40	13	CH863 463 04B7	25947
	3	25	8.5	2NO+2NC	230	15	4	CH863 425 22P7	26192
	3	25	8.5	3NO+1NC	230	15	4	CH863 425 31P7	26193
	3	25	8.5	4NO	230	15	4	CH863 425 40P7	26194
	3	25	8.5	4NC	230	15	4	CH863 425 04P7	26195
3	32	12	2NO+2NC	230	21	6.5	CH863 432 22P7	26196	
3	32	12	3NO+1NC	230	21	6.5	CH863 432 31P7	26197	
3	32	12	4NO	230	21	6.5	CH863 432 40P7	26198	
3	32	12	4NC	230	21	6.5	CH863 432 04P7	26199	
3	40	15	2NO+2NC	230	26	7.5	CH863 440 22P7	26200	
3	40	15	3NO+1NC	230	26	7.5	CH863 440 31P7	26201	
3	40	15	4NO	230	26	7.5	CH863 440 40P7	26202	
3	40	15	4NC	230	26	7.5	CH863 440 04P7	26203	
3	63	25	2NO+2NC	230	40	13	CH863 463 22P7	26204	
3	63	25	3NO+1NC	230	40	13	CH863 463 31P7	26205	
3	63	25	4NO	230	40	13	CH863 463 40P7	26206	
3	63	25	4NC	230	40	13	CH863 463 04P7	26207	

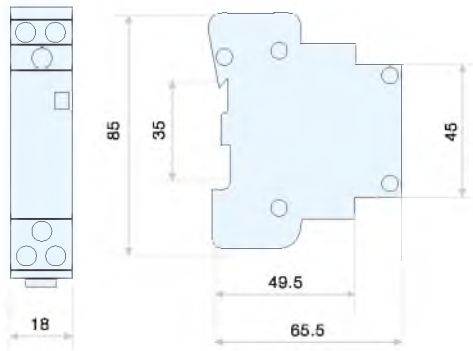
(1) Please contact us if any other coil voltage required

Modular Contactors Series 3SCH8

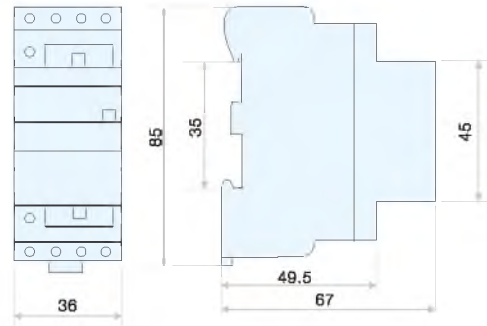
Outline and installation dimensions

unit in mm

3SCH8-25 2P



3SCH8-25 4P



3SCH8-63 2P



3SCH8-63 4P




Functions

- Widely used in terminal distribution system
- Being complete series of terminal distribution system together with series 3SB71

Technical specifications

- Standard: IEC 60884-1
- Rated current (A): 16
- Modules: 2.5
- Rated voltage Ue (V): 230/400
- Conductor cross-sections
- Solid and stranded (mm²): 0.75-35

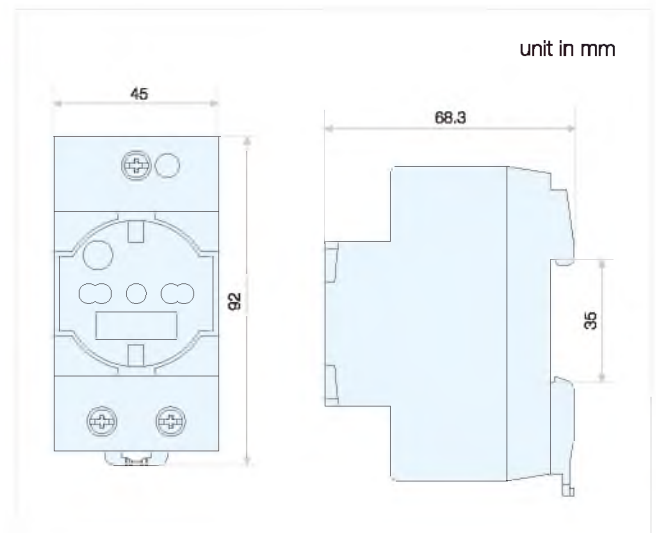
Selection and ordering data

	Number of poles (P)	Rated current In (A)	Type code	Order code
	2+E	16	MS71	17727



2

Outline and installation dimensions



Modular Pushbuttons and Indicators Series 3SB71PD

Functions

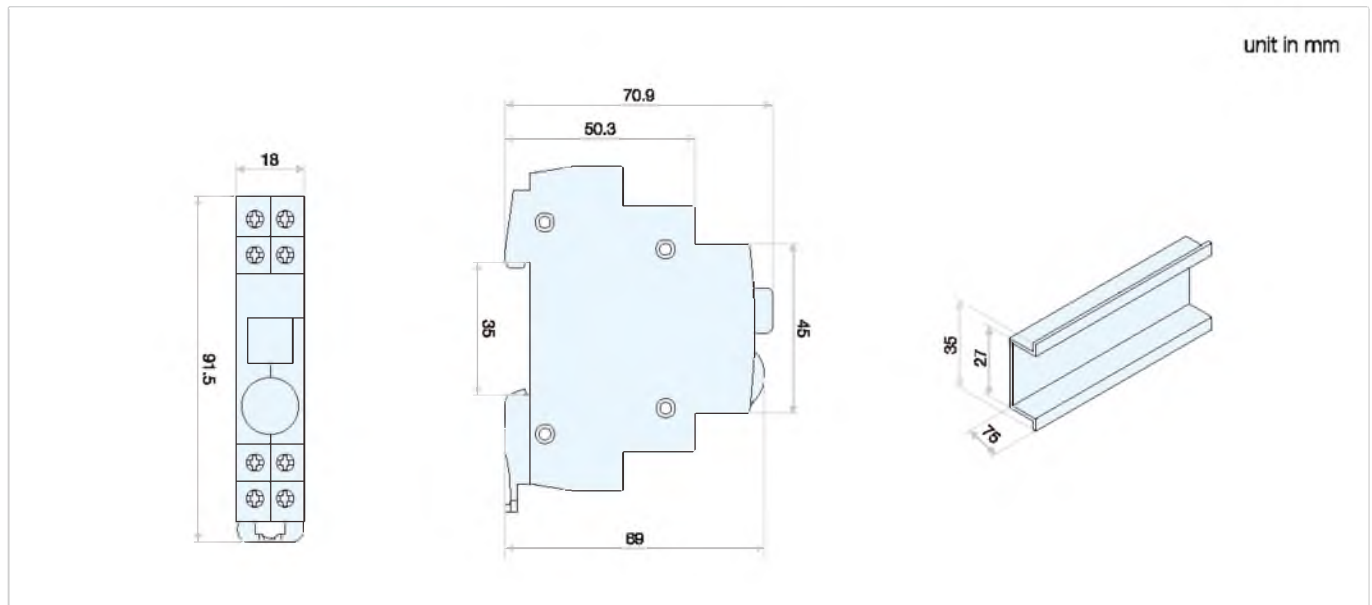
- The pushbuttons are used for remote control in every kind of electric installation.
- The indicator lamps signal any event in every kind of electric installation.
- 3SB71P, 3SB71D, 3SB71PD may match with MCB series 3SB71-63



Technical specifications

- Standard: IEC 60947-5-1
- Rated voltage U_e (V): 230
- Rated current I_n (A): 6
- Conventional glowing current (A): 16
- Frequency (Hz): 50/60
- Modules (18mm): 1
- Utilization category: AC14, DC13
- Degree of protection: IP20, with connected conductors
- Conductor cross-sections
 - Solid and stranded (mm^2): 1-10
 - Finely stranded with end sleeve (mm^2): 1-4
- Terminal tightening torque (N·m): 0.5
- Ambient temperature ($^{\circ}\text{C}$): -5 ~ +40, max. 95% humidity
- Storage temperature ($^{\circ}\text{C}$): -40 ~ +75
- Connection Capacity (mm^2): 1-16

Outline and installation dimensions



Modular Pushbuttons and Indicators

Series 3SB71PD

Selection and ordering data

3SB71P Pushbutton

Color		Voltage AC/DC (V)	1 NO + 2 NC		2 NO + 1 NC		2 NO + 2 NC		3 NO	
Pushbutton	Indicator		Type code	Order code	Type code	Order code	Type code	Order code	Type code	Order code
Green		-	B71P G12	16185	B71P G21	16186	B71P G22	16187	B71P G30	16188
Red		-	B71P R12	16189	B71P R21	16190	B71P R22	16191	B71P R30	16192
Black		-	B71P H12	16193	B71P H21	16194	B71P H22	16195	B71P H30	16196
Yellow		-	B71P Y12	16197	B71P Y21	16198	B71P Y22	16199	B71P Y30	16200
Blue		-	B71P B12	16201	B71P B21	16202	B71P B22	16203	B71P B30	16204

3SB71PD Pushbutton + Indicator

Color		Voltage AC/DC (V)	1 NO + 2 NC		2 NO + 1 NC		2 NO + 2 NC		3 NO	
Pushbutton	Indicator		Type code	Order code	Type code	Order code	Type code	Order code	Type code	Order code
Green		12	B71PD G12V12	16205	B71PD G21V12	16206	-	-	B71PD G30V12	16207
Red		12	B71PD R12V12	16208	B71PD R21V12	16209	-	-	B71PD R30V12	16210
White		12	B71PD W12V12	16211	B71PD W21V12	16212	-	-	B71PD W30V12	16213
Yellow		12	B71PD Y12V12	16214	B71PD Y21V12	16215	-	-	B71PD Y30V12	16216
Blue		12	B71PD B12V12	16217	B71PD B21V12	16218	-	-	B71PD B30V12	16219
Green		24	B71PD G12V24	16220	B71PD G21V24	16221	-	-	B71PD G30V24	16222
Red		24	B71PD R12V24	16223	B71PD R21V24	16224	-	-	B71PD R30V24	16225
White		24	B71PD W12V24	16226	B71PD W21V24	16227	-	-	B71PD W30V24	16228
Yellow		24	B71PD Y12V24	16229	B71PD Y21V24	16230	-	-	B71PD Y30V24	16231
Blue		24	B71PD B12V24	16232	B71PD B21V24	16233	-	-	B71PD B30V24	16234
Green		110	B71PD G12V110	16235	B71PD G21V110	16236	-	-	B71PD G30V110	16237
Red		110	B71PD R12V110	16238	B71PD R21V110	16239	-	-	B71PD R30V110	16240
White		110	B71PD W12V110	16241	B71PD W21V110	16242	-	-	B71PD W30V110	16243
Yellow		110	B71PD Y12V110	16244	B71PD Y21V110	16245	-	-	B71PD Y30V110	16246
Blue		110	B71PD B12V110	16247	B71PD B21V110	16248	-	-	B71PD B30V110	16249
Green		230	B71PD G12V230	16250	B71PD G21V230	16251	-	-	B71PD G30V230	16252
Red		230	B71PD R12V230	16253	B71PD R21V230	16254	-	-	B71PD R30V230	16255
White		230	B71PD W12V230	16256	B71PD W21V230	16257	-	-	B71PD W30V230	16258
Yellow		230	B71PD Y12V230	16259	B71PD Y21V230	16260	-	-	B71PD Y30V230	16261
Blue		230	B71PD B12V230	16262	B71PD B21V230	16263	-	-	B71PD B30V230	16264

3SB71D Indicator

Color		Indicator	12 V AC/DC		24 V AC/DC		110 V AC/DC		230 V AC/DC	
Pushbutton			Type code	Order code	Type code	Order code	Type code	Order code	Type code	Order code
Green	-		B71D G12	16265	B71D G24	16266	B71D G110	16267	B71D G230	16268
Red	-		B71D R12	16269	B71D R24	16270	B71D R110	16271	B71D R230	16272
White	-		B71D W12	16273	B71D W24	16274	B71D W110	16275	B71D W230	16276
Yellow	-		B71D Y12	16277	B71D Y24	16278	B71D Y110	16279	B71D Y230	16280
Blue	-		B71D B12	16281	B71D B24	16282	B71D B110	16283	B71D B230	16284

Modular Pushbuttons and Indicators

Series 3SB1D

Functions

- The pushbuttons are used for remote control in every kind of electric installation.
- The indicator lamps signal any event in every kind of electric installation.
- 3SB1D may match with MCB series 3SB5, 3SB52, 3SB1-63N




Technical specifications

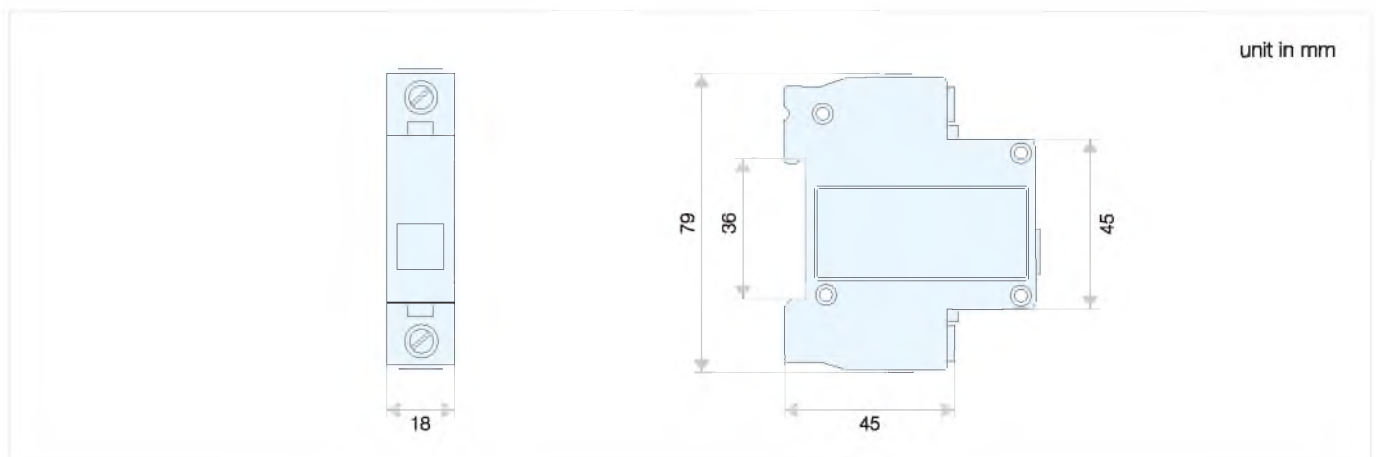
- Standard: IEC 60947-5-1
- Rated voltage U_e (V): 230
- Rated current I_n (A): 6
- Conventional glowing current (A): 16
- Frequency (Hz): 50/60
- Modules (18mm): 1
- Utilization category: AC14, DC13
- Degree of protection: IP20, with connected conductors
- Conductor cross-sections
 - Solid and stranded (mm²): 1-10
 - Finely stranded with end sleeve (mm²): 1-4
- Terminal tightening torque (N·m): 0.5
- Ambient temperature (°C): -5 ~ +40, max. 95% humidity
- Storage temperature (°C): -40 ~ +75
- Connection Capacity (mm²): 1-16

Selection and ordering data

3SB1D Indicator lamps

	Color	Indicator	Illumination	Type code	Order code	Pack.
	Red	●	Neon bulb	B1D N1	24734	12
	Green	●	Neon bulb	B1D N2	24735	12
	Yellow	●	Neon bulb	B1D N3	24736	12
	White	○	Neon bulb	B1D N4	24737	12
	Grey	○	Neon bulb	B1D N5	24738	12

Outline and installation dimensions



Over-Voltage and Under-Voltage Protectors Series 3SVP6

Functions

- Over-voltage and under-voltage protection
- Used in terminal distribution system
- Double busbar design, with stronger wiring ability
- Self restart and recovery
- Fault can be indicated by LED
- Installed in DIN rail

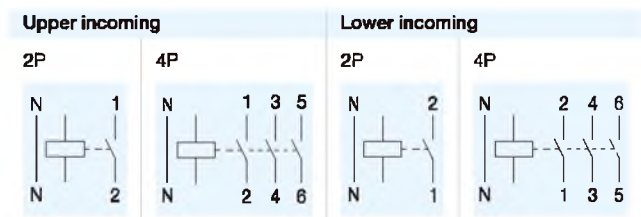
Technical specifications

- Standards: IEC 60255-1, IEC 61010-1
- Number of poles (P): 2, 4
- Rated current I_n (A): 32, 40, 50, 65
- Rated frequency (Hz): 50/60
- Rated voltage U_n (V): 220
- Over-voltage action cut-off value (V AC): 265
- Over-voltage recovery value (V AC): 257
- Under-voltage action cut-off value: 175
- Under-voltage recovery value II (V AC): 180
- Action delayed time: 1 seconds
- Recovery delayed time: 30 seconds
- IP degree: IP20
- Operating temperature: -5 ~ +40 °C

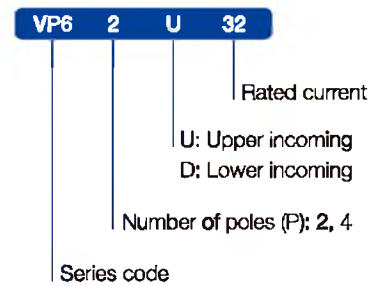
Selection and ordering data

Incoming	Number of poles (P)	Rated current I_n (A)	Type code	Order code	Pack.
Upper Incoming	2	32	VP6 2U32	27680	6
		40	VP6 2U40	27681	6
		50	VP6 2U50	27682	6
	4	32	VP6 4U32	27683	6
		40	VP6 4U40	27684	3
		50	VP6 4U50	27685	3
Lower incoming	2	32	VP6 2D32	27686	3
		40	VP6 2D40	27687	3
		50	VP6 2D50	27688	3
	4	32	VP6 4D32	27689	6
		40	VP6 4D40	27690	6
		50	VP6 4D50	27691	6
	4	63	VP6 4D63	27692	3
		40	VP6 4D40	27693	3
		50	VP6 4D50	27694	3
		63	VP6 4D63	27695	3

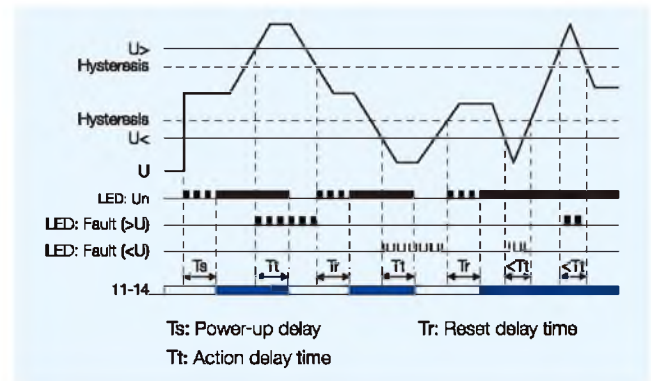
Wiring Diagram



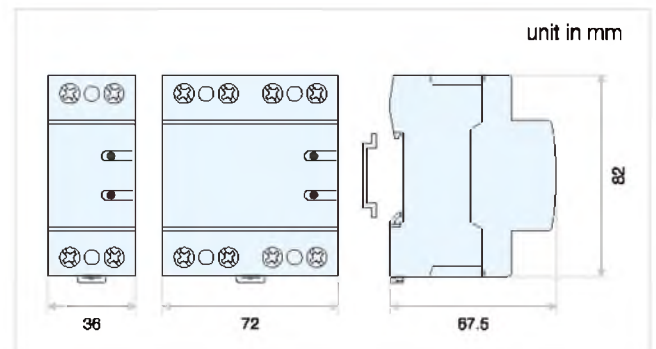
Instruction of type code



Functions Diagram



Outline and installation dimensions




Modular Doorbell Series 3SU213

Technical specifications

- Rated voltage AC (V): 8, 12, 24, 36, 220, 230, 240
- Rated frequency (Hz): 50/60
- Max. continuous duty (minute): 30
- Connection terminal:
 - Pillar terminal with
 - Clamp
- Connection capacity, rigid conductor (mm²): 10

Selection and ordering data

	Rated current I _n			
	(A)	Type code	Order code	Pack.
	8	SU213 1	24753	12
	12	SU213 2	24754	12
	24	SU213 3	24755	12
	36	SU213 4	24756	12
	220	SU213 5	24757	12
	230	SU213 6	24758	12
	240	SU213 7	24759	12

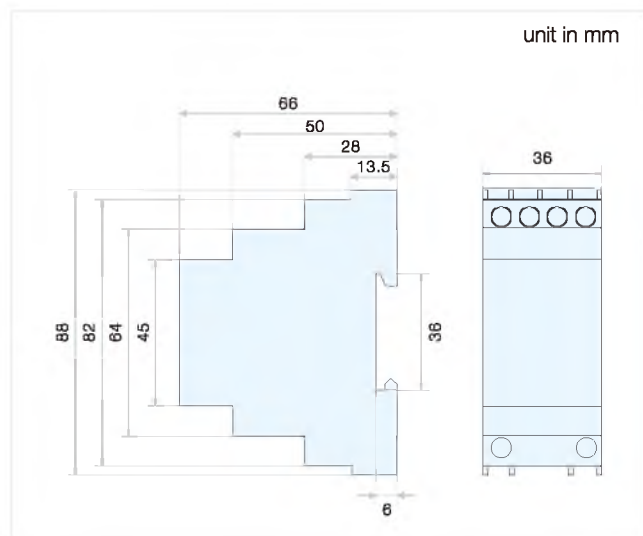


Doorbell Transformer Series BT8


Technical specifications

- Rated input voltage AC (V): 230
- Rated output voltage AC (V): 4, 6, 8, 12, 16, 24
- Rated frequency (Hz): 50/60
- Rated output power (VA): 6
- Consumption (W): 1.15
- Pollution class: 2

Outline and installation dimensions



Selection and ordering data

	Rated output power			
	Type code	Order code	Pack.	
	8 VA	BT8-8	24751	1

Modular Time Switches

Series 3SE8, 3SUL181H, 3SRC18, 3SHC18A

Functions

- Controlling circuit opening and closing according to the scheduled program.
- Can be set on the scheduled program
- Available on hourly,daily and weekly version and equipped with a 16A contact
- Fitting applications such as shop lighting systems, public buildings, schools, heating and irrigation systems and so forth.



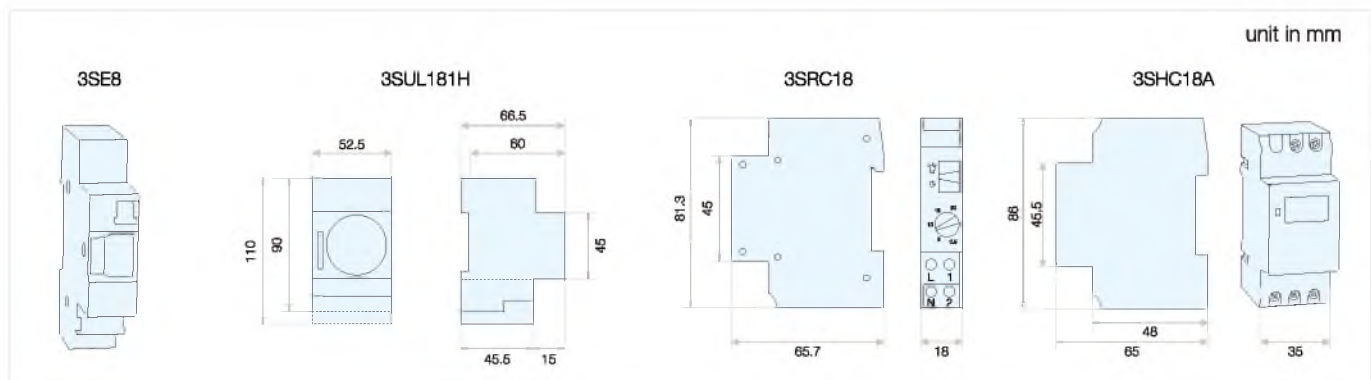
Technical specifications

Type	3SE8	3SUL181H	3SRC18	3SHC18A
Standard	IEC 60730-1			
Rated supply voltage (V)	AC 220-240			
Contact type	-	-	-	1NC OR 1NO
Switching capacity resistive load (A)	16	16	16	16
inductive load (A)	4			
Rated frequency (Hz)	50/60			
Full time range	7 minutes	24 minutes	20 minutes	24 hours or one week
Minimum setting unit	0.5 minutes	30 minutes	0.5 minutes	-
Electrical life (times)	10 ⁵ times	10 ⁶ times	10 ⁵ times	10 ⁵ times
Mechanical life (times)	10 ⁷ times	10 ⁷ times	10 ⁷ times	10 ⁷ times
Modules (18 mm)	1	3	1	2
Operating temperature (°C)	-5 ~ +40, max. 95 % humidity			
Storage temperature (°C)	-40 ~ +75			
Mounting	ON DIN RAIL			
Terminal size for cable (mm ²)	2.5			

Selection and ordering data

	Rated current In (A)	Full time range	Type code	Order code
3SE8	16	7 minutes	E8	24776
3SUL181H	16	24 hours	SUL181H	13684
3SRC18	16	20 minutes	ALC18	24780
3SHC18A	16	24 hours or one week	HC18A	24777

Outline and installation dimensions



Distribution Boxes

Series 3SD5 & 3SD6

Functions

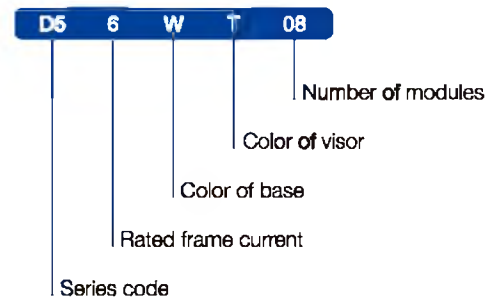
- Equipped with various modular electric for the function of terminal power distribution .
- Suited for the installation of all Sassin individual modular devices. (RCDs, MCBs, RCBO's, switch disconnectors etc).
- Used in residential building, non-residential building, industry.



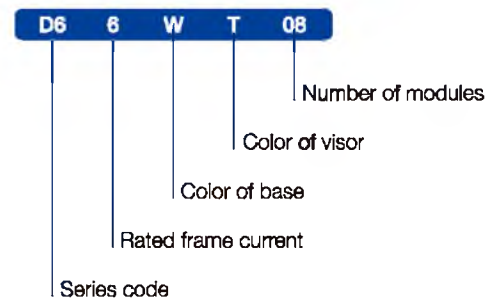
Technical specifications

- Standard: IEC 60439-3
- Modules (No.): 4, 6, 8, 12, 18, 24, 36
- Row :
- Single row for 4, 6, 8, 12, 18 modules
- 2 rows for 24 modules
- 3 rows for 36 modules
- Rated frame current In (A): 63, 100
- Color: White RAL 9003 and gray RAL 7035
- The color of door: Transparent, non transparent
- Mounting type: Surface, Flush.
- Degree of protection: IP30
- Material:
- HIPS for body
- SAN for door (4-18 modules)
- PC for door (24 & 36 modules)
- Fire resistance: 650 °C / 30 s
- Ambient temperature (°C): -5 ~ +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75

Instruction of type code




Instruction of type code



Distribution Boxes Series 3SD5 & 3SD6

Selection and ordering data


Flush mounting 3SD5

	Rated current In (A)	Color of base	Color of door	Number of module	Type code					
					Type code	Order code				
	63	White	White	4	D506WW04	23157				
				6	D506WW06	23163				
				8	D506WW08	23169				
				12	D506WW12	23137				
				18	D506WW18	23143				
				24	D506WW24	23149				
			36	D506WW36	23153					
			Transparent	4	D506WT04	23159				
				6	D506WT06	23165				
				8	D506WT08	23171				
				12	D506WT12	23139				
				18	D506WT18	23145				
				24	D506WT24	23150				
			Grey	Grey	Grey	4	D506GG04	24555		
						6	D506GG06	24557		
						8	D506GG08	24559		
						12	D506GG12	24563		
						18	D506GG18	24565		
	24	D506GG24				24567				
	100	White	White	Transparent	36	D506GG36	24569			
					4	D506GT04	24556			
					6	D506GT06	24558			
					8	D506GT08	24560			
					12	D506GT12	24564			
					18	D506GT18	24566			
				24	D506GT24	24568				
				36	D506GT36	24570				
				Grey	Grey	Grey	White	4	D510WW04	30655
								6	D510WW06	30657
								8	D510WW08	30659
								12	D510WW12	30663
								18	D510WW18	30665
								24	D510WW24	30667
							36	D510WW36	30669	
							Transparent	4	D510WT04	30656
								6	D510WT06	30658
8								D510WT08	30660	
12	D510WT12	30664								
18	D510WT18	30666								
24	D510WT24	30668								
Transparent	36	D510WT36	30670							
	Grey	Grey	Grey				4	D510GG04	30697	
							6	D510GG06	30699	
							8	D510GG08	30701	
							12	D510GG12	30705	
				18	D510GG18	30707				
24				D510GG24	30709					
36	D510GG36	30711								
Transparent	Transparent	Transparent	Transparent	4	D510GT04	30698				
				6	D510GT06	30700				
				8	D510GT08	30702				
				12	D510GT12	30706				
				18	D510GT18	30708				
				24	D510GT24	30710				
36	D510GT36	30712								

Distribution Boxes Series 3SD5 & 3SD6

Selection and ordering data

Surface mounting 3SD6

	Rated current In (A)	Color of base	Color of door	Number of module	Type code		
					Type code	Order code	
	63	White	White	4	D606WW04	23161	
				6	D606WW06	23167	
				8	D606WW08	23173	
				12	D606WW12	23141	
				18	D606WW18	23147	
				24	D606WW24	23151	
				36	D606WW36	23155	
				Transparent	4	D606WT04	23162
					6	D606WT06	23168
		8	D606WT08		23174		
		12	D606WT12		23142		
		18	D606WT18		23148		
		24	D606WT24		23152		
		36	D606WT36		23156		
		Grey	Grey		4	D606GG04	24571
					6	D606GG06	24573
				8	D606GG08	24575	
				12	D606GG12	24579	
	18			D606GG18	24581		
	24			D606GG24	24583		
	36			D606GG36	24585		
	Transparent			4	D606GT04	24572	
				6	D606GT06	24574	
		8	D606GT08	24576			
		12	D606GT12	24580			
		18	D606GT18	24582			
		24	D606GT24	24584			
		36	D606GT36	24586			
		100	White	White	4	D610WW04	30671
					6	D610WW06	30673
	8				D610WW08	30675	
	12				D610WW12	30679	
	18				D610WW18	30681	
	24				D610WW24	30683	
	36				D610WW36	30685	
	Transparent				4	D610WT04	30672
6					D610WT06	30674	
8				D610WT08	30676		
12				D610WT12	30680		
18				D610WT18	30682		
24				D610WT24	30684		
36				D610WT36	30686		
Grey				Grey	4	D610GG04	30713
					6	D610GG06	30715
	8				D610GG08	30717	
	12				D610GG12	30721	
	18		D610GG18		30723		
	24		D610GG24		30725		
	36		D610GG36		30727		
	Transparent		4		D610GT04	30714	
			6		D610GT06	30716	
8			D610GT08	30718			
12			D610GT12	30722			
18			D610GT18	30724			
24			D610GT24	30726			
36			D610GT36	30728			

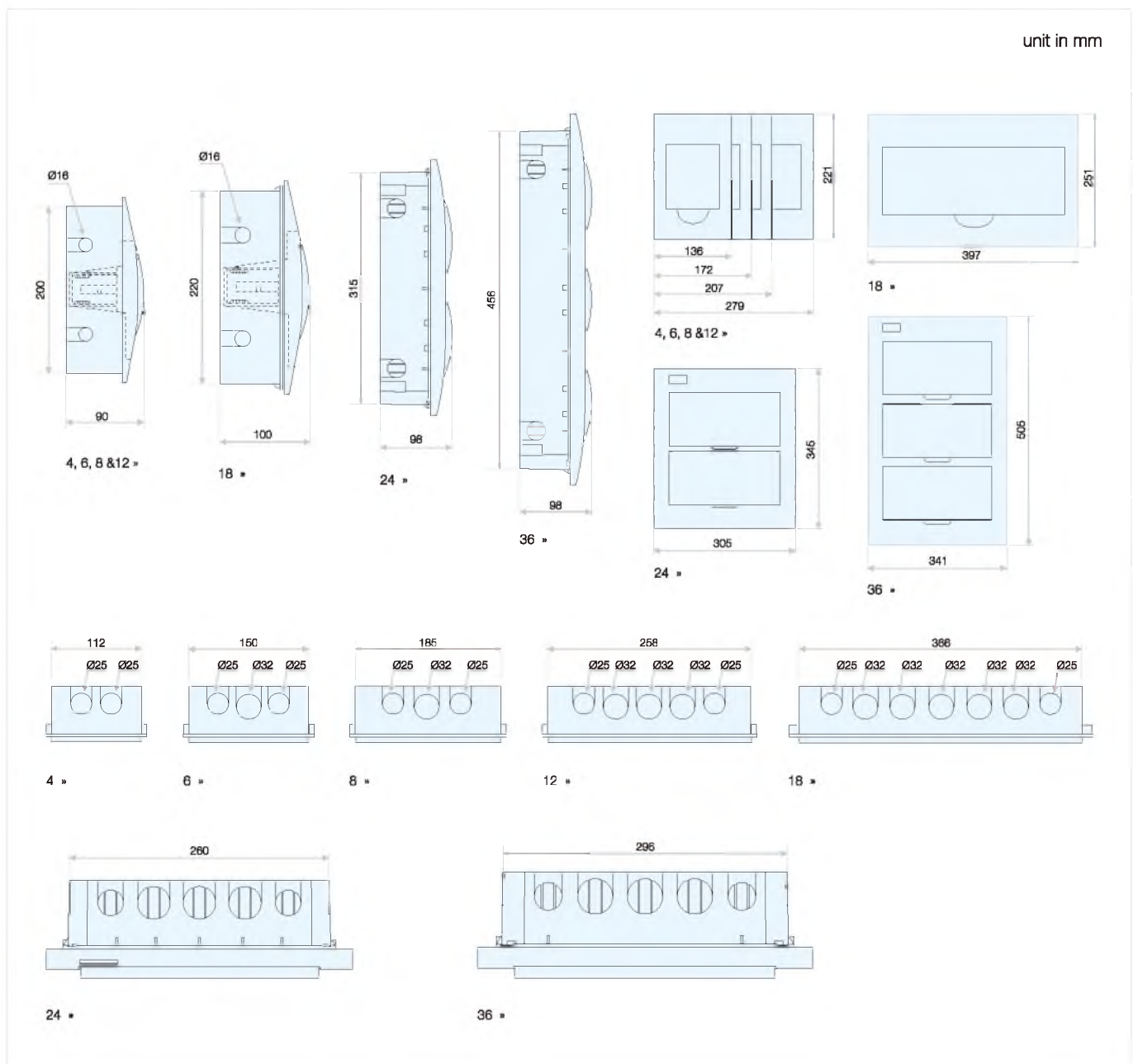
Distribution Boxes Series 3SD5 & 3SD6

Fitting inside of the enclose

Attached with sticky label for marking on wire front panel; ready equipped with zero line and earth terminal bar and attached with zero bar, earth bar marks and alarm mark; users can select to connect with wire or insulating busbar method.

Neutral	Neutral bar length (mm)	Neutral bar holes (piece)	Earth bar length (mm)	Earth bar holes (piece)	Width (mm)	Height (mm)
4	37	4M4X7+M4X7	29.5	3M4X7+M4X7	6	8
6	52	6M4X7+M4X7	29.5	3M4X7+M4X7	6	8
8	67	8M4X7+M4X7	37	4M4X7+M4X7	6	8
12	37+52	10M4X7+2M4X7	52	6M4X7+M4X7	6	8
18	74.5+37	13M4X7+2M4X7	74.5	9M4X7+M4X7	6	8
24	60+60+28+28	20M4X7+4M4X7	28+28	6M4X7+2M4X7	6	8
36	60+60+60+28	24M4X7+4M4X7	60+28	10M4X7+2M4X7	6	8

Outline and installation dimensions (3SD5)

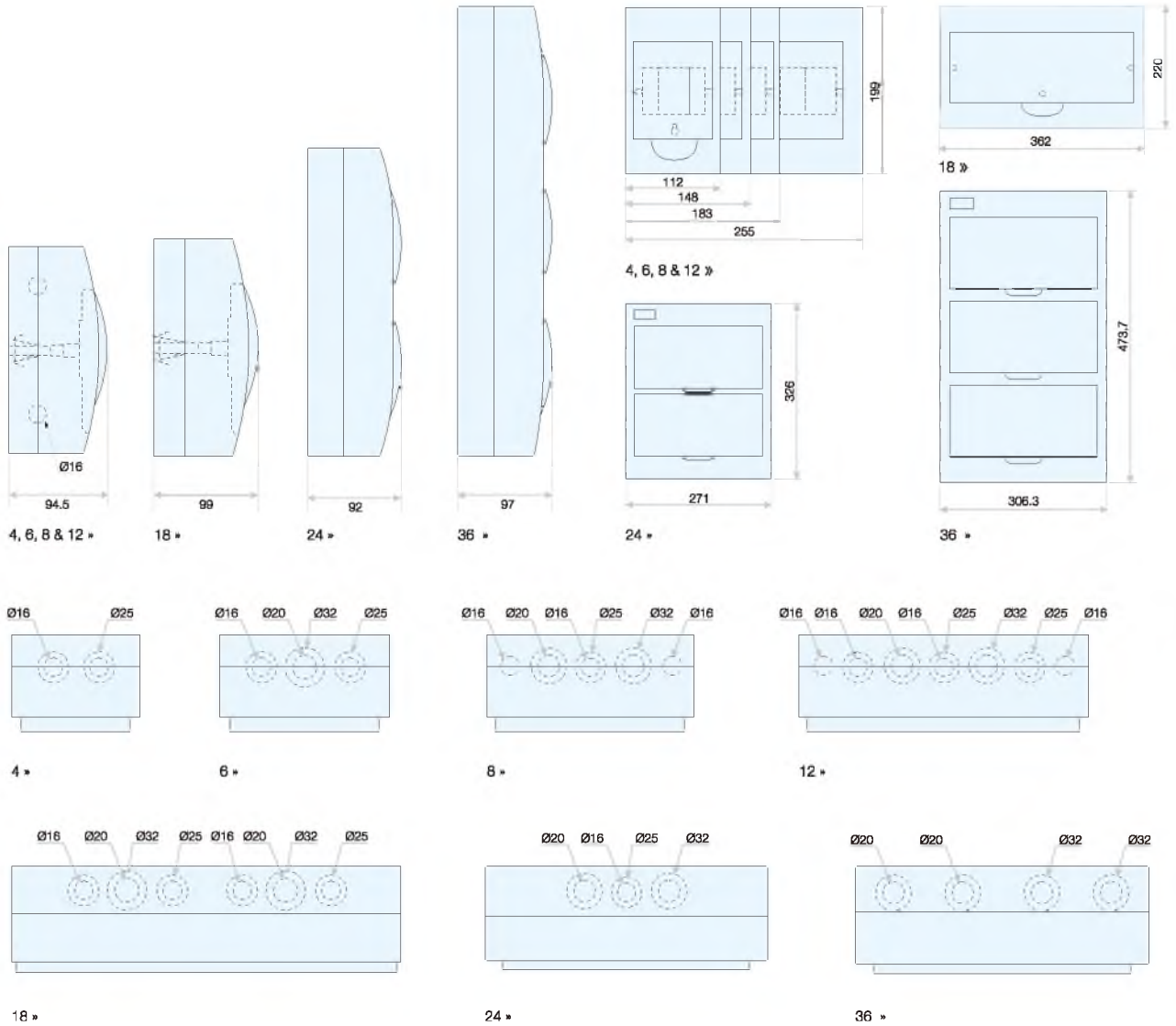


Distribution Boxes Series 3SD5 & 3SD6

Outline and installation dimensions (3SD6)

unit in mm

2



Functions

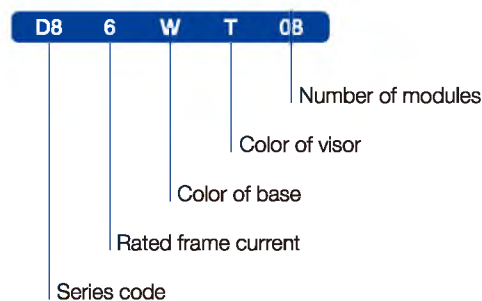
- Equipped with various modular electric for the function of terminal power distribution.
- Suited for the installation of all Sassin individual modular devices. (RCDs, MCBs, RCBO's, switch disconnectors etc).
- Used in residential building, non-residential building, industry.

Technical specifications

- Standard: IEC 60439-3
- Modules: 4, 7, 10, 13, 16, 21
- Row: Single
- Rated voltage In (A): 100
- Color: White RAL 9003
- Color of door: Transparent, non transparent
- Mounting type: Surface
- Degree of protection: IP30
- Material:
 - HIPS for body
 - AS for door
- Fire resistance: 650 °C / 30 s
- Ambient temperature (°C): -5 ~ +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75



Instruction of type code



Selection and ordering data

3SD8 Surface Mounting

	Rated current In (A)	Color of base	Color of door	Number of module	Type code		
					Type code	Order code	
	100	White	White	4	D810WW04	23176	
				7	D810WW07	23178	
				10	D810WW10	23180	
				13	D810WW13	23182	
				16	D810WW16	23184	
				21	D810WW21	23186	
	Transparent	100	White	Transparent	4	D810WT04	23175
					7	D810WT07	23177
					10	D810WT10	23179
					13	D810WT13	23181
					16	D810WT16	23183
					21	D810WT21	23185

Distribution Boxes

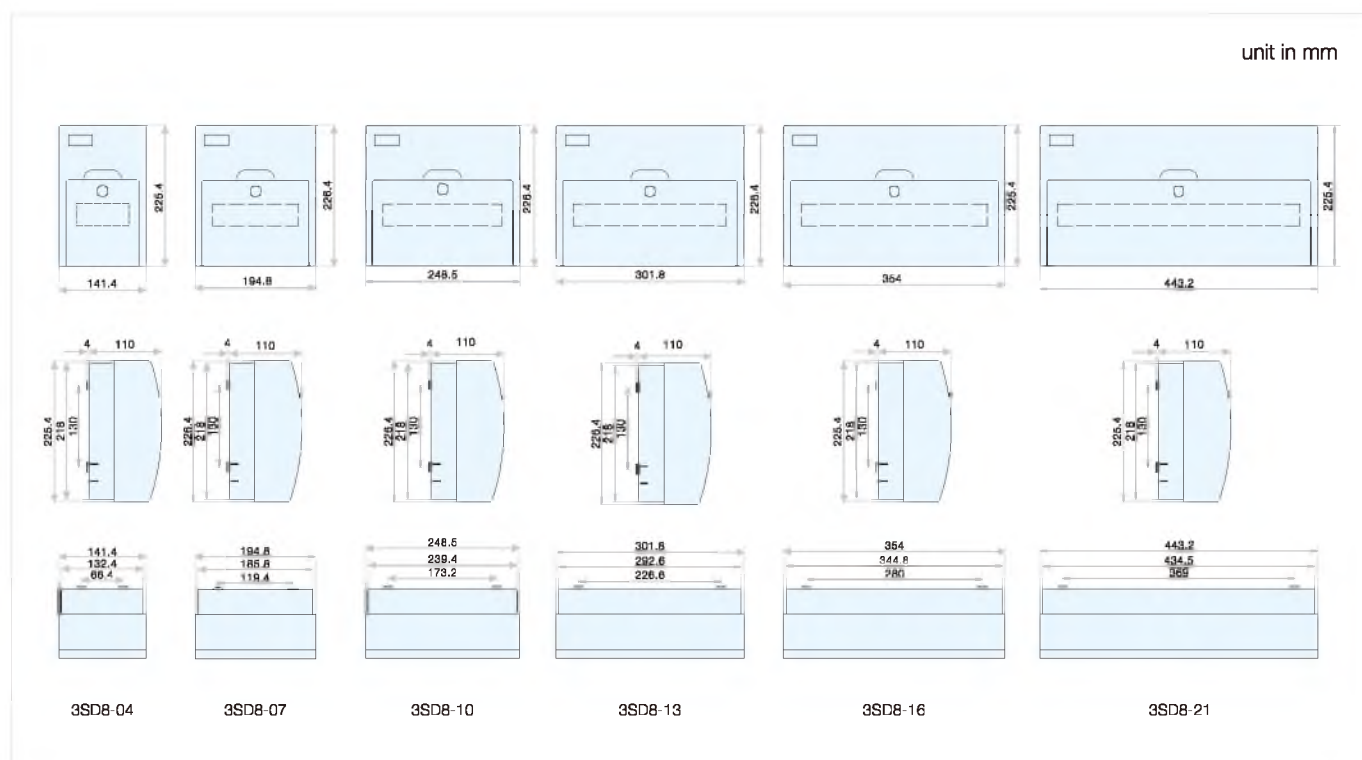
Series 3SD8

Fitting inside of the enclose

Attached with sticky label for marking on wire front panel; ready equipped with zero line and earth terminal bar and attached with zero bar, earth bar marks and alarm mark; users can select to connect with wire or insulating busbar method.

The Number of Module	Neutral bar holes 1	Neutral bar holes 2	Earth bar holes
4 module	1xØ6 + 1xØ5.8 + 3xØ5.4	-	1xØ6 + 1xØ5.8 + 3xØ5.4
7 module	1xØ6 + 1xØ5.8 + 6xØ5.4	-	1xØ6 + 1xØ5.8 + 4xØ5.4
10 module	1xØ6 + 1xØ5.8 + 10xØ5.4	-	1xØ6 + 1xØ5.8 + 8xØ5.4
13 module	1xØ6 + 1xØ5.8 + 8xØ5.4	1xØ6 + 1xØ5.8 + 6xØ5.4	1xØ6 + 1xØ5.8 + 11xØ5.4
16 module	1xØ6 + 1xØ5.8 + 8xØ5.4	1xØ6 + 1xØ5.8 + 8xØ5.4	1xØ6 + 1xØ5.8 + 14xØ5.4
21 module	1xØ6 + 1xØ5.8 + 8xØ5.4	1xØ6 + 1xØ5.8 + 11xØ5.4	1xØ6 + 1xØ5.8 + 18xØ5.4

Outline and installation dimensions (3SD8)



Technical specifications


- Standard: IEC 60529
- Modules (NO.): 1, 2, 4, 8
- Mounting type: Surface
- Color: White
- Degree of protection: IP30
- Material: ABS
- Fire resistance: 650 °C / 30 s
- Ambient temperature (°C): -5 ~ +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75



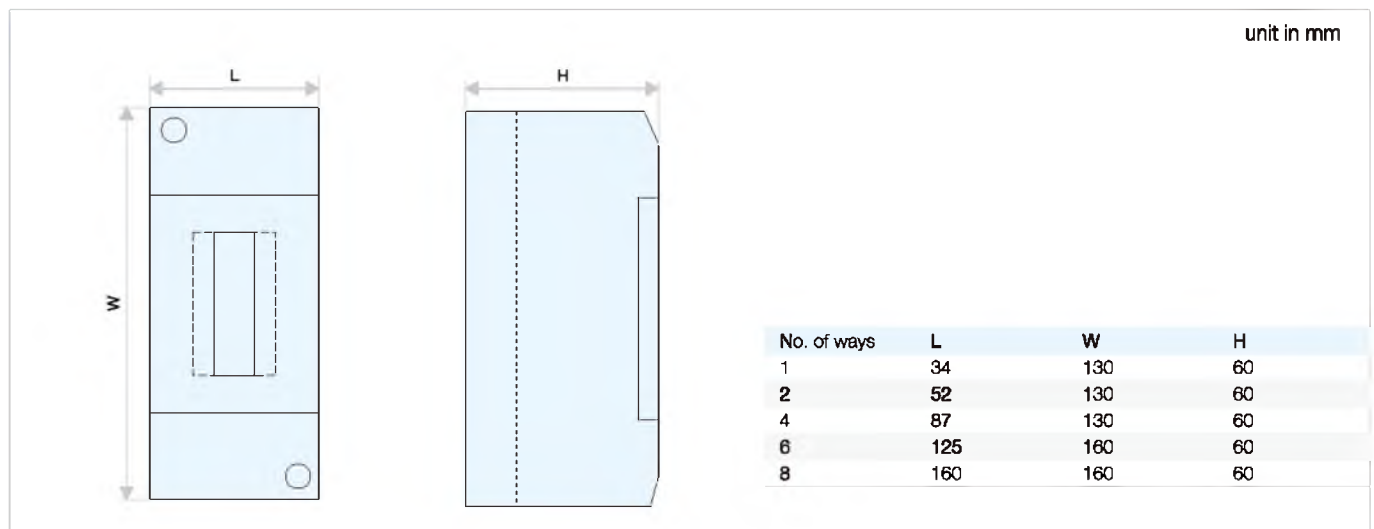
2

Selection and ordering data

3SD7N Surface mounting

	Rated current In (A)	Color of base	Number of module	Outline Dimension (mm)			Type code	Order code
				L	W	H		
	63	White	1	40	142	65	D7N1	36031
			2	56	142	65	D7N2	36032
			4	90	142	65	D7N4	36033
			8	167.5	145	65	D7N8	14973

Outline and installation dimensions



Distribution Boxes

Series 3SHT & 3SHA

Functions

- Equipped with various modular electric for the function of terminal power distribution.
- Suited for the installation of all Sassin individual modular devices. (RCDs, MCBs, RCBO's, Isolators etc).
- Used in residential building, non-residential building, industry.




Technical specifications


- Standard: IEC 60439-3
- Number of modules: 5, 8, 12, 15, 18, 24 for 3SHT
4, 8, 12, 24 for 3SHA
- Row: Single for 5, 8, 12, 15, 18 modules
Two for 24 modules
- Rated current In (A): 63
- Color: White
- The color of door: Transparent
- Mounting type: Surface
- Degree of protection: IP54
- Material: ABS for body
PC for door
- Fire resistance: 650 °C / 30 s
- Ambient temperature (°C): -5 ~ +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75

Selection and ordering data

3SHT surface mounting

	Rated current In (A)	Color of base	Color of door	Degree of protection	Number of module	Type code	Order code
	63	White	Transparent	IP65	5	HT05	24605
					8	HT08	24606
					12	HT12	24607
					15	HT15	24608
					18	HT18	24609
					24	HT24	24610

3SHA surface mounting

	Rated current In (A)	Color of base	Color of door	Degree of protection	Number of module	Type code	Order code
	63	White	Transparent	IP65	4	HA04	30729
					8	HA08	30730
					12	HA12	30731
					18	HA18	30732
					24	HA24	30733

Distribution Boxes Series 3SD5T (Metal Base)

Functions

- Equipped with various modular electric for the function of the terminal power distribution
- Suited for the installation of all the Sassin individual modular device (RCDs, MCBs, RCBOs, switch disconnectors etc.)
- Used in the residential buildings, non-residential buildings and industry
- Lifting installation rail, easy for installation

Technical specifications

- Standard: IEC 60439-3
- Modules: 4, 6, 8, 12, 18
- Row: Single
- Rated frame current In (A): 63
- Color: White RAL 9003, Grey RAL7035
- The color of the door: Transparent, non transparent
- Mounting type: Flush
- Degree of the protection: IP40
- Material:
 - HIPS for the body
 - SAN for the door
 - Metal for the base
- Fire resistance: 650 °C / 30 s
- Ambient temperature (°C): -5 ~ +40, 50% humidity permitted under max +40 °C
- Storage temperature (°C): -40 ~ +75

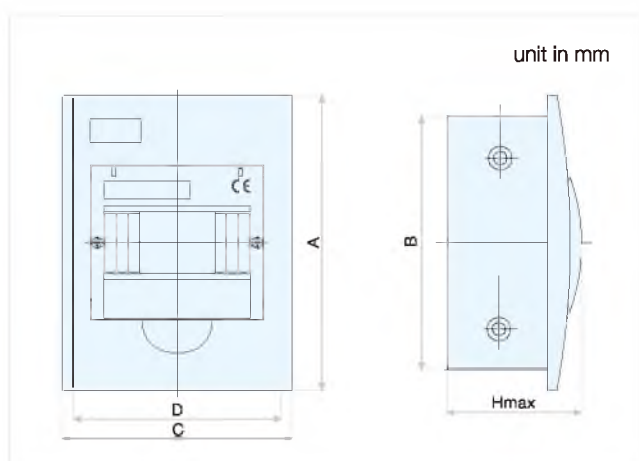


Selection and ordering data

Flush mounting 3SD5T

	Rated current In (A)	Color of base	Color of door	Number of module	Type code	Order code	
	63	Grey	Transparent	4	D5T06GT04	23160	
				6	D5T06GT06	23166	
				8	D5T06GT08	23172	
				12	D5T06GT12	23140	
				18	D5T06GT18	23146	
			Grey		4	D5T06GG04	23158
					6	D5T06GG06	23164
					8	D5T06GG08	23170
					12	D5T06GG12	23138
					18	D5T06GG18	23144

Outline and installation dimensions



Type	A (mm)	B (mm)	C (mm)	D (mm)	H max (mm)
3SD5T-04	221	190.5	136	108.5	102
3SD5T-06	221	190.5	172	142.5	102
3SD5T-08	221	190.5	207	180.5	102
3SD5T-12	221	190.5	279	252.5	102
3SD5T-18	251	223.5	397	360.5	103

Metal Distribution Boxes

Series TY3

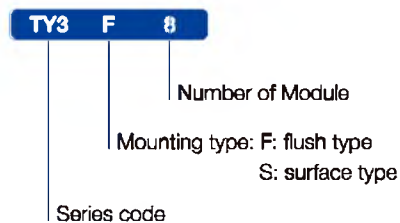
Functions

- Equipped with various modular electric for the function of terminal power distribution
- Suited for the installation of all Sassin individual modular devices (RCDs, MCBs, RCBOs, Isolators etc)
- Used in the residential buildings, non-residential buildings and industry.
- All-metal enclosure, safe and fireproof, firm, practical.

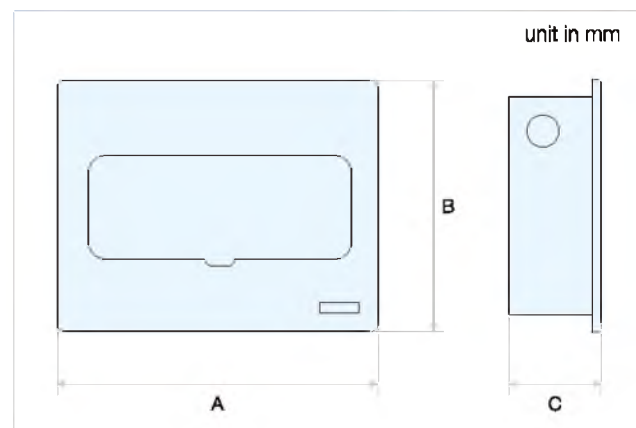
Technical specifications

- Executive Standard: IEC17466
- Protection degree: IEC60529 IP40
- Number of modules: 8/12/16/18/24/32/40/48/60
- Rated voltage: 230/380 V
- Color: White
- Type: flush type and suspension type

Instruction of type code



Outline and installation dimensions



Selection and ordering data

Type	Rated current In (A)	Number of module	Outline dimension			Type code	Order code
			A (mm)	B	C		
Flush type	63	8	250	250	92	TY3 F8	36519
		12	320	250	92	TY3 F12	36520
		16	390	250	92	TY3 F16	36521
		20	460	250	92	TY3 F20	36522
		24	320	500	100	TY3 F24	36523
		32	390	500	100	TY3 F32	36524
		40	460	500	100	TY3 F40	36525
		48	390	750	100	TY3 F48	36526
Surface type	63	60	460	750	100	TY3 F60	36527
		8	250	250	92	TY3 S8	36528
		12	320	250	92	TY3 S12	36529
		16	390	250	92	TY3 S16	36530
		20	460	250	92	TY3 S20	36531
		24	320	500	100	TY3 S24	36532
		32	390	500	100	TY3 S32	36533
		40	460	500	100	TY3 S40	36534
		48	390	750	100	TY3 S48	36535
		60	460	750	100	TY3 S60	36536



Single Phase Metal Distribution Boxes Series 3SD22

Functions

3SD Distribution system is suitable for the Circuit of AC 50/60Hz, rated voltage up to the AC 660V, rated current up to the 125A of distributing control of modern building such as large office mansion, hotel, commerce department, industrial and mining enterprise and so on. It can protect electric appliances from overload voltage & Current. It also can short and frequent switch ON/OFF under normal operating condition.

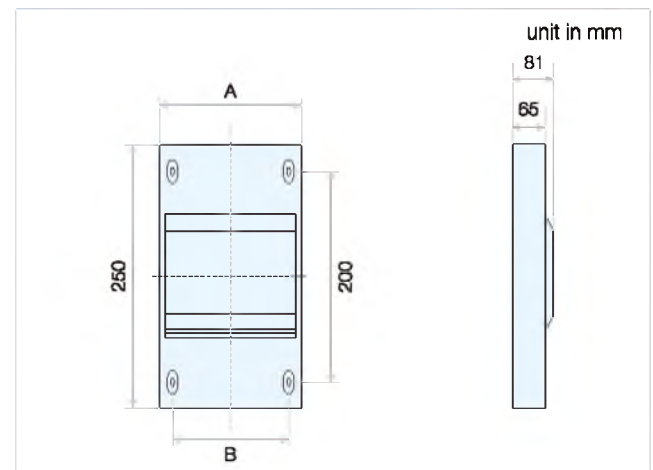
Technical specifications

- Standard: IEC 60439
- Busbar rating: 125 A Used for Single phases circuit system
- Tinned Copper busbar to prevent corrosion
- Rated shortcircuit withstand
- Capacity: 20 kA for 200 msec
- IP: 41
- Flush mounted
- Main incomer: Modular isolator and RCCB
- Isolator current rating (A): 100 A and 125 A
- Utilisation category: AC 22
- Insulation voltage (V): 500
- Impulse Voltage (KA): 6
- Main Incomer: Residual Current Circuit Breaker (RCCB)
- Current rating (A): 100
- Sensitivity (mA): 300



2

Outline and installation dimensions



Selection and ordering data

Type	Number of module	Outline dimension		Type code	Order code
		A (mm)	B		
3SD22-6	6	207±1.2	148±1.2	D2206	17325
3SD22-8	8	243±1.2	184±1.2	D2208	17326
3SD22-10	10	279±1.2	220±1.2	D2210	17327
3SD22-12	12	315±1.2	256±1.2	D2212	17328
3SD22-14	14	351±1.2	292±1.2	D2214	17329
3SD22-16	16	387±1.2	328±1.2	D2216	17330
3SD22-18	18	423±2.0	364±2.0	D2218	17331
3SD22-20	20	459±2.0	400±2.0	D2220	17332
3SD22-22	22	495±2.0	436±2.0	D2222	17333

Three Phase Metal Distribution Boxes Series 3SD23

Incoming Devices

Outgoing Devices

2



Moulded case circuit breaker
Frame 1(x160); up to 160 A, 18 kA
Frame 2(x250); 200A & 250 A, 25 kA



Moulded isolators
current rating: 100 A & 125 A



Miniature circuit breaker
current rating: 100 A & 125 A
pull up & bi connect terminals
IP20 Protection



Miniature circuit breaker
current rating: UP to 50 A
B/C/D Curves for various
application pull up & Bi
connect terminals IP20
Protection



Residual current circuit breakers
current rating: 100 A
Inbuilt ON/OFF indication
Inbuilt earth leakage Indication

Three Phase Metal Distribution Boxes Series 3SD23

Functions

- Equipped with various modular electric for the function of terminal power distribution
- Suited for the installation of all Sassin individual modular devices MCCB, MCB, Isolator, RCCB
- Used in residential building, non-residential building industry

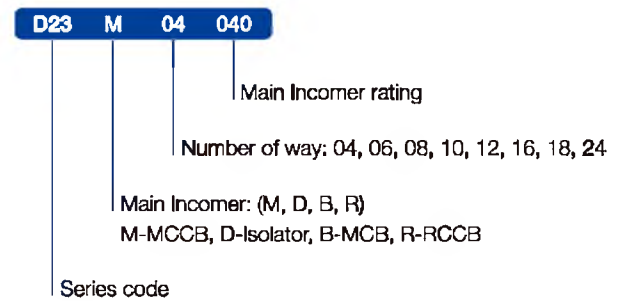
Distribution board with MCCB 3SM8N

Technical specifications

- Standard: IEC 60439-3
- Busbar rating (A): 250
- Tinned Copper Busbar to prevent corrosion
- Rated shortcircuit withstand capacity: 20 kA For 200 msec
- IP: 41
- Flush mounted
- Main Incomer: MCCB 3SM8N
- Operation voltage (V AC): up to 440
- Frequency (Hz): 50/60
- Rated insulation voltage (V AC): 690/800
- Impulse voltage (kV): 8
- Electrical endurance: 10000 operation
- Breaking capacity:
 - Up to 160 A incomer-18 kA
 - 200 A & 250 A incomer-25 kA



Instruction of type code

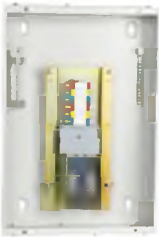


Selection and ordering data

	Number of way	Main Incomer rating	Type code	
			Typs code	Order code
	4	40 A	D23 M04040	37996
		63 A	D23 M04063	37997
		80 A	D23 M04080	37998
		100 A	D23 M04100	37999
		125 A	D23 M04125	38000
		160 A	D23 M04160	38001
		200 A	D23 M04200	38002
	6	40 A	D23 M06040	38003
		63 A	D23 M06063	38004
		80 A	D23 M06080	38005
		100 A	D23 M06100	38006
		125 A	D23 M06125	38007
		160 A	D23 M06160	38008
		200 A	D23 M06200	38009
	8	40 A	D23 M08040	38011
		63 A	D23 M08063	38012
		80 A	D23 M08080	38013
		100 A	D23 M08100	38014
		125 A	D23 M08125	38015
		160 A	D23 M08160	38016
		200 A	D23 M08200	38017
	10	40 A	D23 M10040	38019
		63 A	D23 M10063	38020
		80 A	D23 M10080	38021
		100 A	D23 M10100	38022
		125 A	D23 M10125	38023
		160 A	D23 M10160	38024
		200 A	D23 M10200	38025
		250 A	D23 M10250	38026

Three Phase Metal Distribution Boxes Series 3SD23

Selection and ordering data

	Number of way	Main Incomer rating	Type code	Order code
	12	40 A	D23 M12040	38027
		63 A	D23 M12063	38028
		80 A	D23 M12080	38029
		100 A	D23 M12100	38030
		125 A	D23 M12125	38031
		160 A	D23 M12160	38032
		200 A	D23 M12200	38033
	16	250 A	D23 M12250	38034
		40 A	D23 M16040	38035
		63 A	D23 M16063	38036
		80 A	D23 M16080	38037
		100 A	D23 M16100	38038
		125 A	D23 M16125	38039
		160 A	D23 M16160	38040
18	200 A	D23 M16200	38041	
	250 A	D23 M16250	38042	
	100 A	D23 M18100	38043	
	125 A	D23 M18125	38044	
	160 A	D23 M18160	38045	
24	200 A	D23 M18200	38046	
	250 A	D23 M18250	38047	
	100 A	D23 M24100	38048	
	125 A	D23 M24125	38049	
	160 A	D23 M24160	38050	
		200 A	D23 M24200	38051
		250 A	D23 M24250	38052


Distribution board with switch disconnecter 3SB71G

Technical specifications

- Standard: IEC 60439
- Busbar rating (A): 125
- Tinned Copper Busbar to prevent corrosion
- Rated shortcircuit withstand capacity: 20 kA For 200 msec
- IP: 41
- Flush mounted
- Main Incomer: Switch disconnecter 3SB71G
- Rated insulation voltage (V AC): 500
- Impulse voltage (kV): 6
- Current rating (A): 100 and 125



Selection and ordering data

	Number of way	Main Incomer rating	Type code	Order code
	4	100 A	D23 D04100	38053
		125 A	D23 D04125	38054
	6	100 A	D23 D06100	38055
		125 A	D23 D06125	38056
	8	100 A	D23 D08100	38057
		125 A	D23 D08125	38058
	10	100 A	D23 D10100	38059
		125 A	D23 D10125	38060
	12	100 A	D23 D12100	38061
		125 A	D23 D12125	38062
	16	100 A	D23 D16100	38063
		125 A	D23 D16125	38064
	18	100 A	D23 D18100	38065
		125 A	D23 D18125	38066
24	100 A	D23 D24100	38067	
	125 A	D23 D24125	38068	

Three Phase Metal Distribution Boxes Series 3SD23


Invicta distribution board with MCB

Technical specifications

- Standard: IEC 60439
- Buabar rating (A): 125
- Tinned Copper Busbar to prevent corrosion
- Rated shortcircuit withstand capacity: 20 kA For 200 msec
- IP: 41
- Flush mounted
- Main Incomer: MCB 3SB71-125
- Breaking capacity: 6 kA & 10 kA as per IEC 60947-2
- Current rating (A): 100 and 125



Selection and ordering data

	Number of way	Main Incomer rating	Type code	
			Type code	Order code
	4	100 A	D23 B04100	38069
		125 A	D23 B04125	38070
	6	100 A	D23 B06100	38071
		125 A	D23 B06125	38072
	8	100 A	D23 B08100	38073
		125 A	D23 B08125	38074
	10	100 A	D23 B10100	38075
		125 A	D23 B10125	38076
	12	100 A	D23 B12100	38077
		125 A	D23 B12125	38078
	16	100 A	D23 B16100	38079
		125 A	D23 B16125	38080
	18	100 A	D23 B18100	38081
		125 A	D23 B18125	38082
	24	100 A	D23 B24100	38083
		125 A	D23 B24125	38084


Distribution board with RCCB 3SL71

Technical specifications

- Standard: IEC 60439
- Buabar rating (A): 125
- Tinned Copper Busbar to prevent corrosion
- Rated shortcircuit withstand capacity: 20 kA For 200 msec
- IP: 41
- Flush mounted
- Main Incomer: RCCB 3SL71
- Sensitivity (mA): 300
- Current rating (A): 100



Selection and ordering data

	Number of way	Main Incomer rating	Type code	
			Type code	Order code
	4	100 A	D23 R04100	38085
	6	100 A	D23 R06100	38086
	8	100 A	D23 R08100	38087
	10	100 A	D23 R10100	38088
	12	100 A	D23 R12100	38089
	16	100 A	D23 R16100	38090
	18	100 A	D23 R18100	38091
	24	100 A	D23 R24100	38092

Junction Boxes

Technical specifications

- Standard: IEC 60529
- Color: White
- Degree of protection: IP65
- Material: ABS
- Fire resistance: 650 °C / 30 s
- Ambient temperature (°C): -5 ~ +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75

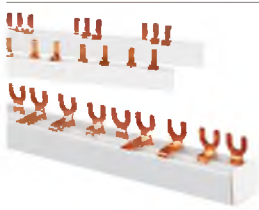


Selection and ordering data

	Type	Color of base	Color of cover	Size (mm)	Type code	Order code
	O	White	White	50X50	OBW5050	29789
				80X50	OBW8050	29790
				85X85X50	OBW858550	29791
				100X100X70	OBW10010070	29792
				150X150X70	OBW15011070	29793
				150X110X70	OBW15015070	29794
				200X100X70	OBW20010070	29795
				200X155X80	OBW20015580	29796
				200X200X80	OBW20020080	29797
				255X200X80	OBW25520080	29798
				300X250X120	OBW300250120	29799
				400X350X120	OBW400350120	29800
					N	White
85X80X60	NBW858060	29802				
110X80X70	NBW1108070	29803				
100X100X70	NBW10010070	29804				
120X100X70	NBW12010070	29805				
150X110X70	NBW15011070	29806				
175X125X75	NBW17512575	29807				
175X125X100	NBW175125100	29808				
150X150X80	NBW15015080	29809				
200X100X80	NBW20010080	29810				
180X180X80	NBW18018080	29811				
200X155X100	NBW200155100	29812				
200X200X100	NBW200200100	29813				
250X200X100	NBW250200100	29814				
300X250X130	NBW300250130	29815				
400X350X130	NBW400350130	29816				
350X300X130	NBW350300130	29817				
	N	White	Transparent	65X50X55	NBT655055	24587
				85X80X60	NBT858060	24588
				110X80X70	NBT1108070	24589
				100X100X70	NBT10010070	24590
				120X100X70	NBT12010070	24591
				150X110X70	NBT15011070	24592
				175X125X75	NBT17512575	24593
				175X125X100	NBT175125100	24594
				150X150X80	NBT15015080	24595
				200X100X80	NBT20010080	24596
				180X180X80	NBT18018080	24597
				200X155X100	NBT200155100	24598
200X200X100	NBT200200100	24599				

Selection and ordering data

Busbar systems Suitable for cutting

	Connection type	Phases	Rated current (A)	Length (cm)	Type code	Order code
	PIN type	1x54	63	100	SA-BB101	24760
		2x27	63	100	SA-BB201	24762
		3x18	63	100	SA-BB301	24764
	Fork type	4x14	63	100	SA-BB401	24766
	Fork type	1x54	63	100	SA-BB102	24761
		2x27	63	100	SA-BB202	24763
		3x18	63	100	SA-BB302	24765
		4x14	63	100	SA-BB402	24767


End caps

	For 1P	100	SA-BBEC1	32676
	For 2P	100	SA-BBEC2	32677
	For 3P	100	SA-BBEC3	32678
	For 4P	100	SA-BBEC4	32679

Shock-protection caps

	Discription	Phases	Type code	Order code
	yellow	5 parts	SA-BBSCY5	32680

Feeder terminals

	Discription	Type code	Order code
	Connection capacity: 6-25 mm ² Max. electrical load: 63 A Max. tightening torque 2 N·m	FT1B	32929
	Connection capacity: 6-25 mm ² Max. electrical load: 63 A Max. tightening torque 2 N·m	FT2G	32930

DIN Rails

	Discription	Type code	Order code
	Aluminum, 100 cm	DR1	32931
	Iron plated zinc, 100 cm	DR2	32932

Accessories for Distribution Boxes

Selection and ordering data

Terminal bars with screws

2




Rated current (A)	Sectioncross of brass (mm)	Way	Screw size	Type code	Order code
63	6x8	3+1	M4x7	TBS0631	32933
	6x8	4+1	M4x7	TBS0641	32934
	6x8	6+1	M4x7	TBS0661	32935
	6x8	6+2	M4x7	TBS0662	32936
	6x8	8+1	M4x7	TBS0681	32937
	6x8	9+1	M4x7	TBS0691	32938
	6x8	10+2	M4x7	TBS06102	32939
	6x8	13+2	M4x7	TBS06132	32940
	6x8	20+4	M4x7	TBS06204	32941
	6x9	3+1	M4x7	TBS1031	32942
	100	6x9	4+1	M4x7	TBS1041
6x9		6+1	M4x7	TBS1061	32944
6x9		6+2	M4x7	TBS1062	32945
6x9		8+1	M4x7	TBS1081	32946
6x9		9+1	M4x7	TBS1091	32947
6x9		10+2	M4x7	TBS10102	32948
6x9		13+2	M4x7	TBS10132	32949
6x9		20+4	M4x7	TBS10204	32950

Accessories for Distribution Boxes

Selection and ordering data


Terminal blocks

Terminals with insulation holder for quick fastening onto DIN rails

	Way	Rated current (A)	Installation size (mm)	Dimension (mm)	Screw size	Section cross of brass (mm)	Type code	Order code
	7	100	35x7.5	50x21	M5x8	6x9	TBS1007	32951
	8	100	35x7.5	57x21	M5x8	6x9	TBS1008	32952
	10	100	35x7.5	70x21	M5x8	6x9	TBS1010	32953
	12	100	35x7.5	84x21	M5x8	6x9	TBS1012	32954
	13	100	35x7.5	91x21	M5x8	6x9	TBS1013	32955
	15	100	35x7.5	104x21	M5x8	6x9	TBS1015	32956

Blanking plates

Matched with distribution boxes for device covers

	Discription	Type code	Order code
	width: 1 module = 17.5 mm, White	MBP1	32957
	width: 0.5 module = 9 mm, White	MBP2	32958

Index / Order Code

2

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
10003	B6 4D06N	2-11	13761	B71 82D25	2-3	16084	B71QRA230	2-54
10004	B6 4D10N	2-11	13762	B71 82D32	2-3	16085	B71QL12	2-54
10005	B6 4D16N	2-11	13763	B71 82D40	2-3	16086	B71QL24	2-54
10006	B6 4D20N	2-11	13764	B71 82D50	2-3	16087	B71QL48	2-54
10007	B6 4D25N	2-11	13765	B71 82D63	2-3	16088	B71QLD127	2-54
10008	B6 4D32N	2-11	13768	B71 83B06	2-3	16089	B71QLD230	2-54
10009	B6 4D40N	2-11	13769	B71 83B10	2-3	16090	B71QLA127	2-54
10010	B6 4D50N	2-11	13770	B71 83B16	2-3	16091	B71QLA230	2-54
10011	B6 4D63N	2-11	13771	B71 83B20	2-3	16161	D125 1C080	2-25
10466	B71CJL	2-54	13772	B71 83B25	2-3	16162	D125 1C100	2-25
10467	B71CJR	2-54	13773	B71 83B32	2-3	16163	D125 1C125	2-25
10468	OF	2-55	13774	B71 83B40	2-3	16164	D125 2C080	2-25
10472	SD	2-55	13775	B71 83B50	2-3	16165	D125 2C100	2-25
10476	S223A	2-55	13776	B71 83B63	2-3	16166	D125 2C125	2-25
10477	S240A	2-55	13779	B71 83C06	2-3	16167	D125 3C080	2-25
10478	S224D	2-55	13780	B71 83C10	2-3	16168	D125 3C100	2-25
10479	S248D	2-55	13781	B71 83C16	2-3	16169	D125 3C125	2-25
10480	UO23A	2-55	13782	B71 83C20	2-3	16170	D125 4C080	2-25
10481	UO40A	2-55	13783	B71 83C25	2-3	16171	D125 4C100	2-25
10482	UO24D	2-55	13784	B71 83C32	2-3	16172	D125 4C125	2-25
10483	UO48D	2-55	13785	B71 83C40	2-3	16173	D125 1D080	2-25
13684	SUL181H	2-75	13786	B71 83C50	2-3	16174	D125 1D100	2-25
13702	B71 81B06	2-3	13787	B71 83C63	2-3	16175	D125 1D125	2-25
13703	B71 81B10	2-3	13790	B71 83D06	2-3	16176	D125 2D080	2-25
13704	B71 81B16	2-3	13791	B71 83D10	2-3	16177	D125 2D100	2-25
13705	B71 81B20	2-3	13792	B71 83D16	2-3	16178	D125 2D125	2-25
13706	B71 81B25	2-3	13793	B71 83D20	2-3	16179	D125 3D080	2-25
13707	B71 81B32	2-3	13794	B71 83D25	2-3	16180	D125 3D100	2-25
13708	B71 81B40	2-3	13795	B71 83D32	2-3	16181	D125 3D125	2-25
13709	B71 81B50	2-3	13796	B71 83D40	2-3	16182	D125 4D080	2-25
13710	B71 81B63	2-3	13797	B71 83D50	2-3	16183	D125 4D100	2-25
13713	B71 81C06	2-3	13798	B71 83D63	2-3	16184	D125 4D125	2-25
13714	B71 81C10	2-3	13801	B71 84B06	2-3	16185	B71P G12	2-71
13715	B71 81C16	2-3	13802	B71 84B10	2-3	16186	B71P G21	2-71
13716	B71 81C20	2-3	13803	B71 84B16	2-3	16187	B71P G22	2-71
13717	B71 81C25	2-3	13804	B71 84B20	2-3	16188	B71P G30	2-71
13718	B71 81C32	2-3	13805	B71 84B25	2-3	16189	B71P R12	2-71
13719	B71 81C40	2-3	13806	B71 84B32	2-3	16190	B71P R21	2-71
13720	B71 81C50	2-3	13807	B71 84B40	2-3	16191	B71P R22	2-71
13721	B71 81C63	2-3	13808	B71 84B50	2-3	16192	B71P R30	2-71
13724	B71 81D06	2-3	13809	B71 84B63	2-3	16193	B71P H12	2-71
13725	B71 81D10	2-3	13812	B71 84C06	2-3	16194	B71P H21	2-71
13726	B71 81D16	2-3	13813	B71 84C10	2-3	16195	B71P H22	2-71
13727	B71 81D20	2-3	13814	B71 84C16	2-3	16196	B71P H30	2-71
13728	B71 81D25	2-3	13815	B71 84C20	2-3	16197	B71P Y12	2-71
13729	B71 81D32	2-3	13816	B71 84C25	2-3	16198	B71P Y21	2-71
13730	B71 81D40	2-3	13817	B71 84C32	2-3	16199	B71P Y22	2-71
13731	B71 81D50	2-3	13818	B71 84C40	2-3	16200	B71P Y30	2-71
13732	B71 81D63	2-3	13819	B71 84C50	2-3	16201	B71P B12	2-71
13735	B71 82B06	2-3	13820	B71 84C63	2-3	16202	B71P B21	2-71
13736	B71 82B10	2-3	13823	B71 84D06	2-3	16203	B71P B22	2-71
13737	B71 82B16	2-3	13824	B71 84D10	2-3	16204	B71P B30	2-71
13738	B71 82B20	2-3	13825	B71 84D16	2-3	16205	B71PD 12G12	2-71
13739	B71 82B25	2-3	13826	B71 84D20	2-3	16206	B71PD 12G21	2-71
13740	B71 82B32	2-3	13827	B71 84D25	2-3	16207	B71PD 12G30	2-71
13741	B71 82B40	2-3	13828	B71 84D32	2-3	16208	B71PD 12R12	2-71
13742	B71 82B50	2-3	13829	B71 84D40	2-3	16209	B71PD 12R21	2-71
13743	B71 82B63	2-3	13830	B71 84D50	2-3	16210	B71PD 12R30	2-71
13746	B71 82C06	2-3	13831	B71 84D63	2-3	16211	B71PD 12W12	2-71
13747	B71 82C10	2-3	14973	D7N8	2-83	16212	B71PD 12W21	2-71
13748	B71 82C16	2-3	15331	B72LE C06/030	2-46	16213	B71PD 12W30	2-71
13749	B71 82C20	2-3	15332	B72LE C10/030	2-46	16214	B71PD 12Y12	2-71
13750	B71 82C25	2-3	15333	B72LE C16/030	2-46	16215	B71PD 12Y21	2-71
13751	B71 82C32	2-3	15334	B72LE C20/030	2-46	16216	B71PD 12Y30	2-71
13752	B71 82C40	2-3	15335	B72LE C25/030	2-46	16217	B71PD 12B12	2-71
13753	B71 82C50	2-3	16078	B71QR12	2-54	16218	B71PD 12B21	2-71
13754	B71 82C63	2-3	16079	B71QR24	2-54	16219	B71PD 12B30	2-71
13757	B71 82D06	2-3	16080	B71QR48	2-54	16220	B71PD 24G12	2-71
13758	B71 82D10	2-3	16081	B71QRD127	2-54	16221	B71PD 24G21	2-71
13759	B71 82D16	2-3	16082	B71QRD230	2-54	16222	B71PD 24G30	2-71
13760	B71 82D20	2-3	16083	B71QRA127	2-54	16223	B71PD 24R12	2-71

Index / Order Code

Order code	Type code	Page
16224	B71PD 24R21	2-71
16225	B71PD 24R30	2-71
16226	B71PD 24W12	2-71
16227	B71PD 24W21	2-71
16228	B71PD 24W30	2-71
16229	B71PD 24Y12	2-71
16230	B71PD 24Y21	2-71
16231	B71PD 24Y30	2-71
16232	B71PD 24B12	2-71
16233	B71PD 24B21	2-71
16234	B71PD 24B30	2-71
16235	B71PD 110G12	2-71
16236	B71PD 110G21	2-71
16237	B71PD 110G30	2-71
16238	B71PD 110R12	2-71
16239	B71PD 110R21	2-71
16240	B71PD 110R30	2-71
16241	B71PD 110W12	2-71
16242	B71PD 110W21	2-71
16243	B71PD 110W30	2-71
16244	B71PD 110Y12	2-71
16245	B71PD 110Y21	2-71
16246	B71PD 110Y30	2-71
16247	B71PD 110B12	2-71
16248	B71PD 110B21	2-71
16249	B71PD 110B30	2-71
16250	B71PD 230G12	2-71
16251	B71PD 230G21	2-71
16252	B71PD 230G30	2-71
16253	B71PD 230R12	2-71
16254	B71PD 230R21	2-71
16255	B71PD 230R30	2-71
16256	B71PD 230W12	2-71
16257	B71PD 230W21	2-71
16258	B71PD 230W30	2-71
16259	B71PD 230Y12	2-71
16260	B71PD 230Y21	2-71
16261	B71PD 230Y30	2-71
16262	B71PD 230B12	2-71
16263	B71PD 230B21	2-71
16264	B71PD 230B30	2-71
16265	B71D G12	2-71
16266	B71D G24	2-71
16267	B71D G110	2-71
16268	B71D G230	2-71
16269	B71D R12	2-71
16270	B71D R24	2-71
16271	B71D R110	2-71
16272	B71D R230	2-71
16273	B71D W12	2-71
16274	B71D W24	2-71
16275	B71D W110	2-71
16276	B71D W230	2-71
16277	B71D Y12	2-71
16278	B71D Y24	2-71
16279	B71D Y110	2-71
16280	B71D Y230	2-71
16281	B71D B12	2-71
16282	B71D B24	2-71
16283	B71D B110	2-71
16284	B71D B230	2-71
16947	B71LNC 2B06/030H	2-43
16948	B71LNC 2B10/030H	2-43
16949	B71LNC 2B16/030H	2-43
16950	B71LNC 2B20/030H	2-43
16951	B71LNC 2B25/030H	2-43
16952	B71LNC 2B32/030H	2-43
16953	B71LNC 2B40/030H	2-43
16954	B71LNC 3B06/030H	2-43
16955	B71LNC 3B10/030H	2-43
16956	B71LNC 3B16/030H	2-43

Order code	Type code	Page
16957	B71LNC 3B20/030H	2-43
16958	B71LNC 3B25/030H	2-43
16959	B71LNC 3B32/030H	2-43
16960	B71LNC 3B40/030H	2-43
16961	B71LNC 4B06/030H	2-43
16962	B71LNC 4B10/030H	2-43
16963	B71LNC 4B16/030H	2-43
16964	B71LNC 4B20/030H	2-43
16965	B71LNC 4B25/030H	2-43
16966	B71LNC 4B32/030H	2-43
16967	B71LNC 4B40/030H	2-43
16968	B71LNC 2C06/030H	2-43
16969	B71LNC 2C10/030H	2-43
16970	B71LNC 2C16/030H	2-43
16971	B71LNC 2C20/030H	2-43
16972	B71LNC 2C25/030H	2-43
16973	B71LNC 2C32/030H	2-43
16974	B71LNC 2C40/030H	2-43
16975	B71LNC 3C06/030H	2-43
16976	B71LNC 3C10/030H	2-43
16977	B71LNC 3C16/030H	2-43
16978	B71LNC 3C20/030H	2-43
16979	B71LNC 3C25/030H	2-43
16980	B71LNC 3C32/030H	2-43
16981	B71LNC 3C40/030H	2-43
16982	B71LNC 4C06/030H	2-43
16983	B71LNC 4C10/030H	2-43
16984	B71LNC 4C16/030H	2-43
16985	B71LNC 4C20/030H	2-43
16986	B71LNC 4C25/030H	2-43
16987	B71LNC 4C32/030H	2-43
16988	B71LNC 4C40/030H	2-43
16989	B71LNC 2D06/030H	2-43
16990	B71LNC 2D10/030H	2-43
16991	B71LNC 2D16/030H	2-43
16992	B71LNC 2D20/030H	2-43
16993	B71LNC 2D25/030H	2-43
16994	B71LNC 2D32/030H	2-43
16995	B71LNC 2D40/030H	2-43
16996	B71LNC 3D06/030H	2-43
16997	B71LNC 3D10/030H	2-43
16998	B71LNC 3D16/030H	2-43
16999	B71LNC 3D20/030H	2-43
17000	B71LNC 3D25/030H	2-43
17001	B71LNC 3D32/030H	2-43
17002	B71LNC 3D40/030H	2-43
17003	B71LNC 4D06/030H	2-43
17004	B71LNC 4D10/030H	2-43
17005	B71LNC 4D16/030H	2-43
17006	B71LNC 4D20/030H	2-43
17007	B71LNC 4D25/030H	2-43
17008	B71LNC 4D32/030H	2-43
17009	B71LNC 4D40/030H	2-43
17010	B71LNC 2B06/100H	2-43
17011	B71LNC 2B10/100H	2-43
17012	B71LNC 2B16/100H	2-43
17013	B71LNC 2B20/100H	2-43
17014	B71LNC 2B25/100H	2-43
17015	B71LNC 2B32/100H	2-43
17016	B71LNC 2B40/100H	2-43
17017	B71LNC 3B06/100H	2-43
17018	B71LNC 3B10/100H	2-43
17019	B71LNC 3B16/100H	2-43
17020	B71LNC 3B20/100H	2-43
17021	B71LNC 3B25/100H	2-43
17022	B71LNC 3B32/100H	2-43
17023	B71LNC 3B40/100H	2-43
17024	B71LNC 4B06/100H	2-43
17025	B71LNC 4B10/100H	2-43
17026	B71LNC 4B16/100H	2-43
17027	B71LNC 4B20/100H	2-43

Order code	Type code	Page
17028	B71LNC 4B25/100H	2-43
17029	B71LNC 4B32/100H	2-43
17030	B71LNC 4B40/100H	2-43
17031	B71LNC 2C06/100H	2-43
17032	B71LNC 2C10/100H	2-43
17033	B71LNC 2C16/100H	2-43
17034	B71LNC 2C20/100H	2-43
17035	B71LNC 2C25/100H	2-43
17036	B71LNC 2C32/100H	2-43
17037	B71LNC 2C40/100H	2-43
17038	B71LNC 3C06/100H	2-43
17039	B71LNC 3C10/100H	2-43
17040	B71LNC 3C16/100H	2-43
17041	B71LNC 3C20/100H	2-43
17042	B71LNC 3C25/100H	2-43
17043	B71LNC 3C32/100H	2-43
17044	B71LNC 3C40/100H	2-43
17045	B71LNC 4C06/100H	2-43
17046	B71LNC 4C10/100H	2-43
17047	B71LNC 4C16/100H	2-43
17048	B71LNC 4C20/100H	2-43
17049	B71LNC 4C25/100H	2-43
17050	B71LNC 4C32/100H	2-43
17051	B71LNC 4C40/100H	2-43
17052	B71LNC 2D06/100H	2-43
17053	B71LNC 2D10/100H	2-43
17054	B71LNC 2D16/100H	2-43
17055	B71LNC 2D20/100H	2-43
17056	B71LNC 2D25/100H	2-43
17057	B71LNC 2D32/100H	2-43
17058	B71LNC 2D40/100H	2-43
17059	B71LNC 3D06/100H	2-43
17060	B71LNC 3D10/100H	2-43
17061	B71LNC 3D16/100H	2-43
17062	B71LNC 3D20/100H	2-43
17063	B71LNC 3D25/100H	2-43
17064	B71LNC 3D32/100H	2-43
17065	B71LNC 3D40/100H	2-43
17066	B71LNC 4D06/100H	2-43
17067	B71LNC 4D10/100H	2-43
17068	B71LNC 4D16/100H	2-43
17069	B71LNC 4D20/100H	2-43
17070	B71LNC 4D25/100H	2-43
17071	B71LNC 4D32/100H	2-43
17072	B71LNC 4D40/100H	2-43
17073	B71LNC 2B06/300H	2-43
17074	B71LNC 2B10/300H	2-43
17075	B71LNC 2B16/300H	2-43
17076	B71LNC 2B20/300H	2-43
17077	B71LNC 2B25/300H	2-43
17078	B71LNC 2B32/300H	2-43
17079	B71LNC 2B40/300H	2-43
17080	B71LNC 3B06/300H	2-43
17081	B71LNC 3B10/300H	2-43
17082	B71LNC 3B16/300H	2-43
17083	B71LNC 3B20/300H	2-43
17084	B71LNC 3B25/300H	2-43
17085	B71LNC 3B32/300H	2-43
17086	B71LNC 3B40/300H	2-43
17087	B71LNC 4B06/300H	2-43
17088	B71LNC 4B10/300H	2-43
17089	B71LNC 4B16/300H	2-43
17090	B71LNC 4B20/300H	2-43
17091	B71LNC 4B25/300H	2-43
17092	B71LNC 4B32/300H	2-43
17093	B71LNC 4B40/300H	2-43
17094	B71LNC 2C06/300H	2-43
17095	B71LNC 2C10/300H	2-43
17096	B71LNC 2C16/300H	2-43
17097	B71LNC 2C20/300H	2-43
17098	B71LNC 2C25/300H	2-43

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
17312	B71LNA 3D10/300H	2-44	18601	B5 1B50T	2-16	18672	B5 3C06T	2-16
17313	B71LNA 3D16/300H	2-44	18602	B5 1B63T	2-16	18673	B5 3C10T	2-16
17314	B71LNA 3D20/300H	2-44	18603	B5 2B01T	2-16	18674	B5 3C16T	2-16
17315	B71LNA 3D25/300H	2-44	18604	B5 2B02T	2-16	18675	B5 3C20T	2-16
17316	B71LNA 3D32/300H	2-44	18605	B5 2B03T	2-16	18676	B5 3C25T	2-16
17317	B71LNA 3D40/300H	2-44	18606	B5 2B04T	2-16	18677	B5 3C32T	2-16
17318	B71LNA 4D06/300H	2-44	18607	B5 2B06T	2-16	18678	B5 3C40T	2-16
17319	B71LNA 4D10/300H	2-44	18608	B5 2B10T	2-16	18679	B5 3C50T	2-16
17320	B71LNA 4D16/300H	2-44	18609	B5 2B16T	2-16	18680	B5 3C63T	2-16
17321	B71LNA 4D20/300H	2-44	18610	B5 2B20T	2-16	18681	B5 4C01T	2-16
17322	B71LNA 4D25/300H	2-44	18611	B5 2B25T	2-16	18682	B5 4C02T	2-16
17323	B71LNA 4D32/300H	2-44	18612	B5 2B32T	2-16	18683	B5 4C03T	2-16
17324	B71LNA 4D40/300H	2-44	18613	B5 2B40T	2-16	18684	B5 4C04T	2-16
17325	D2206	2-87	18614	B5 2B50T	2-16	18685	B5 4C06T	2-16
17326	D2208	2-87	18615	B5 2B63T	2-16	18686	B5 4C10T	2-16
17327	D2210	2-87	18616	B5 3B01T	2-16	18687	B5 4C16T	2-16
17328	D2212	2-87	18617	B5 3B02T	2-16	18688	B5 4C20T	2-16
17329	D2214	2-87	18618	B5 3B03T	2-16	18689	B5 4C25T	2-16
17330	D2216	2-87	18619	B5 3B04T	2-16	18690	B5 4C32T	2-16
17331	D2218	2-87	18620	B5 3B06T	2-16	18691	B5 4C40T	2-16
17332	D2220	2-87	18621	B5 3B10T	2-16	18692	B5 4C50T	2-16
17333	D2222	2-87	18622	B5 3B16T	2-16	18693	B5 4C63T	2-16
17618	B71Z 1B06H	2-22	18623	B5 3B20T	2-16	18694	B5 1D01T	2-16
17619	B71Z 1B10H	2-22	18624	B5 3B25T	2-16	18695	B5 1D02T	2-16
17620	B71Z 1B16H	2-22	18625	B5 3B32T	2-16	18696	B5 1D03T	2-16
17621	B71Z 1B20H	2-22	18626	B5 3B40T	2-16	18697	B5 1D04T	2-16
17622	B71Z 1B25H	2-22	18627	B5 3B50T	2-16	18698	B5 1D06T	2-16
17623	B71Z 1B32H	2-22	18628	B5 3B63T	2-16	18699	B5 1D10T	2-16
17624	B71Z 1B40H	2-22	18629	B5 4B01T	2-16	18700	B5 1D16T	2-16
17625	B71Z 1B50H	2-22	18630	B5 4B02T	2-16	18701	B5 1D20T	2-16
17626	B71Z 1B63H	2-22	18631	B5 4B03T	2-16	18702	B5 1D25T	2-16
17627	B71Z 2B06H	2-22	18632	B5 4B04T	2-16	18703	B5 1D32T	2-16
17628	B71Z 2B10H	2-22	18633	B5 4B06T	2-16	18704	B5 1D40T	2-16
17629	B71Z 2B16H	2-22	18634	B5 4B10T	2-16	18705	B5 1D50T	2-16
17630	B71Z 2B20H	2-22	18635	B5 4B16T	2-16	18706	B5 1D63T	2-16
17631	B71Z 2B25H	2-22	18636	B5 4B20T	2-16	18707	B5 2D01T	2-16
17632	B71Z 2B32H	2-22	18637	B5 4B25T	2-16	18708	B5 2D02T	2-16
17633	B71Z 2B40H	2-22	18638	B5 4B32T	2-16	18709	B5 2D03T	2-16
17634	B71Z 2B50H	2-22	18639	B5 4B40T	2-16	18710	B5 2D04T	2-16
17635	B71Z 2B63H	2-22	18640	B5 4B50T	2-16	18711	B5 2D06T	2-16
17654	B71Z 1C06H	2-22	18641	B5 4B63T	2-16	18712	B5 2D10T	2-16
17655	B71Z 1C10H	2-22	18642	B5 1C01T	2-16	18713	B5 2D16T	2-16
17656	B71Z 1C16H	2-22	18643	B5 1C02T	2-16	18714	B5 2D20T	2-16
17657	B71Z 1C20H	2-22	18644	B5 1C03T	2-16	18715	B5 2D25T	2-16
17658	B71Z 1C25H	2-22	18645	B5 1C04T	2-16	18716	B5 2D32T	2-16
17659	B71Z 1C32H	2-22	18646	B5 1C06T	2-16	18717	B5 2D40T	2-16
17660	B71Z 1C40H	2-22	18647	B5 1C10T	2-16	18718	B5 2D50T	2-16
17661	B71Z 1C50H	2-22	18648	B5 1C16T	2-16	18719	B5 2D63T	2-16
17662	B71Z 1C63H	2-22	18649	B5 1C20T	2-16	18720	B5 3D01T	2-16
17663	B71Z 2C06H	2-22	18650	B5 1C25T	2-16	18721	B5 3D02T	2-16
17664	B71Z 2C10H	2-22	18651	B5 1C32T	2-16	18722	B5 3D03T	2-16
17665	B71Z 2C16H	2-22	18652	B5 1C40T	2-16	18723	B5 3D04T	2-16
17666	B71Z 2C20H	2-22	18653	B5 1C50T	2-16	18724	B5 3D06T	2-16
17667	B71Z 2C25H	2-22	18654	B5 1C63T	2-16	18725	B5 3D10T	2-16
17668	B71Z 2C32H	2-22	18655	B5 2C01T	2-16	18726	B5 3D16T	2-16
17669	B71Z 2C40H	2-22	18656	B5 2C02T	2-16	18727	B5 3D20T	2-16
17670	B71Z 2C50H	2-22	18657	B5 2C03T	2-16	18728	B5 3D25T	2-16
17671	B71Z 2C63H	2-22	18658	B5 2C04T	2-16	18729	B5 3D32T	2-16
17726	B71FR2	2-54	18659	B5 2C06T	2-16	18730	B5 3D40T	2-16
17727	MS71	2-69	18660	B5 2C10T	2-16	18731	B5 3D50T	2-16
18590	B5 1B01T	2-16	18661	B5 2C16T	2-16	18732	B5 3D63T	2-16
18591	B5 1B02T	2-16	18662	B5 2C20T	2-16	18733	B5 4D01T	2-16
18592	B5 1B03T	2-16	18663	B5 2C25T	2-16	18734	B5 4D02T	2-16
18593	B5 1B04T	2-16	18664	B5 2C32T	2-16	18735	B5 4D03T	2-16
18594	B5 1B06T	2-16	18665	B5 2C40T	2-16	18736	B5 4D04T	2-16
18595	B5 1B10T	2-16	18666	B5 2C50T	2-16	18737	B5 4D06T	2-16
18596	B5 1B16T	2-16	18667	B5 2C63T	2-16	18738	B5 4D10T	2-16
18597	B5 1B20T	2-16	18668	B5 3C01T	2-16	18739	B5 4D16T	2-16
18598	B5 1B25T	2-16	18669	B5 3C02T	2-16	18740	B5 4D20T	2-16
18599	B5 1B32T	2-16	18670	B5 3C03T	2-16	18741	B5 4D25T	2-16
18600	B5 1B40T	2-16	18671	B5 3C04T	2-16	18742	B5 4D32T	2-16

Index / Order Code

2

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
18743	B5 4D40T	2-16	19033	B71 91C63F	2-5	19122	B71 91B50H	2-6
18744	B5 4D50T	2-16	19034	B71 92C06F	2-5	19123	B71 91B63H	2-6
18745	B5 4D63T	2-16	19035	B71 92C10F	2-5	19124	B71 92B06H	2-6
18757	B5 1B50D	2-17	19036	B71 92C16F	2-5	19125	B71 92B10H	2-6
18758	B5 1B63D	2-17	19037	B71 92C20F	2-5	19126	B71 92B16H	2-6
18770	B5 2B50D	2-17	19038	B71 92C25F	2-5	19127	B71 92B20H	2-6
18771	B5 2B63D	2-17	19039	B71 92C32F	2-5	19128	B71 92B25H	2-6
18783	B5 3B50D	2-17	19040	B71 92C40F	2-5	19129	B71 92B32H	2-6
18784	B5 3B63D	2-17	19041	B71 92C50F	2-5	19130	B71 92B40H	2-6
18796	B5 4B50D	2-17	19042	B71 92C63F	2-5	19131	B71 92B50H	2-6
18797	B5 4B63D	2-17	19043	B71 93C06F	2-5	19132	B71 92B63H	2-6
18809	B5 1C50D	2-17	19044	B71 93C10F	2-5	19133	B71 93B06H	2-6
18810	B5 1C63D	2-17	19045	B71 93C16F	2-5	19134	B71 93B10H	2-6
18822	B5 2C50D	2-17	19046	B71 93C20F	2-5	19135	B71 93B16H	2-6
18823	B5 2C63D	2-17	19047	B71 93C25F	2-5	19136	B71 93B20H	2-6
18835	B5 3C50D	2-17	19048	B71 93C32F	2-5	19137	B71 93B25H	2-6
18836	B5 3C63D	2-17	19049	B71 93C40F	2-5	19138	B71 93B32H	2-6
18848	B5 4C50D	2-17	19050	B71 93C50F	2-5	19139	B71 93B40H	2-6
18849	B5 4C63D	2-17	19051	B71 93C63F	2-5	19140	B71 93B50H	2-6
18861	B5 1D50D	2-17	19061	B71 94C06F	2-5	19141	B71 93B63H	2-6
18862	B5 1D63D	2-17	19062	B71 94C10F	2-5	19151	B71 94B06H	2-6
18874	B5 2D50D	2-17	19063	B71 94C16F	2-5	19152	B71 94B10H	2-6
18875	B5 2D63D	2-17	19064	B71 94C20F	2-5	19153	B71 94B16H	2-6
18887	B5 3D50D	2-17	19065	B71 94C25F	2-5	19154	B71 94B20H	2-6
18888	B5 3D63D	2-17	19066	B71 94C32F	2-5	19155	B71 94B25H	2-6
18900	B5 4D50D	2-17	19067	B71 94C40F	2-5	19156	B71 94B32H	2-6
18901	B5 4D63D	2-17	19068	B71 94C50F	2-5	19157	B71 94B40H	2-6
18980	B71 91B06F	2-5	19069	B71 94C63F	2-5	19158	B71 94B50H	2-6
18981	B71 91B10F	2-5	19070	B71 91D06F	2-5	19159	B71 94B63H	2-6
18982	B71 91B16F	2-5	19071	B71 91D10F	2-5	19160	B71 91C06H	2-6
18983	B71 91B20F	2-5	19072	B71 91D16F	2-5	19161	B71 91C10H	2-6
18984	B71 91B25F	2-5	19073	B71 91D20F	2-5	19162	B71 91C16H	2-6
18985	B71 91B32F	2-5	19074	B71 91D25F	2-5	19163	B71 91C20H	2-6
18986	B71 91B40F	2-5	19075	B71 91D32F	2-5	19164	B71 91C25H	2-6
18987	B71 91B50F	2-5	19076	B71 91D40F	2-5	19165	B71 91C32H	2-6
18988	B71 91B63F	2-5	19077	B71 91D50F	2-5	19166	B71 91C40H	2-6
18989	B71 92B06F	2-5	19078	B71 91D63F	2-5	19167	B71 91C50H	2-6
18990	B71 92B10F	2-5	19079	B71 92D06F	2-5	19168	B71 91C63H	2-6
18991	B71 92B16F	2-5	19080	B71 92D10F	2-5	19169	B71 92C06H	2-6
18992	B71 92B20F	2-5	19081	B71 92D16F	2-5	19170	B71 92C10H	2-6
18993	B71 92B25F	2-5	19082	B71 92D20F	2-5	19171	B71 92C16H	2-6
18994	B71 92B32F	2-5	19083	B71 92D25F	2-5	19172	B71 92C20H	2-6
18995	B71 92B40F	2-5	19084	B71 92D32F	2-5	19173	B71 92C25H	2-6
18996	B71 92B50F	2-5	19085	B71 92D40F	2-5	19174	B71 92C32H	2-6
18997	B71 92B63F	2-5	19086	B71 92D50F	2-5	19175	B71 92C40H	2-6
18998	B71 93B06F	2-5	19087	B71 92D63F	2-5	19176	B71 92C50H	2-6
18999	B71 93B10F	2-5	19088	B71 93D06F	2-5	19177	B71 92C63H	2-6
19000	B71 93B16F	2-5	19089	B71 93D10F	2-5	19178	B71 93C06H	2-6
19001	B71 93B20F	2-5	19090	B71 93D16F	2-5	19179	B71 93C10H	2-6
19002	B71 93B25F	2-5	19091	B71 93D20F	2-5	19180	B71 93C16H	2-6
19003	B71 93B32F	2-5	19092	B71 93D25F	2-5	19181	B71 93C20H	2-6
19004	B71 93B40F	2-5	19093	B71 93D32F	2-5	19182	B71 93C25H	2-6
19005	B71 93B50F	2-5	19094	B71 93D40F	2-5	19183	B71 93C32H	2-6
19006	B71 93B63F	2-5	19095	B71 93D50F	2-5	19184	B71 93C40H	2-6
19016	B71 94B06F	2-5	19096	B71 93D63F	2-5	19185	B71 93C50H	2-6
19017	B71 94B10F	2-5	19106	B71 94D06F	2-5	19186	B71 93C63H	2-6
19018	B71 94B16F	2-5	19107	B71 94D10F	2-5	19196	B71 94C06H	2-6
19019	B71 94B20F	2-5	19108	B71 94D16F	2-5	19197	B71 94C10H	2-6
19020	B71 94B25F	2-5	19109	B71 94D20F	2-5	19198	B71 94C16H	2-6
19021	B71 94B32F	2-5	19110	B71 94D25F	2-5	19199	B71 94C20H	2-6
19022	B71 94B40F	2-5	19111	B71 94D32F	2-5	19200	B71 94C25H	2-6
19023	B71 94B50F	2-5	19112	B71 94D40F	2-5	19201	B71 94C32H	2-6
19024	B71 94B63F	2-5	19113	B71 94D50F	2-5	19202	B71 94C40H	2-6
19025	B71 91C06F	2-5	19114	B71 94D63F	2-5	19203	B71 94C50H	2-6
19026	B71 91C10F	2-5	19115	B71 91B06H	2-6	19204	B71 94C63H	2-6
19027	B71 91C16F	2-5	19116	B71 91B10H	2-6	19205	B71 91D06H	2-6
19028	B71 91C20F	2-5	19117	B71 91B16H	2-6	19206	B71 91D10H	2-6
19029	B71 91C25F	2-5	19118	B71 91B20H	2-6	19207	B71 91D16H	2-6
19030	B71 91C32F	2-5	19119	B71 91B25H	2-6	19208	B71 91D20H	2-6
19031	B71 91C40F	2-5	19120	B71 91B32H	2-6	19209	B71 91D25H	2-6
19032	B71 91C50F	2-5	19121	B71 91B40H	2-6	19210	B71 91D32H	2-6

