

3SM8D, MCCBs 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.

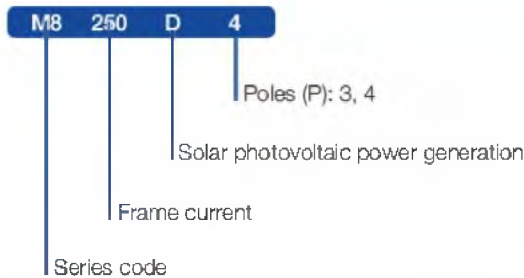
- Overload protection
- Short circuit protection
- Isolation
- Controlling
- Used in residential building, non-residential building, industry, energy and infrastructure



Product Profile

- 3SM8D series photovoltaic DC circuit breakers are suitable for DC network circuit which rated
- voltage to DC 1000 V and rated current to 800 A . DC circuit

Instruction of type code



Normal working environment

- The altitude is 2000 m and below. If it is higher than 2000 m, it needs to be derated.
- For other

Technical specifications

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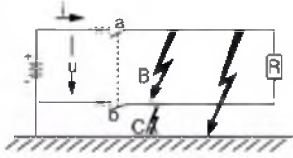
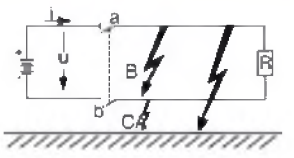
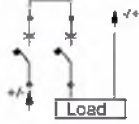
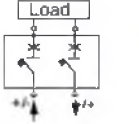
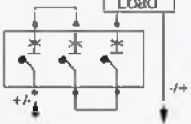
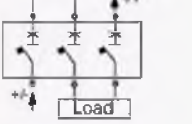
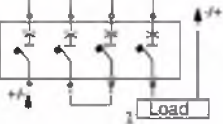
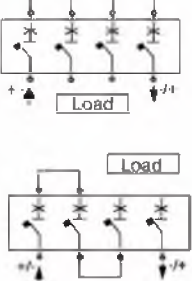
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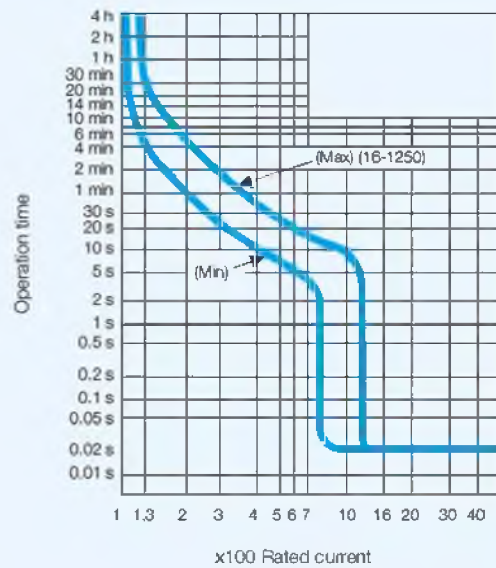
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Model type	3SM8D-125	3SM8D-250	3SM8D-400	3SM8D-630	3SM8D-800
Standard	IEC 60947-2				
Rated frame current Inm (A)	125	250	400	630	800
Rated current In (A)	20, 25, 32, 40, 50, 63, 80, 100, 125	125, 140, 160, 180, 200, 225, 250	250, 315, 350, 400	400, 500, 630	630, 700, 800
Rated voltage Ue (V) DC	250, 500, 750, 1000	500, 750, 1000	500, 750, 1000	500, 750, 1000	500, 750, 1000
Rated insulation voltage Ui (V)	1000	1000	1500	1500	1500
Rated impulse withstand voltage Uimp (kV)	8	8	8	8	8
Test voltage of one minute (V)	3550	3550	3550	3550	3550
Rated switching capacity Icu (kA) (Ics = 75% Icu)	250 V	20	20	35	50
	500 V	20	20	35	50
	750 V	20	20	35	50
	1000 V	20	20	35	50
Mechanical life (times)	7000	7000	4000	4000	2500
Electrical life (times)	2000	2000	1000	1000	800
Total breaking time (ms)	20				
Installation position					
Isolation characteristics	Yes				
Ambient temperature (°C)	-25 °C ~ +50 °C				
Degree of protection	IP20				
Accessories available					
Arcing distance (mm)	≤ 50		≤ 100		
Instantaneous action value	12 In				7 In
Installing category	Fixed type, Plug-in type				

