

CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 3-POLE, MOTOR STARTER PROTECTION TM120M, AM, IN=100A 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	25 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	100 A
Operating current	
• at 40 °C	100 A
• at 45 °C	100 A
• at 50 °C	100 A
• at 55 °C	98 A
• at 60 °C	96 A
• at 65 °C	94 A
• at 70 °C	91 A

Switching capacity according to IEC 60947

Switching capacity class of the circuit breaker	M
Maximum short-circuit current breaking capacity (Icu)	
• at 240 V	85 kA
• at 415 V	55 kA
• at 440 V	36 kA
• at 690 V	5 kA
Operational short-circuit current breaking capacity (Ics)	
• at 240 V	85 kA
• at 415 V	55 kA
• at 440 V	36 kA
• at 690 V	5 kA
Short-circuit current making capacity (Icm)	
• at 240 V	187 kA
• at 415 V	121 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 _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 • Voltage trigger • undervoltage release with leading contact • Trip indicator 	<ul style="list-style-type: none"> No Yes No Yes
Number of CO contacts / for auxiliary contacts	3

Accessories

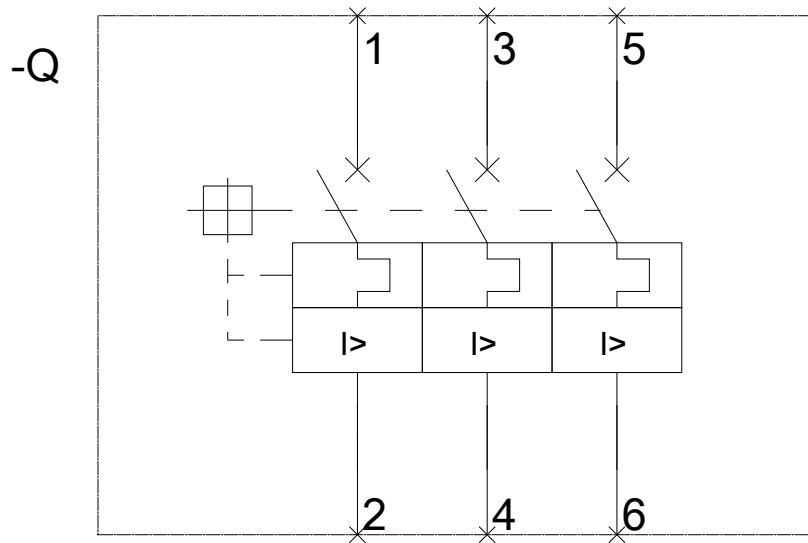
Product extension / optional / motor drive	Yes
Manufacturer's article number	
<ul style="list-style-type: none"> • of the supplied basic switch • of the integrated auxiliary switch/alarm switch • of the integrated auxiliary switch/alarm switch • of the integrated auxiliary trip 	<ul style="list-style-type: none"> 3VA1110-5MH36-0AA0 3VA9988-0AA12 3VA9988-0AB12 3VA9688-0BL32

Environmental conditions

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

Certificates

Equipment marking / acc. to DIN EN 81346-2	Q
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last modified:

10/24/2016