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
19211	B71 91D40H	2-6	19413	B71 91D04F	2-5	19536	B71LB63 4MA100	2-50
19212	B71 91D50H	2-6	19415	B71 92D02F	2-5	19537	B71LB63 4MA300	2-50
19213	B71 91D63H	2-6	19417	B71 92D04F	2-5	19538	B71LB40 2EA030	2-50
19214	B71 92D06H	2-6	19419	B71 93D02F	2-5	19539	B71LB40 2EA100	2-50
19215	B71 92D10H	2-6	19421	B71 93D04F	2-5	19540	B71LB40 2EA300	2-50
19216	B71 92D16H	2-6	19427	B71 94D02F	2-5	19541	B71LB63 2EA030	2-50
19217	B71 92D20H	2-6	19429	B71 94D04F	2-5	19542	B71LB63 2EA100	2-50
19218	B71 92D25H	2-6	19431	B71 91B02H	2-6	19543	B71LB63 2EA300	2-50
19219	B71 92D32H	2-6	19433	B71 91B04H	2-6	19544	B71LB40 3EA030	2-50
19220	B71 92D40H	2-6	19435	B71 92B02H	2-6	19545	B71LB40 3EA100	2-50
19221	B71 92D50H	2-6	19437	B71 92B04H	2-6	19546	B71LB40 3EA300	2-50
19222	B71 92D63H	2-6	19439	B71 93B02H	2-6	19547	B71LB63 3EA030	2-50
19223	B71 93D06H	2-6	19441	B71 93B04H	2-6	19548	B71LB63 3EA100	2-50
19224	B71 93D10H	2-6	19447	B71 94B02H	2-6	19549	B71LB63 3EA300	2-50
19225	B71 93D16H	2-6	19449	B71 94B04H	2-6	19550	B71LB40 4EA030	2-50
19226	B71 93D20H	2-6	19451	B71 91C02H	2-6	19551	B71LB40 4EA100	2-50
19227	B71 93D25H	2-6	19453	B71 91C04H	2-6	19552	B71LB40 4EA300	2-50
19228	B71 93D32H	2-6	19455	B71 92C02H	2-6	19553	B71LB63 4EA030	2-50
19229	B71 93D40H	2-6	19457	B71 92C04H	2-6	19554	B71LB63 4EA100	2-50
19230	B71 93D50H	2-6	19459	B71 93C02H	2-6	19555	B71LB63 4EA300	2-50
19231	B71 93D63H	2-6	19461	B71 93C04H	2-6	20001	B71 81B06H	2-4
19241	B71 94D06H	2-6	19467	B71 94C02H	2-6	20002	B71 81B10H	2-4
19242	B71 94D10H	2-6	19469	B71 94C04H	2-6	20003	B71 81B16H	2-4
19243	B71 94D16H	2-6	19471	B71 91D02H	2-6	20004	B71 81B20H	2-4
19244	B71 94D20H	2-6	19473	B71 91D04H	2-6	20005	B71 81B25H	2-4
19245	B71 94D25H	2-6	19475	B71 92D02H	2-6	20006	B71 81B32H	2-4
19246	B71 94D32H	2-6	19477	B71 92D04H	2-6	20007	B71 81B40H	2-4
19247	B71 94D40H	2-6	19479	B71 93D02H	2-6	20008	B71 81B50H	2-4
19248	B71 94D50H	2-6	19481	B71 93D04H	2-6	20009	B71 81B63H	2-4
19249	B71 94D63H	2-6	19487	B71 94D02H	2-6	20010	B71 82B06H	2-4
19251	B71 81B02H	2-4	19489	B71 94D04H	2-6	20011	B71 82B10H	2-4
19253	B71 81B04H	2-4	19490	L52 2C16/010	2-37	20012	B71 82B16H	2-4
19255	B71 82B02H	2-4	19491	L52 2A16/010	2-37	20013	B71 82B20H	2-4
19257	B71 82B04H	2-4	19493	L52 4C16/010	2-37	20014	B71 82B25H	2-4
19259	B71 83B02H	2-4	19494	L52 4A16/010	2-37	20015	B71 82B32H	2-4
19261	B71 83B04H	2-4	19496	L66 2C016/010	2-32	20016	B71 82B40H	2-4
19267	B71 84B02H	2-4	19497	L66 2A016/010	2-32	20017	B71 82B50H	2-4
19269	B71 84B04H	2-4	19502	B71LB40 2MC030	2-50	20018	B71 82B63H	2-4
19271	B71 81C02H	2-4	19503	B71LB40 2MC100	2-50	20019	B71 83B06H	2-4
19273	B71 81C04H	2-4	19504	B71LB40 2MC300	2-50	20020	B71 83B10H	2-4
19275	B71 82C02H	2-4	19505	B71LB63 2MC030	2-50	20021	B71 83B16H	2-4
19277	B71 82C04H	2-4	19506	B71LB63 2MC100	2-50	20022	B71 83B20H	2-4
19279	B71 83C02H	2-4	19507	B71LB63 2MC300	2-50	20023	B71 83B25H	2-4
19281	B71 83C04H	2-4	19508	B71LB40 2MA030	2-50	20024	B71 83B32H	2-4
19287	B71 84C02H	2-4	19509	B71LB40 2MA100	2-50	20025	B71 83B40H	2-4
19289	B71 84C04H	2-4	19510	B71LB40 2MA300	2-50	20026	B71 83B50H	2-4
19291	B71 81D02H	2-4	19511	B71LB63 2MA030	2-50	20027	B71 83B63H	2-4
19293	B71 81D04H	2-4	19512	B71LB63 2MA100	2-50	20037	B71 84B06H	2-4
19295	B71 82D02H	2-4	19513	B71LB63 2MA300	2-50	20038	B71 84B10H	2-4
19297	B71 82D04H	2-4	19514	B71LB40 3MC030	2-50	20039	B71 84B16H	2-4
19299	B71 83D02H	2-4	19515	B71LB40 3MC100	2-50	20040	B71 84B20H	2-4
19301	B71 83D04H	2-4	19516	B71LB40 3MC300	2-50	20041	B71 84B25H	2-4
19307	B71 84D02H	2-4	19517	B71LB63 3MC030	2-50	20042	B71 84B32H	2-4
19309	B71 84D04H	2-4	19518	B71LB63 3MC100	2-50	20043	B71 84B40H	2-4
19371	B71 91B02F	2-5	19519	B71LB63 3MC300	2-50	20044	B71 84B50H	2-4
19373	B71 91B04F	2-5	19520	B71LB40 3MA030	2-50	20045	B71 84B63H	2-4
19375	B71 92B02F	2-5	19521	B71LB40 3MA100	2-50	20046	B71 81C06H	2-4
19377	B71 92B04F	2-5	19522	B71LB40 3MA300	2-50	20047	B71 81C10H	2-4
19379	B71 93B02F	2-5	19523	B71LB63 3MA030	2-50	20048	B71 81C16H	2-4
19381	B71 93B04F	2-5	19524	B71LB63 3MA100	2-50	20049	B71 81C20H	2-4
19387	B71 94B02F	2-5	19525	B71LB63 3MA300	2-50	20050	B71 81C25H	2-4
19389	B71 94B04F	2-5	19526	B71LB40 4MC030	2-50	20051	B71 81C32H	2-4
19391	B71 91C02F	2-5	19527	B71LB40 4MC100	2-50	20052	B71 81C40H	2-4
19393	B71 91C04F	2-5	19528	B71LB40 4MC300	2-50	20053	B71 81C50H	2-4
19395	B71 92C02F	2-5	19529	B71LB63 4MC030	2-50	20054	B71 81C63H	2-4
19397	B71 92C04F	2-5	19530	B71LB63 4MC100	2-50	20055	B71 82C06H	2-4
19399	B71 93C02F	2-5	19531	B71LB63 4MC300	2-50	20056	B71 82C10H	2-4
19401	B71 93C04F	2-5	19532	B71LB40 4MA030	2-50	20057	B71 82C16H	2-4
19407	B71 94C02F	2-5	19533	B71LB40 4MA100	2-50	20058	B71 82C20H	2-4
19409	B71 94C04F	2-5	19534	B71LB40 4MA300	2-50	20059	B71 82C25H	2-4
19411	B71 91D02F	2-5	19535	B71LB63 4MA030	2-50	20060	B71 82C32H	2-4

Index / Order Code

2

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
20061	B71 82C40H	2-4	20285	L71NC C16/030	2-40	20356	L71NA C20/300	2-40
20062	B71 82C50H	2-4	20286	L71NC C20/030	2-40	20357	L71NA C25/300	2-40
20063	B71 82C63H	2-4	20287	L71NC C25/030	2-40	20358	L71NA C32/300	2-40
20064	B71 83C06H	2-4	20288	L71NC C32/030	2-40	20359	L71NA C40/300	2-40
20065	B71 83C10H	2-4	20289	L71NC C40/030	2-40	21140	C125 1B063	2-28
20066	B71 83C16H	2-4	20290	L71NA B06/030	2-40	21141	C125 1B080	2-28
20067	B71 83C20H	2-4	20291	L71NA B10/030	2-40	21142	C125 1B100	2-28
20068	B71 83C25H	2-4	20292	L71NA B16/030	2-40	21143	C125 2B063	2-28
20069	B71 83C32H	2-4	20293	L71NA B20/030	2-40	21144	C125 2B080	2-28
20070	B71 83C40H	2-4	20294	L71NA B25/030	2-40	21145	C125 2B100	2-28
20071	B71 83C50H	2-4	20295	L71NA B32/030	2-40	21146	C125 3B063	2-28
20072	B71 83C63H	2-4	20296	L71NA B40/030	2-40	21147	C125 3B080	2-28
20082	B71 84C06H	2-4	20297	L71NA C06/030	2-40	21148	C125 3B100	2-28
20083	B71 84C10H	2-4	20298	L71NA C10/030	2-40	21149	C125 4B063	2-28
20084	B71 84C16H	2-4	20299	L71NA C16/030	2-40	21150	C125 4B080	2-28
20085	B71 84C20H	2-4	20300	L71NA C20/030	2-40	21151	C125 4B100	2-28
20086	B71 84C25H	2-4	20301	L71NA C25/030	2-40	21152	C125 1C063	2-28
20087	B71 84C32H	2-4	20302	L71NA C32/030	2-40	21153	C125 1C080	2-28
20088	B71 84C40H	2-4	20303	L71NA C40/030	2-40	21154	C125 1C100	2-28
20089	B71 84C50H	2-4	20304	L71NC B06/100	2-40	21155	C125 2C063	2-28
20090	B71 84C63H	2-4	20305	L71NC B10/100	2-40	21156	C125 2C080	2-28
20091	B71 81D06H	2-4	20306	L71NC B16/100	2-40	21157	C125 2C100	2-28
20092	B71 81D10H	2-4	20307	L71NC B20/100	2-40	21158	C125 3C063	2-28
20093	B71 81D16H	2-4	20308	L71NC B25/100	2-40	21159	C125 3C080	2-28
20094	B71 81D20H	2-4	20309	L71NC B32/100	2-40	21160	C125 3C100	2-28
20095	B71 81D25H	2-4	20310	L71NC B40/100	2-40	21161	C125 4C063	2-28
20096	B71 81D32H	2-4	20311	L71NC C06/100	2-40	21162	C125 4C080	2-28
20097	B71 81D40H	2-4	20312	L71NC C10/100	2-40	21163	C125 4C100	2-28
20098	B71 81D50H	2-4	20313	L71NC C16/100	2-40	21164	C125 1D063	2-28
20099	B71 81D63H	2-4	20314	L71NC C20/100	2-40	21165	C125 1D080	2-28
20100	B71 82D06H	2-4	20315	L71NC C25/100	2-40	21166	C125 1D100	2-28
20101	B71 82D10H	2-4	20316	L71NC C32/100	2-40	21167	C125 2D063	2-28
20102	B71 82D16H	2-4	20317	L71NC C40/100	2-40	21168	C125 2D080	2-28
20103	B71 82D20H	2-4	20318	L71NA B06/100	2-40	21169	C125 2D100	2-28
20104	B71 82D25H	2-4	20319	L71NA B10/100	2-40	21170	C125 3D063	2-28
20105	B71 82D32H	2-4	20320	L71NA B16/100	2-40	21171	C125 3D080	2-28
20106	B71 82D40H	2-4	20321	L71NA B20/100	2-40	21172	C125 3D100	2-28
20107	B71 82D50H	2-4	20322	L71NA B25/100	2-40	21173	C125 4D063	2-28
20108	B71 82D63H	2-4	20323	L71NA B32/100	2-40	21174	C125 4D080	2-28
20109	B71 83D06H	2-4	20324	L71NA B40/100	2-40	21175	C125 4D100	2-28
20110	B71 83D10H	2-4	20325	L71NA C06/100	2-40	21179	L6 2C16/030	2-34
20111	B71 83D16H	2-4	20326	L71NA C10/100	2-40	21180	L6 2C25/030	2-34
20112	B71 83D20H	2-4	20327	L71NA C16/100	2-40	21181	L6 2C40/030	2-34
20113	B71 83D25H	2-4	20328	L71NA C20/100	2-40	21182	L6 2C63/030	2-34
20114	B71 83D32H	2-4	20329	L71NA C25/100	2-40	21184	L6 2C16/100	2-34
20115	B71 83D40H	2-4	20330	L71NA C32/100	2-40	21185	L6 2C25/100	2-34
20116	B71 83D50H	2-4	20331	L71NA C40/100	2-40	21186	L6 2C40/100	2-34
20117	B71 83D63H	2-4	20332	L71NC B06/300	2-40	21187	L6 2C63/100	2-34
20127	B71 84D06H	2-4	20333	L71NC B10/300	2-40	21189	L6 2C16/300	2-34
20128	B71 84D10H	2-4	20334	L71NC B16/300	2-40	21190	L6 2C25/300	2-34
20129	B71 84D16H	2-4	20335	L71NC B20/300	2-40	21191	L6 2C40/300	2-34
20130	B71 84D20H	2-4	20336	L71NC B25/300	2-40	21192	L6 2C63/300	2-34
20131	B71 84D25H	2-4	20337	L71NC B32/300	2-40	21196	L6 2A16/030	2-34
20132	B71 84D32H	2-4	20338	L71NC B40/300	2-40	21197	L6 2A25/030	2-34
20133	B71 84D40H	2-4	20339	L71NC C06/300	2-40	21198	L6 2A40/030	2-34
20134	B71 84D50H	2-4	20340	L71NC C10/300	2-40	21199	L6 2A63/030	2-34
20135	B71 84D63H	2-4	20341	L71NC C16/300	2-40	21201	L6 2A16/100	2-34
20271	B71CR	2-54	20342	L71NC C20/300	2-40	21202	L6 2A25/100	2-34
20272	B71CL	2-54	20343	L71NC C25/300	2-40	21203	L6 2A40/100	2-34
20273	B71JR	2-54	20344	L71NC C32/300	2-40	21204	L6 2A63/100	2-34
20274	B71JL	2-54	20345	L71NC C40/300	2-40	21206	L6 2A16/300	2-34
20275	B71FR1	2-54	20346	L71NA B06/300	2-40	21207	L6 2A25/300	2-34
20276	L71NC B06/030	2-40	20347	L71NA B10/300	2-40	21208	L6 2A40/300	2-34
20277	L71NC B10/030	2-40	20348	L71NA B16/300	2-40	21209	L6 2A63/300	2-34
20278	L71NC B16/030	2-40	20349	L71NA B20/300	2-40	21211	L6 2SC16/100	2-34
20279	L71NC B20/030	2-40	20350	L71NA B25/300	2-40	21212	L6 2SC25/100	2-34
20280	L71NC B25/030	2-40	20351	L71NA B32/300	2-40	21213	L6 2SC40/100	2-34
20281	L71NC B32/030	2-40	20352	L71NA B40/300	2-40	21214	L6 2SC63/100	2-34
20282	L71NC B40/030	2-40	20353	L71NA C06/300	2-40	21216	L6 2SC16/300	2-34
20283	L71NC C06/030	2-40	20354	L71NA C10/300	2-40	21217	L6 2SC25/300	2-34
20284	L71NC C10/030	2-40	20355	L71NA C16/300	2-40	21218	L6 2SC40/300	2-34

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
21219	L6 2SC63/300	2-34	23085	L66 2C063/300	2-32	23160	D5T06GT04	2-85
21233	L6 4C16/030	2-34	23086	L66 2C080/300	2-32	23161	D606WWW04	2-78
21234	L6 4C25/030	2-34	23087	L66 2C100/300	2-32	23162	D606WT04	2-78
21235	L6 4C40/030	2-34	23088	L66 2A025/030	2-32	23163	D506WWW06	2-77
21236	L6 4C63/030	2-34	23089	L66 2A040/030	2-32	23164	D5T06GG06	2-85
21238	L6 4C16/100	2-34	23090	L66 2A063/030	2-32	23165	D506WT06	2-77
21239	L6 4C25/100	2-34	23091	L66 2A080/030	2-32	23166	D5T06GT06	2-85
21240	L6 4C40/100	2-34	23092	L66 2A100/030	2-32	23167	D606WWW06	2-78
21241	L6 4C63/100	2-34	23093	L66 2A025/100	2-32	23168	D606WT06	2-78
21243	L6 4C16/300	2-34	23094	L66 2A040/100	2-32	23169	D506WWW08	2-77
21244	L6 4C25/300	2-34	23095	L66 2A063/100	2-32	23170	D5T06GG08	2-85
21245	L6 4C40/300	2-34	23096	L66 2A080/100	2-32	23171	D506WT08	2-77
21246	L6 4C63/300	2-34	23097	L66 2A100/100	2-32	23172	D5T06GT08	2-85
21250	L6 4A16/030	2-34	23098	L66 2A025/300	2-32	23173	D606WWW08	2-78
21251	L6 4A25/030	2-34	23099	L66 2A040/300	2-32	23174	D606WT08	2-78
21252	L6 4A40/030	2-34	23100	L66 2A063/300	2-32	23175	D810WT04	2-81
21253	L6 4A63/030	2-34	23101	L66 2A080/300	2-32	23176	D810WWW04	2-81
21255	L6 4A16/100	2-34	23102	L66 2A100/300	2-32	23177	D810WT07	2-81
21256	L6 4A25/100	2-34	23103	L66 4C025/030	2-32	23178	D810WWW07	2-81
21257	L6 4A40/100	2-34	23104	L66 4C040/030	2-32	23179	D810WT10	2-81
21258	L6 4A63/100	2-34	23105	L66 4C063/030	2-32	23180	D810WWW10	2-81
21260	L6 4A16/300	2-34	23106	L66 4C080/030	2-32	23181	D810WT13	2-81
21261	L6 4A25/300	2-34	23107	L66 4C100/030	2-32	23182	D810WWW13	2-81
21262	L6 4A40/300	2-34	23108	L66 4C025/100	2-32	23183	D810WT16	2-81
21263	L6 4A63/300	2-34	23109	L66 4C040/100	2-32	23184	D810WWW16	2-81
21265	L6 4SC16/100	2-34	23110	L66 4C063/100	2-32	23185	D810WT21	2-81
21266	L6 4SC25/100	2-34	23111	L66 4C080/100	2-32	23186	D810WWW21	2-81
21267	L6 4SC40/100	2-34	23112	L66 4C100/100	2-32	23577	C125 1B125	2-28
21268	L6 4SC63/100	2-34	23113	L66 4C025/300	2-32	23578	C125 2B125	2-28
21270	L6 4SC16/300	2-34	23114	L66 4C040/300	2-32	23579	C125 3B125	2-28
21271	L6 4SC25/300	2-34	23115	L66 4C063/300	2-32	23580	C125 4B125	2-28
21272	L6 4SC40/300	2-34	23116	L66 4C080/300	2-32	23581	C125 1C125	2-28
21273	L6 4SC63/300	2-34	23117	L66 4C100/300	2-32	23582	C125 2C125	2-28
21284	B66 B06N	2-19	23118	L66 4A025/030	2-32	23583	C125 3C125	2-28
21285	B66 B10N	2-19	23119	L66 4A040/030	2-32	23584	C125 4C125	2-28
21286	B66 B16N	2-19	23120	L66 4A063/030	2-32	23585	C125 1D125	2-28
21287	B66 B20N	2-19	23121	L66 4A080/030	2-32	23586	C125 2D125	2-28
21288	B66 B25N	2-19	23122	L66 4A100/030	2-32	23587	C125 3D125	2-28
21289	B66 B32N	2-19	23123	L66 4A025/100	2-32	23588	C125 4D125	2-28
21290	B66 B40N	2-19	23124	L66 4A040/100	2-32	23589	B71L B06/030	2-47
21291	B66 C06N	2-19	23125	L66 4A063/100	2-32	23590	B71L B10/030	2-47
21292	B66 C10N	2-19	23126	L66 4A080/100	2-32	23591	B71L B16/030	2-47
21293	B66 C16N	2-19	23127	L66 4A100/100	2-32	23592	B71L B20/030	2-47
21294	B66 C20N	2-19	23128	L66 4A025/300	2-32	23593	B71L B25/030	2-47
21295	B66 C25N	2-19	23129	L66 4A040/300	2-32	23594	B71L B32/030	2-47
21296	B66 C32N	2-19	23130	L66 4A063/300	2-32	23595	B71L B40/030	2-47
21297	B66 C40N	2-19	23131	L66 4A080/300	2-32	23596	B71L B50/030	2-47
22899	B71G 1032	2-56	23132	L66 4A100/300	2-32	23597	B71L C06/030	2-47
22900	B71G 1063	2-56	23137	D506WW12	2-77	23598	B71L C10/030	2-47
22901	B71G 1100	2-56	23138	D5T06GG12	2-85	23599	B71L C16/030	2-47
22902	B71G 2032	2-56	23139	D506WT12	2-77	23600	B71L C20/030	2-47
22903	B71G 2063	2-56	23140	D5T06GT12	2-85	23601	B71L C25/030	2-47
22904	B71G 2100	2-56	23141	D606WWW12	2-78	23602	B71L C32/030	2-47
22905	B71G 3032	2-56	23142	D606WT12	2-78	23603	B71L C40/030	2-47
22906	B71G 3063	2-56	23143	D506WWW18	2-77	23604	B71L C50/030	2-47
22907	B71G 3100	2-56	23144	D5T06GG18	2-85	23622	L66 2S025/100	2-32
22908	B71G 4032	2-56	23145	D506WT18	2-77	23623	L66 2S040/100	2-32
22909	B71G 4063	2-56	23146	D5T06GT18	2-85	23624	L66 2S063/100	2-32
22910	B71G 4100	2-56	23147	D606WWW18	2-78	23625	L66 2S080/100	2-32
23073	L66 2C025/030	2-32	23148	D606WT18	2-78	23626	L66 2S100/100	2-32
23074	L66 2C040/030	2-32	23149	D506WWW24	2-77	23627	L66 2S025/300	2-32
23075	L66 2C063/030	2-32	23150	D506WT24	2-77	23628	L66 2S040/300	2-32
23076	L66 2C080/030	2-32	23151	D606WWW24	2-78	23629	L66 2S063/300	2-32
23077	L66 2C100/030	2-32	23152	D606WT24	2-78	23630	L66 2S080/300	2-32
23078	L66 2C025/100	2-32	23153	D506WWW36	2-77	23631	L66 2S100/300	2-32
23079	L66 2C040/100	2-32	23154	D506WT36	2-77	23637	L66 4S025/100	2-32
23080	L66 2C063/100	2-32	23155	D606WWW36	2-78	23638	L66 4S040/100	2-32
23081	L66 2C080/100	2-32	23156	D606WT36	2-78	23639	L66 4S063/100	2-32
23082	L66 2C100/100	2-32	23157	D506WWW04	2-77	23640	L66 4S080/100	2-32
23083	L66 2C025/300	2-32	23158	D5T06GG04	2-85	23641	L66 4S100/100	2-32
23084	L66 2C040/300	2-32	23159	D506WT04	2-77	23642	L66 4S025/300	2-32

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
23643	L66 4S040/300	2-32	24374	L52 2S63/100	2-37	24754	Su2132	2-74
23644	L66 4S063/300	2-32	24376	L52 2S16/300	2-37	24755	SU2133	2-74
23645	L66 4S080/300	2-32	24377	L52 2S25/300	2-37	24756	SU2134	2-74
23646	L66 4S100/300	2-32	24379	L52 2S40/300	2-37	24757	SU2135	2-74
23648	L66 2C016/030	2-32	24381	L52 2S63/300	2-37	24758	SU2136	2-74
23651	L66 4C016/030	2-32	24390	L52 4S16/100	2-37	24759	SU2137	2-74
23654	L66 2A016/030	2-32	24391	L52 4S25/100	2-37	24760	SA-BB101	2-93
23657	L66 4A016/030	2-32	24393	L52 4S40/100	2-37	24761	SA-BB102	2-93
23666	L66 2C016/100	2-32	24395	L52 4S63/100	2-37	24762	SA-BB201	2-93
23669	L66 4C016/100	2-32	24397	L52 4S16/300	2-37	24763	SA-BB202	2-93
23672	L66 2A016/100	2-32	24398	L52 4S25/300	2-37	24764	SA-BB301	2-93
23675	L66 4A016/100	2-32	24400	L52 4S40/300	2-37	24765	SA-BB302	2-93
23678	L66 2S016/100	2-32	24402	L52 4S63/300	2-37	24766	SA-BB401	2-93
23681	L66 4S016/100	2-32	24555	D506GG04	2-77	24767	SA-BB402	2-93
23684	L66 2C016/300	2-32	24556	D506GT04	2-77	24776	E8	2-75
23687	L66 4C016/300	2-32	24557	D506GG06	2-77	24777	HC18A	2-75
23690	L66 2A016/300	2-32	24558	D506GT06	2-77	24780	ALC18	2-75
23693	L66 4A016/300	2-32	24559	D506GG08	2-77	25896	CH825 210 11B7	2-66
23696	L66 2S016/300	2-32	24560	D506GT08	2-77	25897	CH825 210 20B7	2-66
23699	L66 4S016/300	2-32	24563	D506GG12	2-77	25898	CH825 216 11B7	2-66
24278	L52 2C16/030	2-37	24564	D506GT12	2-77	25899	CH825 216 20B7	2-66
24279	L52 2C25/030	2-37	24565	D506GG18	2-77	25900	CH825 220 11B7	2-66
24281	L52 2C40/030	2-37	24566	D506GT18	2-77	25901	CH825 220 20B7	2-66
24283	L52 2C63/030	2-37	24567	D506GG24	2-77	25902	CH825 225 11B7	2-66
24285	L52 2C16/100	2-37	24568	D506GT24	2-77	25903	CH825 225 20B7	2-66
24286	L52 2C25/100	2-37	24569	D506GG36	2-77	25904	CH825 410 22B7	2-66
24288	L52 2C40/100	2-37	24570	D506GT36	2-77	25905	CH825 410 31B7	2-66
24290	L52 2C63/100	2-37	24571	D606GG04	2-78	25906	CH825 410 40B7	2-66
24292	L52 2C16/300	2-37	24572	D606GT04	2-78	25907	CH825 410 04B7	2-66
24293	L52 2C25/300	2-37	24573	D606GG06	2-78	25908	CH825 416 22B7	2-66
24295	L52 2C40/300	2-37	24574	D606GT06	2-78	25909	CH825 416 31B7	2-66
24297	L52 2C63/300	2-37	24575	D606GG08	2-78	25910	CH825 416 40B7	2-66
24299	L52 4C16/030	2-37	24576	D606GT08	2-78	25911	CH825 416 04B7	2-66
24300	L52 4C25/030	2-37	24579	D606GG12	2-78	25912	CH825 420 22B7	2-66
24302	L52 4C40/030	2-37	24580	D606GT12	2-78	25913	CH825 420 31B7	2-66
24304	L52 4C63/030	2-37	24581	D606GG18	2-78	25914	CH825 420 40B7	2-66
24306	L52 4C16/100	2-37	24582	D606GT18	2-78	25915	CH825 420 04B7	2-66
24307	L52 4C25/100	2-37	24583	D606GG24	2-78	25916	CH825 425 22B7	2-66
24309	L52 4C40/100	2-37	24584	D606GT24	2-78	25917	CH825 425 31B7	2-66
24311	L52 4C63/100	2-37	24585	D606GG36	2-78	25918	CH825 425 40B7	2-66
24313	L52 4C16/300	2-37	24586	D606GT36	2-78	25919	CH825 425 04B7	2-66
24314	L52 4C25/300	2-37	24587	NBT655055	2-92	25920	CH863 225 11B7	2-67
24316	L52 4C40/300	2-37	24588	NBT858060	2-92	25921	CH863 225 20B7	2-67
24318	L52 4C63/300	2-37	24589	NBT1108070	2-92	25922	CH863 225 02B7	2-67
24320	L52 2A16/030	2-37	24590	NBT10010070	2-92	25923	CH863 232 11B7	2-67
24321	L52 2A25/030	2-37	24591	NBT12010070	2-92	25924	CH863 232 20B7	2-67
24323	L52 2A40/030	2-37	24592	NBT15011070	2-92	25925	CH863 232 02B7	2-67
24325	L52 2A63/030	2-37	24593	NBT17512575	2-92	25926	CH863 240 11B7	2-67
24327	L52 2A16/100	2-37	24594	NBT175125100	2-92	25927	CH863 240 20B7	2-67
24328	L52 2A25/100	2-37	24595	NBT15015080	2-92	25928	CH863 240 02B7	2-67
24330	L52 2A40/100	2-37	24596	NBT20010080	2-92	25929	CH863 263 11B7	2-67
24332	L52 2A63/100	2-37	24597	NBT18018080	2-92	25930	CH863 263 20B7	2-67
24334	L52 2A16/300	2-37	24598	NBT200155100	2-92	25931	CH863 263 02B7	2-67
24335	L52 2A25/300	2-37	24599	NBT200200100	2-92	25932	CH863 425 22B7	2-67
24337	L52 2A40/300	2-37	24600	NBT250200100	2-92	25933	CH863 425 31B7	2-67
24339	L52 2A63/300	2-37	24601	NBT300250130	2-92	25934	CH863 425 40B7	2-67
24341	L52 4A16/030	2-37	24602	NBT400350130	2-92	25935	CH863 425 04B7	2-67
24342	L52 4A25/030	2-37	24603	NBT350300130	2-92	25936	CH863 432 22B7	2-67
24344	L52 4A40/030	2-37	24605	HT05	2-84	25937	CH863 432 31B7	2-67
24346	L52 4A63/030	2-37	24606	HT08	2-84	25938	CH863 432 40B7	2-67
24348	L52 4A16/100	2-37	24607	HT12	2-84	25939	CH863 432 04B7	2-67
24349	L52 4A25/100	2-37	24608	HT15	2-84	25940	CH863 440 22B7	2-67
24351	L52 4A40/100	2-37	24609	HT18	2-84	25941	CH863 440 31B7	2-67
24353	L52 4A63/100	2-37	24610	HT24	2-84	25942	CH863 440 40B7	2-67
24355	L52 4A16/300	2-37	24734	B1D N1	2-72	25943	CH863 440 04B7	2-67
24356	L52 4A25/300	2-37	24735	B1D N2	2-72	25944	CH863 463 22B7	2-67
24358	L52 4A40/300	2-37	24736	B1D N3	2-72	25945	CH863 463 31B7	2-67
24360	L52 4A63/300	2-37	24737	B1D N4	2-72	25946	CH863 463 40B7	2-67
24369	L52 2S16/100	2-37	24738	B1D N5	2-72	25947	CH863 463 04B7	2-67
24370	L52 2S25/100	2-37	24751	BT8-8	2-74	26156	CH825 210 11P7	2-66
24372	L52 2S40/100	2-37	24753	SU2131	2-74	26157	CH825 210 20P7	2-66

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
26158	CH825 216 11P7	2-66	29042	U1 10D4/275	2-62	29815	NBW300250130	2-92
26159	CH825 216 20P7	2-66	29043	U1 10D1N/275	2-62	29816	NBW400350130	2-92
26160	CH825 220 11P7	2-66	29045	U1 10D3N/275	2-62	29817	NBW350300130	2-92
26161	CH825 220 20P7	2-66	29053	U1 20D1/275	2-62	29859	B6 1B06N	2-11
26162	CH825 225 11P7	2-66	29054	U1 20D2/275	2-62	29860	B6 1B10N	2-11
26163	CH825 225 20P7	2-66	29055	U1 20D3/275	2-62	29861	B6 1B16N	2-11
26164	CH825 410 22P7	2-66	29056	U1 20D4/275	2-62	29862	B6 1B20N	2-11
26165	CH825 410 31P7	2-66	29057	U1 20D1N/275	2-62	29863	B6 1B25N	2-11
26166	CH825 410 40P7	2-66	29059	U1 20D3N/275	2-62	29864	B6 1B32N	2-11
26167	CH825 410 04P7	2-66	29067	U1 40C1/275	2-62	29865	B6 1B40N	2-11
26168	CH825 416 22P7	2-66	29068	U1 40C2/275	2-62	29866	B6 1B50N	2-11
26169	CH825 416 31P7	2-66	29069	U1 40C3/275	2-62	29867	B6 1B63N	2-11
26170	CH825 416 40P7	2-66	29070	U1 40C4/275	2-62	29872	B6 2B06N	2-11
26171	CH825 416 04P7	2-66	29071	U1 40C1N/275	2-62	29873	B6 2B10N	2-11
26172	CH825 420 22P7	2-66	29073	U1 40C3N/275	2-62	29874	B6 2B16N	2-11
26173	CH825 420 31P7	2-66	29074	U1 60C1/275	2-62	29875	B6 2B20N	2-11
26174	CH825 420 40P7	2-66	29075	U1 60C2/275	2-62	29876	B6 2B25N	2-11
26175	CH825 420 04P7	2-66	29076	U1 60C3/275	2-62	29877	B6 2B32N	2-11
26176	CH825 425 22P7	2-66	29077	U1 60C4/275	2-62	29878	B6 2B40N	2-11
26177	CH825 425 31P7	2-66	29078	U1 60C1N/275	2-62	29879	B6 2B50N	2-11
26178	CH825 425 40P7	2-66	29080	U1 60C3N/275	2-62	29880	B6 2B63N	2-11
26179	CH825 425 04P7	2-66	29312	U1 10D1/400	2-63	29885	B6 3B06N	2-11
26180	CH863 225 11P7	2-67	29313	U1 10D2/400	2-63	29886	B6 3B10N	2-11
26181	CH863 225 20P7	2-67	29314	U1 10D3/400	2-63	29887	B6 3B16N	2-11
26182	CH863 225 02P7	2-67	29315	U1 10D4/400	2-63	29888	B6 3B20N	2-11
26183	CH863 232 11P7	2-67	29316	U1 10D1N/400	2-63	29889	B6 3B25N	2-11
26184	CH863 232 20P7	2-67	29318	U1 10D3N/400	2-63	29890	B6 3B32N	2-11
26185	CH863 232 02P7	2-67	29326	U1 20D1/400	2-63	29891	B6 3B40N	2-11
26186	CH863 240 11P7	2-67	29327	U1 20D2/400	2-63	29892	B6 3B50N	2-11
26187	CH863 240 20P7	2-67	29328	U1 20D3/400	2-63	29893	B6 3B63N	2-11
26188	CH863 240 02P7	2-67	29329	U1 20D4/400	2-63	29898	B6 4B06N	2-11
26189	CH863 263 11P7	2-67	29330	U1 20D1N/400	2-63	29899	B6 4B10N	2-11
26190	CH863 263 20P7	2-67	29332	U1 20D3N/400	2-63	29900	B6 4B16N	2-11
26191	CH863 263 02P7	2-67	29340	U1 40C1/400	2-63	29901	B6 4B20N	2-11
26192	CH863 425 22P7	2-67	29341	U1 40C2/400	2-63	29902	B6 4B25N	2-11
26193	CH863 425 31P7	2-67	29342	U1 40C3/400	2-63	29903	B6 4B32N	2-11
26194	CH863 425 40P7	2-67	29343	U1 40C4/400	2-63	29904	B6 4B40N	2-11
26195	CH863 425 04P7	2-67	29344	U1 40C1N/400	2-63	29905	B6 4B50N	2-11
26196	CH863 432 22P7	2-67	29346	U1 40C3N/400	2-63	29906	B6 4B63N	2-11
26197	CH863 432 31P7	2-67	29347	U1 60C1/400	2-63	29911	B6 1C06N	2-11
26198	CH863 432 40P7	2-67	29348	U1 60C2/400	2-63	29912	B6 1C10N	2-11
26199	CH863 432 04P7	2-67	29349	U1 60C3/400	2-63	29913	B6 1C16N	2-11
26200	CH863 440 22P7	2-67	29350	U1 60C4/400	2-63	29914	B6 1C20N	2-11
26201	CH863 440 31P7	2-67	29351	U1 60C1N/400	2-63	29915	B6 1C25N	2-11
26202	CH863 440 40P7	2-67	29353	U1 60C3N/400	2-63	29916	B6 1C32N	2-11
26203	CH863 440 04P7	2-67	29789	OBW5050	2-92	29917	B6 1C40N	2-11
26204	CH863 463 22P7	2-67	29790	OBW8050	2-92	29918	B6 1C50N	2-11
26205	CH863 463 31P7	2-67	29791	OBW858550	2-92	29919	B6 1C63N	2-11
26206	CH863 463 40P7	2-67	29792	OBW10010070	2-92	29924	B6 2C06N	2-11
26207	CH863 463 04P7	2-67	29793	OBW15011070	2-92	29925	B6 2C10N	2-11
26329	B71FL1	2-54	29794	OBW15015070	2-92	29926	B6 2C16N	2-11
26330	B71FL2	2-54	29795	OBW20010070	2-92	29927	B6 2C20N	2-11
27680	VP6 2U32	2-73	29796	OBW20015580	2-92	29928	B6 2C25N	2-11
27681	VP6 2U40	2-73	29797	OBW20020080	2-92	29929	B6 2C32N	2-11
27682	VP6 2U50	2-73	29798	OBW25520080	2-92	29930	B6 2C40N	2-11
27683	VP6 2U63	2-73	29799	OBW300250120	2-92	29931	B6 2C50N	2-11
27684	VP6 4U32	2-73	29800	OBW400350120	2-92	29932	B6 2C63N	2-11
27685	VP6 4U40	2-73	29801	NBW655055	2-92	29937	B6 3C06N	2-11
27686	VP6 4U50	2-73	29802	NBW858060	2-92	29938	B6 3C10N	2-11
27687	VP6 4U63	2-73	29803	NBW1108070	2-92	29939	B6 3C16N	2-11
27688	VP6 2D32	2-73	29804	NBW10010070	2-92	29940	B6 3C20N	2-11
27689	VP6 2D40	2-73	29805	NBW12010070	2-92	29941	B6 3C25N	2-11
27690	VP6 2D50	2-73	29806	NBW15011070	2-92	29942	B6 3C32N	2-11
27691	VP6 2D63	2-73	29807	NBW17512575	2-92	29943	B6 3C40N	2-11
27692	VP6 4D32	2-73	29808	NBW175125100	2-92	29944	B6 3C50N	2-11
27693	VP6 4D40	2-73	29809	NBW15015080	2-92	29945	B6 3C63N	2-11
27694	VP6 4D50	2-73	29810	NBW20010080	2-92	29950	B6 4C06N	2-11
27695	VP6 4D63	2-73	29811	NBW18018080	2-92	29951	B6 4C10N	2-11
29039	U1 10D1/275	2-62	29812	NBW200155100	2-92	29952	B6 4C16N	2-11
29040	U1 10D2/275	2-62	29813	NBW200200100	2-92	29953	B6 4C20N	2-11
29041	U1 10D3/275	2-62	29814	NBW250200100	2-92	29954	B6 4C25N	2-11

Index / Order Code

2

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
29955	B6 4C32N	2-11	30711	D510GG36	2-77	32941	TBS06204	2-94
29956	B6 4C40N	2-11	30712	D510GT36	2-77	32942	TBS1031	2-94
29957	B6 4C50N	2-11	30713	D610GG04	2-78	32943	TBS1041	2-94
29958	B6 4C63N	2-11	30714	D610GT04	2-78	32944	TBS1061	2-94
29963	B6 1D06N	2-11	30715	D610GG06	2-78	32945	TBS1062	2-94
29964	B6 1D10N	2-11	30716	D610GT06	2-78	32946	TBS1081	2-94
29965	B6 1D16N	2-11	30717	D610GG08	2-78	32947	TBS1091	2-94
29966	B6 1D20N	2-11	30718	D610GT08	2-78	32948	TBS10102	2-94
29967	B6 1D25N	2-11	30721	D610GG12	2-78	32949	TBS10132	2-94
29968	B6 1D32N	2-11	30722	D610GT12	2-78	32950	TBS10204	2-94
29969	B6 1D40N	2-11	30723	D610GG18	2-78	32951	TB1007	2-95
29970	B6 1D50N	2-11	30724	D610GT18	2-78	32952	TB1008	2-95
29971	B6 1D63N	2-11	30725	D610GG24	2-78	32953	TB1010	2-95
29976	B6 2D06N	2-11	30726	D610GT24	2-78	32954	TB1012	2-95
29977	B6 2D10N	2-11	30727	D610GG36	2-78	32955	TB1013	2-95
29978	B6 2D16N	2-11	30728	D610GT36	2-78	32956	TB1015	2-95
29979	B6 2D20N	2-11	30729	HA04	2-84	32957	MBP1	2-95
29980	B6 2D25N	2-11	30730	HA08	2-84	32958	MBP2	2-95
29981	B6 2D32N	2-11	30731	HA12	2-84	32959	PL1	2-55
29982	B6 2D40N	2-11	30732	HA18	2-84	32960	PL2	2-55
29983	B6 2D50N	2-11	30733	HA24	2-84	32961	PL3	2-54
29984	B6 2D63N	2-11	31423	B71DD	2-52	32962	U1RP 27510	2-64
29989	B6 3D06N	2-11	32676	SA-BBEC1	2-93	32963	U1RP 27520	2-64
29990	B6 3D10N	2-11	32677	SA-BBEC2	2-93	32964	U1RP 27540	2-64
29991	B6 3D16N	2-11	32678	SA-BBEC3	2-93	32965	U1RP 27560	2-64
29992	B6 3D20N	2-11	32679	SA-BBEC4	2-93	32966	U1RP 32010	2-64
29993	B6 3D25N	2-11	32680	SA-BBSCY5	2-93	32967	U1RP 32020	2-64
29994	B6 3D32N	2-11	32683	U1C 10D1/275	2-62	32968	U1RP 32040	2-64
29995	B6 3D40N	2-11	32684	U1C 10D2/275	2-62	32969	U1RP 32060	2-64
29996	B6 3D50N	2-11	32685	U1C 10D3/275	2-62	32970	U1RP 38510	2-64
29997	B6 3D63N	2-11	32686	U1C 10D4/275	2-62	32971	U1RP 38520	2-64
30655	D510WW04	2-77	32687	U1C 20D1/275	2-62	32972	U1RP 38540	2-64
30656	D510WT04	2-77	32688	U1C 20D2/275	2-62	32973	U1RP 38560	2-64
30657	D510WW06	2-77	32689	U1C 20D3/275	2-62	32974	U1RP 40010	2-64
30658	D510WT06	2-77	32690	U1C 20D4/275	2-62	32975	U1RP 40020	2-64
30659	D510WW08	2-77	32691	U1C 40C1/275	2-62	32976	U1RP 40040	2-64
30660	D510WT08	2-77	32692	U1C 40C2/275	2-62	32977	U1RP 40060	2-64
30663	D510WW12	2-77	32693	U1C 40C3/275	2-62	32978	U1RP 44010	2-64
30664	D510WT12	2-77	32694	U1C 40C4/275	2-62	32979	U1RP 44020	2-64
30665	D510WW18	2-77	32695	U1C 60C1/275	2-62	32980	U1RP 44040	2-64
30666	D510WT18	2-77	32696	U1C 60C2/275	2-62	32981	U1RP 44060	2-64
30667	D510WW24	2-77	32697	U1C 60C3/275	2-62	34355	OFN	2-55
30668	D510WT24	2-77	32698	U1C 60C4/275	2-62	34823	U71 10D1/140	2-59
30669	D510WW36	2-77	32699	U1C 10D1/400	2-63	34824	U71 10D1/275	2-59
30670	D510WT36	2-77	32700	U1C 10D2/400	2-63	34825	U71 10D1/320	2-59
30671	D610WW04	2-78	32701	U1C 10D3/400	2-63	34826	U71 10D1/385	2-60
30672	D610WT04	2-78	32702	U1C 10D4/400	2-63	34827	U71 10D1/420	2-60
30673	D610WW06	2-78	32703	U1C 20D1/400	2-63	34828	U71 10D2/140	2-59
30674	D610WT06	2-78	32704	U1C 20D2/400	2-63	34829	U71 10D2/275	2-59
30675	D610WW08	2-78	32705	U1C 20D3/400	2-63	34830	U71 10D2/320	2-59
30676	D610WT08	2-78	32706	U1C 20D4/400	2-63	34831	U71 10D2/385	2-60
30679	D610WW12	2-78	32707	U1C 40C1/400	2-63	34832	U71 10D2/420	2-60
30680	D610WT12	2-78	32708	U1C 40C2/400	2-63	34833	U71 10D3/140	2-59
30681	D610WW18	2-78	32709	U1C 40C3/400	2-63	34834	U71 10D3/275	2-59
30682	D610WT18	2-78	32710	U1C 40C4/400	2-63	34835	U71 10D3/320	2-59
30683	D610WW24	2-78	32711	U1C 60C1/400	2-63	34836	U71 10D3/385	2-60
30684	D610WT24	2-78	32712	U1C 60C2/400	2-63	34837	U71 10D3/420	2-60
30685	D610WW36	2-78	32713	U1C 60C3/400	2-63	34838	U71 10D4/140	2-59
30686	D610WT36	2-78	32714	U1C 60C4/400	2-63	34839	U71 10D4/275	2-59
30697	D510GG04	2-77	32929	FT1B	2-93	34840	U71 10D4/320	2-59
30698	D510GT04	2-77	32930	FT2G	2-93	34841	U71 10D4/385	2-60
30699	D510GG06	2-77	32931	DR1	2-93	34842	U71 10D4/420	2-60
30700	D510GT06	2-77	32932	DR2	2-93	34843	U71 20D1/275	2-59
30701	D510GG08	2-77	32933	TBS0631	2-94	34844	U71 20D1/320	2-59
30702	D510GT08	2-77	32934	TBS0641	2-94	34845	U71 20D1/385	2-60
30705	D510GG12	2-77	32935	TBS0661	2-94	34846	U71 20D1/420	2-60
30706	D510GT12	2-77	32936	TBS0662	2-94	34847	U71 20D2/275	2-59
30707	D510GG18	2-77	32937	TBS0681	2-94	34848	U71 20D2/320	2-59
30708	D510GT18	2-77	32938	TBS0691	2-94	34849	U71 20D2/385	2-60
30709	D510GG24	2-77	32939	TBS06102	2-94	34850	U71 20D2/420	2-60
30710	D510GT24	2-77	32940	TBS06132	2-94	34851	U71 20D3/275	2-59

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
34852	U71 20D3/320	2-59	36096	L71 4C080/100	2-30	36167	L71 2SA040/100	2-30
34853	U71 20D3/385	2-60	36097	L71 4C100/100	2-30	36168	L71 2SA063/100	2-30
34854	U71 20D3/420	2-60	36098	L71 4C016/300	2-30	36169	L71 2SA080/100	2-30
34855	U71 20D4/275	2-59	36099	L71 4C025/300	2-30	36170	L71 2SA100/100	2-30
34856	U71 20D4/320	2-59	36100	L71 4C040/300	2-30	36171	L71 2SA016/300	2-30
34857	U71 20D4/385	2-60	36101	L71 4C063/300	2-30	36172	L71 2SA025/300	2-30
34858	U71 20D4/420	2-60	36102	L71 4C080/300	2-30	36173	L71 2SA040/300	2-30
34859	U71 40D1/275	2-59	36103	L71 4C100/300	2-30	36174	L71 2SA063/300	2-30
34860	U71 40D1/320	2-59	36104	L71 2A016/010	2-30	36175	L71 2SA080/300	2-30
34861	U71 40D1/385	2-60	36105	L71 2A016/030	2-30	36176	L71 2SA100/300	2-30
34862	U71 40D1/420	2-60	36106	L71 2A025/030	2-30	36177	L71 4SA016/100	2-30
34863	U71 40D2/275	2-59	36107	L71 2A040/030	2-30	36178	L71 4SA025/100	2-30
34864	U71 40D2/320	2-59	36108	L71 2A063/030	2-30	36179	L71 4SA040/100	2-30
34865	U71 40D2/385	2-60	36109	L71 2A080/030	2-30	36180	L71 4SA063/100	2-30
34866	U71 40D2/420	2-60	36110	L71 2A100/030	2-30	36181	L71 4SA080/100	2-30
34867	U71 40D3/275	2-59	36111	L71 2A016/100	2-30	36182	L71 4SA100/100	2-30
34868	U71 40D3/320	2-59	36112	L71 2A025/100	2-30	36183	L71 4SA016/300	2-30
34869	U71 40D3/385	2-60	36113	L71 2A040/100	2-30	36184	L71 4SA025/300	2-30
34870	U71 40D3/420	2-60	36114	L71 2A063/100	2-30	36185	L71 4SA040/300	2-30
34871	U71 40D4/275	2-59	36115	L71 2A080/100	2-30	36186	L71 4SA063/300	2-30
34872	U71 40D4/320	2-59	36116	L71 2A100/100	2-30	36187	L71 4SA080/300	2-30
34873	U71 40D4/385	2-60	36117	L71 2A016/300	2-30	36188	L71 4SA100/300	2-30
34874	U71 40D4/420	2-60	36118	L71 2A025/300	2-30	36519	TY3 F8	2-86
34875	U71 60D1/275	2-59	36119	L71 2A040/300	2-30	36520	TY3 F12	2-86
34876	U71 60D1/320	2-59	36120	L71 2A063/300	2-30	36521	TY3 F16	2-86
34877	U71 60D1/385	2-60	36121	L71 2A080/300	2-30	36522	TY3 F20	2-86
34878	U71 60D1/420	2-60	36122	L71 2A100/300	2-30	36523	TY3 F24	2-86
34879	U71 60D2/275	2-59	36123	L71 4A016/030	2-30	36524	TY3 F32	2-86
34880	U71 60D2/320	2-59	36124	L71 4A025/030	2-30	36525	TY3 F40	2-86
34881	U71 60D2/385	2-60	36125	L71 4A040/030	2-30	36526	TY3 F48	2-86
34882	U71 60D2/420	2-60	36126	L71 4A063/030	2-30	36527	TY3 F60	2-86
34883	U71 60D3/275	2-59	36127	L71 4A080/030	2-30	36528	TY3 S8	2-86
34884	U71 60D3/320	2-59	36128	L71 4A100/030	2-30	36529	TY3 S12	2-86
34885	U71 60D3/385	2-60	36129	L71 4A016/100	2-30	36530	TY3 S16	2-86
34886	U71 60D3/420	2-60	36130	L71 4A025/100	2-30	36531	TY3 S20	2-86
34887	U71 60D4/275	2-59	36131	L71 4A040/100	2-30	36532	TY3 S24	2-86
34888	U71 60D4/320	2-59	36132	L71 4A063/100	2-30	36533	TY3 S32	2-86
34889	U71 60D4/385	2-60	36133	L71 4A080/100	2-30	36534	TY3 S40	2-86
34890	U71 60D4/420	2-60	36134	L71 4A100/100	2-30	36535	TY3 S48	2-86
36031	D7N1	2-83	36135	L71 4A016/300	2-30	36536	TY3 S60	2-86
36032	D7N2	2-83	36136	L71 4A025/300	2-30	36547	B5 1B06N	2-17
36033	D7N4	2-83	36137	L71 4A040/300	2-30	36548	B5 1B10N	2-17
36067	L71 2C016/010	2-30	36138	L71 4A063/300	2-30	36549	B5 1B16N	2-17
36068	L71 2C016/030	2-30	36139	L71 4A080/300	2-30	36550	B5 1B20N	2-17
36069	L71 2C025/030	2-30	36140	L71 4A100/300	2-30	36551	B5 1B25N	2-17
36070	L71 2C040/030	2-30	36141	L71 2SC016/100	2-30	36552	B5 1B32N	2-17
36071	L71 2C063/030	2-30	36142	L71 2SC025/100	2-30	36553	B5 1B40N	2-17
36072	L71 2C080/030	2-30	36143	L71 2SC040/100	2-30	36558	B5 2B06N	2-17
36073	L71 2C100/030	2-30	36144	L71 2SC063/100	2-30	36559	B5 2B10N	2-17
36074	L71 2C016/100	2-30	36145	L71 2SC080/100	2-30	36560	B5 2B16N	2-17
36075	L71 2C025/100	2-30	36146	L71 2SC100/100	2-30	36561	B5 2B20N	2-17
36076	L71 2C040/100	2-30	36147	L71 2SC016/300	2-30	36562	B5 2B25N	2-17
36077	L71 2C063/100	2-30	36148	L71 2SC025/300	2-30	36563	B5 2B32N	2-17
36078	L71 2C080/100	2-30	36149	L71 2SC040/300	2-30	36564	B5 2B40N	2-17
36079	L71 2C100/100	2-30	36150	L71 2SC063/300	2-30	36569	B5 3B06N	2-17
36080	L71 2C016/300	2-30	36151	L71 2SC080/300	2-30	36570	B5 3B10N	2-17
36081	L71 2C025/300	2-30	36152	L71 2SC100/300	2-30	36571	B5 3B16N	2-17
36082	L71 2C040/300	2-30	36153	L71 4SC016/100	2-30	36572	B5 3B20N	2-17
36083	L71 2C063/300	2-30	36154	L71 4SC025/100	2-30	36573	B5 3B25N	2-17
36084	L71 2C080/300	2-30	36155	L71 4SC040/100	2-30	36574	B5 3B32N	2-17
36085	L71 2C100/300	2-30	36156	L71 4SC063/100	2-30	36575	B5 3B40N	2-17
36086	L71 4C016/030	2-30	36157	L71 4SC080/100	2-30	36580	B5 4B06N	2-17
36087	L71 4C025/030	2-30	36158	L71 4SC100/100	2-30	36581	B5 4B10N	2-17
36088	L71 4C040/030	2-30	36159	L71 4SC016/300	2-30	36582	B5 4B16N	2-17
36089	L71 4C063/030	2-30	36160	L71 4SC025/300	2-30	36583	B5 4B20N	2-17
36090	L71 4C080/030	2-30	36161	L71 4SC040/300	2-30	36584	B5 4B25N	2-17
36091	L71 4C100/030	2-30	36162	L71 4SC063/300	2-30	36585	B5 4B32N	2-17
36092	L71 4C016/100	2-30	36163	L71 4SC080/300	2-30	36586	B5 4B40N	2-17
36093	L71 4C025/100	2-30	36164	L71 4SC100/300	2-30	36591	B5 1C06N	2-17
36094	L71 4C040/100	2-30	36165	L71 2SA016/100	2-30	36592	B5 1C10N	2-17
36095	L71 4C063/100	2-30	36166	L71 2SA025/100	2-30	36593	B5 1C16N	2-17

Index / Order Code

2

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
36594	B5 1C20N	2-17	36977	L52 4C40/100L	2-37	38017	D23 M08200	2-89
36595	B5 1C25N	2-17	36979	L52 4C63/100L	2-37	38018	D23 M08250	2-89
36596	B5 1C32N	2-17	36981	L52 4C16/300L	2-37	38019	D23 M10040	2-89
36597	B5 1C40N	2-17	36982	L52 4C25/300L	2-37	38020	D23 M10063	2-89
36602	B5 2C06N	2-17	36984	L52 4C40/300L	2-37	38021	D23 M10080	2-89
36603	B5 2C10N	2-17	36986	L52 4C63/300L	2-37	38022	D23 M10100	2-89
36604	B5 2C16N	2-17	36988	L52 2A16/030L	2-37	38023	D23 M10125	2-89
36605	B5 2C20N	2-17	36989	L52 2A25/030L	2-37	38024	D23 M10160	2-89
36606	B5 2C25N	2-17	36991	L52 2A40/030L	2-37	38025	D23 M10200	2-89
36607	B5 2C32N	2-17	36993	L52 2A63/030L	2-37	38026	D23 M10250	2-89
36608	B5 2C40N	2-17	36995	L52 2A16/100L	2-37	38027	D23 M12040	2-90
36613	B5 3C06N	2-17	36996	L52 2A25/100L	2-37	38028	D23 M12063	2-90
36614	B5 3C10N	2-17	36998	L52 2A40/100L	2-37	38029	D23 M12080	2-90
36615	B5 3C16N	2-17	37000	L52 2A63/100L	2-37	38030	D23 M12100	2-90
36616	B5 3C20N	2-17	37002	L52 2A16/300L	2-37	38031	D23 M12125	2-90
36617	B5 3C25N	2-17	37003	L52 2A25/300L	2-37	38032	D23 M12160	2-90
36618	B5 3C32N	2-17	37005	L52 2A40/300L	2-37	38033	D23 M12200	2-90
36619	B5 3C40N	2-17	37007	L52 2A63/300L	2-37	38034	D23 M12250	2-90
36624	B5 4C06N	2-17	37009	L52 4A16/030L	2-37	38035	D23 M16040	2-90
36625	B5 4C10N	2-17	37010	L52 4A25/030L	2-37	38036	D23 M16063	2-90
36626	B5 4C16N	2-17	37012	L52 4A40/030L	2-37	38037	D23 M16080	2-90
36627	B5 4C20N	2-17	37014	L52 4A63/030L	2-37	38038	D23 M16100	2-90
36628	B5 4C25N	2-17	37016	L52 4A16/100L	2-37	38039	D23 M16125	2-90
36629	B5 4C32N	2-17	37017	L52 4A25/100L	2-37	38040	D23 M16160	2-90
36630	B5 4C40N	2-17	37019	L52 4A40/100L	2-37	38041	D23 M16200	2-90
36635	B5 1D06N	2-17	37021	L52 4A63/100L	2-37	38042	D23 M16250	2-90
36636	B5 1D10N	2-17	37023	L52 4A16/300L	2-37	38043	D23 M18100	2-90
36637	B5 1D16N	2-17	37024	L52 4A25/300L	2-37	38044	D23 M18125	2-90
36638	B5 1D20N	2-17	37026	L52 4A40/300L	2-37	38045	D23 M18160	2-90
36639	B5 1D25N	2-17	37028	L52 4A63/300L	2-37	38046	D23 M18200	2-90
36640	B5 1D32N	2-17	37037	L52 2S16/100L	2-37	38047	D23 M18250	2-90
36641	B5 1D40N	2-17	37038	L52 2S25/100L	2-37	38048	D23 M24100	2-90
36646	B5 2D06N	2-17	37040	L52 2S40/100L	2-37	38049	D23 M24125	2-90
36647	B5 2D10N	2-17	37042	L52 2S63/100L	2-37	38050	D23 M24160	2-90
36648	B5 2D16N	2-17	37044	L52 2S16/300L	2-37	38051	D23 M24200	2-90
36649	B5 2D20N	2-17	37045	L52 2S25/300L	2-37	38052	D23 M24250	2-90
36650	B5 2D25N	2-17	37047	L52 2S40/300L	2-37	38053	D23 D04100	2-90
36651	B5 2D32N	2-17	37049	L52 2S63/300L	2-37	38054	D23 D04125	2-90
36652	B5 2D40N	2-17	37058	L52 4S16/100L	2-37	38055	D23 D06100	2-90
36657	B5 3D06N	2-17	37059	L52 4S25/100L	2-37	38056	D23 D06125	2-90
36658	B5 3D10N	2-17	37061	L52 4S40/100L	2-37	38057	D23 D08100	2-90
36659	B5 3D16N	2-17	37063	L52 4S63/100L	2-37	38058	D23 D08125	2-90
36660	B5 3D20N	2-17	37065	L52 4S16/300L	2-37	38059	D23 D10100	2-90
36661	B5 3D25N	2-17	37066	L52 4S25/300L	2-37	38060	D23 D10125	2-90
36662	B5 3D32N	2-17	37068	L52 4S40/300L	2-37	38061	D23 D12100	2-90
36663	B5 3D40N	2-17	37070	L52 4S63/300L	2-37	38062	D23 D12125	2-90
36668	B5 4D06N	2-17	37071	L52 2C16/010L	2-37	38063	D23 D16100	2-90
36669	B5 4D10N	2-17	37072	L52 2A16/010L	2-37	38064	D23 D16125	2-90
36670	B5 4D16N	2-17	37074	L52 4C16/010L	2-37	38065	D23 D18100	2-90
36671	B5 4D20N	2-17	37075	L52 4A16/010L	2-37	38066	D23 D18125	2-90
36672	B5 4D25N	2-17	37996	D23 M04040	2-89	38067	D23 D24100	2-90
36673	B5 4D32N	2-17	37997	D23 M04063	2-89	38068	D23 D24125	2-90
36674	B5 4D40N	2-17	37998	D23 M04080	2-89	38069	D23 B04100	2-91
36946	L52 2C16/030L	2-37	37999	D23 M04100	2-89	38070	D23 B04125	2-91
36947	L52 2C25/030L	2-37	38000	D23 M04125	2-89	38071	D23 B06100	2-91
36949	L52 2C40/030L	2-37	38001	D23 M04160	2-89	38072	D23 B06125	2-91
36951	L52 2C63/030L	2-37	38002	D23 M04200	2-89	38073	D23 B08100	2-91
36953	L52 2C16/100L	2-37	38003	D23 M06040	2-89	38074	D23 B08125	2-91
36954	L52 2C25/100L	2-37	38004	D23 M06063	2-89	38075	D23 B10100	2-91
36956	L52 2C40/100L	2-37	38005	D23 M06080	2-89	38076	D23 B10125	2-91
36958	L52 2C63/100L	2-37	38006	D23 M06100	2-89	38077	D23 B12100	2-91
36960	L52 2C16/300L	2-37	38007	D23 M06125	2-89	38078	D23 B12125	2-91
36961	L52 2C25/300L	2-37	38008	D23 M06160	2-89	38079	D23 B16100	2-91
36963	L52 2C40/300L	2-37	38009	D23 M06200	2-89	38080	D23 B16125	2-91
36965	L52 2C63/300L	2-37	38010	D23 M06250	2-89	38081	D23 B18100	2-91
36967	L52 4C16/030L	2-37	38011	D23 M08040	2-89	38082	D23 B18125	2-91
36968	L52 4C25/030L	2-37	38012	D23 M08063	2-89	38083	D23 B24100	2-91
36970	L52 4C40/030L	2-37	38013	D23 M08080	2-89	38084	D23 B24125	2-91
36972	L52 4C63/030L	2-37	38014	D23 M08100	2-89	38085	D23 R04100	2-91
36974	L52 4C16/100L	2-37	38015	D23 M08125	2-89	38086	D23 R06100	2-91
36975	L52 4C25/100L	2-37	38016	D23 M08160	2-89	38087	D23 R08100	2-91

Order code	Type code	Page
38088	D23 R10100	2-91
38089	D23 R12100	2-91
38090	D23 R16100	2-91
38091	D23 R18100	2-91
38092	D23 R24100	2-91
38093	U71 10D1N/140	2-59
38094	U71 10D1N/275	2-59
38095	U71 10D1N/320	2-59
38096	U71 10D1N/385	2-60
38097	U71 10D1N/420	2-60
38098	U71 10D3N/140	2-59
38099	U71 10D3N/275	2-59
38100	U71 10D3N/320	2-59
38101	U71 10D3N/385	2-60
38102	U71 10D3N/420	2-60
38103	U71 20D1N/275	2-59
38104	U71 20D1N/320	2-59
38105	U71 20D1N/385	2-60
38106	U71 20D1N/420	2-60
38107	U71 20D3N/275	2-59
38108	U71 20D3N/320	2-59
38109	U71 20D3N/385	2-60
38110	U71 20D3N/420	2-60
38111	U71 40C1N/275	2-59
38112	U71 40C1N/320	2-59
38113	U71 40C1N/385	2-60
38114	U71 40C1N/420	2-60
38115	U71 40C3N/275	2-59
38116	U71 40C3N/320	2-59
38117	U71 40C3N/385	2-60
38118	U71 40C3N/420	2-60
38119	U71 60C1N/275	2-59
38120	U71 60C1N/320	2-59
38121	U71 60C1N/385	2-60
38122	U71 60C1N/420	2-60
38123	U71 60C3N/275	2-59
38124	U71 60C3N/320	2-59
38125	U71 60C3N/385	2-60
38126	U71 60C3N/420	2-60
38876	B71G 1125	2-56
38877	B71G 2125	2-56
38878	B71G 3125	2-56
38879	B71G 4125	2-56
39583	B5 1B00T	2-16
39584	B5 1C00T	2-16
39585	B5 1D00T	2-16
39586	B5 2B00T	2-16
39587	B5 2C00T	2-16
39588	B5 2D00T	2-16
39589	B5 3B00T	2-16
39590	B5 3C00T	2-16
39591	B5 3D00T	2-16
39592	B5 4B00T	2-16
39593	B5 4C00T	2-16
39594	B5 4D00T	2-16
39637	B5 1B05T	2-16
39638	B5 1C05T	2-16
39639	B5 1D05T	2-16
39640	B5 2B05T	2-16
39641	B5 2C05T	2-16
39642	B5 2D05T	2-16
39643	B5 3B05T	2-16
39644	B5 3C05T	2-16
39645	B5 3D05T	2-16
39646	B5 4B05T	2-16
39647	B5 4C05T	2-16
39648	B5 4D05T	2-16
39949	G6 1025	2-57
39950	G6 1040	2-57
39951	G6 1063	2-57
39952	G6 1080	2-57

Order code	Type code	Page
39953	G6 1100	2-57
39954	G6 2025	2-57
39955	G6 2040	2-57
39956	G6 2063	2-57
39957	G6 2080	2-57
39958	G6 2100	2-57
39959	G6 3025	2-57
39960	G6 3040	2-57
39961	G6 3063	2-57
39962	G6 3080	2-57
39963	G6 3100	2-57
39964	G6 4025	2-57
39965	G6 4040	2-57
39966	G6 4063	2-57
39967	G6 4080	2-57
39968	G6 4100	2-57

SASSIN

Industrial Control Electrics



Contactors and thermal relays

- P 1-5 3SC8-K & 3SR8-K series
- P 6-15 3SC8 & 3SR8 series
- P 16-22 3SC8-F & 3SR8-F series
- P 23-24 3SC8-P series for DC operated AC contactors
- P 25-28 3SC7 & 3SR7 series
- P 29-30 3SC19 series capacitor switching contactors

Starters

- P 31-32 3SQ1 series DOL starters
- P 33 3SQ8-D series star-delta starters

P 34-37 3SM18 motor protection circuit-breakers

P 38-40 Index order code



Contactors and Thermal Relays

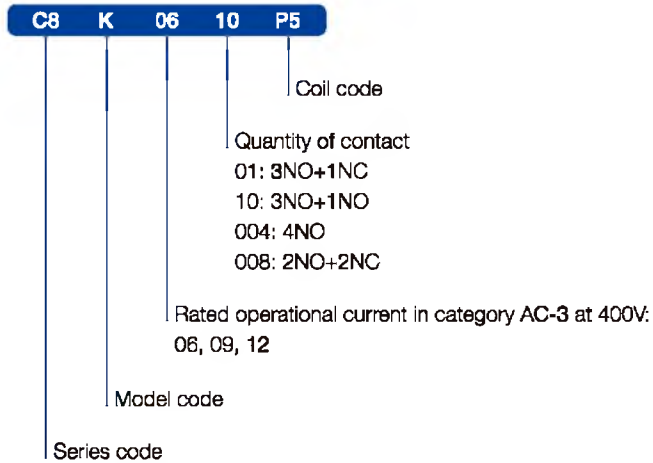
Series 3SC8-K & 3SR8-K

Applications and functions for AC contactor

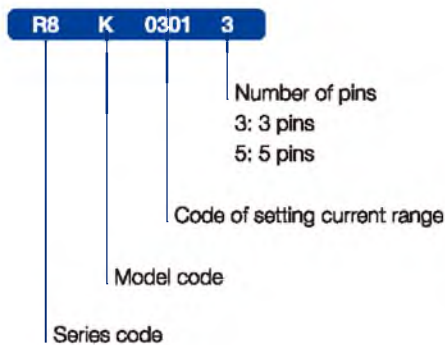
- Used for controlling 3-phase motors and generally for controlling power circuits.
- Used for many other applications such as isolation, capacitor switching and lighting.

Instruction of type code

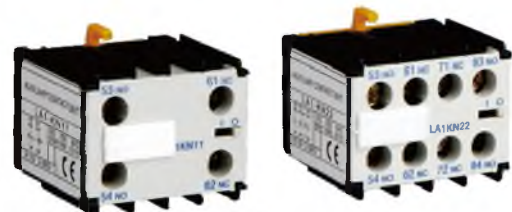
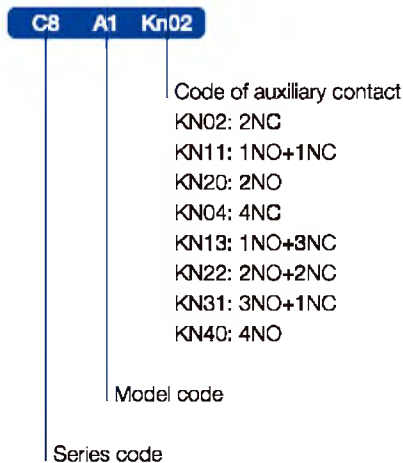
- For contactor



- For thermal relay



- For thermal relay



Contactors and Thermal Relays

Series 3SC8-K & 3SR8-K

Technical specifications for type 3SC8-K

Type		3SC8-K0610, 3SC8-K0601, 3SC8-K06004, 3SC8-K06008	3SC8-K0910, 3SC8-K0901, 3SC8-K09004, 3SC8-K09008	3SC8-K1210, 3SC8-K1201, 3SC8-K12004, 3SC8-K12008
Standard		IEC 60947-4-1		
Number of contacts		3NO+1NO, 3NO+1NC, 4NO, 2NO+2NC		
Rated conventional thermal current Ith (A)	AC-1	20		
Rated operational voltage Ue (V)		690		
Rated insulation voltage Ui (V)		690		
Rated impulse withstand voltage Uimp (kV)		6		
Rated frequency (Hz)		50/60		
Rated operational current (A)	AC-3 380/400 V	6	9	12
	AC-4 380/400 V	2.6	3.5	5
Number of poles		3,4	3,4	3,4
Rated operational power in category AC-3 (kW)	220/230/240 V	1.5	2.2	3
	380/400 V	2.2	4	5.5
	660/690 V	3	4	5.5
Rated making capacity (A)		110	110	114
Rated breaking capacity (A)	380 V	100	100	100
	690 V	70	70	70
Short-circuit protection (A)	gG fuse U ≤ 440 V	25		
Average impedance per pole (mV)		3		
Add-on auxiliary contact blocks	Front	3SC8-KA/N		
	Side	-		
	Front time delay	-		
	Front dust and damp protected	-		
Reversing contactor type		3SC8-KN		
Associated thermal overload relays	3 Pins/5 Pins	3SR8-K		
Operation cycles(times/hour)	Electrical AC-3	1200		
	Electrical AC-4	300		
	Mechanical	3600		
Electrical life (X 10 ⁴ times)	AC-3	100	120	
	AC-4	20		
Mechanical life (X 10 ⁴ times)		1000		
Matching fuse model		RT16-16	RT16-20	
Tightening torque (N·m)		0.8		
Connection				
Screw clamp terminals	solid conductor (mm ²)	Max. 1x4+1x2.5		
	Flexible conductor without cable end (mm ²)	Max. 2x2.5		
	Flexible conductor with cable end (mm ²)	Max. 1X1.5+1X2.5		
Degree of protection		IP20		
Ambient air temperature (°C)		-5 to +40, max. 95 % humidity		
Storage temperature (°C)		-40 ~ +75		
Maximum operating altitude (meters)		2000		
Flame resistance	Conforming to UL 94	V1		



Contactors and Thermal Relays

Series 3SC8-K & 3SR8-K

Technical specifications for auxiliary contact incorporated in the contactor type 3SC8-K

- Standard: IEC 60947-5-1
- Number of auxiliary contact: 2, 4
- Mounting type: Front
- Conventional heating current (A): 10
- Rated operational voltage U_e (V): Up to 690
- Rated insulation voltage U_i (V): 690
- Conventional thermal current I_{th} (A): 10
- Minimum switching capacity I_m (mA): 5
- Short circuit protection (A): 10
- Rated making capacity (A): 110

3SC8-A1/KN

	Auxiliary contacts		Type code	Order code
	↓	↓		
	0	2	C8K A1/N02	33032
	1	1	C8K A1/N11	33033
	2	0	C8K A1/N20	33034
	0	4	C8K A1/N04	33035
	1	3	C8K A1/N13	33036
	2	2	C8K A1/N22	33037
	3	1	C8K A1/N31	33038
	4	0	C8K A1/N40	33039

Coil voltage of contactor 3SC8-K

Coil voltage	12	20	24	32	36	42	48	60	100	110	115	120	127	208	220	230	240	265	380	400	415	440	480	500	550	600	550/600	660/690	
U_s (V)																													
50 Hz	J5	-	B5	C5	-	D5	E5	-	-	F5	FE5	G5	FC5	LE5	M5	P5	U5	-	Q5	V5	N5	R5	T5	S5	SC5	X5	-	Y5	
60 Hz	-	-	B6	-	-	-	E6	-	-	F6	-	-	-	-	M6	-	U6	-	Q6	-	-	R6	-	-	-	-	-	-	Y6
50/60 Hz	J7	Z7	B7	C7	CC7	D7	E7	EE7	K7	F7	FE7	-	FC7	-	M7	P7	U7	W7	Q7	V7	N7	R7	-	S7	-	-	X7	Y7	

Technical specifications for assembled thermal relay of type 3SC8-K



- Type: 3SR8-K
- Standard: IEC 60947-4-1
- Tripping class: 10 A
- Number of connecting pin: 4
- Rated operational voltage U_e (V): up to 690
- Rated insulation voltage U_i (V): 690
- Rated impulse withstand voltage U_{imp} (kV): 6
- Rated current range I_n (A):
0.11-0.16, 0.16-0.23, 0.23-0.36, 0.36-0.54, 0.54-0.8, 0.8-1.2, 1.8-2.6, 2.6-3.7, 3.7-5.5, 5.-8, 8-11.5, 10-14
- Signalling: Trip indicator
- Tightening torque (N·m): 0.8
- Degree of protection: IP20
- Ambient air temperature (°C): -5 to +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Maximum operating altitude (meters): 2000
- Flame resistance: V1
- Mounting: Directly under the contactor

Contactors and Thermal Relays


Series 3SC8-K & 3SR8-K

Selection and ordering data

3

	Rated operational current in category AC-3 400 V (A)	Number of poles		Instantaneous auxiliary contacts		230 V 50 Hz Please contact us for other coil voltage	
						Type code	Order code
3SC8-K contactor 	6	3	-	-	1	C8 K0601P5	11373
		3	-	1	-	C8 K0610P5	11374
	9	3	-	-	1	C8 K0901P5	11377
		3	-	1	-	C8 K0910P5	11378
	12	3	-	-	1	C8 K1201P5	11381
		3	-	1	-	C8 K1201P5	11382
	6	4	-	-	-	C8 K06004P5	11375
		2	2	-	-	C8 K06008P5	11376
	9	4	-	-	-	C8 K09004P5	11379
		2	2	-	-	C8 K09008P5	11380
12	4	-	-	-	C8 K12004P5	11383	
	2	2	-	-	C8 K12008P5	11384	
3SC8-KN reversing contactors 	6	3	-	-	1	C8 KN0601P5	15576
		3	-	1	-	C8 KN0610P5	15697
		4	-	-	-	C8 KN06004P5	15703
	9	3	-	-	1	C8 KN0901P5	15577
		3	-	1	-	C8 KN0910P5	15698
		4	-	-	-	C8 KN09004P5	15704
	12	3	-	-	1	C8 KN1201P5	15578
		3	-	1	-	C8 KN1210P5	15699
		4	-	-	-	C8 KN12004P5	15705
		4	-	-	-	C8 KN12004P5	15705

3SR8-K thermal relay matched with contactor 3SC8-K

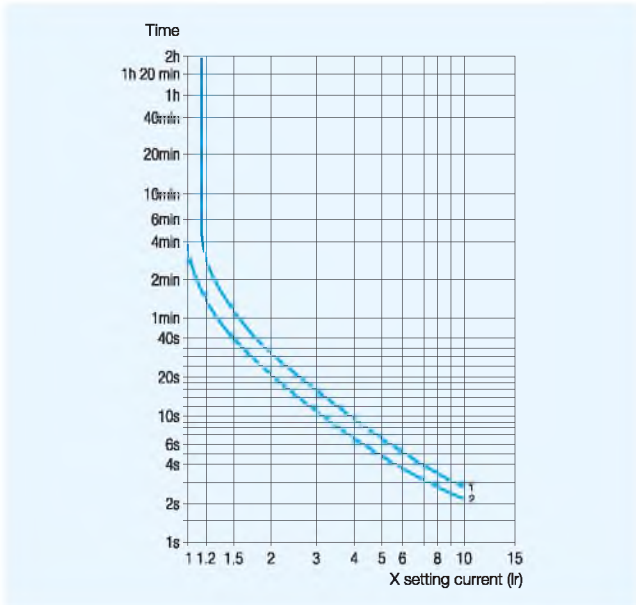
	Current setting range (A)	Fuses to be used with selected relay		Type code	Order code
		aM Type (A)	gG Type (A)		
3SR8-K 5 Pins 	0.11-0.16	0.25	0.5	R8 K0301/5	15594
	0.16-0.23	0.25	0.5	R8 K0302/5	15595
	0.23-0.36	0.5	1	R8 K0303/5	15596
	0.36-0.54	1	1.6	R8 K0304/5	15597
	0.54-0.8	1	2	R8 K0305/5	15598
	0.8-1.2	2	6	R8 K0306/5	15599
	1.8-2.6	4	8	R8 K0308/5	15600
	2.6-3.7	4	10	R8 K0310/5	15601
	3.7-5.5	6	16	R8 K0312/5	15602
	5.-8	8	20	R8 K0314/5	15603
	8-11.5	10	25	R8 K0316/5	15604
10-14	16	32	R8 K0321/5	15605	

Contactors and Thermal Relays Series 3SC8-K & 3SR8-K

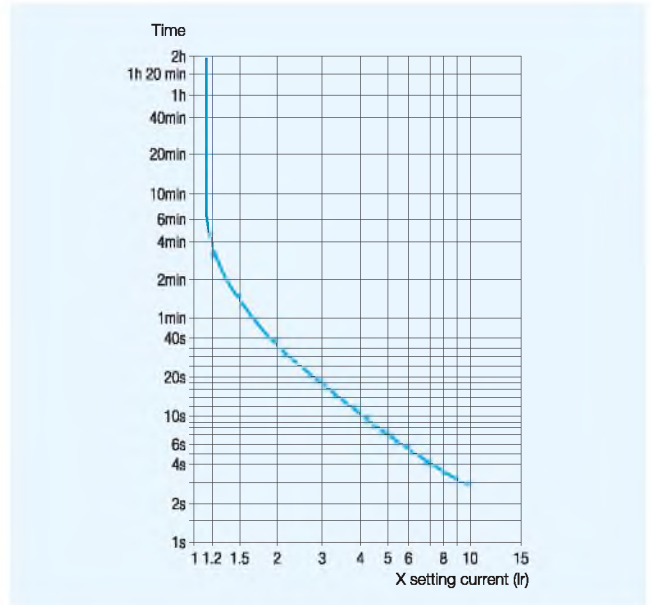
Tripping curve of thermal relay 3SR8-K

Average operating time related to multiples of the current setting (Class 10 A)

Balanced 3-phase operation, from cold state

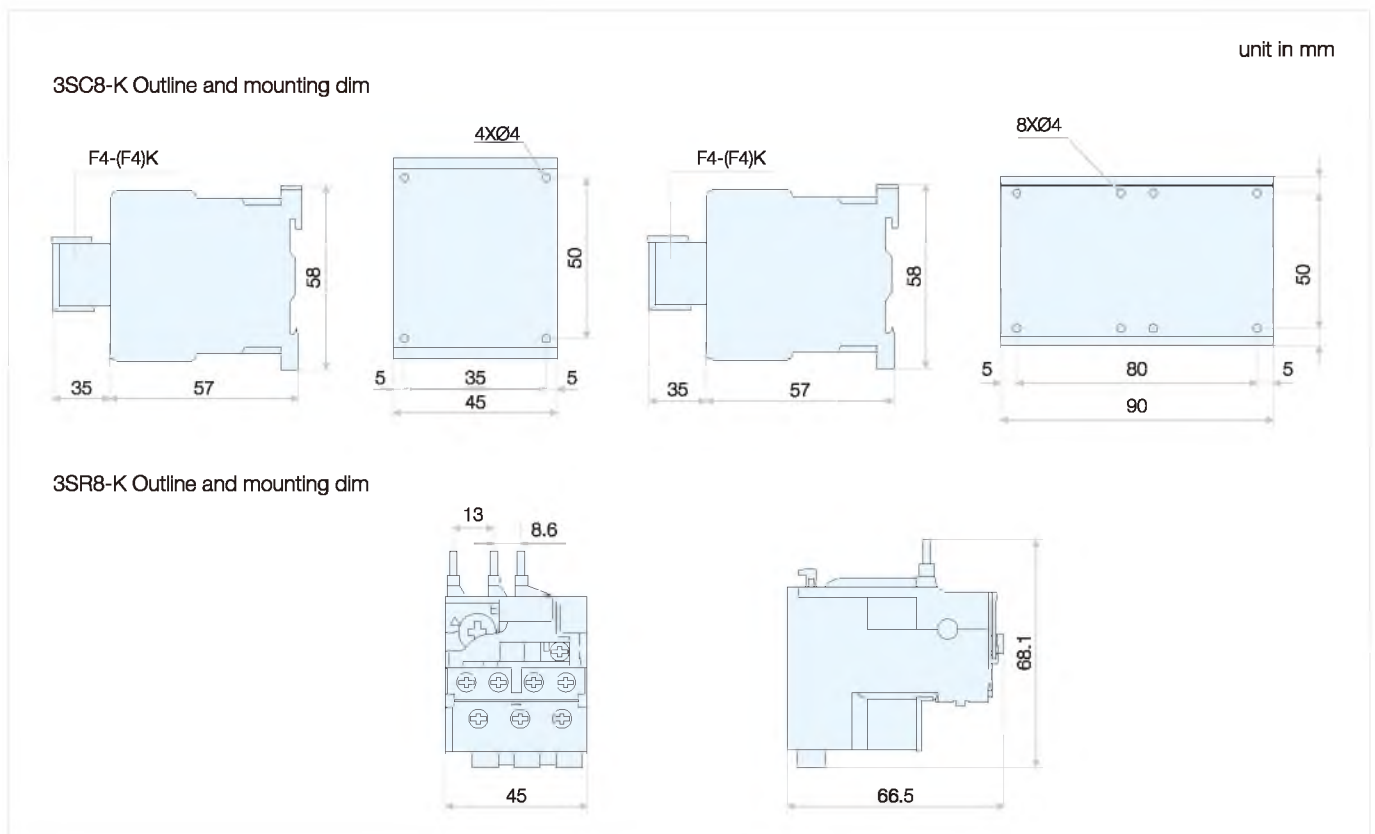


Balanced operation with 2 phases only, from cold state



1 Setting: at lower end of scale
2 Setting: at upper end of scale

Outline and installation dimensions (3SC8-K, 3SR8-K)



Contactors and Thermal Relays

Series 3SC8 & 3SR8

Applications and functions for AC contactor 3SC8

- Used for controlling 3-phase motors and generally for controlling power circuits.
- Used for many other applications such as isolation, capacitor switching and lighting.

Instruction of type code

- For contactor

C8	09	10	P7
			Coil code
Quantity of contact			
10: 3 NO + 1 NO (I _e ≤ 32A)			
01: 3 NO + 1 NC (I _e ≤ 32A)			
11: 3 NO + 1 NO + 1 NC			
004: 4 NO (except I _e = 18 A & I _e = 32 A)			
008: 2 NO + 2 NC (except I _e = 18 A & I _e = 32 A)			
Rated working current in category AC-3 at 400 V AC (A):			
09, 12, 18, 25, 32, 40, 50, 65, 80, 95			
Series code			

- For thermal relay

R8	25	0.16
Max. setting current range (A):		
0.16: 0.1-0.16	10: 7-10	
0.25: 0.16-0.25	13: 9-13	
0.4: 0.25-0.4	18: 12-18	
0.63: 0.4-0.63	25: 17-25	
1: 0.63-1	32: 23-32	
1.6: 1-1.6	36: 28-36	
2: 1.25-2	40: 30-40	
2.5: 1.6-2.5	50: 37-50	
4: 2.5-4	65: 48-65	
6: 4-6	70: 55-70	
8: 5.5-8	80: 63-80	
	93: 80-93	
Rated frame current (A): 25, 36, 93		
Series code		

Applications and functions for thermal relay 3SR8

- Protecting the loads from overload and phase failure
- Implementing short-circuit protection by means of a fuse or circuit breaker.
- Used for the protection of motors.



Contactors and Thermal Relays

Series 3SC8 & 3SR8

Technical specifications for type 3SC8

Type	3SC8-09 3SC8-12 3SC8-18 3SC8-25 3SC8-32 3SC8-40 3SC8-50 3SC8-65 3SC8-80 3SC8-95											
Standard	IEC 60947-4-1											
Number of poles	3, 4 3, 4 3 3, 4 3 3, 4 3, 4 3, 4 3, 4 3, 4											
Rated operational current I_e (A)	380 V	In AC-3	9	12	18	25	32	40	50	65	80	95
		In AC-4	3.5	5	7.7	8.5	12	18.5	24	28	37	44
	660 V	In AC-3	6.6	8.9	12	18	21	34	39	42	49	55
		In AC-4	1.5	2	3.8	4.4	7.5	9	12	14	17.3	21.3
Rated operational voltage U_e (V)	440 V	In AC-1	20	25	32	40	50	60	80	80	110	125
	Up to		690									
Frequency limits of the operational current (time/h)	25-400											
Rated conventional thermal current I_{th} (A)	25 25 32 40 50 60 80 80 125 125											
Rated insulation voltage U_i (V)	690											
Rated impulse withstand voltage U_{imp} (kV)	8											
Rated frequency (Hz)	50/60											
Rated making capacity (A)	400 V	10 x I_e AC-3 or 12 x I_e AC-4										
Rated breaking capacity (A)	400 V	8 x I_e AC-3 or 10 x I_e AC-4										
Rated operational power in category AC-3 (kW)	220/230/240 V	2.2	3	4	5.5	7.5	11	15	18.5	22	25	
	380/400 V	4	5.5	7.5	11	15	18.5	22	30	37	45	
	660/690 V	5.5	7.5	10	15	18.5	30	33	37	45	45	
Fuse protection against short-circuit (A)	Without thermal overload relay, Gg fuse Type 1		20	25	32	40	50	63	80	80	125	160
	Type 2		20	20	25	32	40	50	63	80	150	150
		With thermal overload relay see specification and ordering data of 3SR8, for aM or gG fuse ratings corresponding to the associated thermal overload relay										
Average impedance per pole (mΩ)	2.5 2.5 2.5 2 2 1.5 1.5 1.5 0.8 0.8											
Add-on auxiliary contact blocks	Front		3SC8-A1 and 3SC8-A1D									
	Side		3SC8-A1C									
	Front time delay		3SC8-A2									
	Front dust and damp protected		■									
Reversing contactor type	3SC8-DN											
Associated thermal overload relays	3SR8-25					3SR8-36 3SR8-93						
Operation cycles (times/hour)	Electrical AC-3		1200	1200	1200	1200	600	600	600	600	600	600
	Electrical AC-4		300	300	300	300	300	300	300	300	300	300
Electrical life ($\times 10^3$ times)	Mechanical		3600	3600	3600	3600	3600	3600	3600	3600	3600	3600
	AC-3		1000	1000	1000	1000	800	800	600	600	600	600
	AC-4		200	200	200	200	200	150	150	150	100	100
Mechanical life ($\times 10^6$ times)	10 10 10 10 8 8 8 8 6 6											
Matching fuse model	RT16-20 RT16-20 RT16-32 RT16-40 RT16-50 RT16-63 RT16-80 RT16-80 RT16-100 RT16-125											
Tightening torque (N · m) Connection	1.2 1.2 1.7 2.0 2.5 5 5 5 9 9											
Cabling cross section (CU)	Flexible cable with cold-pressed 2 socket (mm ²)		1/2.5	1/2.5	1/4	1/4	1.5/4	2.5/10	2.5/10	2.5/10	4/16	4/16
	Flexible cable without cold-pressed 2 socket (mm ²)		1/4	1/4	1.5/6	1.5/6	2.5/10	2.5/16	2.5/16	2.5/16	4/25	4/25
	Inflexible 2 cable (mm ²)		1/4	1.5/4	1.5/6	1.5/6	1.5/10	2.5/25	2.5/25	2.5/25	4/50	4/50
Screw size	M3.5 M3.5 M3.5 M4 M4 M8 M8 M8 M10 M10											
Degree of protection	IP20											
Ambient air temperature (°C)	-5 to +40, max. 95 % humidity											
Storage temperature (°C)	-40 ~ +75											
Maximum operating altitude (meters)	2000											
Flame resistance	Conforming to UL 94		V1									

Contactors and Thermal Relays

Series 3SC8 & 3SR8

Technical specifications for auxiliary contacts incorporated in the contactor 3SC8

- Standard: IEC 60947-5-1
- Number of auxiliary contacts: 2, 4
- Mounting type: Front, side
- Conventional heating current (A): 10
- Rated operational voltage U_e (V): Up to 690
- Rated insulation voltage U_i (V): 690
- Conventional thermal current I_{th} (A): 10
- Minimum switching capacity I_{min} (mA): 5
- Short circuit protection (A): gG fuse: 10 A
- Rated making capacity (A): 140

Technical specifications for time delay contact incorporated in the contactor 3SC8

- Standard: IEC 60255-5
- Number of contacts: 2
- Mounting type: Front
- Delay time type making time delay, breaking time delay
- Timing ranges: 0.1-3, 0.1-30, 10-180
- Repeat accuracy: $\pm 3\%$ (10 ms minimum)
- Reset time
- During time delay period (ms): 150
- After time delay period (ms): 50
- Conventional heating current (A): 10
- Rated operational voltage U_e (V): Up to 690
- Rated insulation voltage U_i (V): 250
- Conventional thermal current I_{th} (A): 10

Technical specifications for coil incorporated in contactor 3SC8

Type		3SC8-09	3SC8-12	3SC8-18	3SC8-25	3SC8-32	3SC8-40	3SC8-50	3SC8-65	3SC8-80	3SC8-95
Coil consumption	Pick-up (VA)	70	70	70	100	100	245	245	245	245	245
	Holding (VA)	50 Hz, 60 Hz	9.0	9.0	9.0	10	10	30	30	30	30
		50/60 Hz	10	10	10	11	11	32	32	32	32
	Power (W)	2~3.5	2~3.5	2~3.5	3~4	3~4	6~10	6~10	6~10	6~10	6~10

Coil voltage of contactor 3SC8

Coil voltage U_s (V)	12	20	24	32	36	42	48	60	100	110	115	120	127	208	220	230	240	265	380	400	415	440	480	500	550	600	550/600 600/660	660/690
50 Hz	J5	-	B5	C5	-	D5	E5	-	F5	FE5	G5	FC5	LE5	M5	P5	U5	-	Q5	V5	N5	R5	T5	S5	SC5	X5	-	Y5	
60 Hz	-	-	B6	-	-	-	E6	-	F6	-	-	-	-	M6	-	U6	-	Q6	-	-	R6	-	-	-	-	-	-	Y6
50/60 Hz	J7	Z7	B7	C7	CC7	D7	E7	EE7	K7	F7	FE7	-	FC7	-	M7	P7	U7	W7	Q7	V7	N7	R7	-	S7	-	X7	Y7	






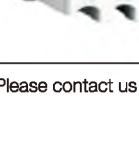


Technical specifications for assembled thermal relay of type 3SR8

Type	3SR8-D13	3SR8-D23	3SR8-D33
Standard	IEC 60947-4-1		
Tripping class	10 A		
Rated working current I_e (A)	25	36	93
Setting range (A)	0.1-25	23-36	23-93
Rated insulation voltage U_i (V)	690		
Rated impulse withstand voltage U_{imp} (kV)	6		
Signalling Trip indicator	Trip indicator		
Tightening torque (N·m)	0.8		
Degree of protection	IP20		
Ambient air temperature (°C)	-5 to +40, max. 95 % humidity		
Storage temperature (°C)	-40 ~ +75		
Maximum operating altitude (meters)	2000		
Flame resistance	V1		
Mounting	Directly under the contactor		

Contactors and Thermal Relays


Series 3SC8 & 3SR8

Selection and ordering data

	Standard control circuit voltages (V AC)	Rated frequency (Hz)	Rated operational current in category AC-3 400 V (A)	Number of poles		Instantaneous auxiliary contacts		230 V 50/60 Hz	
				↓	↘	↓	↘	Type code	Order code
	230	50/60	9	3	-	1	-	C8N 0910P7	27432
				3	-	-	1	C8N 0901P7	27431
				3	-	1	1	C8N 09004P7	27433
				4	-	-	-	C8N 0911P7	27451
				2	2	-	-	C8N 09008P7	27452
	230	50/60	12	3	-	1	-	C8N 1210P7	27435
				3	-	-	1	C8N 1201P7	27434
				3	-	1	1	C8N 12004P7	27436
				4	-	-	-	C8N 1211P7	27453
				2	2	-	-	C8N 12008P7	27454
	230	50/60	18	3	-	1	-	C8N 1810P7	27438
				3	-	-	1	C8N 2511P7	27437
				3	-	1	1	C8N 3211P7	27439
				3	-	1	-	C8N 1801P7	27441
				3	-	-	1	C8N 1811P7	27440
	230	50/60	25	3	-	1	1	C8N 2510P7	27442
				4	-	-	-	C8N 2501P7	27455
				2	2	-	-	C8N 25004P7	27456
				3	-	1	-	C8N 25008P7	27444
				3	-	-	1	C8N 3210P7	27443
	230	50/60	32	3	-	1	1	C8N 3201P7	27445
				3	-	1	1	C8N 4011P7	27446
				4	-	-	-	C8N 40004P7	27457
				2	2	-	-	C8N 40008P7	27458
				3	-	1	1	C8N 5011P7	27447
	230	50/60	40	4	-	-	-	C8N 50004P7	27459
				2	2	-	-	C8N 50008P7	27460
				3	-	1	1	C8N 6511P7	27448
				4	-	-	-	C8N 65004P7	27461
				2	2	-	-	C8N 65008P7	27462
	230	50/60	50	3	-	1	1	C8N 8011P7	27449
				4	-	-	-	C8N 80004P7	27463
				2	2	-	-	C8N 80008P7	27464
				3	-	1	1	C8N 9511P7	27450
				4	-	-	-	C8N 95004P7	27465
	230	50/60	65	2	2	-	-	C8N 95008P7	27466
				3	-	1	1	C8N 9511P7	27450
				4	-	-	-	C8N 95004P7	27465
				2	2	-	-	C8N 95008P7	27466
				3	-	1	1	C8N 9511P7	27450

Please contact us for other coil voltage and frequency listed in "coil voltage of contactor" on page 4-3

3SC8-DN reversing contactors

	Rated operating current 400 V AC-3 (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3					Poles	230 V 50 Hz	
		220 V 230 V (KW)	380 V 400 V (KW)	415 V (KW)	440 V (KW)	660 V 690 V (KW)		Type code	Order code
	9	2.2	4	4	4	5.5	3	C8 DN9P5	15913
	12	3	5.5	5.5	5.5	7.5	3	C8 DN12P5	15914
	18	4	7.5	9	9	10	3	C8 DN18P5	15915
	25	5.5	11	11	11	15	3	C8 DN25P5	15916
	32	7.5	15	15	15	18.5	3	C8 DN32P5	15917
	40	11	18.5	22	22	30	3	C8 DN40P5	15918
	50	15	22	25	30	33	3	C8 DN50P5	15919
	65	18.5	30	37	37	37	3	C8 DN65P5	15920
	80	22	37	45	45	45	3	C8 DN80P5	15921
	95	25	45	45	45	45	3	C8 DN95P5	15922

Please contact us for other coil voltage and frequency listed in "coil voltage of contactor" on page 4-3

Contactors and Thermal Relays

Series 3SC8 & 3SR8

Selection and ordering data

Coil for contactor 3SC8

	Standard control circuit voltage	Rated frequency	Voltage code	Type code	Order code
	(V AC)	(Hz)			
3SC8X-D2 for AC contactor 3SC8-9...18	Suitable for contactors with auxiliary contact 1NO or 1NC				
	24	50/60	B7	C8X-D2B7	17359
	48	50/60	E7	C8X-D2E7	25323
	110	50/60	F7	C8X-D2F7	32043
	127	50/60	FC7	C8X-D2FC7	32046
	220	50/60	M7	C8X-D2M7	17362
	230	50/60	P7	C8X-D2P7	32049
	240	50/60	U7	C8X-D2U7	32052
	380	50/60	Q7	C8X-D2Q7	32055
	400	50/60	V7	C8X-D2V7	27278
	440	50/60	R7	C8X-D2R7	32058
	Suitable for contactors with auxiliary contact 1NO+1NC				
	24	50/60	B7	C8X-D2NB7	14101
	48	50/60	E7	C8X-D2NE7	14102
	110	50/60	F7	C8X-D2NF7	14103
	127	50/60	FC7	C8X-D2NFC7	14104
	220	50/60	M7	C8X-D2NM7	14105
	230	50/60	P7	C8X-D2NP7	14106
	240	50/60	U7	C8X-D2NU7	14107
	380	50/60	Q7	C8X-D2NQ7	14108
	400	50/60	V7	C8X-D2NV7	14109
	440	50/60	R7	C8X-D2NR7	14110
3SC8X-D4 for AC contactor 3SC8-25...32	Suitable for contactors with auxiliary contact 1NO or 1NC				
	24	50/60	B7	C8X-D4B7	17360
	48	50/60	E7	C8X-D4E7	25324
	110	50/60	F7	C8X-D4F7	32044
	127	50/60	FC7	C8X-D4FC7	32047
	220	50/60	M7	C8X-D4M7	17363
	230	50/60	P7	C8X-D4P7	32050
	240	50/60	U7	C8X-D4U7	32053
	380	50/60	Q7	C8X-D4Q7	32056
	400	50/60	V7	C8X-D4V7	27279
	440	50/60	R7	C8X-D4R7	32059
	Suitable for contactors with auxiliary contact 1NO+1NC				
	24	50/60	B7	C8X-D4NB7	14111
	48	50/60	E7	C8X-D4NE7	14112
	110	50/60	F7	C8X-D4NF7	14113
	127	50/60	FC7	C8X-D4NFC7	14114
	220	50/60	M7	C8X-D4NM7	14115
	230	50/60	P7	C8X-D4NP7	14116
	240	50/60	U7	C8X-D4NU7	14117
	380	50/60	Q7	C8X-D4NQ7	14118
	400	50/60	V7	C8X-D4NV7	14119
	440	50/60	R7	C8X-D4NR7	14120
3SC8X-D6 for AC contactor 3SC8-40...95	Suitable for contactors with auxiliary contact 1NO or 1NC				
	24	50/60	B7	C8X-D6B7	17361
	48	50/60	E7	C8X-D6E7	25325
	110	50/60	F7	C8X-D6F7	32045
	127	50/60	FC7	C8X-D6FC7	32048
	220	50/60	M7	C8X-D6M7	17364
	230	50/60	P7	C8X-D6P7	32051
	240	50/60	U7	C8X-D6U7	32054
	380	50/60	Q7	C8X-D6Q7	32057
	400	50/60	V7	C8X-D6V7	27280
	440	50/60	R7	C8X-D6R7	32060

Please contact us for other coil voltages.



