3SB71-125, high current, 10 kA

Independent power supply with build-in power source,directly draws power from the incoming end to avoid the risk of protection function failure caused by supply failure.

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

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 In (A): 80, 100, 125
- Rated voltage Un (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 C (In): 8
- Characteristic D (In): 12
- Thermal operating limit (In): (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(V)		Acc. to IEC 60947-2	
			Icu(kA)	Icu(kA)
3SB71-125	1P	230/400	10	7.5
	2-4P	400	10	7.5

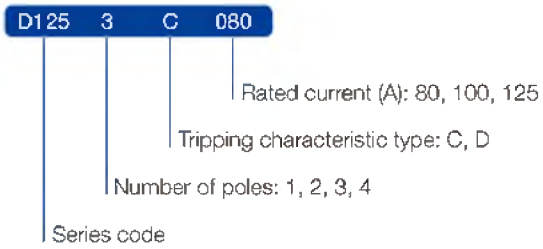
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm²): 1-50
- Finely stranded with end sleeve (mm²): 1-35
- Terminal tightening torque (N·m): 2.8

- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity
- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max 2,000

References

- Additional components: page 189 ~ 191

Instruction of Type Code

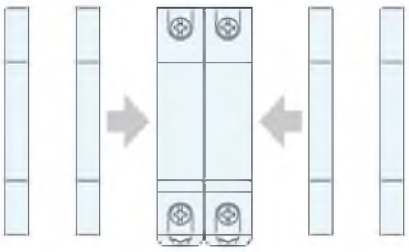


Features

- Rated current up to 125 A
- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- 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 In, release C 8 In, release D 12 In.
- 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



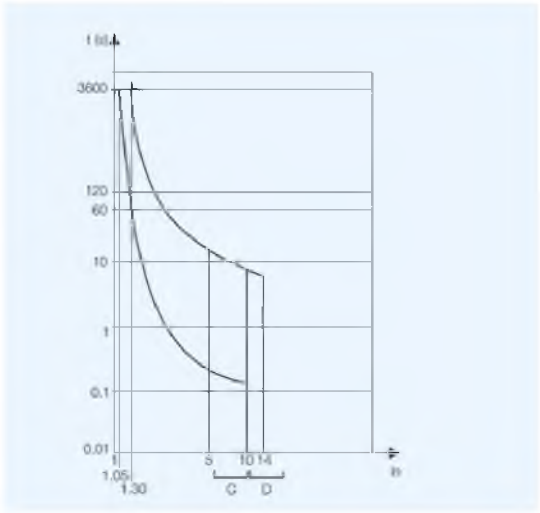
Selection and Ordering Data

IEC 60947-2 10 kA

	Number of poles	Rated current In (A)	Characteristic C		Characteristic D		
			Type code	Order code	Type code	Order code	Pack.
	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

