SIEMENS

Data sheet



circuit breaker 3VM1 IEC frame 160 breaking capacity class N Icu=25kA @ 415V 4-pole, line protection TM220, ATFM, In=20A overload protection Ir=14A...20A short-circuit protection Ii=16 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	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	12 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	4 W
mechanical service life (operating cycles) / typical	15 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	6 000
product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof	No
ground-fault monitoring version	Without
product function	
 communication function 	No
other measurement function	No
Net Weight	1.229 kg
Current	
operational current	
● at 40 °C	20 A
● at 45 °C	20 A
• at 50 °C	20 A
• at 55 °C	20 A
• at 60 °C	19 A
• at 65 °C	19 A
• at 70 °C	19 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	N
maximum short-circuit current breaking capacity (Icu)	
• at 240 V	36 kA
● at 415 V	25 kA
● at 440 V	16 kA
● at 500 V	7 kA
operating short-circuit current breaking capacity (lcs)	

• at 240 V	27 kA
● at 415 V	18 kA
● at 440 V	12 kA
● at 500 V	5 kA
short-circuit current making capacity (Icm)	
● at 240 V	76 kA
● at 415 V	53 kA
● at 440 V	32 kA
● at 500 V	12 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
Adjustable parameters	chapter
	No
product feature / for L-tripping / can be switched on/off	NO
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic	
• minimum	14 A
• maximum	20 A
adjustable response value delay time (tr) / for L-tripping / with l2t characteristic	
• minimum	1 s
• maximum	1 s
adjustable response value setting current (li) / for I-tripping	
• minimum	320 A
• maximum	320 A
adjustable setting current (InN) / for N-tripping	
• minimum	20 A
• maximum	20 A
adjustable current response value current / of instantaneous short-circuit trip unit	
• maximum	320 A
design of the N-conductor protection	100%
product function / grounding protection	No
Mechanical Design	
product component	
undervoltage release	No
voltage trigger	No
trip indicator	No
height [in]	5.12 in
height	130 mm
width [in]	4 in
width	101.6 mm
depth [in]	2.76 in
depth	70 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 electrical conflection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum	12 x 1 mm
type of connectable conductor cross-sections / for flat-bar	17 x 6.5 mm
design of the surface / of the connections / on the top of the	Silver
switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the	Tin
switch (N, 2, 4, 6) 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

- 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



Miscellaneous









Marine / Shipping

other

Environment



Confirmation

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)

 $\underline{https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VM1120-3GE42-0AA0}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3VM1120-3GE42-0AA0

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

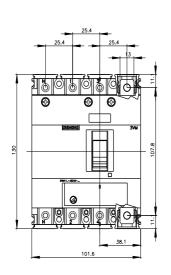
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VM1120-3GE42-0AAC

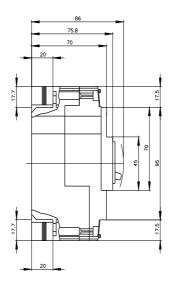
CAx-Online-Generator

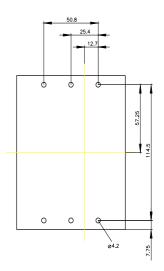
http://www.siemens.com/cax

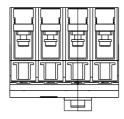
Tender specifications

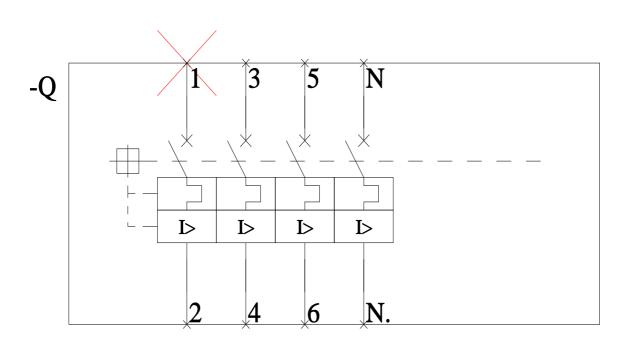
http://www.siemens.com/specifications











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