Contactors and Thermal Relays

Series 3SC8 & 3SR8

Auxiliary contact

- Instruction of type code

C8	A1	O2
Code of auxiliary contact		
02: 2NC		
11: 1NO+1NC		
20: 2NO		
04: 4NC		
13: 1NO+3NC		
22: 2NO+2NC		
31: 3NO+1NC		
40: 4NO		
Model code		
A1: Front type		
A1C: Side type		
A1D: Front type		
Series code		

Time-delay auxiliary contact

- Instruction of type code

C8	A2	T0
Delay scope		
T0: 0.1-30 s (A2)		
T2: 0.1-30 s (A2)		
T4: 10-180 s (A2)		
R0: 0.1-30 s (A3)		
R2: 0.1-30 s (A3)		
R4: 10-180 s (A3)		
Delay type		
A2: Making time-delay		
A3: Breaking time-delay		
Series code		

Selection and ordering data


Auxiliary contact blocks

Mounting type	Auxiliary contacts		Type code	Order code
	NO	NC		
 Front	0	2	C8 A1/02	29578
	1	1	C8 A1/11	29579
	2	0	C8 A1/20	29580
 Front	0	4	C8 A1/04	29581
	1	3	C8 A1/13	29582
	2	2	C8 A1/22	29583
	3	1	C8 A1/31	29584
	4	0	C8 A1/40	29585
 Front	1	0	C8 A1D/10	29587
	0	1	C8 A1D/01	29588
 Side	1	1	C8 A1C	29586

Time-delay auxiliary contact

Delay type	Auxiliary contacts		Delay scope	Type code	Order code
	NO	NC			
making	1	1	0.1~3 s	C8 A2/T0	29589
time-delay			0.1~30 s	C8 A2/T2	29590
			10~180 s	C8 A2/T4	29591
breaking			0.1~3 s	C8 A3/R0	29592
time-delay			0.1~30 s	C8 A3/R2	29593
			10~180 s	C8 A3/R4	29594

Mechanical interlock




Matched contactor	Type code	Order code
 3SC8-09...32 3SC8-40...95	3SC8-A4X	29595
	3SC8-A4D	29596

Contactors and Thermal Relays


Series 3SC8 & 3SR8

Selection and ordering data

Series 3SR8

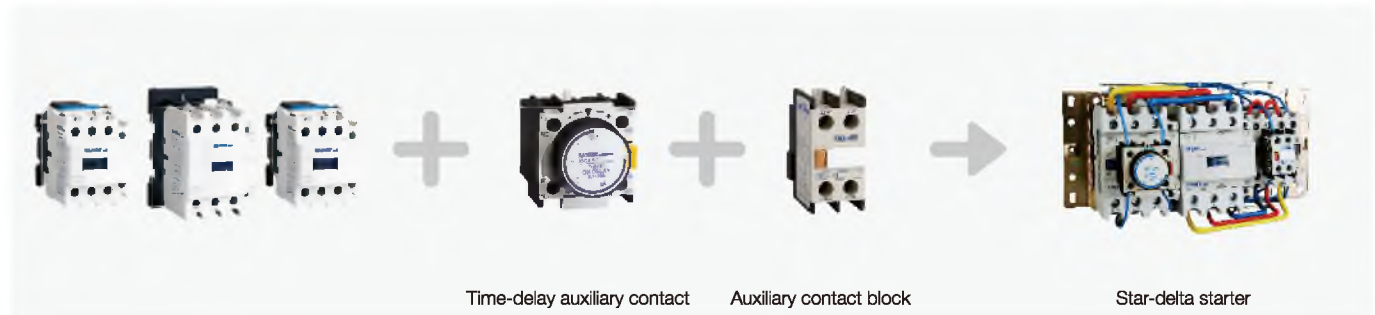
	Rated frame current (A)	Current setting range (A)	Matched fuse type		Matched AC contactor		
			aM (A)	gG (A)		Type code	Order code
	25	0.1~0.16	0.25	2	3SC8-09	R8 25/0.16	22875
		0.16~0.25	0.25	2	3SC8-09	R8 25/0.25	22876
		0.25~0.4	1	2	3SC8-09	R8 25/0.40	22877
		0.4~0.63	1	2	3SC8-09	R8 25/0.63	22878
		0.63~1	2	4	3SC8-09	R8 25/1	22879
		1~1.6	2	4	3SC8-09	R8 25/1.6	22880
		1.25~2	4	6	3SC8-09	R8 25/2	22881
		1.6~2.5	4	6	3SC8-09	R8 25/2.5	22882
		2.5~4	6	10	3SC8-09	R8 25/4	22883
		4~6	8	16	3SC8-09	R8 25/6	22884
		5.5~8	12	20	3SC8-09	R8 25/8	22885
		7~10	12	20	3SC8-12	R8 25/10	22886
		9~13	16	25	3SC8-12	R8 25/13	22887
		12~18	20	35	3SC8-18	R8 25/18	22888
		17~25	25	50	3SC8-25	R8 25/25	22889
	36	23~32	40	63	3SC8-32	R8 36/32	22890
		28~36	40	80	3SC8-32	R8 36/36	22891
	93	23~32	40	63	3SC8-40	R8 93/32	22892
		30~40	40	100	3SC8-40	R8 93/40	22893
		37~50	63	100	3SC8-50	R8 93/50	22894
		48~65	63	100	3SC8-65	R8 93/65	22895
		55~70	80	125	3SC8-80	R8 93/70	22896
		63~80	80	125	3SC8-80	R8 93/80	22897
		80~93	100	160	3SC8-95	R8 93/93	22898

Mounting block

	Matched relay		
		Type code	Order code
	R8 25	C8 A7D1064	15971
	R8 36	C8 A7D2064	15972
	R8 93	C8 A7D3064	15973

Contactors and Thermal Relays Series 3SC8 & 3SR8

Derivative products of AC contactor



Contactors and Thermal Relays

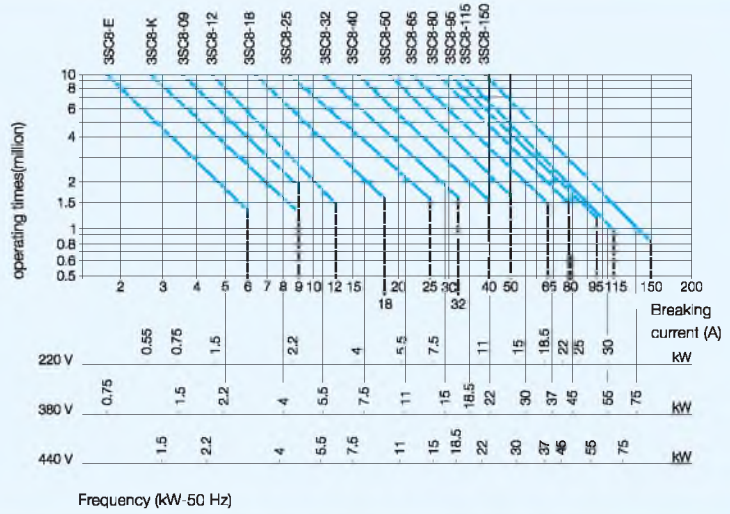
Series 3SC8 & 3SR8

Electrical life curve for AC contactor 3SC8

For breaking control when AC-3 type work. ($U_e \leq 440\text{ V}$)
The breaking current is equal to rated making current.

Notes:

Asynchronous, $P = 5.5\text{ kW}$,
 $U_e = 400\text{ V}$, $I_e = 11\text{ A}$, $I_c = I_e = 11\text{ A}$
motor or asynchronous, $P = 5.5\text{ kW}$,
 $U_e = 415\text{ V}$, $I_e = 11\text{ A}$, $I_c = I_e = 11\text{ A}$
For 30 million electrical life.

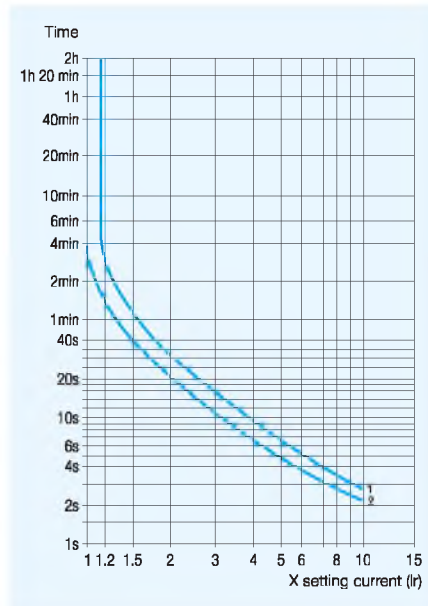


3

Action characteristics for thermal relay 3SR8

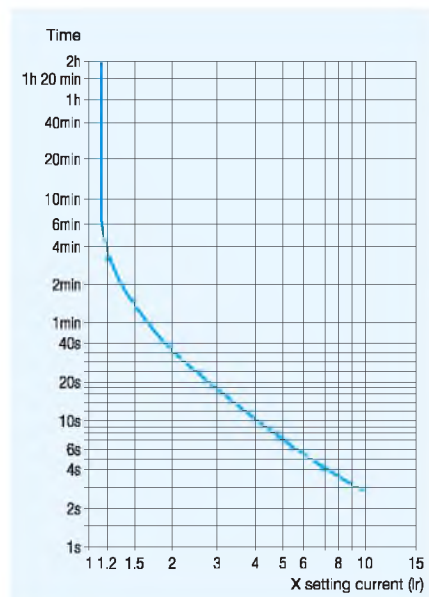
Average operating time related to multiples of the current setting (Class 10 A)

Balanced 3-phase operation, from cold state

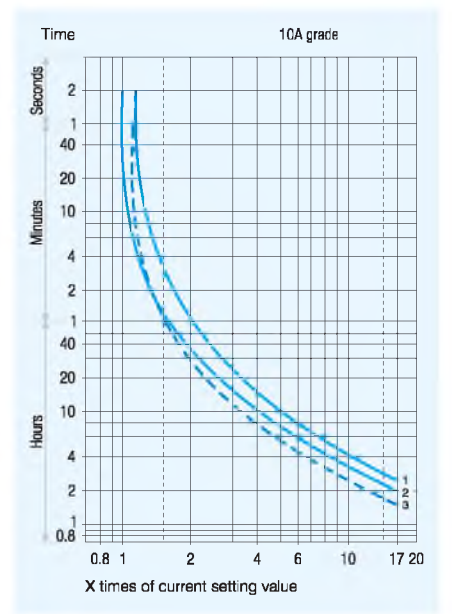


1 Setting: at lower end of scale
2 Setting: at upper end of scale

Balanced operation with 2 phases only, from cold state



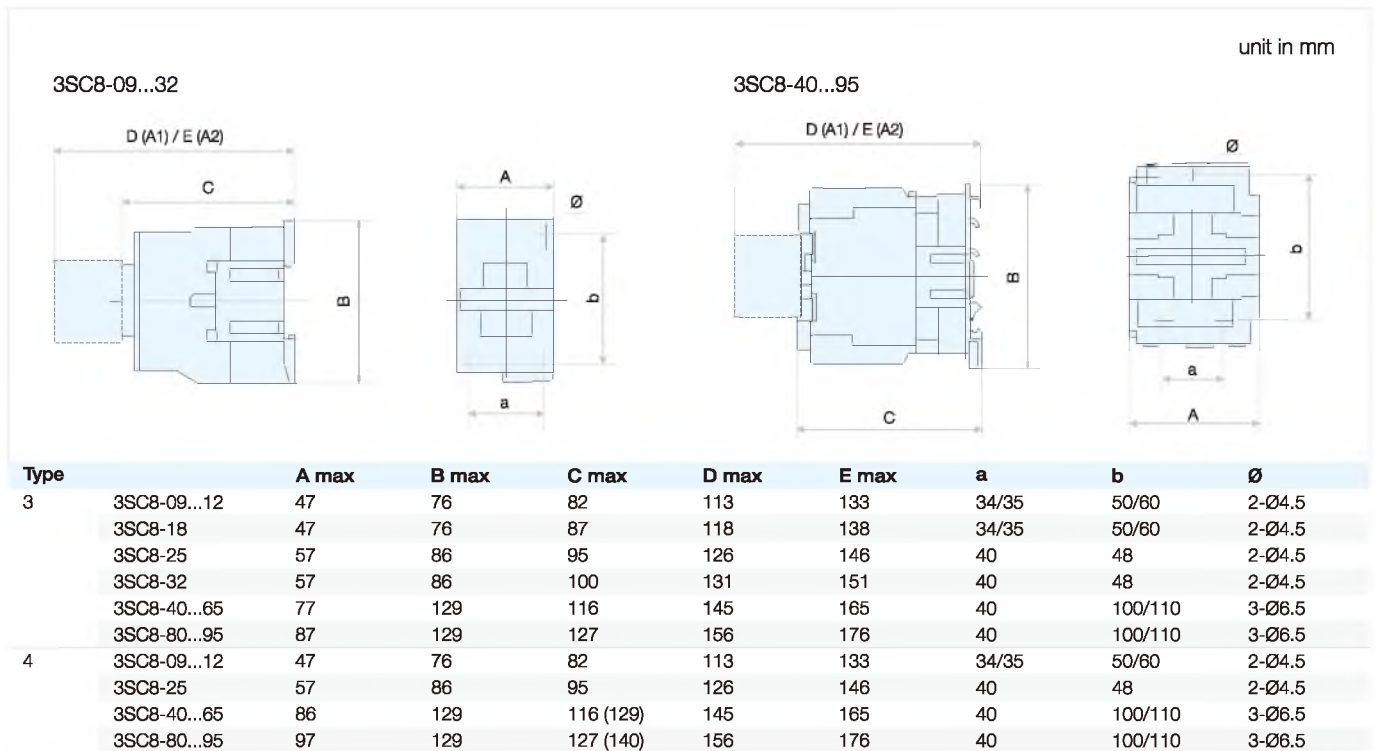
Tripping curve for thermal relay 3SR8



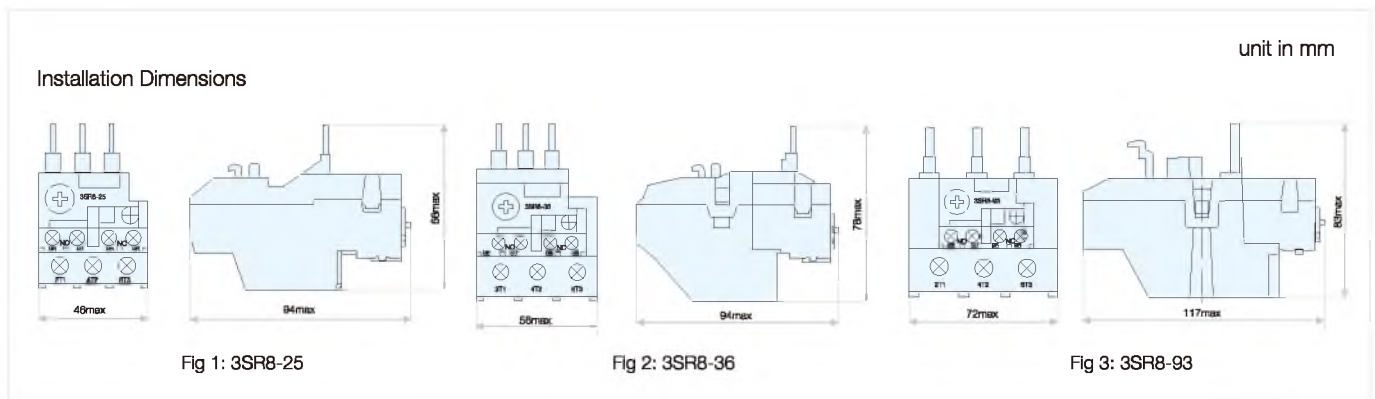
1. Equilibrium running, 3 phase, start from cold state
2. Equilibrium running, 2 phase, start from cold state
3. Equilibrium running, 3 phase, after long period of setting current (hot state)

Contactor and Thermal Relays Series 3SC8 & 3SR8

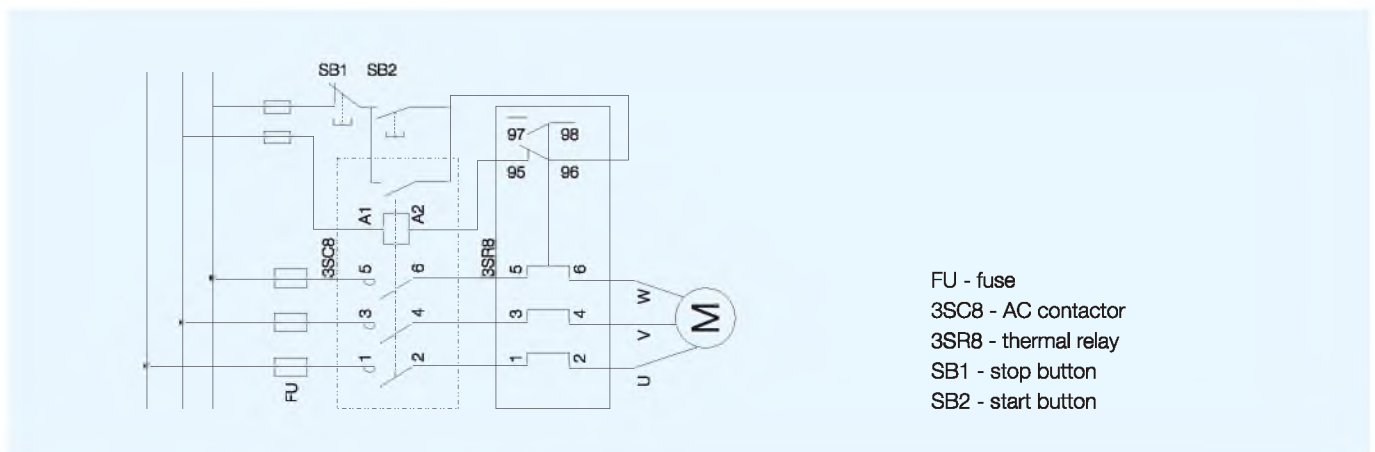
Outline and installation dimensions



Notes: The dimensions in brackets are for 008 (4P) type



Operating principle diagram of overload relay



Contactors and Thermal Relays

Series 3SC8-F & 3SR8-F

Applications and functions for AC contactor 3SC8-F

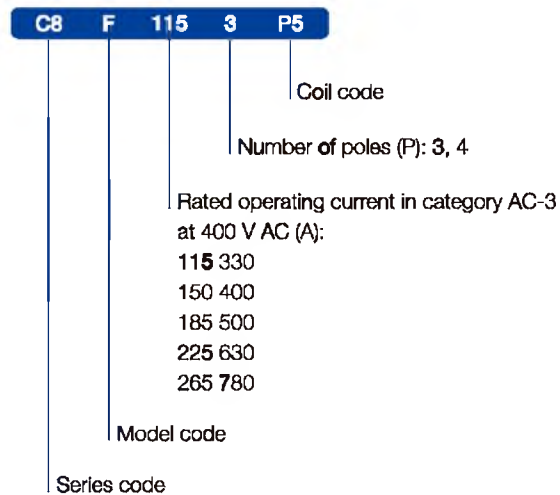
- Used for controlling 3-phase motors and generally for controlling power circuits.
- Used for many other applications such as isolation, capacitor switching and lighting.

Applications and functions for thermal relay 3SR8-F

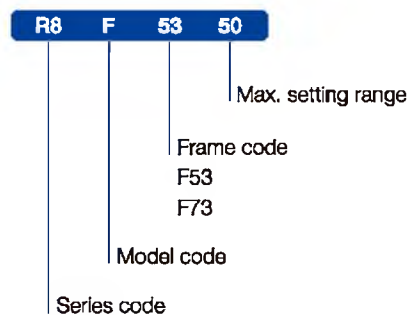
- Protecting the loads from overload and phase failure
- Implementing short-circuit protection by means of fuse or circuit breaker.
- Used for the protection of motors.

Instruction of type code

- For contactor



- For thermal relay



Contactors and Thermal Relays

Series 3SC8-F & 3SR8-F

Technical specifications for contactor 3SC8-F

Model	3SC8-F115	3SC8-F150	3SC8-F185	3SC8-F225	3SC8-F265	3SC8-F330	3SC8-F400	3SC8-F500	3SC8-F630	3SC8-F780
Standard	IEC 60947-4-1									
Number of poles	3, 4	3, 4	3, 4	3, 4	3	3	3, 4	3, 4	3, 4	3, 4
Rated operational current I_e (A)	In AC-3 115	150	185	225	265	330	400	500	630	780
	In AC-1 200	250	275	315	350	400	500	700	1000	1600
Rated operational voltage U_e (V)	Up to 1000									
Frequency limits of the operational current (time/h)	16-200									
Rated conventional thermal current I_{th} (A)	200	250	275	315	350	400	500	700	1000	1600
Rated insulation voltage U_i (V)	1000									
Rated impulse withstand voltage U_{imp} (kV)	8									
Rated frequency (Hz)	50/60									
Rated making capacity (A)	10 x In AC-3 or 12 x In AC-4									
Rated breaking capacity (A)	400 V 8 x In AC-3 or 10 x In AC-4									
Rated operational power in category AC-3 (kW)	220/230/240 V 30	40	55	68	75	100	129	147	200	220
	380/400 V 55	75	90	100	132	160	200	250	335	400
	660/690 V 80	100	120	129	180	220	280	355	450	475
Short-circuit protection by fuse (A)	Motor circuit (type aM) 125	160	200	250	315	400	400	500	630	-
	With thermal overload relay (type gG) 200	200	315	315	500	500	630	800	800	-
	gG fuses 200	250	315	315	400	500	500	800	1000	-
Average impedance per pole (mV)	0.37	0.35	0.33	0.32	0.3	0.28	0.26	0.18	0.12	0.1
Add-on auxiliary contact blocks	Front identical to those used on 3SC8 contactors									
	Side -									
	Front time delay identical to those used on 3SC8 contactors									
	Front dust and damp protected -									
Reversing contactor type	3SC8-FN									
Associated thermal overload relays	3SR8-F53					3SR8-F73				
Operation cycles (times/hour) In AC-3	1200	1200	600	600	600	600	600	600	600	600
Electrical life (X 10 ⁶ times)	1.2	1.2	1	1	0.8	0.8	0.8	0.8	0.8	0.8
Mechanical life (X 10 ⁶ times)	10	10	6	6	6	6	6	6	6	6
Matching fuse model	RT16-1	RT16-1	RT16-2	RT16-2	RT16-2	RT16-3	RT16-3	RT16-4	RT16-4	RT16-4
Tightening torque (N·m) Connection	0.8	0.8	0.8	1.2	1.2	1.2	1.2	1.2	4	4
Cabling cross section CU (mm ²)	95	120	150	185	240	240	2 x 150	2 x 240	240	300
Screw size	M6	M8	M8	M10	M10	M10	M10	M12	M12	M4
Degree of protection	IP20									
Ambient air temperature (°C)	-5 to +40, max. 95 % humidity									
Storage temperature (°C)	-40 ~ +70									
Maximum operating altitude (meters)	2000									
Flame resistance	Conforming to UL 94 V1									

Technical specifications for thermal relay 3SR8-F


Type	3SR8-F53	3SR8-F73
Standard	IEC 60947-4-1	
Tripping class	10 A, 20 A	
Rated operational voltage U_e (V)	1000	
Rated working current I_e (A)	220	630
Setting range (A)	30-220	200-630
Reset	Manual on front of relay	
Rated insulation voltage U_i (V)	1000	
Rated impulse withstand voltage U_{imp} (kV)	6	
Tightening torque (N·m)	0.8	
Degree of protection	IP20	
Ambient air temperature (°C)	-5 to +40, max. 95 % humidity	
Storage temperature (°C)	-40 ~ +75	
Maximum operating altitude (meters)	2000	
Flame resistance	V1	

Contactors and Thermal Relays


Series 3SC8-F & 3SR8-F

Selection and ordering data

3SC8-F contactor

	Rated operating current 400 V AC-3 (A)	Conventional thermal current (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3			Poles	230 V 50 Hz	
			220 V	380 V	415 V		Please contact us for other coil voltage	
			230 V (KW)	400 V (KW)	440 V (KW)		Type code	Order code
	115	200	30	55	59	3	C8 F1153P5	12093
						4	C8 F1154P5	12103
	150	220	40	75	80	3	C8 F1503P5	12094
						4	C8 F1504P5	12104
	185	275	55	90	100	3	C8 F1853P5	12095
						4	C8 F1854P5	12105
	225	315	63	110	110	3	C8 F2253P5	12096
						4	C8 F2254P5	12106
	265	350	75	132	140	3	C8 F2653P5	12097
						4	C8 F2654P5	12107
	330	400	100	165	180	3	C8 F3303P5	12098
						4	C8 F3304P5	12108
400	500	115	200	220	3	C8 F4003P5	12099	
					4	C8 F4004P5	12109	
500	700	147	250	280	3	C8 F5003P5	12100	
					4	C8 F5004P5	12110	
630	1000	200	335	375	3	C8 F6303P5	12101	
					4	C8 F6304P5	12111	
780	1500	220	400	425	3	C8 F7803P5	12102	
					4	C8 F7804P5	12112	

3SC8-FN reversing contactors


	Rated operating current 400 V AC-3 (A)	Conventional thermal current (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3			Poles	230 V 50 Hz	
			220 V	380 V	415 V		Please contact us for other coil voltage	
			230 V (KW)	400 V (KW)	440 V (KW)		Type code	Order code
	115	200	30	55	60	3	C8 FN115P5	15718
						4	C8 FN1154P5	15719
	150	250	40	75	80	3	C8 FN150P5	15720
						4	C8 FN1504P5	15721
	185	275	55	90	100	3	C8 FN185P5	15722
						4	C8 FN1854P5	15723
	225	315	63	110	120	3	C8 FN225P5	15724
						4	C8 FN2254P5	15725
	265	350	75	132	140	3	C8 FN265P5	15726
						4	C8 FN2654P5	15727
	330	400	100	165	180	3	C8 FN330P5	15728
						4	C8 FN3304P5	15729
400	500	115	200	220	3	C8 FN400P5	15730	
					4	C8 FN4004P5	15731	
500	700	147	250	280	3	C8 FN500P5	15732	
					4	C8 FN5004P5	15733	
630	1000	200	335	375	3	C8 FN630P5	15734	
					4	C8 FN6304P5	15735	
780	1500	220	400	425	3	C8 FN780P5	15736	
					4	C8 FN7804P5	15737	

Contactors and Thermal Relays








Series 3SC8-F & 3SR8-F

Selection and ordering data

3SR8-F thermal relay matched with contactor 3SC8-F

	Current setting range (A)	Fuses to be used with selected relay maximum rating		Matched contactor		
		aM Type (A)	gG Type (A)		Type code	Order code
	30-50	50	80	3SC8-F115...F185	R8 F53/50	15710
	48-80	80	125	3SC8-F115...F185	R8 F53/80	15711
	60-100	100	200	3SC8-F115...F185	R8 F53/100	15712
	90-150	160	250	3SC8-F115...F185	R8 F53/150	15713
	132-220	250	315	3SC8-F225...F265	R8 F53/220	15714
	200-330	400	500	3SC8-F225...F500	R8 F73/330	15715
	300-500	500	800	3SC8-F225...F500	R8 F73/500	15716
	380-630	630	800	3SC8-F400...F630	R8 F73/630	15717

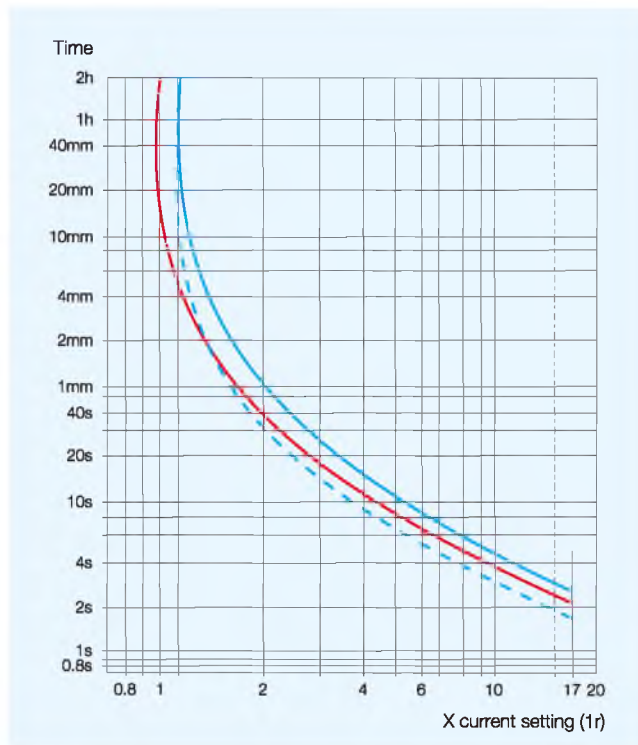
Coil for contactor 3SC8-F

	Standard control circuit voltage (V AC)	Rated frequency (Hz)	Voltage code	Type code	Order code
3SC8X-FF for AC contactor 3SC8-F115...150 	230	50/60	P7	C8X-FFP7	32002
	240	50/60	U7	C8X-FFU7	32003
	380	50/60	Q7	C8X-FFQ7	32004
	440	50/60	R7	C8X-FFR7	32006
3SC8X-FG for AC contactor 3SC8-F185...225 	230	50/60	P7	C8X-FGP7	32008
	240	50/60	U7	C8X-FGU7	32009
	380	50/60	Q7	C8X-FGQ7	32010
	440	50/60	R7	C8X-FGR7	32012
3SC8X-FH for AC contactor 3SC8-F265...330 	230	50/60	P7	C8X-FHP7	32014
	240	50/60	U7	C8X-FHU7	32015
	380	50/60	Q7	C8X-FHQ7	32016
	440	50/60	R7	C8X-FHR7	32018
3SC8X-FJ for AC contactor 3SC8-F400 	230	50/60	P7	C8X-FJP7	32020
	240	50/60	U7	C8X-FJU7	32021
	380	50/60	Q7	C8X-FJQ7	32022
	440	50/60	R7	C8X-FJR7	32024
3SC8X-FK for AC contactor 3SC8-F500 	230	50/60	P7	C8X-FKP7	32026
	240	50/60	U7	C8X-FKU7	32027
	380	50/60	Q7	C8X-FKQ7	32028
	440	50/60	R7	C8X-FKR7	32030
3SC8X-FL for AC contactor 3SC8-F630 	230	50/60	P7	C8X-FLP7	32032
	240	50/60	U7	C8X-FLU7	32033
	380	50/60	Q7	C8X-FLQ7	32034
	440	50/60	R7	C8X-FLR7	32036
3SC8X-FX for AC contactor 3SC8-F780 	230	50/60	P7	C8X-FXP7	32038
	240	50/60	U7	C8X-FXU7	32039
	380	50/60	Q7	C8X-FXQ7	32040
	440	50/60	R7	C8X-FXR7	32042

Contactors and Thermal Relays

Series 3SC8-F & 3SR8-F

Tripping curve for thermal relay 3SR8-F



Outline and installation dimensions (Series 3SC8-F)

unit in mm

3SC8-F115...330

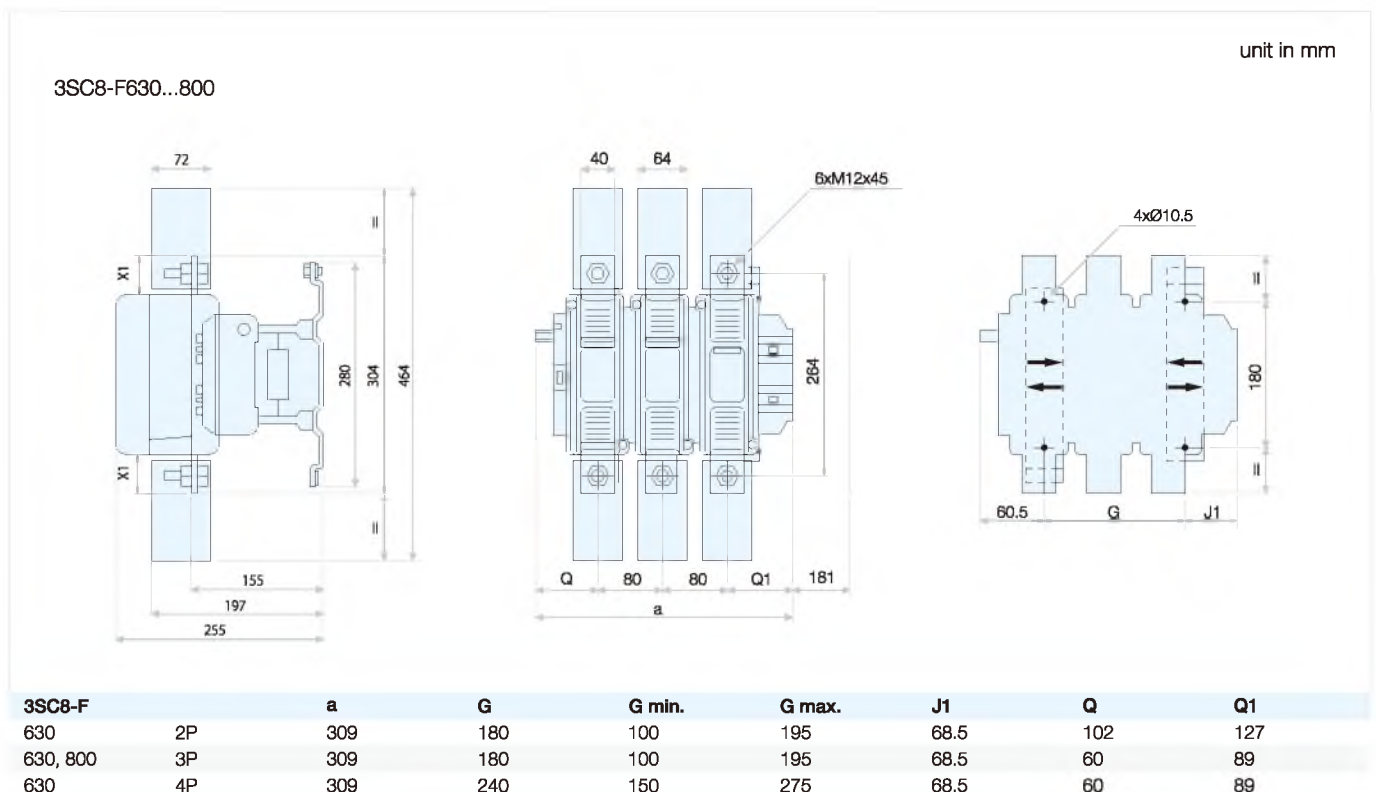
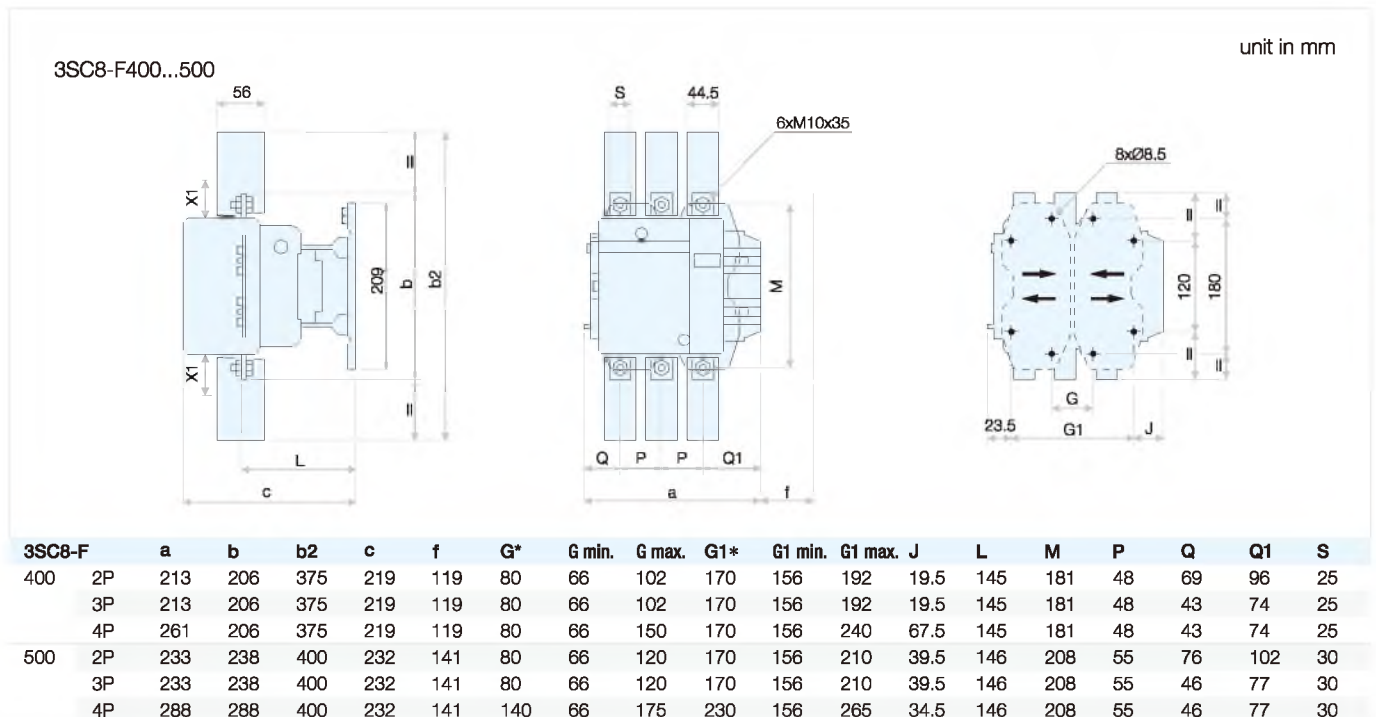
- F115 M6X25
- F150 M8X25
- F185 M8X25
- F225 M10X355
- F265 M10X355
- F330 M10X355

3SC8-F	a	b	b1	b2	c	f	G	G1	J	J1	L	M	P	Q	Q1	S	Y	Z		
115	3P	163.5	162	137	265	171	131	106	80	106	120	107	147	37	29.5	60	20	26	44	13.5
	4P	200.5	162	137	265	171	131	143	80	106	120	107	147	37	29.5	80	20	26	44	13.5
150	3P	163.5	170	137	301	171	131	106	80	106	120	107	150	40	26	57.5	20	34	44	13.5
	4P	200.5	170	137	301	171	131	143	80	106	120	107	150	40	26	55.5	20	34	44	13.5
185	3P	168.5	174	137	305	181	130	111	80	106	120	113.5	154	40	29	59.5	20	34	44	13.5
	4P	208.5	174	137	305	181	130	151	80	106	120	113.5	154	40	29	59.5	20	34	44	13.5
225	3P	168.5	197	137	364	181	130	111	80	106	120	113.5	172	48	21	51.5	25	44.5	44	13.5
	4P	208.5	197	137	364	181	130	151	80	106	120	113.5	172	48	17	47.5	25	44.5	44	13.5
265	3P	201.5	203	145	375	213	147	142	96	106	120	141	178	48	39	66.5	25	44.5	38	21.5
	4P	244.5	203	145	375	213	147	190	96	106	120	141	178	48	34	66.5	25	44.5	38	21.5
330	3P	213	206	145	375	219	147	154.5	96	106	120	145	181	48	43	74	25	44.5	38	20.5
	4P	261	206	145	375	219	147	202.5	96	106	120	145	181	48	43	74	25	44.5	38	20.5

f = minimum distance required for coil removal

Contactors and Thermal Relays Series 3SC8-F & 3SR8-F

Outline and installation dimensions (Series 3SC8-F)

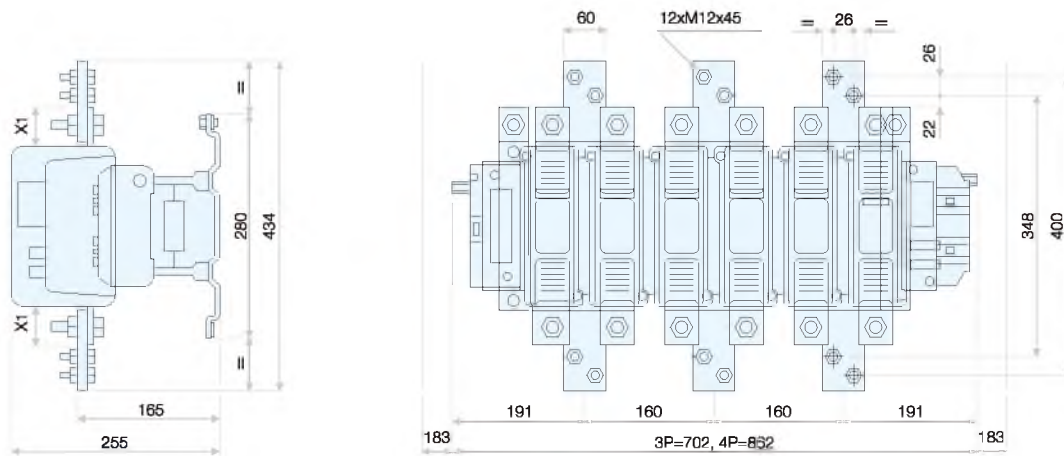


Contactors and Thermal Relays Series 3SC8-F & 3SR8-F

Outline and installation dimensions (Series 3SC8-F)

3SC8-F780

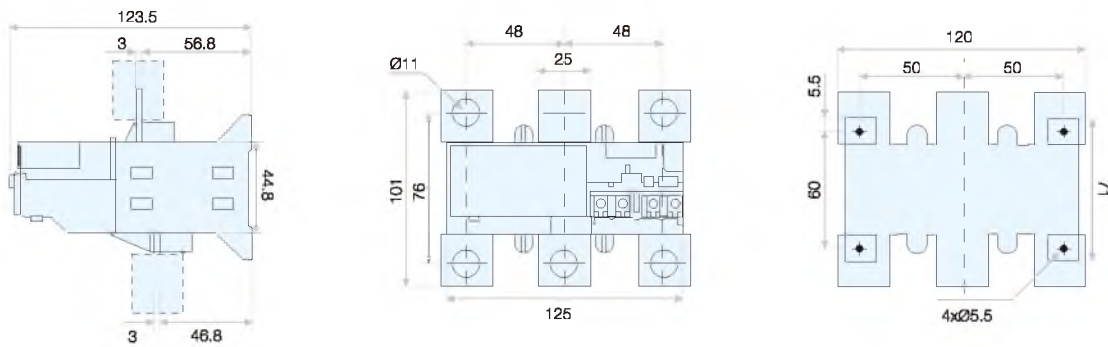
unit in mm



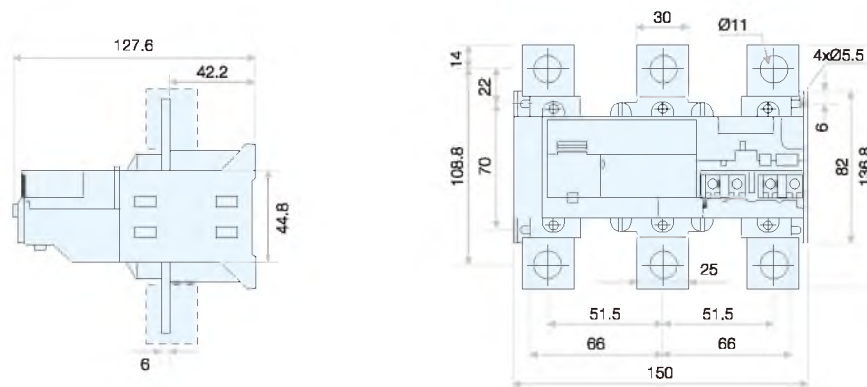
Outline and installation dimensions (Series 3SR8-F)

3SR8-F53

unit in mm



3SR8-F73

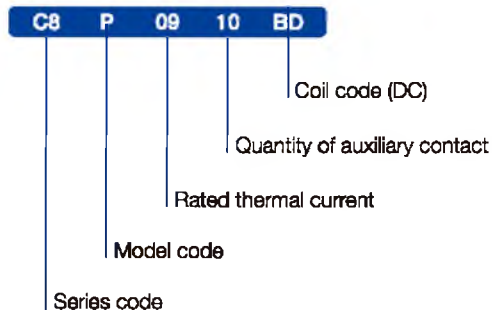


DC Operated AC Contactors Series 3SC8-P

Applications and functions

- DC operated AC contactor
- Remote control of making circuit
- Breaking or protecting the start of AC motor frequently

Instruction of type code



Technical specifications for type 3SC8-P

Model	3SC8-P09	3SC8-P12	3SC8-P18	3SC8-P25	3SC8-P32	3SC8-P40	3SC8-P50	3SC8-P65	3SC8-P80	3SC8-P95											
Standard	IEC 60947-4-1																				
Number of contacts	3P+1NO, 3P+1NC					3P+1NO+1NC															
Rated conventional thermal current I _{th} (A)	20	25	32	40	50	60	80	80	125	125											
Rated operational voltage U _e (V)	690																				
Rated insulation voltage U _i (V)	690																				
Rated frequency (Hz)	50/60																				
Rated operational current (A)	AC3 380/400 V	9	12	18	25	32	40	50	65	80	95										
	AC4 380/400 V	3.5	5	7.7	8.5	12	18.5	24	28	37	44										
	AC3 660/690 V	6.6	8.9	12	18	21	34	39	42	49	55										
	AC4 660/690 V	1.5	2	3.8	4.4	7.5	9	12	14	17.3	21.3										
Number of poles	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4											
Rated operational power in category AC-3 (kW)	220 V	2.2	3	4	5.5	7.5	11	15	18.5	22	25										
	380 V	4	5.5	7.5	11	15	18.5	22	30	37	45										
	660 V	5.5	7.5	9	15	18.5	30	33	37	45	45										
Rated making capacity (VA)	360																				
Rated breaking capacity (VA)	3600																				
Short-circuit protection (A) gG fuse U ≤ 440 V	25																				
Average impedance per pole (MΩ)	3																				
Electrical life (X 10 ⁴ times)	AC-3	100					80		60												
	AC-4	20					15		10												
Operation cycles (times/hour)	Mechanical AC-3	1200																			
	Mechanical AC-4	300																			
Mechanical life (X 10 ⁴ times)	1000					600		500													
Matching fuse model	RT16-20		RT16-32		RT16-40		RT16-50		RT16-63		RT16-80		RT16-80		RT16-100		RT16-125				
Coil sectional area (mm ²)	Number	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2		
	Flexible conductor	4	2.5	4	2.5	6	4	6	4	10	6	25	10	25	10	25	10	50	16	50	16
	Solid conductor	4	4	4	4	6	6	6	6	10	10	25	16	25	16	25	16	50	25	50	25
Tightening torque (N·m)	0.8																				
Degree of protection	IP20																				
Ambient air temperature (°C)	-5 to +40, max. 95 % humidity																				
Storage temperature (°C)	-40 ~ +75																				
Maximum operating altitude (meters)	2000																				
Flame resistance	Conforming to UL 94 V1																				

DC Operated AC Contactors Series 3SC8-P

Selection and ordering data

Rated operating current 380 V AC-3 (A)	Conventional thermal current (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3			Auxiliary contact	24 V DC Please Please contact us for other coil voltage	Type code	
		220 V 230 V (KW)	380 V 400 V (KW)	660 V 690 V (KW)			Order code	
				Type code				
9	20	2.2	4	5.5	1 -	C8 P0910BD	10057	
9	20	2.2	4	5.5	- 1	C8 P0901BD	10058	
12	20	3	5.5	7.5	1 -	C8 P1210BD	10059	
12	20	3	5.5	7.5	- 1	C8 P1201BD	10060	
18	32	4	7.5	9	1 -	C8 P1810BD	10061	
18	32	4	7.5	9	- 1	C8 P1801BD	10062	
25	40	5.5	11	15	1 -	C8 P2510BD	10063	
25	40	5.5	11	15	- 1	C8 P2501BD	10064	
32	50	7.5	15	18.5	1 -	C8 P3210BD	10065	
32	50	7.5	15	18.5	- 1	C8 P3201BD	10066	
40	60	11	18.5	30	1 1	C8 P4011BD	10067	
50	80	15	22	33	1 1	C8 P5011BD	10068	
65	80	18.5	30	37	1 1	C8 P6511BD	10069	
80	125	22	37	45	1 1	C8 P8011BD	10070	
95	125	25	45	45	1 1	C8 P9511BD	10071	



Outline and installation dimensions

unit in mm

3SC8-P09...P32

3SC8-P40...P95

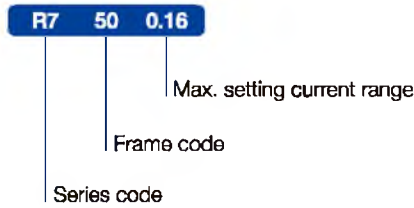
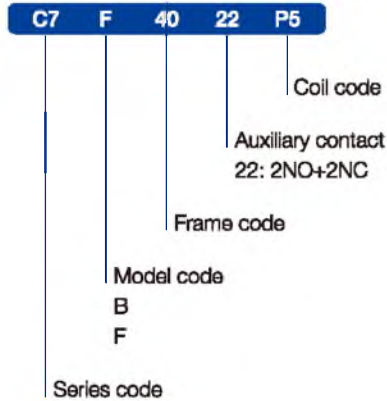
Type	Outline dimensions			Installation dimensions		
	A max	B max	C max	a	b	Ø
3SC8-P09/P12	47	76	115	34/35	50/60	2-Ø4.5
3SC8-P18	47	76	120	34/35	50/60	2-Ø4.5
3SC8-P25	57	86	132	40	50/60	2-Ø4.5
3SC8-P32	57	86	137	40	50/60	2-Ø4.5
3SC8-P40-P65	77	129	169	40	100/110	3-Ø6.5
3SC8-P80/P95	87	129	180	40	100/110	3-Ø6.5

Contactors and Thermal Relays Series 3SC7 and 3SR7

Applications and functions

- Used for controlling 3-phase motors and generally for controlling power circuits.
- Used for many other applications such as isolation, capacitor switching and lighting.

Instruction of type code



Selection and ordering data

3SC7-B contactor






Rated operating current 400 V AC-3 (A)	Conventional thermal current (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3		Auxiliary contact 	230 V 50 Hz Please contact us for other coil voltage	Type code	Order code
		380 V 400 V (KW)	660 V 690 V (KW)				
9	22	4	5.5	2 2		C7 B4022P5	15961
12	22	5.5	7.5	2 2		C7 B4122P5	15962
16	35	7.5	11	2 2		C7 B4222P5	15963
22	35	11	11	2 2		C7 B4322P5	15964
32	55	15	15	2 2		C7 B4422P5	15965

Contactors and Thermal Relays



Series 3SC7 and 3SR7

Selection and ordering data

3SC7-F contactor

	Rated operating current 400 V AC-3 (A)	Conventional thermal current (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3			Auxiliary contact 	230 V 50 Hz Please contact us for other coil voltage	Type code	
			220 V 230 V (KW)	380 V 400 V (KW)	660 V 690 V (KW)			Type code	Order code
	9	20	2.4	4	5.5	2	2	C7 F4022P5	14810
	12	20	3.3	5.5	7.5	2	2	C7 F4122P5	14811
	16	30	4	7.5	11	2	2	C7 F4222P5	14812
	22	30	5.5	10	15	2	2	C7 F4322P5	14813
	32	55	8.5	15	22	2	2	C7 F4422P5	14814
	38	55	11	18.5	22	2	2	C7 F4522P5	14815
	45	80	15	22	37	2	2	C7 F4622P5	14816
	63	80	18.5	30	55	2	2	C7 F4722P5	14817
	75	100	22	37	55	2	2	C7 F4822P5	14818
	85	100	26	45	75	2	2	C7 F4922P5	14819
	110	160	37	55	90	2	2	C7 F5022P5	14820
	140	160	43	75	110	2	2	C7 F5122P5	14821
	170	200	55	90	150	2	2	C7 F5222P5	14822
	205	210	64	110	160	2	2	C7 F5322P5	14823
	250	300	78	132	220	2	2	C7 F5422P5	14824
	300	300	93	160	250	2	2	C7 F5522P5	14825
	400	400	125	200	355	2	2	C7 F5622P5	14826
	630	630	200	335	560	2	2	C7 F6822P5	15912




3SC7-FN reversing contactors

	Rated operating current 400 V AC-3 (A)	Conventional thermal current (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3			Auxiliary contact 	230 V 50 Hz Please contact us for other coil voltage	Type code	
			220 V 230 V (KW)	380 V 400 V (KW)	660 V 690 V (KW)			Type code	Order code
	9	20	2.4	4	5.5	2	2	C7 FN4022P5	15776
	12	20	3.3	5.5	7.5	2	2	C7 FN4122P5	15777
	16	30	4	7.5	11	2	2	C7 FN422P52	15778
	22	30	5.5	10	15	2	2	C7 FN4322P5	15779
	32	55	8.5	15	22	2	2	C7 FN4422P5	15780
	38	55	11	18.5	22	2	2	C7 FN4522P5	15781
	45	80	15	22	37	2	2	C7 FN4622P5	15782
	63	80	18.5	30	55	2	2	C7 FN4722P5	15783
	75	100	22	37	55	2	2	C7 FN4822P5	15784
	85	100	26	45	75	2	2	C7 FN4922P5	15785
	110	160	37	55	90	2	2	C7 FN5022P5	15786
	140	160	43	75	110	2	2	C7 FN5122P5	15787
	170	200	55	90	150	2	2	C7 FN522P52	15788
	205	210	64	110	160	2	2	C7 FN5322P5	15789
	250	300	78	132	220	2	2	C7 FN5422P5	15790
	300	300	93	160	250	2	2	C7 FN5522P5	15791
	400	400	125	200	355	2	2	C7 FN5622P5	15792

Contactors and Thermal Relays Series 3SC7 and 3SR7

Selection and ordering data


3SR7 thermal relay matched with contactor 3SC7

	Current setting range (A)	Rated operating current (A)	Contactor Matched	Type code	Order code
	0.1-0.16	12.5	3SC7-F4022	R7 50/0.16	16092
	0.16-0.25			R7 50/0.25	16093
	0.25-0.4		R7 50/0.4	16094	
	0.4-0.63		R7 50/0.63	16095	
	0.63-1		R7 50/1	16096	
	0.8-1.25		R7 50/1.25	16097	
	1-1.6		R7 50/1.6	16098	
	1.25-2		R7 50/2	16099	
	1.6-2.5		R7 50/2.5	16100	
	2-3.2		R7 50/3.2	16101	
	2.5-4		R7 50/4	16102	
	3.2-5		R7 50/5	16103	
	4-6.3		R7 50/6.3	16104	
	5-8		R7 50/8	16105	
6.3-10	R7 50/10	16106			
8-12.5	R7 50/12.5	16107			
	10-14.5	25	3SC7-F4222	R7 50/14.5	16108
	0.1-0.16		3SC7-F4322	R7 52/0.16	16109
	0.16-0.25		R7 52/0.25	16110	
	0.25-0.4		R7 52/0.4	16111	
	0.4-0.63		R7 52/0.63	16112	
	0.63-1		R7 52/1	16113	
	0.8-1.25		R7 52/1.25	16114	
	1-1.6		R7 52/1.6	16115	
	1.25-2		R7 52/2	16116	
	1.6-2.5		R7 52/2.5	16117	
	2-3.2		R7 52/3.2	16118	
	2.5-4		R7 52/4	16119	
	3.2-5		R7 52/5	16120	
	4-6.3		R7 52/6.3	16121	
5-8	R7 52/8	16122			
6.3-10	R7 52/10	16123			
8-12.5	R7 52/12.5	16124			
10-16	R7 52/16	16125			
12.5-20	R7 52/20	16126			
16-25	R7 52/25	16127			
	4-6.3	32	3SC7-F4422	R7 54/6.3	16128
	6.3-10		3SC7-F4522	R7 54/10	16129
	10-16		R7 54/16	16130	
	12.5-20		R7 54/20	16131	
	16-25	R7 54/25	16132		
	20-32	R7 54/32	16133		
	16-25	80	3SC7-F4622	R7 58/25	16134
	20-32		3SC7-F4722	R7 58/32	16135
25-40	3SC7-F4822		R7 58/40	16136	
32-50	3SC7-F4922		R7 58/50	16137	
40-57	R7 58/57		16138		
50-63	R7 58/63		16139		
57-70	R7 58/70	16140			
63-80	R7 58/80	16141			

Contactors and Thermal Relays Series 3SC7 and 3SR7

Selection and ordering data

3SR7 thermal relay matched with contactor 3SC7

	Current setting range (A)	Rated operating current (A)	Contactor Matched	Type code	Order code
	0.1-0.16	63	Mounted separately	R7 59/0.16	14828
	0.16-0.25			R7 59/0.25	14829
	0.25-0.4			R7 59/0.4	14830
	0.4-0.63			R7 59/0.63	14831
	0.63-1			R7 59/1	14832
	0.8-1.25			R7 59/1.25	14833
	1-1.6			R7 59/1.6	14834
	1.25-2			R7 59/2	14835
	1.6-2.5			R7 59/2.5	14836
	2-3.2			R7 59/3.2	14837
	2.5-4			R7 59/4	14838
	3.2-5			R7 59/5	14839
	4-6.3			R7 59/6.3	14840
	5-8			R7 59/8	14841
	6.3-10			R7 59/10	14842
8-12.5	R7 59/12.5	14843			
10-16	180	3SC7-F5222	R7 59/16	14844	
12.5-20			3SC7-F5322	R7 59/20	14845
16-25			R7 59/25	14846	
20-32			R7 59/32	14847	
25-40			R7 59/40	14848	
32-45			R7 59/45	14849	
40-57			R7 59/57	14850	
50-63			R7 59/63	14851	
55-80			R7 62/80	14852	
63-90			R7 62/90	14853	
80-110	R7 62/110	14854			
90-120	R7 62/120	14855			
110-135	R7 62/135	14856			
120-150	R7 62/150	14857			
135-160	R7 62/160	14858			
150-180	R7 62/180	14859			
80-125	400	3SC7-F5422	R7 66/125	16142	
125-200			3SC7-F5522	R7 66/200	16143
180-250			3SC7-F5622	R7 66/250	16144
200-320			R7 66/320	16145	
250-400			R7 66/400	16146	
320-500	630	3SC7-F6822	R7 68/500	16147	
400-630			R7 68/630	16148	



Capacitor Switching Contactors Series 3SC19

Applications and functions

- Switching parallel connection capacitance from low voltage reactive power compensating equipments
- Reducing efficiently the impact to capacitor and restraining over-voltage when switching ON/OFF with special flow-cut equipment

Instruction of type code

C19	25	11	P5
Series code	Rated thermal current	Quantity of auxiliary contact 11: 1NO+1NC 02: 2NC 20: 2NO	Coil code




Technical specifications

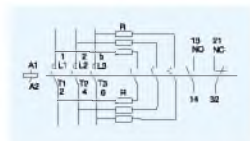
Type		3SC19-25	3SC19-32	3SC19-43	3SC19-50	3SC19-63	3SC19-80	3SC19-95	3SC19-125
Rated insulating voltage Ui	V	690	690	690	690	690	690	690	690
Rated conventional thermal current Ith	A	25	32	43	50	63	80	95	125
Controllable power AC-6b	220/230 V	Kvar	6	8.5	10	12	15	22	25
	380/400 V	Kvar	12	16	20	25	30	37	45
	660/690 V	Kvar	12	16	20	25	30	37	45
Rated current of capacitor	400 V	A	17.3	23	29	36	43	53	65
Rated working current 1.3Ie	A	22.5	30	37.7	47	56	69	85	94
Restrained surge capacity		≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie	≤ 20 Ie
Coil consumed power	Starting	VA	70	100	100	245	245	245	245
	Holding	VA	9	10	10	30	30	30	30
Auxiliary contact type	2NO		√	√	√	-	-	-	-
	2NC		√	√	√	-	-	-	-
	1NO + 1NC		√	√	√	-	-	-	-
	2NO + 1NC		-	-	-	√	√	√	√
	1NO + 2NC		-	-	-	√	√	√	√
Mechanical life	10 ⁴	times	300	300	300	100	100	100	80
Electrical life	10 ⁴	times	10	10	10	6	6	6	6
Operating frequency		times/h	120	120	120	120	120	120	120
Pollution grade			3	3	3	3	3	3	3
Installation category			3	3	3	3	3	3	3
Installation type	screws		√	√	√	√	√	√	√
	35mm DIN-rail		√	√	√	√	√	√	√
	75mm DIN-rail		-	-	-	-	√	√	√
Ambient air temperature		°C	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40
Altitude	max.	meter	2000	2000	2000	2000	2000	2000	2000
Coil sectional area (mm ²)			4	6	10	10	16	25	35
Tightening torque (N·m)			1.7	2.0	2.5	5	5	5	9

Capacitor Switching Contactors Series 3SC19

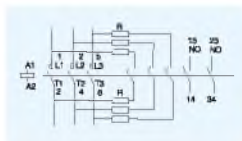
Selection and ordering data

	Rated conventional thermal current I _{th} (A)	Controllable power			Auxiliary contact		230 V AC 50Hz	
		220 V	380 V	660 V	1	1	Type code	Order code
		230 V (KW)	400 V (KW)	690 V (KW)				
	25	6	12	12	1	1	C19 2511 P5	27308
	32	8.5	16	16	0	2	C19 2502 P5	27309
					2	0	C19 2520 P5	27310
	43	10	20	20	1	1	C19 3211 P5	27311
					0	2	C19 3202 P5	27312
	50	12	25	25	2	0	C19 3220 P5	27313
					1	1	C19 4311 P5	27314
	63	15	30	30	0	2	C19 4302 P5	27315
					2	1	C19 4320 P5	27316
	80	22	37	37	1	2	C19 5012 P5	27317
					2	1	C19 5021 P5	27318
	95	23	45	45	1	2	C19 6312 P5	27319
2					1	C19 6321 P5	27320	
125	25	50	50	1	2	C19 8012P5	27321	
				2	1	C19 8021P5	27322	
				1	2	C19 9512 P5	25496	
				2	1	C19 9521 P5	25686	
				1	2	C19 12512 P5	27323	
				2	1	C19 12521 P5	27324	

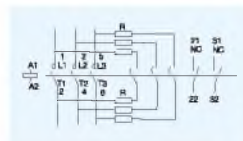
Terminal and electric diagram



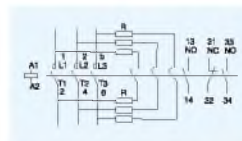
3SC19-2511
3SC19-3211
3SC19-4311



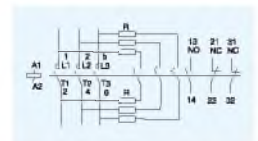
3SC19-2520
3SC19-3220
3SC19-4320



3SC19-2502
3SC19-3202
3SC19-4302

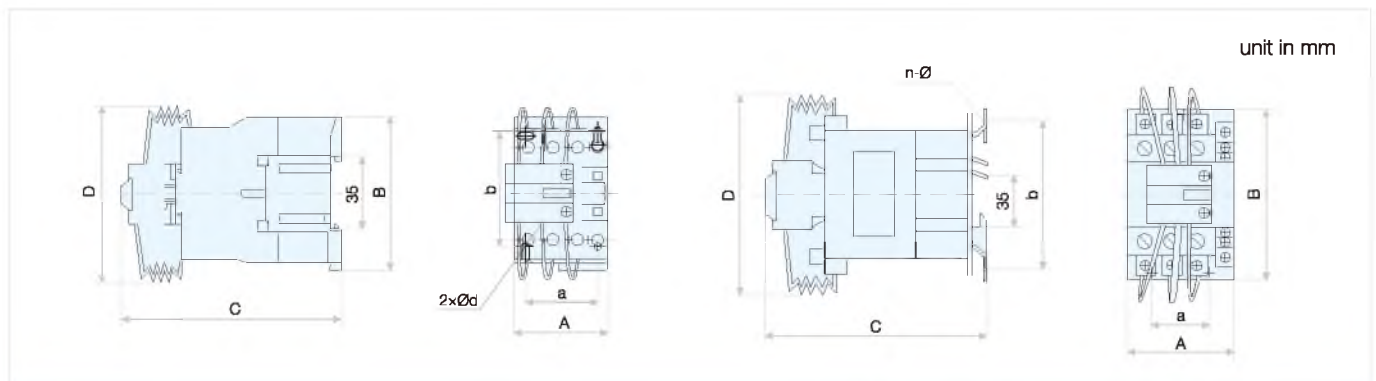


3SC19-5021
3SC19-6321
3SC19-8021
3SC19-9521
3SC19-12521



3SC19-5012
3SC19-6312
3SC19-8012
3SC19-9512
3SC19-12512

Outline and installation dimensions

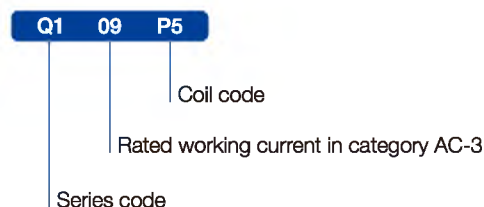


Type	Outline dimensions				Installation dimensions		
	A	B	C	D	a	b	C
3SC19-25	47	76	124	100	34/35	50/60	2-Ø4.5
3SC19-32	57	86	132	110	40	50/60	2-Ø4.5
3SC19-43	57	86	136	110	40	50/60	2-Ø4.5
3SC19-50	77	129	152	155	40	100/110	3-Ø6.5
3SC19-63	77	129	152	155	40	100/110	3-Ø6.5
3SC19-80	77	129	152	155	40	100/110	3-Ø6.5
3SC19-95	87	129	162	165	40	100/110	3-Ø6.5
3SC19-125	87	129	162	165	40	100/110	3-Ø6.5

Applications and functions

- Controlling the direct start and halt of the electromotor
- Protecting the motor from overload and phase failure
- Used in remote making and breaking circuit and frequently starting and controlling motor.

Instruction of type code



Technical specifications

- Type: 3SQ1
- Standards: IEC 60947-4-1, IEC 60439-1
- Rated working current (A): 09, 12, 18, 25, 32, 40, 50, 65, 80, 95
- Rated operational voltage U_e (V): 690
- Rated insulation voltage U_i (V): 690
- Rated impulse withstand voltage U_{imp} (kV): 8
- Rated frequency (Hz): 50/60
- Control (2 pushbuttons mounted on enclosure cover): 1 green Start button "I"; 1 red Stop/Reset button "O"
- Enclosure: 3SC8-09/12/18 Double insulated, degree of protection IP65;
3SC8-25/32 Double insulated, degree of protection IP55;
3SC8-40/50/65/80/95 Metal, degree of protection IP65
- Electrical life ($\times 10^5$ times): 5
- Mechanical life ($\times 10^5$ times): 50
- The model of matched AC contactor: 3SC8
- The model of matched thermal relay: 3SR8
- Ambient air temperature (°C): -5 to +40, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Maximum operating altitude (meters): 2000

Selection and ordering data

	Standard power ratings of 3 phase motors 50-60 Hz in category AC-3			Rated working current in category AC-3, 380 V (A)	Conventional thermal current Ith (A)	Type code of matched contactor	Type code of matched thermal relay	230 V 50 Hz	
	220 V (KW)	380 V (KW)	660 V (KW)					Type code	Order code
	2.2	4	5.5	9	20	C809	R8 D13	Q1 09P5	25606
	3	5.5	7.5	12	20	C812	R8 D13	Q1 12P5	25607
	4	7.5	9	18	32	C818	R8 D13	Q1 18P5	25608
	5.5	11	15	25	40	C825	R8 D13	Q1 25P5	25609
	7.5	15	18.5	32	50	C832	R8 D13	Q1 32P5	25610
	11	18.5	30	40	60	C840	R8 D33	Q1 40P5	25611
	15	22	33	50	80	C850	R8 D33	Q1 50P5	25612
	18.5	30	37	65	80	C865	R8 D33	Q1 65P5	25613
	22	37	45	80	110	C880	R8 D33	Q1 80P5	25614
	25	45	45	95	125	C895	R8 D33	Q1 95P5	25615

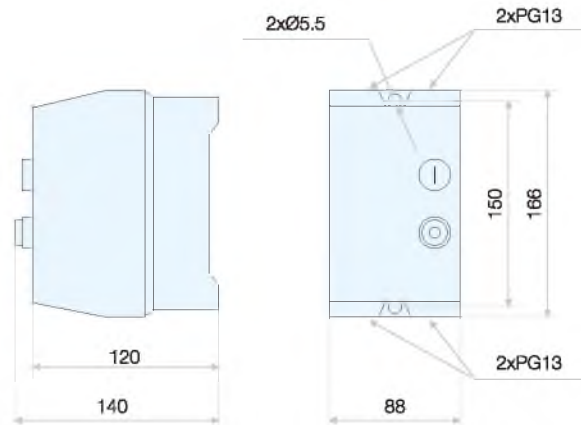


Dol Starters Series 3SQ1

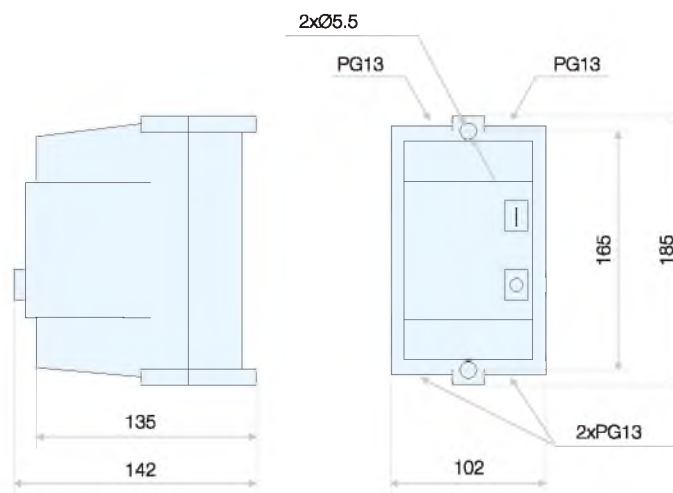
Outline and installation dimensions

unit in mm

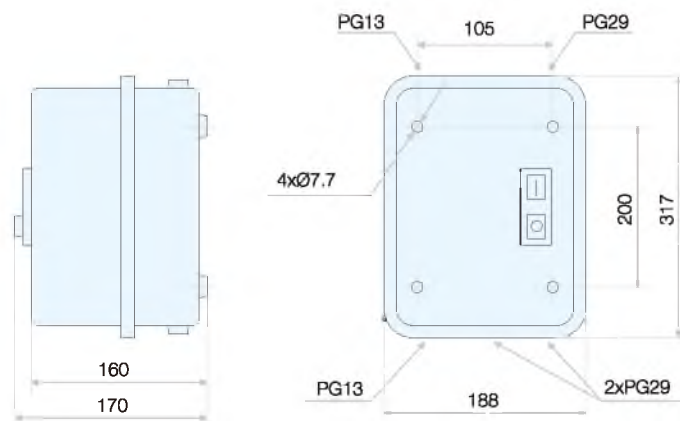
3SQ1-09/12/18



3SQ1-25/32



3SQ1-40/50/65/80/95

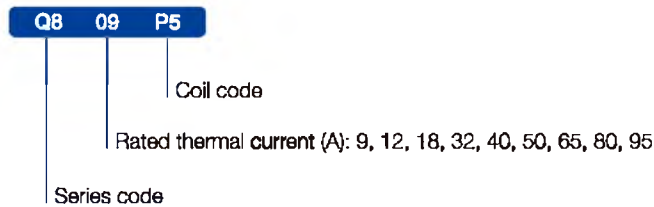


Applications and functions

- For startup of motor that has heavy duty and current used is high
- Reducing the starting current and starting torque when motor starts up
- Smaller circuit breakers and thinner 3-phase line wires can be installed to supply power to the motor



Instruction of type code



Selection and ordering data

Rated operating current 380V AC-3 (A)	Standard power ratings of 3 phase motors 50-60 Hz AC-3				Type code	Order code
	220 V 230 V (KW)	380 V 400 V (KW)	415 V (KW)	445 V (KW)		
9	4	7.5	7.5	7.5	Q8 D093P5	12981
12	5.5	11	11	11	Q8 D123P5	12982
18	7.5	15	15	18.5	Q8 D183P5	12983
25	11	18.5	18.5	22	Q8 D253P5	12984
32	15	25	25	30	Q8 D323P5	12985
40	18.5	33	33	37	Q8 D403P5	12986
50	25	45	45	59	Q8 D503P5	12987
65	30	55	55	59	Q8 D653P5	12988
80	37	63	63	75	Q8 D803P5	12989
95	45	80	80	80	Q8 D953P5	12990

230 V 50 Hz
Please contact us for other coil voltage



Outline and installation dimensions

Model	A	B	C	E	F
3SQ8-09-18	135	124	153	90±0.5	22
3SQ8-25-32	166	124	185	90±0.5	35
3SQ8-40-65	285	143	178	267±1.0	50
3SQ8-80-95	315	143	187	297±1.0	80

unit in mm

3SQ8-09-32

3SQ8-40-85

2x6x11

4x7x12

4xØ7

Motor Protection Circuit Breakers Series 3SM18

Applications and functions

- Providing motor overload protection and short-circuit protection.

Instruction of type code

M18 2 M 0.16

3

Max. setting current range

0.1-0.16 0.16-0.25

0.25-0.4 0.4-0.63

0.63-1 1-1.6

1.6-2.5 2.5-4

4-6.3 6-10

9-14 13-18

17-23 20-25

24-32 25-40

40-63 56-80

Pushbutton type

Frame code

2: 0.16~32A

3: 40~80A

Series code



Motor Protection Circuit Breakers

Series 3SM18

Technical specifications


Type	3SM18-25~32																	3SM18-63~80			
Standards	IEC 60947-2, IEC 60947-4-1																				
Utilization according to IEC 60947-2 category	A																				
Utilization according to IEC 60947-4-1 category	AC-3																				
Rated insulation voltage U_i (V)	690																				
Rated operational voltage U_e (V)	230/240, 400/415, 440, 500, 660/690																				
Rated impulse withstand voltage U_{imp} (kA)	8																				
Rated range of setting current (A)	0.1-0.16	0.16-0.25	0.25-0.4	0.4-0.63	0.63-1	1-1.6	1.6-2.5	2.5-4	4-6.3	6-10	9-14	13-18	17-23	20-25	24-32	25-40	40-63	56-80			
Rated current of release (A)	0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	10	14	18	23	25	32	40	63	80			
Rated frequency (Hz)	50/60																				
Rated ultimate short-circuit breaking capacity I_{cu} (kA)	230/240 V	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Rated service short-circuit breaking capacity I_{cs} (kA)	400/415 V	100	100	100	100	100	100	100	100	100	100	15	15	15	15	35	35	35	35		
	440 V	100	100	100	100	100	100	100	100	100	100	8	8	6	6	-	25	25	25		
	500 V	100	100	100	100	100	100	100	100	100	100	6	6	4	4	-	8	8	8		
Rated service short-circuit breaking capacity I_{cs} (kA)	660/690 V	100	100	100	100	100	100	3	3	3	3	3	3	3	3	-	4	4	4		
	230/240 V	100	100	100	100	100	100	100	100	100	100	100	100	50	50	75	75	75	75		
	400/415 V	100	100	100	100	100	100	100	100	100	100	7.5	6	7.5	6	17.5	17.5	17.5	17.5		
	440 V	100	100	100	100	100	100	100	100	100	100	4	4	3	3	-	12.5	12.5	12.5		
	500 V	100	100	100	100	100	100	100	100	100	100	4.5	4.5	3	3	-	4	4	4		
	660/690 V	100	100	100	100	100	100	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	-	2	2	2		
Arcing distance (mm)	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	50	50	50	50		
Standard rated power of three-phase (kW)	230/240 V	-	-	-	-	-	-	0.37	0.75	1.1	2.2	3	4	5.5	5.5	5.5	11	15	22		
	400 V	-	-	-	-	-	-	0.37	0.75	1.1	2.2	4	5.5	7.5	11	11	11	18.5	30		
	440 V	-	-	-	-	-	-	0.37	0.75	1.1	2.2	4	5.5	9	11	11	11	22	33		
	500 V	-	-	-	-	-	-	0.37	0.75	1.1	2.2	3.7	5.5	7.5	9	11	11	25	40		
	660/690 V	-	-	-	0.37	0.55	1.1	1.5	3	4	7.5	9	11	15	15	-	33	55	63		
Current setting value of instantaneous electromagnetic release I_r (A)	1.5	2.4	5	8	13	22.5	33.5	51	78	138	170	223	327	327	327	480	756	960			
Current rating off use-link of back-up fuse, which is only needed in case of $I_{cc} > I_{cu}$ (lcc: prospective short-circuit breaking current)	230/240 V	aM A	●	●	●	●	●	●	●	●	●	●	●	●	●	80	80	●	●		
	400/415 V	gl/gG A	●	●	●	●	●	●	●	●	●	●	●	●	●	100	100	●	●		
	440 V	aM A	●	●	●	●	●	●	●	●	●	63	63	63	63	●	250	315	315		
	500 V	gl/gG A	●	●	●	●	●	●	●	●	●	63	63	63	63	63	63	63	63		
	500 V	aM A	●	●	●	●	●	●	●	●	●	50	50	50	50	50	50	50	50		
	500 V	gl/gG A	●	●	●	●	●	●	●	●	●	63	63	63	63	63	63	63	63		
● Fuse is not required	500 V	aM A	●	●	●	●	●	●	●	16	25	32	32	40	40	40	40	40	40		
	500 V	gl/gG A	●	●	●	●	●	●	●	20	32	40	40	50	50	50	50	50	50		
Add-on auxiliary contact blocks	Top	1NO+1NC, 2NO																			
	Side	1NO+1NC, 2NO																			
	Shunt release	●																			
	Under voltage release	●																			
	Auxiliary alarm	1NO+1NO, 1NO+1NC, 1NC+1NO, 1NC+1NC																			
	Enclosure	●																			
Electrical life in AC-3 (times)	10000																				
Mechanical life (times)	20000																				
Tightening torque (N·m)	1.7																				
Degree of protection	IP20; IP65 with enclosure																				
Ambient air temperature (°C)	-5 to +40, max. 95 % humidity																				
Storage temperature (°C)	-40~+75																				
Maximum operating altitude (meters)	2000																				

Motor Protection Circuit Breakers


Series 3SM18

Selection and ordering data


3SM18

	Setting range of thermal trips (A)	Rated current of release (A)		
			Type code	Order code
	0.1-0.16	0.16	M18 2M0.16	12730
	0.16-0.25	0.25	M18 2M0.25	12731
	0.25-0.4	0.4	M18 2M0.4	12732
	0.4-0.63	0.63	M18 2M0.63	12733
	0.63-1	1	M18 2M1.0	12734
	1-1.6	1.6	M18 2M1.6	12735
	1.6-2.5	2.5	M18 2M2.5	12736
	2.5-4	4	M18 2M4.0	12737
	4-6.3	6.3	M18 2M6.3	12738
	6-10	10	M18 2M10	12739
	9-14	14	M18 2M14	12740
	13-18	18	M18 2M18	12741
	17-23	23	M18 2M23	12742
	20-25	25	M18 2M25	12743
	24-32	32	M18 2M32	12744
	25-40	40	M18 3/40	12767
	40-63	63	M18 3/63	12768
56-80	80	M18 3/80	12769	


3SM18 with enclosure

	Setting range of thermal trips (A)	Rated current of release (A)		
			Type code	Order code
	0.1-0.16	0.16	M18 4M0.16	12770
	0.16-0.25	0.25	M18 4M0.25	12771
	0.25-0.4	0.4	M18 4M0.4	12772
	0.4-0.63	0.63	M18 4M0.63	12773
	0.63-1	1	M18 4M1.0	12774
	1-1.6	1.6	M18 4M1.6	12775
	1.6-2.5	2.5	M18 4M2.5	12776
	2.5-4	4	M18 4M4.0	12777
	4-6.3	6.3	M18 4M6.3	12778
	6-10	10	M18 4M10	12779
	9-14	14	M18 4M14	12780
	13-18	18	M18 4M18	12781
	17-23	23	M18 4M23	12782
	20-25	25	M18 4M25	12783
24-32	32	M18 4M32	12784	

3SM18-2-AV Under-voltage release

	Rated operational voltage U_e (V)	Voltage range of operation	Frequency (HZ)		
				Type code	Order code
	110-127	35%-70% U_e	50/60	AU115	12790
	220-240	35%-70% U_e	50/60	AU225	12791
	380-415	35%-70% U_e	50/60	AU385	12792

3SM18-2-AS Shunt release

	Rated operational voltage U_e (V)	Voltage range of operation	Frequency (HZ)		
				Type code	Order code
	110-127	70%-110% U_e	50/60	AS115	12793
	220-240	70%-110% U_e	50/60	AS225	12794
	380-415	70%-110% U_e	50/60	AS385	12795

Motor Protection Circuit Breakers Series 3SM18

Selection and ordering data

3SM18-2-AN11 Auxiliary contact



Mounting type	Contact position	Conventional thermal current I _{th} (A)	Type code	Order code
			AE11	12786
Top	1NO+1NC	2.5	AE20	12787
Top	2NO	2.5	AN11	12788
Side	1NO+1NC	6	AN20	12789
Side	2NO	6		

3SM18-2-AD Auxiliary Alarm



Contact position	Conventional thermal current I _{th} (A)	Type code	Order code
		AD1010	12796
1NO+1NO	6	AD1001	12797
1NO+1NC	6	AD0110	12798
1NC+1NO	6	AD0101	12799
1NC+1NC	6		

Enclosure

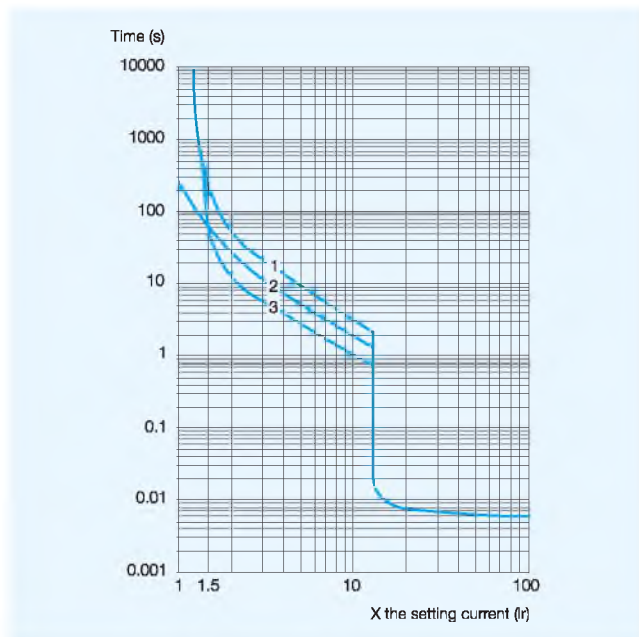


Type	Type code	Order code
3SM18-2B	M18 2B	12785

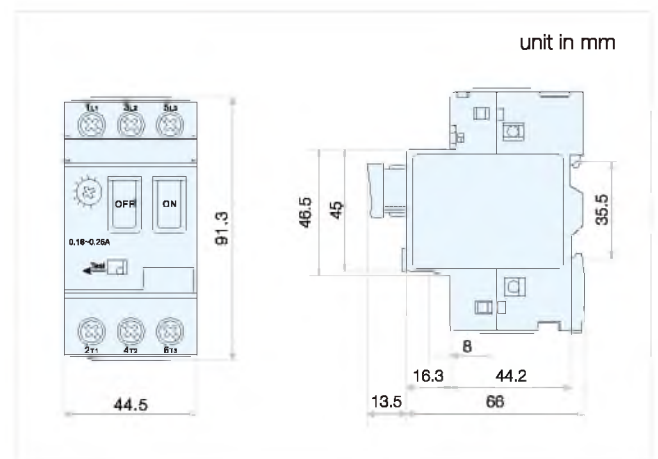
Tripping Curve

Average operating times at 20 °C related to multiples of the setting current

1: 3 poles from cold state; 2: 2 poles from cold state; 3: 3 poles from hot state



Outline and installation dimensions



Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
10057	C8 P0910BD	3-24	12776	M18 4M2.5	3-36	14828	R7 59/0.16	3-28
10058	C8 P0901BD	3-24	12777	M18 4M4	3-36	14829	R7 59/0.25	3-28
10059	C8 P1210BD	3-24	12778	M18 4M6.3	3-36	14830	R7 59/0.4	3-28
10060	C8 P1201BD	3-24	12779	M18 4M10	3-36	14831	R7 59/0.63	3-28
10061	C8 P1810BD	3-24	12780	M18 4M14	3-36	14832	R7 59/1	3-28
10062	C8 P1801BD	3-24	12781	M18 4M18	3-36	14833	R7 59/1.25	3-28
10063	C8 P2510BD	3-24	12782	M18 4M23	3-36	14834	R7 59/1.6	3-28
10064	C8 P2501BD	3-24	12783	M18 4M25	3-36	14835	R7 59/2	3-28
10065	C8 P3210BD	3-24	12784	M18 4M32	3-36	14836	R7 59/2.5	3-28
10066	C8 P3201BD	3-24	12785	M18 2B	3-37	14837	R7 59/3.2	3-28
10067	C8 P4011BD	3-24	12786	AE11	3-37	14838	R7 59/4	3-28
10068	C8 P5011BD	3-24	12787	AE20	3-37	14839	R7 59/5	3-28
10069	C8 P6511BD	3-24	12788	AN11	3-37	14840	R7 59/6.3	3-28
10070	C8 P8011BD	3-24	12789	AN20	3-37	14841	R7 59/8	3-28
10071	C8 P9511BD	3-24	12790	AU115	3-36	14842	R7 59/10	3-28
11373	C8 K0601P5	3-4	12791	AU225	3-36	14843	R7 59/12.5	3-28
11374	C8 K0610P5	3-4	12792	AU385	3-36	14844	R7 59/16	3-28
11375	C8 K06004P5	3-4	12793	AS115	3-36	14845	R7 59/20	3-28
11376	C8 K06008P5	3-4	12794	AS225	3-36	14846	R7 59/25	3-28
11377	C8 K0901P5	3-4	12795	AS385	3-36	14847	R7 59/32	3-28
11378	C8 K0910P5	3-4	12796	AD1010	3-37	14848	R7 59/40	3-28
11379	C8 K09004P5	3-4	12797	AD1001	3-37	14849	R7 59/45	3-28
11380	C8 K09008P5	3-4	12798	AD0110	3-37	14850	R7 59/57	3-28
11381	C8 K1201P5	3-4	12799	AD0101	3-37	14851	R7 59/63	3-28
11382	C8 K1210P5	3-4	12981	Q8 D093P5	3-33	14852	R7 62/80	3-28
11383	C8 K12004P5	3-4	12982	Q8 D123P5	3-33	14853	R7 62/90	3-28
11384	C8 K12008P5	3-4	12983	Q8 D183P5	3-33	14854	R7 62/110	3-28
12093	C8 F115P5	3-18	12984	Q8 D253P5	3-33	14855	R7 62/120	3-28
12094	C8 F150P5	3-18	12985	Q8 D323P5	3-33	14856	R7 62/135	3-28
12095	C8 F185P5	3-18	12986	Q8 D403P5	3-33	14857	R7 62/150	3-28
12096	C8 F225P5	3-18	12987	Q8 D503P5	3-33	14858	R7 62/160	3-28
12097	C8 F265P5	3-18	12988	Q8 D653P5	3-33	14859	R7 62/180	3-28
12098	C8 F330P5	3-18	12989	Q8 D803P5	3-33	15576	C8 KN0601P5	3-4
12099	C8 F400P5	3-18	12990	Q8 D953P5	3-33	15577	C8 KN0901P5	3-4
12100	C8 F500P5	3-18	14101	C8X-D2NB7	3-10	15578	C8 KN1201P5	3-4
12101	C8 F630P5	3-18	14102	C8X-D2NE7	3-10	15594	R8K 0301/5	3-4
12102	C8 F780P5	3-18	14103	C8X-D2NF7	3-10	15595	R8K 0302/5	3-4
12103	C8 F1154P5	3-18	14104	C8X-D2NFC7	3-10	15596	R8K 0303/5	3-4
12104	C8 F1504P5	3-18	14105	C8X-D2NM7	3-10	15597	R8K 0304/5	3-4
12105	C8 F1854P5	3-18	14106	C8X-D2NP7	3-10	15598	R8K 0305/5	3-4
12106	C8 F2254P5	3-18	14107	C8X-D2NU7	3-10	15599	R8K 0306/5	3-4
12107	C8 F2654P5	3-18	14108	C8X-D2NQ7	3-10	15600	R8K 0308/5	3-4
12108	C8 F3304P5	3-18	14109	C8X-D2NV7	3-10	15601	R8K 0310/5	3-4
12109	C8 F4004P5	3-18	14110	C8X-D2NR7	3-10	15602	R8K 0312/5	3-4
12110	C8 F5004P5	3-18	14111	C8X-D4NB7	3-10	15603	R8K 0314/5	3-4
12111	C8 F6304P5	3-18	14112	C8X-D4NE7	3-10	15604	R8K 0316/5	3-4
12112	C8 F7804P5	3-18	14113	C8X-D4NF7	3-10	15605	R8K 0321/5	3-4
12730	M18 2M0.16	3-36	14114	C8X-D4NFC7	3-10	15697	C8 KN0610P5	3-4
12731	M18 2M0.25	3-36	14115	C8X-D4NM7	3-10	15698	C8 KN0910P5	3-4
12732	M18 2M0.4	3-36	14116	C8X-D4NP7	3-10	15699	C8 KN1210P5	3-4
12733	M18 2M0.63	3-36	14117	C8X-D4NU7	3-10	15703	C8 KN06004P5	3-4
12734	M18 2M1	3-36	14118	C8X-D4NQ7	3-10	15704	C8 KN09004P5	3-4
12735	M18 2M1.6	3-36	14119	C8X-D4NV7	3-10	15705	C8 KN12004P5	3-4
12736	M18 2M2.5	3-36	14120	C8X-D4NR7	3-10	15710	R8 F53/50	3-19
12737	M18 2M4	3-36	14810	C7 F4022P5	3-26	15711	R8 F53/80	3-19
12738	M18 2M6.3	3-36	14811	C7 F4122P5	3-26	15712	R8 F53/100	3-19
12739	M18 2M10	3-36	14812	C7 F4222P5	3-26	15713	R8 F53/150	3-19
12740	M18 2M14	3-36	14813	C7 F4322P5	3-26	15714	R8 F53/220	3-19
12741	M18 2M18	3-36	14814	C7 F4422P5	3-26	15715	R8 F73/330	3-19
12742	M18 2M23	3-36	14815	C7 F4522P5	3-26	15716	R8 F73/500	3-19
12743	M18 2M25	3-36	14816	C7 F4622P5	3-26	15717	R8 F73/630	3-19
12744	M18 2M32	3-36	14817	C7 F4722P5	3-26	15718	C8 FN115P5	3-18
12767	M18 3/40	3-36	14818	C7 F4822P5	3-26	15719	C8 FN1154P5	3-18
12768	M18 3/63	3-36	14819	C7 F4922P5	3-26	15720	C8 FN150P5	3-18
12769	M18 3/80	3-36	14820	C7 F5022P5	3-26	15721	C8 FN1504P5	3-18
12770	M18 4M0.16	3-36	14821	C7 F5122P5	3-26	15722	C8 FN185P5	3-18
12771	M18 4M0.25	3-36	14822	C7 F5222P5	3-26	15723	C8 FN1854P5	3-18
12772	M18 4M0.4	3-36	14823	C7 F5322P5	3-26	15724	C8 FN225P5	3-18
12773	M18 4M0.63	3-36	14824	C7 F5422P5	3-26	15725	C8 FN2254P5	3-18
12774	M18 4M1	3-36	14825	C7 F5522P5	3-26	15726	C8 FN265P5	3-18
12775	M18 4M1.6	3-36	14826	C7 F5622P5	3-26	15727	C8 FN2654P5	3-18

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
15728	C8 FN330P5	3-18	16116	R7 52/2	3-27	25610	Q1 32P5	3-31
15729	C8 FN3304P5	3-18	16117	R7 52/2.5	3-27	25611	Q1 40P5	3-31
15730	C8 FN400P5	3-18	16118	R7 52/3.2	3-27	25612	Q1 50P5	3-31
15731	C8 FN4004P5	3-18	16119	R7 52/4	3-27	25613	Q1 65P5	3-31
15732	C8 FN500P5	3-18	16120	R7 52/5	3-27	25614	Q1 80P5	3-31
15733	C8 FN5004P5	3-18	16121	R7 52/6.3	3-27	25615	Q1 95P5	3-31
15734	C8 FN630P5	3-18	16122	R7 52/8	3-27	25686	C19 9521 P5	3-30
15735	C8 FN6304P5	3-18	16123	R7 52/10	3-27	27278	C8X-D2V7	3-10
15736	C8 FN780P5	3-18	16124	R7 52/12.5	3-27	27279	C8X-D4V7	3-10
15737	C8 FN7804P5	3-18	16125	R7 52/16	3-27	27280	C8X-D6V7	3-10
15776	C7 FN4022P5	3-26	16126	R7 52/20	3-27	27308	C19 2511 P5	3-30
15777	C7 FN4122P5	3-26	16127	R7 52/25	3-27	27309	C19 2502 P5	3-30
15778	C7 FN4222P5	3-26	16128	R7 54/6.3	3-27	27310	C19 2520 P5	3-30
15779	C7 FN4322P5	3-26	16129	R7 54/10	3-27	27311	C19 3211 P5	3-30
15780	C7 FN4422P5	3-26	16130	R7 54/16	3-27	27312	C19 3202 P5	3-30
15781	C7 FN4522P5	3-26	16131	R7 54/20	3-27	27313	C19 3220 P5	3-30
15782	C7 FN4622P5	3-26	16132	R7 54/25	3-27	27314	C19 4311 P5	3-30
15783	C7 FN4722P5	3-26	16133	R7 54/32	3-27	27315	C19 4302 P5	3-30
15784	C7 FN4822P5	3-26	16134	R7 58/25	3-27	27316	C19 4320 P5	3-30
15785	C7 FN4922P5	3-26	16135	R7 58/32	3-27	27317	C19 5012 P5	3-30
15786	C7 FN5022P5	3-26	16136	R7 58/40	3-27	27318	C19 5021 P5	3-30
15787	C7 FN5122P5	3-26	16137	R7 58/50	3-27	27319	C19 6312 P5	3-30
15788	C7 FN5222P5	3-26	16138	R7 58/57	3-27	27320	C19 6321 P5	3-30
15789	C7 FN5322P5	3-26	16139	R7 58/63	3-27	27321	C19 8012 P5	3-30
15790	C7 FN5422P5	3-26	16140	R7 58/70	3-27	27322	C19 8021 P5	3-30
15791	C7 FN5522P5	3-26	16141	R7 58/80	3-27	27323	C19 12512 P5	3-30
15792	C7 FN5622P5	3-26	16142	R7 66/125	3-28	27324	C19 12521 P5	3-30
15793	C7 FN5722P5	3-26	16143	R7 66/200	3-28	27431	C8N 0901P7	3-9
15912	C7 F6822P5	3-26	16144	R7 66/250	3-28	27432	C8N 0910P7	3-9
15913	C8 DN09P5	3-9	16145	R7 66/320	3-28	27433	C8N 0911P7	3-9
15914	C8 DN12P5	3-9	16146	R7 66/400	3-28	27434	C8N 1201P7	3-9
15915	C8 DN18P5	3-9	16147	R7 68/500	3-28	27435	C8N 1210P7	3-9
15916	C8 DN25P5	3-9	16148	R7 68/630	3-28	27436	C8N 1211P7	3-9
15917	C8 DN32P5	3-9	17359	C8X-D2B7	3-10	27437	C8N 1801P7	3-9
15918	C8 DN40P5	3-9	17360	C8X-D4B7	3-10	27438	C8N 1810P7	3-9
15919	C8 DN50P5	3-9	17361	C8X-D6B7	3-10	27439	C8N 1811P7	3-9
15920	C8 DN65P5	3-9	17362	C8X-D2M7	3-10	27440	C8N 2501P7	3-9
15921	C8 DN80P5	3-9	17363	C8X-D4M7	3-10	27441	C8N 2510P7	3-9
15922	C8 DN95P5	3-9	17364	C8X-D6M7	3-10	27442	C8N 2511P7	3-9
15966	C7 B4022P5	3-25	22875	R8 25/0.16	3-12	27443	C8N 3201P7	3-9
15967	C7 B4122P5	3-25	22876	R8 25/0.25	3-12	27444	C8N 3210P7	3-9
15968	C7 B4222P5	3-25	22877	R8 25/0.4	3-12	27445	C8N 3211P7	3-9
15969	C7 B4322P5	3-25	22878	R8 25/0.63	3-12	27446	C8N 4011P7	3-9
15970	C7 B4422P5	3-25	22879	R8 25/1.0	3-12	27447	C8N 5011P7	3-9
15971	C8 A7D1064	3-12	22880	R8 25/1.6	3-12	27448	C8N 6511P7	3-9
15972	C8 A7D2064	3-12	22881	R8 25/2	3-12	27449	C8N 8011P7	3-9
15973	C8 A7D3064	3-12	22882	R8 25/2.5	3-12	27450	C8N 9511P7	3-9
16092	R7 50/0.16	3-27	22883	R8 25/4	3-12	27451	C8N 09004P7	3-9
16093	R7 50/0.25	3-27	22884	R8 25/6	3-12	27452	C8N 09008P7	3-9
16094	R7 50/0.4	3-27	22885	R8 25/8	3-12	27453	C8N 12004P7	3-9
16095	R7 50/0.63	3-27	22886	R8 25/10	3-12	27454	C8N 12008P7	3-9
16096	R7 50/1	3-27	22887	R8 25/13	3-12	27455	C8N 25004P7	3-9
16097	R7 50/1.25	3-27	22888	R8 25/18	3-12	27456	C8N 25008P7	3-9
16098	R7 50/1.6	3-27	22889	R8 25/25	3-12	27457	C8N 40004P7	3-9
16099	R7 50/2	3-27	22890	R8 36/32	3-12	27458	C8N 40008P7	3-9
16100	R7 50/2.5	3-27	22891	R8 36/36	3-12	27459	C8N 50004P7	3-9
16101	R7 50/3.2	3-27	22892	R8 93/32	3-12	27460	C8N 50008P7	3-9
16102	R7 50/4	3-27	22893	R8 93/40	3-12	27461	C8N 65004P7	3-9
16103	R7 50/5	3-27	22894	R8 93/50	3-12	27462	C8N 65008P7	3-9
16104	R7 50/6.3	3-27	22895	R8 93/65	3-12	27463	C8N 80004P7	3-9
16105	R7 50/8	3-27	22896	R8 93/70	3-12	27464	C8N 80008P7	3-9
16106	R7 50/10	3-27	22897	R8 93/80	3-12	27465	C8N 95004P7	3-9
16107	R7 50/12.5	3-27	22898	R8 93/93	3-12	27466	C8N 95008P7	3-9
16108	R7 50/14.5	3-27	25323	C8X-D2E7	3-10	29578	C8 A1/02	3-11
16109	R7 52/0.16	3-27	25324	C8X-D4E7	3-10	29579	C8 A1/11	3-11
16110	R7 52/0.25	3-27	25325	C8X-D6E7	3-10	29580	C8 A1/20	3-11
16111	R7 52/0.4	3-27	25496	C19 9512 P5	3-30	29581	C8 A1/04	3-11
16112	R7 52/0.63	3-27	25606	Q1 09P5	3-31	29582	C8 A1/13	3-11
16113	R7 52/1	3-27	25607	Q1 12P5	3-31	29583	C8 A1/22	3-11
16114	R7 52/1.25	3-27	25608	Q1 18P5	3-31	29584	C8 A1/31	3-11
16115	R7 52/1.6	3-27	25609	Q1 25P5	3-31	29585	C8 A1/40	3-11

Index / Order Code

Order code	Type code	Page
29586	C8 A1C	3-11
29587	C8 A1D/10	3-11
29588	C8 A1D/01	3-11
29589	C8 A2/T0	3-11
29590	C8 A2/T2	3-11
29591	C8 A2/T4	3-11
29592	C8 A2/R0	3-11
29593	C8 A2/R2	3-11
29594	C8 A2/R4	3-11
29595	3SC8-A4X	3-11
29596	3SC8-A4D	3-11
32002	C8X-FFP7	3-19
32003	C8X-FFU7	3-19
32004	C8X-FFQ7	3-19
32006	C8X-FFR7	3-19
32008	C8X-FGP7	3-19
32009	C8X-FGU7	3-19
32010	C8X-FGQ7	3-19
32012	C8X-FGR7	3-19
32014	C8X-FHP7	3-19
32015	C8X-FHU7	3-19
32016	C8X-FHQ7	3-19
32018	C8X-FHR7	3-19
32020	C8X-FJP7	3-19
32021	C8X-FJU7	3-19
32022	C8X-FJQ7	3-19
32024	C8X-FJR7	3-19
32026	C8X-FKP7	3-19
32027	C8X-FKU7	3-19
32028	C8X-FKQ7	3-19
32030	C8X-FKR7	3-19
32032	C8X-FLP7	3-19
32033	C8X-FLU7	3-19
32034	C8X-FLQ7	3-19
32036	C8X-FLR7	3-19
32038	C8X-FXP7	3-19
32039	C8X-FXU7	3-19
32040	C8X-FXQ7	3-19
32042	C8X-FXR7	3-19
32043	C8X-D2F7	3-10
32044	C8X-D4F7	3-10
32045	C8X-D6F7	3-10
32046	C8X-D2FC7	3-10
32047	C8X-D4FC7	3-10
32048	C8X-D6FC7	3-10
32049	C8X-D2P7	3-10
32050	C8X-D4P7	3-10
32051	C8X-D6P7	3-10
32052	C8X-D2U7	3-10
32053	C8X-D4U7	3-10
32054	C8X-D6U7	3-10
32055	C8X-D2Q7	3-10
32056	C8X-D4Q7	3-10
32057	C8X-D6Q7	3-10
32058	C8X-D2R7	3-10
32059	C8X-D4R7	3-10
32060	C8X-D6R7	3-10
33032	C8 A1/KN02	3-3
33033	C8 A1/KN11	3-3
33034	C8 A1/KN20	3-3
33035	C8 A1/KN04	3-3
33036	C8 A1/KN13	3-3
33037	C8 A1/KN22	3-3
33038	C8 A1/KN31	3-3
33039	C8 A1/KN40	3-3

SASSIN

Switches and Relay



Catalog classification

V 26.1 Power Distribution Electrics

- Air Circuit Breakers
- Moulded Case Circuit Breakers
- Automatic Transfer Switches
- Load Break Switches
- Fuse Combination Switches
- Low Voltage Fuses
- Fuse Disconnecter Switches



V 26.2 Modular DIN-rail Devices

- Miniature Circuit Breakers
- RCCBs
- RCD Blocks
- RCBOs
- Main Switches
- Additional Components
- Time Switches
- Push Buttons and Indicator Lamps
- Surge Protective Devices
- Distribution Boxes
- Mini Contactors
- Fuse Holders
- Accessories



V 26.3 Industry Control Electrics

- Contactors & Thermal Relays
- DC Operated AC Contactors
- Soft Starters
- Capacitor Switching Contactors
- DOL Starters
- Motor Protection Circuit Breakers
- Inverters



V 26.4 Switches and Relays

- Pushbutton Switches
- Indicators
- Control Stations
- Pushbutton Switch Boxes
- Micro Switches
- Rotary Change-over Cam Switches
- Limit Switches
- Toggle Switches
- Time Relays



V 26.5 Power Sources

- Automatic Voltage Stabilizers
- Voltage Regulators
- Compensated Voltage Stabilizers
- Pure Sine Wave Inverters
- Back Up UPS
- Switching Power Supplies
- Control Transformers



V 26.6 Meters & Electrical Accessories

- Electronic Kilowatt Hour Meters
- Power Capacitors
- Analogue Panel Meters
- Digital Panel Meters
- Current Transformers
- Metal Boxes
- Terminal Blocks
- PC Plug Socket Couplings
- Electric Bell & Buzzers



Catalog CD

All products in these catalogs listed above are available in CD.