Tripping Characteristic

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 In
- release D: 12 In

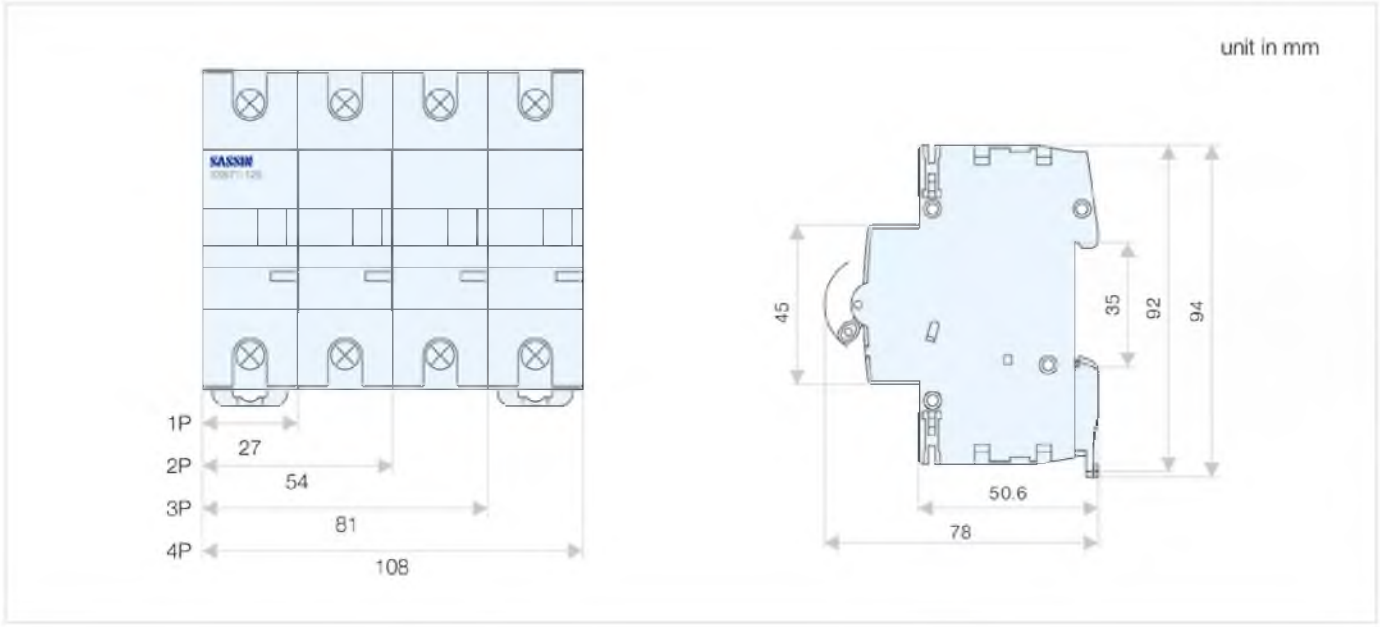
Thermal Release

- 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 ℃

Test current	Tripping time
1.05 In	t ≥ 2 h (In > 63 A)
1.30 In	t < 2 h (In > 63 A)

Outline and Installation Dimensions

3SB71-125 is installed on DIN rail



3SB71Z-63, for DC applications

Independent power supply with build-in power source,directly draws power from the incoming end to avoid the risk of protection function failure caused by supply failure.

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

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 In (A): 6, 10, 16, 20, 25, 32, 40, 50, 63
- Number of poles: 1, 2
- Rated voltage Ue (V DC):
- 1P: 220
- 2P: 440
- Operational voltage Ub (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 B (In): 4~7
- Characteristic C (In): 7~15
- Thermal operating limit (In): 1.13~1.45
- Rated breaking capacity:

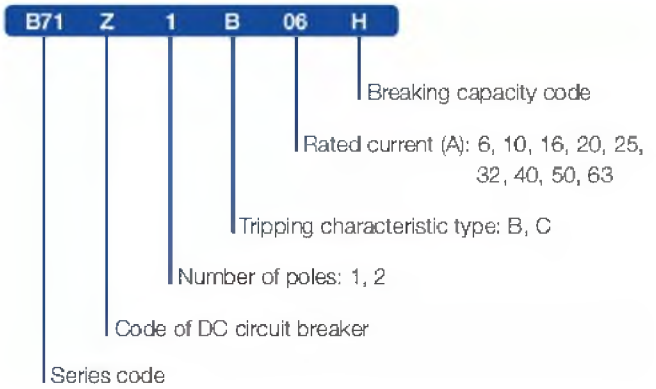
Model	Rated voltage(V)		Acc. to IEC 60898-2	
			Icn(kA)	Ics
3SB71Z-63	1P	220 V DC	10	7.5
	2P	400 V DC	10	7.5

- 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): 2.8
- 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 189 ~ 191

Instruction of type code

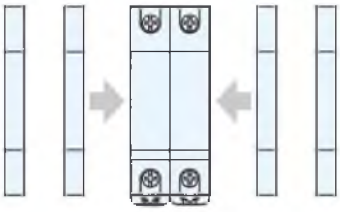


Features

- 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



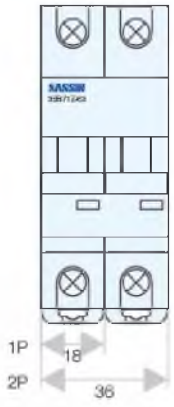
Selection and ordering data

IEC 60898-2 10 kA

	Number of poles	Rated current In (A)	Characteristic B		Characteristic 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

Outline and installation dimensions

unit in mm



3SB66, 1P+N in 1 modular width

Independent power supply with build-in power source,directly draws power from the incoming end to avoid the risk of protection function failure caused by supply failure.

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

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 In (A): 6, 10, 16, 20, 25, 32, 40
- Rated voltage Un (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 B (In): 3-5
- Characteristic C (In): 5-10
- Thermal operating limit : 1.13-1.45 In
- Rated switching capacity Icn (kA): 6
- Degree of protection: IP20, with connected conductors
- Electrical life(times): 4,000
- Mechanical life (times): 10,000
- Breaking capacity:

Model	Rated voltage(V)		Acc. to IEC 60898-1	
			Icu(kA)	Ics(kA)
3SB66	1P+N	230	6	6

