# **SIEMENS**

## **Data sheet**



circuit breaker 3VM1 IEC frame 630 breaking capacity class N Icu=36kA @ 415V 4-pole, line protection TM210, FTFM, In=500A overload protection short-circuit protection li=10 x In N conductor protection 100% 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	TM210
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/retrofittable / short-circuit and overload proof	No
ground-fault monitoring version	Without
product function	
<ul> <li>communication function</li> </ul>	No
other measurement function	No
Net Weight	6.445 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 (lcs)	

• at 240 V	41 kA
• at 415 V	27 kA
• at 440 V	27 kA
• at 500 V	18 kA
short-circuit current making capacity (Icm)	
● at 240 V	121 kA
● at 415 V	76 kA
● at 440 V	76 kA
● at 500 V	53 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
Adjustable parameters	S. Capitol
product feature / for L-tripping / can be switched on/off	No
adjustable response value setting current (Ir) / of the L-trip / with 12t characteristic	
• minimum	500 A
maximum	500 A
adjustable response value delay time (tr) / for L-tripping / with l2t characteristic	
• minimum	1s
• maximum	1 s
adjustable response value setting current (li) / for I-tripping	
• minimum	5 000 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	5 000 A
design of the N-conductor protection	100%
product function / grounding protection	No
Mechanical Design	
product component	
<ul> <li>undervoltage release</li> </ul>	No
<ul> <li>voltage trigger</li> </ul>	No
• trip indicator	No
height [in]	9.76 in
height	248 mm
width [in]	7.24 in
width	184 mm
depth [in]	4.33 in
depth	110 mm
Connections	
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
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
Accessories	
product extension / optional / motor drive	No
Environmental conditions	
protection class IP / on the front	IP40
ambient temperature	
during operation / minimum	-25 °C
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• during operation / maximum

• during storage / minimum

• during storage / maximum

70 °C -40 °C 80 °C

#### Approvals / Certificates

### **General Product Approval**



Confirmation







**Miscellaneous** 

General Product Approval

**Test Certificates** 

Marine / Shipping

other



Type Test Certificates/Test Report





<u>Miscellaneous</u>

Confirmation

#### Environment

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)

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

https://support.industry.siemens.com/cs/ww/en/ps/3VM1450-4GD42-0AA0

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

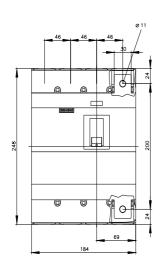
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VM1450-4GD42-0AAC

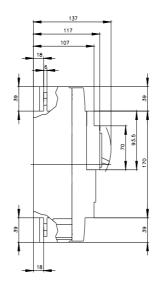
**CAx-Online-Generator** 

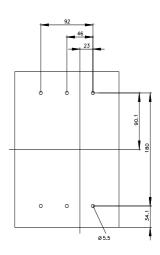
http://www.siemens.com/cax

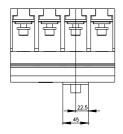
**Tender specifications** 

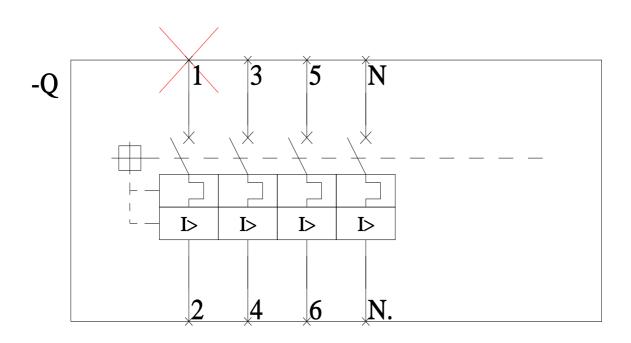
http://www.siemens.com/specifications











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