Catalog PDF

All catalogs can be downloaded as PDF files from SASSIN website.



Switches and Relay

Pushbutton Switches

- P 1-4 3SA8 series pushbuttons
- P 5-6 3SA5 series pushbuttons
- P 7-11 AD22 series indicators
- P 12-13 3SA10 series control stations
- P 14-15 3SP series control stations
- P 16 Enclosures

Switches

- P 17-19 3SLW28 series rotary change-over cam switches
- P 20-23 3SD11 series rotary change-over cam switches
- P 24 LXW5 series micro switches
- P 25 AZ series micro switches
- P 26 3SX5-M series limit switches
- P 27 3SX5-ME series limit switches
- P 28 3SX5-WL series limit switches
- P 29 3SY series float switches
- P 30 Toggle switches
- P 31 Pedal switches

Relays

- P 32 **Voltage protection relays**
- P 32-38 3SRV1 series
- P 39-42 3SRV5 series
- P 43-44 3SRA1 series motor protectors
- P 45-47 **Multi range time relays**
- P 48-51 **Power relays**
- P 52-54 **Relay sockets**

- P 55-60 **Index order code**



Technical specifications

Standard: IEC 60947-5-1

Rated insulation voltage U_i (V): 400

Conventional thermal current I_{th} (A): 10

Rated operational voltage U_e (V): 110, 230, 400

Rated operational current I_e (A):

● In AC-15: 2.5 for 400 V, 4.5 for 230 V

● In DC-13: 0.3 for 230 V, 0.6 for 110 V

Rated frequency (Hz): 50~60

Electrical life (10^5 times): 50 for flush-headed and mushroom-head type

10 for other types

Mechanical life (10^5 times): 10 for flush-headed and mushroom-head type

3 for button with light

1 for other types

Degree of protection: IP40

Pollution degree: 3

Overvoltage category: II

Ambient temperature (°C): -5 to +40, max. 95 % humidity


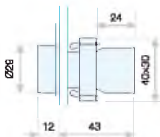

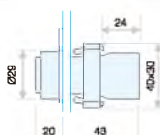

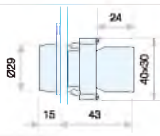
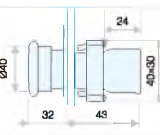
Storage temperature (°C): -30 ~+65

Maximum operating altitude (meters): 2000

3SA8 Series, metal

Selection and ordering data

Spring return pushbuttons, without symbol







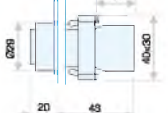

Description	Color	Contact position	Type code		Overall dimensions
			Type code	Order code	
pushbuttons with flush button					
	○ White	N/O	3SA8-BA11	34894	
	● Black	N/O	3SA8-BA21	34895	
	● Green	N/O	3SA8-BA31	34896	
	● Yellow	N/O	3SA8-BA51	34897	
	● Blue	N/O	3SA8-BA61	34898	
	● Black	N/C	3SA8-BA22	34899	
	● Red	N/C	3SA8-BA42	34900	
Pushbuttons with projecting button					
	● Black	N/O	3SA8-BL21	24805	
	● Green	N/O	3SA8-BL31	24806	
	● Yellow	N/O	3SA8-BL51	24807	
	● Blue	N/O	3SA8-BL61	24808	
	● Black	N/C	3SA8-BL22	24809	
	● Red	N/C	3SA8-BL42	24810	
	Pushbuttons with booted button				
	● Black	N/O	3SA8-BP21	24811	
	● Green	N/O	3SA8-BP31	24812	
	● Yellow	N/O	3SA8-BP51	24813	
	● Blue	N/O	3SA8-BP61	24814	
	● Red	N/C	3SA8-BP42	24815	
	Mushroom buttons				
Ø40mm	● Black	N/O	3SA8-BC21	24816	
	● Green	N/O	3SA8-BC31	24817	
	● Yellow	N/O	3SA8-BC51	24818	
	● Blue	N/O	3SA8-BC61	24819	
	● Red	N/C	3SA8-BC42	24820	
	Ø60mm	● Black	N/O	3SA8-BR21	
● Red		N/C	3SA8-BR42	24822	

Pushbutton Switches



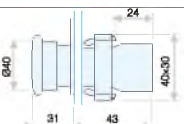


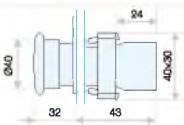


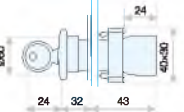
3SA8 Series, metal

Selection and ordering data


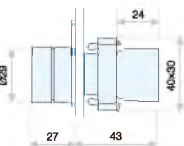



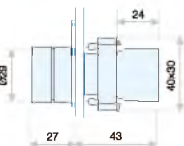










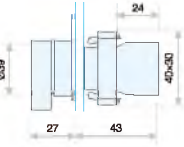

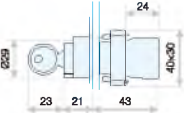







Spring return pushbuttons, with symbol

Description	Color	Contact position		Type code	Order code	Overall dimensions	
 Pushbuttons with flush button		N/O		3SA8-BA3311	24823		
		N/O		3SA8-BA3341	24824		
		N/O		3SA8-BA3351	24825		
			N/C		3SA8-BA4322		24826
			N/C		3SA8-BA4342		24827
 Pushbuttons with projecting button			N/C	3SA8-BL4322	24828		
			N/C	3SA8-BL4342	24829		

EMERGENCY STOP mushroom pushbuttons

Color	Diameter	Contact position		Type code	Order code	Overall dimensions
 EMERGENCY STOP mushroom pushbuttons, pull to release		Ø40	N/C	3SA8-BT42	24830	
		Ø60	N/C	3SA8-BX42	24831	
 EMERGENCY STOP mushroom pushbuttons, rotate to release		Ø30	N/C	3SA8-BS442	24832	
		Ø40	N/C	3SA8-BS542	24833	
		Ø60	N/C	3SA8-BS642	24834	
 EMERGENCY STOP mushroom pushbuttons, turn key to release		Ø40	N/C	3SA8-BS142	24836	
		Ø60	N/C	3SA8-BS242	24837	

Selector switches



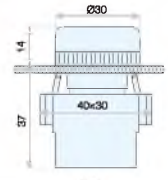
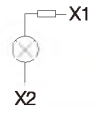

Description	Position	Contact position		Type code	Order code	Overall dimensions	
Locked							
spring reset							
Selector switches with standard handle							
 2positions		N/O		3SA8-BD21	24838		
		N/O	N/C	3SA8-BD25	24839		
		N/O	N/C	3SA8-BD41	24840		
		N/O	N/C	3SA8-BD45	24841		
		2N/O		3SA8-BD33	24842		
 3 positions		2N/O		3SA8-BD53	24843		
		2N/O		3SA8-BD73	24844		
		2N/O					
 Selector switches with long handle		N/O		3SA8-BJ21	24846		
		N/O	N/C	3SA8-BJ25	24847		
		N/O	N/C	3SA8-BJ41	24848		
		N/O	N/C	3SA8-BJ45	24849		
		2N/O		3SA8-BJ33	24850		
		2N/O		3SA8-BJ53	24851		
 Key-operated switches		2N/O		3SA8-BJ73	24852		
	2positions		N/O		3SA8-BG21		24854
			N/O	N/C	3SA8-BG25		24855
			N/O	N/C	3SA8-BG41		24856
			N/O	N/C	3SA8-BG45		24857
	Ronis n°455		N/O		3SA8-BG61		24858
	Key switch n°455		N/O	N/C	3SA8-BG65		24859
 3 positions		2N/O		3SA8-BG33	24860		
		2N/O		3SA8-BG53	24861		
		2N/O		3SA8-BG03	24862		
		2N/O		3SA8-BG73	24863		

Pushbutton Switches

3SA8 Series, metal

Selection and ordering data

Pilot light with BA9s lampholder

Rated Voltage	Circuit	Color	Type code Order code		Overall dimensions
			Type code	Order code	
 Direct bulb BA9S ≤380 V 50/60 Hz	 X1 X2	○ White	3SA8-BV61	24864	
		● Green	3SA8-BV63	24865	
		● Red	3SA8-BV64	24866	
		● Yellow	3SA8-BV65	24867	
		● Blue	3SA8-BV66	24868	
		Via integral resistor bulb BA9S 220/240 V 50/60 Hz	 X1 X2	○ White	
● Green	3SA8-BV73	24870			
● Red	3SA8-BV74	24871			
● Yellow	3SA8-BV75	24872			
● Blue	3SA8-BV76	24873			
Via integral transformer 1.2VA BA 9s,6V bulb supplied 110/127 V 50/60 Hz	 X1 X2	○ White		3SA8-BV31	24874
● Green		3SA8-BV33	24875		
● Red		3SA8-BV34	24876		
● Yellow		3SA8-BV35	24877		
● Blue		3SA8-BV36	24878		
220 /240 V 50/60 Hz			○ White	3SA8-BV41	24879
		● Green	3SA8-BV43	24880	
		● Red	3SA8-BV44	24881	
		● Yellow	3SA8-BV45	24882	
		● Blue	3SA8-BV46	24883	
380/415 V 50/60 Hz		● Green	3SA8-BV53	24889	
		● Red	3SA8-BV54	24890	
		● Yellow	3SA8-BV55	24891	
		● Green	3SA8-BV933	24892	
		● Red	3SA8-BV934	24893	
		● Yellow	3SA8-BV935	24894	


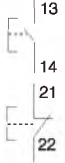

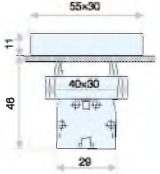



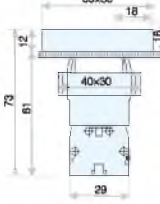

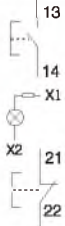

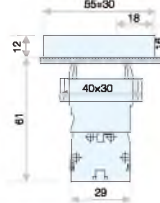

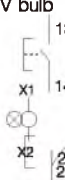

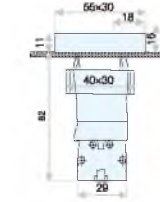
LED bulbs are available, please contact us if you need.

Pushbutton Switches


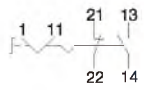
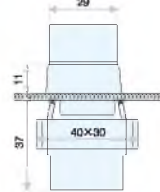
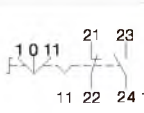
3SA8 Series, metal

Selection and ordering data

Double-headed pushbuttons, spring return, with 1 green flush button and 1 red projecting button

Description	Circuit	Color	Contact position		Type code	Order code	Overall dimensions	
 <p>Without pilot light</p>			N/O	N/C	IP40	3SA8-BL8325	24895	
			N/O	N/C	IP65	3SA8-BL9325	24896	
			N/O	N/C	IP40	3SA8-BL8425	24897	
			N/O	N/C	IP65	3SA8-BL9425	24898	
 <p>Integrated with central pilot light and yellow lens Direct supply ≤ 380 V</p>			N/O	N/C		3SA8-BW8365	24899	
			N/O	N/C		3SA8-BW8465	24900	
 <p>Direct supply 220/250 V via resistor Including BA 9s 130 V bulb</p>			N/O	N/C		3SA8-BW8375	24901	
			N/O	N/C		3SA8-BW8475	24902	
 <p>Direct supply 1.2 VA - 220 V via integral transformer Including BA 9s 6 V bulb</p>			N/O	N/C		3SA8-BW8345	24903	
			N/O	N/C		3SA8-BW8445	24904	


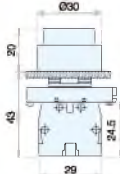

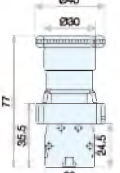

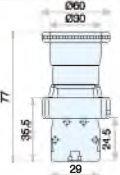
Selector switches with pilot light BA 9s LED

Description	Circuit	Color	Contact position		Type code	Order code	Overall dimensions
 <p>2 positions stay put</p>		Green	N/O	N/C	3SA8-BK2365	24905	
		Red	N/O	N/C	3SA8-BK2465	24906	
		Yellow	N/O	N/C	3SA8-BK2565	24907	
		Blue	N/O	N/C	3SA8-BK2665	24908	
		Clear	N/O	N/C	3SA8-BK2765	24909	
<p>3 positions stay put</p>		Green	N/O	N/C	3SA8-BK3365	24910	
		Red	N/O	N/C	3SA8-BK3465	24911	
		Yellow	N/O	N/C	3SA8-BK3565	24912	
		Blue	N/O	N/C	3SA8-BK3665	24913	
		Clear	N/O	N/C	3SA8-BK3765	24914	


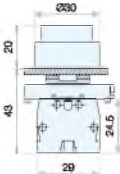
Pushbutton Switches 3SA5 Series, plastic

Selection and ordering data


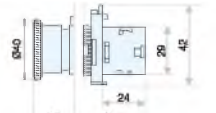
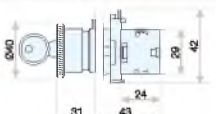
Spring return pushbuttons, without symbol

Description	Color	Contact position	Type code		Overall dimensions
			Type code	Order code	
Pushbuttons with projecting button					
	● Black	N/O	3SA5-BL21	32764	
	● Green	N/O	3SA5-BL31	32765	
	● Yellow	N/O	3SA5-BL51	32766	
	● Blue	N/O	3SA5-BL61	32767	
	● Red	N/C	3SA5-BL42	32769	
Mushroom pushbuttons					
Ø40					
	● Black	N/O	3SA5-BC21	32775	
	● Green	N/O	3SA5-BC31	32776	
	● Yellow	N/C	3SA5-BC51	32777	
	● Red	N/C	3SA5-BC42	32779	
Ø60					
	● Black	N/O	3SA5-BR21	32780	
	● Green	N/O	3SA5-BR31	34081	
	● Yellow	N/C	3SA5-BR42	32781	
	● Red	N/C	3SA5-BR52	34082	

Spring return pushbuttons, with symbol

Description	Color	Contact position	Type code		Overall dimensions
			Type code	Order code	
	ⓘ Green	N/O	3SA5-BL3311	34083	
	Ⓜ Green	N/O	3SA5-BL3361	34084	
	ⓘ ⓘ Black	N/O	3SA5-BL3351	34085	
	Ⓢ Ⓣ White	N/O	3SA5-BL3341	34086	
	Ⓢ Ⓣ Red	N/C	3SA5-BL4322	32787	
	Ⓢ Ⓣ Red	N/C	3SA5-BL4342	32788	

Plastic headed and mushroom headed emergency stop pushbutton

Description	Color	Contact position	Type code		Overall dimensions
			Type code	Order code	
EMERGENCY STOP mushroom pushbuttons, rotate to release					
Ø30	● Red	N/C	3SA5-BS442	32791	
Ø40	● Red	N/C	3SA5-BS542	32792	
Ø60	● Red	N/C	3SA5-BS642	32793	
EMERGENCY STOP mushroom pushbuttons, pull to release					
Ø40	● Red	N/C	3SA5-BT42	32789	
Ø60	● Red	N/C	3SA5-BX42	32790	
EMERGENCY STOP mushroom pushbuttons, turn key to release					
Ø40 (Key n°445)		N/C	3SA5-BS142	32795	
Ø60		N/C	3SA5-BS242	32796	

Pushbutton Switches

3SA5 Series, plastic

Selection and ordering data

Selector switches

Description	Position	Contact position		Type code	Order code	Overall dimensions
		⌋	⌋			
Locked spring reset	keyout	⌋	⌋			
Selector switches with standard handle						
2 positions	∨	N/O		3SA5-BD21	32797	
	∨	N/O	N/C	3SA5-BD25	32798	
3 positions	∨	N/O		3SA5-BD41	32799	
	∨	N/O	N/C	3SA5-BD45	32800	
	∨	2N/O		3SA5-BD33	32801	
	∨	2N/O		3SA5-BD53	32802	
	∨	2N/O		3SA5-BD73	32803	
Selector switches with long handle						
2 positions	∨	N/O		3SA5-BJ21	32805	
	∨	N/O	N/C	3SA5-BJ25	32806	
3 positions	∨	N/O		3SA5-BJ41	32807	
	∨	N/O	N/C	3SA5-BJ45	32808	
	∨	2N/O		3SA5-BJ33	32809	
	∨	2N/O		3SA5-BJ53	32810	
	∨	2N/O		3SA5-BJ73	32811	
Key-operated switches						
2 positions	∨	N/O		3SA5-BG21	32813	
	∨	N/O	N/C	3SA5-BG25	32814	
3 positions	∨	N/O		3SA5-BG41	32815	
	∨	N/O	N/C	3SA5-BG45	32816	
	∨	N/O		3SA5-BG61	32817	
	∨	N/O	N/C	3SA5-BG65	32818	
	∨	2N/O		3SA5-BG33	32819	
	∨	2N/O		3SA5-BG53	32820	
	∨	2N/O		3SA5-BG03	32821	
	∨	2N/O		3SA5-BG73	32822	

Double-headed pushbuttons, without pilot light, without symbol

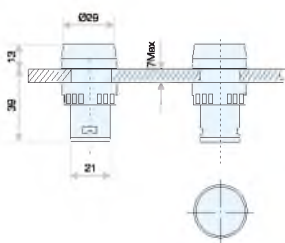
Description	Color	Degree of protection	Contact position		Type code	Order code	Overall dimensions
			⌋	⌋			
1 flush green button and 1 flush red button		IP40	N/O	N/C	3SA5-BL8325	32854	
1 flush green button and 1 projecting red button		IP40	N/O	N/C	3SA5-BL8425	32855	
1 flush green button and 1 flush red button, with transparent silicon cover		IP65	N/O	N/C	3SA5-BL9325	32856	
1 flush green button and 1 projecting red button, with transparent silicon cover		IP65	N/O	N/C	3SA5-BL9425	32857	

Indicators

Series AD22 LED

Selection and ordering data

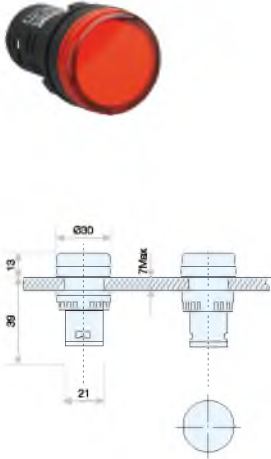
Model	Diameter	Voltage	Color	Type code	Order code
AD22-22BS	Ø22	21 DC/AC 6 V	● Red	AD22-22BS21R	35549
			● Green	AD22-22BS21G	35550
			● Yellow	AD22-22BS21Y	35551
			○ White	AD22-22BS21W	35552
			● Blue	AD22-22BS21B	35553
		22 DC/AC 12 V	● Red	AD22-22BS22R	35554
			● Green	AD22-22BS22G	35555
			● Yellow	AD22-22BS22Y	35556
			○ White	AD22-22BS22W	35557
			● Blue	AD22-22BS22B	35558
23 DC/AC 24 V	● Red	AD22-22BS23R	35559		
	● Green	AD22-22BS23G	35560		
	● Yellow	AD22-22BS23Y	35561		
	○ White	AD22-22BS23W	35562		
	● Blue	AD22-22BS23B	35563		
24 DC/AC 36 V	● Red	AD22-22BS24R	35564		
	● Green	AD22-22BS24G	35565		
	● Yellow	AD22-22BS24Y	35566		
	○ White	AD22-22BS24W	35567		
	● Blue	AD22-22BS24B	35568		
25 DC/AC 48 V	● Red	AD22-22BS25R	35569		
	● Green	AD22-22BS25G	35570		
	● Yellow	AD22-22BS25Y	35571		
	○ White	AD22-22BS25W	35572		
	● Blue	AD22-22BS25B	35573		
26 DC/AC 110 V	● Red	AD22-22BS26R	35574		
	● Green	AD22-22BS26G	35575		
	● Yellow	AD22-22BS26Y	35576		
	○ White	AD22-22BS26W	35577		
	● Blue	AD22-22BS26B	35578		
27 DC/AC 127V	● Red	AD22-22BS27R	35579		
	● Green	AD22-22BS27G	35580		
	● Yellow	AD22-22BS27Y	35581		
	○ White	AD22-22BS27W	35582		
	● Blue	AD22-22BS27B	35583		
28 DC 220 V	● Red	AD22-22BS28R	35584		
	● Green	AD22-22BS28G	35585		
	● Yellow	AD22-22BS28Y	35586		
	○ White	AD22-22BS28W	35587		
	● Blue	AD22-22BS28B	35588		
31 AC 220 V	● Red	AD22-22BS31R	35589		
	● Green	AD22-22BS31G	35590		
	● Yellow	AD22-22BS31Y	35591		
	○ White	AD22-22BS31W	35592		
	● Blue	AD22-22BS31B	35593		
32 AC 380 V	● Red	AD22-22BS32R	35594		
	● Green	AD22-22BS32G	35595		
	● Yellow	AD22-22BS32Y	35596		
	○ White	AD22-22BS32W	35597		
	● Blue	AD22-22BS32B	35598		



Indicators

Series AD22 LED

Selection and ordering data

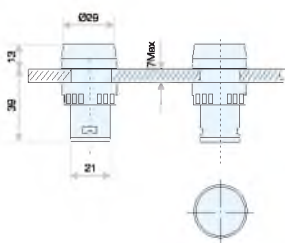
Model	Diameter	Voltage	Color	Type code	Order code
	Ø22	21 DC/AC 6 V	● Red	AD22-22DS21R	35649
			● Green	AD22-22DS21G	35650
			● Yellow	AD22-22DS21Y	35651
			○ White	AD22-22DS21W	35652
			● Blue	AD22-22DS21B	35653
			22 DC/AC 12 V	● Red	AD22-22DS22R
		● Green		AD22-22DS22G	35655
		● Yellow		AD22-22DS22Y	35656
		○ White		AD22-22DS22W	35657
		● Blue		AD22-22DS22B	35658
		23 DC/AC 24 V		● Red	AD22-22DS23R
			● Green	AD22-22DS23G	35660
● Yellow	AD22-22DS23Y		35661		
○ White	AD22-22DS23W		35662		
● Blue	AD22-22DS23B		35663		
24 DC/AC 36 V	● Red		AD22-22DS24R	35664	
	● Green	AD22-22DS24G	35665		
	● Yellow	AD22-22DS24Y	35666		
	○ White	AD22-22DS24W	35667		
	● Blue	AD22-22DS24B	35668		
	25 DC/AC 48 V	● Red	AD22-22DS25R	35669	
● Green		AD22-22DS25G	35670		
● Yellow		AD22-22DS25Y	35671		
○ White		AD22-22DS25W	35672		
● Blue		AD22-22DS25B	35673		
26 DC/AC 110 V		● Red	AD22-22DS26R	35674	
	● Green	AD22-22DS26G	35675		
	● Yellow	AD22-22DS26Y	35676		
	○ White	AD22-22DS26W	35677		
	● Blue	AD22-22DS26B	35678		
	27 DC/AC 127V	● Red	AD22-22DS27R	35679	
● Green		AD22-22DS27G	35680		
● Yellow		AD22-22DS27Y	35681		
○ White		AD22-22DS27W	35682		
● Blue		AD22-22DS27B	35683		
28 DC 220 V		● Red	AD22-22DS28R	35684	
	● Green	AD22-22DS28G	35685		
	● Yellow	AD22-22DS28Y	35686		
	○ White	AD22-22DS28W	35687		
	● Blue	AD22-22DS28B	35688		
	31 AC 220 V	● Red	AD22-22DS31R	35689	
● Green		AD22-22DS31G	35690		
● Yellow		AD22-22DS31Y	35691		
○ White		AD22-22DS31W	35692		
● Blue		AD22-22DS31B	35693		
32 AC 380 V		● Red	AD22-22DS32R	35694	
	● Green	AD22-22DS32G	35695		
	● Yellow	AD22-22DS32Y	35696		
	○ White	AD22-22DS32W	35697		
	● Blue	AD22-22DS32B	35698		

Indicators

Series AD22 LED

Selection and ordering data

Model	Diameter	Voltage	Color	Type code	Order code
AD22-22D	Ø22	21 DC/AC 6 V	● Red	AD22-22D21R	35899
			● Green	AD22-22D21G	35900
			● Yellow	AD22-22D21Y	35901
			○ White	AD22-22D21W	35902
			● Blue	AD22-22D21B	35903
		22 DC/AC 12 V	● Red	AD22-22D22R	35904
			● Green	AD22-22D22G	35905
			● Yellow	AD22-22D22Y	35906
			○ White	AD22-22D22W	35907
			● Blue	AD22-22D22B	35908
		23 DC/AC 24 V	● Red	AD22-22D23R	35909
			● Green	AD22-22D23G	35910
● Yellow	AD22-22D23Y		35911		
○ White	AD22-22D23W		35912		
● Blue	AD22-22D23B		35913		
24 DC/AC 36 V	● Red	AD22-22D24R	35914		
	● Green	AD22-22D24G	35915		
	● Yellow	AD22-22D24Y	35916		
	○ White	AD22-22D24W	35917		
	● Blue	AD22-22D24B	35918		
25 DC/AC 48 V	● Red	AD22-22D25R	35919		
	● Green	AD22-22D25G	35920		
	● Yellow	AD22-22D25Y	35921		
	○ White	AD22-22D25W	35922		
	● Blue	AD22-22D25B	35923		
26 DC/AC 110 V	● Red	AD22-22D26R	35924		
	● Green	AD22-22D26G	35925		
	● Yellow	AD22-22D26Y	35926		
	○ White	AD22-22D26W	35927		
	● Blue	AD22-22D26B	35928		
27 DC/AC 127V	● Red	AD22-22D27R	35929		
	● Green	AD22-22D27G	35930		
	● Yellow	AD22-22D27Y	35931		
	○ White	AD22-22D27W	35932		
	● Blue	AD22-22D27B	35933		
28 DC 220 V	● Red	AD22-22D28R	35934		
	● Green	AD22-22D28G	35935		
	● Yellow	AD22-22D28Y	35936		
	○ White	AD22-22D28W	35937		
	● Blue	AD22-22D28B	35938		
31 AC 220 V	● Red	AD22-22D31R	35939		
	● Green	AD22-22D31G	35940		
	● Yellow	AD22-22D31Y	35941		
	○ White	AD22-22D31W	35942		
	● Blue	AD22-22D31B	35943		
32 AC 380 V	● Red	AD22-22D32R	35944		
	● Green	AD22-22D32G	35945		
	● Yellow	AD22-22D32Y	35946		
	○ White	AD22-22D32W	35947		
	● Blue	AD22-22D32B	35948		

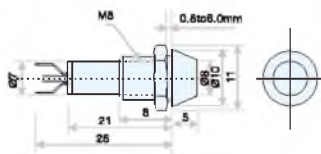


Indicators

Series AD22 LED

Selection and ordering data

Model	Diameter	Voltage	Color	Type code	Order code
AD22C-Ø8	Ø8	DC 6 V	● Red	AD22B-8D6R	34974
			● Green	AD22B-8D6G	34975
			● Yellow	AD22B-8D6Y	34976
			○ White	AD22B-8D6W	34977
			● Blue	AD22B-8D6B	34978
		DC 12 V	● Red	AD22B-8D12R	35014
			● Green	AD22B-8D12G	35015
			● Yellow	AD22B-8D12Y	35016
			○ White	AD22B-8D12W	35017
			● Blue	AD22B-8D12B	35018
DC 24 V	● Red	AD22B-8D24R	35054		
	● Green	AD22B-8D24G	35055		
	● Yellow	AD22B-8D24Y	35056		
	○ White	AD22B-8D24W	35057		
	● Blue	AD22B-8D24B	35058		
DC 36 V	● Red	AD22B-8D36R	35094		
	● Green	AD22B-8D36G	35095		
	● Yellow	AD22B-8D36Y	35096		
	○ White	AD22B-8D36W	35097		
	● Blue	AD22B-8D36B	35098		
DC 48 V	● Red	AD22B-8D48R	35134		
	● Green	AD22B-8D48G	35135		
	● Yellow	AD22B-8D48Y	35136		
	○ White	AD22B-8D48W	35137		
	● Blue	AD22B-8D48B	35138		
DC 110 V	● Red	AD22B-8D110R	35174		
	● Green	AD22B-8D110G	35175		
	● Yellow	AD22B-8D110Y	35176		
	○ White	AD22B-8D110W	35177		
	● Blue	AD22B-8D110B	35178		
DC 120 V	● Red	AD22B-8D120R	35214		
	● Green	AD22B-8D120G	35215		
	● Yellow	AD22B-8D120Y	35216		
	○ White	AD22B-8D120W	35217		
	● Blue	AD22B-8D120B	35218		
DC 220 V	● Red	AD22B-8D220R	35254		
	● Green	AD22B-8D220G	35255		
	● Yellow	AD22B-8D220Y	35256		
	○ White	AD22B-8D220W	35257		
	● Blue	AD22B-8D220B	35258		
DC 230 V	● Red	AD22B-8D230R	35294		
	● Green	AD22B-8D230G	35295		
	● Yellow	AD22B-8D230Y	35296		
	○ White	AD22B-8D230W	35297		
	● Blue	AD22B-8D230B	35298		

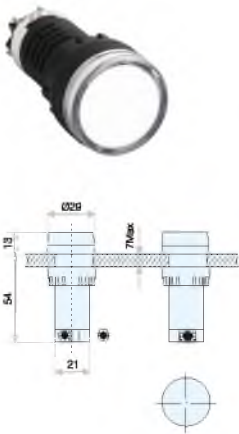


Indicators & Buzzer

Series AD22

Selection and ordering data

Model	Diameter	Color	Voltage	Type code	
				Type code	Order code
AD22-22Drg double color	Ø22	● - ● Red - Green	23 DC/AC 24 V	AD22-22DRG23RG	35999
			24 DC/AC 36 V	AD22-22DRG24RG	36000
			25 DC/AC 48 V	AD22-22DRG25RG	36001
			26 DC/AC 110 V	AD22-22DRG26RG	36002
			27 DC/AC 127 V	AD22-22DRG27RG	36003
			28 DC 220 V	AD22-22DRG28RG	36004
			31 DC 220 V	AD22-22DRG31RG	36005
		● - ● Red - Yellow	32 DC 380 V	AD22-22DRG32RG	36006
			23 DC/AC 24 V	AD22-22DRG23RY	36007
			24 DC/AC 36 V	AD22-22DRG24RY	36008
			25 DC/AC 48 V	AD22-22DRG25RY	36009
			26 DC/AC 110 V	AD22-22DRG26RY	36010
			27 DC/AC 127 V	AD22-22DRG27RY	36011
			28 DC 220 V	AD22-22DRG28RY	36012
31 DC 220 V	AD22-22DRG31RY	36013			
32 DC 380 V	AD22-22DRG32RY	36014			

















Model	Diameter	Color	Voltage	Type code		
				Type code	Order code	
AD22-22M Buzzer 80 Decibel 10 cm 15-20 mA	Ø22	● Black	23 DC/AC 24 V	AD22-22MK23	36015	
			24 DC/AC 36 V	AD22-22MK24	36016	
			25 DC/AC 48 V	AD22-22MK25	36017	
			26 DC/AC 110 V	AD22-22MK26	36018	
			27 DC/AC 127 V	AD22-22MK27	36019	
			28 DC 220 V	AD22-22MK28	36020	
			31 DC 220 V	AD22-22MK31	36021	
			32 DC 380 V	AD22-22MK32	36022	
			● Red	23 DC/AC 24 V	AD22-22MR23	36023
				24 DC/AC 36 V	AD22-22MR24	36024
25 DC/AC 48 V	AD22-22MR25	36025				
26 DC/AC 110 V	AD22-22MR26	36026				
27 DC/AC 127 V	AD22-22MR27	36027				
28 DC 220 V	AD22-22MR28	36028				
31 DC 220 V	AD22-22MR31	36029				
32 DC 380 V	AD22-22MR32	36030				



Control Stations








Selection and ordering data

3SA10 series control station

	Scheme	Description	Weight (kg)	Marking on legend	Marking on button	Type code	Order code
 <p>3SA10-B103</p>	Start-Stop functions (Light grey lid with dark grey base)						
	N/O	1 green flush pushbutton	0.120	Start	—	3SA10-B101H29	32889
	+ N/C	spring return	0.120	—	I	3SA10-B102	32890
			0.120	—	Start	3SA10-B103	32891
 <p>3SA10-B112</p>	N/C	1 red flush pushbutton	0.120	Stop	—	3SA10-B111H29	32892
		spring return	0.120	—	Stop	3SA10-B112	32893
			0.120	—	○	3SA10-B114	32894
 <p>3SA10-B112</p>	N/C	1 red mushroom head pushbutton, Ø40 mm	0.120	Emergency stop	—	3SA10-B164H29	32895
		spring return					
							
 <p>3SA10-J174</p>	Emergency stop functions (Yellow lid with dark grey base)						
	N/C	1 red mushroom head pushbutton, Ø40 mm, latching	0.14	Stop		3SA10-J174	32896
			Turn to release				
 <p>3SA10-J184</p>	N/C	1 red mushroom head pushbutton, Ø40 mm, latching	0.17	Unmarked		3SA10-J184	32897
							
 <p>3SA10-J184</p>	Emergency stop functions with (Yellow lid with dark grey base)						
	N/C	1 red mushroom head pushbutton, Ø40 mm, latching	0.14	Unmarked		3SA10-J178	32898
			Turn to release				
 <p>3SA10-J174H29</p>		1 red mushroom head pushbutton, Ø40 mm, latching	0.17	Unmarked		3SA10-J188	32899

Selection and ordering data

3SA10 series control station



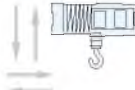











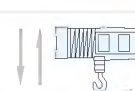









	Scheme	Description	Weight (kg)	Marking on legend	Marking on button	Type code	Order code		
Start-Stop functions (Light grey lid with dark grey base)									
 <p>3SA10-B211H29</p>	N/O	2 spring return	0.165	Start	—	3SA10-B211H29	32900		
	+	pushbutton		Stop	—				
	N/C	1 flush green		—	I			3SA10-B213	32901
		1 flush red		—	O			3SA10-B215	32902
 <p>3SA10-B132H29</p>	N/O	1 selector switch	0.125	Start	—	3SA10-B132H29	32903		
		2 position stay put standard		Stop	—				
		black handle		O	—			3SA10-B134	32904
 <p>3SA10-B213</p>	N/C	1 selector switch key operated (key n°455)	0.150	Start	—	3SA10-B142H29	32905		
		2 position stay put key withdrawal from LH position		Stop	—				
				O	—			3SA10-B144	32906
Start-Stop functions with pilot light (Light grey lid with dark grey base)									
 <p>3SA10-B361H29</p>	N/O	1 red pilot light	0.200	Start	—	3SA10-B361H29	32907		
	+	Direct supply ≤130V		Stop	—				
 <p>3SA10-B142H29</p>	N/C	Bulb not included (1)	0.205	—	I	3SA10-B371H29	32910		
		2 spring return pushbuttons		—	O				
		1 flush green		—	Start			3SA10-B366	32909
		1 flush red		—	Stop				
 <p>3SA10-B373</p>	N/O	1 red pilot light, 230V	0.205	Start	—	3SA10-B373	32911		
	+	Supply direct through resistor		Stop	—				
	N/C	Bulb with BA 9s base fitting-130V (included)		—	I			3SA10-B376	32912
 <p>3SA10-B361H29</p>		+	0.205	—	O	3SA10-B376	32912		
		2 spring return pushbuttons		—	Start				
		1 flush green		—	Stop				
		1 flush red		—					

(1) Bulb types for use with direct supply:
 -incandescent bulb, BA 9s base fitting: $U \leq 130V$, maximum power 2.6W, maximum length: 28 mm,
 -neon bulb, BA 9s base fitting: $10V \leq U \leq 380V$.

Control Stations



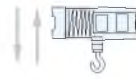





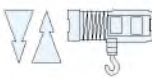












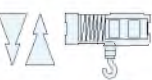



Selection and ordering data

3SP series control station

		Contact blocks and scheme per direction for "Emergency stop"	Number of operators	Functions	Type code	Order code
		For control of single-speed motors				
	ZB2-BE101		4		3SP-471	12699
	ZB2-BE102 + ZB2-BE101		mechanically interlocked between pairs			
3SP-A471	ZB2-BE101		4	mechanically interlocked between pairs +1	3SP-4713	12702
	ZB2-BE102 + ZB2-BE101				trigger action latching "Emergency stop" Ø40mm operator ZA2-BS54	3SP-4813
	ZB2-BE101		6		3SP-671	12705
	ZB2-BE102 + ZB2-BE101		mechanically interlocked between pairs			
3SP-A671	ZB2-BE101		6	mechanically interlocked between pairs +1	3SP-6713	12708
	ZB2-BE102 + ZB2-BE101				trigger action latching "Emergency stop" Ø40mm operator ZA2-BS44	3SP-6813
	ZB2-BE101		6		3SP-871	12711
	ZB2-BE102 + ZB2-BE101		mechanically interlocked between pairs			
3SP-A6713	ZB2-BE101		6	mechanically interlocked between pairs +1	3SP-8713	12714
	ZB2-BE102 + ZB2-BE101				trigger action latching "Emergency stop" Ø40mm operator ZA2-BS44	3SP-8813
	ZB2-BE101		6		3SP-871	12711
	ZB2-BE102 + ZB2-BE101		mechanically interlocked between pairs			
3SP-A871	ZB2-BE101		6	mechanically interlocked between pairs +1	3SP-8713	12714
	ZB2-BE102 + ZB2-BE101				trigger action latching "Emergency stop" Ø40mm operator ZA2-BS44	3SP-8813

Selection and ordering data


3SP series control station

		Contact blocks and scheme per direction for "Emergency stop"	Number of operators	Functions	Type code	Order code
 <p>3SP-A2713</p>	For control of 2-speed motors					
	ZB2-BE101		2 mechanically interlocked		3SP-271	12693
	ZB2-BE102 + ZB2-BE101				3SP-281	12694
	ZB2-BE101		ZB2-BE102	2 mechanically interlocked +1 trigger action latching	3SP-2713	12696
 <p>3SP-A291</p>	ZB2-BE102 + ZB2-BE101		ZB2-BE102	2 mechanically interlocked +1 trigger action latching "Emergency stop" Ø30mm operator ZA2-BS44	3SP-2813	12697
	1N/C+NO+NO staggered XEN-G1191		2 mechanically interlocked		3SP-291	12695
 <p>3SP-A491</p>	1N/C+NO+NO staggered XEN-G1191		2 mechanically interlocked +1 trigger action latching "Emergency stop" Ø30mm operator ZA2-BS44		3SP-2913	12698
	1N/C+NO+NO staggered XEN-G1191		4 mechanically interlocked between pairs		3SP-491	12701
 <p>3SP-A491</p>	1N/C+NO+NO staggered XEN-G1191		4 mechanically interlocked between pairs +1 trigger action latching "Emergency stop" Ø40mm operator ZA2-BS44		3SP-4913	12704
	1N/C+NO+NO staggered XEN-G1191		4 mechanically interlocked between pairs +1 trigger action latching "Emergency stop" Ø40mm operator ZA2-BS44		3SP-4923	32913
 <p>3SP-A691</p>	1N/C102(b)		+1 trigger action latching			
	1N/C ZB2-BE102		"Emergency stop" Ø40mm operator ZA2-BS44			
	1N/C+NO+NO staggered XEN-G1191		6 mechanically interlocked		3SP-691	12707
 <p>3SP-A691</p>	1N/C+NO+NO staggered XEN-G1191		6 mechanically interlocked +1 trigger action latching "Emergency stop" Ø40mm operator ZA2-BS44		3SP-6913	12710

Control Stations


Selection and ordering data

BS series control station

	No. of phase	Applicable motor capacity at 220V (kw)	Rated current In (A)	Function	Type code Order code		Overall dimensions (MM)
					Type code	Order code	
	2	0.75	10	ON/OFF	BS-211	32914	90x44x49
	2	2.2	15	ON/OFF	BS-216	32915	93x53x54
	2	3	30	ON/OFF	BS-230	32916	112x62x56

4

HJ9 Plastic enclosure

	The number of operating holes	Color	Type code Order code	
			Type code	Order code
	1	● Yellow	HJ9-1Y	32917
	2	● Yellow	HJ9-2Y	32918
	3	● Yellow	HJ9-3Y	32919
	4	● Yellow	HJ9-4Y	32920
	5	● Yellow	HJ9-5Y	32921
	6	● Yellow	HJ9-6Y	32922
	1	○ White	HJ9-1W	32923
	2	○ White	HJ9-2W	32924
	3	○ White	HJ9-3W	32925
	4	○ White	HJ9-4W	32926
	5	○ White	HJ9-5W	32927
	6	○ White	HJ9-6W	32928

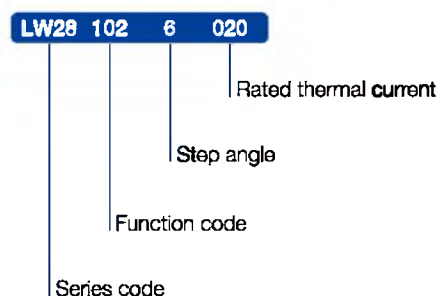
Rotary Change-over Cam Switches

Series 3SLW28

Applications and functions

- Suitable for many different switching and control functions, such as ON/OFF, Hand/Auto and changeover
- Suitable for maintenance and emergency-stop switches
- Being available in their own enclosures or for mounting in control cabinets

Instruction of type code



Technical specifications

Types	3SLW28-20	3SLW28-25	3SLW28-32	3SLW28-63	3SLW28-125	3SLW28-160
Standard	IEC 60947-3					
Rated uninterrupted current I _u (A)	20	25	32	63	125	160
Rated thermal current I _{th} (A)	20	25	32	63	125	160
Rated operational voltage U _e (V)	240/440					
Rated insulation voltage U _i (V)	660					
Rated impulse withstand voltage U _{imp} (kV)	4	4	4	6	6	6
Rated frequency (Hz)	50/60					
Number of poles	1,2,3,4					
Rated operational current in category AC-21A 280/440V (A)	20	25	32	63	125	160
in category AC-23A 380/440V (A)	15	22	30	57	100	115
Rated operational power in category AC-3 380/440V (kW)	5.5	7.5	11	18.5	22	33
In category AC-4 380/440V (kW)	1.5	3	5.5	7.5	12	15
in category AC-23A 380/441V (kW)	7.5	11	15	30	45	57
Handle type	black thumb grip and light grey front plate, padlockable handle					
Degree of protection	IP20					
Ambient air temperature (°C)	-5 to +40, max. 95 % humidity					
Storage temperature (°C)	-40--+75					
Maximum operating altitude (meters)	2000					




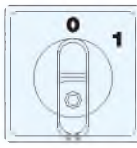

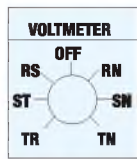

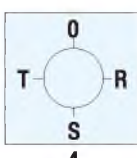
Rotary Change-over Cam Switches

Series 3SLW28

Selection and ordering data

Control switches, door mounting, with black thumb grip and light grey front plate

4


Function		Number of poles	Rated uninterrupted current (A)	Type code	Order code	
				1	20	LW28 102 61020
		25	LW28 102 61025		32983	
		32	LW28 102 61032		32984	
		63	LW28 102 61063		32985	
		125	LW28 102 61125		32986	
		160	LW28 102 61160		32987	
		2		20	LW28 102 62020	32988
				25	LW28 102 62025	32989
				32	LW28 102 62032	32990
				63	LW28 102 62063	32991
				125	LW28 102 62125	32992
				160	LW28 102 62160	32993
		3		20	LW28 102 63020	32994
				25	LW28 102 63025	32995
				32	LW28 102 63032	32996
				63	LW28 102 63063	32997
125	LW28 102 63125			32998		
160	LW28 102 63160			32999		
4		20	LW28 102 64020	33000		
		25	LW28 102 64025	33001		
		32	LW28 102 64032	33002		
		63	LW28 102 64063	33003		
		125	LW28 102 64125	33004		
		160	LW28 102 64160	33005		
		1	20	LW28 12 61020	33006	
			25	LW28 12 61025	33007	
			32	LW28 12 61032	33008	
			63	LW28 12 61063	33009	
			125	LW28 12 61125	33010	
			160	LW28 12 61160	33011	
		2		20	LW28 12 62020	33012
				25	LW28 12 62025	33013
				32	LW28 12 62032	33014
				63	LW28 12 62063	33015
				125	LW28 12 62125	33016
				160	LW28 12 62160	33017
		3		20	LW28 12 63020	33018
				25	LW28 12 63025	33019
				32	LW28 12 63032	33020
				63	LW28 12 63063	33021
				125	LW28 12 63125	33022
				160	LW28 12 63160	33023
		4		20	LW28 12 64020	33024
				25	LW28 12 64025	33025
				32	LW28 12 64032	33026
				63	LW28 12 64063	33027
				125	LW28 12 64125	33028
				160	LW28 12 64160	33029
Voltmeter switches, door mounting, with black thumb grip and light grey front plate		3	20	LW28V	33030	
						
Ammeter switches, door mounting, with black thumb grip and light grey front plate		3	20	LW28A	33031	
						

Rotary Change-over Cam Switches

Series 3SLW28

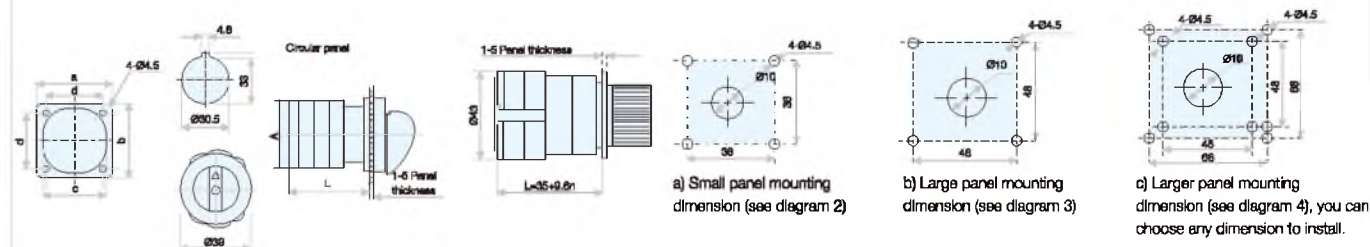
Selection and ordering data

Control switches, door mounting, with padlockable handle

	Function	Number of poles	Rated uninterrupted current (A)	Type code	Order code
	ON/OFF	1	20	LW28GS120	33056
			25	LW28GS125	33057
			32	LW28GS132	33058
			63	LW28GS163	33059
			125	LW28GS1125	33060
			160	LW28GS1160	33061
		2	20	LW28GS220	33062
			25	LW28GS225	33063
			32	LW28GS232	33064
			63	LW28GS263	33065
			125	LW28GS2125	33066
			160	LW28GS2160	33067
		3	20	LW28GS320	33068
			25	LW28GS325	33069
			32	LW28GS332	33070
			63	LW28GS363	33071
125	LW28GS3125		33072		
160	LW28GS3160		33073		
4	20	LW28GS420	33074		
	25	LW28GS425	33075		
	32	LW28GS432	33076		
	63	LW28GS463	33077		
	125	LW28GS4125	33078		
	160	LW28GS4160	33079		

Outline and installation dimensions

7.2 Mounting Dimension



Type	Panel Configuration	Dimension (mm)				Mounting Dimension			
		A	B	C	L	a	b	d1	d2
3SLW28-20	M1 Square	48	48	43	22+9.6n	36	36	Ø8.5	Ø4.5
	M2 Square	64	64	43	25+9.6n	48	48	Ø10	Ø4.5
3SLW28-25	M1 Square	48	48	45.2	23+12.8n	36	36	Ø8.5	Ø4.5
	M2 Square	64	64	45.2	26.5+12.8n	48	48	Ø10	Ø4.5
3SLW28-32	M2 Square	64	64	58	29.2+12.8n	48	48	Ø10	Ø4.5
3SLW28-63	M2 Square	64	64	66	29.2+21.5n	48	48	Ø10	Ø4.5
	M3 Square	88	88	66	29.2+21.5n	68	68	Ø10	Ø4.5
3SLW28-125	M3 Square	88	88	84	35+26.5n	68	68	Ø13	Ø6
3SLW28-160	M3 Square	88	88	88	35+32.5n	68	68	Ø13	Ø6

Note: n – number of poles

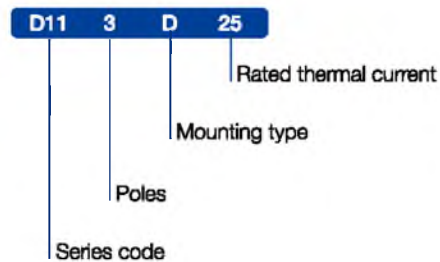
Rotary Change-over Cam Switches

Series 3SD11

Applications and functions

- Suitable for many different switching and control functions, such as ON/OFF, Hand/Auto and changeover
- Suitable for main, maintenance and Emergency-Stop switches
- Being available in their own enclosures or for mounting in control cabinets

Instruction of type code



Technical specifications


Types	3SD11-25	3SD11-32	3SD11-40	3SD11-63	3SD11-80	3SD11-100
Standard	IEC 60947-3					
Rated uninterrupted current Iu (A)	25	32	40	63	80	100
Rated thermal current Ith (A)	25	32	40	63	80	100
Rated operational voltage Ue (V)	240/440					
Rated insulation voltage Ui (V)	660					
Rated impulse withstand voltage Uimp (kA)	4	4	4	6	6	6
Rated frequency (Hz)	50/60					
Number of poles	3,4, 3+N,3+N+E,6					
Rated operational current in category AC-21A 280/440V (A)	25	32	40	63	80	100
Rated operational power in category AC-3 380/440V (kw)	5.5	7.5	11	12.5	22	30
Rated operational power in category AC-3 220/240V (kw)	3	4	7.5	11	15	18.5
Rated operational power in category AC-23A 380/440V (kw)	7.5	11	15	22	30	73
Handle type	padlockable handle					
Degree of protection	IP65					
Ambient air temperature (°C)	-5 to +40,max. 95 % humidity					
Storage temperature (°C)	-40 --+75					
Maximum operating altitude (meters)	2000					

Rotary Change-over Cam Switches


Series 3SD11

Selection and ordering data

Door mounting, with padlockable handle

	Function	Number of poles	Rated uninterrupted current (A)	Type code	Order code
	ON/OFF	3	25	D11 3D25	33080
			32	D11 3D32	33081
			40	D11 3D40	33082
			63	D11 3D63	33083
			80	D11 3D80	33084
			100	D11 3D100	33085
		4	25	D11 4D25	33086
			32	D11 4D32	33087
			40	D11 4D40	33088
			63	D11 4D63	33089
			80	D11 4D80	33090
			100	D11 4D100	33091

Rear mounting, with padlockable handle

	ON/OFF	3	25	D11 3R25	33092	
			32	D11 3R32	33093	
			40	D11 3R40	33094	
			63	D11 3R63	33095	
			80	D11 3R80	33096	
			100	D11 3R100	33097	
		4	25	D11 4R25	33098	
			32	D11 4R32	33099	
			40	D11 4R40	33100	
			63	D11 4R63	33101	
			80	D11 4R80	33102	
			100	D11 4R100	33103	
			3+N	25	D11 3NR25	33104
				32	D11 3NR32	33105
		40		D11 3NR40	33106	
		63		D11 3NR63	33107	
		80		D11 3NR80	33108	
		100		D11 3NR100	33109	
5	25	D11 5R25	33110			
	32	D11 5R32	33111			
	40	D11 5R40	33112			
	63	D11 5R63	33113			
	80	D11 5R80	33114			
	100	D11 5R100	33115			

Rotary Change-over Cam Switches

Series 3SD11

Selection and ordering data

Insulated, enclosed isolators with padlockable handle, IP65

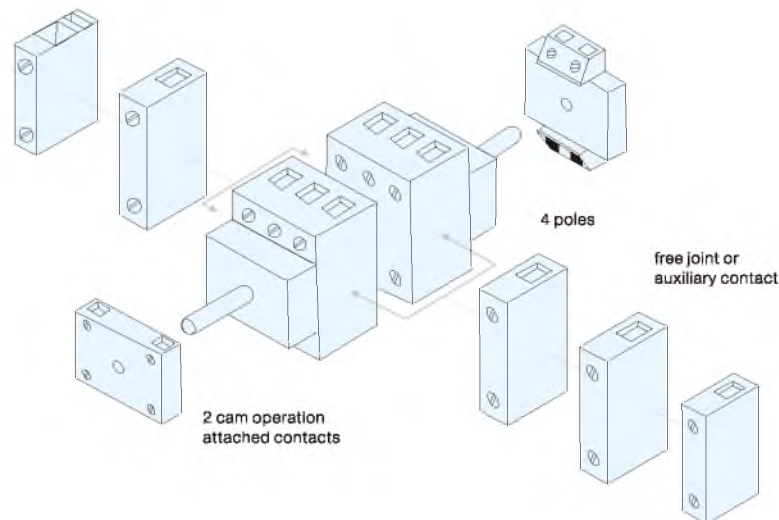
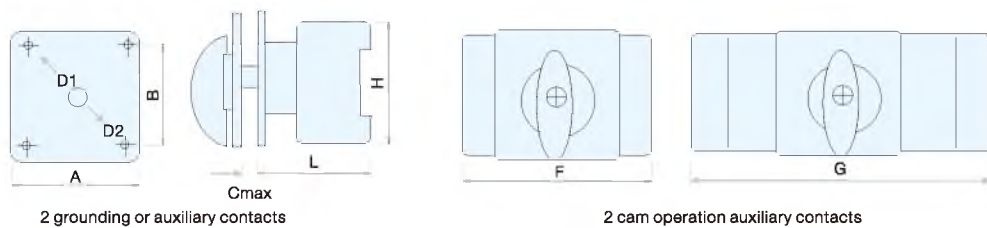


4

Function	Number of poles	Rated uninterrupted current (A)	Type code	Order code
ON/OFF	3	16	D11 B316	33116
		20	D11 B320	33117
		25	D11 B325	33118
		32	D11 B332	33119
		40	D11 B340	33120
		63	D11 B363	33121
		80	D11 B380	33122
	4	100	D11 B3100	33123
		16	D11 B416	33124
		20	D11 B420	33125
		25	D11 B425	33126
		32	D11 B432	33127
		40	D11 B440	33128
		63	D11 B463	33129
80	D11 B480	33130		
100	D11 B4100	33131		

Outline and installation dimensions

Unit: mm



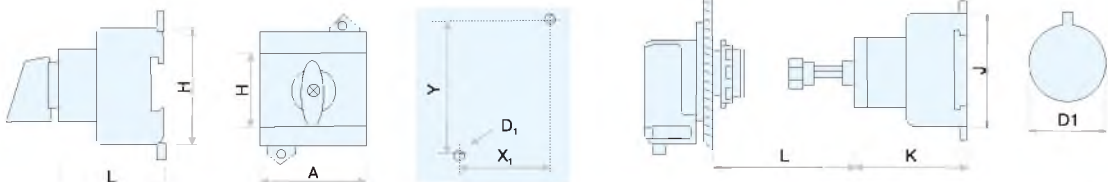
Type	Switch	Pole	B	D ₁	F	H	L	X ₁	Y
3SD11-25/3SD11-32	On-Off	3P	44	4	46	54	52	22	60
3SD11-40/3SD11-63	On-Off	3P	45	4	53	64	59	25	70
3SD11-80/3SD11-100	On-Off	3P	45	5.5	70	80	65	25	90

Rotary Change-over Cam Switches

Series 3SD11

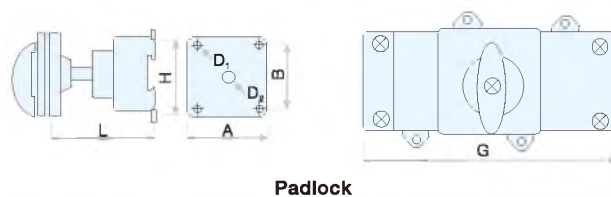
Outline and installation dimensions

Base mounting dimensions Unit: mm

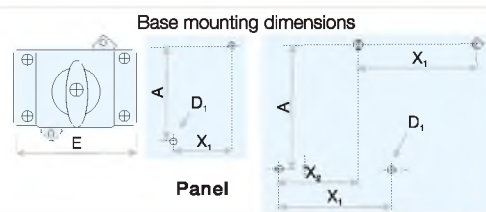


Type	Switch	Pole	A	B	Cam	D ¹	D ²	F	G	H	Lmin	Lmax	X ₁	X ₂	Y
3SD11-25	On-Off	3P	64	48	4	4	22	42	-	54	106	176	22	-	60
3SD11-32	On-Off	4P	64	48	4	4	22	56	-	54	106	176	22	-	60
	On-Off	3P+N	64	48	4	4	22	56	-	54	106	176	22	-	60
	On-Off	3P+N+E	64	48	4	4	22	69	-	54	106	176	22	-	60
	On-Off	6P	64	48	4	4	22	-	84	54	103	183	32	22	60
3SD11-40	On-Off	3P	64	48	4	4	22	50	-	64	123	193	25	-	70
3SD11-63	On-Off	4P	64	48	4	4	22	66	-	64	123	193	25	-	70
	On-Off	3P+N	64	48	4	4	22	66	-	64	123	193	25	-	70
	On-Off	3P+N+E	64	48	4	4	22	82	-	64	123	193	25	-	70
	On-Off	6P	64	48	4	4	22	-	100	64	126	196	50	25	70
3SD11-80	On-Off	3P	64	48	4	5.5	22	70	-	80	126	198	25	-	90
3SD11-100	On-Off	4P	64	48	4	5.5	22	92	-	80	126	198	25	-	90
	On-Off	3P+N+E	64	48	4	5.5	22	104	-	80	126	198	25	-	90
	On-Off	6P	88	68	4	5.5	22	-	140	80	137	209	70	25	90

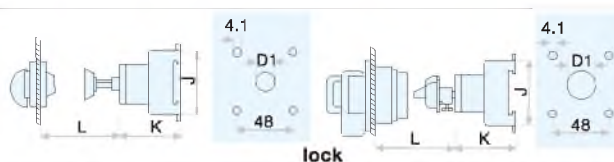
Type	Dimension (mm)			
	D1	K	Lmin	Lmax
3SD11-20	30.5	50	21	100
3SD11-32	30.5	50	21	100
3SD11-40	30.5	61	22	100
3SD11-63	30.5	61	22	100
3SD11-80	30.5	68	23	100
3SD11-100	30.5	68	23	100



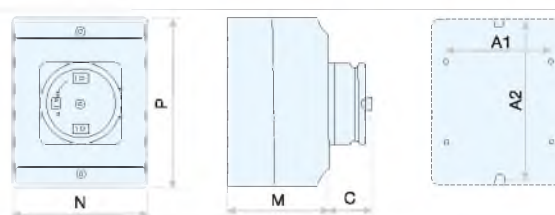
Type	Dimension (mm)			
	D1	K	Lmin	Lmax
3SD11-20	22	50	32	118
3SD11-32	22	50	32	118
3SD11-40	22	61	32	118
3SD11-63	22	61	32	118
3SD11-80	22	68	32	118
3SD11-100	22	68	32	118



Type	Dimension (mm)			
	D1	K	Lmin	Lmax
3SD11-40	39	61	61.6	118
3SD11-63	39	61	61.6	118
3SD11-80	39	68	61.5	118
3SD11-100	39	68	61.5	118



Type	Outline dimension (mm)				Installation dimension (mm)	
	P	N	M	C	A1	A2
3SD11-20	125	100	85	35	60	115
3SD11-25	125	100	85	35	60	115
3SD11-32	175	114	100	35	60	165
3SD11-40	175	114	100	35	60	165
3SD11-63	240	160	120	45	142	193
3SD11-100	240	160	120	45	142	193



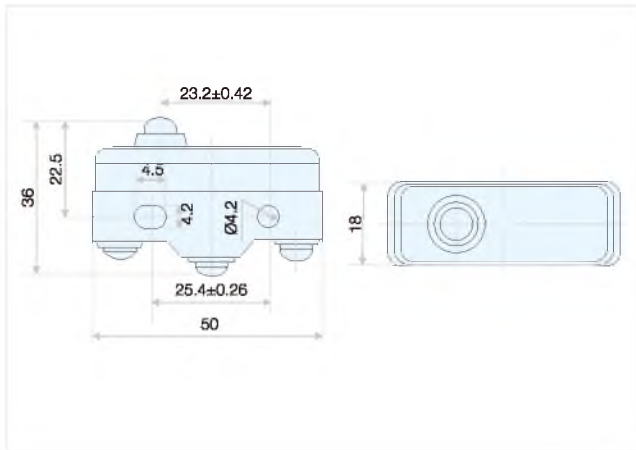
Micro Switches

Series LXW5

Applicable range

General purpose micro switches may be used in AC control circuits of 50 or 60 Hz, with a voltage up to 380V and a rated control capacity of 100VA or in DC control circuits with a voltage up to 220V and a rated control capacity of 10W.

4



LXW5-11Z

LXW5-11M



LXW5-11Q1

LXW5-11Q2

LXW5

Rated Voltage (V)	Rated controlled capacity	Rated heating current (A)	No. of Contacts	
			NO	CO
AC	380	AC100VA	1	1
	220	AC100VA	1	1
	110	AC100VA	1	1
DC	220	DC10W	1	1
	110	DC10W	1	1
	24	DC10W	1	1



LXW5-11D



LXW5-11G1



LXW5-11G2



LXW5-11G3



LXW5-11N1



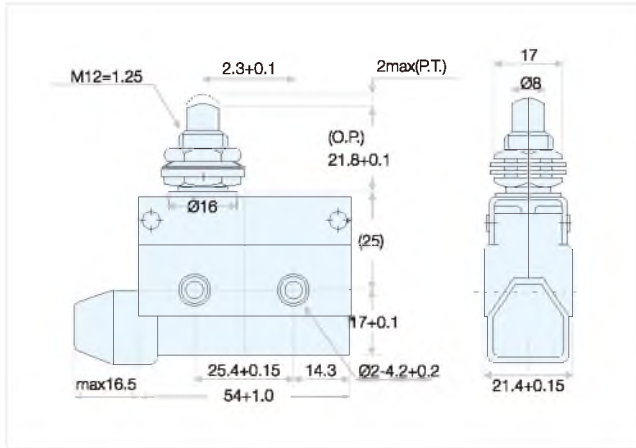
LXW5-11N2

Characteristics

Type	General purpose	General purpose protective type	Heavy current	Heavy current protective type	Actuating force N	Reset force N	Repetition accuracy mm
LXW5-11Z	LXW5-11Z/F	LXW5-11Z/L	LXW5-11Z/FL	LXW5-11Z/FL	2-3.5	>1	± 0.03
LXW5-11D	LXW5-11D/F	LXW5-11D/L	LXW5-11D/FL	LXW5-11D/FL	2-3.8	>1	± 0.05
LXW5-11M	LXW5-11M/F	LXW5-11M/L	LXW5-11M/FL	LXW5-11M/FL	2-3.8	>1	± 0.05
LXW5-11Q1	LXW5-11Q1/F	LXW5-11Q1/L	LXW5-11Q1/FL	LXW5-11Q1/FL	2-3.8	>1	± 0.05
LXW5-11Q2	LXW5-11Q2/F	LXW5-11Q2/L	LXW5-11Q2/FL	LXW5-11Q2/FL	2-3.8	>1	± 0.05
LXW5-11N1	LXW5-11N1/F	LXW5-11N1/L	LXW5-11N1/FL	LXW5-11N1/FL	0.3-0.8	>0.15	± 0.05
LXW5-11N2	LXW5-11N2/F	LXW5-11N2/L	LXW5-11N2/FL	LXW5-11N2/FL	0.5-1	>0.25	± 0.05
LXW5-11G1	LXW5-11G1/F	LXW5-11G1/L	LXW5-11G1/FL	LXW5-11G1/FL	0.35-0.85	>0.15	± 0.05
LXW5-11G2	LXW5-11G2/F	LXW5-11G2/L	LXW5-11G2/FL	LXW5-11G2/FL	0.8-1.6	>0.25	± 0.05
LXW5-11G3	LXW5-11G3/F	LXW5-11G3/L	LXW5-11G3/FL	LXW5-11G3/FL	0.4-0.9	>0.2	± 0.05

Applicable range

General purpose micro switches may be used in AC control circuits of 50 or 60 Hz, with a voltage up to 380V and a rated control capacity of 100VA or in DC control circuits with a voltage up to 220V and a rated control capacity of 10W.



Features

- Side mount switches
- Momentary contacts
- Wide choice of heads and actuators
- Sealed actuators
- Completely sealed construction
- Plastic sealed housing



AZ-7110

AZ-7120



AZ-7121

AZ-7124



AZ-7141



AZ-7144



AZ-7166



AZ-7310



AZ-7311



AZ-7312

Characteristics

Rated voltage (V)	Non-inductive load (A)				Inductive load (A)			
	Resistive load		Lamp load		Inductive load		Motor load	
	N.C.	N.O.	N.C.	N.O.	N.C.	N.O.	N.C.	N.O.
125VAC	10		3	1.5	10		5	2.5
250VAC	10		2.5	1.25	10		3	1.5
480VAC	3		1.5	0.75	2.5		1.5	0.75
8VAC	10		3	1.5	6		6	5
14VDC	10		3	1.5	6		6	5
30VDC	8		3	1.5	6		5	2.5
125VDC	0.5		0.4	0.4	0.05		0.05	0.05
250VDC	0.25		0.2	0.2	0.03		0.03	0.03

Limit Switches

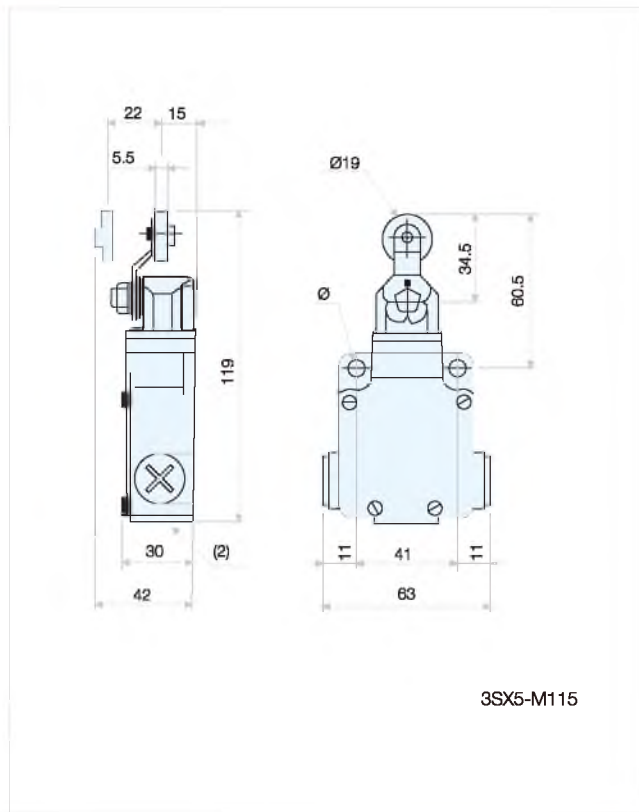
Series 3SX5-M

Applicable range

Limit switches are ideal electrical control switches. They feature compact structure, nice appearance, excellent performance, reliable action, easy installation, operation, maintenance and adjustment. At Sassin we have a variety of limit switches so you can find the limit switch that fits your individual needs.

The switches are applicable to AC control circuits of 50 to 60Hz, with a voltage up to 500V or DC control circuits with a voltage up to 250V, and a current up to 15A to convert a mechanical signal into an electrical signal for the purpose of controlling mechanical movement or performing sequential control.

4



3SX5-M102



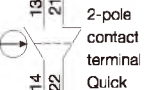
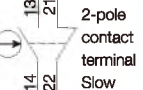
3SX5-M110



3SX5-M115



3SX5-M121

	3SX5-M model, metal, three line incoming mouths.				
	Metal head direct acting type	Steel-roller direct-acting type	Thermoplastic roller tumbler direct-acting type. Single direction with horizontal movement	Thermoplastic roller tumbler direct	Multi direction
 2-pole contact terminal Quick  2-pole contact terminal Slow					
Mechanical life (million times)	15	15	15	15	15
Motion speed (m/s)	0.5	1	1	1	1.5
Protection degree	IP65				
Rated work characters	ALTIPAK AC 15; A 300 (Ue=240V, 1e=3A)/ALTIVAR Dc13; Q 300 (Ue=250, 1e=0.27)				
Boundary dimensions: width x depth x height	63X30X64				
Complete switch (2 poles 1-close+1-open, quick)	3SX5-M110 ↻	3SX5-M102 ↻	3SX5-M121 ↻	3SX5-M115 ↻	3SX5-M106 ↻
Complete switch (2 poles 1-close+1-open, Cut off at first, cut off slowly)	3SX5-M510 ↻	3SX5-M502 ↻	3SX5-M521 ↻	3SX5-M515 ↻	—

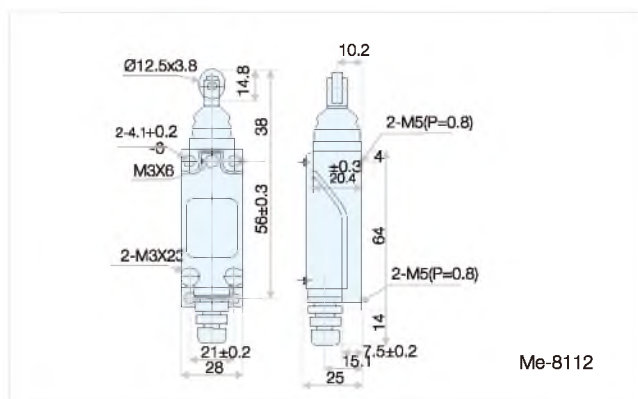
Limit Switches Series 3SX5-ME

Applicable range

Limit switches are ideal electrical control switches. They feature compact structure, nice appearance, excellent performance, reliable action, easy installation, operation, maintenance and adjustment. At Sassin we have a variety of limit switches so you can find the limit switch that fits your individual needs.

The switches are applicable to AC control circuits of 50 to 60Hz, with a voltage up to 500V or DC control circuits with a voltage up to 250V, and a current up to 15A to convert a mechanical signal into an electrical signal for the purpose of controlling mechanical movement or performing sequential control.

Voltage	Load	Resisting load	Induced load
AC 125V		5A	3A
AC 250V		5A	2A
DC 115V		0.4A	0.1A



Characteristics

Initial contact resistance, max 15m Ω (Initial insulation resistance) at 500VDC		By voltage drop 6 or 8V DC at rated current (min) 100m Ω
Initial breakdown voltage		1,000Vrms for 1 min between non-consecutive terminals 2,000Vrms for 1 min Between dead metal parts and each terminal 2,000Vrms for 1 min Between ground and each terminal
shock resistance max.		In the free position 10G In the operating position 30G
Vibration resistance		Standard type (max) 55Hz
Life (min. operations)	Mechanical	10^7 (at 120cpm)
	Electrical	3×10^6 , at rated resistive load of AC 5 A 3×10^5 , at magnetic contactor load of 200 V AC
Ambient temperature		-20 to + 60°C - 4 to + 140°C
Ambient humidity		<95%
Degree of protection		Ip64

Type	LJW8-8104 AZ-8104	LJW8-8108 AZ-8108	LJW8-8107 AZ-8107	LJW8-8111 AZ-8111	LJW8-8112 LJW8-8122 AZ-8112 AZ-8122	LJW8-8166 LJW8-8169 LJW8-8200 AZ-8166 AZ-8169 AZ-8200
Operation speciality						
OF (max)	750g	750g	750g	900g	900g	150g
RF (min)	100g	100 g	100 g	150 g	150 g	—
PT	20°	20°	20°	1.5mm	1.5mm	30mm
OT (min)	50°	50°	50°	4mm	4mm	—
MD (max)	12°	12°	12°	1mm	1mm	—
OP	—	—	—	26 \pm 0.8mm	37 \pm 0.8mm	—

Limit Switches

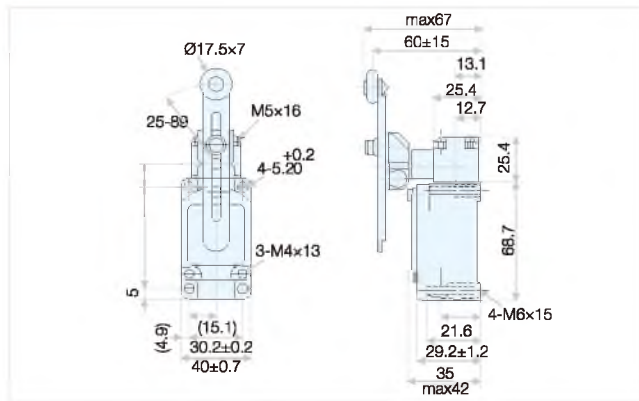
Series 3SX5-WL

Applicable range

Limit switches are ideal electrical control switches. They feature compact structure, nice appearance, excellent performance, reliable action, easy installation, operation, maintenance and adjustment. At Sassin we have a variety of limit switches so you can find the limit switch that fits your individual needs.

The switches are applicable to AC control circuits of 50 to 60Hz, with a voltage up to 500V or DC control circuits with a voltage up to 250V, and a current up to 15A to convert a mechanical signal into an electrical signal for the purpose of controlling mechanical movement or performing sequential control.

4



WL-CL

WL-CA12



WL-D

WL-D2



WL-NJ-S2



WL-NJ



WL-CA32-41



WL-CA12-2



WL-CA2-2



WL-CA2

Protection degree		IP 67
Life	Mechanical (times)	1500,000
	Electrical (times)	750,000
Operation speed		1mm~1m/s
Operation frequency	Mechanical	120times/m
	Electrical	30times/m
Insulation resistance		100MΩ DC 500V
Contact resistance		25mΩ (Initial value)
Withstand voltage (50/61Hz 1min)	Between the terminals of same pole	AC 1,000V(800V)
	Between charged metal parts	AC 2,200V(1,500V)
	Between non-charged metal parts of each terminal	AC 2,200V(1,500V)
Vibration	misoperation	10~55Hz(amplitude)
		1.5mm
Load		AC 250V 10A
		AC 380V 10A
		DC 125V 5A
		AC 250V 5A
Ambient operating temperature		-10~+80
Humidity		<95%

Float Switches

Series 3SY-2

Selection and ordering data

Type	Outline	Operation Voltage (V)	Body Color	Cable Length (meter)	Type code	Order code
3SY-1	Rectangle	220	Red	2	FS1 R2	32575
				3	FS1 R3	32576
				4	FS1 R4	32577
				5	FS1 R5	32578
3SY-2	Trapezium	220	Blue	2	FS2 B2	32603
				3	FS2 B3	32604
				4	FS2 B4	32605
				5	FS2 B5	32606
3SY-3	Large circular	220	Blue	2	FS3 B2	32623
				3	FS3 B3	32624
				4	FS3 B4	32625
				5	FS3 B5	32626
3SY-4	Small circular	220	Blue	2	FS4 B2	32643
				3	FS4 B3	32644
				4	FS4 B4	32645
				5	FS4 B5	32646
3SY-5	Oval	220	Black	2	FS5 H2	32671
				3	FS5 H3	32672
				4	FS5 H4	32673
				5	FS5 H5	32674

Toggle Switches

Technical specifications

Withstand Voltage (V): AC 2000
 Rated voltage (V): 250
 Frequency (Hz): 50/60
 Capacitance tolerance: ≤15mΩ
 Ambient Temperature (°C): -25~80
 Vibration: 10 to 55 Hz, 1.5mm double vibration
 Humidity: ≤80% RH
 Mechanical Life: ≤50000
 Electrical Life: ≤10000
 Dielectric strength (min): 1,000 V RMS



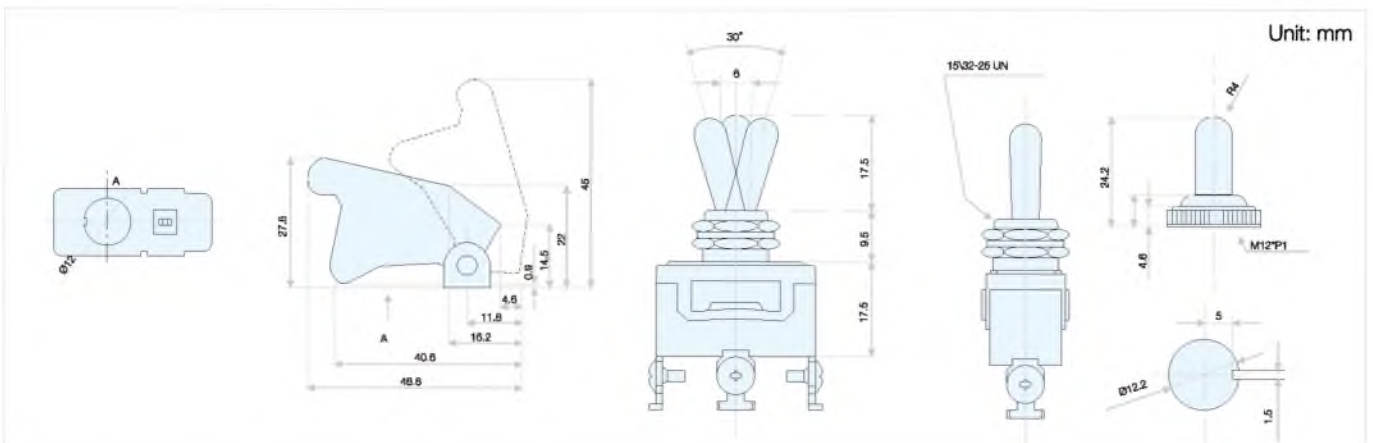
4

Selection and ordering data






	Function	Rated Voltage (V)	Rated Current (A)	Screw terminal		Fast connect terminal		Welding terminal	
				Type code	Order code	Type code	Order code	Type code	Order code
	ON-OFF	250	10	TS1021	32518	-	-	-	-
	ON-ON	250	10	TS1121	32519	-	-	-	-
	ON-OFF	250	10	TS1221	32520	-	-	-	-
	ON-ON	250	10	TS1321	32521	-	-	-	-
	ON-OFF-ON	250	10	TS1122	32522	-	-	-	-
	ON-OFF-ON	250	10	TS1322	32523	-	-	-	-
	ON-OFF	125/250	15/10	T701AW	32524	T701AT	32525	T701AU	32526
	ON-ON	125/250	15/10	T701BW	32527	T701BT	32528	T701BU	32529
	ON-OFF-ON	125/250	15/10	T701CW	32530	T701CT	32531	T701CU	32532
	(ON)-ON	125/250	15/10	T701DW	32533	T701DT	32534	T701DU	32535
	(ON)-OFF-(ON)	125/250	15/10	T701MW	32536	T701MT	32537	T701MU	32538
	(ON)-OFF-ON	125/250	15/10	T701RW	32539	T701RT	32540	T701RU	32541
	ON-OFF	125/250	15/10	T702AW	32542	T702AT	32543	T702AU	32544
	ON-ON	125/250	15/10	T702BW	32545	T702BT	32546	T702BU	32547
	ON-OFF-ON	125/250	15/10	T702CW	32548	T702CT	32549	T702CU	32550
	(ON)-ON	125/250	15/10	T702DW	32551	T702DT	32552	T702DU	32553
	(ON)-OFF-(ON)	125/250	15/10	T702MW	32554	T702MT	32555	T702MU	32556
	(ON)-OFF-ON	125/250	15/10	T702RW	32557	T702RT	32558	T702RU	32559

	Function	Color	Plastic base		Metal base	
			Type code	Order code	Type code	Order code
	Touch protection	● Red	T700-1R	32560	-	-
		● Blue	T700-1B	32561	-	-
		● Yellow	T700-1Y	32562	-	-
		● Green	T700-1G	32563	-	-
		○ Transpernt	T700-1T	32564	-	-
	Dust proof Water proof	● Black	T700-2HS	32565	T700-2HM	32570
		● Yellow	T700-2YS	32566	T700-2YM	32571
		● Blue	T700-2BS	32567	T700-2BM	32572
		● Red	T700-2RS	32568	T700-2RM	32573
		● Green	T700-2GS	32569	T700-2GM	32574

Outline and installation dimensions



Selection and ordering data

Picture	Type	Material	Color	Cable length (Meter)	Type code	Order code
	SFM-1			-	SFM-1C0	14896
				2	SFM-1C2	14897
	SFMP-1			-	SFMP-1C0	14902
				2	SFMP-1C2	14903
	SFMS-1		● Green	-	SFMS-1GC0	14904
				2	SFMS-1GC2	14905
			● Yellow	-	SFMS-1YC0	14906
				2	SFMS-1YC2	14907
SFMS-10			-	SFMS-10C0	14908	
	SFM-5			-	SFM-5C0	14901
	FS-3	Plastic		-	FS-3PC0	14869
				2	FS-3PC2	14870
		Aluminous		-	FS-3AC0	14871
				2	FS-3AC2	14872

Voltage Protection Relay

Series 3SRV1

Functions and Applications

- Control for connection of moving equipments (site equipment, agricultural equipment, refrigerated trucks).
- Control for protection of persons and equipment against the consequences of reverse running.
- Protection against the risk of a driving load (phase loss).
- Normal/emergency power supply switching.
- Widely used in industry control system, power compensation system, air conditioning system, motor control system.



4

Instruction of type code

RV1	05	P / N220	
			Rated control voltage code: N220: 220V, N230 230V, N240: 240V, A380: 380V, A400: 400V, A415: 415V
			P: Optional function
			Function code (code 01-19, see below table)
			Series code

Features

- Controls its own supply voltage (true RMS measurement).
- Loss of neutral.
- LED display for control status.
- Applicable to used for monitoring circuits of single phase, two phase, three phase three wires and three phase four wires.
- Voltage measurement accuracy $\leq 1\%$.
- Measuring frequency: 50/60 Hz.
- PTC temperature monitoring or load side monitoring is optional.
- DIN rail mounting.

Technical specifications

Rated supply voltage: AC 220 V, 230 V, 240 V (P-N)
AC 380 V, 400 V, 415 V (P-P)

Control circuit frequency: 50Hz/60Hz

Voltage hysteresis: 3.5 V (P-N)
6 V (P-P)

Measurement error: $\leq 1\%$ over the full range with voltage variation

Knob setting accuracy: 1% of scale value

Rated insulated voltage: 415 V

Phase loss sensitivity: 0.5 U_n

Conventional thermal current: 5 A

Electrical life: 100,000 cycles

Mechanical life: 1,000,000 cycles

Degree of protection: IP 20

Degree of pollution: 3

Altitude: ≤ 2000 meter

Operation temperature: $-5 \dots +40$ °C

Relative humidity: $\leq 50\%$ (40 °C)

Storage temperature: $-25 \dots +75$ °C

Utilization category: AC-15

Contact capacity: U_e/I_e : 250 V/1.5 A

Connection capacity: 0.5 ... 1 mm²

Tightening torque: 0.5 Nm

Voltage Protection Relay

Series 3SRV1

Technical specifications

Monitoring function		Model	3SRV1-01	3SRV1-02	3SRV1-03	3SRV1-04	3SRV1-05	3SRV1-06	3SRV1-07	3SRV1-08	3SRV1-09	3SRV1-10	3SRV1-11	3SRV1-12	3SRV1-13	3SRV1-14	3SRV1-15	3SRV1-16	3SRV1-17	3SRV1-18	3SRV1-19
Overvoltage																					
Setting range	1.05 ... 1.30 Us		●		●	●	●	●	●	●	●	●		●	●	●	●	●			
	1.15 Us												●	●	●	●	●	●			
Time delay range	0.1 ... 10 s		●		●	●	●	●	●	●				●	●	●	●	●			
	2 s										●	●	●	●	●	●	●	●			
Undervoltage																					
Setting range	0.70 ... 0.95 Us			●	●	●	●	●	●	●	●	●									
	0.85 Us												●	●	●	●	●	●			
Time delay range	0.1 ... 10 s			●	●	●	●	●	●	●				●	●	●	●	●			
	2 s										●	●	●	●	●	●	●	●			
Unbalance																					
Setting range	5% ... 15% Us								●	●			●	●						●	
	8% Us						●	●			●	●			●	●					●
Time delay range	0.1 ... 10 s								●	●			●	●						●	
	2 s										●	●			●	●					●
Phase sequence					●	●	●	●	●	●		●	●	●	●	●	●	●			●
Phase loss		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PTC temperature				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			
Load side				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			

● Available

○ Optional

Note: 1. In circuits three-phase four wires, relays without phase sequence protection is available for voltage protection for single-phase and two-phase.

2. Load side protection is available for Phase to Phase.

Voltage Protection Relay

Series 3SRV1

Selection and ordering data

Model	Monitoring function			Extended	Rated supply voltage	Type code	Order code	
	Basic	Voltage setting range	Time delay setting range					
3SRV1-01	Overvoltage Phase loss	1.05 ... 1.30	0.1 ... 10 s		220 V	RV1-01/N220	36741	
					230 V	RV1-01/N230	36742	
					240 V	RV1-01/N240	36743	
					380 V	RV1-01/A380	36744	
					400 V	RV1-01/A400	36745	
3SRV1-02	Undervoltage Phase loss	0.70 ... 0.95	0.1 ... 10 s		220 V	RV1-02/N220	36747	
					230 V	RV1-02/N230	36748	
					240 V	RV1-02/N240	36749	
					380 V	RV1-02/A380	36750	
					400 V	RV1-02/A400	36751	
3SRV1-03	Overvoltage Undervoltage Phase loss	1.05 ... 1.30	0.1 ... 10 s		220 V	RV1-03/N220	36753	
					230 V	RV1-03/N230	36754	
					240 V	RV1-03/N240	36755	
					380 V	RV1-03/A380	36756	
					400 V	RV1-03/A400	36757	
	PTC temperature					415 V	RV1-03/A415	36758
						380 V	RV1-03P/A380	36759
						400 V	RV1-03P/A400	36760
						415 V	RV1-03P/A415	36761
						Load side		
400 V	RV1-03F/A400	36763						
415 V	RV1-03F/A415	36764						
3SRV1-04	Overvoltage Undervoltage Phase sequence Phase loss	1.05 ... 1.30	0.1 ... 10 s		220 V	RV1-04/N220	36765	
					230 V	RV1-04/N230	36766	
					240 V	RV1-04/N240	36767	
					380 V	RV1-04/A380	36768	
					400 V	RV1-04/A400	36769	
	PTC temperature					415 V	RV1-04/A415	36770
						380 V	RV1-04P/A380	36771
						400 V	RV1-04P/A400	36772
						415 V	RV1-04P/A415	36773
						Load side		
400 V	RV1-04F/A400	36775						
415 V	RV1-04F/A415	36776						
3SRV1-05	Overvoltage Undervoltage Unbalance Phase loss	1.05 ... 1.30	0.1 ... 10 s		220 V	RV1-05/N220	36777	
					230 V	RV1-05/N230	36778	
					240 V	RV1-05/N240	36779	
					380 V	RV1-05/A380	36780	
					400 V	RV1-05/A400	36781	
	PTC temperature		8%	2s		415 V	RV1-05/A415	36782
						380 V	RV1-05P/A380	36783
						400 V	RV1-05P/A400	36784
						415 V	RV1-05P/A415	36785
						Load side		
400 V	RV1-05F/A400	36787						
415 V	RV1-05F/A415	36788						
3SRV1-06	Overvoltage Undervoltage Unbalance Phase sequence Phase loss	1.05 ... 1.30	0.1 ... 10 s		220 V	RV1-06/N220	36789	
					230 V	RV1-06/N230	36790	
					240 V	RV1-06/N240	36791	
					380 V	RV1-06/A380	36792	
					400 V	RV1-06/A400	36793	
	PTC temperature		8%	2s		415 V	RV1-06/A415	36794
						380 V	RV1-06P/A380	36795
						400 V	RV1-06P/A400	36796
						415 V	RV1-06P/A415	36797
						Load side		
400 V	RV1-06F/A400	36799						
415 V	RV1-06F/A415	36800						

Voltage Protection Relay

Series 3SRV1

Selection and ordering data

Model	Monitoring function			Extended	Rated supply voltage	Type code	Order code		
	Basic	Voltage setting range	Time delay setting range						
3SRV1-07	Overvoltage Undervoltage Unbalance Phase loss	1.05 ... 1.30 0.70 ... 0.95 5% ... 15%	0.1 ... 10 s 0.1 ... 10 s 0.1 ... 10 s		220 V	RV1-07/N220	36801		
					230 V	RV1-07/N230	36802		
					240 V	RV1-07/N240	36803		
					380 V	RV1-07/A380	36804		
					400 V	RV1-07/A400	36805		
					415 V	RV1-07/A415	36806		
	PTC temperature					380 V	RV1-07P/A380	36807	
						400 V	RV1-07P/A400	36808	
						415 V	RV1-07P/A415	36809	
						Load side	380 V	RV1-07F/A380	36810
							400 V	RV1-07F/A400	36811
							415 V	RV1-07F/A415	36812
	3SRV1-08	Overvoltage Undervoltage Unbalance Phase sequence Phase loss	1.05 ... 1.30 0.70 ... 0.95 5% ... 15%	0.1 ... 10 s 0.1 ... 10 s 0.1 ... 10 s		220 V	RV1-08/N220	36813	
						230 V	RV1-08/N230	36814	
						240 V	RV1-08/N240	36815	
380 V						RV1-08/A380	36816		
400 V						RV1-08/A400	36817		
415 V						RV1-08/A415	36818		
PTC temperature						380 V	RV1-08P/A380	36819	
						400 V	RV1-08P/A400	36820	
						415 V	RV1-08P/A415	36821	
						Load side	380 V	RV1-08F/A380	36822
							400 V	RV1-08F/A400	36823
							415 V	RV1-08F/A415	36824
3SRV1-09		Overvoltage Undervoltage Unbalance Phase loss	1.05 ... 1.30 0.70 ... 0.95 8%	2 s 2 s 2 s		220 V	RV1-09/N220	36825	
						230 V	RV1-09/N230	36826	
						240 V	RV1-09/N240	36827	
	380 V					RV1-09/A380	36828		
	400 V					RV1-09/A400	36829		
	415 V					RV1-09/A415	36830		
	PTC temperature					380 V	RV1-09P/A380	36831	
						400 V	RV1-09P/A400	36832	
						415 V	RV1-09P/A415	36833	
						Load side	380 V	RV1-09F/A380	36834
							400 V	RV1-09F/A400	36835
							415 V	RV1-09F/A415	36836
	Reset/Test button					380 V	RV1-09RT/A380	36837	
						400 V	RV1-09RT/A400	36838	
						415 V	RV1-09RT/A415	36839	
3SRV1-10	Overvoltage Undervoltage Unbalance Phase sequence Phase loss	1.05 ... 1.30 0.70 ... 0.95 8%	2 s 2 s 2 s		220 V	RV1-10/N220	36840		
					230 V	RV1-10/N230	36841		
					240 V	RV1-10/N240	36842		
					380 V	RV1-10/A380	36843		
					400 V	RV1-10/A400	36844		
					415 V	RV1-10/A415	36845		
	PTC temperature					380 V	RV1-10P/A380	36846	
						400 V	RV1-10P/A400	36847	
						415 V	RV1-10P/A415	36848	
						Load side	380 V	RV1-10F/A380	36849
							400 V	RV1-10F/A400	36850
							415 V	RV1-10F/A415	36851
	Reset/Test button					380 V	RV1-10RT/A380	36852	
						400 V	RV1-10RT/A400	36853	
						415 V	RV1-10RT/A415	36854	

Voltage Protection Relay

Series 3SRV1

Selection and ordering data

Model	Monitoring function			Rated supply voltage	Type code	Order code	
	Basic	Voltage setting range	Time delay setting range				
3SRV1-11	Overvoltage	1.15 ... 2s	2 s	220 V	RV1-11/N220	36855	
				230 V	RV1-11/N230	36856	
				240 V	RV1-11/N240	36857	
				380 V	RV1-11/A380	36858	
				400 V	RV1-11/A400	36859	
	Undervoltage	0.85 ... 2s	2s	415 V	RV1-11/A415	36860	
				380 V	RV1-11P/A380	36861	
				400 V	RV1-11P/A400	36862	
	Unbalance	5% ... 15%	0.1 ... 10 s	415 V	RV1-11P/A415	36863	
				380 V	RV1-11F/A380	36864	
				400 V	RV1-11F/A400	36865	
	Phase loss			415 V	RV1-11RT/A415	36866	
				380 V	RV1-11RT/A380	36867	
				400 V	RV1-11RT/A400	36868	
	3SRV1-12	Overvoltage	1.5	2 s	220 V	RV1-12/N220	36870
					230 V	RV1-12/N230	36871
					240 V	RV1-12/N240	36872
					380 V	RV1-12/A380	36873
400 V					RV1-12/A400	36874	
Undervoltage		0.85	2 s	415 V	RV1-12/A415	36875	
				380 V	RV1-12P/A380	36876	
				400 V	RV1-12P/A400	36877	
Unbalance		5% ... 15%	0.1 ... 10 s	415 V	RV1-12P/A415	36878	
				380 V	RV1-12F/A380	36879	
				400 V	RV1-12F/A400	36880	
Phase sequence				415 V	RV1-12F/A415	36881	
				380 V	RV1-12RT/A380	36882	
				400 V	RV1-12RT/A400	36883	
Phase loss				415 V	RV1-12RT/A415	36884	
				380 V	RV1-13/N220	36885	
				400 V	RV1-13/A400	36889	
3SRV1-13		Overvoltage	1.15	2 s	220 V	RV1-13/N220	36885
	230 V				RV1-13/N230	36886	
	240 V				RV1-13/N240	36887	
	380 V				RV1-13/A380	36888	
	400 V				RV1-13/A400	36889	
	Undervoltage	0.85	2 s	415 V	RV1-13/A415	36890	
				380 V	RV1-13P/A380	36891	
				400 V	RV1-13P/A400	36892	
	Unbalance	8%	2 s	415 V	RV1-13P/A415	36893	
				380 V	RV1-13F/A380	36894	
				400 V	RV1-13F/A400	36895	
	Phase loss			415 V	RV1-13F/A415	36896	
				380 V	RV1-13RT/A380	36897	
				400 V	RV1-13RT/A400	36898	
	3SRV1-14	Overvoltage	1.15	2 s	220 V	RV1-14/N220	36900
					230 V	RV1-14/N230	36901
					240 V	RV1-14/N240	36902
					380 V	RV1-14/A380	36903
400 V					RV1-14/A400	36904	
Undervoltage		0.85	2 s	415 V	RV1-14/A415	36905	
				380 V	RV1-14P/A380	36906	
				400 V	RV1-14P/A400	36907	
Unbalance		8%	2 s	415 V	RV1-14P/A415	36908	
				380 V	RV1-14F/A380	36909	
				400 V	RV1-14F/A400	36910	
Phase sequence				415 V	RV1-14F/A415	36911	
				380 V	RV1-14RT/A380	36912	
				400 V	RV1-14RT/A400	36913	
Phase loss				415 V	RV1-14RT/A415	36914	

Voltage Protection Relay

Series 3SRV1

Selection and ordering data

Model	Monitoring function			Rated supply voltage	Type code	Order code
	Basic	Voltage setting range	Time delay setting range			
3SRV1-15	Overvoltage	1.15	2 s	220 V	RV1-15/N220	36915
	Undervoltage	0.85	2s	230 V	RV1-15/N230	36916
	Phase loss			240 V	RV1-15/N240	36917
				380 V	RV1-15/A380	36918
				400 V	RV1-15/A400	36919
			415 V	RV1-15/A415	36920	
3SRV1-16	Overvoltage	1.5	2 s	220 V	RV1-16/N220	36921
	Undervoltage	0.85	2 s	230 V	RV1-16/N230	36922
	Phase sequence			240 V	RV1-16/N240	36923
	Phase loss			380 V	RV1-16/A380	36924
				400 V	RV1-16/A400	36925
			415 V	RV1-16/A415	36926	
3SRV1-17	Undervoltage	5% ... 15%	0.1 ... 10 s	220 V	RV1-17/N220	36927
	Phase sequence			230 V	RV1-17/N230	36928
	Phase loss			240 V	RV1-17/N240	36929
				380 V	RV1-17/A380	36930
				400 V	RV1-17/A400	36931
			415 V	RV1-17/A415	36932	
3SRV1-18	Phase sequence			220 V	RV1-18/N220	36933
	Phase loss			230 V	RV1-18/N230	36934
				240 V	RV1-18/N240	36935
				380 V	RV1-18/A380	36936
				400 V	RV1-18/A400	36937
			415 V	RV1-18/A415	36938	
3SRV1-19	Undervoltage	8%	2 s	220 V	RV1-19/N220	36939
	Phase sequence			230 V	RV1-19/N230	36940
	Phase loss			240 V	RV1-19/N240	36941
				380 V	RV1-19/A380	36942
				400 V	RV1-19/A400	36943
			415 V	RV1-19/A415	36944	

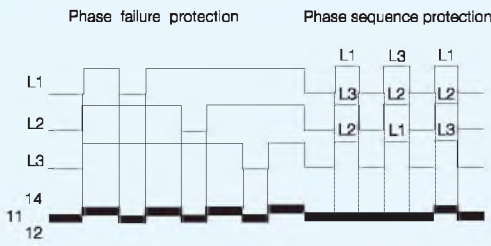
Voltage Protection Relay

Series 3SRV1

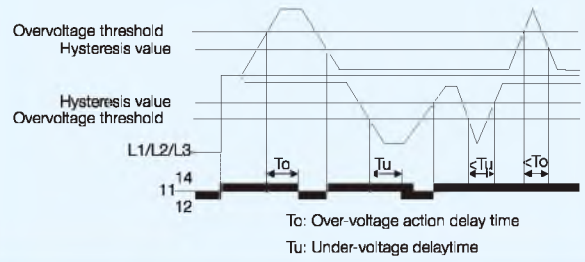
Work sequence diagram

4

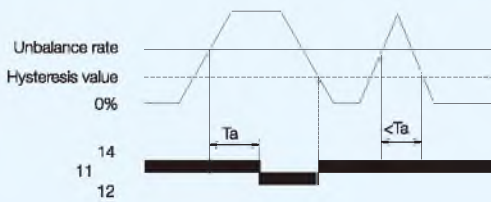
Phase failure and phase sequence protection



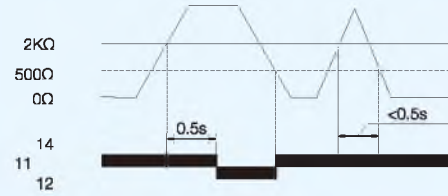
Over-voltage and under-voltage protection



Unbalance protection function chart

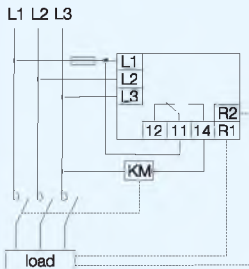


PTC temperature protection function chart

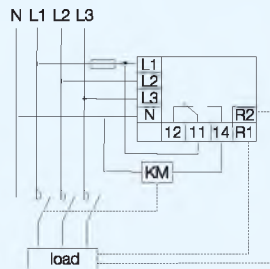


Wiring diagram

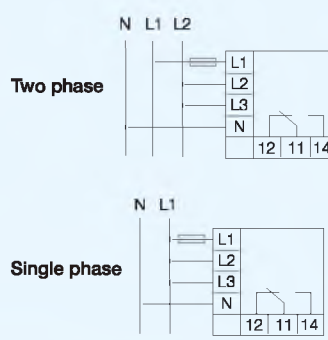
3 phase 3 wire (PTC protection)



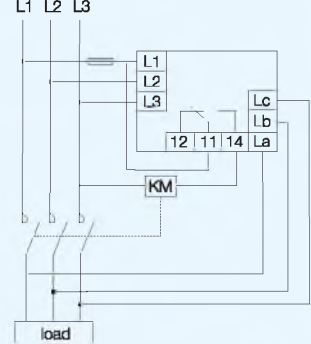
3 phase 4 wire (PTC protection)



Single phase and Two phase



3 phase 3 wire (Load side protection)



Outline and installation dimensions



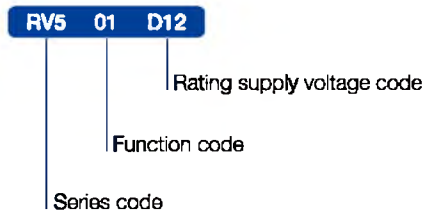
Voltage Protection Relay

Series 3SRV5

Applications and functions

- Phase failure protection and phase sequence protection
- Over-voltage and under-voltage protection
- Three phase unbalance protection
- Widely used in industry control system, power compensation system, air conditioning system, Motor control system.

Instruction of type code



Features

- Micro processor base
- With high reliability and high anti- interference ability.
- Modular design, 18 mm in width.
- TRMS measurement, with accuracy $\leq 1\%$. AC/DC purpose;
- Wide range of frequency measuring of 45Hz~65Hz in AC circuit LED indication.
- Communicating function is available by using Modbus communicating module

Technical specifications

		Single phase	Three phase
Rated supply voltage	DC	12 V	-
	DC/AC	24 ... 48 V	-
		110 ... 240 V	-
Supply voltage limit	AC	220 V	220 ... 460 V
	DC	7 ... 20 V	-
		DC/AC	15 ... 100 V
Voltage range	AC	50 ... 270 V	-
	DC	180 ... 270 V	187 ... 529 V
		DC/AC	9 ... 15 V
Rated supply frequency	AC	20 ... 80 V	-
	DC	65 ... 260 V	-
		AC	180 ... 260 V
Measure range	DC	0	-
Phase failure sensitivity	AC	50/60 Hz $\pm 10\%$	50/60 Hz $\pm 10\%$
Measurement error	AC	-	176 ... 552 V
Run up delay at power up		-	0.7 Un
Knob setting accuracy		< 1% over the full range with voltage variation	
Reset delay		0.5 s	
Rated insulation voltage		0.01	
Pollution degree		1000 ms	
Protection degree		460 V	
Electric life		3	
Mechanical life		IP20	
Conditional thermal current		100,000 cycles	
Utilization category		1,000,000 cycles	
Contact capacity		5 A	
Output type		AC-15	
Altitude		Ue/Ie: 250 V / 1.5 A	
Operation temperature		1 C/O	
Relative humidity		≤ 2000 meter	
Storage temperature		-5 ... +40 °C	
Connection capacity		$\leq 50\%$ at 40 °C	
Tightening torque		-25 ... +75 °C	
Mounting		0.5 ... 2.5 mm ²	
		0.5 Nm	
		on 35 mm DIN rail conforming to EN/IEC 60715	



Voltage Protection Relay

Series 3SRV5

Technical specifications

Monitoring function		Single phase	Three phase										
Function	Setting range	3SRV5-01	3SRV5-02	3SRV5-03	3SRV5-04	3SRV5-05	3SRV5-06	3SRV5-07	3SRV5-08	3SRV5-09	3SRV5-10	3SRV5-11	3SRV5-12
Overvoltage	2% ... 20%	'adj				●		●	●	●	●		
	3%		●										
	15%												●
Undervoltage	-20% ... -2%						●	●	●	●	●		
	-3%		●										
	-15%												●
Unbalance	5% ... 15%				●						●		
	8%									●		●	●
Time delay	0.1 ... 10 s	●			●	●	●	●	●	●			
	2 s										●	●	●
Phase sequence				●	●				●	●	●	●	●
Phase loss			●	●	●	●	●	●	●	●	●	●	●


Note

adj: Overvoltage or undervoltage is adjustable, the voltage setting range is 5% ... 20%.


