



circuit breaker 3VM1 IEC frame 630 breaking capacity class N Icu=36kA @ 415V 4-pole, line protection TM220, ATFM, In=500A overload protection Ir=350A...500A short-circuit protection Ii=10 x In N conductor unprotected nut keeper kit

### Model

product brand name	SENTRON
product designation	Molded case circuit breaker
design of the product	Line protection
design of the overcurrent release	TM220
protection function of the overcurrent release	LI
number of poles	4

### 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	123 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	40.9 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
• other measurement function	No
Net Weight	6.812 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	S
maximum short-circuit current breaking capacity (Icu)	
• at 240 V	55 kA
• at 415 V	36 kA
• at 440 V	36 kA
• at 500 V	25 kA
operating short-circuit current breaking capacity (Ics)	

<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> </ul>	41 kA
short-circuit current making capacity (I <sub>cm</sub> )	27 kA
<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> </ul>	27 kA
design of short-circuit protection	18 kA
	121 kA
	76 kA
	76 kA
	53 kA
	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 current response value current / of instantaneous short-circuit trip unit	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	5 000 A
design of the N-conductor protection	Without
product function / grounding protection	No
<b>Mechanical Design</b>	
product component	
<ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• voltage trigger</li> <li>• trip indicator</li> </ul>	No
height [in]	No
height	No
width [in]	9.76 in
width	248 mm
depth [in]	7.24 in
depth	184 mm
	4.33 in
	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	No
<b>Environmental conditions</b>	
protection class IP / on the front	IP40
ambient temperature	
<ul style="list-style-type: none"> <li>• during operation / minimum</li> <li>• during operation / maximum</li> <li>• during storage / minimum</li> <li>• during storage / maximum</li> </ul>	-25 °C
	70 °C
	-40 °C
	80 °C
<b>Certificates</b>	
reference code / according to IEC 81346-2	Q
<b>General Product Approval</b>	
<b>Declaration of Conformity</b>	



[Confirmation](#)



[Miscellaneous](#)



Declaration of Conformity	Test Certificates	Marine / Shipping			other
	<a href="#">Type Test Certificates/Test Report</a>				<a href="#">Confirmation</a>

other	Environment
<a href="#">Miscellaneous</a>	<a href="#">Environmental Confirmations</a>

#### Further information

**Siemens has decided to exit the Russian market (see here).**

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

**Siemens is working on the renewal of the current EAC certificates.**

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

**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=3VM1450-4EE42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VM1450-4EE42-0AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VM1450-4EE42-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VM1450-4EE42-0AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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