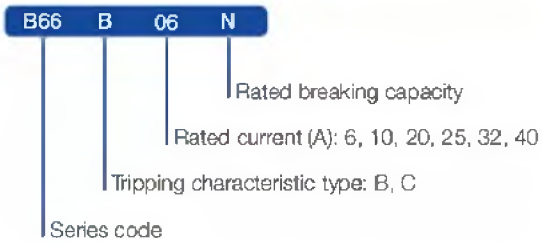
- Mounting position: Any
- Conductor cross-sections
- Solid and stranded (mm²): 0.75-16
- Finely stranded with end sleeve (mm²): 0.75-16
- Terminal tightening torque (N·m): 2.0
- Ambient temperature (°C): -25 ~ +45, max. 95 % humidity

- Storage temperature (°C): -40 ~ +75
- Altitude (meters): Max. 2,000
- Aonnection capacity (mm²): 1-16

References

- Additional components: page 189 ~ 191

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

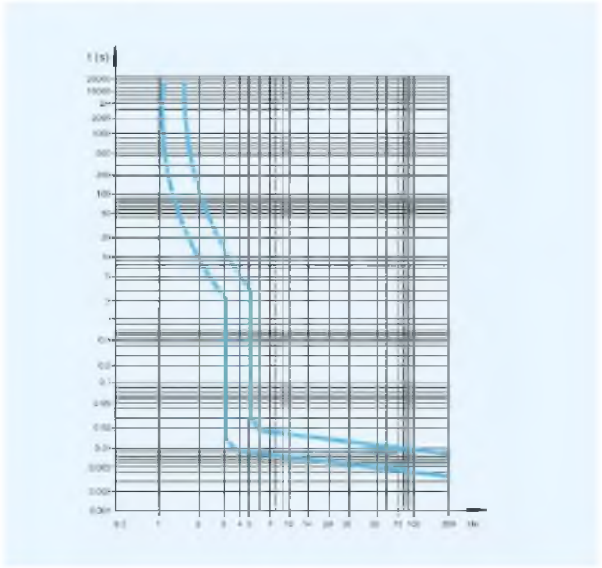
Selection and ordering data

IEC 60898-2 10 kA

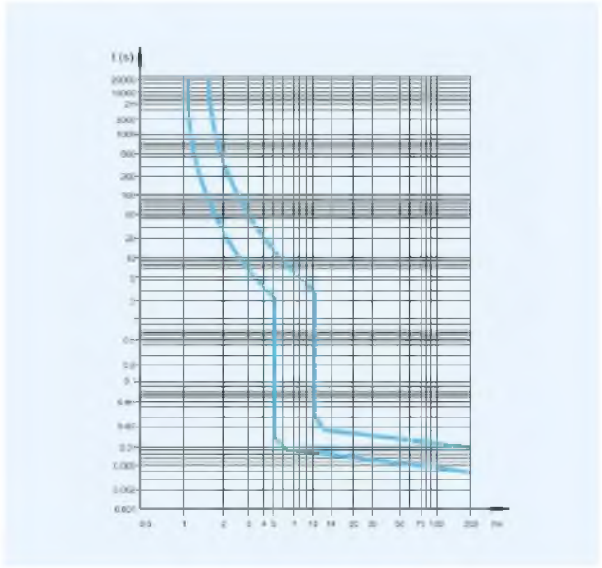
	Number of poles	Rated current In (A)	Characteristic B		Characteristic C		Pack.
			Type code	Order code	Type code	Order code	
	1P+N	6	B66 B06N	21284	B66 C06N	21291	12
		10	B66 B10N	21285	B66 C10N	21292	12
		16	B66 B16N	21286	B66 C16N	21293	12
		20	B66 B20N	21287	B66 C20N	21294	12
		25	B66 B25N	21288	B66 C25N	21295	12
		32	B66 B32N	21289	B66 C32N	21296	12
		40	B66 B40N	21290	B66 C40N	21297	12

Tripping Characteristic curves

Characteristic B



Characteristic C



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	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 heate
	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 - smal
	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 ºC

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

3SB71-63, 16000 A & 10000 A

Independent power supply with build-in power source,directly draws power from the incoming end to avoid the risk of protection function failure caused by supply failure.