Voltage Protection Relay Series 3SRV5

Selection and ordering data

Singe phase

	Model	Over voltage	Under voltage	Rated voltage	Type code	Order code	
	3SRV5-01	Adjustable		DC 12V	RV5-01/D12	37666	
				AC/DC 24V-48V	RV5-01/AD48	37667	
				AC/DC 110V-240V	RV5-01/AD240	37668	
				AC 220V	RV5-01/A220	37669	
	3SRV5-02				DC 12V	RV5-02/D12	37674
					AC/DC 24V-48V	RV5-02/AD48	37675
					AC/DC 110V-240V	RV5-02/AD240	37676
					AC 220V	RV5-02/A220	37677

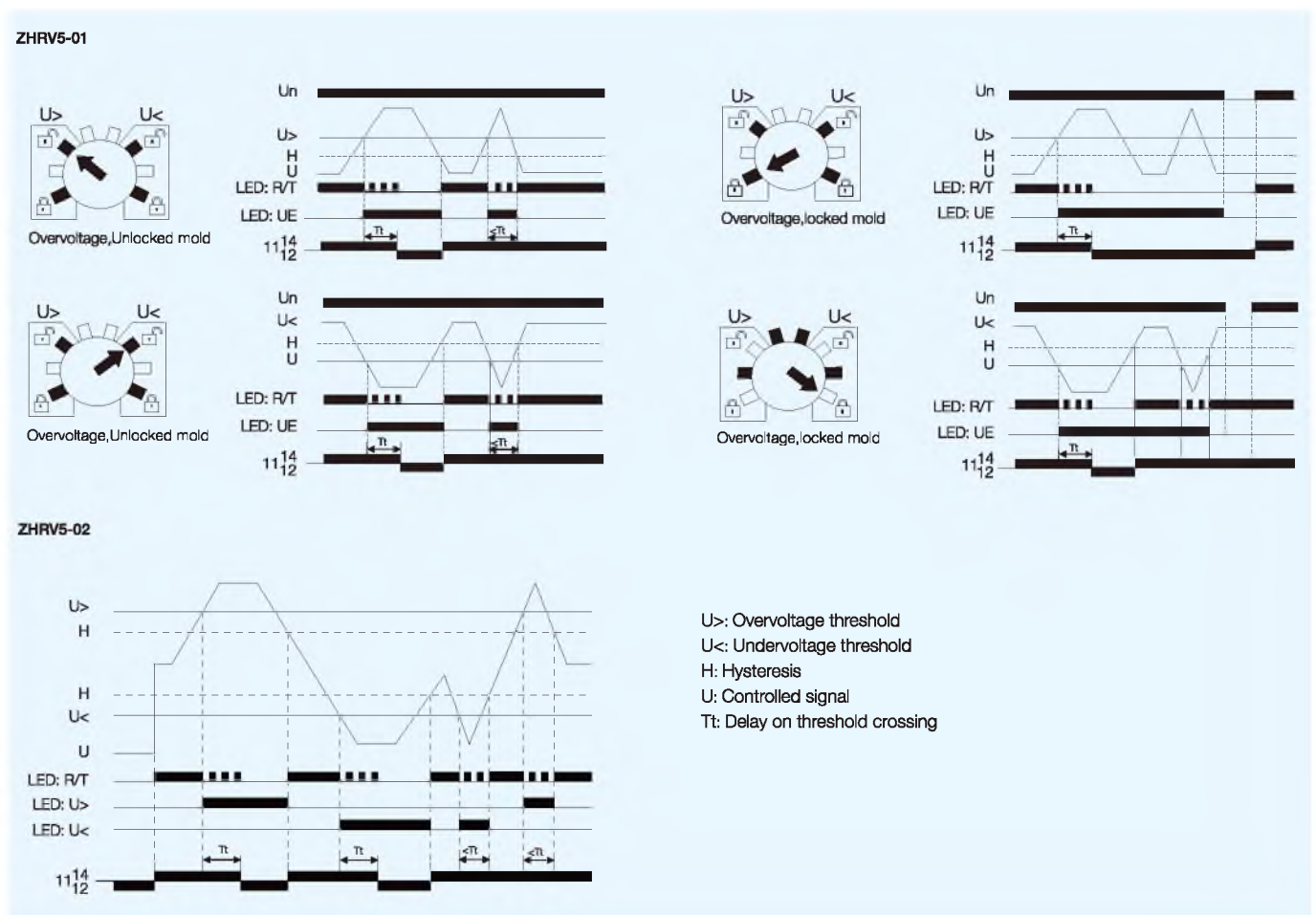
Three phase

	Model	Rated voltage	Type code	Order code
	3SRV5-03	AC 3 × 220V-3 × 460V	RV5-03/M460	37678
	3SRV5-04	AC 3 × 220V-3 × 460V	RV5-04/M460	37679
	3SRV5-05	AC 3 × 220V-3 × 460V	RV5-05/M460	37680
	3SRV5-06	AC 3 × 220V-3 × 460V	RV5-06/M460	37681
	3SRV5-07	AC 3 × 220V-3 × 460V	RV5-07/M460	37682
	3SRV5-08	AC 3 × 220V-3 × 460V	RV5-08/M460	37683
	3SRV5-09	AC 3 × 220V-3 × 460V	RV5-09/M460	37684
	3SRV5-10	AC 3 × 220V-3 × 460V	RV5-10/M460	37685
	3SRV5-11	AC 3 × 220V-3 × 460V	RV5-11/M460	37686
	3SRV5-12	AC 3 × 220V-3 × 460V	RV5-12/M460	37687

Note:
Please see functions in technical specifications in page 41

Work sequence diagram

Singe phase

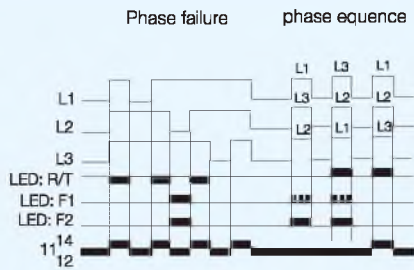


Voltage Protection Relay Series 3SRV5

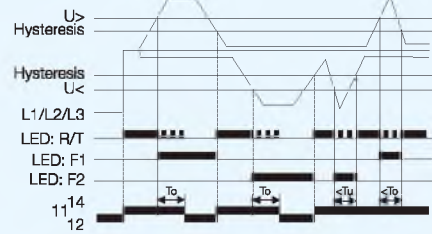
Work sequence diagram

Three phase

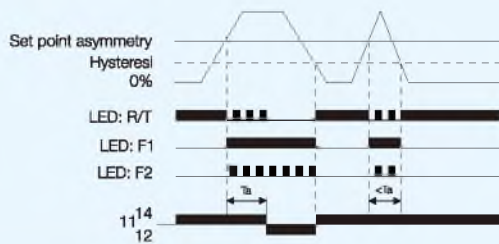
Phase failure and phase sequence function diagram



Overvoltage and undervoltage function diagram



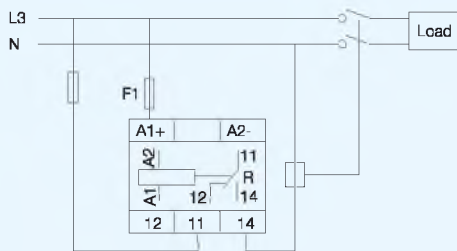
Asymmetry function diagram



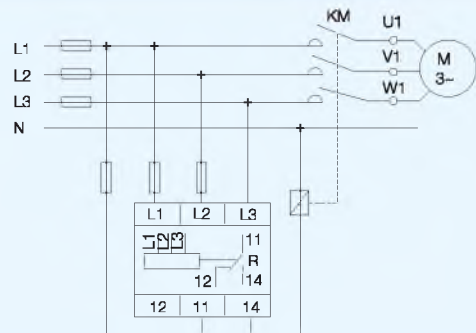
T_o : Overvoltage threshold tripping delay
 T_u : Undervoltage threshold tripping delay
 T_a : Asymmetry threshold tripping delay

Wiring diagram

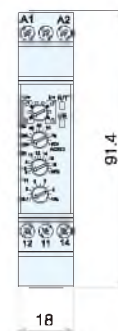
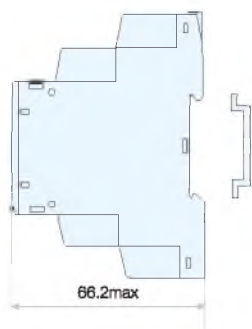
Single phase



Three phase



Outline and installation dimensions



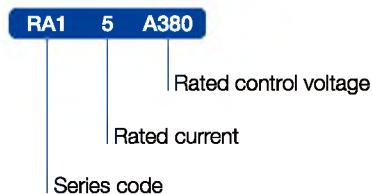
Unit: mm

Motor Protector Series 3SRA1

Applications and functions

- Upgraded relay to protect motor
- Overload, phase failure, protection phase, unbalance protection
- Used in Industry control system

Instruction of type code



4

Features

- Microprocessor based
- Overload, phase failure, rotor-locked, unbalance protection
- Current setting by potentiometer
- Tripping class selectable
- LED indication for three phase current,
- Can be started without load

Technical specifications

Rated control supply voltage	AC 220 V, AC 380 V					
Current setting range	1 ... 5 A	2 ... 10 A	6 ... 30 A	16 ... 80 A	40 ... 200 A	80 ... 400 A
Applicable motor power	0.5 ... 2.5 kW	1 ... 5 kW	3 ... 15 kW	8 ... 40 kW	20 ... 100 kW	40 ... 200 kW
Rated frequency	50 Hz					
Current setting accuracy	± 5%					
Rated operating voltage	AC 380 V					
Rated insulation voltage	AC 690 V					
Power consumption	≤ 1.5 VA					
Reset mode	Reset upon power off					
Quantity of contact						
Electrical life	100,000 cycles					
Mechanical life	1,000,000 cycles					
Conventional thermal current	5 A					
Utilization category	AC-15					
Contact capacity	Ue/Ie: AC 240 V / 1.5 A, AC 380 V / 0.95 A					
Altitude	2000 meter					
Degree of protection	IP20					
Pollution degree	3					
Operation temperature	-5 ... +40 °C					
Relative humidity	≤ 50% at 40 °C					
Storage temperature	-25 ... +75 °C					

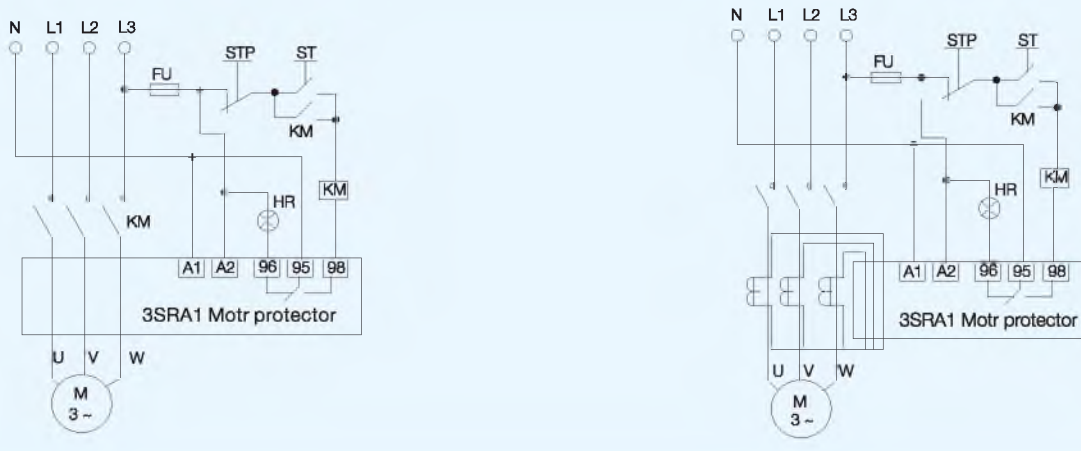
Selection and ordering data

3SRA1	Number of poles	Rated voltage	Rated current range	Rated power range	Type code	Order code
	3P	380V	1-5 A	0.75-2.2 KW	RA1-5/A380	37817
			2-10 A	1.1-3.7 KW	RA1-10/A380	37818
			6-30 A	3.7-15 KW	RA1-30/A380	37819
			16-80 A	11-37 KW	RA1-80/A380	37820
			40-200 A	22-90 KW	RA1-200/A380	37821
			80-400 A	45-200 KW	RA1-400/A380	37822

Motor Protector Series 3SRA1

Wiring diagram

4

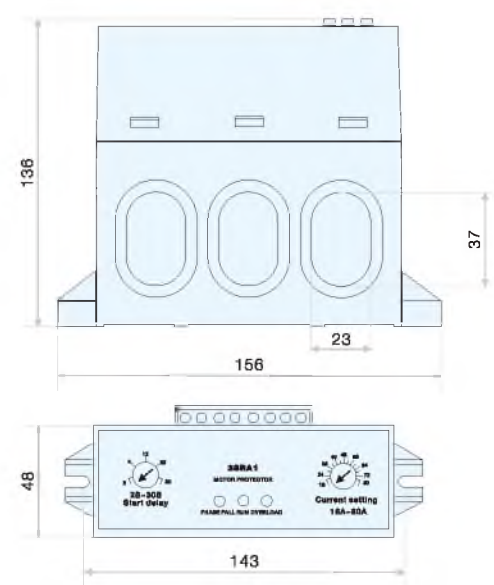
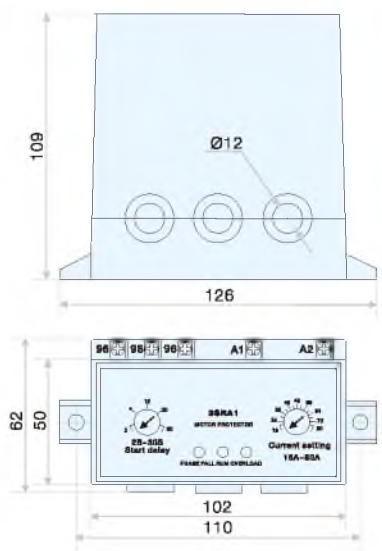


Outline and installation dimensions

1...5A, 2...10A, 5...30A, 16...80A

40...200A, 80...400A

Unit: mm



Technical specifications

- Standard: IEC 60050-445
- Accuracy (class):
- Repeat error: 1%~2% max
- Setting error: 5%~10% max
- voltage error: 1%~5% max
- temp. Error: 2% max
- Rated Voltage (V DC/AC): 12~240
- Indicator Operation:
- ON,UP Operation;Time Operation flicker
- O/P contact capacity (A): 5
- Mechanical life (times): 10⁶
- Electrical life (times): 10⁵
- Reset time: 0.1-0.5 second max
- Self-consumed power (VA): 2
- Ambient temperature (°C): -10~+55
- Ambient humidity: 35~85% RH



Selection and ordering data

	Full timing range	Rated voltage (V)	3SST3PA		3SST3PC		
			Type code	Order code	Type code	Order code	
3SST3P (ON-UP operation) Matched socket: ● Surface:3SPF-083A (see page 53-55) ● Flush:US-08, 3SP3G-08 ● Time-range gears:Four	0.05-0.5s/5s/30s/3min	DC24V	ST3PA AD24	34359	ST3PC AD24	34380	
		AC110V	ST3PA AA110	34360	ST3PC AA110	34381	
		0.1-10s/60s/6min	DC24V	ST3PA BD24	34362	ST3PC BD24	34383
			AC110V	ST3PA BA110	34363	ST3PC BA110	34384
		0.05-5s/50s/5min/30min	DC24V	ST3PA CD24	34365	ST3PC CD24	34386
			AC110V	ST3PA CA110	34366	ST3PC CA110	34387
		1-10s/100s/10min/60min	DC24V	ST3PA DD24	34368	ST3PC DD24	34389
			AC110V	ST3PA DA110	34369	ST3PC DA110	34390
		5-60s/10min/60min/6h	DC24V	ST3PA ED24	34371	ST3PC ED24	34392
			AC110V	ST3PA EA110	34372	ST3PC EA110	34393
		0.25-2min/20min/2h/12h	DC24V	ST3PA FD24	34374	ST3PC FD24	34395
			AC110V	ST3PA FA110	34375	ST3PC FA110	34396
		0.5-4min/40min/4h/24h	DC24V	ST3PA GD24	34377	ST3PC GD24	34398
			AC110V	ST3PA GA110	34378	ST3PC GA110	34399
			AC220V	ST3PA GA220	34379	ST3PC GA220	34400



	Full timing range	Rated voltage (V)	3SH3BA		3SH3BA-8		3SH3BA-8H	
			Type code	Order code	Type code	Order code	Type code	Order code
3SH3BA (time operation flicker) ● Matched socket: ● Surface: 3SPF113A (E) 3SP2CF-08, 3SPS-08 (see page 53-55) ● Flush: US-11, US-08, 3SP3G-08 (see page 53-55) ● Time-range gears: Single	0.5s-100h	DC12V	H3BA D12	34401	H3BA8 D12	34405	H3BA8H D12	34409
		DC24V	H3BA D24	34402	H3BA8 D24	34406	H3BA8H D24	34410
		AC110V	H3BA A110	34403	H3BA8 A110	34407	H3BA8H A110	34411
		AC220V	H3BA A220	34404	H3BA8 A220	34408	H3BA8H A220	34412



Multi Range Time Relays

Selection and ordering data

4



- 3SH3CT (ON-UP operation)**
 Matched socket:
 ● Surface: 3SPF083A (E) (see page 53-55)
 ● Flush: US-08, 3SP3G-08 (see page 53-55)

	Rated Voltage (V)	Calibration	Type code	Order code
	AC 220	1S	H3CT 1SA220	34601
	AC 110	1S	H3CT 1SA110	34602
	DC 24	1S	H3CT 1SD24	34603
	AC 220	10S	H3CT 10SA220	34604
	AC 110	10S	H3CT 10SA110	34605
	DC 24	10S	H3CT 10SD24	34606
	AC 220	1M	H3CT 1MA220	34607
	AC 110	1M	H3CT 1MA110	34608
	DC 24	1M	H3CT 1MD24	34609
	AC 220	10M	H3CT 10MA220	34610
	AC 110	10M	H3CT 10MA110	34611
	DC 24	10M	H3CT 10MD24	34612



- 3SH3CT-8H (time operation flicker)**
 Matched socket:
 ● Surface: 3SPF083A (E) (see page 53-55)
 ● Flush: US-08, 3SP3G-08 (see page 53-55)
 ● Time-range gears: Four

	Rated Voltage (V)	Full timing range	Type code	Order code
	DC 12	1S,10S,1M,10M	H3CT8HA D12	34613
	DC 24	1S,10S,1M,10M	H3CT8HA D24	34614
	AC 110	1S,10S,1M,10M	H3CT8HA A110	34615
	AC 220	1S,10S,1M,10M	H3CT8HA A220	34616
	DC 12	3S,30S,3M,30M	H3CT8HB D12	34617
	DC 24	3S,30S,3M,30M	H3CT8HB D24	34618
	AC 110	3S,30S,3M,30M	H3CT8HB A110	34619
	AC 220	3S,30S,3M,30M	H3CT8HB A220	34620
	DC 12	6S,60S,6M,60M	H3CT8HC D12	34621
	DC 24	6S,60S,6M,60M	H3CT8HC D24	34622
	AC 110	6S,60S,6M,60M	H3CT8HC A110	34623
	AC 220	6S,60S,6M,60M	H3CT8HC A220	34624
	DC 12	1M,10M,1H,10H	H3CT8HD D12	34625
	DC 24	1M,10M,1H,10H	H3CT8HD D24	34626
	AC 110	1M,10M,1H,10H	H3CT8HD A110	34627
	AC 220	1M,10M,1H,10H	H3CT8HD A220	34628
	DC 12	3M,30M,3H,30H	H3CT8HE D12	34629
	DC 24	3M,30M,3H,30H	H3CT8HE D24	34630
	AC 110	3M,30M,3H,30H	H3CT8HE A110	34631
	AC 220	3M,30M,3H,30H	H3CT8HE A220	34632



- 3SH3CT-8 (ON-UP operation)**
 Matched socket:
 ● Surface: 3SPF083A (E) (see page 53-55)
 ● Flush: US-08, 3SP3G-08 (see page 53-55)
 ● Time-range gears: Four

	Rated Voltage (V)	Full timing range	Type code	Order code
	DC 12	1S,10S,1M,10M	H3CT8A D12	34633
	DC 24	1S,10S,1M,10M	H3CT8A D24	34634
	AC 110	1S,10S,1M,10M	H3CT8A A110	34635
	AC 220	1S,10S,1M,10M	H3CT8A A220	34636
	DC 12	3S,30S,3M,30M	H3CT8B D12	34637
	DC 24	3S,30S,3M,30M	H3CT8B D24	34638
	AC 110	3S,30S,3M,30M	H3CT8B A110	34639
	AC 220	3S,30S,3M,30M	H3CT8B A220	34640
	DC 12	6S,60S,6M,60M	H3CT8C D12	34641
	DC 24	6S,60S,6M,60M	H3CT8C D24	34642
	AC 110	6S,60S,6M,60M	H3CT8C A110	34643
	AC 220	6S,60S,6M,60M	H3CT8C A220	34644
	DC 12	1M,10M,1H,10H	H3CT8D D12	34645
	DC 24	1M,10M,1H,10H	H3CT8D D24	34646
	AC 110	1M,10M,1H,10H	H3CT8D A110	34647
	AC 220	1M,10M,1H,10H	H3CT8D A220	34648
	DC 12	3M,30M,3H,30H	H3CT8E D12	34649
	DC 24	3M,30M,3H,30H	H3CT8E D24	34650
	AC 110	3M,30M,3H,30H	H3CT8E A110	34651
	AC 220	3M,30M,3H,30H	H3CT8E A220	34652

Selection and ordering data

	Rated Voltage (V)	Calibration	Type code	Order code
3SH3Y (ON-UP operation)	DC 24	5S	H3Y 5SD24	34653
Matched socket:	DC 24	10S	H3Y 10SD24	34654
● Surface:3SPF083A (E), 3SPYF14A (E) (see page 53-55)	DC 24	30S	H3Y 30SD24	34655
● Flush:With Y-20 adapter	DC 24	60S	H3Y 60SD24	34656
	AC 110	5S	H3Y 5SD110	34657
	AC 110	10S	H3Y 10SD110	34658
	AC 110	30S	H3Y 30SD110	34659
	AC 110	60S	H3Y 60SD110	34660
	AC 220	5S	H3Y 5SD220	34661
	AC 220	10S	H3Y 10SD220	34662
	AC 220	30S	H3Y 30SD220	34663
	AC 220	60S	H3Y 60SD220	34664



Power Relays



Technical specifications

- Standard: IEC 60255-1
- Contact arrangement: 2Z, 3Z, 4Z
- Rated Voltage (V): Max. AC 250, DC125
- Rated Current (A): 3, 5, 10
- Rated power (W): 280 for 2Z, 140 for 3Z, 84 for 4Z
- Holding voltage: 80% Un for AC coil, 75% Un for DC coil
- Drop-out voltage: 30% Un for AC coil, 10% Un for DC coil
- Operating voltage range (Un): (80% -110%)
- Contact material: Silver alloy
- Contact resistance (mΩ): ≥50
- Installation resistance (mΩ): ≥100
- Electrical life (times): 10⁵
- Mechanical life (times): 10⁷
- Ambient temperature (°C): -5--+55



4

Selection and ordering data

	Contact Type	Matched socket	Dimension (mm)	Rated voltage (V)	Accessory	Type code	Order code
	2Z	3SPTF08A, 3SPTF08A (E), 3SPT08 (see page 53-55)	27.5X21.5X35	DC 12V	-	J4L2 D12	34413
				DC 24V	-	J4L2 D24	34414
				AC 110V	-	J4L2 A110	34415
				AC 220V	-	J4L2 A220	34416
				DC 12V	with indicator	J4L2N D12	34417
				DC 24V	with indicator	J4L2N D24	34418
				AC 110V	with indicator	J4L2N A110	34419
				AC 220V	with indicator	J4L2N A220	34420
				DC 12V	with indicator and Test button	J4L2NS D12	34421
				DC 24V	with indicator and Test button	J4L2NS D24	34422
				AC 110V	with indicator and Test button	J4L2NS A110	34423
				AC 220V	with indicator and Test button	J4L2NS A220	34424
	2Z	3SPTF08A, 3SPTF08A (E), 3SPT08 (see page 53-55)	27.5X21.5X35	DC 12V	-	J4M2 D12	34425
				DC 24V	-	J4M2 D24	34426
				AC 110V	-	J4M2 A110	34427
				AC 220V	-	J4M2 A220	34428
				DC 12V	with indicator	J4M2N D12	34429
				DC 24V	with indicator	J4M2N D24	34430
				AC 110V	with indicator	J4M2N A110	34431
				AC 220V	with indicator	J4M2N A220	34432
				DC 12V	with indicator and Test button	J4M2NS D12	34433
				DC 24V	with indicator and Test button	J4M2NS D24	34434
				AC 110V	with indicator and Test button	J4M2NS A110	34435
				AC 220V	with indicator and Test button	J4M2NS A220	34436

Selection and ordering data




Contact Type	Matched socket	Dimension (mm)	Rated voltage (V)	Accessory	Type code	Order code
	3SPYF11A (E), (see page 53-55)	27.5X21.5X35	DC 12V	-	J4M3 D12	34437
			DC 24V	-	J4M3 D24	34438
			AC 110V	-	J4M3 A110	34439
			AC 220V	-	J4M3 A220	34440
			DC 12V	with indicator	J4M3N D12	34441
			DC 24V	with indicator	J4M3N D24	34442
			AC 110V	with indicator	J4M3N A110	34443
			AC 220V	with indicator	J4M3N A220	34444
			DC 12V	with indicator and Test button	J4M3NS D12	34445
			DC 24V	with indicator and Test button	J4M3NS D24	34446
			AC 110V	with indicator and Test button	J4M3NS A110	34447
			AC 220V	with indicator and Test button	J4M3NS A220	34448
				3SPYF14A (E), (see page 53-55)	27.5X21.5X35	DC 12V
DC 24V	-	J4M4 D24				34450
AC 110V	-	J4M4 A110				34451
AC 220V	-	J4M4 A220				34452
DC 12V	with indicator	J4M4N D12				34453
DC 24V	with indicator	J4M4N D24				34454
AC 110V	with indicator	J4M4N A110				34455
AC 220V	with indicator	J4M4N A220				34456
DC 12V	with indicator and Test button	J4M4NS D12				34457
DC 24V	with indicator and Test button	J4M4NS D24				34458
AC 110V	with indicator and Test button	J4M4NS A110				34459
AC 220V	with indicator and Test button	J4M4NS A220				34460
	3SPF083A (see page 53-55), 3SPF083A (E), (see page 53-55) 3SUS-08 (see page 53-55)	34.5X34.5X52				DC 12V
			DC 24V	with indicator	J52N D24	34462
			AC 110V	with indicator	J52N A110	34463
			AC 220V	with indicator	J52N A220	34464
			DC 12V	with test button	J52S D12	34465
			DC 24V	with test button	J52S D24	34466
			AC 110V	with test button	J52S A110	34467
			AC 220V	with test button	J52S A220	34468
			DC 12V	with indicator and Test button	J52NS D12	34469
			DC 24V	with indicator and Test button	J52NS D24	34470
			AC 110V	with indicator and Test button	J52NS A110	34471
			AC 220V	with indicator and Test button	J52NS A220	34472
				3SPF113A, (see page 53-55) 3SPF113A (E), (see page 53-55) 3SUS-11 (see page 53-55)	34.5X34.5X52	DC 12V
DC 24V	with indicator	J53N D24				34474
AC 110V	with indicator	J53N A110				34475
AC 220V	with indicator	J53N A220				34476
DC 12V	with test button	J53S D12				34477
DC 24V	with test button	J53S D24				34478
AC 110V	with test button	J53S A110				34479
AC 220V	with test button	J53S A220				34480
DC 12V	with indicator and Test button	J53NS D12				34481
DC 24V	with indicator and Test button	J53NS D24				34482
AC 110V	with indicator and Test button	J53NS A110				34483
AC 220V	with indicator and Test button	J53NS A220				34484

Power Relays


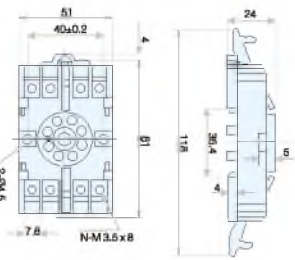
Selection and ordering data

	Contact Type	Matched socket	Dimension (mm)	Rated voltage (V)	Accessory	Type code	Order code
	2Z	3S90.22 (see page 53-55)	37X33X54	DC 12V	-	60.2 D12	34485
				DC 24V	-	60.2 D24	34486
				AC 110V	-	60.2 A110	34487
				AC 220V	-	60.2 A220	34488
	3Z	3S90.23 (see page 53-55)	37X33X59	DC 12V	-	60.3 D12	34489
				DC 24V	-	60.3 D24	34490
				AC 110V	-	60.3 A110	34491
				AC 220V	-	60.3 A220	34492
	2Z	3S90.23 (see page 53-55)	37X33X59	DC 12V	-	70.2 D12	34493
				DC 24V	-	70.2 D24	34494
				AC 110V	-	70.2 A110	34495
				AC 220V	-	70.2 A220	34496
	3Z	3S90.23 (see page 53-55)	37X33X59	DC 12V	-	70.3 D12	34497
				DC 24V	-	70.3 D24	34498
				AC 110V	-	70.3 A110	34499
				AC 220V	-	70.3 A220	34500
	2Z	3SPTT08A, 3SPTT08A (E), 3SPT08, 3SPT08-0	27.5X21X36	DC 12V	-	58.02 D12	34501
				DC 24V	-	58.02 D24	34502
				AC 110V	-	58.02 A110	34503
				AC 220V	-	58.02 A220	34504
	2Z	3SPTT08A, 3SPTT08A (E), 3SPT08, 3SPT08-0	27.5X21X36	DC 12V	-	56.02 D12	34505
				DC 24V	-	56.02 D24	34506
				AC 110V	-	56.02 A110	34507
				AC 220V	-	56.02 A220	34508
	2Z	3SPYF08A, (see page 53-55) 3SPYF08A (E) (see page 53-55)	27.5X21X34	DC 12V	-	55.02 D12	34509
				DC 24V	-	55.02 D24	34510
				AC 110V	-	55.02 A110	34511
				AC 220V	-	55.02 A220	34512


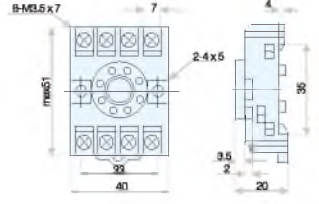
Selection and ordering data

Contact Type	Matched socket	Dimension (mm)	Rated voltage (V)	Accessory	Type code	Order code
 4Z	3SPYF14A, 3SPYF14A (E), 3SPY14, 3SPY14-0 (see page 53-55)	27.5X21X34	DC 12V	-	55.04 D12	34513
			DC 24V	-	55.04 D24	34514
			AC 110V	-	55.04 A110	34515
			AC 220V	-	55.04 A220	34516
 2Z	3SPYF08A, 3SPYF08A (E), 3SPY08, 3SPY08-0 (see page 53-55)	27.5X21X34	DC 12V	-	57.02 D12	34517
			DC 24V	-	57.02 D24	34518
			AC 110V	-	57.02 A110	34519
			AC 220V	-	57.02 A220	34520
 4Z	3SPYF14A, 3SPYF14A (E), 3SPY14, 3SPY14-0 (see page 53-55)	27.5X21X34	DC 12V	-	57.04 D12	34521
			DC 24V	-	57.04 D24	34522
			AC 110V	-	57.04 A110	34523
			AC 220V	-	57.04 A220	34524


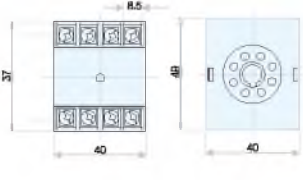
Relay Sockets


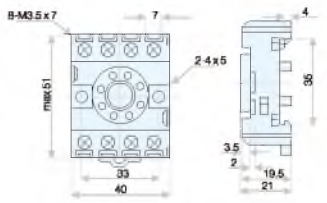
Type code: 3SP2CF-08
Order code: 34525


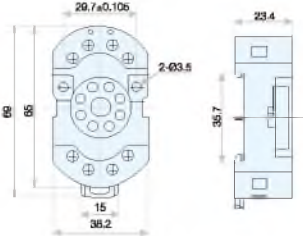
Type code: 3SPF083A
Order code: 34526


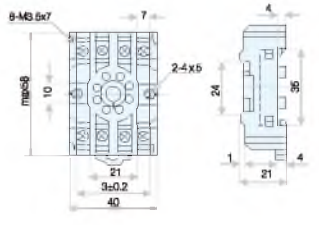
Type code: 3SP3G-08
Order code: 34527


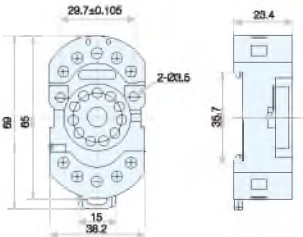
Type code: 3SPF083A-E
Order code: 34528


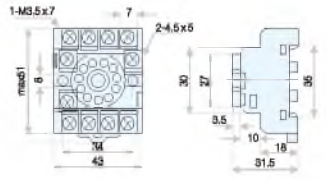
Type code: 3S90.22
Order code: 34529

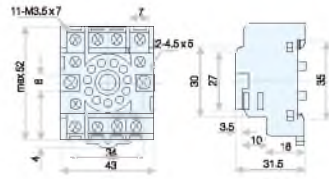
Type code: 3SPF085A
Order code: 34530

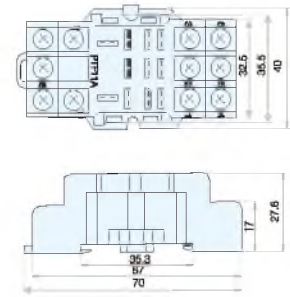
Type code: 3S90.23
Order code: 34531

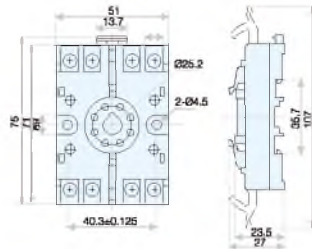
Type code: 3SPF113A
Order code: 34532



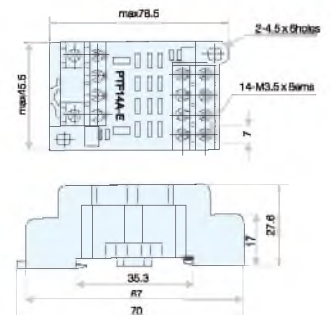
Type code: 3SPF113A-E
Order code: 34533



Type code: 3SPTF11A
Order code: 34534



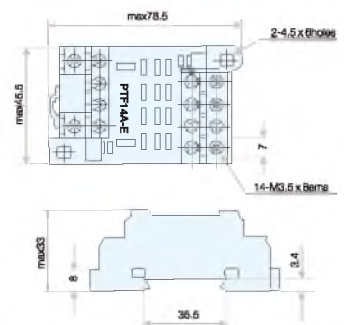
Type code: 3SPS-08
Order code: 34535



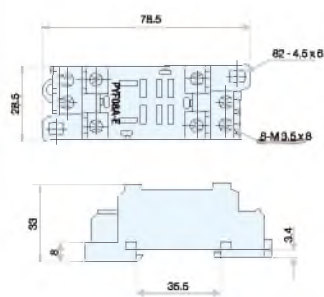
Type code: 3SPTF14A
Order code: 34536



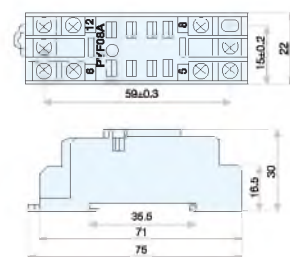
Type code: 3SPTF08A
Order code: 34537



Type code: 3SPTF14A-E
Order code: 34538

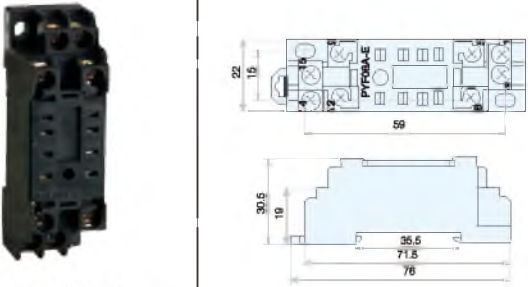


Type code: 3SPTF08A-E
Order code: 34539

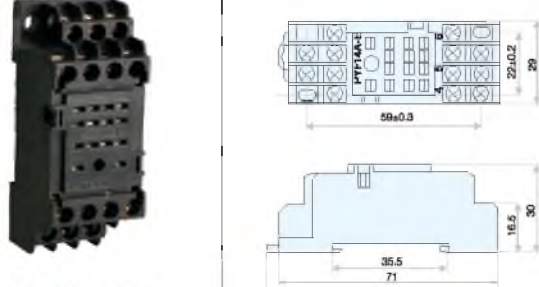


Type code: 3SPYF08A
Order code: 34540

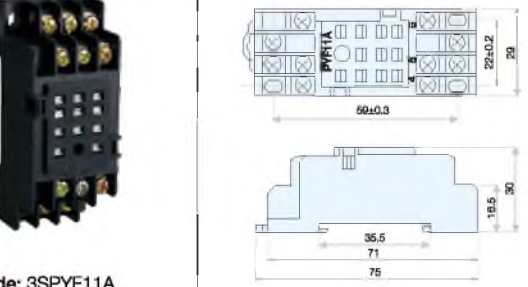
Relay Sockets



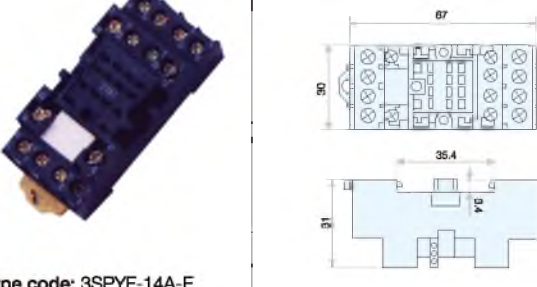
Type code: 3SPYF08A-E
Order code: 34541



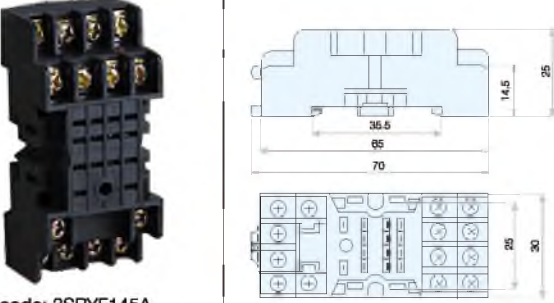
Type code: 3SPYF14A-E
Order code: 34542



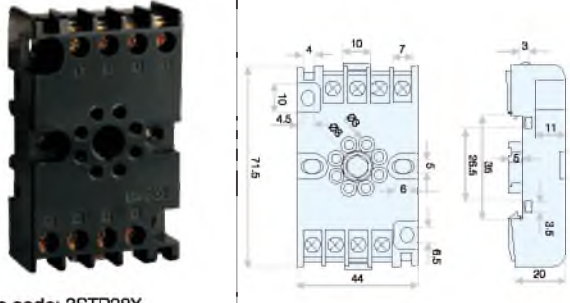
Type code: 3SPYF11A
Order code: 34543



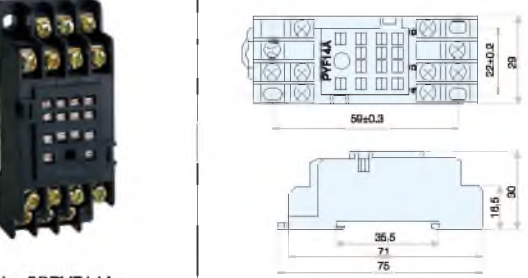
Type code: 3SPYF-14A-E
Order code: 34544



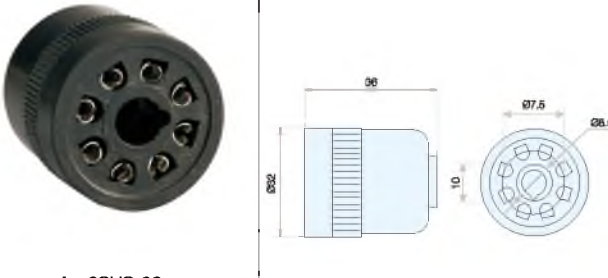
Type code: 3SPYF145A
Order code: 32496



Type code: 3STP28X
Order code: 32497



Type code: 3SPYF14A
Order code: 32498



Type code: 3SUS-08
Order code: 32499

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
12693	3SP-271	4-15	24841	3SA8-BD45	4-2	32518	TS1021	4-30
12694	3SP-281	4-15	24842	3SA8-BD33	4-2	32519	TS1121	4-30
12695	3SP-291	4-15	24843	3SA8-BD53	4-2	32520	TS1221	4-30
12696	3SP-2713	4-15	24844	3SA8-BD73	4-2	32521	TS1321	4-30
12697	3SP-2813	4-15	24846	3SA8-BJ21	4-2	32522	TS1122	4-30
12698	3SP-2913	4-15	24847	3SA8-BJ25	4-2	32523	TS1322	4-30
12699	3SP-471	4-14	24848	3SA8-BJ41	4-2	32524	T701AW	4-30
12700	3SP-481	4-14	24849	3SA8-BJ45	4-2	32525	T701AT	4-30
12701	3SP-491	4-15	24850	3SA8-BJ33	4-2	32526	T701AU	4-30
12702	3SP-4713	4-14	24851	3SA8-BJ73	4-2	32527	T701BW	4-30
12703	3SP-4813	4-14	24852	3SA8-BJ73	4-2	32528	T701BT	4-30
12704	3SP-4913	4-15	24854	3SA8-BG21	4-2	32529	T701BU	4-30
12705	3SP-671	4-14	24855	3SA8-BG25	4-2	32530	T701CW	4-30
12706	3SP-681	4-14	24856	3SA8-BG41	4-2	32531	T701CT	4-30
12707	3SP-691	4-15	24857	3SA8-BG45	4-2	32532	T701CU	4-30
12708	3SP-6713	4-14	24858	3SA8-BG61	4-2	32533	T701DW	4-30
12709	3SP-6813	4-14	24859	3SA8-BG65	4-2	32534	T701DT	4-30
12710	3SP-6913	4-15	24860	3SA8-BG33	4-2	32535	T701DU	4-30
12711	3SP-871	4-14	24861	3SA8-BG53	4-2	32536	T701MW	4-30
12712	3SP-881	4-14	24862	3SA8-BG03	4-2	32537	T701MT	4-30
12714	3SP-8713	4-14	24863	3SA8-BG73	4-2	32538	T701MU	4-30
12715	3SP-8813	4-14	24864	3SA8-BV61	4-3	32539	T701RW	4-30
14869	FS-3PC0	4-31	24865	3SA8-BV63	4-3	32540	T701RT	4-30
14870	FS-3PC2	4-31	24866	3SA8-BV64	4-3	32541	T701RU	4-30
14871	FS-3AC0	4-31	24867	3SA8-BV65	4-3	32542	T702AW	4-30
14872	FS-3AC2	4-31	24868	3SA8-BV66	4-3	32543	T702AT	4-30
14896	SFM-1C0	4-31	24869	3SA8-BV71	4-3	32544	T702AU	4-30
14897	SFM-1C2	4-31	24870	3SA8-BV73	4-3	32545	T702BW	4-30
14901	SFM-5C0	4-31	24871	3SA8-BV74	4-3	32546	T702BT	4-30
14902	SFMP-1C0	4-31	24872	3SA8-BV75	4-3	32547	T702BU	4-30
14903	SFMP-1C2	4-31	24873	3SA8-BV76	4-3	32548	T702CW	4-30
14904	SFMS-1GC0	4-31	24874	3SA8-BV31	4-3	32549	T702CT	4-30
14905	SFMS-1GC2	4-31	24875	3SA8-BV33	4-3	32550	T702CU	4-30
14906	SFMS-1YC0	4-31	24876	3SA8-BV34	4-3	32551	T702DW	4-30
14907	SFMS-1YC2	4-31	24877	3SA8-BV35	4-3	32552	T702DT	4-30
14908	SFMS-10C0	4-31	24878	3SA8-BV36	4-3	32553	T702DU	4-30
24805	3SA8-BL21	4-1	24879	3SA8-BV41	4-3	32554	T702MW	4-30
24806	3SA8-BL31	4-1	24880	3SA8-BV43	4-3	32555	T702MT	4-30
24807	3SA8-BL51	4-1	24881	3SA8-BV44	4-3	32556	T702MU	4-30
24808	3SA8-BL61	4-1	24882	3SA8-BV45	4-3	32557	T702RW	4-30
24809	3SA8-BL22	4-1	24883	3SA8-BV46	4-3	32558	T702RT	4-30
24810	3SA8-BL42	4-1	24889	3SA8-BV53	4-3	32559	T702RU	4-30
24811	3SA8-BA25	4-1	24890	3SA8-BV54	4-3	32560	T700-1R	4-30
24812	3SA8-BA35	4-1	24891	3SA8-BV55	4-3	32561	T700-1B	4-30
24813	3SA8-BA41	4-1	24892	3SA8-BV933	4-3	32562	T700-1Y	4-30
24814	3SA8-BA45	4-1	24893	3SA8-BV934	4-3	32563	T700-1G	4-30
24815	3SA8-BK2341	4-1	24894	3SA8-BV935	4-3	32564	T700-1T	4-30
24816	3SA8-BC21	4-1	24895	3SA8-BL8325	4-4	32565	T700-2HS	4-30
24817	3SA8-BC31	4-1	24896	3SA8-BL9325	4-4	32566	T700-2YS	4-30
24818	3SA8-BC51	4-1	24897	3SA8-BL8425	4-4	32567	T700-2BS	4-30
24819	3SA8-BC61	4-1	24898	3SA8-BL9425	4-4	32568	T700-2RS	4-30
24820	3SA8-BC42	4-1	24899	3SA8-BW8365	4-4	32569	T700-2GS	4-30
24821	3SA8-BR21	4-1	24900	3SA8-BW8465	4-4	32570	T700-2HM	4-30
24822	3SA8-BR42	4-1	24901	3SA8-BW8375	4-4	32571	T700-2YM	4-30
24823	3SA8-BA3311	4-2	24902	3SA8-BW8475	4-4	32572	T700-2BM	4-30
24824	3SA8-BA3341	4-2	24903	3SA8-BW8345	4-4	32573	T700-2RM	4-30
24825	3SA8-BA3351	4-2	24904	3SA8-BW8445	4-4	32574	T700-2GM	4-30
24826	3SA8-BA4322	4-2	24905	3SA8-BK2365	4-4	32575	FS1 R2	4-29
24827	3SA8-BA4342	4-2	24906	3SA8-BK2465	4-4	32576	FS1 R3	4-29
24828	3SA8-BL4322	4-2	24907	3SA8-BK2565	4-4	32577	FS1 R4	4-29
24829	3SA8-BL4342	4-2	24908	3SA8-BK2665	4-4	32578	FS1 R5	4-29
24830	3SA8-BT42	4-2	24909	3SA8-BK2765	4-4	32603	FS2 B2	4-29
24831	3SA8-BX42	4-2	24910	3SA8-BK3365	4-4	32604	FS2 B3	4-29
24832	3SA8-BS442	4-2	24911	3SA8-BK3465	4-4	32605	FS2 B4	4-29
24833	3SA8-BS542	4-2	24912	3SA8-BK3565	4-4	32606	FS2 B5	4-29
24834	3SA8-BS642	4-2	24913	3SA8-BK3665	4-4	32623	FS3 B2	4-29
24836	3SA8-BS142	4-2	24914	3SA8-BK3765	4-4	32624	FS3 B3	4-29
24837	3SA8-BS242	4-2	32496	PYF145A	4-54	32625	FS3 B4	4-29
24838	3SA8-BD21	4-2	32497	TP28X	4-54	32626	FS3 B5	4-29
24839	3SA8-BD25	4-2	32498	PYF14A	4-54	32643	FS4 B2	4-29
24840	3SA8-BD41	4-2	32499	US08	4-54	32644	FS4 B3	4-29

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
32645	FS4 B4	4-29	32906	3SA10-B144	4-13	33030	LW28V	4-18
32646	FS4 B5	4-29	32907	3SA10-B361H29	4-13	33031	LW28A	4-18
32671	FS5 H2	4-29	32908	3SA10-B363	4-13	33056	LW28GS120	4-19
32672	FS5 H3	4-29	32909	3SA10-B366	4-13	33057	LW28GS125	4-19
32673	FS5 H4	4-29	32910	3SA10-B371H29	4-13	33058	LW28GS132	4-19
32674	FS5 H5	4-29	32911	3SA10-B373	4-13	33059	LW28GS163	4-19
32764	3SA5-BL21	4-5	32912	3SA10-B376	4-13	33060	LW28GS1125	4-19
32765	3SA5-BL31	4-5	32913	3SP-4923	4-15	33061	LW28GS1160	4-19
32766	3SA5-BL51	4-5	32914	BS-211	4-16	33062	LW28GS220	4-19
32767	3SA5-BL61	4-5	32915	BS-216	4-16	33063	LW28GS225	4-19
32769	3SA5-BL42	4-5	32916	BS-230	4-16	33064	LW28GS232	4-19
32775	3SA5-BC21	4-5	32917	HJ9-1Y	4-16	33065	LW28GS263	4-19
32776	3SA5-BC31	4-5	32918	HJ9-2Y	4-16	33066	LW28GS2125	4-19
32777	3SA5-BC51	4-5	32919	HJ9-3Y	4-16	33067	LW28GS2160	4-19
32779	3SA5-BC42	4-5	32920	HJ9-4Y	4-16	33068	LW28GS320	4-19
32780	3SA5-BR21	4-5	32921	HJ9-5Y	4-16	33069	LW28GS325	4-19
32781	3SA5-BR42	4-5	32922	HJ9-6Y	4-16	33070	LW28GS332	4-19
32787	3SA5-BL4322	4-5	32923	HJ9-1G	4-16	33071	LW28GS363	4-19
32788	3SA5-BL4342	4-5	32924	HJ9-2G	4-16	33072	LW28GS3125	4-19
32789	3SA5-BT42	4-5	32925	HJ9-3G	4-16	33073	LW28GS3160	4-19
32790	3SA5-BX42	4-5	32926	HJ9-4G	4-16	33074	LW28GS420	4-19
32791	3SA5-BS442	4-5	32927	HJ9-5G	4-16	33075	LW28GS425	4-19
32792	3SA5-BS542	4-5	32928	HJ9-6G	4-16	33076	LW28GS432	4-19
32793	3SA5-BS642	4-5	32982	LW28 102 41020	4-18	33077	LW28GS463	4-19
32795	3SA5-BS142	4-5	32983	LW28 102 41025	4-18	33078	LW28GS4125	4-19
32796	3SA5-BS242	4-5	32984	LW28 102 41032	4-18	33079	LW28GS4160	4-19
32797	3SA5-BD21	4-6	32985	LW28 102 41063	4-18	33080	D11 3D25	4-21
32798	3SA5-BD25	4-6	32986	LW28 102 41125	4-18	33081	D11 3D32	4-21
32799	3SA5-BD41	4-6	32987	LW28 102 41160	4-18	33082	D11 3D40	4-21
32800	3SA5-BD45	4-6	32988	LW28 102 42020	4-18	33083	D11 3D63	4-21
32801	3SA5-BD33	4-6	32989	LW28 102 42025	4-18	33084	D11 3D80	4-21
32802	3SA5-BD53	4-6	32990	LW28 102 42032	4-18	33085	D11 3D100	4-21
32803	3SA5-BD73	4-6	32991	LW28 102 42063	4-18	33086	D11 4D25	4-21
32805	3SA5-BJ21	4-6	32992	LW28 102 42125	4-18	33087	D11 4D32	4-21
32806	3SA5-BJ25	4-6	32993	LW28 102 42160	4-18	33088	D11 4D40	4-21
32807	3SA5-BJ41	4-6	32994	LW28 102 43020	4-18	33089	D11 4D63	4-21
32808	3SA5-BJ45	4-6	32995	LW28 102 43025	4-18	33090	D11 4D80	4-21
32809	3SA5-BJ33	4-6	32996	LW28 102 43032	4-18	33091	D11 4D100	4-21
32810	3SA5-BJ53	4-6	32997	LW28 102 43063	4-18	33092	D11 3R25	4-21
32811	3SA5-BJ73	4-6	32998	LW28 102 43125	4-18	33093	D11 3R32	4-21
32813	3SA5-BG21	4-6	32999	LW28 102 43160	4-18	33094	D11 3R40	4-21
32814	3SA5-BG25	4-6	33000	LW28 102 44020	4-18	33095	D11 3R63	4-21
32815	3SA5-BG41	4-6	33001	LW28 102 44025	4-18	33096	D11 3R80	4-21
32816	3SA5-BG45	4-6	33002	LW28 102 44032	4-18	33097	D11 3R100	4-21
32817	3SA5-BG61	4-6	33003	LW28 102 44063	4-18	33098	D11 4R25	4-21
32818	3SA5-BG65	4-6	33004	LW28 102 44125	4-18	33099	D11 4R32	4-21
32819	3SA5-BG33	4-6	33005	LW28 102 44160	4-18	33100	D11 4R40	4-21
32820	3SA5-BG53	4-6	33006	LW28 12 41020	4-18	33101	D11 4R63	4-21
32821	3SA5-BG03	4-6	33007	LW28 12 41025	4-18	33102	D11 4R80	4-21
32822	3SA5-BG73	4-6	33008	LW28 12 41032	4-18	33103	D11 4R100	4-21
32854	3SA5-BL8325	4-6	33009	LW28 12 41063	4-18	33104	D11 3NR25	4-21
32855	3SA5-BL9325	4-6	33010	LW28 12 41125	4-18	33105	D11 3NR32	4-21
32856	3SA5-BL8425	4-6	33011	LW28 12 41160	4-18	33106	D11 3NR40	4-21
32857	3SA5-BL9425	4-6	33012	LW28 12 42020	4-18	33107	D11 3NR63	4-21
32889	3SA10-B101H29	4-12	33013	LW28 12 42025	4-18	33108	D11 3NR80	4-21
32890	3SA10-B102	4-12	33014	LW28 12 42032	4-18	33109	D11 3NR100	4-21
32891	3SA10-B103	4-12	33015	LW28 12 42063	4-18	33110	D11 5R25	4-21
32892	3SA10-B111H29	4-12	33016	LW28 12 42125	4-18	33111	D11 5R32	4-21
32893	3SA10-B112	4-12	33017	LW28 12 42160	4-18	33112	D11 5R40	4-21
32894	3SA10-B114	4-12	33018	LW28 12 43020	4-18	33113	D11 5R63	4-21
32895	3SA10-B164H29	4-12	33019	LW28 12 43025	4-18	33114	D11 5R80	4-21
32896	3SA10-J174	4-12	33020	LW28 12 43032	4-18	33115	D11 5R100	4-21
32897	3SA10-J184	4-12	33021	LW28 12 43063	4-18	33116	D11 B316	4-22
32898	3SA10-J178	4-12	33022	LW28 12 43125	4-18	33117	D11 B320	4-22
32899	3SA10-J188	4-12	33023	LW28 12 43160	4-18	33118	D11 B325	4-22
32900	3SA10-B211H29	4-13	33024	LW28 12 44020	4-18	33119	D11 B332	4-22
32901	3SA10-B213	4-13	33025	LW28 12 44025	4-18	33120	D11 B340	4-22
32902	3SA10-B215	4-13	33026	LW28 12 44032	4-18	33121	D11 B363	4-22
32903	3SA10-B132H29	4-13	33027	LW28 12 44063	4-18	33122	D11 B380	4-22
32904	3SA10-B134	4-13	33028	LW28 12 44125	4-18	33123	D11 B3100	4-22
32905	3SA10-B142H29	4-13	33029	LW28 12 44160	4-18	33124	D11 B416	4-22

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
33125	D11 B420	4-22	34417	J4L2N D12	4-48	34488	60.2 A220	4-50
33126	D11 B425	4-22	34418	J4L2N D24	4-48	34489	60.3 D12	4-50
33127	D11 B432	4-22	34419	J4L2N A110	4-48	34490	60.3 D24	4-50
33128	D11 B440	4-22	34420	J4L2N A220	4-48	34491	60.3 A110	4-50
33129	D11 B463	4-22	34421	J4L2NS D12	4-48	34492	60.3 A220	4-50
33130	D11 B480	4-22	34422	J4L2NS D24	4-48	34493	70.2 D12	4-50
33131	D11 B4100	4-22	34423	J4L2NS A110	4-48	34494	70.2 D24	4-50
34081	3SA5-BR31	4-5	34424	J4L2NS A220	4-48	34495	70.2 A110	4-50
34082	3SA5-BR52	4-5	34425	J4M2 D12	4-48	34496	70.2 A220	4-50
34083	3SA5-BL3311	4-5	34426	J4M2 D24	4-48	34497	70.3 D12	4-50
34084	3SA5-BL3361	4-5	34427	J4M2 A110	4-48	34498	70.3 D24	4-50
34085	3SA5-BL3351	4-5	34428	J4M2 A220	4-48	34499	70.3 A110	4-50
34086	3SA5-BL3341	4-5	34429	J4M2N D12	4-48	34500	70.3 A220	4-50
34359	ST3PA AD24	4-45	34430	J4M2N D24	4-48	34501	58.02 D12	4-50
34360	ST3PA AA110	4-45	34431	J4M2N A110	4-48	34502	58.02 D24	4-50
34361	ST3PA AA220	4-45	34432	J4M2N A220	4-48	34503	58.02 A110	4-50
34362	ST3PA BD24	4-45	34433	J4M2NS D12	4-48	34504	58.02 A220	4-50
34363	ST3PA BA110	4-45	34434	J4M2NS D24	4-48	34505	56.02 D12	4-50
34364	ST3PA BA220	4-45	34435	J4M2NS A110	4-48	34506	56.02 D24	4-50
34365	ST3PA CD24	4-45	34436	J4M2NS A220	4-48	34507	56.02 A110	4-50
34366	ST3PA CA110	4-45	34437	J4M3 D12	4-49	34508	56.02 A220	4-50
34367	ST3PA CA220	4-45	34438	J4M3 D24	4-49	34509	55.02 D12	4-50
34368	ST3PA DD24	4-45	34439	J4M3 A110	4-49	34510	55.02 D24	4-50
34369	ST3PA DA110	4-45	34440	J4M3 A220	4-49	34511	55.02 A110	4-50
34370	ST3PA DA220	4-45	34441	J4M3N D12	4-49	34512	55.02 A220	4-50
34371	ST3PA ED24	4-45	34442	J4M3N D24	4-49	34513	55.04 D12	4-51
34372	ST3PA EA110	4-45	34443	J4M3N A110	4-49	34514	55.04 D24	4-51
34373	ST3PA EA220	4-45	34444	J4M3N A220	4-49	34515	55.04 A110	4-51
34374	ST3PA FD24	4-45	34445	J4M3NS D12	4-49	34516	55.04 A220	4-51
34375	ST3PA FA110	4-45	34446	J4M3NS D24	4-49	34517	57.02 D12	4-51
34376	ST3PA FA220	4-45	34447	J4M3NS A110	4-49	34518	57.02 D24	4-51
34377	ST3PA GD24	4-45	34448	J4M3NS A220	4-49	34519	57.02 A110	4-51
34378	ST3PA GA110	4-45	34449	J4M4 D12	4-49	34520	57.02 A220	4-51
34379	ST3PA GA220	4-45	34450	J4M4 D24	4-49	34521	57.04 D12	4-51
34380	ST3PC AD24	4-45	34451	J4M4 A110	4-49	34522	57.04 D24	4-51
34381	ST3PC AA110	4-45	34452	J4M4 A220	4-49	34523	57.04 A110	4-51
34382	ST3PC AA220	4-45	34453	J4M4N D12	4-49	34524	57.04 A220	4-51
34383	ST3PC BD24	4-45	34454	J4M4N D24	4-49	34525	P2CF08	4-52
34384	ST3PC BA110	4-45	34455	J4M4N A110	4-49	34526	PF083A	4-52
34385	ST3PC BA220	4-45	34456	J4M4N A220	4-49	34527	P3G08	4-52
34386	ST3PC CD24	4-45	34457	J4M4NS D12	4-49	34528	PF83AE	4-52
34387	ST3PC CA110	4-45	34458	J4M4NS D24	4-49	34529	90.22	4-52
34388	ST3PC CA220	4-45	34459	J4M4NS A110	4-49	34530	PF085A	4-52
34389	ST3PC DD24	4-45	34460	J4M4NS A220	4-49	34531	90.23	4-52
34390	ST3PC DA110	4-45	34461	J52N D12	4-49	34532	PF113A	4-52
34391	ST3PC DA220	4-45	34462	J52N D24	4-49	34533	PF113AE	4-53
34392	ST3PC ED24	4-45	34463	J52N A110	4-49	34534	PTF11A	4-53
34393	ST3PC EA110	4-45	34464	J52N A220	4-49	34535	PS08	4-53
34394	ST3PC EA220	4-45	34465	J52S D12	4-49	34536	PTF14A	4-53
34395	ST3PC FD24	4-45	34466	J52S D24	4-49	34537	PTF08A	4-53
34396	ST3PC FA110	4-45	34467	J52S A110	4-49	34538	PTF14AE	4-53
34397	ST3PC FA220	4-45	34468	J52S A220	4-49	34539	PTF08AE	4-53
34398	ST3PC GD24	4-45	34469	J52NS D12	4-49	34540	PYF08A	4-53
34399	ST3PC GA110	4-45	34470	J52NS D24	4-49	34541	PYF08AE	4-54
34400	ST3PC GA220	4-45	34471	J52NS A110	4-49	34542	PYF14AE	4-54
34401	H3BA D12	4-45	34472	J52NS A220	4-49	34543	PYF11A	4-54
34402	H3BA D24	4-45	34473	J53N D12	4-49	34544	PYF14AE	4-54
34403	H3BA A110	4-45	34474	J53N D24	4-49	34601	H3CT 1SA220	4-46
34404	H3BA A220	4-45	34475	J53N A110	4-49	34602	H3CT 1SA110	4-46
34405	H3BA8 D12	4-45	34476	J53N A220	4-49	34603	H3CT 1SD24	4-46
34406	H3BA8 D24	4-45	34477	J53S D12	4-49	34604	H3CT 10SA220	4-46
34407	H3BA8 A110	4-45	34478	J53S D24	4-49	34605	H3CT 10SA110	4-46
34408	H3BA8 A220	4-45	34479	J53S A110	4-49	34606	H3CT 10SD24	4-46
34409	H3BA8H D12	4-45	34480	J53S A220	4-49	34607	H3CT 1MA220	4-46
34410	H3BA8H D24	4-45	34481	J53NS D12	4-49	34608	H3CT 1MA110	4-46
34411	H3BA8H A110	4-45	34482	J53NS D24	4-49	34609	H3CT 1MD24	4-46
34412	H3BA8H A220	4-45	34483	J53NS A110	4-49	34610	H3CT 10MA220	4-46
34413	J4L2 D12	4-48	34484	J53NS A220	4-49	34611	H3CT 10MA110	4-46
34414	J4L2 D24	4-48	34485	60.2 D12	4-50	34612	H3CT 10MD24	4-46
34415	J4L2 A110	4-48	34486	60.2 D24	4-50	34613	H3CT8HA D12	4-46
34416	J4L2 A220	4-48	34487	60.2 A110	4-50	34614	H3CT8HA D24	4-46

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
34615	H3CT8HA A110	4-46	35058	AD22B-8D24B	4-10	35589	AD22-22BS31R	4-7
34616	H3CT8HA A220	4-46	35094	AD22B-8D36R	4-10	35590	AD22-22BS31G	4-7
34617	H3CT8HB D12	4-46	35095	AD22B-8D36G	4-10	35591	AD22-22BS31Y	4-7
34618	H3CT8HB D24	4-46	35096	AD22B-8D36Y	4-10	35592	AD22-22BS31W	4-7
34619	H3CT8HB A110	4-46	35097	AD22B-8D36W	4-10	35593	AD22-22BS31B	4-7
34620	H3CT8HB A220	4-46	35098	AD22B-8D36B	4-10	35594	AD22-22BS32R	4-7
34621	H3CT8HC D12	4-46	35134	AD22B-8D48R	4-10	35595	AD22-22BS32G	4-7
34622	H3CT8HC D24	4-46	35135	AD22B-8D48G	4-10	35596	AD22-22BS32Y	4-7
34623	H3CT8HC A110	4-46	35136	AD22B-8D48Y	4-10	35597	AD22-22BS32W	4-7
34624	H3CT8HC A220	4-46	35137	AD22B-8D48W	4-10	35598	AD22-22BS32B	4-7
34625	H3CT8HD D12	4-46	35138	AD22B-8D48B	4-10	35649	AD22-22DS21R	4-8
34626	H3CT8HD D24	4-46	35174	AD22B-8A110R	4-10	35650	AD22-22DS21G	4-8
34627	H3CT8HD A110	4-46	35175	AD22B-8A110G	4-10	35651	AD22-22DS21Y	4-8
34628	H3CT8HD A220	4-46	35176	AD22B-8A110Y	4-10	35652	AD22-22DS21W	4-8
34629	H3CT8HE D12	4-46	35177	AD22B-8A110W	4-10	35653	AD22-22DS21B	4-8
34630	H3CT8HE D24	4-46	35178	AD22B-8A110B	4-10	35654	AD22-22DS22R	4-8
34631	H3CT8HE A110	4-46	35214	AD22B-8A120R	4-10	35655	AD22-22DS22G	4-8
34632	H3CT8HE A220	4-46	35215	AD22B-8A120G	4-10	35656	AD22-22DS22Y	4-8
34633	H3CT8A D12	4-46	35216	AD22B-8A120Y	4-10	35657	AD22-22DS22W	4-8
34634	H3CT8A D24	4-46	35217	AD22B-8A120W	4-10	35658	AD22-22DS22B	4-8
34635	H3CT8A A110	4-46	35218	AD22B-8A120B	4-10	35659	AD22-22DS23R	4-8
34636	H3CT8A A220	4-46	35254	AD22B-8A220R	4-10	35660	AD22-22DS23G	4-8
34637	H3CT8B D12	4-46	35255	AD22B-8A220G	4-10	35661	AD22-22DS23Y	4-8
34638	H3CT8B D24	4-46	35256	AD22B-8A220Y	4-10	35662	AD22-22DS23W	4-8
34639	H3CT8B A110	4-46	35257	AD22B-8A220W	4-10	35663	AD22-22DS23B	4-8
34640	H3CT8B A220	4-46	35258	AD22B-8A220B	4-10	35664	AD22-22DS24R	4-8
34641	H3CT8C D12	4-46	35294	AD22B-8A230R	4-10	35665	AD22-22DS24G	4-8
34642	H3CT8C D24	4-46	35295	AD22B-8A230G	4-10	35666	AD22-22DS24Y	4-8
34643	H3CT8C A110	4-46	35296	AD22B-8A230Y	4-10	35667	AD22-22DS24W	4-8
34644	H3CT8C A220	4-46	35297	AD22B-8A230W	4-10	35668	AD22-22DS24B	4-8
34645	H3CT8D D12	4-46	35298	AD22B-8A230B	4-10	35669	AD22-22DS25R	4-8
34646	H3CT8D D24	4-46	35549	AD22-22BS21R	4-7	35670	AD22-22DS25G	4-8
34647	H3CT8D A110	4-46	35550	AD22-22BS21G	4-7	35671	AD22-22DS25Y	4-8
34648	H3CT8D A220	4-46	35551	AD22-22BS21Y	4-7	35672	AD22-22DS25W	4-8
34649	H3CT8E D12	4-46	35552	AD22-22BS21W	4-7	35673	AD22-22DS25B	4-8
34650	H3CT8E D24	4-46	35553	AD22-22BS21B	4-7	35674	AD22-22DS26R	4-8
34651	H3CT8E A110	4-46	35554	AD22-22BS22R	4-7	35675	AD22-22DS26G	4-8
34652	H3CT8E A220	4-46	35555	AD22-22BS22G	4-7	35676	AD22-22DS26Y	4-8
34653	H3Y 5SD24	4-47	35556	AD22-22BS22Y	4-7	35677	AD22-22DS26W	4-8
34654	H3Y 10SD24	4-47	35557	AD22-22BS22W	4-7	35678	AD22-22DS26B	4-8
34655	H3Y 30SD24	4-47	35558	AD22-22BS22B	4-7	35679	AD22-22DS27R	4-8
34656	H3Y 60SD24	4-47	35559	AD22-22BS23R	4-7	35680	AD22-22DS27G	4-8
34657	H3Y 5SD110	4-47	35560	AD22-22BS23G	4-7	35681	AD22-22DS27Y	4-8
34658	H3Y 10SD110	4-47	35561	AD22-22BS23Y	4-7	35682	AD22-22DS27W	4-8
34659	H3Y 30SD110	4-47	35562	AD22-22BS23W	4-7	35683	AD22-22DS27B	4-8
34660	H3Y 60SD110	4-47	35563	AD22-22BS23B	4-7	35684	AD22-22DS28R	4-8
34661	H3Y 5SD220	4-47	35564	AD22-22BS24R	4-7	35685	AD22-22DS28G	4-8
34662	H3Y 10SD220	4-47	35565	AD22-22BS24G	4-7	35686	AD22-22DS28Y	4-8
34663	H3Y 30SD220	4-47	35566	AD22-22BS24Y	4-7	35687	AD22-22DS28W	4-8
34664	H3Y 60SD220	4-47	35567	AD22-22BS24W	4-7	35688	AD22-22DS28B	4-8
34894	3SA8-BA11	4-1	35568	AD22-22BS24B	4-7	35689	AD22-22DS31R	4-8
34895	3SA8-BA21	4-1	35569	AD22-22BS25R	4-7	35690	AD22-22DS31G	4-8
34896	3SA8-BA31	4-1	35570	AD22-22BS25G	4-7	35691	AD22-22DS31Y	4-8
34897	3SA8-BA51	4-1	35571	AD22-22BS25Y	4-7	35692	AD22-22DS31W	4-8
34898	3SA8-BA61	4-1	35572	AD22-22BS25W	4-7	35693	AD22-22DS31B	4-8
34899	3SA8-BA22	4-1	35573	AD22-22BS25B	4-7	35694	AD22-22DS32R	4-8
34900	3SA8-BA42	4-1	35574	AD22-22BS26R	4-7	35695	AD22-22DS32G	4-8
34974	AD22B-8D6R	4-10	35575	AD22-22BS26G	4-7	35696	AD22-22DS32Y	4-8
34975	AD22B-8D6G	4-10	35576	AD22-22BS26Y	4-7	35697	AD22-22DS32W	4-8
34976	AD22B-8D6Y	4-10	35577	AD22-22BS26W	4-7	35698	AD22-22DS32B	4-8
34977	AD22B-8D6W	4-10	35578	AD22-22BS26B	4-7	35899	AD22-22D21R	4-9
34978	AD22B-8D6B	4-10	35579	AD22-22BS27R	4-7	35900	AD22-22D21G	4-9
35014	AD22B-8D12R	4-10	35580	AD22-22BS27G	4-7	35901	AD22-22D21Y	4-9
35015	AD22B-8D12G	4-10	35581	AD22-22BS27Y	4-7	35902	AD22-22D21W	4-9
35016	AD22B-8D12Y	4-10	35582	AD22-22BS27W	4-7	35903	AD22-22D21B	4-9
35017	AD22B-8D12W	4-10	35583	AD22-22BS27B	4-7	35904	AD22-22D22R	4-9
35018	AD22B-8D12B	4-10	35584	AD22-22BS28R	4-7	35905	AD22-22D22G	4-9
35054	AD22B-8D24R	4-10	35585	AD22-22BS28G	4-7	35906	AD22-22D22Y	4-9
35055	AD22B-8D24G	4-10	35586	AD22-22BS28Y	4-7	35907	AD22-22D22W	4-9
35056	AD22B-8D24Y	4-10	35587	AD22-22BS28W	4-7	35908	AD22-22D22B	4-9
35057	AD22B-8D24W	4-10	35588	AD22-22BS28B	4-7	35909	AD22-22D23R	4-9

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
35910	AD22-22D23G	4-9	36741	RV1-01/N220	4-34	36812	RV1-07F/A415	4-35
35911	AD22-22D23Y	4-9	36742	RV1-01/N230	4-34	36813	RV1-08/N220	4-35
35912	AD22-22D23W	4-9	36743	RV1-01/N240	4-34	36814	RV1-08/N230	4-35
35913	AD22-22D23B	4-9	36744	RV1-01/A380	4-34	36815	RV1-08/N240	4-35
35914	AD22-22D24R	4-9	36745	RV1-01/A400	4-34	36816	RV1-08/A380	4-35
35915	AD22-22D24G	4-9	36746	RV1-01/A415	4-34	36817	RV1-08/A400	4-35
35916	AD22-22D24Y	4-9	36747	RV1-02/N220	4-34	36818	RV1-08/A415	4-35
35917	AD22-22D24W	4-9	36748	RV1-02/N230	4-34	36819	RV1-08P/A380	4-35
35918	AD22-22D24B	4-9	36749	RV1-02/N240	4-34	36820	RV1-08P/A400	4-35
35919	AD22-22D25R	4-9	36750	RV1-02/A380	4-34	36821	RV1-08P/A415	4-35
35920	AD22-22D25G	4-9	36751	RV1-02/A400	4-34	36822	RV1-08F/A380	4-35
35921	AD22-22D25Y	4-9	36752	RV1-02/A415	4-34	36823	RV1-08F/A400	4-35
35922	AD22-22D25W	4-9	36753	RV1-03/N220	4-34	36824	RV1-08F/A415	4-35
35923	AD22-22D25B	4-9	36754	RV1-03/N230	4-34	36825	RV1-09/N220	4-35
35924	AD22-22D26R	4-9	36755	RV1-03/N240	4-34	36826	RV1-09/N230	4-35
35925	AD22-22D26G	4-9	36756	RV1-03/A380	4-34	36827	RV1-09/N240	4-35
35926	AD22-22D26Y	4-9	36757	RV1-03/A400	4-34	36828	RV1-09/A380	4-35
35927	AD22-22D26W	4-9	36758	RV1-03/A415	4-34	36829	RV1-09/A400	4-35
35928	AD22-22D26B	4-9	36759	RV1-03P/A380	4-34	36830	RV1-09/A415	4-35
35929	AD22-22D27R	4-9	36760	RV1-03P/A400	4-34	36831	RV1-09P/A380	4-35
35930	AD22-22D27G	4-9	36761	RV1-03P/A415	4-34	36832	RV1-09P/A400	4-35
35931	AD22-22D27Y	4-9	36762	RV1-03F/A380	4-34	36833	RV1-09P/A415	4-35
35932	AD22-22D27W	4-9	36763	RV1-03F/A400	4-34	36834	RV1-09F/A380	4-35
35933	AD22-22D27B	4-9	36764	RV1-03F/A415	4-34	36835	RV1-09F/A400	4-35
35934	AD22-22D28R	4-9	36765	RV1-04/N220	4-34	36836	RV1-09F/A415	4-35
35935	AD22-22D28G	4-9	36766	RV1-04/N230	4-34	36837	RV1-09RT/A380	4-35
35936	AD22-22D28Y	4-9	36767	RV1-04/N240	4-34	36838	RV1-09RT/A400	4-35
35937	AD22-22D28W	4-9	36768	RV1-04/A380	4-34	36839	RV1-09RT/A415	4-35
35938	AD22-22D28B	4-9	36769	RV1-04/A400	4-34	36840	RV1-10/N220	4-35
35939	AD22-22D31R	4-9	36770	RV1-04/A415	4-34	36841	RV1-10/N230	4-35
35940	AD22-22D31G	4-9	36771	RV1-04P/A380	4-34	36842	RV1-10/N240	4-35
35941	AD22-22D31Y	4-9	36772	RV1-04P/A400	4-34	36843	RV1-10/A380	4-35
35942	AD22-22D31W	4-9	36773	RV1-04P/A415	4-34	36844	RV1-10/A400	4-35
35943	AD22-22D31B	4-9	36774	RV1-04F/A380	4-34	36845	RV1-10/A415	4-35
35944	AD22-22D32R	4-9	36775	RV1-04F/A400	4-34	36846	RV1-10P/A380	4-35
35945	AD22-22D32G	4-9	36776	RV1-04F/A415	4-34	36847	RV1-10P/A400	4-35
35946	AD22-22D32Y	4-9	36777	RV1-05/N220	4-34	36848	RV1-10P/A415	4-35
35947	AD22-22D32W	4-9	36778	RV1-05/N230	4-34	36849	RV1-10F/A380	4-35
35948	AD22-22D32B	4-9	36779	RV1-05/N240	4-34	36850	RV1-10F/A400	4-35
35999	AD22-22DRG23RG	4-11	36780	RV1-05/A380	4-34	36851	RV1-10F/A415	4-35
36000	AD22-22DRG24RG	4-11	36781	RV1-05/A400	4-34	36852	RV1-10RT/A380	4-35
36001	AD22-22DRG25RG	4-11	36782	RV1-05/A415	4-34	36853	RV1-10RT/A400	4-35
36002	AD22-22DRG26RG	4-11	36783	RV1-05P/A380	4-34	36854	RV1-10RT/A415	4-35
36003	AD22-22DRG27RG	4-11	36784	RV1-05P/A400	4-34	36855	RV1-11/N220	4-36
36004	AD22-22DRG28RG	4-11	36785	RV1-05P/A415	4-34	36856	RV1-11/N230	4-36
36005	AD22-22DRG31RG	4-11	36786	RV1-05F/A380	4-34	36857	RV1-11/N240	4-36
36006	AD22-22DRG32RG	4-11	36787	RV1-05F/A400	4-34	36858	RV1-11/A380	4-36
36007	AD22-22DRG23RY	4-11	36788	RV1-05F/A415	4-34	36859	RV1-11/A400	4-36
36008	AD22-22DRG24RY	4-11	36789	RV1-06/N220	4-34	36860	RV1-11/A415	4-36
36009	AD22-22DRG25RY	4-11	36790	RV1-06/N230	4-34	36861	RV1-11P/A380	4-36
36010	AD22-22DRG26RY	4-11	36791	RV1-06/N240	4-34	36862	RV1-11P/A400	4-36
36011	AD22-22DRG27RY	4-11	36792	RV1-06/A380	4-34	36863	RV1-11P/A415	4-36
36012	AD22-22DRG28RY	4-11	36793	RV1-06/A400	4-34	36864	RV1-11F/A380	4-36
36013	AD22-22DRG31RY	4-11	36794	RV1-06/A415	4-34	36865	RV1-11F/A400	4-36
36014	AD22-22DRG32RY	4-11	36795	RV1-06P/A380	4-34	36866	RV1-11RTF/A415	4-36
36015	AD22-22MK23	4-11	36796	RV1-06P/A400	4-34	36867	RV1-11RT/A380	4-36
36016	AD22-22MK24	4-11	36797	RV1-06P/A415	4-34	36868	RV1-11RT/A400	4-36
36017	AD22-22MK25	4-11	36798	RV1-06F/A380	4-34	36869	RV1-11RT/A415	4-36
36018	AD22-22MK26	4-11	36799	RV1-06F/A400	4-34	36870	RV1-12/N220	4-36
36019	AD22-22MK27	4-11	36800	RV1-06F/A415	4-34	36871	RV1-12/N230	4-36
36020	AD22-22MK28	4-11	36801	RV1-07/N220	4-35	36872	RV1-12/N240	4-36
36021	AD22-22MK31	4-11	36802	RV1-07/N230	4-35	36873	RV1-12/A380	4-36
36022	AD22-22MK32	4-11	36803	RV1-07/N240	4-35	36874	RV1-12/A400	4-36
36023	AD22-22MR23	4-11	36804	RV1-07/A380	4-35	36875	RV1-12/A415	4-36
36024	AD22-22MR24	4-11	36805	RV1-07/A400	4-35	36876	RV1-12P/A380	4-36
36025	AD22-22MR25	4-11	36806	RV1-07/A415	4-35	36877	RV1-12P/A400	4-36
36026	AD22-22MR26	4-11	36807	RV1-07P/A380	4-35	36878	RV1-12P/A415	4-36
36027	AD22-22MR27	4-11	36808	RV1-07P/A400	4-35	36879	RV1-12F/A380	4-36
36028	AD22-22MR28	4-11	36809	RV1-07P/A415	4-35	36880	RV1-12F/A400	4-36
36029	AD22-22MR31	4-11	36810	RV1-07F/A380	4-35	36881	RV1-12F/A415	4-36
36030	AD22-22MR32	4-11	36811	RV1-07F/A400	4-35	36882	RV1-12RT/A380	4-36

Index / Order Code

Order code	Type code	Page
36883	RV1-12RT/A400	4-36
36884	RV1-12RT/A415	4-36
36885	RV1-13/N220	4-36
36886	RV1-13/N230	4-36
36887	RV1-13/N240	4-36
36888	RV1-13/A380	4-36
36889	RV1-13/A400	4-36
36890	RV1-13/A415	4-36
36891	RV1-13P/A380	4-36
36892	RV1-13P/A400	4-36
36893	RV1-13P/A415	4-36
36894	RV1-13F/A380	4-36
36895	RV1-13F/A400	4-36
36896	RV1-13F/A415	4-36
36897	RV1-13RT/A380	4-36
36898	RV1-13RT/A400	4-36
36899	RV1-13RT/A415	4-36
36900	RV1-14/N220	4-36
36901	RV1-14/N230	4-36
36902	RV1-14/N240	4-36
36903	RV1-14/A380	4-36
36904	RV1-14/A400	4-36
36905	RV1-14/A415	4-36
36906	RV1-14P/A380	4-36
36907	RV1-14P/A400	4-36
36908	RV1-14P/A415	4-36
36909	RV1-14F/A380	4-36
36910	RV1-14F/A400	4-36
36911	RV1-14F/A415	4-36
36912	RV1-14RT/A380	4-36
36913	RV1-14RT/A400	4-36
36914	RV1-14RT/A415	4-36
36915	RV1-15/N220	4-37
36916	RV1-15/N230	4-37
36917	RV1-15/N240	4-37
36918	RV1-15/A380	4-37
36919	RV1-15/A400	4-37
36920	RV1-15/A415	4-37
36921	RV1-16/N220	4-37
36922	RV1-16/N230	4-37
36923	RV1-16/N240	4-37
36924	RV1-16/A380	4-37
36925	RV1-16/A400	4-37
36926	RV1-16/A415	4-37
36927	RV1-17/N220	4-37
36928	RV1-17/N230	4-37
36929	RV1-17/N240	4-37
36930	RV1-17/A380	4-37
36931	RV1-17/A400	4-37
36932	RV1-17/A415	4-37
36933	RV1-18/N220	4-37
36934	RV1-18/N230	4-37
36935	RV1-18/N240	4-37
36936	RV1-18/A380	4-37
36937	RV1-18/A400	4-37
36938	RV1-18/A415	4-37
36939	RV1-19/N220	4-37
36940	RV1-19/N230	4-37
36941	RV1-19/N240	4-37
36942	RV1-19/A380	4-37
36943	RV1-19/A400	4-37
36944	RV1-19/A415	4-37
37666	RV5-01/D12	4-41
37667	RV5-01/AD48	4-41
37668	RV5-01/AD240	4-41
37669	RV5-01/A220	4-41
37674	RV5-02/D12	4-41
37675	RV5-02/AD48	4-41
37676	RV5-02/AD240	4-41
37677	RV5-02/A220	4-41
37678	RV5-03/M460	4-41

Order code	Type code	Page
37679	RV5-04/M460	4-41
37680	RV5-05/M460	4-41
37681	RV5-06/M460	4-41
37682	RV5-07/M460	4-41
37683	RV5-08/M460	4-41
37684	RV5-09/M460	4-41
37685	RV5-10/M460	4-41
37686	RV5-11/M460	4-41
37687	RV5-12/M460	4-41
37817	RA1-5/A380	4-43
37818	RA1-10/A380	4-43
37819	RA1-30/A380	4-43
37820	RA1-80/A380	4-43
37821	RA1-200/A380	4-43
37822	RA1-400/A380	4-43

SASSIN

Power Sources





Power Sources

Automatic voltage stabilizers

- P 1-3 SVC-N series
- P 4-5 PCH series
 - P 6 DVR series, digital display
 - P 7 LVR series, LCD display
 - P 8 SVC-D series, digital display
- P 9-10 SVC series, single phase, horizontal
- P 11-12 SVC series, single phase, vertical
- P 13-14 SVC series, three phase
 - P 15 Options of input plug & output socket
- P 16-17 DBW/SBW series compensated voltage stabilizers

- P 18 TDGC2J/TSGC2J series voltage regulators

Inverters

- P 19-20 SKN-M series pure sine wave inverters
- P 21 SKN-H series modified sine wave inverters

Back-up UPS

- P 22 PCN-V series
- P 23 PCS series

P 24-29 Switching power supplies

P 30 JBK3 control transformers

P 31-32 Index order code

Automatic Voltage Stabilizers Series SVC-N

Applications and functions

- Continuously stabilize power supply where output voltage is unstable
- Protection for office equipment, household appliance
- Protection for industrial equipment, medical equipment
- Protection for communication system etc.



Air Conditioner



Laptop



TV



Washing Machine



Refrigerator



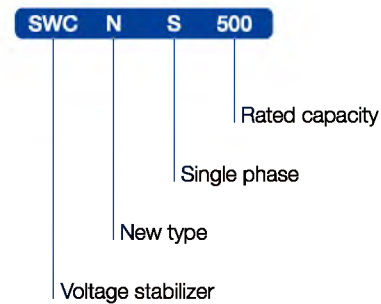
HI-FI



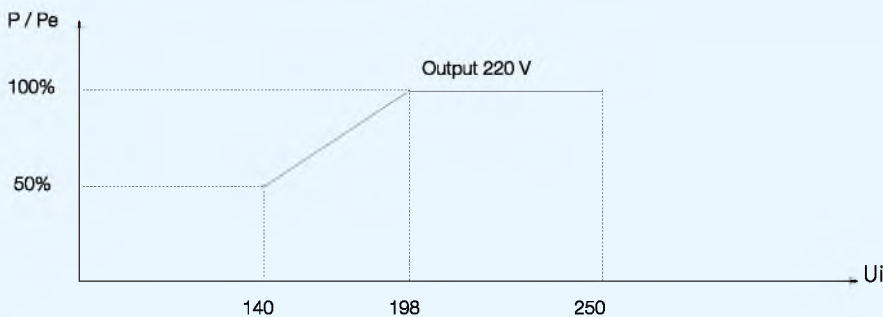
Features

- The updated version of traditional SVC model
- Stylish appearance
- Smaller size and lighter weight
- Higher efficiency
- Low noise
- Wider range of input voltage
- Automatic resume
- Abnormity warning
- Full protections Δ Under / Over voltage Δ Short circuit
 Δ Over load / heat Δ Long-time delay

Instruction of type code



Loading Capacity Diagram



P: Output capacity (VA)
Pe: Rated capacity (VA)
Ui: Input voltage (V)

Automatic Voltage Stabilizers

Series SVC-N

Technical specifications

Type		SVC-N-500	SVC-N-1000	SVC-N-1500	SVC-N-2000	SVC-N-3000	SVC-N-5000	SVC-N-8000	SVC-N-10000	
Input	Power capacity (VA)	500	1000	1500	2000	3000	5000	8000	10000	
	Voltage Range (V)	AC 150 ~ 250								
Output	Frequency (Hz)	50 / 60								
	Voltage Range (V)	AC220 / 110				AC220				
	Precision	±3%								
	Efficiency	≥ 95%								
	Long-time delay	-	-	-	-	-	4 ±1min	4 ±1min	4 ±1min	
Indicator Status	Normal working	Green: on								
	Overvoltage	Red: on								
	Undervoltage	Yellow: on								
Protection	Over-voltage Protection	246V ±4V								
	Under-voltage Protection	184 ±4V								
	Overload Protection	YES								
	High Temperature Protection	-	-	-	-	-	YES (≥ 95°C)			
	Short Circuit Protection	YES								
Cooling Environment	Fan	NO							YES	
	Operating temperature	-5°C ~ 40°C								
Insulation resistance	Humidity	≤ 90%								
		> 5MΩ								
Insulation class		Class E								
Electric strength		1500V / 1min								

Selection and ordering data

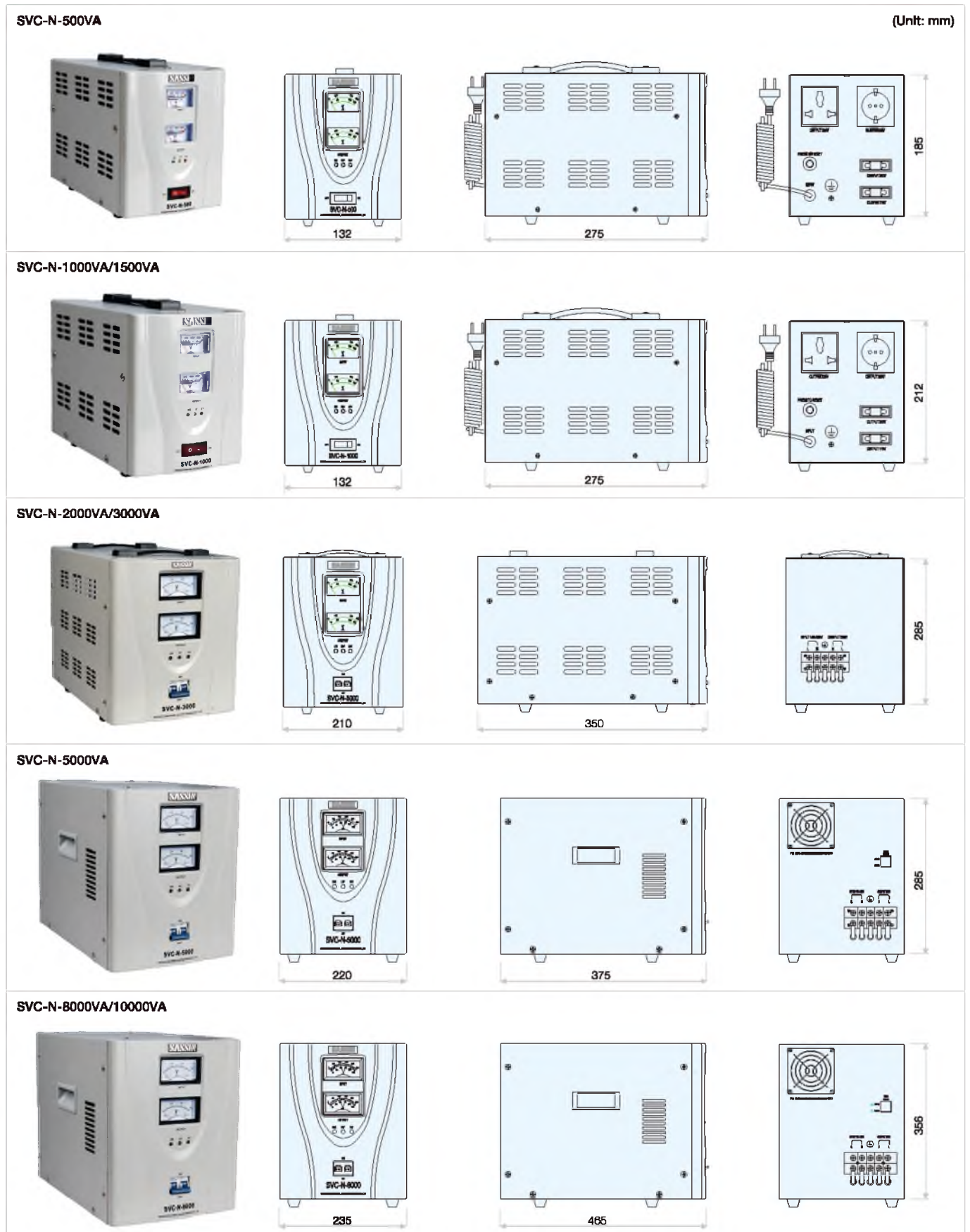
SVC-N

Phase	Type	Frequency (Hz)	Input voltage AC (V)	Output voltage AC (V)	Power capacity (VA)	Type code	Order code
Single	Servo-motor	50 / 60	150 ~ 250	220 / 110	500	SVC NS500	34815
					1000	SVC NS1000	34816
					1500	SVC NS1500	34817
				220	2000	SVC NS2000	34818
					3000	SVC NS3000	34819
					5000	SVC NS5000	34820
					8000	SVC NS8000	34821
					10000	SVC NS10000	34822

Please select the suitable plug and socket for SVC-N-500VA, SVC-N-1000VA and SVC-N-1500VA according to the list in Page 12.

Automatic Voltage Stabilizers Series SVC-N

Outline and installation dimensions



Relay Type Voltage Stabilizers

Series PCH

Applications and functions

- Continuously stabilize power supply where output voltage is unstable
- Protection for office equipment, household appliance
- Protection for industrial equipment, medical equipment
- Protection for communication system

Features

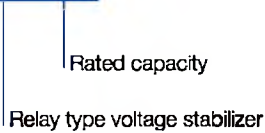
- Small size and light weight
- Wide range of input voltage
- Elegant appearance
- Reliable performance
- High efficiency



5

Instruction of type code

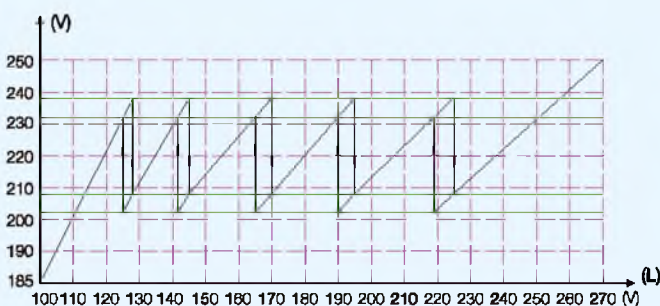
PCH 500



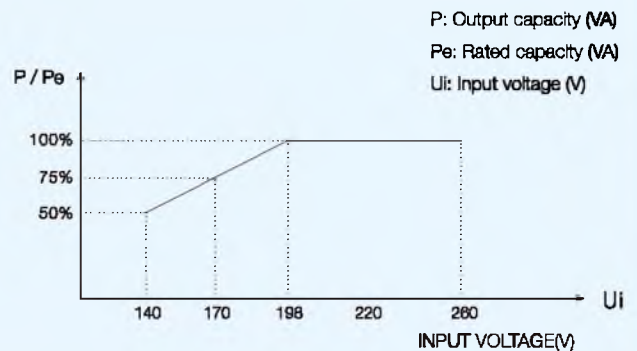
Technical specifications

Type		PCH-500	PCH-1000	PCH-1500	PCH-2000	PCH-3000	PCH-5000	PCH-8000	PCH-10000	
Input	Power capacity (VA)	500	1000	1500	2000	3000	5000	8000	10000	
	Voltage Range (V)	140-280								
Output	Frequency (Hz)	50/60								
	Voltage Range (V)	220								
Indicator Status	Precision	±8%								
	Efficiency	≥ 95%								
	Phase	Single Phase								
	Working	Green: indicating the power ON/OFF								
	Delaying	Yellow: ON during delay; OFF when delay finish								
Protection	Unusual	Red: indicating protection of Over/Under-voltage; OFF when protection finish								
	Over-voltage Protection	YES								
	Under-voltage Protection	YES								
	Overload Protection	YES								
	High Temperature Protection	YES								
Environment	Short Circuit Protection	YES								
	Cooling Fan	Nature							Fan	
	Operating temperature	-5°C ~ 40°C								
Physical	Humidity	< 90%								
	Machine Size (mm)	190x173x135	213x194x170	213x194x170	272x222x205	310x230x220	465x241x210	535x275x240	635x275x240	
	N.W. (Kgs)	4.5	7	8	12	15	26	28	39	

Input/output voltage diagram



Loading capability diagram



Relay Type Voltage Stabilizers Series PCH

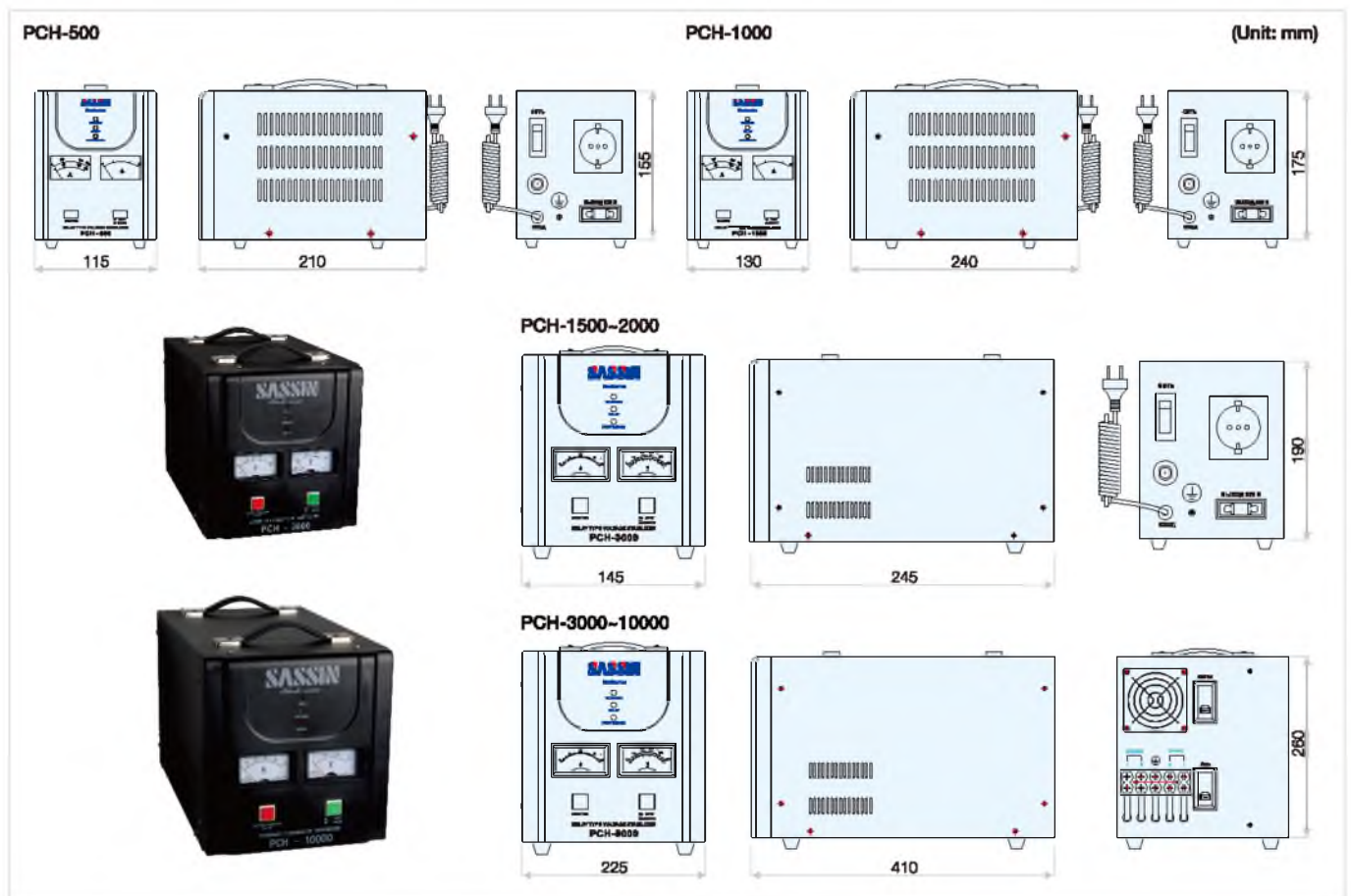
Selection and ordering data

PCH single phase

Phase	Type	Frequency (Hz)	Input voltage AC (V)	Output voltage AC (V)	Rated capacity (VA)	Type code	Order code
Single	Relay	50 / 60	140 ~ 260	220 / 110	500	PCH S500	15802
					1000	PCH S1000	15803
					1500	PCH S1500	15804
					2000	PCH S2000	15805
					3000	PCH S3000	15808
					5000	PCH S5000	15807
					6000	PCH S8000	15808
					10000	PCH S10000	15809

Please select the suitable plug and socket for PCH-500, PCH-1000, PCH-1500 and PCH-2000 according to the list in Page 12.