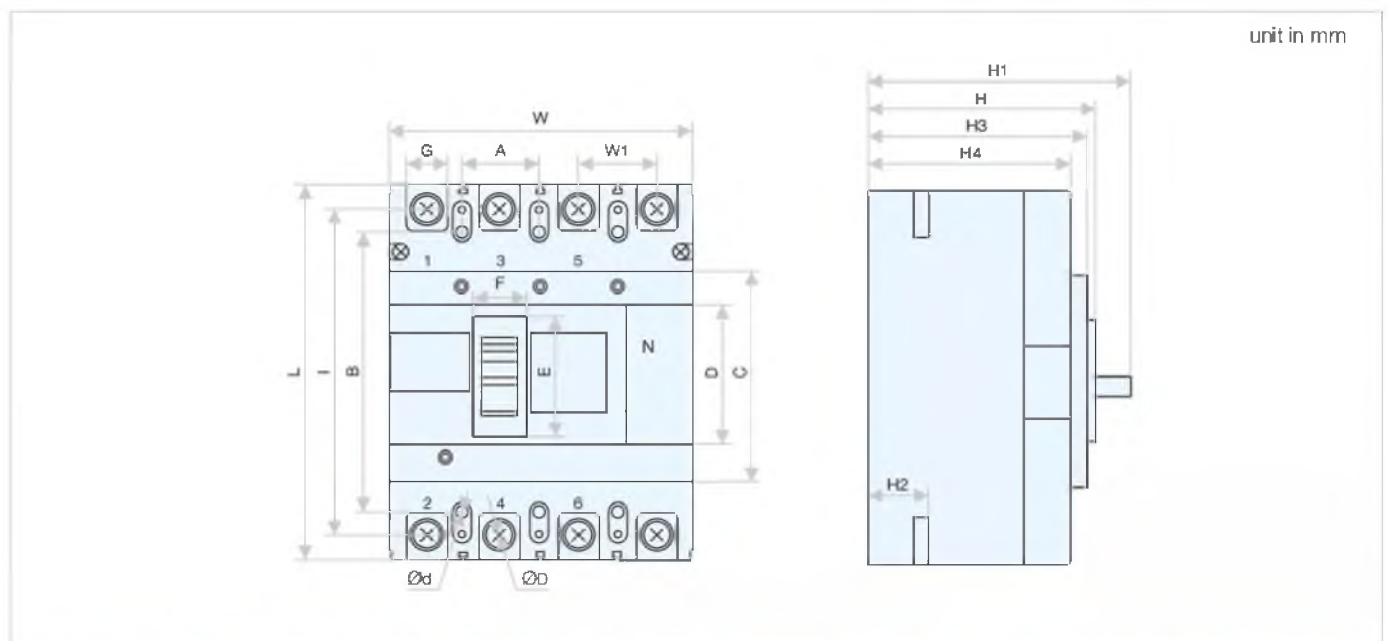
Grounding type

Grounding type Circuit diagram	Grounding system	Ungrounded system												
														
Fault influence	<table border="1"> <tr> <td>Fault A</td> <td>Max. short-circuit current</td> </tr> <tr> <td>Fault B</td> <td>Max. short-circuit current</td> </tr> <tr> <td>Fault C</td> <td>Max. short-circuit current</td> </tr> </table>	Fault A	Max. short-circuit current	Fault B	Max. short-circuit current	Fault C	Max. short-circuit current	<table border="1"> <tr> <td>Fault A</td> <td>No influence</td> </tr> <tr> <td>Fault B</td> <td>Max short-circuit current</td> </tr> <tr> <td>Fault C</td> <td>No influence</td> </tr> </table>	Fault A	No influence	Fault B	Max short-circuit current	Fault C	No influence
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Fault B	Max. short-circuit current													
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Fault A	No influence													
Fault B	Max short-circuit current													
Fault C	No influence													
≤ DC 500 V	 <p>Note: 1. It can be wired by entering above and exiting below or entering below and exiting above, here is the example of entering below.</p>	 <p>Note: 1. It can be wired by entering above and exiting below or entering below and exiting above, here is the example of entering below. Ensure that the installation method does not cause secondary ground faults</p>												
DC 500 ~ 750 V	 <p>Note: 1. It can be wired by entering above and exiting below or entering below and exiting above, here is the example of entering below.</p>	 <p>Note: 1. It can be wired by entering above and exiting below or entering below and exiting above, here is the example of entering below. Ensure that the installation method does not cause secondary ground faults</p>												