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

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 In (A) : 2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63
- Rated voltage Un (V AC): 230/400
- Operational voltage (V AC): Min. 2; Max. 250/440
- Rated frequency (Hz): 50/60
- Rated insulation voltage (V AC): 500
- Number of poles: 1, 2, 3, 4

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

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

Model	Rated voltage(V)		Acc. to IEC 60898-1		Acc. to IEC 60947-2	
			Icn(kA)	Ics(kA)	Icu(kA)	Ics(kA)
3SB71-63	1P	230/400	16	12	15	7.5

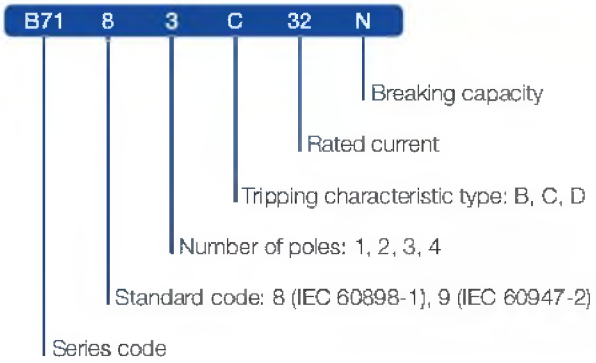
	2-4P	400	16	12	15	7.5
3SB71-63H	1P	230/400	10	7.5	10	7.5
	2-4P	400	10	7.5	10	7.5