Outline and installation dimensions



Automatic Voltage Stabilizers

Series DVR Single Phase

Applications

- To automatically maintain a constant voltage level when power supply is **not** stable
- Ideal power supply for household appliances
- For precision instruments

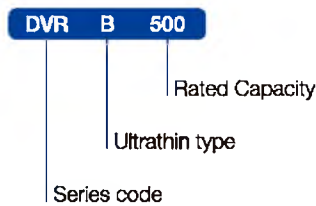
Features

- Luxury design with SCM controlled system
- Digital display working status at a glance
- Subminiature design (ultrathin type), space-saving
- Reliable performance with full protection
- With overload alarming function
- Quick response against voltage fluctuation



5

Instruction of type code



Selection and ordering data

Model	Rated capacity (VA)	Type code	Order code
DVR	500	DVR 500	38181
	1000	DVR 1000	38182
	1500	DVR 1500	38183
	2000	DVR 2000	38184
	3000	DVR 3000	38185
DVR-B	500	DVR B500	36499
	1000	DVR B1000	36500
	1500	DVR B1500	36501
	2000	DVR B2000	36502
	3000	DVR B3000	36503

Technical specifications

Type	DVR-500	DVR-1000	DVR-1500	DVR-2000	DVR-3000
Power Capacity (VA)	DVR-B-500 500	DVR-B-1000 1000	DVR-B-1500 1500	DVR-B-2000 2000	DVR-B-3000 3000
Technology	SCM based digital circuit + servo motor regulating				
Input	Voltage Range (V)	150 ~ 250			
	Frequency (Hz)	50/60			
Output	Voltage (V)	220			
	Precision	±3%			
Protection	Efficiency	≥ 95%			
	Under-voltage (V)	184 ±4			
	Over-voltage (V)	246 ±4			
	Time delay (min)	5 ±2			
Ambient	Over-heating (°C)	95 ±5			
	Overload/short circuit	As per the tripping characteristics of MCB			
	Temperature (°C)	-10 ~ +40			
Packaging	Humidity	≤ 90%			
	Altitude (m)	≤ 2000			
	Measurement (mm)				
Response time	≤ 1s when input voltage fluctuation not more than 10%				
Output waveform	No additional waveform distortion				
Noise	≤ 50dB				
Insulation Class	Class E				
Insulation Resistance	> 5MΩ				
Dielectric Strength	1500V/1 min				

Automatic Voltage Stabilizers Series LVR Single Phase

Applications

- To automatically maintain a constant voltage level when power supply is not stable
- Ideal power supply for household appliances
- For precision instruments

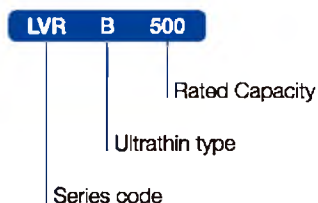
Features

- Luxury design with SCM controlled system
- LCD display working status at a glance
- Superhigh precision up to 1%
- Subminiature design (ultrathin type), space-saving
- Reliable performance with full protection
- With overload alarming function
- Quick response against voltage fluctuation



5

Instruction of type code



Selection and ordering data

Model	Rated capacity (VA)	Type code	Order code
LVR	500	LVR 500	38186
	1000	LVR 1000	38187
	1500	LVR 1500	38188
	2000	LVR 2000	38189
	3000	LVR 3000	38190
LVR-B	500	LVR B500	36504
	1000	LVR B1000	36505
	1500	LVR B1500	36506
	2000	LVR B2000	36507
	3000	LVR B3000	36508

Technical specifications

Type	LVR-500	LVR-1000	LVR-1500	LVR-2000	LVR-3000
Power Capacity (VA)	LVR-B-500 500	LVR-B-1000 1000	LVR-B-1500 1500	LVR-B-2000 2000	LVR-B-3000 3000
Technology	SCM based digital circuit + servo motor regulating				
Input	Voltage Range (V) 70 ~ 130/150 ~ 250				
	Frequency (Hz) 50/60				
Output	Voltage (V) 110/220				
	Precision 220V ±1%, ±3%, ±5% adjustable 110V ±1%, ±3%, ±5% adjustable				
	Efficiency ≥ 95%				
Protection	Under-voltage (V) 184 ±4				
	Over-voltage (V) 246 ±4				
	Time delay (min) 5 ±2				
	Over-heating (°C) 95 ±5				
Ambient	Overload/short circuit As per the tripping characteristics of MCB				
	Temperature (°C) -10 ~ +40				
	Humidity ≤ 90%				
	Altitude (m) ≤ 2000				
Packaging	Measurement (mm)				
	Gross Weight (kg)				
Response time	≤ 1s when input voltage fluctuation not more than 10%				
Output waveform	No additional waveform distortion				
Noise	≤ 50dB				
Insulation Class	Class E				
Insulation Resistance	> 5MΩ				
Dielectric Strength	1500V/1 min				

Automatic Voltage Stabilizers

Series SVC-D Digital Display

Applications and functions

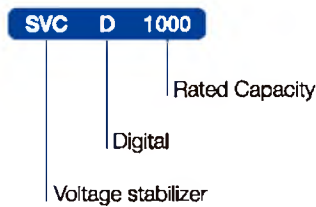
- Continuously stabilizer power supply where output voltage is unstable
Protection for office equipment, household appliance
- Protection for industrial equipment, medical equipment
- Protection for communication system etc

Features

- With digital display screen
- High efficiency power supply
- No wave distortion
- Reliable performance
- Work continually for long time
- Long time delay and under-voltage protection can be customized
- Connector accessory selectable



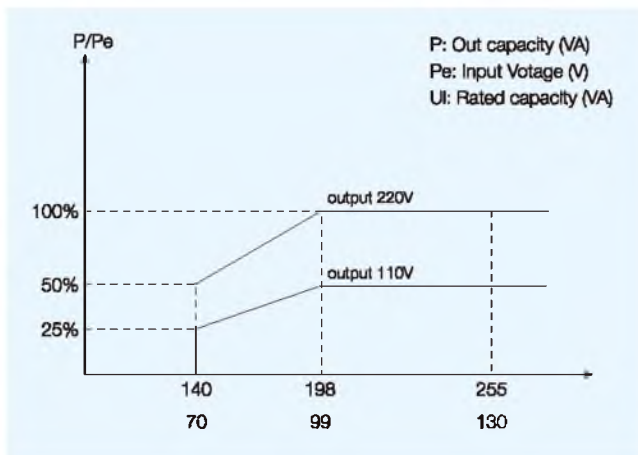
Instruction of type code



Technical specifications

Type		SVC-D-1000	SVC-D-1500	SVC-D-2000	SVC-D-3000	SVC-D-5000	SVC-D-8000	SVC-D-10000
Input	Power Capacity (VA)	1000	1500	2000	3000	5000	8000	10000
	Rated Voltage	AC 50 ~ 130V AC 140 ~ 255V						
Output	Frequency (Hz)	50/60						
	Rated Voltage	AC 220V/110V						
	Precision	±4%						
Protection	Delay Time (S)	5S or 30S						
	Over-voltage protection	246V ±4V (Show "H")						
	Under-voltage protection	184V ±4V (Show "L")						
Environment	High temperature protection	105°C						
	Operating Humidity	-5 ~ +40°C						
	Temperature	≤ 90% (At 25°C)						
Physical	Machine Size (mm)	160x212x195	160x212x195	215x190x260	215x220x290	280x220x310	365x270x330	365x270x330

Input voltage and output power



Model	Rated capacity (VA)	Type code	Order code
SVC-D	1000	SVC D1000	32616
	1500	SVC D1500	32617
	2000	SVC D2000	32618
	3000	SVC D3000	32619
	5000	SVC D5000	32620
	8000	SVC D8000	32621
	10000	SVC D10000	32622

Automatic Voltage Stabilizers Series SVC Single Phase Horizontal

Applications and functions

- Continuously stabilize power supply where output voltage is unstable
- Protection for office equipment, household appliance
- Protection for industrial equipment, medical equipment
- Protection for communication system etc.

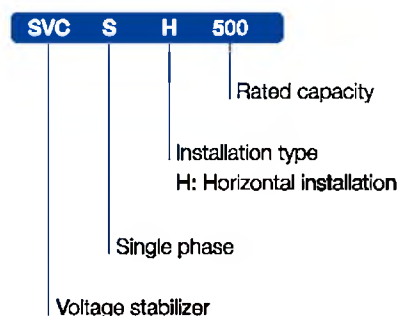
Features

- High efficiency power supply
- No wave distortion
- Reliable performance
- Work continually for long time
- Long-time delay and under-voltage protection can be customized
- Connector accessory selectable



5

Instruction of type code



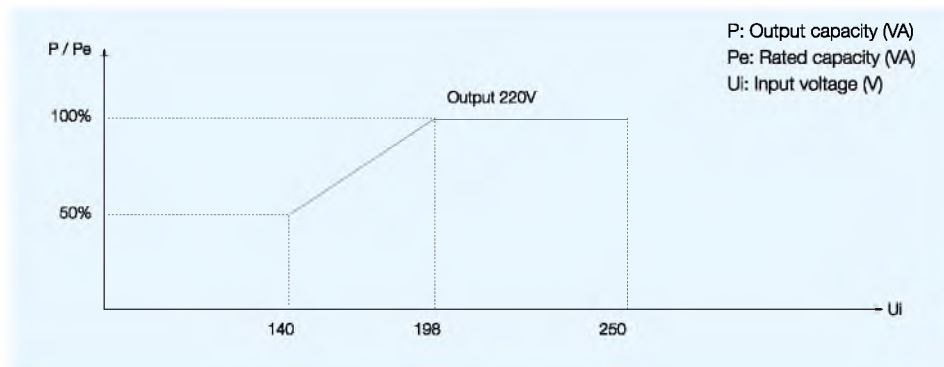
Technical specifications

Type		SVC-500	SVC-1000	SVC-1500	SVC-2000	SVC-3000	SVC-5000	SVC-8000	SVC-10000	
Input	Power capacity (VA)	500	1000	1500	2000	3000	5000	8000	10000	
	Voltage Range (V)	140~250 / 70~130								
Output	Frequency (Hz)	50 / 60								
	Voltage Range (V)	220 / 110								
Protection	Precision	±3%								
	Efficiency	≥ 95%								
	Phase	Single Phase								
	Over-voltage Protection	YES								
	Under-voltage Protection	YES								
	Overload Protection	YES								
	High Temperature Protection	YES								
Environment	Short Circuit Protection	YES								
	Cooling Fan	Nature							Fan	
	Operating temperature	-5°C ~ +40°C								
Physical	Humidity	≤ 80%								
	Machine Size (mm)	190x173x135	213x194x170	213x194x170	272x222x205	310x230x220	465x241x210	535x275x240	535x275x240	
	N.W. (Kgs)	4.5	7	8	12	15	26	28	39	

Automatic Voltage Stabilizers

Series SVC Single Phase Horizontal

Input voltage and output power



Overload capability	Overload time (min)
20%	60
40%	30
60%	5

5

Selection and ordering data

SVC Single Phase Horizontal

Phase	Type	Frequency (Hz)	Input voltage AC (V)	Output voltage AC (V)	Power capacity (VA)	Type code	Order code
Single	Servo-motor Horizontal	50 / 60	140 ~ 250 /70-130	220 / 110	500	SVC SH500	15818
					1000	SVC SH1000	15819
					1500	SVC SH1500	15820
					2000	SVC SH2000	15821
					3000	SVC SH3000	15822
					5000	SVC SH5000	15823
					8000	SVC SH8000	15824
10000	SVC SH10000	15825					

Please select the suitable plug and socket for SVC-500, SVC-1000 and SVC-1500 according to the list in Page 12.

Automatic Voltage Stabilizers Series SVC Single Phase Vertical

Applications and functions

- Continuously stabilizing power supply where output voltage is unstable
- 3G serving base station
- Industrial equipment
- Medical equipment
- Office equipment etc

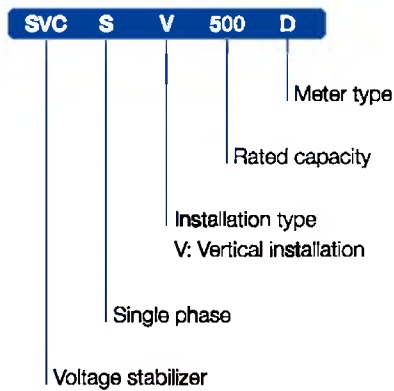
Features

- High efficiency power supply
- No wave distortion
- Reliable performance
- Working continually for long time
- Digital display type is available



5

Instruction of type code



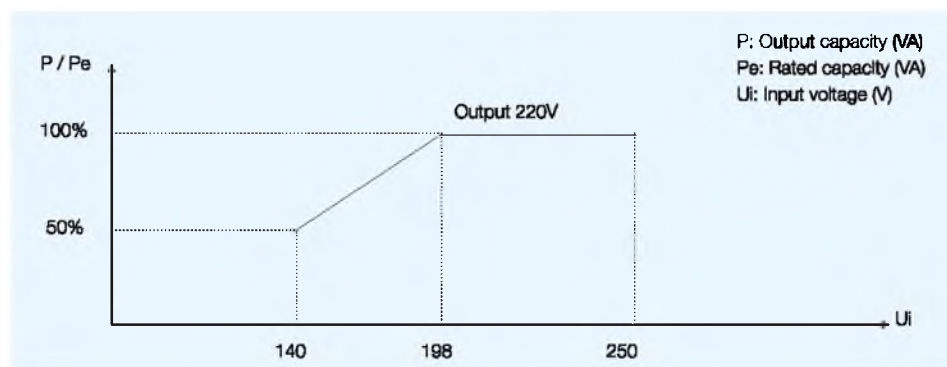
Technical specifications

Type		SVC-5000	SVC-8000	SVC-10000	SVC-15000	SVC-20000	SVC-30000
Input	Power capacity (VA)	5000	8000	10000	15000	20000	30000
	Voltage Range (V)	150 ~ 250					
	Frequency (Hz)	50 / 60					
Output	Voltage Range (V)	220					
	Precision	±3%					
	Efficiency	≥ 95%					
Protection	Phase	Single Phase					
	Over-voltage Protection	■					
	Under-voltage Protection	■					
	Overload Protection	■					
	High Temperature Protection	■					
	Short Circuit Protection	■					
Environment	Cooling Fan	Nature				Fan	
	Operating temperature	-5°C ~ +40°C					
	Humidity	≤ 90%					

Automatic Voltage Stabilizers

Series SVC Single Phase Vertical

Input voltage and output power



Overload capability	Overload time (min)
20%	60
40%	30
60%	5

5

Selection and ordering data

SVC single phase vertical

Phase	Meter	Type	Frequency (Hz)	Input voltage AC (V)	Output voltage AC (V)	Power capacity (VA)	Type code	Order code
Single	Digital	Servo-motor Vertical	50 / 60	150 ~ 250	220	5000	SVC SV5000D	15826
						8000	SVC SV8000D	15827
						10000	SVC SV10000D	15828
Single	Pointer	Servo-motor Vertical	50 / 60	150 ~ 250	220	5000	SVC SV5000P	15829
						8000	SVC SV8000P	15830
						10000	SVC SV10000P	15831
				150 ~ 250	220	15000	SVC SV15000P	15832
						20000	SVC SV20000P	15833
						30000	SVC SV30000P	15834



SVC-5000, 8000, 10000
Vertical (Pointer Meter)



SVC-5000, 8000, 10000
Vertical (Digital meter)



SVC-15000, 20000, 30000
Vertical (Pointer meter)

SVC-15000, 20000, 30000
Vertical (Digital meter)

Automatic Voltage Stabilizers Series SVC Three Phase

Applications and functions

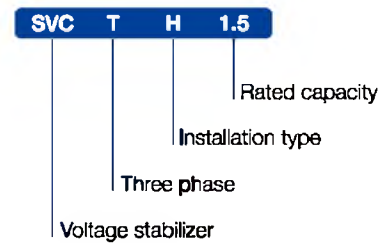
- Continuously stabilize power supply where output voltage is unstable
- Test equipment
- Lighting equipment
- Alarm and security system
- X-ray equipment
- Communication system
- Medical treatment & hygiene

Features

- Compact structure
- High efficiency power supply
- No wave distortion
- Reliable performance
- Work continually for long time



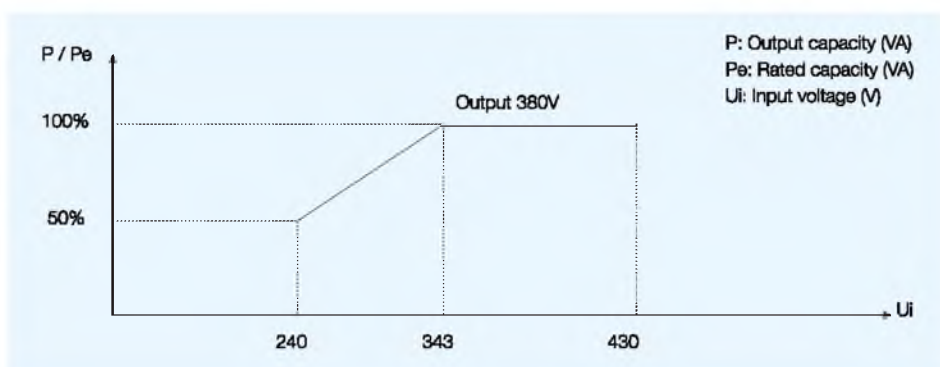
Instruction of type code



Technical specifications

Type		SVC-1.5K	SVC-3K	SVC-4.5K	SVC-6K	SVC-9K	SVC-15K	SVC-20K	SVC-30K	SVC-50K	SVC-60K	
Input	Voltage Range (V)	280 - 430										
	Frequency (Hz)	50 / 60										
Output	Voltage Range (V)	380										
	Precision	±3%										
	Efficiency	≥ 95%										
Protection	Phase	Three Phase										
	Over-voltage Protection	■										
	Under-voltage Protection	■										
	Overload Protection	■										
	High Temperature Protection	■										
	Short Circuit Protection	■										
Insulation resistance		< 5MΩ										
Environment	Operating temperature	-5°C ~ +40°C										
	Humidity	≤ 90%										

Input voltage and output power



Overload capability	Overload time (min)
20%	60
40%	30
60%	5

Automatic Voltage Stabilizers

Series SVC Three Phase

Selection and ordering data

SVC Three Phase

Phase	Type	Frequency (Hz)	Input voltage AC (V)	Output voltage AC (V)	Power capacity (VA)	Type code	
						Type code	Order code
Three	Servo-motor Horizontal	50 / 60	280 ~ 430	380	1.5K	SVC TH1.5	15849
					3K	SVC TH3	15850
					4.5K	SVC TH4.5	15851
Three	Servo-motor Vertical	50 / 60	280 ~ 430	380	6K	SVC TV6	15852
					9K	SVC TV9	15853
					15K	SVC TV15	15854
					20K	SVC TV20	15855
		50 / 60	280 ~ 430	380	30K	SVC TV30	15856
					50K	SVC TV50	15857
				60K	SVC TV60	15858	



SVC-3K



SVC-4.5K



SVC-6K



SVC-9K



SVC-15K



SVC-30K

Compensated Voltage Stabilizers Series DBW / SBW

Applications and functions

- Continuously stabilize power supply where output voltage is unstable
- Industrial production
- Scientific research
- Medical treatment & hygiene
- National defense
- Railway system

Features

- Small volume, light weight
- Large capacity
- High efficiency
- No wave distortion
- Stable voltage adjustment
- Reliable running
- Long working time
- Free transferring between manual control and automatic control
- Suitable for kinds of loads and bearing instantaneous overload
- Convenient installation



Technical specifications

Type	SBW-10KVA ~ 5000K	DBW-10KVA ~ 200K
Input voltage	380V ±20%	220V ±20%
Input phase	Three phase four-line + PE	
Output voltage	380V	220V
Protection	Over-voltage, over-current, machine fault, phase sequence protection (< SBW150KVA), phase failure protection	Over-voltage, over-current, machine fault phase sequence protection
Environment	Operating temperature	-5°C ~ 40°C
	Humidity	< 95%
Accuracy of output voltage	±1~5% (adjustable)	
Efficiency	≥ 95%	
Electric strength	2000V /1min	
Overload capacity	2 times rated current, keeping 1min	
Waveform distortion	No	
Response time	≤ 1.5S, when outside voltage has 10% of change	
Insulation resistance	≥ 1MΩ	

Compensated Voltage Stabilizers Series DBW / SBW

Selection and ordering data

DBW/SBW compensated type

Phase	Accuracy of output voltage (%)	Frequency (Hz)	Input voltage AC (V)	Output voltage AC (V)	Power capacity (KVA)	Type code	
						Type code	Order code
Three	±2~5% (adjustable)	50 / 60	380±20%	380	10	SBW10	15863
					15	SBW15	15864
					20	SBW20	15865
					30	SBW30	15866
					50	SBW50	15867
					60	SBW60	15868
					80	SBW80	15869
					100	SBW100	15870
					120	SBW120	15871
					150	SBW150	15872
					180	SBW180	15873
					200	SBW200	15874
					225	SBW225	15875
					250	SBW250	15876
					300	SBW300	15877
					350	SBW350	15878
					400	SBW400	15879
					450	SBW450	15880
					500	SBW500	15881
					600	SBW600	15882
					800	SBW800	15883
1000	SBW1000	15884					
1200	SBW1200	15885					
1600	SBW1600	15886					
1800	SBW1800	15887					
2000	SBW2000	15888					
2500	SBW2500	15889					
3000	SBW3000	15890					
3500	SBW3500	15891					
4000	SBW4000	15892					
5000	SBW5000	15893					
Single	±2~5% (adjustable)	50 / 60	220±20%	220	10	DBW10	15835
					15	DBW15	15836
					20	DBW20	15837
					25	DBW25	15838
					30	DBW30	15839
					40	DBW40	15840
					50	DBW50	15841
					60	DBW60	15842
					70	DBW70	15843
					80	DBW80	15844
					100	DBW100	15845
					150	DBW150	15846
180	DBW180	15847					
200	DBW200	15848					



Notes: Please indicate clearly about input voltage and accuracy of output voltage when placing an order.

Voltage Regulators

Series TDGC2J / TSGC2J

Applications and functions

- Wide range of output voltage from zero to the maximum value
- Applied in industries, scientific researches
- Suited to serve as ancillary facilities for analytical instruments in petroleum industry etc.
- Voltage regulating
- Temperature controlling



Features

- Energy saving type
- No wave distortion
- Small size and light weight
- Reliable performance
- High efficiency
- Convenient installation



5

Selection and ordering data

	Phase	Frequency (Hz)	Input voltage (V)	Output voltage (V)	Max.output current (A)	Capacity (KVA)	Shape	Type code	
								Type code	Order code
	1	50/60	110/220	0-250	0.88/2	0.5	Round	TDGC2J 0.5	15894
					1.6/4	1	Round	TDGC2J 1	15895
					3.2/8	2	Hexagon	TDGC2J 2	15896
					4.8/12	3	Round	TDGC2J 3	15897
					16	4	Octagon	TDGC2J 4	15902
					8/20	5	Octagon	TDGC2J 5	15898
					28	7	Octagon	TDGC2J 7	16067
					16/40	10	Octagon	TDGC2J 10	15899
					24/60	15	Octagon	TDGC2J 15	15900
					80	20	Octagon	TDGC2J 20	15901
				120	30	Octagon	TDGC2J 30	15903	
	3	50/60	220/380	0-430	1.6/4	3	Hexagon	TSGC2J 3	15905
					3.2/8	6	Hexagon	TSGC2J 6	15906
					5.4/13.4	9	Hexagon	TSGC2J 9	15907
					20	15	Octagon	TSGC2J 15	15908
					28	20	Octagon	TSGC2J 20	15909
					40	30	Octagon	TSGC2J 30	15910

Pure Sine Wave Inverters Series SKN-M

Applications and functions

- Micro Processor Control
- Pure Sine Wave
- Wide input voltage range
- Intelligent Automatic Voltage Regulating Technology
- Intelligent Automatic Voltage Charging Technology
- over load, short circuit protection

Over-temperature protection

- By Pass system
- Automatic charge even inverter is off
- Shut off output by manual if no need power
- Low battery protection
- Over voltage, Low voltage protection

With polarity protection option

- Compatibility with generators
- The LED & LCD Display Design Option

Technical specifications

Type	SKN-M500	SKN-M1000	SKN-M2000	SKN-M3000	SKN-M4000	SKN-M5000	SKN-M8000	SKN-M10000
Specification								
DC input								
Input Voltage (Vdc)	12/24	24	24/48	48	48	48	96	96
Input Current (A)	50/25	50	100/50	75	100	125	104	130
Input DC Range (Vdc)	10 ~ 15/20 ~ 30	20 ~ 30/40 ~ 60		40~60			80-112	80-112
AC bypass								
Input AC Range (Vac)	155 ~ 280V			185 ~ 265V				
Input Frequency Range (Hz)	45 ~ 55Hz							
Input Current (A)	2.3	4.5	9.1	13.6	18.2	22.7	51.7	64.6
Charge Current	7~10A		13~17A		17~25A			
Transfer Time (ms)	≤ 4 ms							
AC output								
Capacity (VA)	500	1000	2000	3000	4000	5000	8000	10000
Output Power (W)	350	700	1400	2100	2800	3500	4800	6000
Output Voltage (Vac)	220VAC ~ 110VAC							
Output Frequency Range (Hz)	50Hz ~ 60Hz							
Output Current (A)	1.6	3.2	6.4	9.5	12.7	15.9		
Voltage Precision (Vac)	220 ± 3%							
Frequency Precision (Hz)	50 ± 1%/60 ± 1% (in inverter model)							
Wave Distortion (TCKJ)	< = 5%							
Power Factor (PF)	0.6							
Overload Capacity	100% ~ 120%, 25 mins, 120% ~ 200%, 1 mins, > 200%, 0.1 mins							
Inversion Efficiency	≥ 82%				≥ 85%			
Bypass Transfer time (ms)	≤ 4 ms				≤ 10 ms			
Protection	over temperature, over load, over voltage, low battery, low voltage, input low/high voltage, short current protection							
Ambient								
Noise (dB)	≤ 40 (1 meter)							
Temperature	-20 ~ +45°C							
Humidity	0 ~ 95% (no condensation)							
Altitude (m)	< = 1500							
Dimension								
Package LxWxH (mm)	520x240x327		600x335x475			720x470x715		
Weight (kg)	9.5	15	22	28	39	43.5	71	81



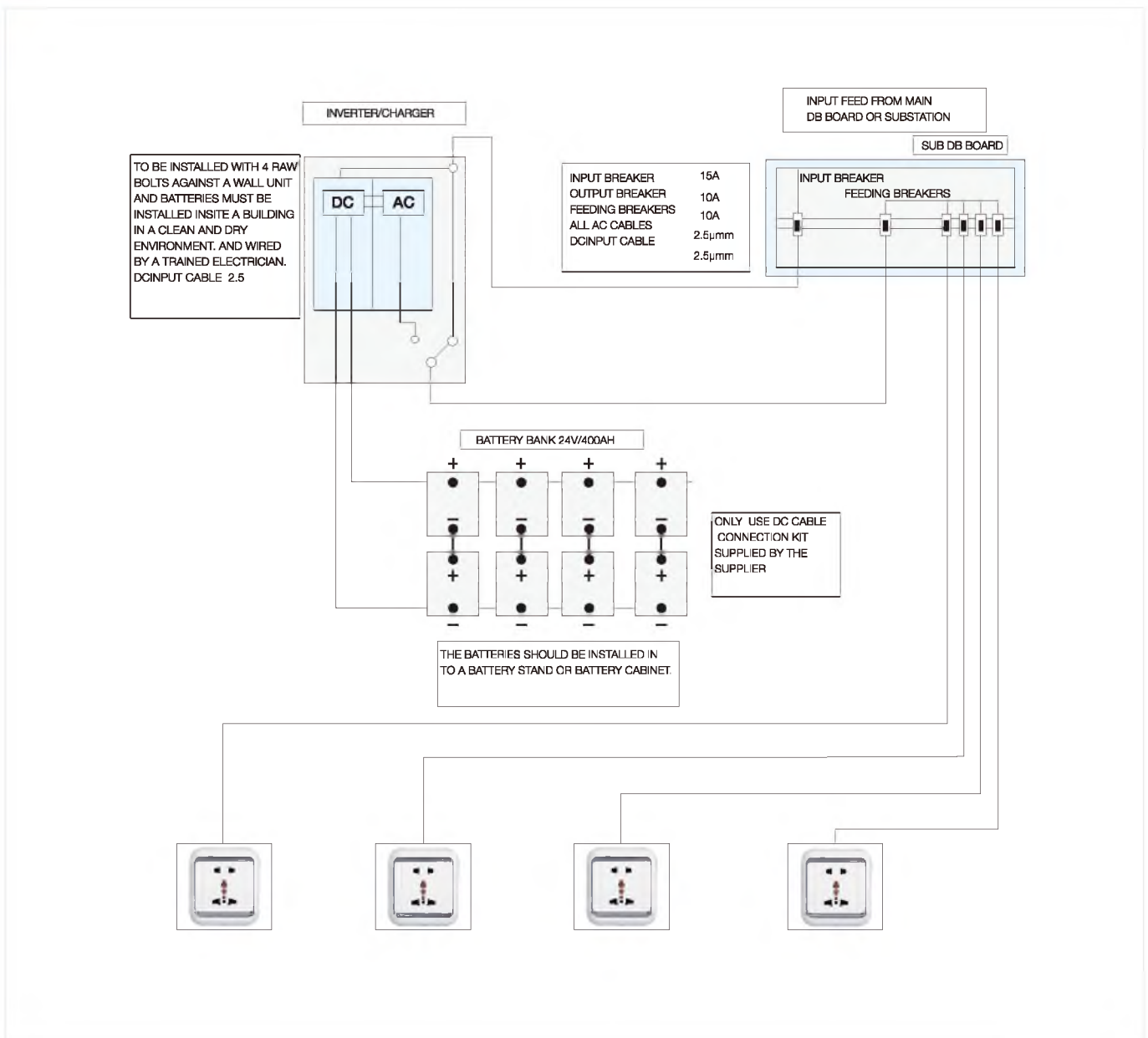
Pure Sine Wave Inverters

Series SKN-M

Selection and ordering data

Type	Input voltage	Type code	
		Type code	Order code
SKN-M500	12V	SKNM500 12	34719
	24V	SKNM500 24	34720
SKN-M1000	24V	SKNM1000 24	34721
SKN-M2000	24V	SKNM2000 24	34722
SKN-M3000	48V	SKNM2000 48	34723
	48V	SKNM3000 48	34724
SKN-M4000	48V	SKNM4000 48	34725
SKN-M5000	48V	SKNM5000 48	34726
SKN-M8000	96V	SKNM8000 96	38333
SKN-M10000	96V	SKNM10000 96	38334

5



Modified Sine Wave Inverters Series SKN-H

Main Features

- Micro Processor Control
- User selectable for accepting wider input voltage
- Full automatic and silent operation
- Automatic Line-to-Battery Switch over
- Intelligent Automatic Charging Technology
- Rack and Tower design
- Automatic charge while AC recovery (off model charging)
- High Efficient DC-to-AC conversion. minimizing energy loss
- Over load, short circuit protection
- Low battery protection
- Cool start
- Isolated output
- Selectable charge current
- Compatibility with generators
- Multi-function LED & LCD Display Design and buzzer alarms
- Application for Fan, light, TV and office Appliances



Selection and ordering data

Type	Type code Order code	
	Type code	Order code
SKN-H600	SKN H600	36493
SKN-H1000	SKN H1000	36494
SKN-H1200	SKN H1200	36495
SKN-H1500	SKN H1500	36496
SKN-H2000	SKN H2000	36497
SKN-H2400	SKN H2400	36498

Technical specifications

Specification	Type	SKN-H600	SKN-H1000	SKN-H1200	SKN-H1000	SKN-H2000	SKN-H2400
DC input							
Input Voltage (Vdc)		12	12	12	24	24	24
Input DC Range (Vdc)		10 ~ 15			20 ~ 30		
Input AC Range (Vac)		AC Bypass in "on / off" switch off mode 220 / 230 / 240V AC 177-280V °C (Narrow Range) or 90-280V AC (Wide Range)					
Input Frequency (Hz)		50 / 60 HZ					
Bypass Output Voltage (Vac)		Same as input AC					
Bypass Output Frequency (Hz)		Same as input frequency					
Charge Current (A)		10A ±2A or 10A- 20A Selectable					
Charge Floating Voltage (V)		13.75 ±0.2V			27.5 ±0.4V		
Over Charge Voltage (V)		15.0V±0.4V Charge stop			30.0V ±0.8V Charge stop		
AC Efficiency		> 97%					
Transfer Time (ms)		Typical 15ms					
AC output (inverter)							
Capacity (VA)		600	1000	1200	1000	2000	2400
Output Power (W)		360	600	720	600	1200	1440
Output Voltage		220V AC					
Output Frequency		50/60 HZ					
Output Current (A)		2.7/1.6	4.5/2.7	5.4/3.2	4.5/2.7	9.1/5.5	10.8/6.4
Voltage Precision (VAC)		220±10%					
Frequency Precision (HZ)		50/60Hz ±0.1HZ					
Wave		modify sine wave					
Power Factor (PF)		0.6					
Inversion Efficiency		> 85%					
Bypass Transfer time (ms)		< = 8 ms					
Over load capacity		over load 110%, 60s later shut offer					
Protection							
Protection		over load / short circuit protection over charge, discharge protection					
Ambient							
Noise (DB)		< = 40 (1 meter)					
Temperature		-20 ~ +45 degree					
Humidity		0 ~ 95% (no condensation)					
Altitude (m)		< = 1500					
Dimension							
Package LxWxH (mm)		638×370×552mm (10pcs in one carton)					
GW. Weight (Kg) /Carton		26.5	27.5	27.8	27.2	28.2	28.6

Back-up UPS Series PCN-V

Main Features

- CPU control
- With Stabilizer Function
- Wide Input Voltage Range
- Wide Input Frequency Range
- High/Low Voltage Protection, Overload/Short Protection
- Cool start computer even there isn't main power
- Automatic recharge even UPS is off
- Automatic restart
- Beeping Alarm on Battery, Battery Low and Overload
- Beeping Selection
- Intelligent Battery Management
- Intelligent LCD Display
- Smart RS232 & RJ11 & USB Option
- Compatibility With Generators



Selection and ordering data

Type	Type code	Order code
PCN-V500	PCN V500	36509
PCN-V650	PCN V650	36510
PCN-V1000	PCN V1000	36511
PCN-V1200	PCN V1200	36512
PCN-V1500	PCN V1500	36513
PCN-V2000	PCN V2000	36514

Technical specifications

Type		PCN-V500	PCN-V650	PCN-V1000	PCN-V1200	PCN-V1500	PCN-V2000	
Input	Voltage	80-150V AC / 145-290V AC \pm 5V						
	Frequency	60/50Hz \pm -10%						
Output	Voltage (AC Mode)	105-135V AC / 190-250V AC						
	Voltage (Inverter Mode)	120V AC/220V AC \pm 5%						
Capacity	Capacity	500VA/300W	650VA/390W	1000VA/600W	1200VA/720W	1500VA/880W	2000VA/1100W	
	Frequency (Inverter Mode)	60/50Hz \pm - 0.5Hz						
	Transfer Time	2ms typical						
	Generator connection	Normal Working under the Generator						
	Waveform	modified Sine wave						
	Protection	Spike & Surge Suppression	yes					
		Over / Under Volt.	Switch to Bat. O / P when Mains over regulation range					
Battery	Over load / short Circuit	Fuse & current limited for both Mains and Battery modes						
	Type	Lead-Acid maintenance-free						
	Dc Bus	12V 7.0Ah	12V 7.0Ah	12V 7.0Ah	12V 7.0Ah	12V 9.0Ah	12V 7.0Ah	
Physical	Number	1 PCS		2 PCS		3 PCS		
	Recharge time	8hours \geq 90%						
	Back up time (one PC)	8-15mins	8-15mins	20-30mins	20-30mins	25-45mins	30-45mins	
	Weight (KGs)	5	5.5	10.5	11	11.5	17	
	Shipping Wt.	5.6	6	11	11.5	12	17.5	
Soft ware Function	Product Dimensions (mm)	335x95x160		355x120x195		410x145x215		
	Packing Dimensions (mm)	435x395x275/ 2 PCS		435x395x275/ 2 PCS		495x250x335		
	RS232 or USB option	Auto save & shut down						
Efficiency	Cold start	UPS Start The Computer Even there Is no Main Power						
	Automatic Charge	Automatic Charge when UPS is off						
	Automatic Restart	Automatic Restart if main power resumes within one hour						
	Voltage display	220V/230V Optional						
	Frequency	50/60Hz Optional						
	Beeping	Beeping optional at battery mode						
	AC-AC	1						
Acoustic Ambient	DC-AC	0.6						
	Noise level	\leq 45dB						
Power Outlet	Temperature	-5 ~ +45 °C						
	Humidity	20% to 90%						
Power Outlet	No. and types	2 sockets		3 sockets		4 sockets		

Applications and functions

- CPU control
- Wide Input Voltage Range
- High/Low Voltage Protection, Overload/Short Circuit Protection
- Cool start computer even there is no main power
- Automatic recharge even UPS is off
- Automatic restart
- Beeping Alarm on Battery, Battery Low and Overload
- Beeping Selection
- Intelligent Battery Management
- Intelligent LCD Display
- Smart RS232 & RJ11 & USB Option
- Compatibility with generators



Technical specifications

Type		PCS-500	PCS-650	PCS-800	PCS-1000	PCS-1200	PCS-1500
Input	Voltage (V)	145-290 VAC ± 5					
	Frequency (Hz)	50 ± 10%					
Output	Voltage (AC Mode)	190V-250V AC					
	Voltage (Inverter Mode)	220V AC±5%					
	Capacity	500VA/300W	650VA/360W	800VA/480W	1000VA/600W	1200VA/720W	1500VA/880W
	Frequency (Inverter Mode)	50Hz ± 0.5Hz					
	Transfer Time (MS)	2					
	Generator connection	Normal working under the generator					
	Waveform	Modified-sinewave					
Protection	Spike & Surge Suppression	yes					
	Over/Under Volt.	Switch to Bat. O/P when mains over regulation range					
	Over load/short circuit	Fuse & current limited for both mains and battery modes					
Battery	Type	Lead-Acid maintenance-free					
	DC Bus	12V 7.0Ah			12V 9.0Ah		
	Number	1 PC			2 PC		
	Recharge time	8 hours ≥ 90%					
Physical	Back up time (one PC)	8-15mins	10-18mins	15-25mins	20-30mins	20-30mins	25-45mins
	Weight (KGS)	5	5.5	6.5	10.5	11	11.5
	Shipping Wt. (KG)	5.6	6	7	11	11.5	12
	Product dimensions (mm)	335x95x160			335x120x195		
	Package Dimensions (mm)	375x170x200			420x190x250		
	Soft ware	Rs232 or USB option Windows & NT	Auto save & shut down				
Function	Cool start	UPS starts the computer even there is no main power					
	Automatic charge	Automatic charge when UPS is no main power					
	Automatic Restart	Automatic restart if main power coming within one hour (UPS shutdown by Automatic)					
	Voltage display	220V/230V Optional following the real capacity					
	Frequency	50/60Hz					
Efficiency	Beeping	During the battery mode, the beeping optional					
	AC - AC	1					
	DC - AC	0.6					
Acoustic	Noise level	≤ 45dB					
	Temperature	-5-45 Degree C					
Environmental	Humidity	20% to 90%					
	Power outlets	No.			2 sockets		

Selection and ordering data

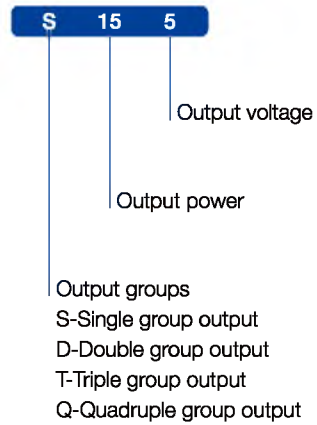
PCS Stand-by UPS	Power capacity (VA)	Input voltage 110V		Input voltage 220V	
		Type code	Order code	Type code	Order code
	500	PCS500110	32715	PCS500220	32721
	650	PCS650110	32716	PCS650220	32722
	800	PCS800110	32717	PCS800220	32723
	1000	PCS1000110	32718	PCS1000220	32724
	1200	PCS1200110	32719	PCS1200220	32725
	1500	PCS1500110	32720	PCS1500220	32726

Switching Power Supplies

Features

- High reliability
- Built-in EMI filter, good anti-jamming performance
- High efficiency
- Soft-start circuit design, AC surge current limiting
- Low operating temperature, long working life
- Wide input voltage range
- Good insulation, high dielectric strength
- Short circuit, overload, overvoltage protection
- 100% burn-in test
- Small size, light weight, beautiful appearance

Introduction of type code



Technical specifications

		Single output S series																
		W	15	25	35	40	50	60	75	100	120	140	201	250	320	350	400	500
Rated output power		W																
Rated output voltage DC																		
3 V										•								
5 V			•		•		•		•	•		•	•			•	•	
7.5 V										•	•	•	•					
12 V			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
13.5 V													•		•			•
15 V				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
24 V			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
27 V										•	•	•	•	•	•	•	•	•
48 V										•	•	•	•	•	•	•	•	•
DC voltage adjustable range			±10% of rated output voltage															
Input voltage range																		
85 ... 132 V AC 47-63 Hz			•	•	•	•	•	•		•	•	•	•	•	•	•	•	
85 ... 264 V AC 47-63 Hz									•									
88 ... 264 V AC 47-63 Hz																		•
170 ... 264 V AC 47-63 Hz			•	•	•	•	•	•		•	•	•	•	•	•	•	•	
120 ... 370 V DC									•									
240 ... 370 V DC			•	•	•	•	•	•		•	•	•	•	•	•	•	•	•
Typical input current																		
at 115 V AC		A	0.5	0.6	0.8	0.9	1.3	2	1.6	2.4	2.4	3.2	4.5	5	6	6.5	6.5	7
at 230 V AC		A	0.25	0.35	0.45	0.5	0.65	1	0.8	1.2	1.2	1.6	2.5	2.5	3.5	4	4	3.5
Inrush current (max.)																		
Cold start at 115 V AC		A	15		18				20				25			25	25	18
Cold start at 230 V AC		A	30		36				40				50		50	50	50	36
Leakage current at 240 V AC		mA	<0.5		<2	<0.5	<1		<3.5	<1			<3.5					
Time																		
Setup		ms	200				200			200		100	200		200			1500
Rise		ms	100				100			50		50	100		50			50
Hold up		ms	30				20			20		20	20		20			20
Overload protection																		
105%-135%, shut off, auto-reset								•	•		•		•	•	•	•	•	•
105%-150%, shut off, auto-reset			•	•	•	•	•			•		•						
Overvoltage protection																		
115%-135% shut off, auto-reset									•			•	•	•	•	•	•	•
Over temperature protection																		
≥80 °C shut off, auto-reset													•		•	•	•	
≥90 °C shut off, auto-reset																		•
Fan ON/OFF control																		
≥80 °C fan start, ≤45 °C fan off																•	•	
Withstand voltage																		
I/P-O/P, AC 1 minute		kV	1.5															3
I/P-FG, AC 1 minute		kV	1.5															1.5
O/P-FG, AC 1 minute		kV	0.5															0.5
Operation temperature			-10 °C - +60 °C, 20%-90% RH															
Weight		kg	0.3	0.3	0.4	0.4	0.5	0.5	0.55	0.6	0.6	0.7	0.87	0.9	1	1	1	1.8
Packing unit		pcs	60	60	45	45	45	45	45	30	30	30	24	24	24	24	24	8

Switching Power Supplies

Technical specifications

	W	Dual output D series					Triple output T series					Quadruple output Q series	
		30	50	60	120	200	30	50	60	100	120	60	120
Rated output power													
Rated output voltage DC													
5 V		●	●	●	●		●	●	●	●	●	●	●
12 V		●	●	●	●	●	●	●	●	●	●	●	●
15 V								●	●	●	●	●	●
24 V		●	●	●	●	●		●				●	●
-5 V							●	●	●	●	●	●	●
-12 V							●	●	●	●	●	●	●
-15 V								●	●	●	●	●	●
DC voltage adjustable range		±10% of rated output voltage					±10% of rated output voltage						
Input voltage range													
85 ... 132 V AC 47-63 Hz		●	●		●		●	●		●	●	●	●
85 ... 264 V AC 47-63 Hz				●									
88 ... 132 V AC 47-63 Hz						●							
88 ... 264 V AC 47-63 Hz									●				
170 ... 264 V AC 47-63 Hz		●	●		●	●	●	●		●	●	●	●
120 ... 370 V DC				●									
240 ... 370 V DC		●	●		●	●	●	●	●	●	●	●	●
Typical input current													
at 115 V AC	A	0.8	1.3	2	2.5	4.5	0.8	1.6	2	2.5	2.5	2	3
at 230 V AC	A	0.45	0.65	1	1.25	2.5	0.45	0.8	1	1.25	1.25	1	1.25
Inrush current (max.)													
Cold start at 115 V AC	A	18			30	25	18	20	30			18	30
Cold start at 230 V AC	A	36			30	50	36	40	60			36	60
Leakage current at 240 V AC	mA	< 0.5			< 3.5	< 3.5	< 0.75	< 0.5	< 3.5			< 1	< 3.5
Time													
Setup	ms	200		300	200		200	200	300	800		800	200
Rise	ms	50		50	50		100	50	50	20		20	50
Hold up	ms	30		80	20		30	15	80	20		70	20
Overload protection													
105%-135%, shut off, auto-reset					●	●				●	●		
105%-150%, shut off, auto-reset		●	●	●			●	●	●			●	●
Overvoltage protection													
115%-135% shut off, auto-reset				●	●	●			●	●	●	●	●
Over temperature protection													
≥80 °C shut off, auto-reset						●							
Withstand voltage													
I/P-O/P, AC 1 minute	kV	1.5					1.5					1.5	
I/P-FG, AC 1 minute	kV	1.5					1.5					1.5	
O/P-FG, AC 1 minute	kV	0.5					0.5					0.5	
Operation temperature		-10 °C - +60 °C , 20%-90% RH											
Weight	kg	0.4	0.52	0.55	0.85	0.85	0.4	0.54	0.56	0.85	0.85	0.5	0.88
Packing unit	pcs	45	45	45	24	24	45	45	45	24	24	45	24

Selection and ordering data

Model	Output voltage	Output current (A)	Tolerance	Residual ripple and noise voltage (mV)	Efficiency	Type code	Order code
	(V DC)						
Single output							
S-15	5	0-3	± 2%	50	65%	S-15-5	34665
	12	0-1.3	± 1%	50	68%	S-15-12	34666
	24	0-0.7	± 1%	100	72%	S-15-24	34667
S-25	12	0-2.1	± 1%	100	68%	S-25-12	34668
	15	0-1.7	± 1%	100	68%	S-25-15	34669
	24	0-1.1	± 1%	100	72%	S-25-24	34670
S-35	5	0-7	± 2%	75	70%	S-35-5	34671
	12	0-3	± 1%	100	76%	S-35-12	34672
	15	0-2.4	± 1%	100	78%	S-35-15	34673
	24	0-1.5	± 1%	100	78%	S-35-24	34674
S-40	12	0-3.5	± 1%	100	76%	S-40-12	34675
	15	0-2.8	± 1%	100	76%	S-40-15	34676
	24	0-1.8	± 1%	100	78%	S-40-24	34677
S-50	5	0-10	± 2%	75	71%	S-50-5	34678
	12	0-4.2	± 1%	100	76%	S-50-12	34679
	15	0-3.4	± 1%	100	78%	S-50-15	34680
	24	0-2.1	± 1%	100	82%	S-50-24	34681
S-60	12	0-5	± 1%	100	78%	S-60-12	34682
	15	0-4	± 1%	100	78%	S-60-15	34683
	24	0-2.5	± 1%	100	82%	S-60-24	34684
S-75	5	0-15	± 2%	70	71%	S-75-5	34685
	12	0-6.3	± 1%	100	78%	S-75-12	34686
	15	0-5	± 1%	100	78%	S-75-15	34687
	24	0-3.2	± 1%	100	82%	S-75-24	34688
S-100	3	0-20	± 2%	100	71%	S-100-3	34689
	5	0-20	± 2%	100	78%	S-100-5	34690
	7.5	0-13.6	± 1%	100	80%	S-100-7.5	34691
	12	0-8.5	± 1%	100	81%	S-100-12	34692
	15	0-6.7	± 1%	100	81%	S-100-15	34693
	24	0-4.5	± 1%	100	84%	S-100-24	34694
	27	0-3.7	± 1%	100	84%	S-100-27	34695
	48	0-2	± 1%	100	84%	S-100-48	34696
S-120	7.5	0-16	± 1%	100	80%	S-120-7.5	34697
	12	0-10	± 1%	100	81%	S-120-12	34698
	15	0-8	± 1%	100	81%	S-120-15	34699
	24	0-5	± 1%	100	84%	S-120-24	34700
	27	0-4.5	± 1%	100	84%	S-120-27	34701
	48	0-2.5	± 1%	100	84%	S-120-48	34702
S-140	5	0-25	± 2%	100	78%	S-140-5	34703
	7.5	0-18	± 1%	100	80%	S-140-7.5	34704
	12	0-12	± 1%	100	80%	S-140-12	34705
	15	0-9.7	± 1%	100	80%	S-140-15	34706
	24	0-6	± 1%	100	83%	S-140-24	34707
	48	0-3	± 1%	100	83%	S-140-48	34708
S-201	5	0-40	± 2%	150	74%	S-201-5	34709
	7.5	0-26.5	± 2%	150	79%	S-201-7.5	34710
	12	0-16.5	± 1%	150	80%	S-201-12	34711
	13.5	0-14.7	± 1%	150	80%	S-201-13.5	34712
	15	0-13	± 1%	150	81%	S-201-15	34713
	24	0-8.3	± 1%	150	83%	S-201-24	34714
	27	0-7.4	± 1%	200	83%	S-201-27	34715
	48	0-4.2	± 1%	240	84%	S-201-48	34716
S-250	12	0-20	± 1%	120	79%	S-250-12	34717
	15	0-16	± 1%	120	80%	S-250-15	34718
	24	0-10	± 1%	120	82%	S-250-24	34727
	27	0-9	± 1%	150	82%	S-250-27	34728
	48	0-5.2	± 1%	200	84%	S-250-48	34729
S-320	12	0-25	± 1%	150	74%	S-320-12	34730
	13.5	0-22	± 1%	150	78%	S-320-13.5	34731
	15	0-20	± 1%	150	78%	S-320-15	34732
	24	0-12.5	± 1%	150	81%	S-320-24	34733
	27	0-11	± 1%	200	82%	S-320-27	34734
	48	0-6.5	± 1%	240	83%	S-320-48	34735

Switching Power Supplies

Selection and ordering data

Model	Output voltage	Output current (A)	Tolerance	Residual ripple and noise voltage (mV)	Efficiency	Type code	Order code
	(V DC)						
Single output							
S-350	5	0-50	± 2%	150	73%	S-350-5	34736
	12	0-29	± 1%	150	74%	S-350-12	34737
	15	0-23.2	± 1%	150	78%	S-350-15	34738
	24	0-14.6	± 1%	150	81%	S-350-24	34739
	27	0-13	± 1%	200	82%	S-350-27	34740
S-400	48	0-7.3	± 1%	240	83%	S-350-48	34741
	5	0-60	± 1%	150	73%	S-400-5	34742
	12	0-33	± 1%	150	74%	S-400-12	34743
	15	0-27	± 1%	150	78%	S-400-15	34744
	24	0-17	± 1%	150	81%	S-400-24	34745
	48	0-8.3	± 1%	240	82%	S-400-48	34746
Dual output							
D-30A	5	0.5-4	± 2%	50	72%	D-30A-5	34747
	12	0.1-1	± 3%-7%	100	72%	D-30A-12	34748
D-30B	5	0.5-4	± 2%	50	84%	D-30B-5	34749
	24	0.1-1	± 3%-5%	100	84%	D-30B-24	34750
D-50A	5	1-6	± 2%	50	72%	D-50A-5	34751
	12	0.3-2	± 5%, -8%	100	72%	D-50A-12	34752
D-50B	5	1-6	± 2%	50	84%	D-50B-5	34753
	24	0.2-1	± 8%	100	84%	D-50B-24	34754
D-60A	5	0.3-6	± 2%	75	73%	D-60A-5	34755
	12	0.2-4	± 6%	150	73%	D-60A-12	34756
D-60B	5	0.3-6	± 2%	75	76%	D-60B-5	34757
	24	0.2-2.2	± 5%	150	76%	D-60B-24	34758
D-120A	5	2-12	± 2%	60	78%	D-120A-5	34759
	12	0.5-5	± 6%	120	78%	D-120A-12	34760
D-120B	5	2-10	± 2%	60	80%	D-120B-5	34761
	24	0.4-4	± 7%	150	80%	D-120B-24	34762
D-120C	12	1-8	± 2%	150	80%	D-200C-12	34763
	24	0.5-4.5	± 6%	150	80%	D-200C-24	34764
Triple output							
T-30A	5	0.5-3	± 2%	50	70%	T-30A-5	34765
	12	0.1-1	± 2%, -6%	100	70%	T-30A-12	34766
	-5	0.1-0.5	± 2%, -10%	50	70%	T-30A-(-5)	34767
T-30B	5	0.5-3	± 2%	50	72%	T-30B-5	34768
	12	0.1-1	± 2%, -6%	100	72%	T-30B-12	34769
	-12	0.1-0.5	± 6%	100	72%	T-30B-(-12)	34770
T-50A	5	0.6-7	± 2%	100	66%	T-50A-5	34771
	12	0.2-1	± 5%	100	66%	T-50A-12	34772
	-5	0.2-1	± 5%	100	66%	T-50A-(-5)	34773
T-50B	5	0.6-5	± 2%	100	69%	T-50B-5	34774
	12	0.2-1	± 5%	100	69%	T-50B-12	34775
	-12	0.2-1	± 5%	100	69%	T-50B-(-12)	34776
T-50C	5	0.6-4	± 2%	100	71%	T-50C-5	34777
	15	0.2-1	± 5%	100	71%	T-50C-15	34778
	-15	0.2-1	± 5%	100	71%	T-50C-(-15)	34779
T-50D	5	0.6-4	± 2%	50	72%	T-50D-5	34780
	12	0.2-1.2	± 6%	120	72%	T-50D-12	34781
	24	0.2-1.2	± 6%	120	72%	T-50D-24	34782
T-60A	5	0.5-7	± 2%	100	72%	T-60A-5	34783
	12	0.2-3.5	± 6%	100	72%	T-60A-12	34784
	-5	0-1	± 6%	100	72%	T-60A-(-5)	34785
T-60B	5	0.5-7	± 2%	100	72%	T-60B-5	34786
	12	0.2-3.5	± 6%	100	72%	T-60B-12	34787
	-12	0-1	± 6%	100	72%	T-60B-(-12)	34788
T-60C	5	0.5-7	± 2%	100	72%	T-60C-5	34789
	15	0.2-3	± 6%	100	72%	T-60C-15	34790
	-15	0-1	± 6%	100	72%	T-60C-(-15)	34791

Selection and ordering data

Model	Output voltage	Output current (A)	Tolerance	Residual ripple and noise voltage (mV)	Efficiency	Type code	Order code
	(V DC)						
Triple output							
T-100A	5	2-8	± 2%	80	77%	T-100A-5	34792
	12	0.5-4	± 6%	120	77%	T-100A-12	34793
	-5	0.2-1	± 6%	80	77%	T-100A- (-5)	34794
T-100B	5	2-8	± 2%	80	77%	T-100B-5	34795
	12	0.5-4	± 6%	120	77%	T-100B-12	34796
	-12	0.2-1	± 6%	120	77%	T-100B- (-12)	34797
T-100C	5	2-8	± 2%	80	76%	T-100C-5	34798
	15	0.5-4	± 10%, -5%	150	76%	T-100C-15	34799
	-15	0.2-1	± 10%, -5%	150	76%	T-100C- (-15)	34800
T-120A	5	2-12	± 2%	80	77%	T-120A-5	34801
	12	0.5-5	± 6%	120	77%	T-120A-12	34802
	-5	0.2-1	± 6%	80	77%	T-120A- (-5)	34803
T-120B	5	2-12	± 2%	80	77%	T-120B-5	34804
	12	0.5-5	± 6%	120	77%	T-120B-12	34805
	-12	0.2-1	± 6%	120	77%	T-120B- (-12)	34806
T-120C	5	2-12	± 2%	80	76%	T-120C-5	34807
	15	0.5-5	± 10%, -5%	150	76%	T-120C-15	34808
	-15	0.2-1	± 10%, -5%	150	76%	T-120C- (-15)	34809
Quadruple output							
Q-60B	5	0.5-8	± 2%	100	70%	Q-60B-5	34810
	12	0.1-3	± 6%	120	70%	Q-60B-12	34811
	-5	0-1	± 5%	100	70%	Q-60B- (-5)	34812
	-12	0-1	± 5%	120	70%	Q-60B- (-12)	34813
Q-60C	5	0.5-8	± 2%	100	72%	Q-60C-5	34814
	15	0.1-3	± 8, 8%	120	72%	Q-60C-15	14130
	-5	0-1	± 5%	100	72%	Q-60C- (-5)	14131
	-15	0-1	± 5%	120	72%	Q-60C- (-15)	14132
Q-60D	5	0.5-8	± 2%	100	75%	Q-60D-5	14133
	12	0.1-3	± 6%	120	75%	Q-60D-12	14134
	24	0-1,5	± 8, 4%	150	75%	Q-60D-24	14135
	-12	0-1	± 5%	120	75%	Q-60D- (-12)	14136

Control Transformers

Series JBK3

Applications and functions

- AC 50Hz/60Hz
- Used as control sources for various mechanical equipment
- Used as control sources for general electrical appliances
- Used as power supplies for working illumination and indication of machinery
- Rated input voltage: < 500V
- Rated output voltage: < 220V



5

Technical specifications

Type	Power capacity (VA)	Rated input voltage (V)	Rated output voltage (V)		
			control	illumination	indication
JBK3-40	40	220 ±5%	110	24	6
JBK3-63	63	380 ±5%	(127)	(36)	(12)
JBK3-100	100				
JBK3-160	160				
JBK3-250	250				
JBK3-400	400				
JBK3-630	630				
JBK3-1000	1000				
JBK3-1600	1600				
JBK3-2500	2500				

Distribution of capacity for different winding may be according to the users' request.

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
14130	Q-60C-15	5-29	15878	SBW350	5-17	34683	S-60-15	5-27
14131	Q-60C-(-5)	5-29	15879	SBW400	5-17	34684	S-60-24	5-27
14132	Q-60C-(-15)	5-29	15880	SBW450	5-17	34685	S-75-5	5-27
14133	Q-60D-5	5-29	15881	SBW500	5-17	34686	S-75-12	5-27
14134	Q-60D-12	5-29	15882	SBW600	5-17	34687	S-75-15	5-27
14135	Q-60D-24	5-29	15883	SBW800	5-17	34688	S-75-24	5-27
14136	Q-60D-(-12)	5-29	15884	SBW1000	5-17	34689	S-100-3	5-27
15802	PCH500	5-5	15885	SBW1200	5-17	34690	S-100-5	5-27
15803	PCH1000	5-5	15886	SBW1600	5-17	34691	S-100-7.5	5-27
15804	PCH1500	5-5	15887	SBW1800	5-17	34692	S-100-12	5-27
15805	PCH2000	5-5	15888	SBW2000	5-17	34693	S-100-15	5-27
15806	PCH3000	5-5	15889	SBW2500	5-17	34694	S-100-24	5-27
15807	PCH5000	5-5	15890	SBW3000	5-17	34695	S-100-27	5-27
15808	PCH8000	5-5	15891	SBW3500	5-17	34696	S-100-48	5-27
15809	PCH1000	5-5	15892	SBW4000	5-17	34697	S-120-7.5	5-27
15818	SVC SH500	5-10	15893	SBW5000	5-17	34698	S-120-12	5-27
15819	SVC SH1000	5-10	15894	TDGC2J0.5	5-18	34699	S-120-15	5-27
15820	SVC SH1500	5-10	15895	TDGC2J1	5-18	34700	S-120-24	5-27
15821	SVC SH2000	5-10	15896	TDGC2J2	5-18	34701	S-120-27	5-27
15822	SVC SH3000	5-10	15897	TDGC2J3	5-18	34702	S-120-48	5-27
15823	SVC SH5000	5-10	15898	TDGC2J5	5-18	34703	S-140-5	5-27
15824	SVC SH8000	5-10	15899	TDGC2J10	5-18	34704	S-140-7.5	5-27
15825	SVC SH10000	5-10	15900	TDGC2J15	5-18	34705	S-140-12	5-27
15826	SVC SV5000D	5-12	15901	TDGC2J20	5-18	34706	S-140-15	5-27
15827	SVC SV8000D	5-12	15902	TDGC2J4	5-18	34707	S-140-24	5-27
15828	SVC SV10000D	5-12	15903	TDGC2J30	5-18	34708	S-140-48	5-27
15829	SVC SV5000P	5-12	15904	TDGC2J60	5-18	34709	S-201-5	5-27
15830	SVC SV8000P	5-12	15905	TSGC2J3	5-18	34710	S-201-7.5	5-27
15831	SVC SV10000P	5-12	15906	TSGC2J6	5-18	34711	S-201-12	5-27
15832	SVC SV15000P	5-12	15907	TSGC2J9	5-18	34712	S-201-13.5	5-27
15833	SVC SV20000P	5-12	15908	TSGC2J15	5-18	34713	S-201-15	5-27
15834	SVC SV30000P	5-12	15909	TSGC2J20	5-18	34714	S-201-24	5-27
15835	DBW10	5-17	15910	TSGC2J30	5-18	34715	S-201-27	5-27
15836	DBW15	5-17	16067	TDGC2J7	5-18	34716	S-201-48	5-27
15837	DBW20	5-17	32616	SVC D1000	5-8	34717	S-250-12	5-27
15838	DBW25	5-17	32617	SVC D1500	5-8	34718	S-250-15	5-27
15839	DBW30	5-17	32618	SVC D2000	5-8	34719	SKNZ500 12	5-20
15840	DBW40	5-17	32619	SVC D3000	5-8	34720	SKNZ500 24	5-20
15841	DBW50	5-17	32620	SVC D5000	5-8	34721	SKNZ1000 24	5-20
15842	DBW60	5-17	32621	SVC D8000	5-8	34722	SKNZ2000 24	5-20
15843	DBW70	5-17	32622	SVC D10000	5-8	34723	SKNZ2000 48	5-20
15844	DBW80	5-17	32715	PCS500110	5-23	34724	SKNZ3000 48	5-20
15845	DBW100	5-17	32716	PCS650110	5-23	34725	SKNZ4000 48	5-20
15846	DBW150	5-17	32717	PCS800110	5-23	34726	SKNZ5000 48	5-20
15847	DBW180	5-17	32718	PCS1000110	5-23	34727	S-250-24	5-27
15848	DBW200	5-17	32719	PCS1200110	5-23	34728	S-250-27	5-27
15849	SVC TH1.5	5-14	32720	PCS1500110	5-23	34729	S-250-48	5-27
15850	SVC TH3	5-14	32721	PCS500220	5-23	34730	S-320-12	5-27
15851	SVC TH4.5	5-14	32722	PCS650220	5-23	34731	S-320-13.5	5-27
15852	SVC TV6	5-14	32723	PCS800220	5-23	34732	S-320-15	5-27
15853	SVC TV9	5-14	32724	PCS1000220	5-23	34733	S-320-24	5-27
15854	SVC TV15	5-14	32725	PCS1200220	5-23	34734	S-320-27	5-27
15855	SVC TV20	5-14	32726	PCS1500220	5-23	34735	S-320-48	5-27
15856	SVC TV30	5-14	34665	S-15-5	5-27	34736	S-350-5	5-28
15857	SVC TV50	5-14	34666	S-15-12	5-27	34737	S-350-12	5-28
15858	SVC TV60	5-14	34667	S-15-24	5-27	34738	S-350-15	5-28
15863	SBW10	5-17	34668	S-25-12	5-27	34739	S-350-24	5-28
15864	SBW15	5-17	34669	S-25-15	5-27	34740	S-350-27	5-28
15865	SBW20	5-17	34670	S-25-24	5-27	34741	S-350-48	5-28
15866	SBW30	5-17	34671	S-35-5	5-27	34742	S-400-5	5-28
15867	SBW50	5-17	34672	S-35-12	5-27	34743	S-400-12	5-28
15868	SBW60	5-17	34673	S-35-15	5-27	34744	S-400-15	5-28
15869	SBW80	5-17	34674	S-35-24	5-27	34745	S-400-24	5-28
15870	SBW100	5-17	34675	S-40-12	5-27	34746	S-400-48	5-28
15871	SBW120	5-17	34676	S-40-15	5-27	34747	D-30A-5	5-28
15872	SBW150	5-17	34677	S-40-24	5-27	34748	D-30A-12	5-28
15873	SBW180	5-17	34678	S-50-5	5-27	34749	D-30B-5	5-28
15874	SBW200	5-17	34679	S-50-12	5-27	34750	D-30B-24	5-28
15875	SBW225	5-17	34680	S-50-15	5-27	34751	D-50A-5	5-28
15876	SBW250	5-17	34681	S-50-24	5-27	34752	D-50A-12	5-28
15877	SBW300	5-17	34682	S-60-12	5-27	34753	D-50B-5	5-28

Index / Order Code

5

Order code	Type code	Page
34754	D-50B-24	5-28
34755	D-60A-5	5-28
34756	D-60A-12	5-28
34757	D-60B-5	5-28
34758	D-60B-24	5-28
34759	D-120A-5	5-28
34760	D-120A-12	5-28
34761	D-120B-5	5-28
34762	D-120B-24	5-28
34763	D-200C-12	5-28
34764	D-200C-24	5-28
34765	T-30A-5	5-28
34766	T-30A-12	5-28
34767	T-30A-(-5)	5-28
34768	T-30B-5	5-28
34769	T-30B-12	5-28
34770	T-30B-(-12)	5-28
34771	T-50A-5	5-28
34772	T-50A-12	5-28
34773	T-50A-(-5)	5-28
34774	T-50B-5	5-28
34775	T-50B-12	5-28
34776	T-50B-(-12)	5-28
34777	T-50C-5	5-28
34778	T-50C-15	5-28
34779	T-50C-(-15)	5-28
34780	T-50D-5	5-28
34781	T-50D-12	5-28
34782	T-50D-24	5-28
34783	T-60A-5	5-28
34784	T-60A-12	5-28
34785	T-60A-(-5)	5-28
34786	T-60B-5	5-28
34787	T-60B-12	5-28
34788	T-60B-(-12)	5-28
34789	T-60C-5	5-28
34790	T-60C-15	5-28
34791	T-60C-(-15)	5-28
34792	T-100A-5	5-29
34793	T-100A-12	5-29
34794	T-100A-(-5)	5-29
34795	T-100B-5	5-29
34796	T-100B-12	5-29
34797	T-100B-(-12)	5-29
34798	T-100C-5	5-29
34799	T-100C-15	5-29
34800	T-100C-(-15)	5-29
34801	T-120A-5	5-29
34802	T-120A-12	5-29
34803	T-120A-(-5)	5-29
34804	T-120B-5	5-29
34805	T-120B-12	5-29
34806	T-120B-(-12)	5-29
34807	T-120C-5	5-29
34808	T-120C-15	5-29
34809	T-120C-(-15)	5-29
34810	Q-60B-5	5-29
34811	Q-60B-12	5-29
34812	Q-60B-(-5)	5-29
34813	Q-60B-(-12)	5-29
34814	Q-60C-5	5-29
34815	SVC N500	5-2
34816	SVC N1000	5-2
34817	SVC N1500	5-2
34818	SVC N2000	5-2
34819	SVC N3000	5-2
34820	SVC N5000	5-2
34821	SVC N8000	5-2
34822	SVC N10000	5-2
36493	SKN H600	5-21
36494	SKN H1000	5-21

Order code	Type code	Page
36495	SKN H1200	5-21
36496	SKN H1500	5-21
36497	SKN H2000	5-21
36498	SKN H2400	5-21
36499	DVR B500	5-6
36500	DVR B1000	5-6
36501	DVR B1500	5-6
36502	DVR B2000	5-6
36503	DVR B3000	5-6
36504	LVR B500	5-7
36505	LVR B1000	5-7
36506	LVR B1500	5-7
36507	LVR B2000	5-7
36508	LVR B3000	5-7
36509	PCN V500	5-22
36510	PCN V650	5-22
36511	PCN V1000	5-22
36512	PCN V1200	5-22
36513	PCN V1500	5-22
36514	PCN V2000	5-22
38181	DVR 500	5-6
38182	DVR 1000	5-6
38183	DVR 1500	5-6
38184	DVR 2000	5-6
38185	DVR 3000	5-6
38186	LVR 500	5-7
38187	LVR 1000	5-7
38188	LVR 1500	5-7
38189	LVR 2000	5-7
38190	LVR 3000	5-7
38333	SKNM8000 96	5-20
38334	SKNM10000 96	5-20

SASSIN

Meters & Electrical Accessories



Meters & Electrical Accessories

P 1 **DDS989/DTS989 series electronic kilowatt hour meters**

Panel meters

P 2-12 **SE series analogue panel meters**

P 13 **SE series digital panel meters**

P 14 **MSQ series current transformers**

P 15-18 **BSMJ/BGMJ series power capacitors**

P 19-21 **3SM series universal metal boxes**

P 22 **Industrial plugs and sockets**

P 23-24 **3SP1 series, IP44/IP67**

P 25-26 **3SP2 series, IP67**

P 27-28 **3SP6 series, IP44**

P 29-30 **3SP6 series, IP67**

Electric bell & buzzers

P 31 **3S-B1 series electric bells**

P 32-33 **UC4 & SCF series electric bells**

P 34 **FM & MS buzzers**

Cable gland & water-resistant junction & insulators

P 35 **PG series cable gland**

P 35 **MG series water-resistant junctions**

P 35 **SM series insulators**

Terminal blocks

P 36 **JXB series**

P 36 **3SUK series**

P 37 **TB & TC series**

P 38 **HFW series**

P 39 **BBVC series terminal box**

P 40-43 **Preinsulated terminals**

P 44-54 **Index order code**



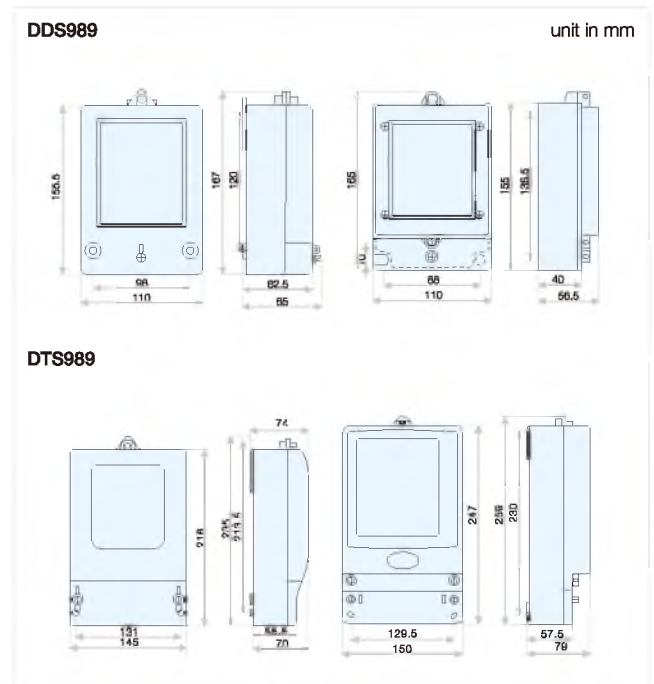
Electronic Kilowatt Hour Meters Series DDS989, DTS989

Technical specifications



- Standards: IEC62053-21, IEC62056-21
- Accuracy (class): 1.0
- Starting conditions: Nominal frequency, 1.0 power factor, load current >0.4% nominal value. Equipped with electrical pulses and continuous electrical pulse display
- No-load rotation: It is regulated that within given time, there is no pulse output, while the voltage is more than 115% of reference value and current circuit is off
- Mistake linearity: 5% I_b~I_{max}
- Rated voltage (V):
 - DDS989: 230
 - DTS989: 3x220/400
- Rated current (A):
 - DDS989: 1.5 (6), 2.5 (10), 5 (20), 10 (40), 5 (30), 10 (60), 15 (60), 20 (80)
 - DTS989: 3x1.5 (6), 3x3 (6), 3x5 (20), 3x10 (40), 3x15 (60), 3x5 (30), 3x10 (60)
- Frequency (Hz): 50/60
- Ambient temperature (°C): -5~+55
- Storage and limit temperature (°C): -40~+70
- Power loss:
 - voltage circuit ≤3W and 10VA
 - current circuit ≤4.0VA



Outline and installation dimensions



Selection and ordering data

	Rated voltage (V)	Phase	Rated current In (A)	Connection	Type code	Order code			
	230	1	1.5 (6)	Directly input	DDS989 1.5 (6)A	31986			
			2.5 (10)	Directly input	DDS989 2.5 (10)A	31987			
			5 (20)	Directly input	DDS989 5 (20)A	31988			
			10 (40)	Directly input	DDS989 10 (40)A	31989			
			5 (30)	Directly input	DDS989 5 (30)A	31990			
			10 (60)	Directly input	DDS989 10 (60)A	31991			
			15 (60)	Directly input	DDS989 15 (60)A	31992			
			20 (80)	Directly input	DDS989 20 (80)A	31993			
				3x220/400	3	3x1.5 (6)	Through current transformer	DTS989 3x1.5 (6)	31994
						3x3 (6)	Through current transformer	DTS989 3x3 (6)	31995
3x5 (20)	Directly input	DTS989 3x5 (20)				31996			
3x10 (40)	Directly input	DTS989 3x10 (40)				31997			
3x15 (60)	Directly input	DTS989 3x15 (60)				31998			
3x5 (30)	Directly input	DTS989 3x5 (30)				31999			
3x10 (60)	Directly input	DTS989 3x10 (60)				32000			

Analogue Panel Meters Series SE

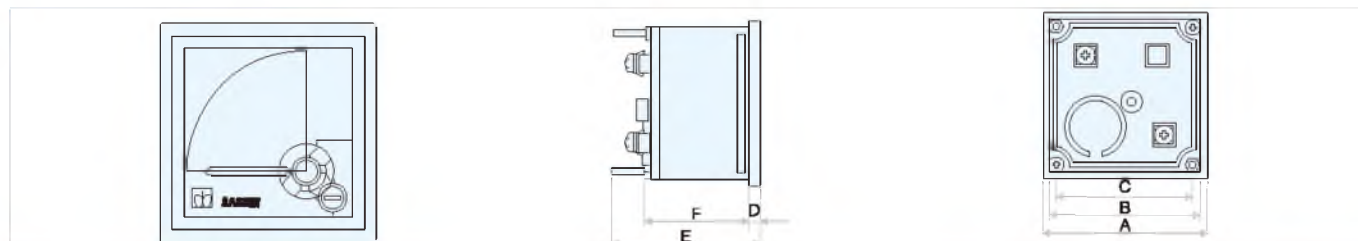
Technical specifications

- Standard: IEC60051-1
- Accuracy (class): 1.5/2.5
- Material:
- External case: ABS plastic
- Base: PPO
- Mechanical character: It can withstand vibration of acceleration 30 meters/second² with shock frequency 80-120 per minute 2 hours transportation
- Dielectric strength: AC voltage 50Hz 2KW, minute
- Voltage influence: When rated value changes $\pm 15\%$, the indicated value should not exceed the basic tolerance
- Operating position: Vertical
- Thermal resistance (°C): 70~120
- Operating temperature (°C): -20~+40 relative humidity $\leq 80\%$



6

Outline drawing (unit: mm)



Type	A	B	C	D	E	F	Hole
SF-96-3#	96	91	90	5.5	65	43	92x92
SE-72-3#	72	67	66	5.5	65	43	68x68
SF-48-3#	48	43	42	5.5	65	43	45x45

Selection and ordering data


AC ammeters

	Measure range (5A)	Connection type	SE-48		SE-72		SE-96	
			Type code	Order code	Type code	Order code	Type code	Order code
	5	with CT	PM48A AT5	17365	PM72A AT5	17408	PM96A AT5	17494
	10	with CT	PM48A AT10	17366	PM72A AT10	17409	PM96A AT10	17495
	15	with CT	PM48A AT15	17367	PM72A AT15	17410	PM96A AT15	17496
	20	with CT	PM48A AT20	17368	PM72A AT20	17411	PM96A AT20	17497
	25	with CT	PM48A AT25	17369	PM72A AT25	17412	PM96A AT25	17498
	30	with CT	PM48A AT30	17370	PM72A AT30	17413	PM96A AT30	17499
	40	with CT	PM48A AT40	17371	PM72A AT40	17414	PM96A AT40	17500
	50	with CT	PM48A AT50	17372	PM72A AT50	17415	PM96A AT50	17501
	60	with CT	PM48A AT60	17373	PM72A AT60	17416	PM96A AT60	17502
	75	with CT	PM48A AT75	17374	PM72A AT75	17417	PM96A AT75	17503
	80	with CT	PM48A AT80	17375	PM72A AT80	17418	PM96A AT80	17504
	100	with CT	PM48A AT100	17376	PM72A AT100	17419	PM96A AT100	17505
	150	with CT	PM48A AT150	17377	PM72A AT150	17420	PM96A AT150	17506
	200	with CT	PM48A AT200	17378	PM72A AT200	17421	PM96A AT200	17507
	250	with CT	PM48A AT250	17379	PM72A AT250	17422	PM96A AT250	17508
	300	with CT	PM48A AT300	17380	PM72A AT300	17423	PM96A AT300	17509
	400	with CT	PM48A AT400	17381	PM72A AT400	17424	PM96A AT400	17510
500	with CT	PM48A AT500	17382	PM72A AT500	17425	PM96A AT500	17511	
600	with CT	PM48A AT600	17383	PM72A AT600	17426	PM96A AT600	17512	
750	with CT	PM48A AT750	17384	PM72A AT750	17427	PM96A AT750	17513	
800	with CT	PM48A AT800	17385	PM72A AT800	17428	PM96A AT800	17514	
1000	with CT	PM48A AT1000	17386	PM72A AT1000	17429	PM96A AT1000	17515	
1200	with CT	PM48A AT1200	17387	PM72A AT1200	17430	PM96A AT1200	17516	
1500	with CT	PM48A AT1500	17388	PM72A AT1500	17431	PM96A AT1500	17517	
2000	with CT	PM48A AT2000	17389	PM72A AT2000	17432	PM96A AT2000	17518	
2500	with CT	PM48A AT2500	17390	PM72A AT2500	17433	PM96A AT2500	17519	
3000	with CT	PM48A AT3000	17391	PM72A AT3000	17434	PM96A AT3000	17520	
4000	with CT	PM48A AT4000	17392	PM72A AT4000	17435	PM96A AT4000	17521	
5000	with CT	PM48A AT5000	17393	PM72A AT5000	17436	PM96A AT5000	17522	

Analogue Panel Meters Series SE

Selection and ordering data


AC ammeters

	Measure range (5A)	Connection type	SE-48		SE-72		SE-96	
			Type code	Order code	Type code	Order code	Type code	Order code
	10	direct	-	-	PM72A AD10	17444	PM96A AD10	17530
	20	direct	-	-	PM72A AD20	17445	PM96A AD20	17531
	25	direct	-	-	PM72A AD25	17446	PM96A AD25	17532
	30	direct	-	-	PM72A AD30	17447	PM96A AD30	17533
	40	direct	-	-	PM72A AD40	17448	PM96A AD40	17534
	50	direct	-	-	PM72A AD50	17449	PM96A AD50	17535
	60	direct	-	-	PM72A AD60	17450	PM96A AD60	17536
	75	direct	-	-	PM72A AD75	17451	PM96A AD75	17537
	100	direct	-	-	PM72A AD100	17452	PM96A AD100	17538

DC ammeters

5	direct	-	-	PM72A DD5	17402	PM96A DD5	17556
10	direct	-	-	PM72A DD10	17403	PM96A DD10	17557
15	direct	-	-	PM72A DD15	17404	PM96A DD15	17558
20	direct	-	-	PM72A DD20	17405	PM96A DD20	17559
25	direct	-	-	PM72A DD25	17406	PM96A DD25	17560
30	direct	-	-	PM72A DD30	17407	PM96A DD30	17561


AC voltmeters

	Measure range (V)	Connection type	SE-48		SE-72		SE-96	
			Type code	Order code	Type code	Order code	Type code	Order code
	150	with CT	PM48V AT150	17394	PM72V AT150	17438	PM96V AT150	17524
	250	with CT	PM48V AT250	17395	PM72V AT250	17439	PM96V AT250	17525
	300	with CT	PM48V AT300	17396	PM72V AT300	17440	PM96V AT300	17526
	450	with CT	PM48V AT450	17397	PM72V AT450	17441	PM96V AT450	17527
	500	with CT	PM48V AT500	17398	PM72V AT500	17442	PM96V AT500	17528
	600	with CT	PM48V AT600	17399	PM72V AT600	17443	PM96V AT600	17529

DC voltmeters

10	direct	-	-	PM72V DD10	17453	PM96V DD10	17539
15	direct	-	-	PM72V DD15	17454	PM96V DD15	17540
20	direct	-	-	PM72V DD20	17455	PM96V DD20	17541
30	direct	-	-	PM72V DD30	17456	PM96V DD30	17542
40	direct	-	-	PM72V DD40	17457	PM96V DD40	17543
50	direct	-	-	PM72V DD50	17458	PM96V DD50	17544
60	direct	-	-	PM72V DD60	17459	PM96V DD60	17545
75	direct	-	-	PM72V DD75	17460	PM96V DD75	17546
100	direct	-	-	PM72V DD100	17461	PM96V DD100	17547
150	direct	-	-	PM72V DD150	17462	PM96V DD150	17548
200	direct	-	-	PM72V DD200	17463	PM96V DD200	17549
250	direct	-	-	PM72V DD250	17464	PM96V DD250	17550
300	direct	-	-	PM72V DD300	17465	PM96V DD300	17551
400	direct	-	-	PM72V DD400	17466	PM96V DD400	17552
450	direct	-	-	PM72V DD450	17467	PM96V DD450	17553
500	direct	-	-	PM72V DD500	17468	PM96V DD500	17554
600	direct	-	-	PM72V DD600	17469	PM96V DD600	17555

Frequency meters

	Measure range (Hz)	Rated voltage (V)	SE-48		SE-72		SE-96	
			Type code	Order code	Type code	Order code	Type code	Order code
	45-55	230	-	-	PM72F 46230	17486	PM96F 45230	17578
		400	-	-	PM72F 45400	17487	PM96F 45400	17579
	45-85	230	PM48F 46220	17400	PM72F 46230	17488	PM96F 46230	17580
		400	PM48F 46380	17401	PM72F 46400	17489	PM96F 46400	17581

Analogue Panel Meters Series SE

Selection and ordering data

Power factor meter



Measure range	Rated voltage (V)	SE-48		SE-72		SE-96	
		Type code	Order code	Type code	Order code	Type code	Order code
0.5cap-1-0.5ind	110	PM48P 515110	33177	PM72P 515110	33192	PM96P 515110	33207
	230	PM48P 515230	33182	PM72P 515230	33198	PM96P 515230	33212
	400	PM48P 515400	33187	PM72P 515400	33202	PM96P 515400	33217
0.3cap-1-0.4ind	110	PM48P 314110	33178	PM72P 314110	33193	PM96P 314110	33208
	230	PM48P 314230	33183	PM72P 314230	33199	PM96P 314230	33213
	400	PM48P 314400	33188	PM72P 314400	33203	PM96P 314400	33218

6


Active power meter



Phase	Rated voltage (V)	Rated measuring range (W)	SE-72		SE-96		
			Type code	Order code	Type code	Order code	
Single phase	110	500	PM72WA 110SP500	33222	PM96WA 110SP500	33429	
		1000	PM72WA 110SP1000	33223	PM96WA 110SP1000	33430	
		1500	PM72WA 110SP1500	33224	PM96WA 110SP1500	33431	
		2000	PM72WA 110SP2000	33225	PM96WA 110SP2000	33432	
		2500	PM72WA 110SP2500	33226	PM96WA 110SP2500	33433	
		3000	PM72WA 110SP3000	33227	PM96WA 110SP3000	33434	
		4000	PM72WA 110SP4000	33228	PM96WA 110SP4000	33435	
		5000	PM72WA 110SP5000	33229	PM96WA 110SP5000	33436	
		6000	PM72WA 110SP6000	33230	PM96WA 110SP6000	33437	
		8000	PM72WA 110SP8000	33231	PM96WA 110SP8000	33438	
		10k	PM72WA 110SP10k	33232	PM96WA 110SP10k	33439	
		15k	PM72WA 110SP15k	33233	PM96WA 110SP15k	33440	
		20k	PM72WA 110SP20k	33234	PM96WA 110SP20k	33441	
		25k	PM72WA 110SP25k	33235	PM96WA 110SP25k	33442	
		30k	PM72WA 110SP30k	33236	PM96WA 110SP30k	33443	
		40k	PM72WA 110SP40k	33237	PM96WA 110SP40k	33444	
		50k	PM72WA 110SP50k	33238	PM96WA 110SP50k	33445	
		60k	PM72WA 110SP60k	33239	PM96WA 110SP60k	33446	
		80k	PM72WA 110SP80k	33240	PM96WA 110SP80k	33447	
		100k	PM72WA 110SP100k	33241	PM96WA 110SP100k	33448	
		150k	PM72WA 110SP150k	33242	PM96WA 110SP150k	33449	
		200k	PM72WA 110SP200k	33243	PM96WA 110SP200k	33450	
		250k	PM72WA 110SP250k	33244	PM96WA 110SP250k	33451	
		230	1000	PM72WA 230SP1000	33245	PM96WA 230SP1000	33452
			2000	PM72WA 230SP2000	33246	PM96WA 230SP2000	33453
	3000		PM72WA 230SP3000	33247	PM96WA 230SP3000	33454	
	4000		PM72WA 230SP4000	33248	PM96WA 230SP4000	33455	
	5000		PM72WA 230SP5000	33249	PM96WA 230SP5000	33456	
	6000		PM72WA 230SP6000	33250	PM96WA 230SP6000	33457	
	8000		PM72WA 230SP8000	33251	PM96WA 230SP8000	33458	
	10k		PM72WA 230SP10k	33252	PM96WA 230SP10k	33459	
	12k		PM72WA 230SP12k	33253	PM96WA 230SP12k	33460	
16k	PM72WA 230SP16k		33254	PM96WA 230SP16k	33461		
20k	PM72WA 230SP20k		33255	PM96WA 230SP20k	33462		
30k	PM72WA 230SP30k		33256	PM96WA 230SP30k	33463		
40k	PM72WA 230SP40k		33257	PM96WA 230SP40k	33464		
50k	PM72WA 230SP50k		33258	PM96WA 230SP50k	33465		
60k	PM72WA 230SP60k		33259	PM96WA 230SP60k	33466		
80k	PM72WA 230SP80k		33260	PM96WA 230SP80k	33467		
100k	PM72WA 230SP100k		33261	PM96WA 230SP100k	33468		
120k	PM72WA 230SP120k	33262	PM96WA 230SP120k	33469			
160k	PM72WA 230SP160k	33263	PM96WA 230SP160k	33470			
200k	PM72WA 230SP200k	33264	PM96WA 230SP200k	33471			
300k	PM72WA 230SP300k	33265	PM96WA 230SP300k	33472			
400k	PM72WA 230SP400k	33266	PM96WA 230SP400k	33473			
500k	PM72WA 230SP500k	33267	PM96WA 230SP500k	33474			

Selection and ordering data

Active power meter

	Phase	Rated voltage (V)	Rated measuring range (W)	SE-72		SE-96				
				Type code	Order code	Type code	Order code			
	Single phase	400	2000	PM72WA 400SP2000	33288	PM96WA 400SP2000	33475			
			4000	PM72WA 400SP4000	33269	PM96WA 400SP4000	33476			
			6000	PM72WA 400SP6000	33270	PM96WA 400SP6000	33477			
			8000	PM72WA 400SP8000	33271	PM96WA 400SP8000	33478			
			10k	PM72WA 400SP10k	33272	PM96WA 400SP10k	33479			
			12k	PM72WA 400SP12k	33273	PM96WA 400SP12k	33480			
			16k	PM72WA 400SP16k	33274	PM96WA 400SP16k	33481			
			20k	PM72WA 400SP20k	33275	PM96WA 400SP20k	33482			
			24k	PM72WA 400SP24k	33276	PM96WA 400SP24k	33483			
			32k	PM72WA 400SP32k	33277	PM96WA 400SP32k	33484			
			40k	PM72WA 400SP40k	33278	PM96WA 400SP40k	33485			
			60k	PM72WA 400SP60k	33279	PM96WA 400SP60k	33486			
			80k	PM72WA 400SP80k	33280	PM96WA 400SP80k	33487			
			100k	PM72WA 400SP100k	33281	PM96WA 400SP100k	33488			
			120k	PM72WA 400SP120k	33282	PM96WA 400SP120k	33489			
			160k	PM72WA 400SP160k	33283	PM96WA 400SP160k	33490			
			200k	PM72WA 400SP200k	33284	PM96WA 400SP200k	33491			
			240k	PM72WA 400SP240k	33285	PM96WA 400SP240k	33492			
			320k	PM72WA 400SP320k	33286	PM96WA 400SP320k	33493			
			400k	PM72WA 400SP400k	33287	PM96WA 400SP400k	33494			
			600k	PM72WA 400SP600k	33288	PM96WA 400SP600k	33495			
			800k	PM72WA 400SP800k	33289	PM96WA 400SP800k	33496			
			1000k	PM72WA 400SP1000k	33290	PM96WA 400SP1000k	33497			
				Three phase three wires	110	1000	PM72WA 110TT1000	33291	PM96WA 110TT1000	33498
						2000	PM72WA 110TT2000	33292	PM96WA 110TT2000	33499
						3000	PM72WA 110TT3000	33293	PM96WA 110TT3000	33500
						4000	PM72WA 110TT4000	33294	PM96WA 110TT4000	33501
						5000	PM72WA 110TT5000	33295	PM96WA 110TT5000	33502
6000	PM72WA 110TT6000	33296				PM96WA 110TT6000	33503			
8000	PM72WA 110TT8000	33297				PM96WA 110TT8000	33504			
10k	PM72WA 110TT10k	33298				PM96WA 110TT10k	33505			
12k	PM72WA 110TT12k	33299				PM96WA 110TT12k	33506			
16k	PM72WA 110TT16k	33300				PM96WA 110TT16k	33507			
20k	PM72WA 110TT20k	33301				PM96WA 110TT20k	33508			
30k	PM72WA 110TT30k	33302				PM96WA 110TT30k	33509			
40k	PM72WA 110TT40k	33303				PM96WA 110TT40k	33510			
50k	PM72WA 110TT50k	33304				PM96WA 110TT50k	33511			
60k	PM72WA 110TT60k	33305				PM96WA 110TT60k	33512			
80k	PM72WA 110TT80k	33306				PM96WA 110TT80k	33513			
100k	PM72WA 110TT100k	33307				PM96WA 110TT100k	33514			
120k	PM72WA 110TT120k	33308				PM96WA 110TT120k	33515			
160k	PM72WA 110TT160k	33309				PM96WA 110TT160k	33516			
200k	PM72WA 110TT200k	33310				PM96WA 110TT200k	33517			
300k	PM72WA 110TT300k	33311				PM96WA 110TT300k	33518			
400k	PM72WA 110TT400k	33312				PM96WA 110TT400k	33519			
500k	PM72WA 110TT500k	33313				PM96WA 110TT500k	33520			

Analogue Panel Meters Series SE

Selection and ordering data

Active power meter



Phase	Rated voltage (V)	Rated measuring range (W)	SE-72		SE-96		
			Type code	Order code	Type code	Order code	
Three phase three wires	230	2000	PM72WA 230TT2000	33314	PM96WA 230TT2000	33521	
		4000	PM72WA 230TT4000	33315	PM96WA 230TT4000	33522	
		6000	PM72WA 230TT6000	33316	PM96WA 230TT6000	33523	
		8000	PM72WA 230TT8000	33317	PM96WA 230TT8000	33524	
		10k	PM72WA 230TT10k	33318	PM96WA 230TT10k	33525	
		12k	PM72WA 230TT12k	33319	PM96WA 230TT12k	33526	
		16k	PM72WA 230TT16k	33320	PM96WA 230TT16k	33527	
		20k	PM72WA 230TT20k	33321	PM96WA 230TT20k	33528	
		24k	PM72WA 230TT24k	33322	PM96WA 230TT24k	33529	
		32k	PM72WA 230TT32k	33323	PM96WA 230TT32k	33530	
		40k	PM72WA 230TT40k	33324	PM96WA 230TT40k	33531	
		60k	PM72WA 230TT60k	33325	PM96WA 230TT60k	33532	
		80k	PM72WA 230TT80k	33326	PM96WA 230TT80k	33533	
		100k	PM72WA 230TT100k	33327	PM96WA 230TT100k	33534	
		120k	PM72WA 230TT120k	33328	PM96WA 230TT120k	33535	
		160k	PM72WA 230TT160k	33329	PM96WA 230TT160k	33536	
		200k	PM72WA 230TT200k	33330	PM96WA 230TT200k	33537	
		240k	PM72WA 230TT240k	33331	PM96WA 230TT240k	33538	
		320k	PM72WA 230TT320k	33332	PM96WA 230TT320k	33539	
		400k	PM72WA 230TT400k	33333	PM96WA 230TT400k	33540	
	600k	PM72WA 230TT600k	33334	PM96WA 230TT600k	33541		
	800k	PM72WA 230TT800k	33335	PM96WA 230TT800k	33542		
	1000k	PM72WA 230TT1000k	33336	PM96WA 230TT1000k	33543		
	400	4000	4000	PM72WA 400TT4000	33337	PM96WA 400TT4000	33544
			8000	PM72WA 400TT8000	33338	PM96WA 400TT8000	33545
			12k	PM72WA 400TT12k	33339	PM96WA 400TT12k	33546
			16k	PM72WA 400TT16k	33340	PM96WA 400TT16k	33547
			20k	PM72WA 400TT20k	33341	PM96WA 400TT20k	33548
			24k	PM72WA 400TT24k	33342	PM96WA 400TT24k	33549
			32k	PM72WA 400TT32k	33343	PM96WA 400TT32k	33550
			40k	PM72WA 400TT40k	33344	PM96WA 400TT40k	33551
			48k	PM72WA 400TT48k	33345	PM96WA 400TT48k	33552
			64k	PM72WA 400TT64k	33346	PM96WA 400TT64k	33553
			80k	PM72WA 400TT80k	33347	PM96WA 400TT80k	33554
			120k	PM72WA 400TT120k	33348	PM96WA 400TT120k	33555
			160k	PM72WA 400TT160k	33349	PM96WA 400TT160k	33556
			200k	PM72WA 400TT200k	33350	PM96WA 400TT200k	33557
			240k	PM72WA 400TT240k	33351	PM96WA 400TT240k	33558
			320k	PM72WA 400TT320k	33352	PM96WA 400TT320k	33559
			400k	PM72WA 400TT400k	33353	PM96WA 400TT400k	33560
480k			PM72WA 400TT480k	33354	PM96WA 400TT480k	33561	
640k			PM72WA 400TT640k	33355	PM96WA 400TT640k	33562	
800k			PM72WA 400TT800k	33356	PM96WA 400TT800k	33563	
1200k	PM72WA 400TT1200k	33357	PM96WA 400TT1200k	33564			
1600k	PM72WA 400TT1600k	33358	PM96WA 400TT1600k	33565			
2000k	PM72WA 400TT2000k	33359	PM96WA 400TT2000k	33566			

Selection and ordering data

Active power meter

Phase	Rated voltage (V)	Rated measuring range (W)	SE-72		SE-96			
			Type code	Order code	Type code	Order code		
Three phase four wires	110	1000	PM72WA 110TF1000	33360	PM96WA 110TF1000	33567		
		2000	PM72WA 110TF2000	33361	PM96WA 110TF2000	33568		
		3000	PM72WA 110TF3000	33362	PM96WA 110TF3000	33569		
		4000	PM72WA 110TF4000	33363	PM96WA 110TF4000	33570		
		5000	PM72WA 110TF5000	33364	PM96WA 110TF5000	33571		
		6000	PM72WA 110TF6000	33365	PM96WA 110TF6000	33572		
		8000	PM72WA 110TF8000	33366	PM96WA 110TF8000	33573		
		10k	PM72WA 110TF10k	33367	PM96WA 110TF10k	33574		
		12k	PM72WA 110TF12k	33368	PM96WA 110TF12k	33575		
		16k	PM72WA 110TF16k	33369	PM96WA 110TF16k	33576		
		20k	PM72WA 110TF20k	33370	PM96WA 110TF20k	33577		
		30k	PM72WA 110TF30k	33371	PM96WA 110TF30k	33578		
		40k	PM72WA 110TF40k	33372	PM96WA 110TF40k	33579		
		50k	PM72WA 110TF50k	33373	PM96WA 110TF50k	33580		
		60k	PM72WA 110TF60k	33374	PM96WA 110TF60k	33581		
		80k	PM72WA 110TF80k	33375	PM96WA 110TF80k	33582		
		100k	PM72WA 110TF100k	33376	PM96WA 110TF100k	33583		
		120k	PM72WA 110TF120k	33377	PM96WA 110TF120k	33584		
		160k	PM72WA 110TF160k	33378	PM96WA 110TF160k	33585		
		200k	PM72WA 110TF200k	33379	PM96WA 110TF200k	33586		
		300k	PM72WA 110TF300k	33380	PM96WA 110TF300k	33587		
		400k	PM72WA 110TF400k	33381	PM96WA 110TF400k	33588		
		500k	PM72WA 110TF500k	33382	PM96WA 110TF500k	33589		
			230	2000	PM72WA 230TF2000	33383	PM96WA 230TF2000	33590
				4000	PM72WA 230TF4000	33384	PM96WA 230TF4000	33591
				6000	PM72WA 230TF6000	33385	PM96WA 230TF6000	33592
				8000	PM72WA 230TF8000	33386	PM96WA 230TF8000	33593
				10k	PM72WA 230TF10k	33387	PM96WA 230TF10k	33594
				12k	PM72WA 230TF12k	33388	PM96WA 230TF12k	33595
				16k	PM72WA 230TF16k	33389	PM96WA 230TF16k	33596
20k	PM72WA 230TF20k			33390	PM96WA 230TF20k	33597		
24k	PM72WA 230TF24k			33391	PM96WA 230TF24k	33598		
32k	PM72WA 230TF32k			33392	PM96WA 230TF32k	33599		
40k	PM72WA 230TF40k			33393	PM96WA 230TF40k	33600		
60k	PM72WA 230TF60k			33394	PM96WA 230TF60k	33601		
80k	PM72WA 230TF80k			33395	PM96WA 230TF80k	33602		
100k	PM72WA 230TF100k			33396	PM96WA 230TF100k	33603		
120k	PM72WA 230TF120k			33397	PM96WA 230TF120k	33604		
160k	PM72WA 230TF160k			33398	PM96WA 230TF160k	33605		
200k	PM72WA 230TF200k			33399	PM96WA 230TF200k	33606		
240k	PM72WA 230TF240k			33400	PM96WA 230TF240k	33607		
320k	PM72WA 230TF320k			33401	PM96WA 230TF320k	33608		
400k	PM72WA 230TF400k			33402	PM96WA 230TF400k	33609		
600k	PM72WA 230TF600k	33403	PM96WA 230TF600k	33610				
800k	PM72WA 230TF800k	33404	PM96WA 230TF800k	33611				
1000k	PM72WA 230TF1000k	33405	PM96WA 230TF1000k	33612				



Analogue Panel Meters Series SE

Selection and ordering data

Active power meter

Phase	Rated voltage (V)	Rated measuring range (W)	SE-72		SE-96	
			Type code	Order code	Type code	Order code
Three phase four wires	400	4000	PM72WA 400TF4000	33406	PM96WA 400TF4000	33613
		8000	PM72WA 400TF8000	33407	PM96WA 400TF8000	33614
		12k	PM72WA 400TF12k	33408	PM96WA 400TF12k	33615
		16k	PM72WA 400TF16k	33409	PM96WA 400TF16k	33616
		20k	PM72WA 400TF20k	33410	PM96WA 400TF20k	33617
		24k	PM72WA 400TF24k	33411	PM96WA 400TF24k	33618
		32k	PM72WA 400TF32k	33412	PM96WA 400TF32k	33619
		40k	PM72WA 400TF40k	33413	PM96WA 400TF40k	33620
		48k	PM72WA 400TF48k	33414	PM96WA 400TF48k	33621
		64k	PM72WA 400TF64k	33415	PM96WA 400TF64k	33622
		80k	PM72WA 400TF80k	33416	PM96WA 400TF80k	33623
		120k	PM72WA 400TF120k	33417	PM96WA 400TF120k	33624
		160k	PM72WA 400TF160k	33418	PM96WA 400TF160k	33625
		200k	PM72WA 400TF200k	33419	PM96WA 400TF200k	33626
		240k	PM72WA 400TF240k	33420	PM96WA 400TF240k	33627
		320k	PM72WA 400TF320k	33421	PM96WA 400TF320k	33628
		400k	PM72WA 400TF400k	33422	PM96WA 400TF400k	33629
		480k	PM72WA 400TF480k	33423	PM96WA 400TF480k	33630
		640k	PM72WA 400TF640k	33424	PM96WA 400TF640k	33631
		800k	PM72WA 400TF800k	33425	PM96WA 400TF800k	33632
1200k	PM72WA 400TF1200k	33426	PM96WA 400TF1200k	33633		
1600k	PM72WA 400TF1600k	33427	PM96WA 400TF1600k	33634		
2000k	PM72WA 400TF2000k	33428	PM96WA 400TF2000k	33635		


Reactive power meter



Phase	Rated voltage (V)	Rated measuring range (W)	Type code	Order code	Type code	Order code
Single phase	110	500	PM72VA 110SP500	33636	PM96VA 110SP500	33843
		1000	PM72VA 110SP1000	33637	PM96VA 110SP1000	33844
		1500	PM72VA 110SP1500	33638	PM96VA 110SP1500	33845
		2000	PM72VA 110SP2000	33639	PM96VA 110SP2000	33846
		2500	PM72VA 110SP2500	33640	PM96VA 110SP2500	33847
		3000	PM72VA 110SP3000	33641	PM96VA 110SP3000	33848
		4000	PM72VA 110SP4000	33642	PM96VA 110SP4000	33849
		5000	PM72VA 110SP5000	33643	PM96VA 110SP5000	33850
		6000	PM72VA 110SP6000	33644	PM96VA 110SP6000	33851
		8000	PM72VA 110SP8000	33645	PM96VA 110SP8000	33852
		10k	PM72VA 110SP10k	33646	PM96VA 110SP10k	33853
		15k	PM72VA 110SP15k	33647	PM96VA 110SP15k	33854
		20k	PM72VA 110SP20k	33648	PM96VA 110SP20k	33855
		25k	PM72VA 110SP25k	33649	PM96VA 110SP25k	33856
		30k	PM72VA 110SP30k	33650	PM96VA 110SP30k	33857
		40k	PM72VA 110SP40k	33651	PM96VA 110SP40k	33858
		50k	PM72VA 110SP50k	33652	PM96VA 110SP50k	33859
		60k	PM72VA 110SP60k	33653	PM96VA 110SP60k	33860
		80k	PM72VA 110SP80k	33654	PM96VA 110SP80k	33861
		100k	PM72VA 110SP100k	33655	PM96VA 110SP100k	33862
150k	PM72VA 110SP150k	33656	PM96VA 110SP150k	33863		
200k	PM72VA 110SP200k	33657	PM96VA 110SP200k	33864		
250k	PM72VA 110SP250k	33658	PM96VA 110SP250k	33865		