DC 750 ~ 1000 V	 <p>Note: 1. It can be wired by entering above and exiting below or entering below and exiting above, here is the example of entering below.</p>	 <p>Note: 1. It can be wired by entering above and exiting below or entering below and exiting above, here is the example of entering below. Ensure that the installation method does not cause secondary ground faults</p>												

Temperature performance curve



Outline and installation dimensions



unit in mm

Model	A	B	Ød	L	W	C	D	G	I	W1	E	F	ØD	H	H1	H2	H3	H4
3SM8D-125	30	129	4.5	150	122	101	61	18	131	30	50	00	8	88	107	22	81	77
3SM8D-250	35	126	4.5	165	142	117	61	23	146	35	50	00	8	108	125	23	102	98
3SM8D-400	44	195	7	257	199	173	128	30	228	44	89	32	10	108	153	36	103	99
3SM8D-630	58	200	7	270	240	184	134	43	235	58	89	32	12	112	158	40	109	104
3SM8D-800	70	243	7	280	280	205	155	46	243	70	106	33	12	108	158	32	103	99

Selection and ordering data

Frame	Rated current In (A)	3 Poles		4 Poles	
		Type code	Order code	Type code	Order code
3SM8D-125	20	M8DA 3020	15155	M8DA 4020	15164
	25	M8DA 3025	15156	M8DA 4025	15165
	32	M8DA 3032	15157	M8DA 4032	15166
	40	M8DA 3040	15158	M8DA 4040	15167
	50	M8DA 3050	15159	M8DA 4050	15168
	63	M8DA 3063	15160	M8DA 4063	15169
	80	M8DA 3080	15161	M8DA 4080	15170
	100	M8DA 3100	15162	M8DA 4100	15171
3SM8D-250	125	M8DA 3125	15163	M8DA 4125	15172
	140	M8DB 3125	15173	M8DB 4125	15180
	160	M8DB 3140	15174	M8DB 4140	15181
	180	M8DB 3160	15175	M8DB 4160	15182
	200	M8DB 3180	15176	M8DB 4180	15183
	225	M8DB 3200	15177	M8DB 4200	15184
	250	M8DB 3225	15178	M8DB 4225	15185
	250	M8DB 3250	15179	M8DB 4250	15186
3SM8D-400	250	M8DC 3250	15187	M8DD 4250	15191
	315	M8DC 3315	15188	M8DD 4315	15192
	350	M8DC 3350	15189	M8DD 4350	15193
	400	M8DC 3400	15190	M8DD 4400	15194
3SM8D-630	400	M8DE 3400	15195	M8DE 4400	15198
	500	M8DE 3500	15196	M8DE 4500	15199
	630	M8DE 3630	15197	M8DE 4630	15200
3SM8D-800	630	M8DF 3630	15201	M8DF 4630	15204
	700	M8DF 3700	15202	M8DF 4700	15205
	800	M8DF 3800	15203	M8DF 4800	15206

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