- 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 189 ~ 191

Instruction of type code

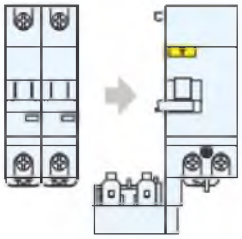


Features

- 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

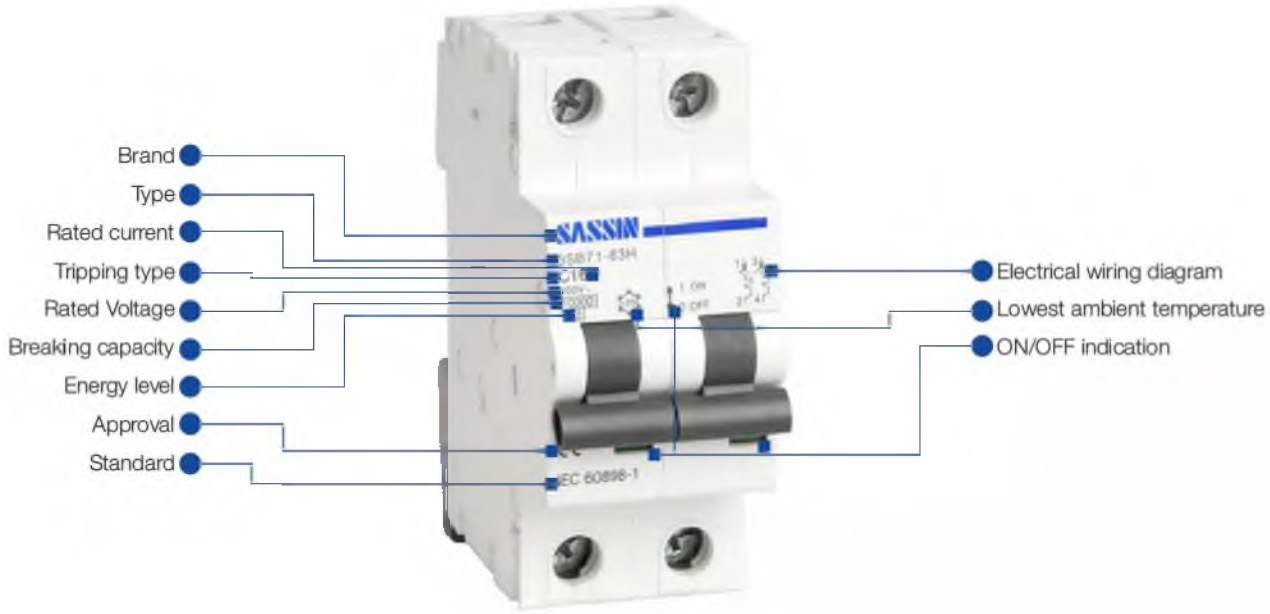
Add-on RCD



Auxiliaries

Benefits

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



Well matched with RCCB 3SL71

Extended with add-on RCD block 3SB71LB

Added 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

Selection and ordering data

IEC 60898-1 16 kA

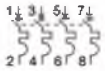
IEC 60947-2 15 kA

	Number of poles	Rated current In (A)	Characteristic B		Characteristic C		Characteristic D		Pack.
			Type code	Order code	Type code	Order code	Type code	Order code	
	1	6	B71 1B06	13702	B71 1C06	13713	B71 1D06	13724	12
		10	B71 1B10	13703	B71 1C10	13714	B71 1D10	13725	12
		16	B71 1B16	13704	B71 1C16	13715	B71 1D16	13726	12
		20	B71 1B20	13705	B71 1C20	13716	B71 1D20	13727	12
		25	B71 1B25	13706	B71 1C25	13717	B71 1D25	13728	12
		32	B71 1B32	13707	B71 1C32	13718	B71 1D32	13729	12
		40	B71 1B40	13708	B71 1C40	13719	B71 1D40	13730	12
		50	B71 1B50	13709	B71 1C50	13720	B71 1D50	13731	12
		63	B71 1B63	13710	B71 1C63	13721	B71 1D63	13732	12
	2	6	B71 2B06	13735	B71 2C06	13746	B71 2D06	13757	6
		10	B71 2B10	13736	B71 2C10	13747	B71 2D10	13758	6
		16	B71 2B16	13737	B71 2C16	13748	B71 2D16	13759	6
		20	B71 2B20	13738	B71 2C20	13749	B71 2D20	13760	6
		25	B71 2B25	13739	B71 2C25	13750	B71 2D25	13761	6
		32	B71 2B32	13740	B71 2C32	13751	B71 2D32	13762	6
		40	B71 2B40	13741	B71 2C40	13752	B71 2D40	13763	6
		50	B71 2B50	13742	B71 2C50	13753	B71 2D50	13764	6
		63	B71 2B63	13743	B71 2C63	13754	B71 2D63	13765	6
	3	6	B71 3B06	13768	B71 3C06	13779	B71 3D06	13790	4
		10	B71 3B10	13769	B71 3C10	13780	B71 3D10	13791	4
		16	B71 3B16	13770	B71 3C16	13781	B71 3D16	13792	4
		20	B71 3B20	13771	B71 3C20	13782	B71 3D20	13793	4
		25	B71 3B25	13772	B71 3C25	13783	B71 3D25	13794	4
		32	B71 3B32	13773	B71 3C32	13784	B71 3D32	13795	4
		40	B71 3B40	13774	B71 3C40	13785	B71 3D40	13796	4
		50	B71 3B50	13775	B71 3C50	13786	B71 3D50	13797	4
		63	B71 3B63	13776	B71 3C63	13787	B71 3D63	13798	4
	4	6	B71 4B06	13801	B71 4C06	13812	B71 4D06	13823	3
		10	B71 4B10	13802	B71 4C10	13813	B71 4D10	13824	3
		16	B71 4B16	13803	B71 4C16	13814	B71 4D16	13825	3
		20	B71 4B20	13804	B71 4C20	13815	B71 4D20	13826	3
		25	B71 4B25	13805	B71 4C25	13816	B71 4D25	13827	3
		32	B71 4B32	13806	B71 4C32	13817	B71 4D32	13828	3
		40	B71 4B40	13807	B71 4C40	13818	B71 4D40	13829	3
		50	B71 4B50	13808	B71 4C50	13819	B71 4D50	13830	3
		63	B71 4B63	13809	B71 4C63	13820	B71 4D63	13831	3