Selection and ordering data

Reactive power meter

	Phase	Rated voltage (V)	Rated measuring range (W)	SE-72		SE-96	
				Type code	Order code	Type code	Order code
	Single phase	230	1000	PM72VA 230SP1000	33659	PM96VA 230SP1000	33866
			2000	PM72VA 230SP2000	33660	PM96VA 230SP2000	33867
			3000	PM72VA 230SP3000	33661	PM96VA 230SP3000	33868
			4000	PM72VA 230SP4000	33662	PM96VA 230SP4000	33869
			5000	PM72VA 230SP5000	33663	PM96VA 230SP5000	33870
			6000	PM72VA 230SP6000	33664	PM96VA 230SP6000	33871
			8000	PM72VA 230SP8000	33665	PM96VA 230SP8000	33872
			10k	PM72VA 230SP10k	33666	PM96VA 230SP10k	33873
			12k	PM72VA 230SP12k	33667	PM96VA 230SP12k	33874
			16k	PM72VA 230SP16k	33668	PM96VA 230SP16k	33875
			20k	PM72VA 230SP20k	33669	PM96VA 230SP20k	33876
			30k	PM72VA 230SP30k	33670	PM96VA 230SP30k	33877
			40k	PM72VA 230SP40k	33671	PM96VA 230SP40k	33878
			50k	PM72VA 230SP50k	33672	PM96VA 230SP50k	33879
			60k	PM72VA 230SP60k	33673	PM96VA 230SP60k	33880
			80k	PM72VA 230SP80k	33674	PM96VA 230SP80k	33881
			100k	PM72VA 230SP100k	33675	PM96VA 230SP100k	33882
			120k	PM72VA 230SP120k	33676	PM96VA 230SP120k	33883
			160k	PM72VA 230SP160k	33677	PM96VA 230SP160k	33884
			200k	PM72VA 230SP200k	33678	PM96VA 230SP200k	33885
		300k	PM72VA 230SP300k	33679	PM96VA 230SP300k	33886	
		400k	PM72VA 230SP400k	33680	PM96VA 230SP400k	33887	
		500k	PM72VA 230SP500k	33681	PM96VA 230SP500k	33888	
		400	2000	PM72VA 400SP2000	33682	PM96VA 400SP2000	33889
			4000	PM72VA 400SP4000	33683	PM96VA 400SP4000	33890
			6000	PM72VA 400SP6000	33684	PM96VA 400SP6000	33891
			8000	PM72VA 400SP8000	33685	PM96VA 400SP8000	33892
			10k	PM72VA 400SP10k	33686	PM96VA 400SP10k	33893
			12k	PM72VA 400SP12k	33687	PM96VA 400SP12k	33894
			16k	PM72VA 400SP16k	33688	PM96VA 400SP16k	33895
			20k	PM72VA 400SP20k	33689	PM96VA 400SP20k	33896
			24k	PM72VA 400SP24k	33690	PM96VA 400SP24k	33897
			32k	PM72VA 400SP32k	33691	PM96VA 400SP32k	33898
			40k	PM72VA 400SP40k	33692	PM96VA 400SP40k	33899
			60k	PM72VA 400SP60k	33693	PM96VA 400SP60k	33900
			80k	PM72VA 400SP80k	33694	PM96VA 400SP80k	33901
			100k	PM72VA 400SP100k	33695	PM96VA 400SP100k	33902
			120k	PM72VA 400SP120k	33696	PM96VA 400SP120k	33903
			160k	PM72VA 400SP160k	33697	PM96VA 400SP160k	33904
			200k	PM72VA 400SP200k	33698	PM96VA 400SP200k	33905
240k	PM72VA 400SP240k		33699	PM96VA 400SP240k	33906		
320k	PM72VA 400SP320k		33700	PM96VA 400SP320k	33907		
400k	PM72VA 400SP400k		33701	PM96VA 400SP400k	33908		
600k	PM72VA 400SP600k	33702	PM96VA 400SP600k	33909			
800k	PM72VA 400SP800k	33703	PM96VA 400SP800k	33910			
1000k	PM72VA 400SP1000k	33704	PM96VA 400SP1000k	33911			

Analogue Panel Meters Series SE

Selection and ordering data


Reactive power meter



Phase	Rated voltage (V)	Rated measuring range (W)	SE-72		SE-96			
			Type code	Order code	Type code	Order code		
Three phase three wires	110	1000	PM72VA 110TT1000	33705	PM96VA 110TT1000	33912		
		2000	PM72VA 110TT2000	33706	PM96VA 110TT2000	33913		
		3000	PM72VA 110TT3000	33707	PM96VA 110TT3000	33914		
		4000	PM72VA 110TT4000	33708	PM96VA 110TT4000	33915		
		5000	PM72VA 110TT5000	33709	PM96VA 110TT5000	33916		
		6000	PM72VA 110TT6000	33710	PM96VA 110TT6000	33917		
		8000	PM72VA 110TT8000	33711	PM96VA 110TT8000	33918		
		10k	PM72VA 110TT10k	33712	PM96VA 110TT10k	33919		
		12k	PM72VA 110TT12k	33713	PM96VA 110TT12k	33920		
		16k	PM72VA 110TT16k	33714	PM96VA 110TT16k	33921		
		20k	PM72VA 110TT20k	33715	PM96VA 110TT20k	33922		
		30k	PM72VA 110TT30k	33716	PM96VA 110TT30k	33923		
		40k	PM72VA 110TT40k	33717	PM96VA 110TT40k	33924		
		50k	PM72VA 110TT50k	33718	PM96VA 110TT50k	33925		
		60k	PM72VA 110TT60k	33719	PM96VA 110TT60k	33926		
		80k	PM72VA 110TT80k	33720	PM96VA 110TT80k	33927		
		100k	PM72VA 110TT100k	33721	PM96VA 110TT100k	33928		
		120k	PM72VA 110TT120k	33722	PM96VA 110TT120k	33929		
		160k	PM72VA 110TT160k	33723	PM96VA 110TT160k	33930		
		200k	PM72VA 110TT200k	33724	PM96VA 110TT200k	33931		
		300k	PM72VA 110TT300k	33725	PM96VA 110TT300k	33932		
		400k	PM72VA 110TT400k	33726	PM96VA 110TT400k	33933		
		500k	PM72VA 110TT500k	33727	PM96VA 110TT500k	33934		
			230	2000	PM72VA 230TT2000	33728	PM96VA 230TT2000	33935
				4000	PM72VA 230TT4000	33729	PM96VA 230TT4000	33936
				6000	PM72VA 230TT6000	33730	PM96VA 230TT6000	33937
				8000	PM72VA 230TT8000	33731	PM96VA 230TT8000	33938
				10k	PM72VA 230TT10k	33732	PM96VA 230TT10k	33939
				12k	PM72VA 230TT12k	33733	PM96VA 230TT12k	33940
				16k	PM72VA 230TT16k	33734	PM96VA 230TT16k	33941
20k	PM72VA 230TT20k			33735	PM96VA 230TT20k	33942		
24k	PM72VA 230TT24k			33736	PM96VA 230TT24k	33943		
32k	PM72VA 230TT32k			33737	PM96VA 230TT32k	33944		
40k	PM72VA 230TT40k			33738	PM96VA 230TT40k	33945		
60k	PM72VA 230TT60k			33739	PM96VA 230TT60k	33946		
80k	PM72VA 230TT80k			33740	PM96VA 230TT80k	33947		
100k	PM72VA 230TT100k			33741	PM96VA 230TT100k	33948		
120k	PM72VA 230TT120k			33742	PM96VA 230TT120k	33949		
160k	PM72VA 230TT160k			33743	PM96VA 230TT160k	33950		
200k	PM72VA 230TT200k			33744	PM96VA 230TT200k	33951		
240k	PM72VA 230TT240k			33745	PM96VA 230TT240k	33952		
320k	PM72VA 230TT320k			33746	PM96VA 230TT320k	33953		
400k	PM72VA 230TT400k			33747	PM96VA 230TT400k	33954		
600k	PM72VA 230TT600k	33748	PM96VA 230TT600k	33955				
800k	PM72VA 230TT800k	33749	PM96VA 230TT800k	33956				
1000k	PM72VA 230TT1000k	33750	PM96VA 230TT1000k	33957				

Selection and ordering data

Reactive power meter

	Phase	Rated voltage (V)	Rated measuring range (W)	SE-72		SE-96				
				Type code	Order code	Type code	Order code			
	Three phase three wires	400	4000	PM72VA 400TT4000	33751	PM96VA 400TT4000	33958			
			8000	PM72VA 400TT8000	33752	PM96VA 400TT8000	33959			
			12k	PM72VA 400TT12k	33753	PM96VA 400TT12k	33960			
			16k	PM72VA 400TT16k	33754	PM96VA 400TT16k	33961			
			20k	PM72VA 400TT20k	33755	PM96VA 400TT20k	33962			
			24k	PM72VA 400TT24k	33756	PM96VA 400TT24k	33963			
			32k	PM72VA 400TT32k	33757	PM96VA 400TT32k	33964			
			40k	PM72VA 400TT40k	33758	PM96VA 400TT40k	33965			
			48k	PM72VA 400TT48k	33759	PM96VA 400TT48k	33966			
			64k	PM72VA 400TT64k	33760	PM96VA 400TT64k	33967			
			80k	PM72VA 400TT80k	33761	PM96VA 400TT80k	33968			
			120k	PM72VA 400TT120k	33762	PM96VA 400TT120k	33969			
			160k	PM72VA 400TT160k	33763	PM96VA 400TT160k	33970			
			200k	PM72VA 400TT200k	33764	PM96VA 400TT200k	33971			
			240k	PM72VA 400TT240k	33765	PM96VA 400TT240k	33972			
			320k	PM72VA 400TT320k	33766	PM96VA 400TT320k	33973			
			400k	PM72VA 400TT400k	33767	PM96VA 400TT400k	33974			
			480k	PM72VA 400TT480k	33768	PM96VA 400TT480k	33975			
			640k	PM72VA 400TT640k	33769	PM96VA 400TT640k	33976			
			800k	PM72VA 400TT800k	33770	PM96VA 400TT800k	33977			
			1200k	PM72VA 400TT1200k	33771	PM96VA 400TT1200k	33978			
			1600k	PM72VA 400TT1600k	33772	PM96VA 400TT1600k	33979			
			2000k	PM72VA 400TT2000k	33773	PM96VA 400TT2000k	33980			
				Three phase four wires	110	1000	PM72VA 110TF1000	33774	PM96VA 110TF1000	33981
						2000	PM72VA 110TF2000	33775	PM96VA 110TF2000	33982
						3000	PM72VA 110TF3000	33776	PM96VA 110TF3000	33983
						4000	PM72VA 110TF4000	33777	PM96VA 110TF4000	33984
						5000	PM72VA 110TF5000	33778	PM96VA 110TF5000	33985
6000	PM72VA 110TF6000	33779				PM96VA 110TF6000	33986			
8000	PM72VA 110TF8000	33780				PM96VA 110TF8000	33987			
10k	PM72VA 110TF10k	33781				PM96VA 110TF10k	33988			
12k	PM72VA 110TF12k	33782				PM96VA 110TF12k	33989			
16k	PM72VA 110TF16k	33783				PM96VA 110TF16k	33990			
20k	PM72VA 110TF20k	33784				PM96VA 110TF20k	33991			
30k	PM72VA 110TF30k	33785				PM96VA 110TF30k	33992			
40k	PM72VA 110TF40k	33786				PM96VA 110TF40k	33993			
50k	PM72VA 110TF50k	33787				PM96VA 110TF50k	33994			
60k	PM72VA 110TF60k	33788				PM96VA 110TF60k	33995			
80k	PM72VA 110TF80k	33789				PM96VA 110TF80k	33996			
100k	PM72VA 110TF100k	33790				PM96VA 110TF100k	33997			
120k	PM72VA 110TF120k	33791				PM96VA 110TF120k	33998			
160k	PM72VA 110TF160k	33792				PM96VA 110TF160k	33999			
200k	PM72VA 110TF200k	33793				PM96VA 110TF200k	34000			
300k	PM72VA 110TF300k	33794	PM96VA 110TF300k	34001						
400k	PM72VA 110TF400k	33795	PM96VA 110TF400k	34002						
500k	PM72VA 110TF500k	33796	PM96VA 110TF500k	34003						

Analogue Panel Meters Series SE

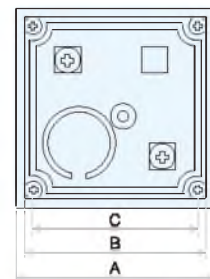
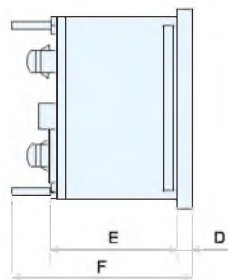
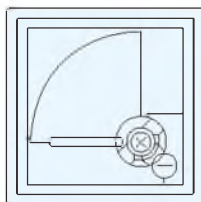
Selection and ordering data

Reactive power meter



Phase	Rated voltage (V)	Rated measuring range (W)	SE-72		SE-96		
			Type code	Order code	Type code	Order code	
Three phase four wires	230	2000	PM72VA 230TF2000	33797	PM96VA 230TF2000	34004	
		4000	PM72VA 230TF4000	33798	PM96VA 230TF4000	34005	
		6000	PM72VA 230TF6000	33799	PM96VA 230TF6000	34006	
		8000	PM72VA 230TF8000	33800	PM96VA 230TF8000	34007	
		10k	PM72VA 230TF10k	33801	PM96VA 230TF10k	34008	
		12k	PM72VA 230TF12k	33802	PM96VA 230TF12k	34009	
		18k	PM72VA 230TF18k	33803	PM96VA 230TF18k	34010	
		20k	PM72VA 230TF20k	33804	PM96VA 230TF20k	34011	
		24k	PM72VA 230TF24k	33805	PM96VA 230TF24k	34012	
		32k	PM72VA 230TF32k	33806	PM96VA 230TF32k	34013	
		40k	PM72VA 230TF40k	33807	PM96VA 230TF40k	34014	
		60k	PM72VA 230TF60k	33808	PM96VA 230TF60k	34015	
		80k	PM72VA 230TF80k	33809	PM96VA 230TF80k	34016	
		100k	PM72VA 230TF100k	33810	PM96VA 230TF100k	34017	
		120k	PM72VA 230TF120k	33811	PM96VA 230TF120k	34018	
		180k	PM72VA 230TF180k	33812	PM96VA 230TF180k	34019	
		200k	PM72VA 230TF200k	33813	PM96VA 230TF200k	34020	
		240k	PM72VA 230TF240k	33814	PM96VA 230TF240k	34021	
		320k	PM72VA 230TF320k	33815	PM96VA 230TF320k	34022	
		400k	PM72VA 230TF400k	33816	PM96VA 230TF400k	34023	
	600k	PM72VA 230TF600k	33817	PM96VA 230TF600k	34024		
	800k	PM72VA 230TF800k	33818	PM96VA 230TF800k	34025		
	1000k	PM72VA 230TF1000k	33819	PM96VA 230TF1000k	34026		
	400	400	4000	PM72VA 400TF4000	33820	PM96VA 400TF4000	34027
			8000	PM72VA 400TF8000	33821	PM96VA 400TF8000	34028
			12k	PM72VA 400TF12k	33822	PM96VA 400TF12k	34029
			18k	PM72VA 400TF18k	33823	PM96VA 400TF18k	34030
			20k	PM72VA 400TF20k	33824	PM96VA 400TF20k	34031
			24k	PM72VA 400TF24k	33825	PM96VA 400TF24k	34032
			32k	PM72VA 400TF32k	33826	PM96VA 400TF32k	34033
			40k	PM72VA 400TF40k	33827	PM96VA 400TF40k	34034
			48k	PM72VA 400TF48k	33828	PM96VA 400TF48k	34035
			64k	PM72VA 400TF64k	33829	PM96VA 400TF64k	34036
			80k	PM72VA 400TF80k	33830	PM96VA 400TF80k	34037
			120k	PM72VA 400TF120k	33831	PM96VA 400TF120k	34038
			180k	PM72VA 400TF180k	33832	PM96VA 400TF180k	34039
			200k	PM72VA 400TF200k	33833	PM96VA 400TF200k	34040
			240k	PM72VA 400TF240k	33834	PM96VA 400TF240k	34041
			320k	PM72VA 400TF320k	33835	PM96VA 400TF320k	34042
			400k	PM72VA 400TF400k	33836	PM96VA 400TF400k	34043
480k			PM72VA 400TF480k	33837	PM96VA 400TF480k	34044	
640k			PM72VA 400TF640k	33838	PM96VA 400TF640k	34045	
800k			PM72VA 400TF800k	33839	PM96VA 400TF800k	34046	
1200k	PM72VA 400TF1200k	33840	PM96VA 400TF1200k	34047			
1800k	PM72VA 400TF1800k	33841	PM96VA 400TF1800k	34048			
2000k	PM72VA 400TF2000k	33842	PM96VA 400TF2000k	34049			

Outline and installation dimensions



unit in mm

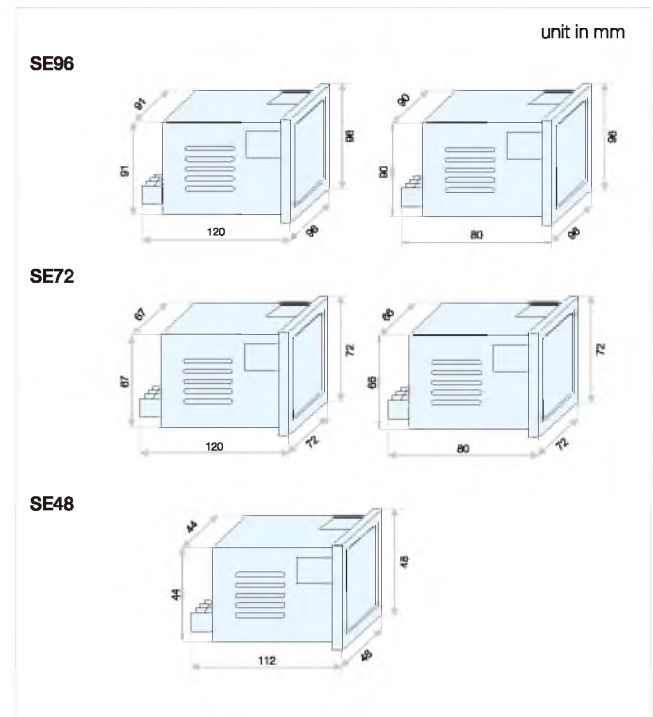
Type	A	B	C	D	E	F	Hole
SE-96-3#	96	91	90	5.5	65	43	92x92
SE-72-3#	72	67	68	5.5	65	43	68x68
SE-48-3#	48	43	42	5.5	65	43	45x45

Technical specifications

- Standard: ICS 17.220.20
- Accuracy: $\pm 0.5\%$
- Measurement display method: 3 and a half digits LED
- Display range: 0~1999
- Working power: AC220V $\pm 10\%$ 50/60Hz
- Measuring range:
 - AC voltmeter: AC0-600V, AC0-200V (199.9V), AC0-20V (19.99V)
 - DC voltmeter: DC0-600V, DC0-200V (199.9V), DC0-20V (19.99V), DC0-2V (1.999V)
 - AC ammeter: AC0-20A (direct), external CT is needed for meter more than 20A
 - DC ammeter: DC0-20A (direct), external shunt is necessary of more than 20A
- Frequency meter (Hz): 10.0-999.9 or 10.00-99.99
- Max Signal Consumption (VA): <0.5
- Hi-pot testing (V/min): AC 2000/1
- Operating temperature (°C): 0~+40
- Storage temperature (°C): -25~+40



Outline and installation dimensions



Selection and ordering data

Items	SE-48		SE-72		SE-96	
	Type code	Order code	Type code	Order code	Type Code	Order Code
Digital Panel Meter						
AC ammeter	DPM48AA	34050	DPM72AA	34055	DPM96AA	34068
DC ammeter	DPM48AD	34051	DPM72AD	34056	DPM96AD	34069
AC voltmeter	DPM48VA	34052	DPM72VA	34057	DPM96VA	34070
DC voltmeter	DPM48VD	34053	DPM72VD	34058	DPM96VD	34071
Frequency meter	DPM48FM	34054	DPM72FM	34059	DPM96FM	34072
Power factor meter	-	-	DPM72PFM	34060	DPM96PFM	34073
Single phase wattmeter	-	-	DPM72SPWM	34061	DPM96SPWM	34074
Voltage & Current	-	-	DPM72VCM	34062	DPM96VCM	34075
Voltage & Frequency	-	-	DM72VFM	34063	DM96VFM	34076
Current of all 3 phase	-	-	DM72C3	34064	DM96C3	34077
Voltage of all 3 phase	-	-	DM72V3	34065	DM96V3	34078
Frequency of all 3 phase	-	-	DM72F3	34066	DM96F3	34079
3-phase reactive power meter	-	-	DM72OPM3	34067	DM96OPM3	34080



Current Transformers

Series MSQ

Technical specifications

- Standard: IEC60044-1
- Accuracy (class): 1.0
- Max. voltage rating U_e (V): 660.0
- Secondary current I_{sn} (A): 5.0
- Frequency (Hz): 0.8
- Tolerable max overload current: $1.2I_n$
- Safety factor (sf): 30~3000A; $sf \leq 5$
- Degree of protection: IP20
- Ambient temperature ($^{\circ}C$): $-5 \sim +50$ related humidity $\leq 80\%$

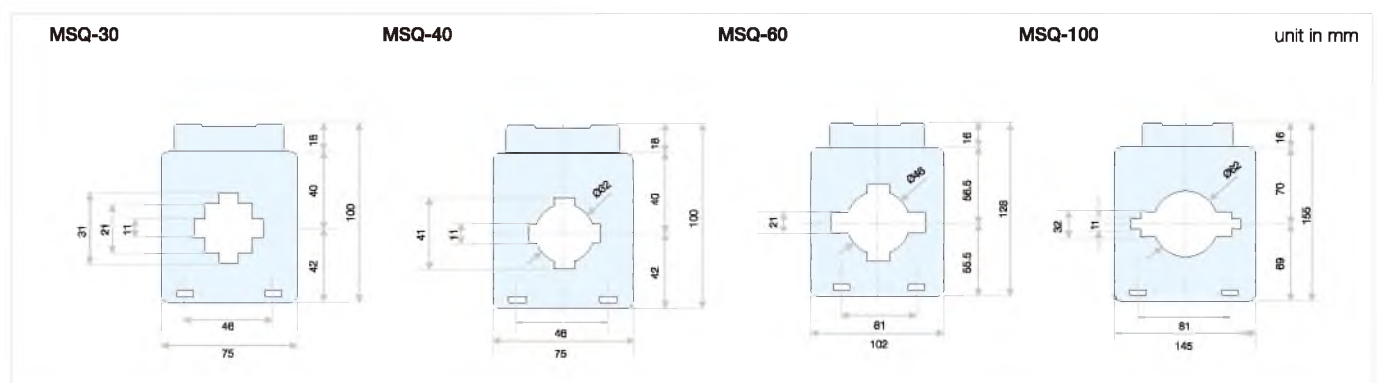


6

Selection and ordering data

	Frame class	Transformation ratio (I_{pn}/I_{sn})	Type code	Order code		
	MSQ-30	30A/5	MSQ30 30/5	15974		
		40A/5	MSQ30 40/5	15975		
		50A/5	MSQ30 50/5	15976		
		60A/5	MSQ30 60/5	15977		
		100A/5	MSQ30 100/5	15978		
		150A/5	MSQ30 150/5	15979		
		200A/5	MSQ30 200/5	15980		
		250A/5	MSQ30 250/5	15981		
		300A/5	MSQ30 300/5	15982		
			MSQ-40	100A/5	MSQ40 100/5	39800
				150A/5	MSQ40 150/5	39801
				200A/5	MSQ40 200/5	15983
				250A/5	MSQ40 250/5	15984
				300A/5	MSQ40 300/5	15985
400A/5	MSQ40 400/5			15986		
	MSQ-60	500A/5	MSQ40 500/5	15987		
		600A/5	MSQ40 600/5	15988		
		400A/5	MSQ60 400/5	15989		
		500A/5	MSQ60 500/5	15990		
		600A/5	MSQ60 600/5	15991		
		800A/5	MSQ60 800/5	15992		
	MSQ-100	1000A/5	MSQ60 1000/5	15993		
		1200A/5	MSQ60 1200/5	15994		
		1000A/5	MSQ100 1000/5	15995		
		1200A/5	MSQ100 1200/5	15996		
		1500A/5	MSQ100 1500/5	15997		
		1600A/5	MSQ100 1600/5	15998		
		2000A/5	MSQ100 2000/5	15999		
2500A/5	MSQ100 2500/5	16000				
		3000A/5	MSQ100 3000/5	16001		

Outline and installation dimensions



Technical specifications

- Standard: IEC60831
- Rated Voltage (VAC): 230, 250, 280, 400, 415, 450, 525, 690
- Frequency (Hz): 50/60
- Rated output (Kvar): 1~80
- Capacitance tolerance: -5~+10%
- Material:
 - Body: dielectric-metallized poly propylene film;
 - Impregnant: semi-solid
- Over-voltage permitted: $1.0U_n$, $1.1U_n \leq 8h/day$, $1.3U_n$ 1min
- Over-current permitted (In): 1.3
- Loss angle tangent: BSMJ: $\text{tg } \delta \leq 0.1\%$; BGMJ: $\text{tg } \delta \leq 0.0015$
- Impact current (In): ≤ 300
- Dielectric Loss (W/kvar): ≤ 0.25
- Ambient temperature (°C): -25/+50 Humidity $\leq 90\%$
- Altitude (m): ≤ 2000



Power Capacitors Series BSMJ

Selection and ordering data

Series BSMJ, BGMJ

Rated voltage (V)	Rated current (A)	Rated output (kvar)	Total capacitance (µF)	Overall dimension (mm)	Type code	Order code
250	12.0	3	153	160x56x140	BSMJ0.25-3-1	31834
	20.0	5	245	160x56x220	BSMJ0.25-5-1	31835
	30.0	7.5	382	160x56x220	BSMJ0.25-7.5-1	31836
	40.0	10	509	160x70x220	BSMJ0.25-10-1	31837
	60.0	15	764	160x70x250	BSMJ0.25-15-1	31838
400	2.9	2	39	160x56x115	BSMJ0.4-2-3	31839
	5.8	4	79	160x56x115	BSMJ0.4-4-3	31840
	8.7	6	118	160x56x115	BSMJ0.4-6-3	31841
	11.5	8	158	160x56x135	BSMJ0.4-8-3	31842
	14.4	10	198	160x56x190	BSMJ0.4-10-3	31843
	17.3	12	238	160x56x190	BSMJ0.4-12-3	31844
	20.2	14	278	160x56x190	BSMJ0.4-14-3	31845
	21.7	15	298	160x56x210	BSMJ0.4-15-3	31846
	23.1	16	318	160x56x210	BSMJ0.4-16-3	31847
	26.0	18	358	180x56x250	BSMJ0.4-18-3	31848
	28.9	20	398	180x56x250	BSMJ0.4-20-3	31849
	36.1	25	498	180x70x220	BSMJ0.4-25-3	31850
	43.3	30	597	180x70x280	BSMJ0.4-30-3	31851
415	57.7	40	796	180x70x320	BSMJ0.4-40-3	31852
	72.2	50	995	180x70x380	BSMJ0.4-50-3	31853
	13.7	10	180.5	160x56x190	BSMJ0.415-10-3	31854
	16.5	12	216.5	160x56x190	BSMJ0.415-12-3	31855
	19.3	14	252.6	160x56x210	BSMJ0.415-14-3	31856
	20.6	15	270.7	160x56x210	BSMJ0.415-15-3	31857
	22.0	16	288.7	160x56x210	BSMJ0.415-16-3	31858
	24.7	18	324.8	180x56x250	BSMJ0.415-18-3	31859
	27.5	20	360.9	180x56x250	BSMJ0.415-20-3	31860
	34.4	25	451.1	180x70x220	BSMJ0.415-25-3	31861
450	41.2	30	541.3	180x70x280	BSMJ0.415-30-3	31862
	55.0	40	721.8	180x70x320	BSMJ0.415-40-3	31863
	68.7	50	902.2	180x70x380	BSMJ0.415-50-3	31864
	12.8	10	157.3	160x56x190	BSMJ0.45-10-3	31865
	15.4	12	188.7	160x56x190	BSMJ0.45-12-3	31866
	18.0	14	220.2	160x56x210	BSMJ0.45-14-3	31867
	19.2	15	236.0	160x56x210	BSMJ0.45-15-3	31868
	20.5	16	251.6	160x56x210	BSMJ0.45-16-3	31869
525	25.7	20	314.5	180x56x250	BSMJ0.45-20-3	31871
	38.5	30	471.6	180x70x280	BSMJ0.45-30-3	31873
	51.3	40	628.8	180x70x320	BSMJ0.45-40-3	31874
	64.2	50	786.0	180x70x380	BSMJ0.45-50-3	31875
	11.0	10	115.5	160x56x190	BSMJ0.525-10-3	31876
	13.2	12	138.7	160x56x190	BSMJ0.525-12-3	31877
	15.4	14	161.8	160x56x210	BSMJ0.525-14-3	31878
690	16.5	15	173.3	160x56x210	BSMJ0.525-15-3	31879
	17.6	16	184.9	160x56x210	BSMJ0.525-16-3	31880
	22.0	20	231.1	180x56x250	BSMJ0.525-20-3	31882
	33.0	30	346.5	180x70x280	BSMJ0.525-30-3	31884
	44.0	40	426.0	180x70x320	BSMJ0.525-40-3	31885
	55.0	50	577.4	180x70x380	BSMJ0.525-50-3	31886
	8.4	10	66.9	160x56x190	BSMJ0.69-10-3	31887
	10.0	12	80.3	160x56x190	BSMJ0.69-12-3	31888
690	11.7	14	93.6	160x56x210	BSMJ0.69-14-3	31889
	12.6	15	100.3	160x56x210	BSMJ0.69-15-3	31890
	13.4	16	107.0	160x56x210	BSMJ0.69-16-3	31891
	16.7	20	133.8	160x56x250	BSMJ0.69-20-3	31893
	25.1	30	200.6	180x70x280	BSMJ0.69-30-3	31895
	33.5	40	267.4	180x70x320	BSMJ0.69-40-3	31896
	41.8	50	334.3	180x70x320	BSMJ0.69-50-3	31897



Power Capacitors Series BSMJ, BGMJ

Selection and ordering data

Series BSMJ, BGMJ


Rated voltage (V)	Rated current (A)	Rated output (kvar)	Total capacitance (µF)	Overall dimension (mm)	Type code	Order code
230	7.5	3.0	180.5	Ø65x180	BGMJ230- 3.0	32061
	10.0	4.0	240.7	Ø76x180	BGMJ230- 4.0	31898
	12.5	5.0	300.9	Ø76x180	BGMJ230- 5.0	31899
	15.1	6.0	361.0	Ø76x240	BGMJ230- 6.0	31900
	18.8	7.5	451.3	Ø76x240	BGMJ230- 7.5	31901
	25.1	10.0	601.7	Ø86x240	BGMJ230- 10.0	31902
	30.1	12.0	722.1	Ø96x240	BGMJ230- 12.0	31903
	35.1	14.0	842.4	Ø106x240	BGMJ230- 14.0	31904
	37.6	15.0	902.6	Ø106x240	BGMJ230- 15.0	32062
	40.1	16.0	962.8	Ø106x240	BGMJ230- 16.0	31905
	45.2	18.0	1083.1	Ø116x240	BGMJ230- 18.0	31906
	50.2	20.0	1203.4	Ø116x240	BGMJ230- 20.0	31907
	62.7	25.0	1504.3	Ø116x280	BGMJ230- 25.0	31908
	280	6.2	3.0	121.8	Ø65x180	BGMJ280- 3.0
8.2		4.0	162.4	Ø65x180	BGMJ280- 4.0	31910
10.3		5.0	203.0	Ø65x180	BGMJ280- 5.0	31911
12.4		6.0	243.6	Ø76x240	BGMJ280- 6.0	31912
15.5		7.5	304.5	Ø76x240	BGMJ280- 7.5	31913
20.6		10.0	406.0	Ø76x240	BGMJ280- 10.0	31914
24.7		12.0	487.2	Ø86x240	BGMJ280- 12.0	31915
28.9		14.0	568.4	Ø86x240	BGMJ280- 14.0	31916
30.9		15.0	609.0	Ø86x240	BGMJ280- 15.0	32063
33.0		16.0	649.6	Ø96x240	BGMJ280- 16.0	31917
37.1		18.0	730.8	Ø96x240	BGMJ280- 18.0	31918
41.2		20.0	812.0	Ø106x240	BGMJ280- 20.0	31919
51.5		25.0	1015.0	Ø96x280	BGMJ280- 25.0	31920
400		4.3	3.0	59.7	Ø65x140	BGMJ400- 3.0
	5.8	4.0	79.6	Ø65x180	BGMJ400- 4.0	31922
	7.2	5.0	99.5	Ø65x180	BGMJ400- 5.0	31923
	8.7	6.0	119.4	Ø65x180	BGMJ400- 6.0	31924
	10.8	7.5	149.2	Ø65x180	BGMJ400- 7.5	31925
	14.4	10.0	198.9	Ø65x240	BGMJ400- 10.0	31926
	17.3	12.0	238.7	Ø76x240	BGMJ400- 12.0	31927
	20.2	14.0	278.5	Ø76x240	BGMJ400- 14.0	31928
	21.6	15.0	298.4	Ø76x240	BGMJ400- 15.0	32064
	23.1	16.0	318.3	Ø76x240	BGMJ400- 16.0	31929
	26.0	18.0	358.1	Ø86x240	BGMJ400- 18.0	31930
	28.9	20.0	397.9	Ø86x240	BGMJ400- 20.0	31931
	36.1	25.0	497.4	Ø96x240	BGMJ400- 25.0	31932
	43.3	30.0	596.8	Ø106x240	BGMJ400- 30.0	31933
415	4.2	3.0	55.4	Ø65x140	BGMJ415- 3.0	31934
	5.6	4.0	73.9	Ø65x180	BGMJ415- 4.0	31935
	7.0	5.0	92.4	Ø65x180	BGMJ415- 5.0	31936
	8.3	6.0	110.9	Ø65x180	BGMJ415- 6.0	31937
	10.4	7.5	138.6	Ø65x180	BGMJ415- 7.5	31938
	13.9	10.0	184.8	Ø76x180	BGMJ415- 10.0	31939
	16.7	12.0	221.8	Ø65x240	BGMJ415- 12.0	31940
	19.5	14.0	258.8	Ø76x240	BGMJ415- 14.0	31941
	20.9	15.0	277.2	Ø76x240	BGMJ415- 15.0	32065
	22.2	16.0	295.7	Ø76x240	BGMJ415- 16.0	31942
	25.0	18.0	332.7	Ø86x240	BGMJ415- 18.0	31943
	27.8	20.0	369.6	Ø86x240	BGMJ415- 20.0	31944
	34.8	25.0	462.1	Ø96x240	BGMJ415- 25.0	31945
	41.7	30.0	554.5	Ø96x240	BGMJ415- 30.0	31946
450	3.8	3.0	47.2	Ø65x140	BGMJ450- 3.0	31947
	5.1	4.0	62.9	Ø65x180	BGMJ450- 4.0	31948
	6.4	5.0	78.9	Ø65x180	BGMJ450- 5.0	31949
	7.7	6.0	94.3	Ø65x180	BGMJ450- 6.0	31950
	9.6	7.5	117.9	Ø76x240	BGMJ450- 7.5	31951
	12.8	10.0	157.2	Ø76x240	BGMJ450- 10.0	31952
	15.4	12.0	188.6	Ø76x240	BGMJ450- 12.0	31953
	18.0	14.0	220.1	Ø76x240	BGMJ450- 14.0	31954
	19.2	15.0	235.8	Ø76x240	BGMJ450- 15.0	32066
	20.5	16.0	251.5	Ø86x240	BGMJ450- 16.0	31955
	23.1	18.0	282.9	Ø86x240	BGMJ450- 18.0	31956
	25.6	20.0	314.4	Ø86x240	BGMJ450- 20.0	31957



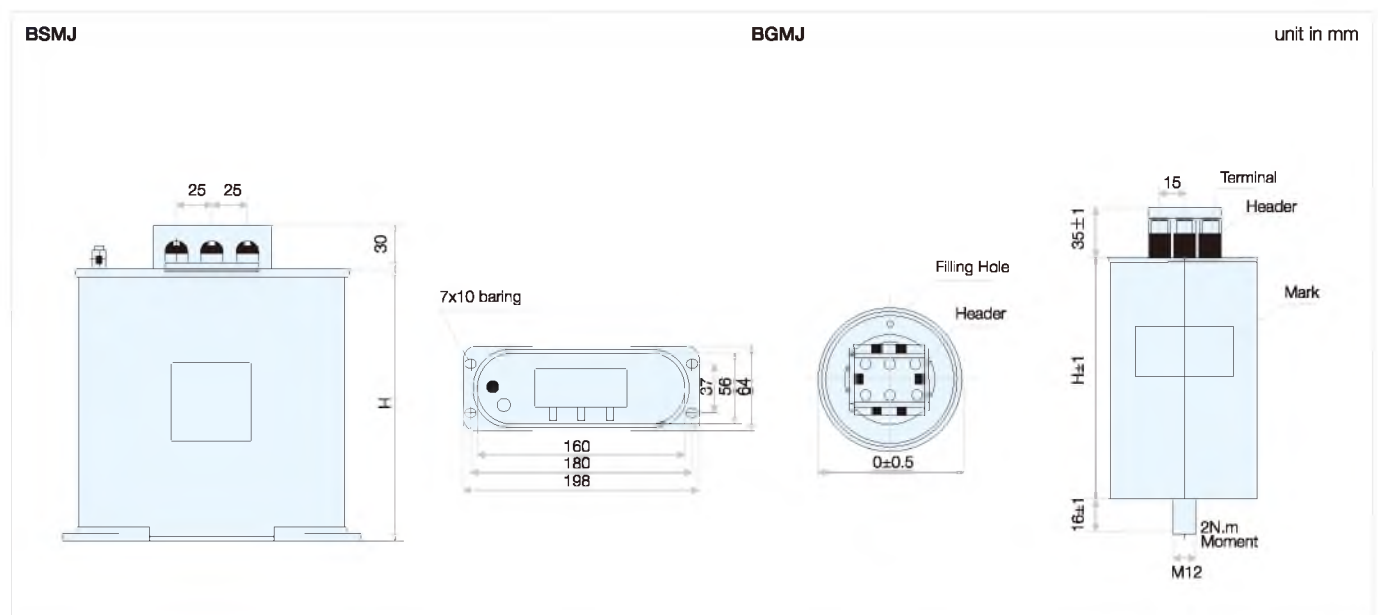
Power Capacitors Series BSMJ

Selection and ordering data

Series BSMJ, BGMJ

	Rated voltage (V)	Rated current (A)	Rated output (kvar)	Total capacitance (µF)	Overall dimension (mm)	Type code	Order code
	450	32.1	25.0	393.0	Ø96x240	BGMJ450- 25.0	31958
		38.5	30.0	471.6	Ø106x240	BGMJ450- 30.0	31959
	525	3.3	3.0	34.6	Ø65x140	BGMJ525- 3.0	31960
		4.4	4.0	46.2	Ø65x180	BGMJ525- 4.0	31961
		5.5	5.0	57.7	Ø65x180	BGMJ525- 5.0	32062
		6.6	6.0	69.3	Ø65x180	BGMJ525- 6.0	31963
		8.2	7.5	86.6	Ø76x180	BGMJ525- 7.5	31964
		11.0	10.0	115.5	Ø76x240	BGMJ525- 10.0	31965
		13.2	12.0	138.6	Ø76x240	BGMJ525- 12.0	31966
		15.4	14.0	161.7	Ø76x240	BGMJ525- 14.0	31967
		16.5	15.0	173.2	Ø76x240	BGMJ525- 15.0	32067
		17.6	16.0	184.8	Ø86x240	BGMJ525- 16.0	31968
	19.8	18.0	207.9	Ø86x240	BGMJ525- 18.0	31969	
	22.0	20.0	231.0	Ø86x240	BGMJ525- 20.0	31970	
	27.5	25.0	288.7	Ø96x240	BGMJ525- 25.0	31971	
	33.0	30.0	346.5	Ø106x240	BGMJ525- 30.0	31972	
	690	2.5	3.0	20.1	Ø65x180	BGMJ690- 3.0	31973
3.3		4.0	26.7	Ø65x180	BGMJ690- 4.0	31974	
4.2		5.0	33.4	Ø76x180	BGMJ690- 5.0	32075	
5.0		6.0	40.1	Ø76x180	BGMJ690- 6.0	31976	
6.3		7.5	50.1	Ø76x240	BGMJ690- 7.5	31977	
8.4		10.0	66.9	Ø76x240	BGMJ690- 10.0	31978	
10.0		12.0	80.2	Ø86x240	BGMJ690- 12.0	31979	
11.7		14.0	93.6	Ø86x240	BGMJ690- 14.0	31980	
12.5		15.0	100.3	Ø86x240	BGMJ690- 15.0	32068	
13.4		16.0	107.0	Ø96x240	BGMJ690- 16.0	31981	
15.1	18.0	120.3	Ø96x240	BGMJ690- 18.0	31982		
16.7	20.0	133.7	Ø106x240	BGMJ690- 20.0	31983		
20.9	25.0	167.1	Ø116x240	BGMJ690- 25.0	31984		

Outline and installation dimensions




Technical specifications

- Standard: IEC60529
- Material: Cold rolled plate/Galvanized sheet
- Body and door: 1.5mm steel sheet
- Mounting plate: 2.5mm steel sheet
- Finish:
 - Case and door: RAL 7032 mat finish
 - Mounting plate: RAL 2004 smooth finish
- Protection degree: IP 65
- Boxes are completed with:
 - Mounting plate
 - Gland plate and gasket
 - Locking system with 3mm double bar key
 - Package with hardware for earth connection and screws to mount all components



Selection and ordering data

	Height	Dimension Width (mm)	Depth	Type code	Order code
	200	200	150	M200x200x150	14672
	250	200	150	M250x200x150	14674
	300	200	150	M300x200x150	14683
	300	250	150	M300x250x150	14685
	300	300	150	M300x300x150	14688
	400	300	150	M400x300x150	14702
	400	400	150	M400x400x150	14706
	500	300	150	M500x300x150	14710
	500	400	150	M500x400x150	14714
	500	500	150	M500x500x150	14719
	600	400	150	M600x400x150	14723
	600	500	150	M600x500x150	14727
	600	600	150	M600x600x150	14731
	700	500	150	M700x500x150	14738
	300	200	200	M300x200x200	14684
	300	250	200	M300x250x200	14688
	300	300	200	M300x300x200	14689
	400	300	200	M400x300x200	14703
	400	400	200	M400x400x200	14707
	500	300	200	M500x300x200	14711
500	400	200	M500x400x200	14715	
500	500	200	M500x500x200	14720	
600	400	200	M600x400x200	14724	
600	500	200	M600x500x200	14728	
600	600	200	M600x600x200	14732	
700	400	200	M700x400x200	14738	
700	500	200	M700x500x200	14739	
700	600	200	M700x600x200	14742	
800	600	200	M800x600x200	14745	
800	800	200	M800x800x200	14748	
1000	600	200	M1000x600x200	14751	
1000	700	200	M1000x700x200	14754	
1000	800	200	M1000x800x200	14758	
1200	600	200	M1200x600x200	14760	
1200	800	200	M1200x800x200	14763	
500	400	210	M500x400x210	14716	
300	250	250	M300x250x250	14687	
300	300	250	M300x300x250	14690	
400	300	250	M400x300x250	14704	



Metal Boxes Series 3SM

Selection and ordering data

	Height	Dimension Width (mm)	Depth	Type code	Order code
Single door series	400	400	250	M400x400x250	14708
	500	300	250	M500x300x250	14712
	500	400	250	M500x400x250	14717
	500	500	250	M500x500x250	14721
	600	400	250	M600x400x250	14725
	600	500	250	M600x500x250	14729
	600	600	250	M600x600x250	14733
	700	350	250	M700x350x250	14680
	700	500	250	M700x500x250	14740
	700	600	250	M700x600x250	14743
	800	600	250	M800x600x250	14746
	800	800	250	M800x800x250	14749
	1000	600	250	M1000x600x250	14752
	1000	700	250	M1000x700x250	14755
	1000	800	250	M1000x800x250	14757
	1000	1000	250	M1000x1000x250	14681
	1200	600	250	M1200x600x250	14761
	1200	800	250	M1200x800x250	14764
	1200	1000	250	M1200x1000x250	14766
	1200	1200	250	M1200x1200x250	14682
	200	400	300	M200x400x300	14673
	250	400	300	M250x400x300	14675
	400	300	300	M400x300x300	14705
	400	400	300	M400x400x300	14709
	500	300	300	M500x300x300	14713
	500	400	300	M500x400x300	14718
	500	500	300	M500x500x300	14722
	600	400	300	M600x400x300	14726
	600	500	300	M600x500x300	14730
	600	600	300	M600x600x300	14734
	700	400	300	M700x400x300	14737
	700	500	300	M700x500x300	14741
	700	600	300	M700x600x300	14744
	800	600	300	M800x600x300	14747
	800	800	300	M800x800x300	14750
	900	500	300	M900x500x300	27275
	1000	600	300	M1000x600x300	14753
	1000	800	300	M1000x800x300	14758
	1000	1000	300	M1000x1000x300	14759
	1200	600	300	M1200x600x300	14762
1200	800	300	M1200x800x300	14765	
1200	1000	300	M1200x1000x300	14767	
1200	1200	300	M1200x1200x300	14769	
1400	600	300	M1400x600x300	14768	
1400	800	300	M1400x800x300	14770	
1400	1000	300	M1400x1000x300	14676	
1400	1200	300	M1400x1200x300	14677	
1600	800	300	M1600x800x300	14678	
1600	1000	300	M1600x1000x300	14771	
1600	1200	300	M1600x1200x300	14679	
1800	800	300	M1800x800x300	14772	
1800	1000	300	M1800x1000x300	14773	
1800	1200	300	M1800x1200x300	27276	
600	600	350	M600x600x350	14735	
600	600	400	M600x600x400	14692	
800	600	400	M800x600x400	14693	
800	800	400	M800x800x400	14694	
1000	800	400	M1000x800x400	14696	
1000	1000	400	M1000x1000x400	14700	
1200	1000	400	M1200x1000x400	14695	
1200	1200	400	M1200x1200x400	14697	
1400	800	400	M1400x800x400	14699	
1400	1000	400	M1400x1000x400	14701	
1600	1000	400	M1600x1000x400	14698	
300	600	600	M300x600x600	14691	
1000	800	600	M1000x800x600	27277	



Selection and ordering data

	Height	Dimension Width (mm)	Depth	Type code	Order code
	600	800	200	MD600x800x200	33132
	600	800	250	MD600x800x250	33133
	600	800	300	MD600x800x300	33134
	600	1000	200	MD600x1000x200	33135
	600	1000	250	MD600x1000x250	33136
	600	1000	300	MD600x1000x300	33137
	600	1200	250	MD600x1200x250	33138
	600	1200	300	MD600x1200x300	33139
	800	1200	250	MD800x1200x250	33140
	800	1200	300	MD800x1200x300	33141
	1000	1000	250	MD1000x1000x250	33142
	1000	1000	300	MD1000x1000x300	33143
	1000	1000	400	MD1000x1000x400	33144
	1200	1000	250	MD1200x1000x250	33145
	1200	1200	250	MD1200x1200x250	33146
	1200	1000	300	MD1200x1000x300	33147
	1200	1200	300	MD1200x1200x300	33148
	1200	1000	400	MD1200x1000x400	33149
	1200	1200	400	MD1200x1200x400	33150
	1400	1000	250	MD1400x1000x250	33151
1400	1000	300	MD1400x1000x300	33152	
1400	1000	400	MD1400x1000x400	33153	
1400	1200	300	MD1400x1200x300	33154	
1400	1200	400	MD1400x1200x400	33155	
1400	1400	300	MD1400x1400x300	33156	
1400	1400	400	MD1400x1400x400	33157	
	400	300	200	MI400x300x200	33158
	400	400	200	MI400x400x200	33159
	500	300	200	MI500x300x200	33160
	500	400	200	MI500x400x200	33161
	500	500	200	MI500x500x200	33162
	600	400	200	MI600x400x200	33163
	600	500	200	MI600x500x200	33164
	600	600	200	MI600x600x200	33165
	700	500	200	MI700x500x200	33166
	800	600	200	MI800x600x200	33167
	800	800	200	MI800x800x200	33168
	400	300	250	MI400x300x250	33169
	400	400	250	MI400x400x250	33170
	500	300	250	MI500x300x250	33171
	500	400	250	MI500x400x250	33172
	500	500	250	MI500x500x250	33173
	600	400	250	MI600x400x250	33174
600	500	250	MI600x500x250	33175	
600	600	250	MI600x600x250	33176	

Industrial plugs and sockets

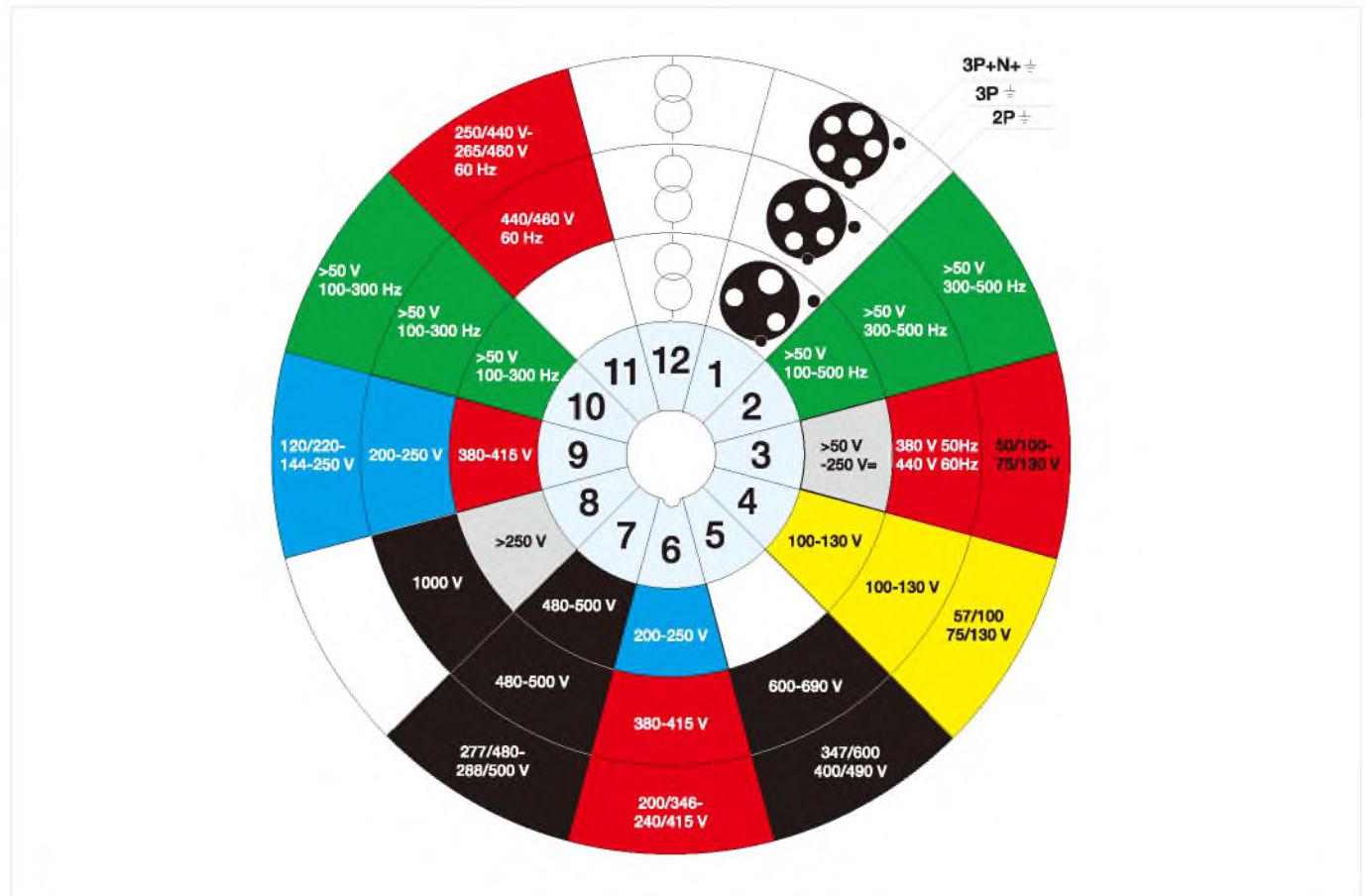
The industrial plugs and sockets is basically designed to be suitable for indoor and outdoor applications where it needs to be possible to connect and disconnect, such as industry, building sites, workshops, agricultural sector, commercial premises and in households.

Clock position

acc. To IEC 60309-1, -2

Position of earthing sleeve with respect to major keyway for various voltages and frequencies.

The color codes correspond to the nominal voltage.



Position of the earth contact

Plugs and sockets with rated voltages above 50 V must have an earth contact.

To prevent incorrect insertion of different voltages or frequencies, a nose on the plug is designed in accordance with the voltages or frequencies to fit into a keyway in the receptacle, thus ensuring that the earth contact pin or tube is correctly positioned in accordance with the required electrical standard.

Selection table

		3SP1		3SP2	3SP6	
		IP44	IP67	IP67	IP44	IP67
16 A	110-130 V	●		●	●	●
	220-240 V	●		●	●	●
	380-415 V	●		●	●	●
32 A	110-130 V	●		●	●	●
	220-240 V	●		●	●	●
	380-415 V	●		●	●	●
63 A	220-240 V		●	●		●
	380-415 V		●	●		●

Industrial plugs and sockets

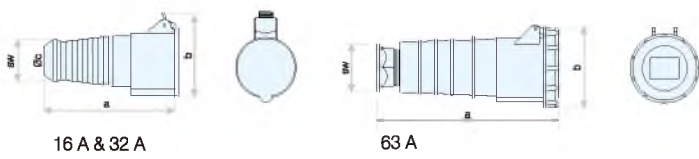
Series 3SP1, IP44 (16 A & 32 A), IP67 (63 A)

Selection and ordering data

Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code		Dimension				
				Type code	Order code	a	b	c	d	sw
Plugs										
16	2P+E	110-130	4h	3SP1-013-4	14253	118	82	47	6-15	38
		220-240	6h	3SP1-013	31433	118	82	47	6-15	38
	3P+E	380-415	6h	3SP1-014	31436	124	88	83	6-15	38
32	2P+E	110-130	4h	3SP1-023-4	14254	146	100	63	10-20	50
		220-240	6h	3SP1-023	31434	146	100	63	10-20	50
	3P+E	380-415	6h	3SP1-024	31437	146	100	63	10-20	50
63	2P+E	110-130	4h	3SP1-023-4	14254	152	106	70	10-20	50
		220-240	6h	3SP1-023	31434	152	106	70	10-20	50
	3P+E	380-415	6h	3SP1-024	31437	152	106	70	10-20	50
63	2P+E	220-240	6h	3SP1-033	31435	230	109			36
		380-415	6h	3SP1-034	31438	230	109			36
	3P+N+E	220-380/240-415	6h	3SP1-035	31441	230	109			36



Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code		Dimension				
				Type code	Order code	a	b	c	d	sw
Connectors										
16	2P+E	110-130	4h	3SP1-213-4	14259	129	76	6-15		38
		220-240	6h	3SP1-213	31451	129	76	6-15		38
	3P+E	380-415	6h	3SP1-214	31454	135	80	6-15		38
32	2P+E	110-130	4h	3SP1-215-4	14260	142	89	8-16		42
		220-240	6h	3SP1-215	31457	142	89	8-16		42
	3P+N+E	220-380/240-415	6h	3SP1-215	31457	142	89	8-16		42
63	2P+E	110-130	4h	3SP1-223-4	14260	159	92	10-20		50
		220-240	6h	3SP1-223	31452	159	92	10-20		50
	3P+N+E	220-380/240-415	6h	3SP1-225	31458	165	98	10-20		50
63	2P+E	220-240	6h	3SP1-233	31453	240	112			36
		380-415	6h	3SP1-234	31456	240	112			36
	3P+N+E	220-380/240-415	6h	3SP1-235	31459	240	112			36

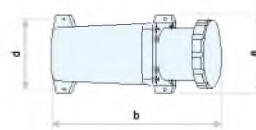
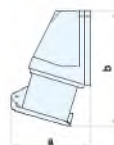


Industrial plugs and sockets

Series 3SP1, IP44 (16 A & 32 A), IP67 (63 A)

Selection and ordering data

Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code		Dimension mm				
				Type code	Order code	a	b	c	d	
Surface mounting socket outlets										
16	2P+E	110-130	4h	3SP1-113-4	14255	87	137			
		220-240	6h	3SP1-113	31442	87	137			
	3P+E	380-415	6h	3SP1-114	31445	95	139			
	3P+N+E	220-380/240-415	6h	3SP1-115	31448	99	138			
32	2P+E	110-130	4h	3SP1-123-4	14256	101	153			
		220-240	6h	3SP1-123	31443	101	153			
	3P+E	380-415	6h	3SP1-124	31446	101	153			
	3P+N+E	220-380/240-415	6h	3SP1-125	31449	104	154			
63	2P+E	220-240	6h	3SP1-133	31444	125	270		109	
		380-415	6h	3SP1-134	31447	125	270		109	
	3P+N+E	220-380/240-415	6h	3SP1-135	31450	125	270		109	

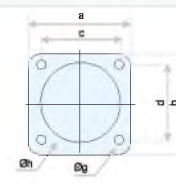
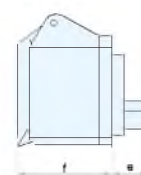


16 A & 32 A

63 A

6

Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code		Dimension mm						
				Type code	Order code	a	b	c	d	e	f	g
Panel mounting socket outlets												
16	2P+E	110-130	4h	3SP1-313-4	14257	76	76	61	61	16	60	5.5
		220-240	6h	3SP1-313	31460	76	76	61	61	16	60	5.5
	3P+E	380-415	6h	3SP1-314	31463	76	76	61	61	17	60	5.5
	3P+N+E	220-380/240-415	6h	3SP1-315	31466	76	76	61	61	18	58	5.5
32	2P+E	110-130	4h	3SP1-323-4	14258	76	76	61	61	20	70	5.5
		220-240	6h	3SP1-323	31461	76	76	61	61	20	70	5.5
	3P+E	380-415	6h	3SP1-324	31464	76	76	61	61	20	70	5.5
	3P+N+E	220-380/240-415	6h	3SP1-325	31467	76	76	61	61	22	71	5.5
63	2P+E	220-240	6h	3SP1-333	31462	100	100	80	80	39	95	114
		380-415	6h	3SP1-334	31465	100	100	80	80	39	95	114
	3P+N+E	220-380/240-415	6h	3SP1-335	31468							



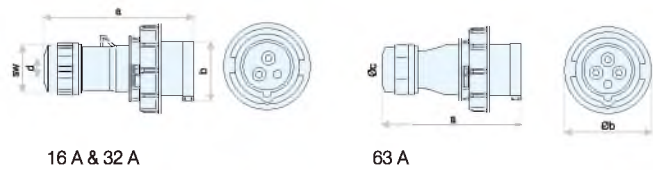
16 A & 32 A & 63 A

Industrial plugs and sockets

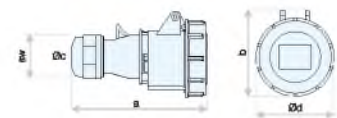
Series 3SP2, IP67

Selection and ordering data

Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code		Dimension				
				Type code	Order code	a	b	c	d	sw
Plugs										
16	2P+E	110-130	4h	3SP2-0132-4	14261	118	82	6-15	38	
		220-240	6h	3SP2-0131	31469	118	82	6-16	38	
	3P+E	380-415	6h	3SP2-0141	31472	124	79	6-16	38	
	3P+N+E	220-380/240-415	6h	3SP2-0151	31475	131	87	8-16	42	
32	2P+E	110-130	4h	3SP2-0232-4	14262	146	100	10-20	50	
		220-240	6h	3SP2-0231	31470	146	100	10-20	50	
	3P+E	380-415	6h	3SP2-0241	31473	146	93	10-20	50	
	3P+N+E	220-380/240-415	6h	3SP2-0251	31476	152	100	10-20	50	
63	2P+E	220-240	6h	3SP2-0331	31471	240	115	30		
	3P+E	380-415	6h	3SP2-0341	31474	240	115	30		
	3P+N+E	220-380/240-415	6h	3SP2-0351	31477	240	115	30		



Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code		Dimension			
				Type code	Order code	a	b	c	d
Connectors									
16	2P+E	110-130	4h	3SP2-2132-4	14267	133	78	6-15	38
		220-240	6h	3SP2-2131	31487	133	78	6-15	38
	3P+E	380-415	6h	3SP2-2141	31490	139	84	6-15	38
	3P+N+E	220-380/240-415	6h	3SP2-2151	31493	145	92	6-15	38
32	2P+E	110-130	4h	3SP2-2232-4	14268	162	96	10-20	50
		220-240	6h	3SP2-2231	31488	162	96	10-20	50
	3P+E	380-415	6h	3SP2-2241	31491	162	96	10-20	50
	3P+N+E	220-380/240-415	6h	3SP2-2251	31494	168	102	10-20	50
63	2P+E	220-240	6h	3SP2-2331	31489	261	114	30	112
	3P+E	380-415	6h	3SP2-2341	31492	261	114	30	112
	3P+N+E	220-380/240-415	6h	3SP2-2351	31495	261	114	30	112

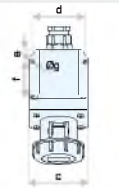


Industrial plugs and sockets

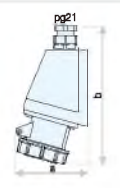
Series 3SP2, IP67

Selection and ordering data

Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code		Dimension mm						
				Type code	Order code	a	b	c	d	e	f	g
Surface mounting socket outlets												
16	2P+E	110-130	4h	3SP2-1132-4	14263	96	151	81	71	17	48	5.2
		220-240	6h	3SP2-1131	31478	96	151	81	71	17	48	5.2
	3P+E	380-415	6h	3SP2-1141	31481	98	155	81	71	17	48	5.2
32	2P+E	110-130	4h	3SP2-1232-4	14264	107	165					
		220-240	6h	3SP2-1231	31479	107	165					
	3P+E	380-415	6h	3SP2-1241	31482	107	165					
63	2P+E	110-130	4h	3SP2-1332-4	14265	171	170	238	118			
		220-240	6h	3SP2-1331	31480	171	170	238	118			
	3P+E	380-415	6h	3SP2-1341	31483	171	170	238	118			
	3P+N+E	220-380/240-415	6h	3SP2-1351	31486	171	170	238	118			



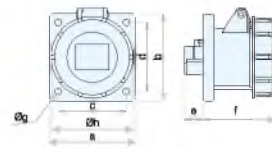
16 A & 32 A



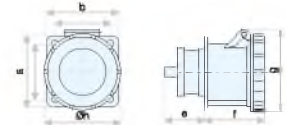
63 A



Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code		Dimension mm							
				Type code	Order code	a	b	c	d	e	f	g	h
Panel mounting socket outlets													
16	2P+E	110-130	4h	3SP2-3132-4	14265	76	76	61	61	16	61	5.5	46
		220-240	6h	3SP2-3131	31496	76	76	61	61	16	61	5.5	46
	3P+E	380-415	6h	3SP2-3141	31499	76	76	61	61	17	61	5.5	46
32	2P+E	110-130	4h	3SP2-3232-4	14266	76	76	61	61	20	74	5.5	60
		220-240	6h	3SP2-3231	31497	76	76	61	61	20	74	5.5	60
	3P+E	380-415	6h	3SP2-3241	31500	76	76	61	61	20	74	5.5	60
63	2P+E	110-130	4h	3SP2-3332-4	14267	100	100	80	80	39	95	114	80
		220-240	6h	3SP2-3331	31498	100	100	80	80	39	95	114	80
	3P+E	380-415	6h	3SP2-3341	31501	100	100	80	80	39	95	114	80
	3P+N+E	220-380/240-415	6h	3SP2-3351	31504	100	100	80	80	39	95	114	80



16 A & 32 A

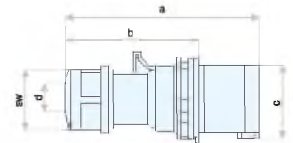


63 A

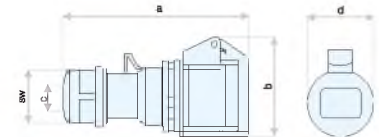
Industrial plugs and sockets Series 3SP6, IP44

Selection and ordering data

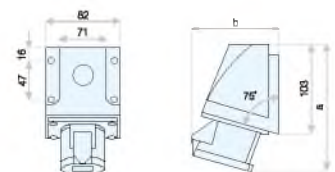
Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code Order code		Dimension mm				
				Type code	Order code	a	b	c	d	sw
Plugs										
16	2P+E	110-130	4h	3SP6-0131-4	14139	118	82	47	6-15	38
		220-240	6h	3SP6-0131	14141	118	82	47	6-15	38
	3P+E	380-415	6h	3SP6-0141	14143	124	88	53	6-15	38
32	2P+E	110-130	4h	3SP6-0231-4	14140	146	100	63	10-20	50
		220-240	6h	3SP6-0231	14142	146	100	63	10-20	50
	3P+E	380-415	6h	3SP6-0241	14144	146	100	63	10-20	50
	3P+N+E	380-415	6h	3SP6-0251	14146	152	106	70	10-20	20



Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code Order code		Dimension mm				
				Type code	Order code	a	b	c	d	sw
Connectors										
16	2P+E	110-130	4h	3SP6-2131-4	14147	127	75	6-15	51	38
		220-240	6h	3SP6-2131	14149	127	75	6-15	51	38
	3P+E	380-415	6h	3SP6-2141	14151	135	80	6-15	57	38
32	2P+E	110-130	4h	3SP6-2231-4	14148	159	90	10-20	66	50
		220-240	6h	3SP6-2231	14150	159	90	10-20	66	50
	3P+E	380-415	6h	3SP6-2241	14152	159	90	10-20	66	50
	3P+N+E	380-415	6h	3SP6-2251	14154	159	90	10-20	66	50



Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code Order code		Dimension mm	
				Type code	Order code	a	b
Surface mounting socket outlets							
16	2P+E	110-130	4h	3SP6-1131-4	14155	149	96
		220-240	6h	3SP6-1131	14157	149	96
	3P+E	380-415	6h	3SP6-1141	14159	150	101
32	2P+E	110-130	4h	3SP6-1231-4	14156	163	107
		220-240	6h	3SP6-1231	14158	163	107
	3P+E	380-415	6h	3SP6-1241	14160	163	107
	3P+N+E	380-415	6h	3SP6-1251	14162	163	112

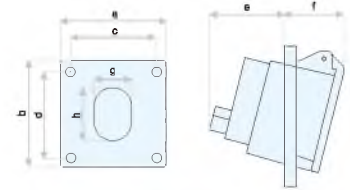


Industrial plugs and sockets

Series 3SP6, IP44

Selection and ordering data

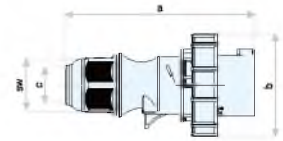
Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code		Dimension mm									
				Type code	Order code	a	b	c	d	e	f	g	h	l	
Panel mounting socket outlets															
16	2P+E	110-130	4h	3SP6-3131-4	14163	80	98	60	73	37	50	57	62	6	
		220-240	6h	3SP6-3131	14165	80	98	60	73	37	50	57	62	6	
	3P+E	380-415	6h	3SP6-3141	14167	80	98	60	73	40	46	63	70	6	
	3P+N+E	380-415	6h	3SP6-3151	14169	80	98	60	73	43	45	70	78	6	
32	2P+E	110-130	4h	3SP6-3231-4	14164	80	98	60	73	45	57	72	81	6	
		220-240	6h	3SP6-3231	14166	88	98	60	73	45	57	72	81	6	
	3P+E	380-415	6h	3SP6-3241	14168	88	98	60	73	45	57	72	81	6	
	3P+N+E	380-415	6h	3SP6-3251	14170	88	98	60	73	47	55	78	88	6	



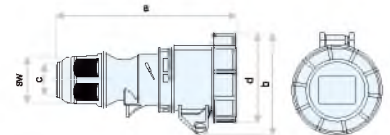
Industrial plugs and sockets Series 3SP6, IP67

Selection and ordering data

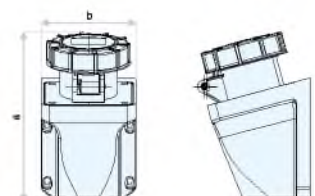
Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code		Dimension			
				Type code	Order code	a	b	c	sw
Plugs									
16	2P+E	110-130	4h	3SP6-0132-4	14171	135	72	6-15	38
		220-240	6h	3SP6-0132	14173	135	72	6-15	38
	3P+E	380-415	6h	3SP6-0142	14175	140	80	6-15	38
32	2P+E	110-130	4h	3SP6-0232-4	14172	160	93	10-20	50
		220-240	6h	3SP6-0232	14174	160	93	10-20	50
	3P+E	380-415	6h	3SP6-0242	14176	160	93	10-20	50
	3P+N+E	380-415	6h	3SP6-0252	14178	170	102	10-20	50



Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code		Dimension				
				Type code	Order code	a	b	c	d	sw
Connectors										
16	2P+E	110-130	4h	3SP6-2132-4	14179	147	71	6-15	71	38
		220-240	6h	3SP6-2132	14181	147	71	6-15	71	38
	3P+E	380-415	6h	3SP6-2142	14183	153	87	6-15	80	38
32	2P+E	110-130	4h	3SP6-2232-4	14180	175	97	10-20	93	50
		220-240	6h	3SP6-2232	14182	175	97	10-20	93	50
	3P+E	380-415	6h	3SP6-2242	14184	175	97	10-20	93	50
	3P+N+E	380-415	6h	3SP6-2252	14186	185	104	12-22	100	50



Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code		Dimension	
				Type code	Order code	a	b
Surface mounting socket outlets							
16	2P+E	110-130	4h	3SP6-1132-4	14187	155	99
		220-240	6h	3SP6-1132	14189	155	99
	3P+E	380-415	6h	3SP6-1142	14191	155	101
32	2P+E	110-130	4h	3SP6-1232-4	14188	170	108
		220-240	6h	3SP6-1232	14190	170	108
	3P+E	380-415	6h	3SP6-1242	14192	170	108
	3P+N+E	380-415	6h	3SP6-1252	14194	172	111

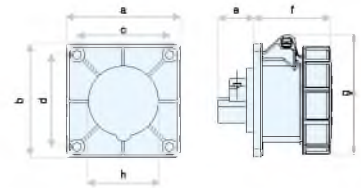


Industrial plugs and sockets

Series 3SP6, IP67

Selection and ordering data

Rated current A	Terminal	Voltage 50/60 Hz V	EARTH HR. POS	Type code		Dimension mm							
				Type code	Order code	a	b	c	d	e	f	g	h
Panel mounting socket outlets													
16	2P+E	110-130	4h	3SP6-3132-4	14195	76×76	61×61	73	18	63	78	46	5
		220-240	6h	3SP6-3132	14197	76×76	61×61	73	18	63	78	46	5
	3P+E	380-415	6h	3SP6-3142	14199	76×76	61×61	73	17	61	84	53	6
32	3P+N+E	380-415	6h	3SP6-3152	14201	76×76	61×61	73	17	62	91	60	6
	2P+E	110-130	4h	3SP6-3232-4	14196	76×76	61×61	73	20	74	96	60	5
		220-240	6h	3SP6-3232	14198	76×76	61×61	73	20	74	96	60	6
	3P+E	380-415	6h	3SP6-3242	14200	76×76	61×61	73	20	74	98	60	6
	3P+N+E	380-415	6h	3SP6-3252	14202	76×76	61×61	73	22	73	102	60	6




Electric Bell & Buzzers Series 3S-B1


Technical specifications

- Standard: IEC61558-2-8
- Voltage range (V):
AC: 12, 24, 36, 48, 110, 127, 220, 380
DC: 12, 24, 36, 48, 110, 220
- Rated frequency (Hz): 50/60
- Permissible voltage variation: $\pm 10\%$
- Rated insulation resistance: $\geq 20M \Omega$



Selection and ordering data

	Diameter Ø (mm)	Rated voltage	Type code	Order code
	Ø55	12VAC	B10512A	31505
		24VAC	B10524A	31506
		36VAC	B10536A	31507
		48VAC	B10548A	31508
		110VAC	B105110A	31509
		27VAC	B105127A	31510
		220VAC	B105220A	31511
		380VAC	B105380A	31512
		12VDC	B10512D	31513
		24VDC	B10524D	31514
		36VDC	B10536D	31515
		48VDC	B10548D	31516
		110VDC	B105110D	31517
		220VDC	B105220D	31518
		Ø75	12VAC	B10712A
	24VAC		B10724A	31520
	36VAC		B10736A	31521
	48VAC		B10748A	31522
	110VAC		B107110A	31523
	127VAC		B107127A	31524
	220VAC		B107220A	31525
	380VAC		B107380A	31526
	12VDC		B10712D	31527
	24VDC		B10724D	31528
	36VDC		B10736D	31529
	48VDC		B10748D	31530
	110VDC		B107110D	31531
	220VDC		B107220D	31532
	Ø100		12VAC	B11012A
		24VAC	B11024A	31534
		36VAC	B11036A	31535
		48VAC	B11048A	31536
		110VAC	B110110A	31537
		127VAC	B110127A	31538
		220VAC	B110220A	31539
		380VAC	B110380A	31540
		12VDC	B11012D	31541
		24VDC	B11024D	31542
		36VDC	B11036D	31543
		48VDC	B11048D	31544
		110VDC	B110110D	31545
		220VDC	B110220D	31546
Ø150		12VAC	B11512A	31547
	24VAC	B11524A	31548	
	36VAC	B11536A	31549	
	48VAC	B11548A	31550	
	110VAC	B115110A	31551	
	127VAC	B115127A	31552	
	220VAC	B115220A	31553	
	380VAC	B115380A	31554	
	12VDC	B11512D	31555	

	Diameter Ø (mm)	Rated voltage	Type code	Order code
	Ø150	24VDC	B11524D	31556
		36VDC	B11536D	31557
		48VDC	B11548D	31558
		110VDC	B115110D	31559
		220VDC	B115220D	31560
		Ø200	12VAC	B12012A
	24VAC		B12024A	31562
	36VAC		B12036A	31563
	48VAC		B12048A	31564
	110VAC		B120110A	31565
	127VAC		B120127A	31566
	220VAC		B120220A	31567
	380VAC		B120380A	31568
	12VDC		B12012D	31569
	24VDC		B12024D	31570
	36VDC		B12036D	31571
	48VDC		B12048D	31572
	Ø250	110VDC	B120110D	31573
		220VDC	B120220D	31574
		12VAC	B12512A	31575
		24VAC	B12524A	31576
		36VAC	B12536A	31577
		48VAC	B12548A	31578
		110VAC	B125110A	31579
		127VAC	B125127A	31580
		220VAC	B125220A	31581
		380VAC	B125380A	31582
		12VDC	B12512D	31583
		24VDC	B12524D	31584
	Ø300	36VDC	B12536D	31585
		48VDC	B12548D	31586
		110VDC	B125110D	31587
		220VDC	B125220D	31588
		12VAC	UC42012A	31589
		24VAC	UC42024A	31590
		36VAC	UC42036A	31591
		48VAC	UC42048A	31592
		110VAC	UC420110A	31593
		127VAC	UC420127A	31594
		220VAC	UC420220A	31595
		380VAC	UC420380A	31596
	Ø300	12VDC	UC42012D	31597
24VDC		UC42024D	31598	
36VDC		UC42036D	31599	
48VDC		UC42048D	31600	
110VDC		UC420110D	31601	
220VDC		UC420220D	31602	

Electric Bell & Buzzers

Series UC4 & SCF

Selection and ordering data

	Diameter Ø (mm)	Rated voltage	Type code	Order code
UC4	Ø55	12VAC	UC40512A	31603
		24VAC	UC40524A	31604
		36VAC	UC40536A	31605
		48VAC	UC40548A	31606
		110VAC	UC405110A	31607
		127VAC	UC405127A	31608
		220VAC	UC405220A	31609
		380VAC	UC405380A	31610
		12VDC	UC40512D	31611
		24VDC	UC40524D	31612
		36VDC	UC40536D	31613
		48VDC	UC40548D	31614
	110VDC	UC405110D	31615	
	220VDC	UC405220D	31616	
	Ø75	12VAC	UC40712A	31617
		24VAC	UC40724A	31618
		36VAC	UC40736A	31619
		48VAC	UC40748A	31620
		110VAC	UC407110A	31621
		127VAC	UC407127A	31622
		220VAC	UC407220A	31623
		380VAC	UC407380A	31624
		12VDC	UC40712D	31625
		24VDC	UC40724D	31626
		36VDC	UC40736D	31627
		48VDC	UC40748D	31628
	110VDC	UC407110D	31629	
	220VDC	UC407220D	31630	
	Ø100	12VAC	UC41012A	31631
		24VAC	UC41024A	31632
		36VAC	UC41036A	31633
		48VAC	UC41048A	31634
		110VAC	UC410110A	31635
		127VAC	UC410127A	31636
		220VAC	UC410220A	31637
		380VAC	UC410380A	31638
12VDC		UC41012D	31639	
24VDC		UC41024D	31640	
36VDC		UC41036D	31641	
48VDC		UC41048D	31642	
110VDC	UC410110D	31643		
220VDC	UC410220D	31644		
Ø150	12VAC	UC41512A	31645	
	24VAC	UC41524A	31646	
	36VAC	UC41536A	31647	
	48VAC	UC41548A	31648	
	110VAC	UC415110A	31649	
	127VAC	UC415127A	31650	
	220VAC	UC415220A	31651	
	380VAC	UC415380A	31652	
	12VDC	UC41512D	31653	
	24VDC	UC41524D	31654	
	36VDC	UC41536D	31655	
	48VDC	UC41548D	31656	
110VDC	UC415110D	31657		
220VDC	UC415220D	31658		
Ø200	12VAC	UC42012A	31659	
	24VAC	UC42024A	31660	
	36VAC	UC42036A	31661	
	48VAC	UC42048A	31662	
	110VAC	UC420110A	31663	
	127VAC	UC420127A	31664	
	220VAC	UC420220A	31665	
	380VAC	UC420380A	31666	
	12VDC	UC42012D	31667	
	24VDC	UC42024D	31668	
	36VDC	UC42036D	31669	
	48VDC	UC42048D	31670	
110VDC	UC420110D	31671		



	Diameter Ø (mm)	Rated voltage	Type code	Order code
UC4	Ø200	220VDC	UC420220D	31672
		Ø250	12VAC	UC42512A
		24VAC	UC42524A	31674
		36VAC	UC42536A	31675
		48VAC	UC42548A	31676
		110VAC	UC425110A	31677
		127VAC	UC425127A	31678
		220VAC	UC425220A	31679
		380VAC	UC425380A	31680
		12VDC	UC42512D	31681
		24VDC	UC42524D	31682
		36VDC	UC42536D	31683
		48VDC	UC42548D	31684
		110VDC	UC425110D	31685
		220VDC	UC425220D	31686
	Ø300	12VAC	UC43012A	31687
		24VAC	UC43024A	31688
		36VAC	UC43036A	31689
		48VAC	UC43048A	31690
		110VAC	UC430110A	31691
		127VAC	UC430127A	31692
		220VAC	UC430220A	31693
		380VAC	UC430380A	31694
		12VDC	UC43012D	31695
24VDC		UC43024D	31696	
36VDC		UC43036D	31697	
48VDC		UC43048D	31698	
	110VDC	UC430110D	31699	
	220VDC	UC430220D	31700	
SCF	Ø100	12VAC	SCF1012A	31701
		24VAC	SCF1024A	31702
		36VAC	SCF1036A	31703
		48VAC	SCF1048A	31704
		110VAC	SCF10110A	31705
		127VAC	SCF10127A	31706
		220VAC	SCF10220A	31707
		380VAC	SCF10380A	31708
		12VDC	SCF1012D	31709
		24VDC	SCF1024D	31710
		36VDC	SCF1036D	31711
		48VDC	SCF1048D	31712
		110VDC	SCF10110D	31713
		220VDC	SCF10220D	31714
	Ø125	12VAC	SCF1212A	31715
		24VAC	SCF1224A	31716
		36VAC	SCF1236A	31717
		48VAC	SCF1248A	31718
		110VAC	SCF12110A	31719
		127VAC	SCF12127A	31720
		220VAC	SCF12220A	31721
		380VAC	SCF12380A	31722
		12VDC	SCF1212D	31723
		24VDC	SCF1224D	31724
36VDC		SCF1236D	31725	
48VDC		SCF1248D	31726	
	110VDC	SCF12110D	31727	
	220VDC	SCF12220D	31728	
Ø150	12VAC	SCF1512A	31729	
	24VAC	SCF1524A	31730	
	36VAC	SCF1536A	31731	
	48VAC	SCF1548A	31732	
	110VAC	SCF15110A	31733	
	127VAC	SCF15127A	31734	
	220VAC	SCF15220A	31735	
	380VAC	SCF15380A	31736	
	12VDC	SCF1512D	31737	
	24VDC	SCF1524D	31738	
	36VDC	SCF1536D	31739	



Selection and ordering data

	Diameter Ø (mm)	Rated voltage	Type code	Order code
SCF	Ø150	48VDC	SCF1548D	31740
		110VDC	SCF15110D	31741
		220VDC	SCF15220D	31742
	Ø200	12VAC	SCF2012A	31743
		24VAC	SCF2024A	31744
		36VAC	SCF2036A	31745
		48VAC	SCF2048A	31746
		110VAC	SCF20110A	31747
		127VAC	SCF20127A	31748
		220VAC	SCF20220A	31749
		380VAC	SCF20380A	31750
		12VDC	SCF2012D	31751
		24VDC	SCF2024D	31752
		36VDC	SCF2036D	31753
		48VDC	SCF2048D	31754
		110VDC	SCF20110D	31755
		220VDC	SCF20220D	31756
Ø250	Ø250	12VAC	SCF2512A	31757
		24VAC	SCF2524A	31758
		36VAC	SCF2536A	31759
		48VAC	SCF2548A	31760
		110VAC	SCF25110A	31761
		127VAC	SCF25127A	31762
		220VAC	SCF25220A	31763
		380VAC	SCF25380A	31764
		12VDC	SCF2512D	31765
		24VDC	SCF2524D	31766
		36VDC	SCF2536D	31767
		48VDC	SCF2548D	31768
		110VDC	SCF25110D	31769
		220VDC	SCF25220D	31770
Ø300	Ø300	12VAC	SCF3012A	31771
		24VAC	SCF3024A	31772
		36VAC	SCF3036A	31773
		48VAC	SCF3048A	31774
		110VAC	SCF30110A	31775
		127VAC	SCF30127A	31776
		220VAC	SCF30220A	31777
		380VAC	SCF30380A	31778
		12VDC	SCF3012D	31779
		24VDC	SCF3024D	31780
		36VDC	SCF3036D	31781
		48VDC	SCF3048D	31782
		110VDC	SCF30110D	31783
		220VDC	SCF30220D	31784

Electric Bell & Buzzers Series FM & MS

Technical specifications

- Voltage arrange (V):
- AC: 12, 24, 110, 220, 230, 240
- DC: 12, 24

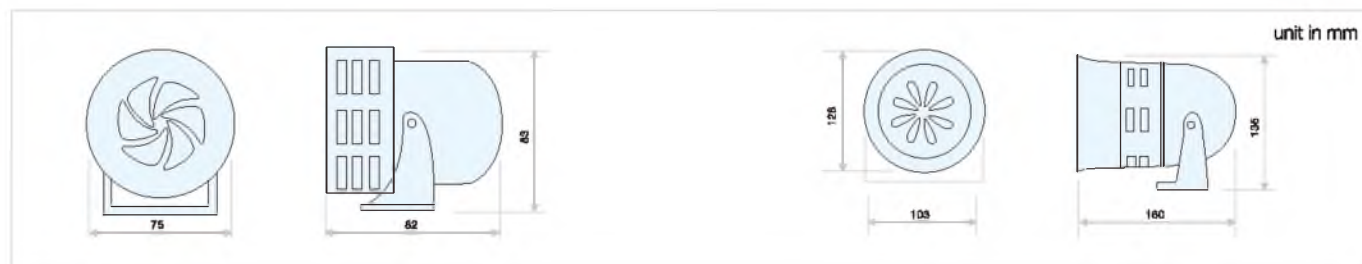


Selection and ordering data

Model	Material	Voltage	Rated voltage V	Type code	Order code
FM-1	Plastic	AC	12V	FM1 12A	14232
			24V	FM1 24A	14211
			110V	FM1 110A	14218
		DC	220V	FM1 220A	14225
			230V	FM1 230A	13677
			24V	FM1 24D	14239
FM-2	Plastic	AC	12V	FM2 12A	14233
			24V	FM2 24A	14212
			110V	FM2 110A	14219
		DC	220V	FM2 220A	14226
			230V	FM2 230A	13678
			24V	FM2 24D	14240
FM-3	Plastic	AC	12V	FM3 12A	14234
			24V	FM3 24A	14213
			110V	FM3 110A	14220
		DC	220V	FM3 220A	14227
			230V	FM3 230A	13679
			24V	FM3 24D	14241
MS190	Steel	AC	12V	MS190M 12A	14235
			24V	MS190M 24A	14214
			110V	MS190M 110A	14221
		DC	220V	MS190M 220A	14228
			230V	MS190M 230A	13680
			24V	MS190M 24D	14242
MS290	Plastic	AC	12V	MS290S 12A	14236
			24V	MS290S 24A	14215
			110V	MS290S 110A	14222
		DC	220V	MS290S 220A	14229
			230V	MS290S 230A	13681
			24V	MS290S 24D	14243
	Steel	AC	12V	MS290M 12A	14237
			24V	MS290M 24A	14216
			110V	MS290M 110A	14223
		DC	220V	MS290M 220A	14230
			230V	MS290M 230A	13682
			24V	MS290M 24D	14244
MS390	Steel	AC	12V	MS390M 12A	14238
			24V	MS390M 24A	14217
			110V	MS390M 110A	14224
		DC	220V	MS390M 220A	14231
			230V	MS390M 230A	13683
			24V	MS390M 24D	14245



Outline and installation dimensions





Cable Gland & Water-resistant Junction & Insulators

Series PG & MG & SM


Selection and ordering data

Cable gland

	Color	Diameter (mm)	Screw length (mm)	Type code	Order code
PG 	grey	3-6.5	8	PG7	17349
	grey	4-8	8	PG9	17350
	grey	5-10	8	PG11	17351
	grey	6-12	9	PG13.5	17352
	grey	10-14	10	PG16	17353
	grey	13-18	11	PG21	17354
	grey	18-25	11	PG29	17355
	grey	22-32	13	PG36	17356
	grey	30-33	13	PG42	17357
	grey	34-44	13	PG48	17358

	Cable range (mm)	Thread O.D. (mm)	Thread length (mm)	Spanner size (mm)	Black		Grey	
					Type code	Order code	Type code	Order code
MG 	7.6-4.6	12	12	18/19	MG12B	31785	MG12G	31793
	10-6	16	16.5	22/22	MG16B	31786	MG16G	31794
	14-9	20	20.5	27/27	MG20B	31787	MG20G	31795
	18-13	25	25.5	33/33	MG25B	31788	MG25G	31796
	25-18	32	33	41/41	MG32B	31789	MG32G	31797
	30-24	40	41	50/50	MG40B	31790	MG40G	31798
	41-30	50	51	62/62	MG50B	31791	MG50G	31799
	51-40	63	64	75/75	MG63B	31792	MG63G	31800

Insulator

	Screw	Tensile strength (lbs)	Torque strength (ft lbs)	Voltage withstand (kv)	Type code	Order code
SM 	with screw	500	6	6	SM25S	31801
		550	8	8	SM30S	31802
		600	10	10	SM35S	31803
		650	10	12	SM40S	31804
		1000	20	15	SM51S	31805
		1500	40	25	SM76S	31806
		without screw	500	6	6	SM25
	550		8	8	SM30	31808
	600		10	10	SM35	31809
	650		10	12	SM40	31810
	1000		20	15	SM51	31811
	1500		40	25	SM76	31812

Terminal Blocks

Series JXB & 3SUK


Technical specifications

- Standards: IEC60947 & IEC60079
- Material: PA66 and pure copper volume is more than 99%




Phase terminal


JXB series

	Current	Voltage	Rated working frequency	Cross-sectional	Type code	Order code
	A	V	durable voltage	area		
	24	800	2.5	2.5	JXB-2.5	24781
	32	800	2.5	4	JXB-4	24782
	41	800	2.5	6	JXB-6	24783
	57	800	2.5	10	JXB-10	24784
	76	800	2.5	16	JXB-16	24785
	150	1000	2.5	35	JXB-35	13671
	150	1000	2.5	50	JXB-50	13672
	192	1000	2.5	70	JXB-70	13673
	232	1000	2.5	95	JXB-95	13674

3SUK series

	Current	Voltage	Connect capacity		Dimensions	Type code	Order code
	A	V	Solid wire	flexible wire	mm		
	32	690	0.2-4	0.2-2.5	6.2x42.5x42	3SUK2.5B	34923
	32	800	0.2-4	0.2-2.5	6.2x42.5x42	3SUK3N	34924
	41	800	0.2-6	0.2-4	6.2x42.5x47	3SUK5N	34925
	57	800	0.2-10	0.2-2.6	6.2x42.5x47	3SUK6N	34926
	76	800	0.5-16	0.5-10	10.2x42.5x47	3SUK10N	34927
	101	800	2.5-25	4-16	12.2x42.5x54	3SUK16N	34928
	150	1000	0.75-50	0.75-35	15.2x50x62	3SUK35N	34929
	150	1000	16-50	25-50	20x70.5x83.5	3SUKH50	34930
	232	1000	25-95	35-95	25x83x97.5	3SUKH95	34931
	309	1000	35-150	50-150	31x100x118.5	3SUKH150	34932

Earth terminal blocks

	Current	Connect capacity		Dimensions	Type code	Order code
	A	Solid wire	flexible wire	mm		
	10	0.14-0.75	0.14-0.75	64.2x42.5x42	USLKG1.5	14274
	32	0.2-1.5	0.2-1.5	6.2x42.5x42	USLKG2.5	38868
	32	0.2-1.5	0.2-1.5	5.2x42.5x47	USLKG3	38869
	41	0.2-1.5	0.2-1.5	6.2x42.5x47	USLKG5	38870
	57	0.2-2.5	0.2-2.5	8.2x42.5x47	USLKG6N	38871
	76	0.5-4	0.5-4	10.2x42.5x47	USLKG10N	38872
	101	1.5-6	1.5-4	12.2x42.5x54	USLKG16N	38873
	150	0.75-16	0.75-10	15.2x50x62	USLKG35N	38874
	150	10-16	10-16	20x70.5x81.5	USLKG50	38875
	232	25-35	25-35	25x83x99	USLKG95	14275

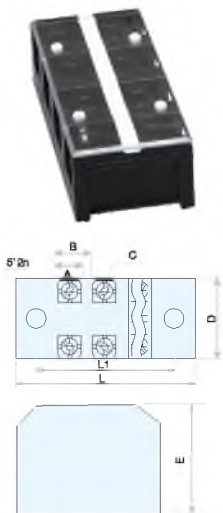
Accessories for JXB terminals

Description	Type code	Order code
Earthing terminal	EK2.5	13695
	EK4	13696
	EK6	13697
	EK10	13698
	EK16	13699
Partition board	AP2.5	24786
	AP4/6/10	24787
	AP16	24788
	AP35	13675
Fixed parts	AP70	13676
Blank mark	EW35	24789
	LZB6B	24790
	LZB6H	24791
	LZB6V	24792

Terminal connecto

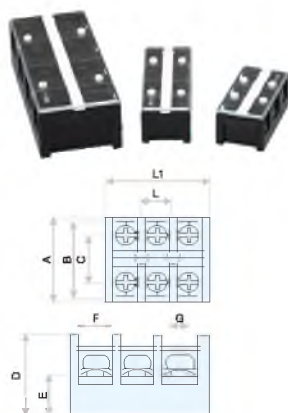
Series TB, TC

Rated current A	Number of poles			Dimensions						
		Type code	Order code	L	L1	A	B	C	D	E
15	3	TB1503	14276	46	36.5	7.5	9	M3	22	17
	4	TB1504	14277	55	45.5	7.5	9	M3	22	17
	6	TB1506	14278	73	63.5	7.5	9	M3	22	17
	12	TB1512	14279	127	118	7.5	9	M3	22	17
25	3	TB2503	14280	50	40	10.5	12	M4	30	20
	4	TB2504	14281	62.5	57	10.5	12	M4	30	20
	6	TB2506	14282	91	81.5	10.5	12	M4	30	20
35	12	TB2512	14283	163	153	10.5	12	M4	30	20
	3	TB3503	14284	50	40	10.5	12	M4	30	20
	4	TB3504	14285	62.5	57	10.5	12	M4	30	20
45	6	TB3506	14286	91	81.5	10.5	12	M4	30	20
	12	TB3512	14287	163	153	10.5	12	M4	30	20
	3	TB4503	14288	70	60.5	15	17	M5	38	23.5
60	4	TB4504	14289	86	75.5	15	17	M5	38	23.5
	6	TB4506	14290	121	110	15	17	M5	38	23.5
	3	TB6003	14291	70.5	65.5	15.5	18	M6	38	31
100	4	TB6004	14292	93.5	82.5	15.5	18	M6	38	31
	6	TB6006	14293	129	118	15.5	18	M6	38	31
	3	TB1003	14294	86.5	75.5	22	20	M6	43.5	35
100	4	TB1004	14295	108	96	22	20	M6	43.5	35
	6	TB1006	14296	153	140	22	20	M6	43.5	35



TC series



Rated current A	Number of poles			Dimensions								
		Type code	Order code	L	L1	A	B	C	D	E	F	G
60	3	TC603	14297	28.5	86.5	38	42.7	25.5	31	15	17	M6
	4	TC604	14298	28.5	115	38	42.7	25.5	31	15	17	M6
100	3	TC1003	14299	34.5	114	46.5	55.2	28	36.3	17.3	22.5	M6
	4	TC1004	14300	34.5	138	46.5	55.2	28	36.3	17.3	22.5	M6
150	3	TC1503	14301	38.5	115	57.2	67	30.5	40	19.8	25.3	M8
	4	TC1504	14302	38.5	153	57.2	67	30.5	40	19.8	25.3	M8
200	3	TC2003	14303	44.5	133	63	72.1	34	44.4	23	28.3	M8
	4	TC2004	14304	44.5	177	63	72.1	34	44.4	23	28.3	M8
300	3	TC3003	14305	55	164	78	89.4	47.5	50.6	27	30	M10
	4	TC3004	14306	55	218	78	89.4	47.5	50.6	27	30	M10
400	3	TC4003	14307	55	164	78	89.4	47.5	50.6	27	36	M10
	4	TC4004	14308	55	218	78	89.4	47.5	50.6	27	36	M10

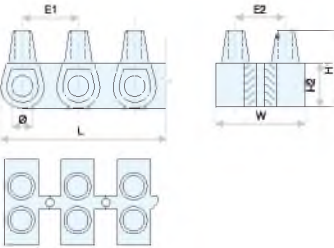


Terminal Blocks

Series HFW

Terminal block

	Color	Rated current A	Connect capacity mm ²	Screw size	U type		H type		H type	
					Type code	Order code	Type code	Order code	Type code	Order code
	Black	3	4	M2.5x4	U003-01EB	29597	U003-01PB	29598	U003-01AB	29599
		6	6	M3x4.5	U003-02EB	29600	U003-02PB	29601	U003-02AB	29602
		10	10	M3x6	U003-03EB	29603	U003-03PB	29604	U003-03AB	29605
		15	12	M4x6.5	U003-04EB	29606	U003-04PB	29607	U003-04AB	29608
		20	14	M4x6.5	U003-05EB	29609	U003-05PB	29610	U003-05AB	29611
		30	16	M4x7	U003-06EB	29612	U003-06PB	29613	U003-06AB	29614
		60	25	M5x9	U003-07EB	29615	U003-07PB	29616	U003-07AB	29617
		80	35	M5x12	U003-08EB	29618	U003-08PB	29619	U003-08AB	29620
		100	40	M5x12	U003-09EB	29621	U003-09PB	29622	U003-09AB	29623
	Transparent	3	4	M2.5x4	U003-01ET	32585	U003-01PT	32586	U003-01AT	32587
		6	6	M3x4.5	U003-02ET	32588	U003-02PT	32589	U003-02AT	32590
		10	10	M3x6	U003-03ET	32591	U003-03PT	32592	U003-03AT	32593
		15	12	M4x6.5	U003-04ET	32594	U003-04PT	32595	U003-04AT	32596
		20	14	M4x6.5	U003-05ET	32597	U003-05PT	32598	U003-05AT	32599
		30	16	M4x7	U003-06ET	32600	U003-06PT	32601	U003-06AT	32602
		60	25	M5x9	U003-07ET	32607	U003-07PT	32608	U003-07AT	32609
		80	35	M5x12	U003-08ET	32610	U003-08PT	32611	U003-08AT	32612
		100	40	M5x12	U003-09ET	32613	U003-09PT	32614	U003-09AT	32615
	Black	3	4	M2.5x4	H001-01EB	14309	H001-01PB	14310	H001-01AB	14311
		6	6	M3x4.5	H001-02EB	14312	H001-02PB	14313	H001-02AB	14314
		10	10	M3x6	H001-03EB	14315	H001-03PB	14316	H001-03AB	14317
		15	12	M4x6.5	H001-04EB	14318	H001-04PB	14319	H001-04AB	14320
		20	14	M4x6.5	H001-05EB	14321	H001-05PB	14322	H001-05AB	14323
		30	16	M4x7	H001-06EB	14324	H001-06PB	14325	H001-06AB	14326
		60	25	M5x9	H001-07EB	14327	H001-07PB	14328	H001-07AB	14329
		80	35	M5x12	H001-08EB	14330	H001-08PB	14331	H001-08AB	14332
		100	40	M5x12	H001-09EB	14333	H001-09PB	14334	H001-09AB	14335
	Transparent	3	4	M2.5x4	H001-01ET	14651	H001-01PT	14652	H001-01AT	14653
		6	6	M3x4.5	H001-02ET	14654	H001-02PT	14655	H001-02AT	14656
		10	10	M3x6	H001-03ET	14657	H001-03PT	14658	H001-03AT	14659
		15	12	M4x6.5	H001-04ET	14660	H001-04PT	14661	H001-04AT	14662
		20	14	M4x6.5	H001-05ET	14663	H001-05PT	14664	H001-05AT	14665
		30	16	M4x7	H001-06ET	14666	H001-06PT	14667	H001-06AT	14668
		60	25	M5x9	H001-07ET	14669	H001-07PT	14670	H001-07AT	14671
		80	35	M5x12	H001-08ET	32579	H001-08PT	32580	H001-08AT	32581
		100	40	M5x12	H001-09ET	32582	H001-09PT	32583	H001-09AT	32584

	Type	L mm	W mm	H1 mm	H2 mm	Ø mm	E1 mm	E2 mm
	U003-01	91.4	15.6	10.8	6.4	3	7.5	5.8
	U003-02	112.5	16	12.8	7.5	3.2	9.5	6.2
	U003-03	128	20.6	15	8.6	4.2	10.8	7.3
	U003-04	137.3	22.5	16.6	9	4.5	11.5	8.1
	U003-05	137.5	22	17.7	9.9	4.7	12	8.4
	U003-06	164.5	25.3	19	10.7	5.6	19	9.3
	U003-07	185.5	29.2	24	13.3	6.6	15.8	13
	U003-08	204.5	32.6	27.2	14	7	17.3	14.8
	U003-09	250	45.6	30.6	18	8.8	21.5	21.6
H001-01	92.3	16.8	12.3	7.7	3	7.8	5.7	
H001-02	115.4	18.8	15.4	8.7	3.2	9.6	6.3	
H001-03	129.3	20.7	16	9.5	4.2	11	7.6	
H001-04	137.8	22.5	18.6	10.3	4.5	11.7	8.6	
H001-05	138	22.5	19	10.7	4.7	12	8.6	
H001-06	164	22.5	20	11.7	5.6	13.7	9.3	
H001-07	186	29.2	25.3	14.8	6.6	15.7	10.8	
H001-08	226.8	36.1	29	18	7.8	19.2	13.2	
H001-09	254.6	45	34.7	22.3	9	20.5	19.2	

Function

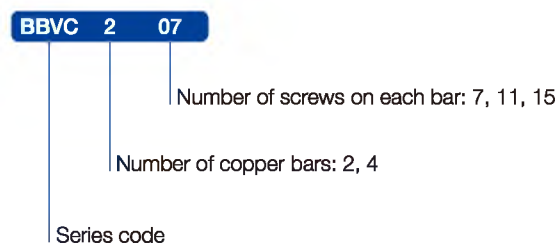
- Applied to DIN rail and Power Distribution Cabinet
- Facilitating the connection of complex wires
- Protecting the terminal blocks inside
- Insulation protection for each phase

Features



- Standard: IEC60947-7-1
- Voltage: 500V
- Color: Blue/Grey
- Material:
 - PA, Polyamide 66, 94V-2 grade. inflaming ratarding, good resist dissolve, good bounce impact force, Working
 - Temperature: -30°C~110°C;
 - PC Polycarbonate, good glossniess, inflaming retarding, bouce impact force and good thermal stability, Working
- Temperature: -60°C~135°C;
- Degree of Protection: IP20



Instruction of type code




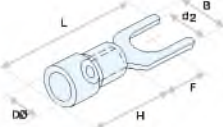
Selection and ordering data

type	NO. of Phase		Cross Sectional area for copper stock (mm ²)	Outline Dimensions		Type code	Order code
				(mm)			
	2	7	6.5×12	65×45×51		BBVC207	36537
		11	6.5×12	100×45×51		BBVC211	36538
		15	6.5×12	132×45×51		BBVC215	36539
	4	7	6.5×12	65×88×51		BBVC407	36540
		11	6.5×12	100×88×51		BBVC411	36541
		15	6.5×12	132×88×51		BBVC415	36542

