

CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS H ICU=70KA @ 415 V 3-POLE, MOTOR STARTER PROTECTION TM120M, AM, IN=125A WITHOUT OVERLOAD PROTECTION SHORT CIRCUIT PROTECTION II=5...15 X IN CABLE CONNECTION SHUNT TRIP (STL) 110-127 V DC, AC 50/60 HZ 2 AUXILIARY SWITCH HQ 1 TRIP ALARM SWITCH HQ



Model	
product brandname	SENTRON
Product designation	Molded case circuit breaker
Design of the product	Starter protection
Design of the overcurrent release	TM120M
Protective function of the overcurrent release	I
Number of poles	3
Design of the auxiliary release	Shunt trip (STL)
Design of the auxiliary switch	2 auxiliary switches + 1 trip alarm switch HQ
General technical data	
Tension assignée d'isolement Ui	800 V
Max. rated operational voltage Ue with AC 50/60Hz	690 V
Max. rated operational voltage Ue with DC	500 V
Operating power / at AC-3 / at 400 V	0 W
Operating power / at AC-3 / at 230 V	0 W
Active power loss / for rated value of the current / at AC / in hot operating state / per device	23.2 W
Mechanical service life (switching cycles) / typical	15 000

Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	8 000
Neutral conductors / upgradeable/retrofitable	No
Ground fault monitoring version	Without
Product function	
• communication function	No
• Phase failure detection	No
• other measurement function	No
Net weight	1.08 kg

Electricity

Max. rated operational voltage of the size of the circuit-breaker	160 A
Courant permanent assigné Iu	125 A
Operating current	
• at 40 °C	125 A
• at 45 °C	125 A
• at 50 °C	125 A
• at 55 °C	122 A
• at 60 °C	120 A
• at 65 °C	117 A
• at 70 °C	114 A

Switching capacity according to IEC 60947

Switching capacity class of the circuit breaker	H
Maximum short-circuit current breaking capacity (Icu)	
• at 240 V	100 kA
• at 415 V	70 kA
• at 440 V	36 kA
• at 690 V	5 kA
Operational short-circuit current breaking capacity (Ics)	
• at 240 V	100 kA
• at 415 V	70 kA
• at 440 V	36 kA
• at 690 V	5 kA
Short-circuit current making capacity (Icm)	
• at 240 V	220 kA
• at 415 V	154 kA
• at 440 V	75.6 kA
• at 690 V	8.5 kA

Adjustable parameters

Adjustable response value current / I _g min.	0 A
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Adjustable response value current / I _g min.	0 A
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Adjustable response value current / I _i min.	0 A
Adjustable response value current / I _i max.	0 A

Mechanical Design

Height	130 mm
Width	76.2 mm
Depth	70 mm

Connections

Arrangement of electrical connectors / for main current circuit	Front terminal
Type of electrical connection / for main current circuit	box terminal
Type of connectable conductor cross-section, round conductor terminal, stranded	1 x (1.5 - 70 mm ²)

Auxiliary circuit

Product component	
<ul style="list-style-type: none"> • undervoltage release 	No
<ul style="list-style-type: none"> • Voltage trigger 	Yes
<ul style="list-style-type: none"> • undervoltage release with leading contact 	No
<ul style="list-style-type: none"> • Trip indicator 	Yes
Number of CO contacts / for auxiliary contacts	3

Accessories

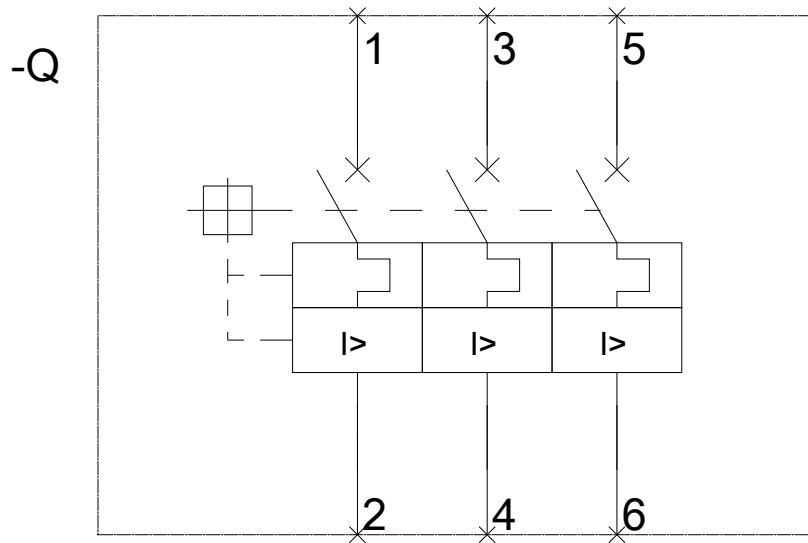
Product extension / optional / motor drive	Yes
Manufacturer's article number	
<ul style="list-style-type: none"> • of the supplied basic switch 	3VA1112-6MH36-0AA0
<ul style="list-style-type: none"> • of the integrated auxiliary switch/alarm switch 	3VA9988-0AA12
<ul style="list-style-type: none"> • of the integrated auxiliary switch/alarm switch 	3VA9988-0AB12
<ul style="list-style-type: none"> • of the integrated auxiliary trip 	3VA9688-0BL32

Environmental conditions

Protection class IP / on the front	IP40
Ambient temperature	
<ul style="list-style-type: none"> • during operation / minimum 	-25 °C
<ul style="list-style-type: none"> • during operation / maximum 	70 °C
<ul style="list-style-type: none"> • during storage / minimum 	-40 °C
<ul style="list-style-type: none"> • during storage / maximum 	80 °C

Certificates

Equipment marking / acc. to DIN EN 81346-2	Q
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10/24/2016