Selection and ordering data

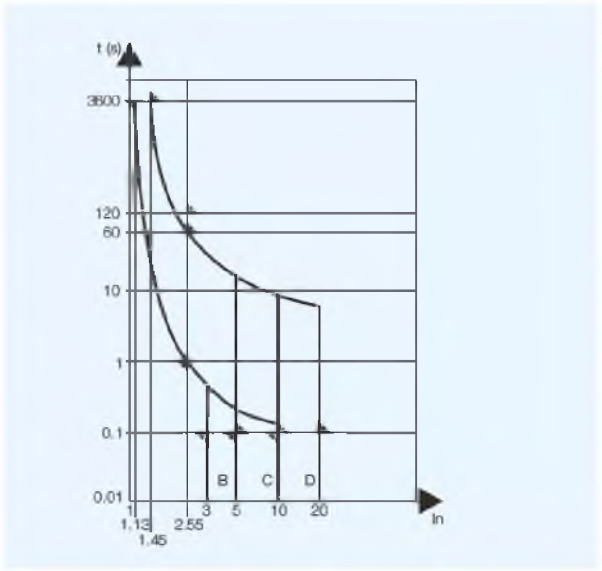
IEC 60898-1 10 kA

IEC 60947-2 10 kA

	Number of poles	Rated current In (A)	Characteristic B		Characteristic C		Characteristic D		Pack.
			Type code	Order code	Type code	Order code	Type code	Order code	
	1	2	B71 1B02H	19251	B71 1C02H	19271	B71 1D02H	19291	12
		4	B71 1B04H	19253	B71 1C04H	19273	B71 1D04H	19293	12
		6	B71 1B06H	20001	B71 1C06H	20046	B71 1D06H	20091	12
		10	B71 1B10H	20002	B71 1C10H	20047	B71 1D10H	20092	12
		16	B71 1B16H	20003	B71 1C16H	20048	B71 1D16H	20093	12
		20	B71 1B20H	20004	B71 1C20H	20049	B71 1D20H	20094	12
		25	B71 1B25H	20005	B71 1C25H	20050	B71 1D25H	20095	12
		32	B71 1B32H	20006	B71 1C32H	20051	B71 1D32H	20096	12
		40	B71 1B40H	20007	B71 1C40H	20052	B71 1D40H	20097	12
		50	B71 1B50H	20008	B71 1C50H	20053	B71 1D50H	20098	12
		63	B71 1B63H	20009	B71 1C63H	20054	B71 1D63H	20099	12
	2	2	B71 2B02H	19255	B71 2C02H	19275	B71 2D02H	19295	6
		4	B71 2B04H	19257	B71 2C04H	19277	B71 2D04H	19297	6
		6	B71 2B06H	20010	B71 2C06H	20055	B71 2D06H	20100	6
		10	B71 2B10H	20011	B71 2C10H	20056	B71 2D10H	20101	6
		16	B71 2B16H	20012	B71 2C16H	20057	B71 2D16H	20102	6
		20	B71 2B20H	20013	B71 2C20H	20058	B71 2D20H	20103	6
		25	B71 2B25H	20014	B71 2C25H	20059	B71 2D25H	20104	6
		32	B71 2B32H	20015	B71 2C32H	20060	B71 2D32H	20105	6
		40	B71 2B40H	20016	B71 2C40H	20061	B71 2D40H	20106	6
		50	B71 2B50H	20017	B71 2C50H	20062	B71 2D50H	20107	6
		63	B71 2B63H	20018	B71 2C63H	20063	B71 2D63H	20108	6
	3	2	B71 3B02H	19259	B71 3C02H	19279	B71 3D02H	19299	4
		4	B71 3B04H	19261	B71 3C04H	19281	B71 3D04H	19301	4
		6	B71 3B06H	20019	B71 3C06H	20064	B71 3D06H	20109	4
		10	B71 3B10H	20020	B71 3C10H	20065	B71 3D10H	20110	4
		16	B71 3B16H	20021	B71 3C16H	20066	B71 3D16H	20111	4
		20	B71 3B20H	20022	B71 3C20H	20067	B71 3D20H	20112	4
		25	B71 3B25H	20023	B71 3C25H	20068	B71 3D25H	20113	4
		32	B71 3B32H	20024	B71 3C32H	20069	B71 3D32H	20114	4
		40	B71 3B40H	20025	B71 3C40H	20070	B71 3D40H	20115	4
		50	B71 3B50H	20026	B71 3C50H	20071	B71 3D50H	20116	4
		63	B71 3B63H	20027	B71 3C63H	20072	B71 3D63H	20117	4
	4	2	B71 4B02H	19267	B71 4C02H	19287	B71 4D02H	19307	3
		4	B71 4B04H	19269	B71 4C04H	19289	B71 4D04H	19309	3
		6	B71 4B06H	20037	B71 4C06H	20082	B71 4D06H	20127	3
		10	B71 4B10H	20038	B71 4C10H	20083	B71 4D10H	20128	3
		16	B71 4B16H	20039	B71 4C16H	20084	B71 4D16H	20129	3
		20	B71 4B20H	20040	B71 4C20H	20085	B71 4D20H	20130	3
		25	B71 4B25H	20041	B71 4C25H	20086	B71 4D25H	20131	3
		32	B71 4B32H	20042	B71 4C32H	20087	B71 4D32H	20132	3
		40	B71 4B40H	20043	B71 4C40H	20088	B71 4D40H	20133	3
		50	B71 4B50H	20044	B71 4C50H	20089	B71 4D50H	20134	3
		63	B71 4B63H	20045	B71 4C63H	20090	B71 4D63H	20135	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

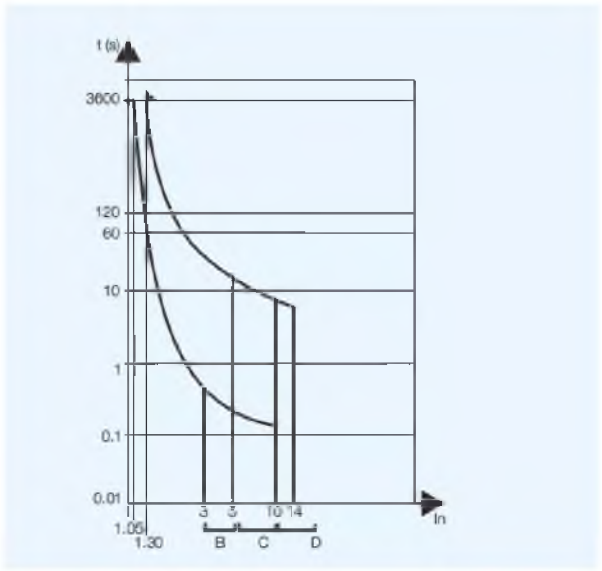
	Test current	Tripping time	Applications
B	3 In	0.1 < t < 45 s (In ≤ 32 A) 0.1 < t < 90 s (In > 32 A)	Only for resistive loads such as: - electrical heating - water heater
	5 In	t < 0.1 s	- stoves
C	5 In	0.1 < t < 15 s (In ≤ 32 A) 0.1 < t < 30 s (In > 32 A)	Usual loads such as: - lighting - socket outlets
	10 In	t < 0.1 s	- small motors
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)