Preinsulated Terminals


Selection and ordering data

Fork/spade terminals

	Conductor size (AWG) mm ²	I _{max} A	Color	American bolt number			Dimensions					
					Type code	Order code	d2	B	L	F	H	DØ
							mm					
	0.5-1.5 (22-16)	19	Red	#4	SV1.25-3	16747	3.2	5.7	21.6	6.5	10.0	4.3
				#6	SV1.25-3.5S	16748	3.7	5.7	21.6	6.5	10.0	4.3
				#6	SV1.25-3.5L	16749	3.7	6.4	21.8	6.5	10.0	4.3
				#8	SV1.25-4S	16750	4.3	8.0	21.2	6.5	10.0	4.3
				#8	SV1.25-4M	16751	4.3	7.2	21.2	6.5	10.0	4.3
				#8	SV1.25-4L	16752	4.3	8.1	21.2	6.5	10.0	4.3
				#10	SV1.25-5S	16753	5.3	8.1	21.2	6.5	10.0	4.3
				#10	SV1.25-5L	16754	5.3	9.5	21.2	6.5	10.0	4.3
				1/4	SV1.25-6S	16755	6.4	9.5	21.2	6.5	10.0	4.3
				1/4	SV1.25-6L	16756	6.4	12.0	27.2	11.0	10.0	4.3
	1.5-2.5 (16-14)	27	Blue	#4	SV2-3	16757	3.2	5.7	21.6	6.5	10.6	4.9
				#6	SV2-3.5S	16758	3.7	5.7	21.2	6.5	10.6	4.9
				#6	SV2-3.5L	16759	3.7	6.0	21.2	6.5	10.6	4.9
				#8	SV2-4S	16760	4.3	6.4	21.2	6.5	10.6	4.9
				#8	SV2-4M	16761	4.3	7.2	21.2	6.5	10.6	4.9
				#8	SV2-4L	16762	4.3	8.1	21.2	6.5	10.6	4.9
				#10	SV2-5S	16763	5.3	8.1	21.2	6.5	10.6	4.9
				#10	SV2-5L	16764	5.3	9.5	21.2	6.5	10.6	4.9
				1/4	SV2-6S	16765	6.4	9.5	21.2	6.5	10.6	4.9
				1/4	SV2-6L	16766	6.4	12.0	27.8	11.0	10.6	4.9
2.5-4 (14-12)	37	Black	#4	SV3.5-3	16767	3.2	5.7	26.8	7.0	13.0	6.2	
			#8	SV3.5-4	16768	4.3	8.0	24.8	7.0	13.0	6.2	
			#10	SV3.5-5	16769	5.3	8.0	24.8	7.0	13.0	6.2	
			1/4	SV3.5-6	16770	6.4	12.1	28.3	12.1	13.0	6.2	
4-6 (12-10)	48	Yellow	#6	SV5.5-3.5	16771	3.7	8.4	26.0	7.5	13.0	6.7	
			#8	SV5.5-4S	16772	4.3	8.4	26.0	7.5	13.0	6.7	
			#8	SV5.5-4L	16773	4.3	9.0	26.0	7.5	13.0	6.7	
			#10	SV5.5-5	16774	5.3	9.0	26.0	7.5	13.0	6.7	
			1/4	SV5.5-6S	16775	6.4	9.0	26.0	7.5	13.0	6.7	
			1/4	SV5.5-6L	16776	6.4	12.0	32.0	12.0	13.0	6.7	
			5/16	SV5.5-8	16777	8.4	14.0	31.0	11.5	13.0	6.7	

Selection and ordering data


Ring terminals

	Conductor size (AWG) mm ²	I _{max} A	Color	American bolt number			Dimensions								
					Type code	Order code	d2	B	L	F	H	DØ			
							mm								
	0.5-1.5 (22-16)	19	Red	#4	RV1.25-3	16673	3.2	5.7	18.7	5.0	10.6	4.3			
				#6	RV1.25-3.5S	16674	3.7	5.7	18.7	5.0	10.6	4.3			
				#6	RV1.25-3.5M	16675	3.7	6.6	19.4	6.3	10.6	4.3			
				#6	RV1.25-3.5L	16676	3.7	8.0	21.2	7.0	10.6	4.3			
				#8	RV1.25-4S	16677	4.3	6.6	19.4	6.3	10.6	4.3			
				#8	RV1.25-4L	16678	4.3	8.0	21.2	7.0	10.6	4.3			
				#10	RV1.25-5S	16679	5.3	8.0	21.2	7.0	10.6	4.3			
				#10	RV1.25-5L	16680	5.3	9.8	23.0	8.5	10.6	4.3			
				1/4	RV1.25-6S	16681	6.4	9.8	23.0	8.5	10.6	4.3			
				1/4	RV1.25-6L	38547	6.4	11.6	26.8	11.1	10.6	4.3			
				5/16	RV1.25-8	16682	8.4	11.6	27.4	11.1	10.6	4.3			
				3/8	RV1.25-10	16683	10.5	13.6	27.4	13.9	10.6	4.3			
				1/2	RV1.25-12	16684	13.0	19.2	37.3	16.5	10.6	4.3			
				0.5-2.5 (16-14)	27	Blue	#4	RV2-3	16685	3.2	6.6	17.5	4.3	10.6	4.9
							#6	RV2-3.5S	16686	3.7	6.6	17.5	4.3	10.6	4.9
							#8	RV2-3.5M	16687	3.7	6.6	20.0	6.2	10.6	4.9
#6	RV2-3.5L	16688	3.7				8.5	22.8	7.8	10.6	4.9				
#8	RV2-4S	16689	4.3				6.6	20.0	6.2	10.6	4.9				
#8	RV2-4L	16690	4.3				8.5	22.8	7.8	10.6	4.9				
#10	RV2-5S	16691	5.3				8.5	22.0	7.8	10.6	4.9				
#10	RV2-5L	16692	5.3				9.5	22.6	7.3	10.6	4.9				
1/4	RV2-6	16693	6.4				11.9	27.2	11.0	10.6	4.9				
5/16	RV2-8	16694	8.4				11.9	27.2	11.0	10.6	4.9				
3/8	RV2-10	16695	10.5				13.6	31.1	13.9	10.6	4.9				
1/2	RV2-12	16696	13.0				19.2	36.8	16.5	10.6	4.9				
2.5-4 (14-12)	37	Black	#8	RV3.5-4	16697	4.3	8.0	24.5	7.7	13.5	6.2				
			#10	RV3.5-5S	16698	5.3	8.0	24.5	7.7	13.5	6.2				
			#10	RV3.5-5L	16699	5.3	12.0	29.0	7.7	13.5	6.2				
			1/4	RV3.5-6	16700	6.4	12.0	29.0	7.7	13.5	6.2				
4-6 (12-10)	48	Yellow	#6	RV5.5-3.5	16701	3.7	7.2	22.0	5.3	13.5	6.7				
			#8	RV5.5-4S	16702	4.3	7.2	22.0	5.3	13.5	6.7				
			#8	RV5.5-4L	16703	4.3	9.5	26.2	8.3	13.5	6.7				
			#10	RV5.5-5	16704	5.3	9.5	26.2	8.3	13.5	6.7				
			1/4	RV5.5-6S	16705	6.4	12.0	32.1	10.7	13.5	6.7				
			1/4	RV5.5-6L	27290	6.4	12.0	32.8	13.0	13.5	6.7				
			5/16	RV5.5-8	16706	8.4	15.0	34.0	13.7	13.5	6.7				
			3/8	RV5.5-10	16707	10.5	15.0	34.0	13.7	13.5	6.7				
1/2	RV5.5-12	16708	13.0	19.2	38.8	16.0	13.5	6.7							

Preinsulated Terminals

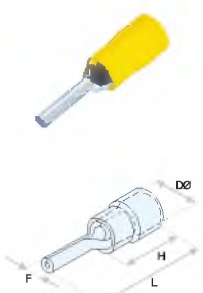
Selection and ordering data

Insulated end terminals



Conductor size (AWG) mm ²	Color Germany	Germany		Color France	France		Dimensions				
		Type code	Order code		Type code	Order code	B	L	F	H	DØ
0.5 (22)	Orange	E0506GC	16900	White	E0506FW	16386	6.0	12.0	3.4	1.3	1.0
		E0508GC	16901		E0508FW	16387	8.0	14.0	3.4	1.3	1.0
		E0510GC	16902		E0510FW	16388	10.0	16.0	3.4	1.3	1.0
		E0512GC	16903		E0512FW	16389	12.0	18.0	3.4	1.3	1.0
0.75 (20)	White	E7506GW	16928	Blue	E7506FB	16414	6.0	12.4	3.4	1.5	1.2
		E7508GW	16929		E7508FB	16415	8.0	14.4	3.4	1.5	1.2
		E7510GW	16931		E7510FB	16417	10.0	16.4	3.4	1.5	1.2
		E7512GW	16932		E7512FB	16418	12.0	18.4	3.4	1.5	1.2
1.0 (18)	Yellow	E1006GY	16904	Red	E1006FR	16390	6.0	12.5	3.6	1.7	1.4
		E1008GY	16905		E1008FR	16391	8.0	14.5	3.6	1.7	1.4
		E1010GY	16907		E1010FR	16393	10.0	16.5	3.6	1.7	1.4
		E1012GY	16908		E1012FR	16394	12.0	18.5	3.6	1.7	1.4
1.5 (16)	Red	E1508GR	16911	Black	E1508FK	16397	8.0	15.4	4.0	2.0	1.7
		E1510GR	16913		E1510FK	16399	10.0	17.4	4.0	2.0	1.7
		E1512GR	16914		E1512FK	16400	12.0	19.4	4.0	2.0	1.7
		E1518GR	16916		E1518FK	16402	18.0	25.4	4.0	2.0	1.7
2.5 (14)	Blue	E2508GB	16917	Grey	E2508FH	16403	8.0	15.0	4.6	2.6	2.3
		E2510GB	16918		E2510FH	16404	10.0	17.0	4.6	2.6	2.3
		E2512GB	16919		E2512FH	16405	12.0	19.0	4.6	2.6	2.3
		E2518GB	16920		E2518FH	16406	18.0	25.0	4.6	2.6	2.3
4.0 (12)	Grey	E4009GH	16922	Orange	E4009FC	16408	9.0	17.0	5.5	3.2	2.8
		E4012GH	16924		E4012FC	16410	12.0	21.0	5.5	3.2	2.8
		E4018GH	16925		E4018FC	16411	18.0	27.0	5.5	3.2	2.8
6.0 (10)	Black	E6010GK	25736	Green	E6010FG	25737	10.0	19.0	6.7	3.9	3.5
		E6012GK	16926		E6012FG	16412	12.0	21.0	6.7	3.9	3.5
		E6018GK	16927		E6018FG	16413	18.0	26.0	6.7	3.9	3.5
10.0 (7)	White	E10-12GW	16934	Brown	E10-12FZ	16420	12.0	20.8	8.3	4.9	4.5
		E10-18GW	16935		E10-18FZ	16421	18.0	26.8	8.3	4.9	4.5
16.0 (5)	Green	E16-12GG	16936	White	E16-12FW	16422	12.0	22.2	9.4	6.2	5.8
		E16-18GG	16937		E16-18FW	16423	18.0	27.6	9.4	6.2	5.8
25.0 (4)	Black	E25-16GK	16940	Brown	E25-16FZ	16426	16.0	27.6	11.7	7.9	7.5
		E25-22GK	16942		E25-22FZ	16428	22.0	33.5	11.7	7.9	7.5
35.0 (2)	Brown	E35-16GZ	16943	Grey	E35-16FH	16429	16.0	30.0	13.0	8.7	8.3
		E35-25GZ	16946		E35-25FH	16432	25.0	39.0	13.0	8.7	8.3
50.0 (1)	Olive	E50-20GL	25739	Blue	E50-20FB	16434	20.0	35.5	15.8	10.9	10.3
		E50-25GL	25740		E50-25FB	16435	25.0	40.5	15.8	10.9	10.3

Insulated end terminals



Conductor size (AWG) mm ²	I _{max} A	Color Germany			Dimensions			
			Type code	Order code	F	L	H	DØ
0.5-1.5 (22-16)	19	Red	PTV1.25-9	16594	1.9	19.0	10.6	4.3
			PTV1.25-10	16595	1.9	20.6	10.6	4.3
			PTV1.25-12	16596	1.9	22.6	10.6	4.3
			PTV1.25-13	16597	1.9	23.6	10.6	4.3
			PTV1.25-18	16598	1.9	28.6	10.6	4.3
1.5-2.5 (16-14)	27	Blue	PTV2-9	16599	1.9	19.0	10.6	4.9
			PTV2-10	16600	1.9	20.6	10.6	4.9
			PTV2-12	16601	1.9	22.0	10.6	4.9
2.5-4 (14-12)	36	Blue	PTV2-13	16602	1.9	23.0	10.6	4.9
			PTV2-18	16603	1.9	28.6	10.6	4.9
4-6 (12-10)	48	Black	PTV3.5-10	25741	2.8	20.0	13.0	6.2
			PTV3.5-12	25742	2.8	25.5	13.0	6.2
4-6 (12-10)	48	Yellow	PTV5.5-13	16604	2.8	26.0	13.5	6.7

Selection and ordering data

Female disconnect terminals

Conductor size (AWG) mm ²	I _{max} A	Color	Tab size			Dimensions				
				Type code	Order code	B	dØ	DØ	L	H
0.5-1.5 (22-16)	10	Red	0.5 x 2.8	FDD1.25-110(5)	16542	3.8	3.8	1.7	18.7	10.6
			0.8 x 2.8	FDD1.25-110(8)	16543	3.8	3.8	1.7	18.7	10.6
			0.5 x 4.75	FDD1.25-187(5)	16544	5.6	3.8	1.7	18.7	10.6
			0.8 x 4.75	FDD1.25-187(8)	16545	5.6	3.8	1.7	18.7	10.6
			0.5 x 5.2	FDD1.25-205	16546	6.5	3.8	1.7	20.0	10.6
			0.8 x 6.35	FDD1.25-250	16547	7.4	3.8	1.7	21.0	10.6
1.5-2.5(16-14)	15	Blue	0.5 x 2.8	FDD2-110(5)	16548	3.8	4.3	2.3	18.7	10.6
			0.8 x 2.8	FDD2-110(8)	16549	3.8	4.3	2.3	18.7	10.6
			0.5 x 4.75	FDD2-187(5)	16550	5.6	4.3	2.3	18.7	10.6
			0.8 x 4.75	FDD2-187(8)	16551	5.6	4.3	2.3	18.7	10.6
			0.5 x 5.2	FDD2-205	16552	6.5	4.3	2.3	19.7	10.6
			0.8 x 6.35	FDD2-250	16553	7.4	4.3	2.3	21.4	10.6
4-6 (12-10)	24	Yellow	0.8 x 8.0	FDD2-312	16554	8.9	4.3	2.3	24.1	10.6
		Black	0.8 x 6.35	FDD5.5-250	16555	7.4	5.7	3.4	24.5	13.0
			1.2 x 9.4	FDD5.5-375	16556	10.9	5.7	3.4	29.3	13.5

Female disconnect terminals

Conductor size (AWG) mm ²	I _{max} A	Color	Tab size			Dimensions				
				Type code	Order code	B	dØ	DØ	L	H
0.5-1.5 (22-16)	10	Red	0.5 x 2.8	MDD1.25-110(5)	16564	2.8	4.3	1.7	17.7	10.6
			0.8 x 2.8	MDD1.25-110(8)	16565	2.8	4.3	1.7	17.7	10.6
			0.5 x 4.75	MDD1.25-187(5)	16566	4.8	4.3	1.7	20.0	10.6
			0.8 x 4.75	MDD1.25-187(8)	16567	4.8	4.3	1.7	20.0	10.6
			0.8 x 6.35	MDD1.25-250	16568	6.4	4.3	1.7	21.6	10.6
1.5-2.5 (16-14)	15	Blue	0.5 x 4.75	MDD2-187(5)	16569	4.8	4.3	2.3	20.0	10.6
			0.8 x 4.75	MDD2-187(8)	16570	4.8	4.3	2.3	20.0	10.6
			0.8 x 6.35	MDD2-250	16571	6.4	4.3	2.3	21.6	10.6
4-6 (12-10)	24	Yellow	0.8 x 6.35	MDD5.5-250	16572	6.4	5.7	3.4	25.5	13.5

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
10469	3SP2-1013	6-26	14191	3SP6-1142	6-29	14283	TB2512	6-37
13671	JXB-35	6-36	14192	3SP6-1242	6-29	14284	TB3503	6-37
13672	JXB-50	6-36	14193	3SP6-1152	6-29	14285	TB3504	6-37
13673	JXB-70	6-36	14194	3SP6-1252	6-29	14286	TB3506	6-37
13674	JXB-95	6-36	14195	3SP6-3132-4	6-30	14287	TB3512	6-37
13675	AP35	6-36	14196	3SP6-3232-4	6-30	14288	TB4503	6-37
13676	AP70	6-36	14197	3SP6-3132	6-30	14289	TB4504	6-37
13677	FM1 230A	6-34	14199	3SP6-3142	6-30	14290	TB4506	6-37
13678	FM2 230A	6-34	14200	3SP6-3242	6-30	14291	TB6003	6-37
13679	FM3 230A	6-34	14201	3SP6-3152	6-30	14292	TB6004	6-37
13680	MS190M 230A	6-34	14202	3SP6-3252	6-30	14293	TB6006	6-37
13681	MS290S 230A	6-34	14211	FM1 24A	6-34	14294	TB1003	6-37
13682	MS290M 230A	6-34	14212	FM2 24A	6-34	14295	TB1004	6-37
13683	MS390M 230A	6-34	14213	FM3 24A	6-34	14296	TB1006	6-37
13695	EK2.5	6-36	14214	MS190M 24A	6-34	14297	TC603	6-37
13696	EK4	6-36	14215	MS290S 24A	6-34	14298	TC604	6-37
13697	EK6	6-36	14216	MS290M 24A	6-34	14299	TC1003	6-37
13698	EK10	6-36	14217	MS390M 24A	6-34	14300	TC1004	6-37
13699	EK16	6-36	14218	FM1 110A	6-34	14301	TC1503	6-37
14139	3SP6-0131-4	6-27	14219	FM2 110A	6-34	14302	TC1504	6-37
14140	3SP6-0231-4	6-27	14220	FM3 110A	6-34	14303	TC2003	6-37
14141	3SP6-0131	6-27	14221	MS190M 110A	6-34	14304	TC2004	6-37
14142	3SP6-0231	6-27	14222	MS290S 110A	6-34	14305	TC3003	6-37
14143	3SP6-0141	6-27	14223	MS290M 110A	6-34	14306	TC3004	6-37
14144	3SP6-0241	6-27	14224	MS390M 110A	6-34	14307	TC4003	6-37
14145	3SP6-0151	6-27	14225	FM1 220A	6-34	14308	TC4004	6-37
14146	3SP6-0251	6-27	14226	FM2 220A	6-34	14309	H001-01EB	6-38
14147	3SP6-2131-4	6-27	14227	FM3 220A	6-34	14310	H001-01PB	6-38
14148	3SP6-2231-4	6-27	14228	MS190M 220A	6-34	14311	H001-01AB	6-38
14149	3SP6-2131	6-27	14229	MS290S 220A	6-34	14312	H001-02EB	6-38
14150	3SP6-2231	6-27	14230	MS290M 220A	6-34	14313	H001-02PB	6-38
14151	3SP6-2141	6-27	14231	MS390M 220A	6-34	14314	H001-02AB	6-38
14152	3SP6-2241	6-27	14232	FM1 12A	6-34	14315	H001-03EB	6-38
14153	3SP6-2151	6-27	14233	FM2 12A	6-34	14316	H001-03PB	6-38
14154	3SP6-2251	6-27	14234	FM3 12A	6-34	14317	H001-03AB	6-38
14155	3SP6-1131-4	6-27	14235	MS190M 12A	6-34	14318	H001-04EB	6-38
14156	3SP6-1231-4	6-27	14236	MS290S 12A	6-34	14319	H001-04PB	6-38
14157	3SP6-1131	6-27	14237	MS290M 12A	6-34	14320	H001-04AB	6-38
14158	3SP6-1231	6-27	14238	MS390M 12A	6-34	14321	H001-05EB	6-38
14159	3SP6-1141	6-27	14239	FM1 24D	6-34	14322	H001-05PB	6-38
14160	3SP6-1241	6-27	14240	FM2 24D	6-34	14323	H001-05AB	6-38
14161	3SP6-1151	6-27	14241	FM3 24D	6-34	14324	H001-06EB	6-38
14162	3SP6-1251	6-27	14242	MS190M 24D	6-34	14325	H001-06PB	6-38
14163	3SP6-3131-4	6-28	14243	MS290S 24D	6-34	14326	H001-06AB	6-38
14164	3SP6-3231-4	6-28	14244	MS290M 24D	6-34	14327	H001-07EB	6-38
14165	3SP6-3131	6-28	14245	MS390M 24D	6-34	14328	H001-07PB	6-38
14166	3SP6-3231	6-28	14253	3SP1-013-4	6-23	14329	H001-07AB	6-38
14167	3SP6-3141	6-28	14254	3SP1-023-4	6-23	14330	H001-08EB	6-38
14168	3SP6-3241	6-28	14255	3SP1-113-4	6-24	14331	H001-08PB	6-38
14169	3SP6-3151	6-28	14256	3SP1-123-4	6-24	14332	H001-08AB	6-38
14170	3SP6-3251	6-28	14257	3SP1-313-4	6-24	14333	H001-09EB	6-38
14171	3SP6-0132-4	6-29	14258	3SP1-323-4	6-24	14334	H001-09PB	6-38
14172	3SP6-0232-4	6-29	14259	3SP1-213-4	6-23	14335	H001-09AB	6-38
14173	3SP6-0132	6-29	14260	3SP1-223-4	6-23	14651	H001-01ET	6-38
14174	3SP6-0232	6-29	14261	3SP2-0132-4	6-25	14652	H001-01PT	6-38
14175	3SP6-0142	6-29	14262	3SP2-0232-4	6-25	14653	H001-01AT	6-38
14176	3SP6-0242	6-29	14263	3SP2-1132-4	6-26	14654	H001-02ET	6-38
14177	3SP6-0152	6-29	14264	3SP2-1232-4	6-26	14655	H001-02PT	6-38
14178	3SP6-0252	6-29	14265	3SP2-3132-4	6-26	14656	H001-02AT	6-38
14179	3SP6-2132-4	6-29	14266	3SP2-3232-4	6-26	14657	H001-03ET	6-38
14180	3SP6-2232-4	6-29	14267	3SP2-2132-4	6-25	14658	H001-03PT	6-38
14181	3SP6-2132	6-29	14268	3SP2-2232-4	6-25	14659	H001-03AT	6-38
14182	3SP6-2232	6-29	14274	USLKG1.5	6-36	14660	H001-04ET	6-38
14183	3SP6-2142	6-29	14275	USLKG95	6-36	14661	H001-04PT	6-38
14184	3SP6-2242	6-29	14276	TB1503	6-37	14662	H001-04AT	6-38
14185	3SP6-2152	6-29	14277	TB1504	6-37	14663	H001-05ET	6-38
14186	3SP6-2252	6-29	14278	TB1506	6-37	14664	H001-05PT	6-38
14187	3SP6-1132-4	6-29	14279	TB1512	6-37	14665	H001-05AT	6-38
14188	3SP6-1232-4	6-29	14280	TB2503	6-37	14666	H001-06ET	6-38
14189	3SP6-1132	6-29	14281	TB2504	6-37	14667	H001-06PT	6-38
14190	3SP6-1232	6-29	14282	TB2506	6-37	14668	H001-06AT	6-38

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
14669	H001-07ET	6-38	14740	M700*500*250	6-20	16399	E1510FK	6-42
14670	H001-07PT	6-38	14741	M700*500*300	6-20	16400	E1512FK	6-42
14671	H001-07AT	6-38	14742	M700*600*200	6-19	16402	E1518FK	6-42
14672	M200*200*150	6-19	14743	M700*600*250	6-20	16403	E2508FH	6-42
14673	M200*400*300	6-20	14744	M700*600*300	6-20	16404	E2510FH	6-42
14674	M250*200*150	6-19	14745	M800*600*200	6-19	16405	E2512FH	6-42
14675	M250*400*300	6-20	14746	M800*600*250	6-20	16406	E2518FH	6-42
14676	M1400*1000*300	6-20	14747	M800*600*300	6-20	16408	E4009FC	6-42
14677	M1400*1200*300	6-20	14748	M800*800*200	6-19	16410	E4012FC	6-42
14678	M1600*800*300	6-20	14749	M800*800*250	6-20	16411	E4018FC	6-42
14679	M1600*1200*300	6-20	14750	M800*800*300	6-20	16412	E6012FG	6-42
14680	M700*350*250	6-19	14751	M1000*600*200	6-19	16413	E6018FG	6-42
14681	M1000*1000*250	6-19	14752	M1000*600*250	6-20	16414	E7506FB	6-42
14682	M1200*1200*250	6-19	14753	M1000*600*300	6-20	16415	E7508FB	6-42
14683	M300*200*150	6-19	14754	M1000*700*200	6-19	16417	E7510FB	6-42
14684	M300*200*200	6-19	14755	M1000*700*250	6-20	16418	E7512FB	6-42
14685	M300*250*150	6-19	14756	M1000*800*200	6-19	16420	E10-12FZ	6-42
14686	M300*250*200	6-19	14757	M1000*800*250	6-20	16421	E10-18FZ	6-42
14687	M300*250*250	6-19	14758	M1000*800*300	6-20	16422	E16-12FW	6-42
14688	M300*300*150	6-19	14759	M1000*1000*300	6-20	16423	E16-18FW	6-42
14689	M300*300*200	6-19	14760	M1200*600*200	6-19	16426	E25-16FZ	6-42
14690	M300*300*250	6-19	14761	M1200*600*250	6-20	16428	E25-22FZ	6-42
14691	M300*600*600	6-20	14762	M1200*600*300	6-20	16429	E35-16FH	6-42
14692	M600*800*400	6-20	14763	M1200*800*200	6-19	16432	E35-25FH	6-42
14693	M800*600*400	6-20	14764	M1200*800*250	6-20	16434	E50-20FB	6-42
14694	M800*800*400	6-20	14765	M1200*800*300	6-20	16435	E50-25FB	6-42
14695	M1200*1000*400	6-20	14766	M1200*1000*250	6-20	16542	FDD1.25-110(5)	6-43
14696	M1000*800*400	6-20	14767	M1200*1000*300	6-20	16543	FDD1.25-110(8)	6-43
14697	M1200*1200*400	6-20	14768	M1400*600*300	6-20	16544	FDD1.25-187(5)	6-43
14698	M1600*1000*400	6-20	14769	M1200*1200*300	6-20	16545	FDD1.25-187(8)	6-43
14699	M1400*800*400	6-20	14770	M1400*800*300	6-20	16546	FDD1.25-205	6-43
14700	M1000*1000*400	6-20	14771	M1600*1000*300	6-20	16547	FDD1.25-250	6-43
14701	M1400*1000*400	6-20	14772	M1800*800*300	6-20	16548	FDD2-110(5)	6-43
14702	M400*300*150	6-19	14773	M1800*1000*300	6-20	16549	FDD2-110(8)	6-43
14703	M400*300*200	6-19	15974	MSQ30 30/5	6-14	16550	FDD2-187(5)	6-43
14704	M400*300*250	6-19	15975	MSQ30 40/5	6-14	16551	FDD2-187(8)	6-43
14705	M400*300*300	6-20	15976	MSQ30 50/5	6-14	16552	FDD2-205	6-43
14706	M400*400*150	6-19	15977	MSQ30 60/5	6-14	16553	FDD2-250	6-43
14707	M400*400*200	6-19	15978	MSQ30 100/5	6-14	16554	FDD2-312	6-43
14708	M400*400*250	6-20	15979	MSQ30 150/5	6-14	16555	FDD5.5-250	6-43
14709	M400*400*300	6-20	15980	MSQ30 200/5	6-14	16556	FDD5.5-375	6-43
14710	M500*300*150	6-19	15981	MSQ30 250/5	6-14	16564	MDD1.25-110(5)	6-43
14711	M500*300*200	6-19	15982	MSQ30 300/5	6-14	16565	MDD1.25-110(8)	6-43
14712	M500*300*250	6-20	15983	MSQ40 200/5	6-14	16566	MDD1.25-187(5)	6-43
14713	M500*300*300	6-20	15984	MSQ40 250/5	6-14	16567	MDD1.25-187(8)	6-43
14714	M500*400*150	6-19	15985	MSQ40 300/5	6-14	16568	MDD1.25-250	6-43
14715	M500*400*200	6-19	15986	MSQ40 400/5	6-14	16569	MDD2-187(5)	6-43
14716	M500*400*210	6-19	15987	MSQ40 500/5	6-14	16570	MDD2-187(8)	6-43
14717	M500*400*250	6-20	15988	MSQ40 600/5	6-14	16571	MDD2-250	6-43
14718	M500*400*300	6-20	15989	MSQ60 400/5	6-14	16572	MDD5.5-250	6-43
14719	M500*500*150	6-19	15990	MSQ60 500/5	6-14	16594	PTV1.25-9	6-42
14720	M500*500*200	6-19	15991	MSQ60 600/5	6-14	16595	PTV1.25-10	6-42
14721	M500*500*250	6-20	15992	MSQ60 800/5	6-14	16596	PTV1.25-12	6-42
14722	M500*500*300	6-20	15993	MSQ60 1000/5	6-14	16597	PTV1.25-13	6-42
14723	M600*400*150	6-19	15994	MSQ60 1200/5	6-14	16598	PTV1.25-18	6-42
14724	M600*400*200	6-19	15995	MSQ100 1000/5	6-14	16599	PTV2-9	6-42
14725	M600*400*250	6-20	15996	MSQ100 1200/5	6-14	16600	PTV2-10	6-42
14726	M600*400*300	6-20	15997	MSQ100 1500/5	6-14	16601	PTV2-12	6-42
14727	M600*500*150	6-19	15998	MSQ100 1600/5	6-14	16602	PTV2-13	6-42
14728	M600*500*200	6-19	15999	MSQ100 2000/5	6-14	16603	PTV2-18	6-42
14729	M600*500*250	6-20	16000	MSQ100 2500/5	6-14	16604	PTV5.5-13	6-42
14730	M600*500*300	6-20	16001	MSQ100 3000/5	6-14	16673	RV1.25-3	6-41
14731	M600*600*150	6-19	16386	E0506FW	6-42	16674	RV1.25-3.5S	6-41
14732	M600*600*200	6-19	16387	E0508FW	6-42	16675	RV1.25-3.5M	6-41
14733	M600*600*250	6-20	16388	E0510FW	6-42	16676	RV1.25-3.5L	6-41
14734	M600*600*300	6-20	16389	E0512FW	6-42	16677	RV1.25-4S	6-41
14735	M600*600*350	6-20	16390	E1006FR	6-42	16678	RV1.25-4L	6-41
14736	M700*400*200	6-19	16391	E1008FR	6-42	16679	RV1.25-5S	6-41
14737	M700*400*300	6-20	16393	E1010FR	6-42	16680	RV1.25-5L	6-41
14738	M700*500*150	6-19	16394	E1012FR	6-42	16681	RV1.25-6S	6-41
14739	M700*500*200	6-19	16397	E1508FK	6-42	16682	RV1.25-8	6-41

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
16683	RV1.25-10	6-41	16919	E2512GB	6-42	17407	PM72A DD30	6-3
16684	RV1.25-12	6-41	16920	E2518GB	6-42	17408	PM72A AT5	6-2
16685	RV2-3	6-41	16922	E4009GH	6-42	17409	PM72A AT10	6-2
16686	RV2-3.5S	6-41	16924	E4012GH	6-42	17410	PM72A AT15	6-2
16687	RV2-3.5M	6-41	16925	E4018GH	6-42	17411	PM72A AT20	6-2
16688	RV2-3.5L	6-41	16926	E6012GK	6-42	17412	PM72A AT25	6-2
16689	RV2-4S	6-41	16927	E6018GK	6-42	17413	PM72A AT30	6-2
16690	RV2-4L	6-41	16928	E7506GW	6-42	17414	PM72A AT40	6-2
16691	RV2-5S	6-41	16929	E7508GW	6-42	17415	PM72A AT50	6-2
16692	RV2-5L	6-41	16931	E7510GW	6-42	17416	PM72A AT60	6-2
16693	RV2-6	6-41	16932	E7512GW	6-42	17417	PM72A AT75	6-2
16694	RV2-8	6-41	16934	E10-12GW	6-42	17418	PM72A AT80	6-2
16695	RV2-10	6-41	16935	E10-18GW	6-42	17419	PM72A AT100	6-2
16696	RV2-12	6-41	16936	E16-12GG	6-42	17420	PM72A AT150	6-2
16697	RV3.5-4	6-41	16937	E16-18GG	6-42	17421	PM72A AT200	6-2
16698	RV3.5-5S	6-41	16940	E25-16GK	6-42	17422	PM72A AT250	6-2
16699	RV3.5-5L	6-41	16942	E25-22GK	6-42	17423	PM72A AT300	6-2
16700	RV3.5-6	6-41	16943	E35-16GZ	6-42	17424	PM72A AT400	6-2
16701	RV5.5-3.5	6-41	16946	E35-25GZ	6-42	17425	PM72A AT500	6-2
16702	RV5.5-4S	6-41	17349	PG7	6-35	17426	PM72A AT600	6-2
16703	RV5.5-4L	6-41	17350	PG9	6-35	17427	PM72A AT750	6-2
16704	RV5.5-5	6-41	17351	PG11	6-35	17428	PM72A AT800	6-2
16705	RV5.5-6S	6-41	17352	PG13.5	6-35	17429	PM72A AT1000	6-2
16706	RV5.5-8	6-41	17353	PG16	6-35	17430	PM72A AT1200	6-2
16707	RV5.5-10	6-41	17354	PG21	6-35	17431	PM72A AT1500	6-2
16708	RV5.5-12	6-41	17355	PG29	6-35	17432	PM72A AT2000	6-2
16747	SV1.25-3	6-40	17356	PG36	6-35	17433	PM72A AT2500	6-2
16748	SV1.25-3.5S	6-40	17357	PG42	6-35	17434	PM72A AT3000	6-2
16749	SV1.25-3.5L	6-40	17358	PG48	6-35	17435	PM72A AT4000	6-2
16750	SV1.25-4S	6-40	17365	PM48A AT5	6-2	17436	PM72A AT5000	6-2
16751	SV1.25-4M	6-40	17366	PM48A AT10	6-2	17438	PM72V AT150	6-3
16752	SV1.25-4L	6-40	17367	PM48A AT15	6-2	17439	PM72V AT250	6-3
16753	SV1.25-5S	6-40	17368	PM48A AT20	6-2	17440	PM72V AT300	6-3
16754	SV1.25-5L	6-40	17369	PM48A AT25	6-2	17441	PM72V AT450	6-3
16755	SV1.25-6S	6-40	17370	PM48A AT30	6-2	17442	PM72V AT500	6-3
16756	SV1.25-6L	6-40	17371	PM48A AT40	6-2	17443	PM72V AT600	6-3
16757	SV2-3	6-40	17372	PM48A AT50	6-2	17444	PM72A AD10	6-3
16758	SV2-3.5S	6-40	17373	PM48A AT60	6-2	17445	PM72A AD20	6-3
16759	SV2-3.5L	6-40	17374	PM48A AT75	6-2	17446	PM72A AD25	6-3
16760	SV2-4S	6-40	17375	PM48A AT80	6-2	17447	PM72A AD30	6-3
16761	SV2-4M	6-40	17376	PM48A AT100	6-2	17448	PM72A AD40	6-3
16762	SV2-4L	6-40	17377	PM48A AT150	6-2	17449	PM72A AD50	6-3
16763	SV2-5S	6-40	17378	PM48A AT200	6-2	17450	PM72A AD60	6-3
16764	SV2-5L	6-40	17379	PM48A AT250	6-2	17451	PM72A AD75	6-3
16765	SV2-6S	6-40	17380	PM48A AT300	6-2	17452	PM72A AD100	6-3
16766	SV2-6L	6-40	17381	PM48A AT400	6-2	17453	PM72V DD10	6-3
16767	SV2-8	6-40	17382	PM48A AT500	6-2	17454	PM72V DD15	6-3
16768	SV3.5-4	6-40	17383	PM48A AT600	6-2	17455	PM72V DD20	6-3
16769	SV3.5-5	6-40	17384	PM48A AT750	6-2	17456	PM72V DD30	6-3
16770	SV3.5-6	6-40	17385	PM48A AT800	6-2	17457	PM72V DD40	6-3
16771	SV5.5-3.5	6-40	17386	PM48A AT1000	6-2	17458	PM72V DD50	6-3
16772	SV5.5-4S	6-40	17387	PM48A AT1200	6-2	17459	PM72V DD60	6-3
16773	SV5.5-4L	6-40	17388	PM48A AT1500	6-2	17460	PM72V DD75	6-3
16774	SV5.5-5	6-40	17389	PM48A AT2000	6-2	17461	PM72V DD100	6-3
16775	SV5.5-6S	6-40	17390	PM48A AT2500	6-2	17462	PM72V DD150	6-3
16776	SV5.5-6L	6-40	17391	PM48A AT3000	6-2	17463	PM72V DD200	6-3
16777	SV5.5-8	6-40	17392	PM48A AT4000	6-2	17464	PM72V DD250	6-3
16900	E0506GC	6-42	17393	PM48A AT5000	6-2	17465	PM72V DD300	6-3
16901	E0508GC	6-42	17394	PM48V AT150	6-3	17466	PM72V DD400	6-3
16902	E0510GC	6-42	17395	PM48V AT250	6-3	17467	PM72V DD450	6-3
16903	E0512GC	6-42	17396	PM48V AT300	6-3	17468	PM72V DD500	6-3
16904	E1006GY	6-42	17397	PM48V AT450	6-3	17469	PM72V DD600	6-3
16905	E1008GY	6-42	17398	PM48V AT500	6-3	17486	PM72F 45220	6-3
16907	E1010GY	6-42	17399	PM48V AT600	6-3	17487	PM72F 45380	6-3
16908	E1012GY	6-42	17400	PM48F 46220	6-3	17488	PM72F 46220	6-3
16911	E1508GR	6-42	17401	PM48F 46380	6-3	17489	PM72F 46380	6-3
16913	E1510GR	6-42	17402	PM72A DD5	6-3	17494	PM96A AT5	6-2
16914	E1512GR	6-42	17403	PM72A DD10	6-3	17495	PM96A AT10	6-2
16916	E1518GR	6-42	17404	PM72A DD15	6-3	17496	PM96A AT15	6-2
16917	E2508GB	6-42	17405	PM72A DD20	6-3	17497	PM96A AT20	6-2
16918	E2510GB	6-42	17406	PM72A DD25	6-3	17498	PM96A AT25	6-2

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
17499	PM96A AT30	6-2	24786	AP2.5	6-36	31460	3SP1-313	6-24
17500	PM96A AT40	6-2	24787	AP4/6/10	6-36	31461	3SP1-323	6-24
17501	PM96A AT50	6-2	24788	AP16	6-36	31462	3SP1-333	6-24
17502	PM96A AT60	6-2	24789	EW35	6-36	31463	3SP1-314	6-24
17503	PM96A AT75	6-2	24790	LZB6B	6-36	31464	3SP1-324	6-24
17504	PM96A AT80	6-2	24791	LZB6H	6-36	31465	3SP1-334	6-24
17505	PM96A AT100	6-2	24792	LZB6V	6-36	31466	3SP1-315	6-24
17506	PM96A AT150	6-2	25736	E6010GK	6-42	31467	3SP1-325	6-24
17507	PM96A AT200	6-2	25737	E6010FG	6-42	31468	3SP1-335	6-24
17508	PM96A AT250	6-2	25739	E50-20GL	6-42	31469	3SP2-0131	6-25
17509	PM96A AT300	6-2	25740	E50-25GL	6-42	31470	3SP2-0231	6-25
17510	PM96A AT400	6-2	25741	PTV3.5-10	6-42	31471	3SP2-0331	6-25
17511	PM96A AT500	6-2	25742	PTV3.5-12	6-42	31472	3SP2-0141	6-25
17512	PM96A AT600	6-2	27275	M900*500*300	6-20	31473	3SP2-0241	6-25
17513	PM96A AT750	6-2	27276	M1800*1200*300	6-20	31474	3SP2-0341	6-25
17514	PM96A AT800	6-2	27277	M1000*800*600	6-20	31475	3SP2-0151	6-25
17515	PM96A AT1000	6-2	27290	RV5.5-6L	6-41	31476	3SP2-0251	6-25
17516	PM96A AT1200	6-2	29597	U003-01EB	6-38	31477	3SP2-0351	6-25
17517	PM96A AT1500	6-2	29598	U003-01PB	6-38	31478	3SP2-1131	6-26
17518	PM96A AT2000	6-2	29599	U003-01AB	6-38	31479	3SP2-1231	6-26
17519	PM96A AT2500	6-2	29600	U003-02EB	6-38	31480	3SP2-1331	6-26
17520	PM96A AT3000	6-2	29601	U003-02PB	6-38	31481	3SP2-1141	6-26
17521	PM96A AT4000	6-2	29602	U003-02AB	6-38	31482	3SP2-1241	6-26
17522	PM96A AT5000	6-2	29603	U003-03EB	6-38	31483	3SP2-1341	6-26
17524	PM96V AT150	6-3	29604	U003-03PB	6-38	31484	3SP2-1151	6-26
17525	PM96V AT250	6-3	29605	U003-03AB	6-38	31485	3SP2-1251	6-26
17526	PM96V AT300	6-3	29606	U003-04EB	6-38	31486	3SP2-1351	6-26
17527	PM96V AT500	6-3	29607	U003-04PB	6-38	31487	3SP2-2131	6-25
17528	PM96V AT450	6-3	29608	U003-04AB	6-38	31488	3SP2-2231	6-25
17529	PM96V AT600	6-3	29609	U003-05EB	6-38	31489	3SP2-2331	6-25
17530	PM96A AD10	6-3	29610	U003-05PB	6-38	31490	3SP2-2141	6-25
17531	PM96A AD20	6-3	29611	U003-05AB	6-38	31491	3SP2-2241	6-25
17532	PM96A AD25	6-3	29612	U003-06EB	6-38	31492	3SP2-2341	6-25
17533	PM96A AD30	6-3	29613	U003-06PB	6-38	31493	3SP2-2151	6-25
17534	PM96A AD40	6-3	29614	U003-06AB	6-38	31494	3SP2-2251	6-25
17535	PM96A AD50	6-3	29615	U003-07EB	6-38	31495	3SP2-2351	6-25
17536	PM96A AD60	6-3	29616	U003-07PB	6-38	31496	3SP2-3131	6-26
17537	PM96A AD75	6-3	29617	U003-07AB	6-38	31497	3SP2-3231	6-26
17538	PM96A AD100	6-3	29618	U003-08EB	6-38	31498	3SP2-3331	6-26
17539	PM96V DD10	6-3	29619	U003-08PB	6-38	31499	3SP2-3141	6-26
17540	PM96V DD15	6-3	29620	U003-08AB	6-38	31500	3SP2-3241	6-26
17541	PM96V DD20	6-3	29621	U003-09EB	6-38	31501	3SP2-3341	6-26
17542	PM96V DD30	6-3	29622	U003-09PB	6-38	31502	3SP2-3151	6-26
17543	PM96V DD40	6-3	29623	U003-09AB	6-38	31503	3SP2-3251	6-26
17544	PM96V DD50	6-3	31433	3SP1-013	6-23	31504	3SP2-3351	6-26
17545	PM96V DD60	6-3	31434	3SP1-023	6-23	31505	B10512A	6-31
17546	PM96V DD75	6-3	31435	3SP1-033	6-23	31506	B10524A	6-31
17547	PM96V DD100	6-3	31436	3SP1-014	6-23	31507	B10536A	6-31
17548	PM96V DD150	6-3	31437	3SP1-024	6-23	31508	B10548A	6-31
17549	PM96V DD200	6-3	31438	3SP1-034	6-23	31509	B105110A	6-31
17550	PM96V DD250	6-3	31439	3SP1-015	6-23	31510	B105127A	6-31
17551	PM96V DD300	6-3	31440	3SP1-025	6-23	31511	B105220A	6-31
17552	PM96V DD400	6-3	31441	3SP1-035	6-23	31512	B105380A	6-31
17553	PM96V DD450	6-3	31442	3SP1-113	6-24	31513	B10512D	6-31
17554	PM96V DD500	6-3	31443	3SP1-123	6-24	31514	B10524D	6-31
17555	PM96V DD600	6-3	31444	3SP1-133	6-24	31515	B10536D	6-31
17556	PM96A DD5	6-3	31445	3SP1-114	6-24	31516	B10548D	6-31
17557	PM96A DD10	6-3	31446	3SP1-124	6-24	31517	B105110D	6-31
17558	PM96A DD15	6-3	31447	3SP1-134	6-24	31518	B105220D	6-31
17559	PM96A DD20	6-3	31448	3SP1-115	6-24	31519	B10712A	6-31
17560	PM96A DD25	6-3	31449	3SP1-125	6-24	31520	B10724A	6-31
17561	PM96A DD30	6-3	31450	3SP1-135	6-24	31521	B10736A	6-31
17578	PM96F 45220	6-3	31451	3SP1-213	6-23	31522	B10748A	6-31
17579	PM96F 45380	6-3	31452	3SP1-223	6-23	31523	B107110A	6-31
17580	PM96F 46220	6-3	31453	3SP1-233	6-23	31524	B107127A	6-31
17581	PM96F 46380	6-3	31454	3SP1-214	6-23	31525	B107220A	6-31
24781	JXB-2.5	6-36	31455	3SP1-224	6-23	31526	B107380A	6-31
24782	JXB-4	6-36	31456	3SP1-234	6-23	31527	B10712D	6-31
24783	JXB-6	6-36	31457	3SP1-215	6-23	31528	B10724D	6-31
24784	JXB-10	6-36	31458	3SP1-225	6-23	31529	B10736D	6-31
24785	JXB-16	6-36	31459	3SP1-235	6-23	31530	B10748D	6-31

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
31531	B107110D	6-31	31602	UC420220D	6-31	31673	UC42512A	6-32
31532	B107220D	6-31	31603	UC40512A	6-32	31674	UC42524A	6-32
31533	B11012A	6-31	31604	UC40524A	6-32	31675	UC42536A	6-32
31534	B11024A	6-31	31605	UC40536A	6-32	31676	UC42548A	6-32
31535	B11036A	6-31	31606	UC40548A	6-32	31677	UC425110A	6-32
31536	B11048A	6-31	31607	UC405110A	6-32	31678	UC425127A	6-32
31537	B110110A	6-31	31608	UC405127A	6-32	31679	UC425220A	6-32
31538	B110127A	6-31	31609	UC405220A	6-32	31680	UC425380A	6-32
31539	B110220A	6-31	31610	UC405380A	6-32	31681	UC42512D	6-32
31540	B110380A	6-31	31611	UC40512D	6-32	31682	UC42524D	6-32
31541	B11012D	6-31	31612	UC40524D	6-32	31683	UC42536D	6-32
31542	B11024D	6-31	31613	UC40536D	6-32	31684	UC42548D	6-32
31543	B11036D	6-31	31614	UC40548D	6-32	31685	UC425110D	6-32
31544	B11048D	6-31	31615	UC405110D	6-32	31686	UC425220D	6-32
31545	B110110D	6-31	31616	UC405220D	6-32	31687	UC43012A	6-32
31546	B110220D	6-31	31617	UC40712A	6-32	31688	UC43024A	6-32
31547	B11512A	6-31	31618	UC40724A	6-32	31689	UC43036A	6-32
31548	B11524A	6-31	31619	UC40736A	6-32	31690	UC43048A	6-32
31549	B11536A	6-31	31620	UC40748A	6-32	31691	UC430110A	6-32
31550	B11548A	6-31	31621	UC407110A	6-32	31692	UC430127A	6-32
31551	B115110A	6-31	31622	UC407127A	6-32	31693	UC430220A	6-32
31552	B115127A	6-31	31623	UC407220A	6-32	31694	UC430380A	6-32
31553	B115220A	6-31	31624	UC407380A	6-32	31695	UC43012D	6-32
31554	B115380A	6-31	31625	UC40712D	6-32	31696	UC43024D	6-32
31555	B11512D	6-31	31626	UC40724D	6-32	31697	UC43036D	6-32
31556	B11524D	6-31	31627	UC40736D	6-32	31698	UC43048D	6-32
31557	B11536D	6-31	31628	UC40748D	6-32	31699	UC430110D	6-32
31558	B11548D	6-31	31629	UC407110D	6-32	31700	UC430220D	6-32
31559	B115110D	6-31	31630	UC407220D	6-32	31701	SCF1012A	6-32
31560	B115220D	6-31	31631	UC41012A	6-32	31702	SCF1024A	6-32
31561	B12012A	6-31	31632	UC41024A	6-32	31703	SCF1036A	6-32
31562	B12024A	6-31	31633	UC41036A	6-32	31704	SCF1048A	6-32
31563	B12036A	6-31	31634	UC41048A	6-32	31705	SCF10110A	6-32
31564	B12048A	6-31	31635	UC410110A	6-32	31706	SCF10127A	6-32
31565	B120110A	6-31	31636	UC410127A	6-32	31707	SCF10220A	6-32
31566	B120127A	6-31	31637	UC410220A	6-32	31708	SCF10380A	6-32
31567	B120220A	6-31	31638	UC410380A	6-32	31709	SCF1012D	6-32
31568	B120380A	6-31	31639	UC41012D	6-32	31710	SCF1024D	6-32
31569	B12012D	6-31	31640	UC41024D	6-32	31711	SCF1036D	6-32
31570	B12024D	6-31	31641	UC41036D	6-32	31712	SCF1048D	6-32
31571	B12036D	6-31	31642	UC41048D	6-32	31713	SCF10110D	6-32
31572	B12048D	6-31	31643	UC410110D	6-32	31714	SCF10220D	6-32
31573	B120110D	6-31	31644	UC410220D	6-32	31715	SCF1212A	6-32
31574	B120220D	6-31	31645	UC41512A	6-32	31716	SCF1224A	6-32
31575	B12512A	6-31	31646	UC41524A	6-32	31717	SCF1236A	6-32
31576	B12524A	6-31	31647	UC41536A	6-32	31718	SCF1248A	6-32
31577	B12536A	6-31	31648	UC41548A	6-32	31719	SCF12110A	6-32
31578	B12548A	6-31	31649	UC415110A	6-32	31720	SCF12127A	6-32
31579	B125110A	6-31	31650	UC415127A	6-32	31721	SCF12220A	6-32
31580	B125127A	6-31	31651	UC415220A	6-32	31722	SCF12380A	6-32
31581	B125220A	6-31	31652	UC415380A	6-32	31723	SCF1212D	6-32
31582	B125380A	6-31	31653	UC41512D	6-32	31724	SCF1224D	6-32
31583	B12512D	6-31	31654	UC41524D	6-32	31725	SCF1236D	6-32
31584	B12524D	6-31	31655	UC41536D	6-32	31726	SCF1248D	6-32
31585	B12536D	6-31	31656	UC41548D	6-32	31727	SCF12110D	6-32
31586	B12548D	6-31	31657	UC415110D	6-32	31728	SCF12220D	6-32
31587	B125110D	6-31	31658	UC415220D	6-32	31729	SCF1512A	6-32
31588	B125220D	6-31	31659	UC42012A	6-32	31730	SCF1524A	6-32
31589	UC42012A	6-31	31660	UC42024A	6-32	31731	SCF1536A	6-32
31590	UC42024A	6-31	31661	UC42036A	6-32	31732	SCF1548A	6-32
31591	UC42036A	6-31	31662	UC42048A	6-32	31733	SCF15110A	6-32
31592	UC42048A	6-31	31663	UC420110A	6-32	31734	SCF15127A	6-32
31593	UC420110A	6-31	31664	UC420127A	6-32	31735	SCF15220A	6-32
31594	UC420127A	6-31	31665	UC420220A	6-32	31736	SCF15380A	6-32
31595	UC420220A	6-31	31666	UC420380A	6-32	31737	SCF1512D	6-32
31596	UC420380A	6-31	31667	UC42012D	6-32	31738	SCF1524D	6-32
31597	UC42012D	6-31	31668	UC42024D	6-32	31739	SCF1536D	6-32
31598	UC42024D	6-31	31669	UC42036D	6-32	31740	SCF1548D	6-33
31599	UC42036D	6-31	31670	UC42048D	6-32	31741	SCF15110D	6-33
31600	UC42048D	6-31	31671	UC420110D	6-32	31742	SCF15220D	6-33
31601	UC420110D	6-31	31672	UC420220D	6-32	31743	SCF2012A	6-33

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
31744	SCF2024A	6-33	31844	BSMJ0.4-12-3	6-16	31915	BGMJ280- 12.0	6-17
31745	SCF2036A	6-33	31845	BSMJ0.4-14-3	6-16	31916	BGMJ280- 14.0	6-17
31746	SCF2048A	6-33	31846	BSMJ0.4-15-3	6-16	31917	BGMJ280- 16.0	6-17
31747	SCF20110A	6-33	31847	BSMJ0.4-16-3	6-16	31918	BGMJ280- 18.0	6-17
31748	SCF20127A	6-33	31848	BSMJ0.4-18-3	6-16	31919	BGMJ280- 20.0	6-17
31749	SCF20220A	6-33	31849	BSMJ0.4-20-3	6-16	31920	BGMJ280- 25.0	6-17
31750	SCF20380A	6-33	31850	BSMJ0.4-25-3	6-16	31921	BGMJ400- 3.0	6-17
31751	SCF2012D	6-33	31851	BSMJ0.4-30-3	6-16	31922	BGMJ400- 4.0	6-17
31752	SCF2024D	6-33	31852	BSMJ0.4-40-3	6-16	31923	BGMJ400- 5.0	6-17
31753	SCF2036D	6-33	31853	BSMJ0.4-50-3	6-16	31924	BGMJ400- 6.0	6-17
31754	SCF2048D	6-33	31854	BSMJ0.415-10-3	6-16	31925	BGMJ400- 7.5	6-17
31755	SCF20110D	6-33	31855	BSMJ0.415-12-3	6-16	31926	BGMJ400- 10.0	6-17
31756	SCF20220D	6-33	31856	BSMJ0.415-14-3	6-16	31927	BGMJ400- 12.0	6-17
31757	SCF2512A	6-33	31857	BSMJ0.415-15-3	6-16	31928	BGMJ400- 14.0	6-17
31758	SCF2524A	6-33	31858	BSMJ0.415-16-3	6-16	31929	BGMJ400- 16.0	6-17
31759	SCF2536A	6-33	31859	BSMJ0.415-18-3	6-16	31930	BGMJ400- 18.0	6-17
31760	SCF2548A	6-33	31860	BSMJ0.415-20-3	6-16	31931	BGMJ400- 20.0	6-17
31761	SCF25110A	6-33	31861	BSMJ0.415-25-3	6-16	31932	BGMJ400- 25.0	6-17
31762	SCF25127A	6-33	31862	BSMJ0.415-30-3	6-16	31933	BGMJ400- 30.0	6-17
31763	SCF25220A	6-33	31863	BSMJ0.415-40-3	6-16	31934	BGMJ415- 3.0	6-17
31764	SCF25380A	6-33	31864	BSMJ0.415-50-3	6-16	31935	BGMJ415- 4.0	6-17
31765	SCF2512D	6-33	31865	BSMJ0.45-10-3	6-16	31936	BGMJ415- 5.0	6-17
31766	SCF2524D	6-33	31866	BSMJ0.45-12-3	6-16	31937	BGMJ415- 6.0	6-17
31767	SCF2536D	6-33	31867	BSMJ0.45-14-3	6-16	31938	BGMJ415- 7.5	6-17
31768	SCF2548D	6-33	31868	BSMJ0.45-15-3	6-16	31939	BGMJ415- 10.0	6-17
31769	SCF25110D	6-33	31869	BSMJ0.45-16-3	6-16	31940	BGMJ415- 12.0	6-17
31770	SCF25220D	6-33	31870	BSMJ0.45-18-3	6-16	31941	BGMJ415- 14.0	6-17
31771	SCF3012A	6-33	31871	BSMJ0.45-20-3	6-16	31942	BGMJ415- 16.0	6-17
31772	SCF3024A	6-33	31872	BSMJ0.45-25-3	6-16	31943	BGMJ415- 18.0	6-17
31773	SCF3036A	6-33	31873	BSMJ0.45-30-3	6-16	31944	BGMJ415- 20.0	6-17
31774	SCF3048A	6-33	31874	BSMJ0.45-40-3	6-16	31945	BGMJ415- 25.0	6-17
31775	SCF30110A	6-33	31875	BSMJ0.45-50-3	6-16	31946	BGMJ415- 30.0	6-17
31776	SCF30127A	6-33	31876	BSMJ0.525-10-3	6-16	31947	BGMJ450- 3.0	6-17
31777	SCF30220A	6-33	31877	BSMJ0.525-12-3	6-16	31948	BGMJ450- 4.0	6-17
31778	SCF30380A	6-33	31878	BSMJ0.525-14-3	6-16	31949	BGMJ450- 5.0	6-17
31779	SCF3012D	6-33	31879	BSMJ0.525-15-3	6-16	31950	BGMJ450- 6.0	6-17
31780	SCF3024D	6-33	31880	BSMJ0.525-16-3	6-16	31951	BGMJ450- 7.5	6-17
31781	SCF3036D	6-33	31881	BSMJ0.525-18-3	6-16	31952	BGMJ450- 10.0	6-17
31782	SCF3048D	6-33	31882	BSMJ0.525-20-3	6-16	31953	BGMJ450- 12.0	6-17
31783	SCF30110D	6-33	31883	BSMJ0.525-25-3	6-16	31954	BGMJ450- 14.0	6-17
31784	SCF30220D	6-33	31884	BSMJ0.525-30-3	6-16	31955	BGMJ450- 16.0	6-17
31793	MG12G	6-35	31885	BSMJ0.525-40-3	6-16	31956	BGMJ450- 18.0	6-17
31794	MG16G	6-35	31886	BSMJ0.525-50-3	6-16	31957	BGMJ450- 20.0	6-17
31795	MG20G	6-35	31887	BSMJ0.69-10-3	6-16	31958	BGMJ450- 25.0	6-18
31796	MG25G	6-35	31888	BSMJ0.69-12-3	6-16	31959	BGMJ450- 30.0	6-18
31797	MG32G	6-35	31889	BSMJ0.69-14-3	6-16	31960	BGMJ525- 3.0	6-18
31798	MG40G	6-35	31890	BSMJ0.69-15-3	6-16	31961	BGMJ525- 4.0	6-18
31799	MG50G	6-35	31891	BSMJ0.69-16-3	6-16	31962	BGMJ525- 5.0	6-18
31800	MG63G	6-35	31892	BSMJ0.69-18-3	6-16	31963	BGMJ525- 6.0	6-18
31801	SM25S	6-35	31893	BSMJ0.69-20-3	6-16	31964	BGMJ525- 7.5	6-18
31802	SM30S	6-35	31894	BSMJ0.69-25-3	6-16	31965	BGMJ525- 10.0	6-18
31803	SM35S	6-35	31895	BSMJ0.69-30-3	6-16	31966	BGMJ525- 12.0	6-18
31804	SM40S	6-35	31896	BSMJ0.69-40-3	6-16	31967	BGMJ525- 14.0	6-18
31805	SM51S	6-35	31897	BSMJ0.69-50-3	6-16	31968	BGMJ525- 16.0	6-18
31806	SM76S	6-35	31898	BGMJ230- 4.0	6-17	31969	BGMJ525- 18.0	6-18
31807	SM25	6-35	31899	BGMJ230- 5.0	6-17	31970	BGMJ525- 20.0	6-18
31808	SM30	6-35	31900	BGMJ230- 6.0	6-17	31971	BGMJ525- 25.0	6-18
31809	SM35	6-35	31901	BGMJ230- 7.5	6-17	31972	BGMJ525- 30.0	6-18
31810	SM40	6-35	31902	BGMJ230- 10.0	6-17	31973	BGMJ690- 3.0	6-18
31811	SM51	6-35	31903	BGMJ230- 12.0	6-17	31974	BGMJ690- 4.0	6-18
31812	SM76	6-35	31904	BGMJ230- 14.0	6-17	31975	BGMJ690- 5.0	6-18
31834	BSMJ0.25-3-1	6-16	31905	BGMJ230- 16.0	6-17	31976	BGMJ690- 6.0	6-18
31835	BSMJ0.25-5-1	6-16	31906	BGMJ230- 18.0	6-17	31977	BGMJ690- 7.5	6-18
31836	BSMJ0.25-7.5-1	6-16	31907	BGMJ230- 20.0	6-17	31978	BGMJ690- 10.0	6-18
31837	BSMJ0.25-10-1	6-16	31908	BGMJ230- 25.0	6-17	31979	BGMJ690- 12.0	6-18
31838	BSMJ0.25-15-1	6-16	31909	BGMJ280- 3.0	6-17	31980	BGMJ690- 14.0	6-18
31839	BSMJ0.4-2-3	6-16	31910	BGMJ280- 4.0	6-17	31981	BGMJ690- 16.0	6-18
31840	BSMJ0.4-4-3	6-16	31911	BGMJ280- 5.0	6-17	31982	BGMJ690- 18.0	6-18
31841	BSMJ0.4-6-3	6-16	31912	BGMJ280- 6.0	6-17	31983	BGMJ690- 20.0	6-18
31842	BSMJ0.4-8-3	6-16	31913	BGMJ280- 7.5	6-17	31984	BGMJ690- 25.0	6-18
31843	BSMJ0.4-10-3	6-16	31914	BGMJ280- 10.0	6-17	31986	DDS989 1.5(6)A	6-1

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
31987	DDS989 2.5(10)A	6-1	33148	MD1200*1200*300	6-21	33246	PM72WA 230SP2000	6-4
31988	DDS989 5(20)A	6-1	33149	MD1200*1000*400	6-21	33247	PM72WA 230SP3000	6-4
31989	DDS989 10(40)A	6-1	33150	MD1200*1200*400	6-21	33248	PM72WA 230SP4000	6-4
31990	DDS989 5(30)A	6-1	33151	MD1400*1000*250	6-21	33249	PM72WA 230SP5000	6-4
31991	DDS989 10(60)A	6-1	33152	MD1400*1000*300	6-21	33250	PM72WA 230SP6000	6-4
31992	DDS989 15(60)A	6-1	33153	MD1400*1000*400	6-21	33251	PM72WA 230SP8000	6-4
31993	DDS989 20(80)A	6-1	33154	MD1400*1200*300	6-21	33252	PM72WA 230SP10K	6-4
31994	DTS989 3x1.5(6)	6-1	33155	MD1400*1200*400	6-21	33253	PM72WA 230SP12K	6-4
31995	DTS989 3x3(6)	6-1	33156	MD1400*1400*300	6-21	33254	PM72WA 230SP16K	6-4
31996	DTS989 3x5(20)	6-1	33157	MD1400*1400*400	6-21	33255	PM72WA 230SP20K	6-4
31997	DTS989 3x10(40)	6-1	33158	MI400*300*200	6-21	33256	PM72WA 230SP30K	6-4
31998	DTS989 3x15(60)	6-1	33159	MI400*400*200	6-21	33257	PM72WA 230SP40K	6-4
31999	DTS989 3x5(30)	6-1	33160	MI500*300*200	6-21	33258	PM72WA 230SP50K	6-4
32000	DTS989 3x10(60)	6-1	33161	MI500*400*200	6-21	33259	PM72WA 230SP60K	6-4
32061	BGMJ230- 3.0	6-17	33162	MI500*500*200	6-21	33260	PM72WA 230SP80K	6-4
32062	BGMJ230- 15.0	6-17	33163	MI600*400*200	6-21	33261	PM72WA 230SP100K	6-4
32063	BGMJ280- 15.0	6-17	33164	MI600*500*200	6-21	33262	PM72WA 230SP120K	6-4
32064	BGMJ400- 15.0	6-17	33165	MI600*600*200	6-21	33263	PM72WA 230SP160K	6-4
32065	BGMJ415- 15.0	6-17	33166	MI700*500*200	6-21	33264	PM72WA 230SP200K	6-4
32066	BGMJ450- 15.0	6-17	33167	MI800*600*200	6-21	33265	PM72WA 230SP300K	6-4
32067	BGMJ525- 15.0	6-18	33168	MI800*800*200	6-21	33266	PM72WA 230SP400K	6-4
32068	BGMJ690- 15.0	6-18	33169	MI400*300*250	6-21	33267	PM72WA 230SP500K	6-4
32579	H001-08ET	6-38	33170	MI400*400*250	6-21	33268	PM72WA 400SP2000	6-5
32580	H001-08PT	6-38	33171	MI500*300*250	6-21	33269	PM72WA 400SP4000	6-5
32581	H001-08AT	6-38	33172	MI500*400*250	6-21	33270	PM72WA 400SP6000	6-5
32582	H001-09ET	6-38	33173	MI500*500*250	6-21	33271	PM72WA 400SP8000	6-5
32583	H001-09PT	6-38	33174	MI600*400*250	6-21	33272	PM72WA 400SP10K	6-5
32584	H001-09AT	6-38	33175	MI600*500*250	6-21	33273	PM72WA 400SP12K	6-5
32585	U003-01ET	6-38	33176	MI600*600*250	6-21	33274	PM72WA 400SP16K	6-5
32586	U003-01PT	6-38	33177	PM48P 515110	6-4	33275	PM72WA 400SP20K	6-5
32587	U003-01AT	6-38	33178	PM48P 314110	6-4	33276	PM72WA 400SP24K	6-5
32588	U003-02ET	6-38	33182	PM48P 515230	6-4	33277	PM72WA 400SP32K	6-5
32589	U003-02PT	6-38	33183	PM48P 314230	6-4	33278	PM72WA 400SP40K	6-5
32590	U003-02AT	6-38	33187	PM48P 515400	6-4	33279	PM72WA 400SP60K	6-5
32591	U003-03ET	6-38	33188	PM48P 314400	6-4	33280	PM72WA 400SP80K	6-5
32592	U003-03PT	6-38	33192	PM72P 515110	6-4	33281	PM72WA 400SP100K	6-5
32593	U003-03AT	6-38	33193	PM72P 314110	6-4	33282	PM72WA 400SP120K	6-5
32594	U003-04ET	6-38	33198	PM72P 314230	6-4	33283	PM72WA 400SP160K	6-5
32595	U003-04PT	6-38	33199	PM72P 311230	6-4	33284	PM72WA 400SP200K	6-5
32596	U003-04AT	6-38	33202	PM72P 515400	6-4	33285	PM72WA 400SP240K	6-5
32597	U003-05ET	6-38	33203	PM72P 314400	6-4	33286	PM72WA 400SP320K	6-5
32598	U003-05PT	6-38	33207	PM96P 515110	6-4	33287	PM72WA 400SP400K	6-5
32599	U003-05AT	6-38	33208	PM96P 314110	6-4	33288	PM72WA 400SP600K	6-5
32600	U003-06ET	6-38	33212	PM96P 515230	6-4	33289	PM72WA 400SP800K	6-5
32601	U003-06PT	6-38	33213	PM96P 314230	6-4	33290	PM72WA 400SP1000K	6-5
32602	U003-06AT	6-38	33217	PM96P 515400	6-4	33291	PM72WA 110TT1000	6-5
32607	U003-07ET	6-38	33218	PM96P 314400	6-4	33292	PM72WA 110TT2000	6-5
32608	U003-07PT	6-38	33222	PM72WA 110SP500	6-4	33293	PM72WA 110TT3000	6-5
32609	U003-07AT	6-38	33223	PM72WA 110SP1000	6-4	33294	PM72WA 110TT4000	6-5
32610	U003-08ET	6-38	33224	PM72WA 110SP1500	6-4	33295	PM72WA 110TT5000	6-5
32611	U003-08PT	6-38	33225	PM72WA 110SP2000	6-4	33296	PM72WA 110TT6000	6-5
32612	U003-08AT	6-38	33226	PM72WA 110SP2500	6-4	33297	PM72WA 110TT8000	6-5
32613	U003-09ET	6-38	33227	PM72WA 110SP3000	6-4	33298	PM72WA 110TT10K	6-5
32614	U003-09PT	6-38	33228	PM72WA 110SP4000	6-4	33299	PM72WA 110TT12K	6-5
32615	U003-09AT	6-38	33229	PM72WA 110SP5000	6-4	33300	PM72WA 110TT16K	6-5
33132	MD600*800*200	6-21	33230	PM72WA 110SP6000	6-4	33301	PM72WA 110TT20K	6-5
33133	MD600*800*250	6-21	33231	PM72WA 110SP8000	6-4	33302	PM72WA 110TT30K	6-5
33134	MD600*800*300	6-21	33232	PM72WA 110SP10k	6-4	33303	PM72WA 110TT40K	6-5
33135	MD600*1000*200	6-21	33233	PM72WA 110SP15k	6-4	33304	PM72WA 110TT50K	6-5
33136	MD600*1000*250	6-21	33234	PM72WA 110SP20k	6-4	33305	PM72WA 110TT60K	6-5
33137	MD600*1000*300	6-21	33235	PM72WA 110SP25k	6-4	33306	PM72WA 110TT80K	6-5
33138	MD600*1200*250	6-21	33236	PM72WA 110SP30k	6-4	33307	PM72WA 110TT100K	6-5
33139	MD600*1200*300	6-21	33237	PM72WA 110SP40k	6-4	33308	PM72WA 110TT120K	6-5
33140	MD800*1200*250	6-21	33238	PM72WA 110SP50k	6-4	33309	PM72WA 110TT160K	6-5
33141	MD800*1200*300	6-21	33239	PM72WA 110SP60k	6-4	33310	PM72WA 110TT200K	6-5
33142	MD1000*1000*250	6-21	33240	PM72WA 110SP80k	6-4	33311	PM72WA 110TT300K	6-5
33143	MD1000*1000*300	6-21	33241	PM72WA 110SP100k	6-4	33312	PM72WA 110TT400K	6-5
33144	MD1000*1000*400	6-21	33242	PM72WA 110SP150k	6-4	33313	PM72WA 110TT500K	6-5
33145	MD1200*1000*250	6-21	33243	PM72WA 110SP200k	6-4	33314	PM72WA 230TT2000	6-6
33146	MD1200*1200*250	6-21	33244	PM72WA 110SP250k	6-4	33315	PM72WA 230TT4000	6-6
33147	MD1200*1000*300	6-21	33245	PM72WA 230SP1000	6-4	33316	PM72WA 230TT6000	6-6

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
33317	PM72WA 230TT8000	6-6	33388	PM72WA 230TF12k	6-7	33459	PM96WA 230SP10K	6-4
33318	PM72WA 230TT10k	6-6	33389	PM72WA 230TF16k	6-7	33460	PM96WA 230SP12K	6-4
33319	PM72WA 230TT12k	6-6	33390	PM72WA 230TF20k	6-7	33461	PM96WA 230SP16K	6-4
33320	PM72WA 230TT16k	6-6	33391	PM72WA 230TF24k	6-7	33462	PM96WA 230SP20K	6-4
33321	PM72WA 230TT20k	6-6	33392	PM72WA 230TF32k	6-7	33463	PM96WA 230SP30K	6-4
33322	PM72WA 230TT24k	6-6	33393	PM72WA 230TF40k	6-7	33464	PM96WA 230SP40K	6-4
33323	PM72WA 230TT32k	6-6	33394	PM72WA 230TF60k	6-7	33465	PM96WA 230SP50K	6-4
33324	PM72WA 230TT40k	6-6	33395	PM72WA 230TF80k	6-7	33466	PM96WA 230SP60K	6-4
33325	PM72WA 230TT60k	6-6	33396	PM72WA 230TF100k	6-7	33467	PM96WA 230SP80K	6-4
33326	PM72WA 230TT80k	6-6	33397	PM72WA 230TF120k	6-7	33468	PM96WA 230SP100K	6-4
33327	PM72WA 230TT100k	6-6	33398	PM72WA 230TF160k	6-7	33469	PM96WA 230SP120K	6-4
33328	PM72WA 230TT120k	6-6	33399	PM72WA 230TF200k	6-7	33470	PM96WA 230SP160K	6-4
33329	PM72WA 230TT160k	6-6	33400	PM72WA 230TF240k	6-7	33471	PM96WA 230SP200K	6-4
33330	PM72WA 230TT200k	6-6	33401	PM72WA 230TF320k	6-7	33472	PM96WA 230SP300K	6-4
33331	PM72WA 230TT240k	6-6	33402	PM72WA 230TF400k	6-7	33473	PM96WA 230SP400K	6-4
33332	PM72WA 230TT320k	6-6	33403	PM72WA 230TF600k	6-7	33474	PM96WA 230SP500K	6-4
33333	PM72WA 230TT400k	6-6	33404	PM72WA 230TF800k	6-7	33475	PM96WA 400SP2000	6-5
33334	PM72WA 230TT600k	6-6	33405	PM72WA 230TF1000k	6-7	33476	PM96WA 400SP4000	6-5
33335	PM72WA 230TT800k	6-6	33406	PM72WA 400TF4000	6-8	33477	PM96WA 400SP6000	6-5
33336	PM72WA 230TT1000k	6-6	33407	PM72WA 400TF8000	6-8	33478	PM96WA 400SP8000	6-5
33337	PM72WA 400TT4000	6-6	33408	PM72WA 400TF12k	6-8	33479	PM96WA 400SP10K	6-5
33338	PM72WA 400TT8000	6-6	33409	PM72WA 400TF16k	6-8	33480	PM96WA 400SP12K	6-5
33339	PM72WA 400TT12k	6-6	33410	PM72WA 400TF20k	6-8	33481	PM96WA 400SP16K	6-5
33340	PM72WA 400TT16k	6-6	33411	PM72WA 400TF24k	6-8	33482	PM96WA 400SP20K	6-5
33341	PM72WA 400TT20k	6-6	33412	PM72WA 400TF32k	6-8	33483	PM96WA 400SP24K	6-5
33342	PM72WA 400TT24k	6-6	33413	PM72WA 400TF40k	6-8	33484	PM96WA 400SP32K	6-5
33343	PM72WA 400TT32k	6-6	33414	PM72WA 400TF48k	6-8	33485	PM96WA 400SP40K	6-5
33344	PM72WA 400TT40k	6-6	33415	PM72WA 400TF64k	6-8	33486	PM96WA 400SP60K	6-5
33345	PM72WA 400TT48k	6-6	33416	PM72WA 400TF80k	6-8	33487	PM96WA 400SP80K	6-5
33346	PM72WA 400TT64k	6-6	33417	PM72WA 400TF120k	6-8	33488	PM96WA 400SP100K	6-5
33347	PM72WA 400TT80k	6-6	33418	PM72WA 400TF160k	6-8	33489	PM96WA 400SP120K	6-5
33348	PM72WA 400TT120k	6-6	33419	PM72WA 400TF200k	6-8	33490	PM96WA 400SP160K	6-5
33349	PM72WA 400TT160k	6-6	33420	PM72WA 400TF240k	6-8	33491	PM96WA 400SP200K	6-5
33350	PM72WA 400TT200k	6-6	33421	PM72WA 400TF320k	6-8	33492	PM96WA 400SP240K	6-5
33351	PM72WA 400TT240k	6-6	33422	PM72WA 400TF400k	6-8	33493	PM96WA 400SP320K	6-5
33352	PM72WA 400TT320k	6-6	33423	PM72WA 400TF480k	6-8	33494	PM96WA 400SP400K	6-5
33353	PM72WA 400TT400k	6-6	33424	PM72WA 400TF640k	6-8	33495	PM96WA 400SP600K	6-5
33354	PM72WA 400TT480k	6-6	33425	PM72WA 400TF800k	6-8	33496	PM96WA 400SP800K	6-5
33355	PM72WA 400TT640k	6-6	33426	PM72WA 400TF1200k	6-8	33497	PM96WA 400SP1000K	6-5
33356	PM72WA 400TT800k	6-6	33427	PM72WA 400TF1600k	6-8	33498	PM96WA 110TT1000	6-5
33357	PM72WA 400TT1200k	6-6	33428	PM72WA 400TF2000k	6-8	33499	PM96WA 110TT2000	6-5
33358	PM72WA 400TT1600k	6-6	33429	PM96WA 110SP500	6-4	33500	PM96WA 110TT3000	6-5
33359	PM72WA 400TT2000k	6-6	33430	PM96WA 110SP1000	6-4	33501	PM96WA 110TT4000	6-5
33360	PM72WA 110TF1000	6-7	33431	PM96WA 110SP1500	6-4	33502	PM96WA 110TT5000	6-5
33361	PM72WA 110TF2000	6-7	33432	PM96WA 110SP2000	6-4	33503	PM96WA 110TT6000	6-5
33362	PM72WA 110TF3000	6-7	33433	PM96WA 110SP2500	6-4	33504	PM96WA 110TT8000	6-5
33363	PM72WA 110TF4000	6-7	33434	PM96WA 110SP3000	6-4	33505	PM96WA 110TT10K	6-5
33364	PM72WA 110TF5000	6-7	33435	PM96WA 110SP4000	6-4	33506	PM96WA 110TT12K	6-5
33365	PM72WA 110TF6000	6-7	33436	PM96WA 110SP5000	6-4	33507	PM96WA 110TT16K	6-5
33366	PM72WA 110TF8000	6-7	33437	PM96WA 110SP6000	6-4	33508	PM96WA 110TT20K	6-5
33367	PM72WA 110TF10k	6-7	33438	PM96WA 110SP8000	6-4	33509	PM96WA 110TT30K	6-5
33368	PM72WA 110TF12k	6-7	33439	PM96WA 110SP10k	6-4	33510	PM96WA 110TT40K	6-5
33369	PM72WA 110TF16k	6-7	33440	PM96WA 110SP15k	6-4	33511	PM96WA 110TT50K	6-5
33370	PM72WA 110TF20k	6-7	33441	PM96WA 110SP20k	6-4	33512	PM96WA 110TT80K	6-5
33371	PM72WA 110TF30k	6-7	33442	PM96WA 110SP25k	6-4	33513	PM96WA 110TT80K	6-5
33372	PM72WA 110TF40k	6-7	33443	PM96WA 110SP30k	6-4	33514	PM96WA 110TT100K	6-5
33373	PM72WA 110TF50k	6-7	33444	PM96WA 110SP40k	6-4	33515	PM96WA 110TT120K	6-5
33374	PM72WA 110TF60k	6-7	33445	PM96WA 110SP50k	6-4	33516	PM96WA 110TT160K	6-5
33375	PM72WA 110TF80k	6-7	33446	PM96WA 110SP60k	6-4	33517	PM96WA 110TT200K	6-5
33376	PM72WA 110TF100k	6-7	33447	PM96WA 110SP80k	6-4	33518	PM96WA 110TT300K	6-5
33377	PM72WA 110TF120k	6-7	33448	PM96WA 110SP100k	6-4	33519	PM96WA 110TT400K	6-5
33378	PM72WA 110TF160k	6-7	33449	PM96WA 110SP150k	6-4	33520	PM96WA 110TT500K	6-5
33379	PM72WA 110TF200k	6-7	33450	PM96WA 110SP200k	6-4	33521	PM96WA 230TT2000	6-6
33380	PM72WA 110TF300k	6-7	33451	PM96WA 110SP250k	6-4	33522	PM96WA 230TT4000	6-6
33381	PM72WA 110TF400k	6-7	33452	PM96WA 230SP1000	6-4	33523	PM96WA 230TT6000	6-6
33382	PM72WA 110TF500k	6-7	33453	PM96WA 230SP2000	6-4	33524	PM96WA 230TT8000	6-6
33383	PM72WA 230TF2000	6-7	33454	PM96WA 230SP3000	6-4	33525	PM96WA 230TT10K	6-6
33384	PM72WA 230TF4000	6-7	33455	PM96WA 230SP4000	6-4	33526	PM96WA 230TT12K	6-6
33385	PM72WA 230TF6000	6-7	33456	PM96WA 230SP5000	6-4	33527	PM96WA 230TT16K	6-6
33386	PM72WA 230TF8000	6-7	33457	PM96WA 230SP6000	6-4	33528	PM96WA 230TT20K	6-6
33387	PM72WA 230TF10k	6-7	33458	PM96WA 230SP8000	6-4	33529	PM96WA 230TT24K	6-6

Index / Order Code

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
33530	PM96WA 230TT32k	6-6	33601	PM96WA 230TF60k	6-7	33672	PM72VA 230SP50K	6-9
33531	PM96WA 230TT40k	6-6	33602	PM96WA 230TF80k	6-7	33673	PM72VA 230SP60K	6-9
33532	PM96WA 230TT60k	6-6	33603	PM96WA 230TF100k	6-7	33674	PM72VA 230SP80K	6-9
33533	PM96WA 230TT80k	6-6	33604	PM96WA 230TF120k	6-7	33675	PM72VA 230SP100K	6-9
33534	PM96WA 230TT100k	6-6	33605	PM96WA 230TF160k	6-7	33676	PM72VA 230SP120K	6-9
33535	PM96WA 230TT120k	6-6	33606	PM96WA 230TF200k	6-7	33677	PM72VA 230SP160K	6-9
33536	PM96WA 230TT160k	6-6	33607	PM96WA 230TF240k	6-7	33678	PM72VA 230SP200K	6-9
33537	PM96WA 230TT200k	6-6	33608	PM96WA 230TF320k	6-7	33679	PM72VA 230SP300K	6-9
33538	PM96WA 230TT240k	6-6	33609	PM96WA 230TF400k	6-7	33680	PM72VA 230SP400K	6-9
33539	PM96WA 230TT320k	6-6	33610	PM96WA 230TF600k	6-7	33681	PM72VA 230SP500K	6-9
33540	PM96WA 230TT400k	6-6	33611	PM96WA 230TF800k	6-7	33682	PM72VA 400SP2000	6-9
33541	PM96WA 230TT600k	6-6	33612	PM96WA 230TF1000k	6-7	33683	PM72VA 400SP4000	6-9
33542	PM96WA 230TT800k	6-6	33613	PM96WA 400TF4000	6-8	33684	PM72VA 400SP6000	6-9
33543	PM96WA 230TT1000k	6-6	33614	PM96WA 400TF8000	6-8	33685	PM72VA 400SP8000	6-9
33544	PM96WA 400TT4000	6-6	33615	PM96WA 400TF12k	6-8	33686	PM72VA 400SP10K	6-9
33545	PM96WA 400TT8000	6-6	33616	PM96WA 400TF16k	6-8	33687	PM72VA 400SP12K	6-9
33546	PM96WA 400TT12k	6-6	33617	PM96WA 400TF20k	6-8	33688	PM72VA 400SP16K	6-9
33547	PM96WA 400TT16k	6-6	33618	PM96WA 400TF24k	6-8	33689	PM72VA 400SP20K	6-9
33548	PM96WA 400TT20k	6-6	33619	PM96WA 400TF32k	6-8	33690	PM72VA 400SP24K	6-9
33549	PM96WA 400TT24k	6-6	33620	PM96WA 400TF40k	6-8	33691	PM72VA 400SP32K	6-9
33550	PM96WA 400TT32k	6-6	33621	PM96WA 400TF48k	6-8	33692	PM72VA 400SP40K	6-9
33551	PM96WA 400TT40k	6-6	33622	PM96WA 400TF64k	6-8	33693	PM72VA 400SP60K	6-9
33552	PM96WA 400TT48k	6-6	33623	PM96WA 400TF80k	6-8	33694	PM72VA 400SP80K	6-9
33553	PM96WA 400TT64k	6-6	33624	PM96WA 400TF120k	6-8	33695	PM72VA 400SP100K	6-9
33554	PM96WA 400TT80k	6-6	33625	PM96WA 400TF160k	6-8	33696	PM72VA 400SP120K	6-9
33555	PM96WA 400TT120k	6-6	33626	PM96WA 400TF200k	6-8	33697	PM72VA 400SP160K	6-9
33556	PM96WA 400TT160k	6-6	33627	PM96WA 400TF240k	6-8	33698	PM72VA 400SP200K	6-9
33557	PM96WA 400TT200k	6-6	33628	PM96WA 400TF320k	6-8	33699	PM72VA 400SP240K	6-9
33558	PM96WA 400TT240k	6-6	33629	PM96WA 400TF400k	6-8	33700	PM72VA 400SP320K	6-9
33559	PM96WA 400TT320k	6-6	33630	PM96WA 400TF480k	6-8	33701	PM72VA 400SP400K	6-9
33560	PM96WA 400TT400k	6-6	33631	PM96WA 400TF640k	6-8	33702	PM72VA 400SP600K	6-9
33561	PM96WA 400TT480k	6-6	33632	PM96WA 400TF800k	6-8	33703	PM72VA 400SP800K	6-9
33562	PM96WA 400TT640k	6-6	33633	PM96WA 400TF1200k	6-8	33704	PM72VA 400SP1000K	6-9
33563	PM96WA 400TT800k	6-6	33634	PM96WA 400TF1600k	6-8	33705	PM72VA 110TT1000	6-10
33564	PM96WA 400TT1200k	6-6	33635	PM96WA 400TF2000k	6-8	33706	PM72VA 110TT2000	6-10
33565	PM96WA 400TT1600k	6-6	33636	PM72VA 110SP500	6-8	33707	PM72VA 110TT3000	6-10
33566	PM96WA 400TT2000k	6-6	33637	PM72VA 110SP1000	6-8	33708	PM72VA 110TT4000	6-10
33567	PM96WA 110TF1000	6-7	33638	PM72VA 110SP1500	6-8	33709	PM72VA 110TT5000	6-10
33568	PM96WA 110TF2000	6-7	33639	PM72VA 110SP2000	6-8	33710	PM72VA 110TT6000	6-10
33569	PM96WA 110TF3000	6-7	33640	PM72VA 110SP2500	6-8	33711	PM72VA 110TT8000	6-10
33570	PM96WA 110TF4000	6-7	33641	PM72VA 110SP3000	6-8	33712	PM72VA 110TT10K	6-10
33571	PM96WA 110TF5000	6-7	33642	PM72VA 110SP4000	6-8	33713	PM72VA 110TT12K	6-10
33572	PM96WA 110TF6000	6-7	33643	PM72VA 110SP5000	6-8	33714	PM72VA 110TT16K	6-10
33573	PM96WA 110TF8000	6-7	33644	PM72VA 110SP6000	6-8	33715	PM72VA 110TT20K	6-10
33574	PM96WA 110TF10k	6-7	33645	PM72VA 110SP8000	6-8	33716	PM72VA 110TT30K	6-10
33575	PM96WA 110TF12k	6-7	33646	PM72VA 110SP10k	6-8	33717	PM72VA 110TT40K	6-10
33576	PM96WA 110TF16k	6-7	33647	PM72VA 110SP15k	6-8	33718	PM72VA 110TT50K	6-10
33577	PM96WA 110TF20k	6-7	33648	PM72VA 110SP20k	6-8	33719	PM72VA 110TT60K	6-10
33578	PM96WA 110TF30k	6-7	33649	PM72VA 110SP25k	6-8	33720	PM72VA 110TT80K	6-10
33579	PM96WA 110TF40k	6-7	33650	PM72VA 110SP30k	6-8	33721	PM72VA 110TT100K	6-10
33580	PM96WA 110TF50k	6-7	33651	PM72VA 110SP40k	6-8	33722	PM72VA 110TT120K	6-10
33581	PM96WA 110TF60k	6-7	33652	PM72VA 110SP50k	6-8	33723	PM72VA 110TT160K	6-10
33582	PM96WA 110TF80k	6-7	33653	PM72VA 110SP60k	6-8	33724	PM72VA 110TT200K	6-10
33583	PM96WA 110TF100k	6-7	33654	PM72VA 110SP80k	6-8	33725	PM72VA 110TT300K	6-10
33584	PM96WA 110TF120k	6-7	33655	PM72VA 110SP100k	6-8	33726	PM72VA 110TT400K	6-10
33585	PM96WA 110TF160k	6-7	33656	PM72VA 110SP150k	6-8	33727	PM72VA 110TT500K	6-10
33586	PM96WA 110TF200k	6-7	33657	PM72VA 110SP200k	6-8	33728	PM72VA 230TT2000	6-10
33587	PM96WA 110TF300k	6-7	33658	PM72VA 110SP250k	6-8	33729	PM72VA 230TT4000	6-10
33588	PM96WA 110TF400k	6-7	33659	PM72VA 230SP1000	6-9	33730	PM72VA 230TT6000	6-10
33589	PM96WA 110TF500k	6-7	33660	PM72VA 230SP2000	6-9	33731	PM72VA 230TT8000	6-10
33590	PM96WA 230TF2000	6-7	33661	PM72VA 230SP3000	6-9	33732	PM72VA 230TT10K	6-10
33591	PM96WA 230TF4000	6-7	33662	PM72VA 230SP4000	6-9	33733	PM72VA 230TT12K	6-10
33592	PM96WA 230TF6000	6-7	33663	PM72VA 230SP5000	6-9	33734	PM72VA 230TT16K	6-10
33593	PM96WA 230TF8000	6-7	33664	PM72VA 230SP6000	6-9	33735	PM72VA 230TT20K	6-10
33594	PM96WA 230TF10k	6-7	33665	PM72VA 230SP8000	6-9	33736	PM72VA 230TT24K	6-10
33595	PM96WA 230TF12k	6-7	33666	PM72VA 230SP10k	6-9	33737	PM72VA 230TT32K	6-10
33596	PM96WA 230TF16k	6-7	33667	PM72VA 230SP12k	6-9	33738	PM72VA 230TT40K	6-10
33597	PM96WA 230TF20k	6-7	33668	PM72VA 230SP16k	6-9	33739	PM72VA 230TT60K	6-10
33598	PM96WA 230TF24k	6-7	33669	PM72VA 230SP20k	6-9	33740	PM72VA 230TT80K	6-10
33599	PM96WA 230TF32k	6-7	33670	PM72VA 230SP30k	6-9	33741	PM72VA 230TT100K	6-10
33600	PM96WA 230TF40k	6-7	33671	PM72VA 230SP40k	6-9	33742	PM72VA 230TT120K	6-10

Order code	Type code	Page	Order code	Type code	Page	Order code	Type code	Page
33743	PM72VA 230TT160k	6-10	33814	PM72VA 230TF240k	6-12	33885	PM96VA 230SP200K	6-9
33744	PM72VA 230TT200k	6-10	33815	PM72VA 230TF320k	6-12	33886	PM96VA 230SP300K	6-9
33745	PM72VA 230TT240k	6-10	33816	PM72VA 230TF400k	6-12	33887	PM96VA 230SP400K	6-9
33746	PM72VA 230TT320k	6-10	33817	PM72VA 230TF600k	6-12	33888	PM96VA 230SP500K	6-9
33747	PM72VA 230TT400k	6-10	33818	PM72VA 230TF800k	6-12	33889	PM96VA 400SP2000	6-9
33748	PM72VA 230TT600k	6-10	33819	PM72VA 230TF1000k	6-12	33890	PM96VA 400SP4000	6-9
33749	PM72VA 230TT800k	6-10	33820	PM72VA 400TF4000	6-12	33891	PM96VA 400SP6000	6-9
33750	PM72VA 230TT1000k	6-10	33821	PM72VA 400TF8000	6-12	33892	PM96VA 400SP8000	6-9
33751	PM72VA 400TT4000	6-11	33822	PM72VA 400TF12k	6-12	33893	PM96VA 400SP10K	6-9
33752	PM72VA 400TT8000	6-11	33823	PM72VA 400TF16k	6-12	33894	PM96VA 400SP12K	6-9
33753	PM72VA 400TT12k	6-11	33824	PM72VA 400TF20k	6-12	33895	PM96VA 400SP16K	6-9
33754	PM72VA 400TT16k	6-11	33825	PM72VA 400TF24k	6-12	33896	PM96VA 400SP20K	6-9
33755	PM72VA 400TT20k	6-11	33826	PM72VA 400TF32k	6-12	33897	PM96VA 400SP24K	6-9
33756	PM72VA 400TT24k	6-11	33827	PM72VA 400TF40k	6-12	33898	PM96VA 400SP32K	6-9
33757	PM72VA 400TT32k	6-11	33828	PM72VA 400TF48k	6-12	33899	PM96VA 400SP40K	6-9
33758	PM72VA 400TT40k	6-11	33829	PM72VA 400TF64k	6-12	33900	PM96VA 400SP60K	6-9
33759	PM72VA 400TT48k	6-11	33830	PM72VA 400TF80k	6-12	33901	PM96VA 400SP80K	6-9
33760	PM72VA 400TT64k	6-11	33831	PM72VA 400TF120k	6-12	33902	PM96VA 400SP100K	6-9
33761	PM72VA 400TT80k	6-11	33832	PM72VA 400TF160k	6-12	33903	PM96VA 400SP120K	6-9
33762	PM72VA 400TT120k	6-11	33833	PM72VA 400TF200k	6-12	33904	PM96VA 400SP160K	6-9
33763	PM72VA 400TT160k	6-11	33834	PM72VA 400TF240k	6-12	33905	PM96VA 400SP200K	6-9
33764	PM72VA 400TT200k	6-11	33835	PM72VA 400TF320k	6-12	33906	PM96VA 400SP240K	6-9
33765	PM72VA 400TT240k	6-11	33836	PM72VA 400TF400k	6-12	33907	PM96VA 400SP320K	6-9
33766	PM72VA 400TT320k	6-11	33837	PM72VA 400TF480k	6-12	33908	PM96VA 400SP400K	6-9
33767	PM72VA 400TT400k	6-11	33838	PM72VA 400TF640k	6-12	33909	PM96VA 400SP600K	6-9
33768	PM72VA 400TT480k	6-11	33839	PM72VA 400TF800k	6-12	33910	PM96VA 400SP800K	6-9
33769	PM72VA 400TT640k	6-11	33840	PM72VA 400TF1200k	6-12	33911	PM96VA 400SP1000K	6-9
33770	PM72VA 400TT800k	6-11	33841	PM72VA 400TF1600k	6-12	33912	PM96VA 110TT1000	6-10
33771	PM72VA 400TT1200k	6-11	33842	PM72VA 400TF2000k	6-12	33913	PM96VA 110TT2000	6-10
33772	PM72VA 400TT1600k	6-11	33843	PM96VA 110SP500	6-8	33914	PM96VA 110TT3000	6-10
33773	PM72VA 400TT2000k	6-11	33844	PM96VA 110SP1000	6-8	33915	PM96VA 110TT4000	6-10
33774	PM72VA 110TF1000	6-11	33845	PM96VA 110SP1500	6-8	33916	PM96VA 110TT5000	6-10
33775	PM72VA 110TF2000	6-11	33846	PM96VA 110SP2000	6-8	33917	PM96VA 110TT8000	6-10
33776	PM72VA 110TF3000	6-11	33847	PM96VA 110SP2500	6-8	33918	PM96VA 110TT8000	6-10
33777	PM72VA 110TF4000	6-11	33848	PM96VA 110SP3000	6-8	33919	PM96VA 110TT10K	6-10
33778	PM72VA 110TF5000	6-11	33849	PM96VA 110SP4000	6-8	33920	PM96VA 110TT12K	6-10
33779	PM72VA 110TF6000	6-11	33850	PM96VA 110SP5000	6-8	33921	PM96VA 110TT16K	6-10
33780	PM72VA 110TF8000	6-11	33851	PM96VA 110SP6000	6-8	33922	PM96VA 110TT20K	6-10
33781	PM72VA 110TF10k	6-11	33852	PM96VA 110SP8000	6-8	33923	PM96VA 110TT30K	6-10
33782	PM72VA 110TF12k	6-11	33853	PM96VA 110SP10k	6-8	33924	PM96VA 110TT40K	6-10
33783	PM72VA 110TF16k	6-11	33854	PM96VA 110SP15k	6-8	33925	PM96VA 110TT50K	6-10
33784	PM72VA 110TF20k	6-11	33855	PM96VA 110SP20k	6-8	33926	PM96VA 110TT60K	6-10
33785	PM72VA 110TF30k	6-11	33856	PM96VA 110SP25k	6-8	33927	PM96VA 110TT80K	6-10
33786	PM72VA 110TF40k	6-11	33857	PM96VA 110SP30k	6-8	33928	PM96VA 110TT100K	6-10
33787	PM72VA 110TF50k	6-11	33858	PM96VA 110SP40k	6-8	33929	PM96VA 110TT120K	6-10
33788	PM72VA 110TF60k	6-11	33859	PM96VA 110SP50k	6-8	33930	PM96VA 110TT160K	6-10
33789	PM72VA 110TF80k	6-11	33860	PM96VA 110SP60k	6-8	33931	PM96VA 110TT200K	6-10
33790	PM72VA 110TF100k	6-11	33861	PM96VA 110SP80k	6-8	33932	PM96VA 110TT300K	6-10
33791	PM72VA 110TF120k	6-11	33862	PM96VA 110SP100k	6-8	33933	PM96VA 110TT400K	6-10
33792	PM72VA 110TF160k	6-11	33863	PM96VA 110SP150k	6-8	33934	PM96VA 110TT500K	6-10
33793	PM72VA 110TF200k	6-11	33864	PM96VA 110SP200k	6-8	33935	PM96VA 230TT2000	6-10
33794	PM72VA 110TF300k	6-11	33865	PM96VA 110SP250k	6-8	33936	PM96VA 230TT4000	6-10
33795	PM72VA 110TF400k	6-11	33866	PM96VA 230SP1000	6-9	33937	PM96VA 230TT6000	6-10
33796	PM72VA 110TF500k	6-11	33867	PM96VA 230SP2000	6-9	33938	PM96VA 230TT8000	6-10
33797	PM72VA 230TF2000	6-12	33868	PM96VA 230SP3000	6-9	33939	PM96VA 230TT10K	6-10
33798	PM72VA 230TF4000	6-12	33869	PM96VA 230SP4000	6-9	33940	PM96VA 230TT12K	6-10
33799	PM72VA 230TF6000	6-12	33870	PM96VA 230SP5000	6-9	33941	PM96VA 230TT16K	6-10
33800	PM72VA 230TF8000	6-12	33871	PM96VA 230SP6000	6-9	33942	PM96VA 230TT20K	6-10
33801	PM72VA 230TF10k	6-12	33872	PM96VA 230SP8000	6-9	33943	PM96VA 230TT24K	6-10
33802	PM72VA 230TF12k	6-12	33873	PM96VA 230SP10k	6-9	33944	PM96VA 230TT32K	6-10
33803	PM72VA 230TF16k	6-12	33874	PM96VA 230SP12k	6-9	33945	PM96VA 230TT40K	6-10
33804	PM72VA 230TF20k	6-12	33875	PM96VA 230SP16k	6-9	33946	PM96VA 230TT60K	6-10
33805	PM72VA 230TF24k	6-12	33876	PM96VA 230SP20k	6-9	33947	PM96VA 230TT80K	6-10
33806	PM72VA 230TF32k	6-12	33877	PM96VA 230SP30k	6-9	33948	PM96VA 230TT100K	6-10
33807	PM72VA 230TF40k	6-12	33878	PM96VA 230SP40k	6-9	33949	PM96VA 230TT120K	6-10
33808	PM72VA 230TF60k	6-12	33879	PM96VA 230SP50k	6-9	33950	PM96VA 230TT160K	6-10
33809	PM72VA 230TF80k	6-12	33880	PM96VA 230SP60k	6-9	33951	PM96VA 230TT200K	6-10
33810	PM72VA 230TF100k	6-12	33881	PM96VA 230SP80k	6-9	33952	PM96VA 230TT240K	6-10
33811	PM72VA 230TF120k	6-12	33882	PM96VA 230SP100k	6-9	33953	PM96VA 230TT320K	6-10
33812	PM72VA 230TF160k	6-12	33883	PM96VA 230SP120k	6-9	33954	PM96VA 230TT400K	6-10
33813	PM72VA 230TF200k	6-12	33884	PM96VA 230SP160k	6-9	33955	PM96VA 230TT600K	6-10

Алматы (7273) 495-231
Ангарск (3955) 60-70-56
Архангельск (8182) 63-90-72
Астрахань (8512) 99-46-04
Барнаул (3852) 73-04-60
Белгород (4722) 40-23-64
Благовещенск (4162) 22-76-07
Брянск (4832) 59-03-52
Владивосток (423) 249-28-31
Владикавказ (8672) 28-90-48
Владимир (4922) 49-43-18
Волгоград (844) 278-03-48
Вологда (8172) 26-41-59
Воронеж (473) 204-51-73
Екатеринбург (343) 384-55-89

Иваново (4932) 77-34-06
Ижевск (3412) 26-03-58
Иркутск (395) 279-98-46
Казань (843) 206-01-48
Калининград (4012) 72-03-81
Калуга (4842) 92-23-67
Кемерово (3842) 65-04-62
Киров (8332) 68-02-04
Коломна (4966) 23-41-49
Кострома (4942) 77-07-48
Краснодар (861) 203-40-90
Красноярск (391) 204-63-61
Курск (4712) 77-13-04
Курган (3522) 50-90-47
Липецк (4742) 52-20-81

Магнитогорск (3519) 55-03-13
Москва (495) 268-04-70
Мурманск (8152) 59-64-93
Набережные Челны (8552) 20-53-41
Нижний Новгород (831) 429-08-12
Новокузнецк (3843) 20-46-81
Ноябрьск (3496) 41-32-12
Новосибирск (383) 227-86-73
Омск (3812) 21-46-40
Орел (4862) 44-53-42
Оренбург (3532) 37-68-04
Пенза (8412) 22-31-16
Петрозаводск (8142) 55-98-37
Псков (8112) 59-10-37
Пермь (342) 205-81-47

Ростов-на-Дону (863) 308-18-15
Рязань (4912) 46-61-64
Самара (846) 206-03-16
Санкт-Петербург (812) 309-46-40
Саратов (845) 249-38-78
Севастополь (8692) 22-31-93
Саранск (8342) 22-96-24
Симферополь (3652) 67-13-56
Смоленск (4812) 29-41-54
Сочи (862) 225-72-31
Ставрополь (8652) 20-65-13
Сургут (3462) 77-98-35
Сыктывкар (8212) 25-95-17
Тамбов (4752) 50-40-97
Тверь (4822) 63-31-35

Тольятти (8482) 63-91-07
Томск (3822) 98-41-53
Тула (4872) 33-79-87
Тюмень (3452) 66-21-18
Ульяновск (8422) 24-23-59
Улан-Удэ (3012) 59-97-51
Уфа (347) 229-48-12
Хабаровск (4212) 92-98-04
Чебоксары (8352) 28-53-07
Челябинск (351) 202-03-61
Череповец (8202) 49-02-64
Чита (3022) 38-34-83
Якутск (4112) 23-90-97
Ярославль (4852) 69-52-93

Россия +7(495) 268-04-70

Казахстан +7(7172) 727-132

Киргизия +996(312) 96-26-47

<https://sassin.nt-rt.ru/> || sib@nt-rt.ru