



circuit breaker 3VA1 IEC Frame 160 breaking capacity class H Icu=70 kA @ 415 V
3-pole, starter protection TM120M, AM, In=63 A without overload protection short-
circuit protection Ii=7...16 x In terminal connection

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
design of the product	Starter protection
design of the overcurrent release	TM120M
protection function of the overcurrent release	I
number of poles	3
General technical data	
insulation voltage / rated value	800 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	17.3 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	5.77 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	9 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	6 300
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
ground-fault monitoring version	Without
product function	
• communication function	No
• other measurement function	No
Net Weight	994 g
Current	
operational current	
• at 40 °C	63 A
• at 45 °C	63 A
• at 50 °C	63 A
• at 55 °C	62 A
• at 60 °C	61 A
• at 65 °C	60 A
• at 70 °C	58 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	55 kA
• at 500 V	5 kA

• at 690 V	5 kA
operating short-circuit current breaking capacity (Ics)	
• at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	100 kA 70 kA 40 kA 5 kA 5 kA
short-circuit current making capacity (Icm)	
• at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	220 kA 154 kA 121 kA 7.5 kA 7.5 kA
design of short-circuit protection	For switching power values in DC networks, see the 3VA molded case circuit breaker device manual; link to be found under Service & Support in the last chapter
Adjustable parameters	
adjustable response value setting current (Ii) / for I-tripping	
• minimum • maximum	440 A 1 008 A
adjustable setting current (InN) / for N-tripping	
• minimum • maximum	63 A 63 A
product function / grounding protection	No
Mechanical Design	
product component	
• undervoltage release • voltage trigger • trip indicator	No No No
height [in]	5.12 in
height	130 mm
width [in]	3 in
type of connectable conductor cross-sections / of the round conductor terminal / stranded	1 x (1,5 - 70 mm²)
width	76.2 mm
depth [in]	2.76 in
depth	70 mm
Connections	
arrangement of electrical connectors / for main current circuit	Front terminal
type of electrical connection / for main current circuit	box terminal on both sides
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	Silver
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	Tin
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
Accessories	
product extension / optional / motor drive	Yes
Environmental conditions	
protection class IP / on the front	IP40
ambient temperature	
• during operation / minimum • during operation / maximum • during storage / minimum • during storage / maximum	-25 °C 70 °C -40 °C 80 °C
Environmental footprint	
Environmental Product Declaration (EPD)	Yes
global warming potential [CO2 eq] / total	190 kg
global warming potential [CO2 eq] / during manufacturing	4.67 kg
global warming potential [CO2 eq] / during operation	186 kg

global warming potential [CO2 eq] / after end of life	-0.826 kg				
reference code / according to IEC 81346-2	Q				
Approvals / Certificates					
General Product Approval					
 CCC	 UK CA	 EG-Konf.	Confirmation	 VDE	Miscellaneous
General Product Approval	EMV	Test Certificates			
 EAC	 S	 RCM	Miscellaneous	Type Test Certificates/Test Report	Special Test Certificate
Maritime application		other			
 BUREAU VERITAS	 DNV	CCS (China Classification Society)	 产品合格 QC PASS	Confirmation	Miscellaneous
Environment					
 EPD	 EPD	Environmental Confirmations	Environmental Confirmations		
Further information					
Information on the packaging https://support.industry.siemens.com/cs/ww/en/view/109813875 Information for data generation and storage https://support.industry.siemens.com/cs/ww/en/view/109995012 Information- and Downloadcenter (Catalogs, Brochures,...) https://www.siemens.com/lowvoltage/catalogs Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA1163-6MH36-0AA0 Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3VA1163-6MH36-0AA0 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1163-6MH36-0AA0 CAX-Online-Generator https://www.siemens.com/cax Tender specifications https://www.siemens.com/specifications					