Selectivity

Load side: 3SB71-63,Characteristic B, C

Rated current In (A)	**Power supply side: RT16-00 (fuse)**								
	20	**25**	**36**	**50**	**63**	**80**	**100**	**125**	**1**
	Is(kA)								
≤2	1.2	4	12	12	12	12	12	12	1
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
63							2.4	3.3	4

Load side: 3SB71-63,Characteristic B, C

Rated current In (A)	**Power supply side: 3SM29-125**								
	16	**20**	**25**	**32**	**40**	**50**	**63**	**80**	**1**
	Is(kA)								
≤10	0.19	0.019	0.3	0.4	0.5	0.5	0.5	0.63	0
16			0.3	0.4	0.5	0.5	0.5	0.63	0
20					0.5	0.5	0.5	0.63	0
25						0.5	0.5	0.63	0
32						0.5	0.5	0.63	0
40									
50									
63									

Back up protection

Load side: 3SB71-63,Characteristic B, C

Rated current In (A)	**Power supply side: RT16 series**						
	40	**50**	**63**	**80**	**100**	**125**	**160**
	Is(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,Characteristic B, C

Rated current In (A)	**Power supply side: 3SM29**					
	3SM29-125S	**3SM29-125H**	**3SM29-125R**	**3SM29-250S**	**3SM29-250H**	**3SM29-**
	Is(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

Temperature derating

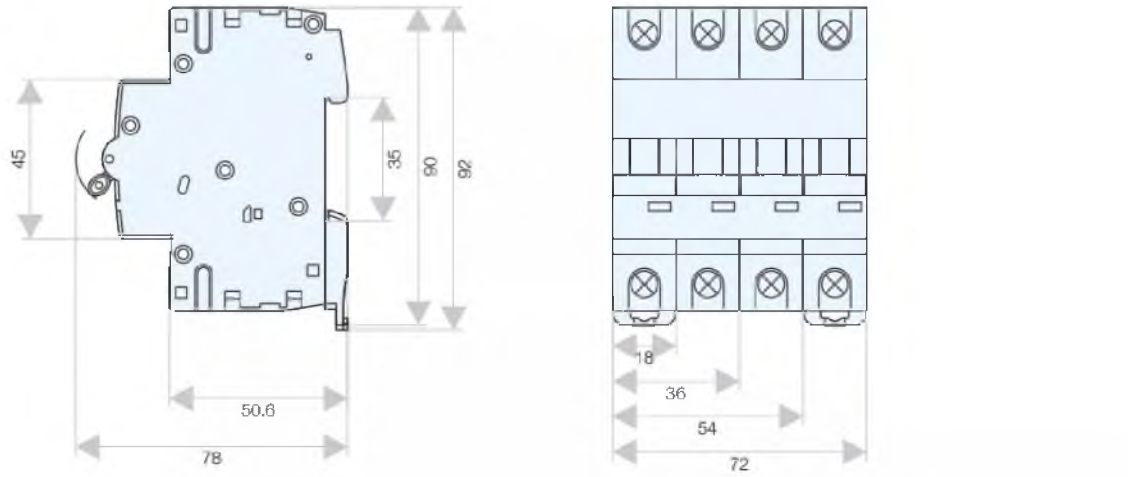
The maximum permissible current in a circuit breaker depends on the ambient temperature where the circuit breaker is placed.
Ambient temperature is the temperature inside the enclosure or switchboard in which the circuit breakers are installed.
The reference temperature is 30 ℃

