



circuit breaker 3VM1 IEC frame 630 breaking capacity class M  $I_{cu}=55\text{kA}$  @ 415V  
3-pole, starter protection TM120M, AM,  $I_n=500\text{A}$  without overload protection short-  
circuit protection  $I_i=8\ldots 16 \times I_n$  nut keeper kit

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
design of the product	Startetptotection
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 / at 50/60 Hz / rated value	500 V
operating voltage / at DC / rated value	500 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	120 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	40 W
mechanical service life (operating cycles) / typical	15 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	4 000
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
ground-fault monitoring version	Without
product function	
• communication function	No
• phase failure detection	No
• other measurement function	No
Net Weight	4.935 kg
Current	
operational current	
• at 40 °C	500 A
• at 45 °C	500 A
• at 50 °C	500 A
• at 55 °C	488 A
• at 60 °C	476 A
• at 65 °C	464 A
• at 70 °C	452 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	M
maximum short-circuit current breaking capacity ( $I_{cu}$ )	
• at 240 V	85 kA
• at 415 V	55 kA
• at 440 V	55 kA
• at 500 V	36 kA

operating short-circuit current breaking capacity (Ics)	
• at 240 V	63 kA
• at 415 V	41 kA
• at 440 V	41 kA
• at 500 V	27 kA
short-circuit current making capacity (Icm)	
• at 240 V	187 kA
• at 415 V	121 kA
• at 440 V	121 kA
• at 500 V	76 kA
design of short-circuit protection	For switching capacity values in DC power systems, see the 3VA Molded Case Circuit Breaker Manual; link available under Service & Support in the last chapter
<b>Adjustable parameters</b>	
adjustable response value setting current (Ii) / for I-tripping	
• minimum	2 500 A
• maximum	5 000 A
adjustable setting current (InN) / for N-tripping	
• minimum	500 A
• maximum	500 A
adjustable current response value current / of instantaneous short-circuit trip unit	
• maximum	8 000 A
product function / grounding protection	No
<b>Mechanical Design</b>	
product component	
• undervoltage release	No
• voltage trigger	No
• trip indicator	No
height [in]	9.76 in
height	248 mm
width [in]	5.43 in
width	138 mm
depth [in]	4.33 in
depth	110 mm
<b>Connections</b>	
arrangement of electrical connectors / for main current circuit	Front connection
type of electrical connection / for main current circuit	nut keeper kit on both ends
type of connectable conductor cross-sections / for flat-bar terminal connection / minimum	20 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	35 x 10 mm
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)	Silver
<b>Auxiliary circuit</b>	
number of CO contacts / for auxiliary contacts	0
<b>Accessories</b>	
product extension / optional / motor drive	Yes
<b>Environmental conditions</b>	
protection class IP / on the front	IP40
ambient temperature	
• during operation / minimum	-25 °C
• during operation / maximum	70 °C
• during storage / minimum	-40 °C
• during storage / maximum	80 °C
<b>Approvals / Certificates</b>	
<b>General Product Approval</b>	



[Confirmation](#)



[Miscellaneous](#)

General Product Approval	Test Certificates	Marine / Shipping	other
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[Type Test Certificates/Test Report](#)



[Confirmation](#)

other	Environment
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[Miscellaneous](#)

[Environmental Confirmations](#)

[Environmental Confirmations](#)

#### Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/lowvoltage/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VM1450-5MH32-0AA0>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3VM1450-5MH32-0AA0>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VM1450-5MH32-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VM1450-5MH32-0AA0)

CAX-Online-Generator

<http://www.siemens.com/cax>

Tender specifications

<http://www.siemens.com/specifications>