Ambient temperature Rated current (A)	**-35 ℃**	**-30 ℃**	**-20 ℃**	**-10 ℃**	**0 ℃**	**10 ℃**	**20 ℃**	**30 ℃**	**40 ℃**	**50 ℃**	**(**
2	2.60	2.52	2.46	2.38	2.28	2.20	2.08	2.00	1.92	1.86	1
4	5.20	2.04	4.92	4.76	4.56	4.40	4.16	4.00	3.84	3.76	1
6	7.80	7.56	7.38	7.14	6.84	6.60	6.24	6.00	5.76	5.64	5
10	13.20	12.70	2.50	12.00	11.50	11.10	10.60	10.00	9.60	9.30	8
16	21.12	20.48	20.00	19.20	18.40	17.76	16.96	16.00	15.36	4.88	1
20	26.40	25.60	25.00	24.00	23.00	22.20	21.20	20.00	19.20	8.60	1
25	33.00	32.00	31.25	30.00	28.75	27.75	26.50	25.00	24.00	23.25	2
32	42.56	41.28	40.00	38.72	37.12	35.52	33.92	32.00	30.72	29.76	2
40	53.20	51.20	50.00	48.00	46.40	44.80	42.40	40.00	38.40	37.20	3
50	67.00	65.50	63.00	60.50	58.00	56.00	53.00	50.00	48.00	46.50	4
63	83.79	81.90	80.01	76.86	73.71	70.56	66.78	63.00	60.48	58.90	5

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

unit in mm



Previous: 3SB66, 1P+N in 1 modular width

3SB6, 6kA

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

Functions

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

Technical specifications

- Standard: IEC 60898-1
- Rated current In (A): 6, 10, 16, 20, 25, 32, 40, 50, 63
- Rated voltage Un (V AC): 1P: 230/400; 2-4P: 400
- Operational voltage Ue (V AC): Min. : 24; Max. : 250/440
- Rated frequency (Hz): 50/60
- Rated insulation voltage Ui (V AC):
- Phase to ground: 250
- Phase to phase: 500
- Number of poles (P): 1, 2, 3, 4
- Tripping characteristic:
- Characteristic Characteristic B (In): 3-5
- Characteristic Characteristic C (In): 5-10
- Characteristic Characteristic D (In): 10-20
- Thermal operating limit (In): 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

VBN515, 1P+N in 1 modular width

- 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 buildings

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 buildings

Technical specifications

- Standard: IEC 60898-1
- Rated current In (A): 6, 10, 16, 20, 25, 32, 40
- Rated voltage Un (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 B (In): 3-5
- Characteristic C (In): 5-10
- Thermal operating limit: 1.13-1.45 In
- Rated switching capacity Icn (kA): 6
- Degree of protection: IP40, housing; IP20, terminals
- Electrical life (times): 10000
- Mechanical life (times): 20000
- Mounting position: No significant vibration and shock
- Connection capacity (mm^2): 1-10
- Terminal tightening torque (N·m): 2.0
- Ambient temperature (°C): +20, max. 95 % humidity;
- +40, max. 50 % humidity
- Storage temperature (°C): -30 ~ +70
- Altitude (meters): Max. 2000

Features

- 1P+N with switched neutral line in 1 module of 18 mm width, up to 40 A, rated breaking capacity 6 kA
- Current-limiting contact system and magnetic blow-out arc extinguishing device, avoiding products and equipment to bear large short-circuit current, improving the arc extinguishing ability of the product, and ensuring the breaking capacity

VB510, 6000 A

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

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
- Rated current In (A): 6, 10, 16, 20, 25, 32, 40, 50, 63
- Rated voltage Un (V AC): 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, 1P+N, 3P+N
- Tripping characteristic:
- Characteristic B (In): 3-5
- Characteristic C (In): 5-10
- Characteristic D (In): 10-20
- Thermal operating limit (In): 1.13 - 1.45
- Degree of protection: IP20, with connected conductors
- Electrical endurance (Cycles): 6,000
- Mechanical endurance (Cycles): 20,000
- 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. 2000

Features

- The handle being sealable or equipped with padlock bracket avoids dangerous operation changes (ON / OFF)
- Clear indication of the contact position
- Energy limiting class: 3
- The emission of ionized gases is limited to the severest
- restrictions: 45 mm grid distance
- Suitable for household or similar applications in accordance with:
- IEC 60898-1, tripping characteristics B, C and D.

VBH510, high current, 6 kA

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

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 In (A): 63, 70, 80, 100, 125
- Rated voltage Un (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: C, D
- release B (In): 4
- release C (In): 8
- release D (In): 14
- Thermal operating limit (In): 1.05 - 1.30
- Electrical life (times): 4,000
- Mechanical life (times): 20,000
- Breaking capacity:

Model	Rated voltage(V)		Acc. to IEC 60898-1	
			Icu(kA)	Ics(kA)
VBH510	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 (mm²): 1-35

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 C: 8 In , release D: 12 In
- This MCB may be extended with:
- Full sets of additional components
- Full sets of accessories