# **SIEMENS**

## **Data sheet**



circuit breaker 3VM1 IEC frame 160 breaking capacity class N Icu=25kA @ 415V 4-pole, line protection TM220, ATFM, In=63A overload protection Ir=44A...63A short-circuit protection Ii=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	TM220
protection function of the overcurrent release	Ц
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	17 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	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	
<ul> <li>communication function</li> </ul>	No
<ul> <li>other measurement function</li> </ul>	No
Net Weight	1.269 kg
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	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 (Ics)	

• 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 chapter
Adjustable parameters	Chapter
product feature / for L-tripping / can be switched on/off	No
adjustable response value setting current (Ir) / of the L-trip / with	INO
I2t characteristic	
• minimum	44 A
• maximum	63 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	630 A
• maximum	630 A
adjustable setting current (InN) / for N-tripping	
• minimum	63 A
• maximum	63 A
adjustable current response value current / of instantaneous short-circuit trip unit	
• maximum	630 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]	5.12 in
height	130 mm
width [in]	4 in
width	101.6 mm
depth [in]	2.76 in
depth	70 mm
depth Connections	70 mm
·	70 mm  Front connection
Connections	
Connections arrangement of electrical connectors / for main current circuit	Front connection
Connections  arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar	Front connection nut keeper kit on both ends
connections arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  design of the surface / of the connections / on the top of the	Front connection nut keeper kit on both ends 12 x 1 mm
connections arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm
arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the	Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm  Silver
arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm  Silver
arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)  Auxiliary circuit	Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm  Silver  Tin
arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)  Auxiliary circuit number of CO contacts / for auxiliary contacts	Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm  Silver  Tin
arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)  Auxiliary circuit number of CO contacts / for auxiliary contacts  Accessories	Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm  Silver  Tin
arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)  Auxiliary circuit number of CO contacts / for auxiliary contacts  Accessories product extension / optional / motor drive	Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm  Silver  Tin
arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)  Auxiliary circuit number of CO contacts / for auxiliary contacts  Accessories product extension / optional / motor drive  Environmental conditions	Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm  Silver  Tin
arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum  type of connectable conductor cross-sections / for flat-bar terminal connection / maximum  design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)  Auxiliary circuit number of CO contacts / for auxiliary contacts  Accessories product extension / optional / motor drive  Environmental conditions protection class IP / on the front	Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm  Silver  Tin

- during operation / maximum
- during storage / minimum
- during storage / maximum

70 °C -40 °C 80 °C

#### Approvals / Certificates

### **General Product Approval**

Confirmation









**Miscellaneous** 

General Product Ap-

proval

**Test Certificates** 

Marine / Shipping



**Miscellaneous** 









Marine / Shipping

other

**Environment** 



**Miscellaneous** 

Confirmation

**Environmental Confirmations** 

**Environmental Confirmations** 

Information on the packaging

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

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

Industry Mall (Online ordering system)

 $\underline{https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VM1163-3GE42-0AA0}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3VM1163-3GE42-0AA0

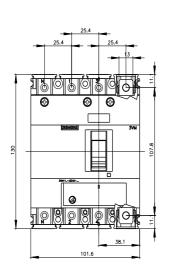
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

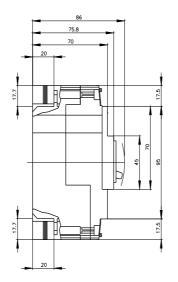
**CAx-Online-Generator** 

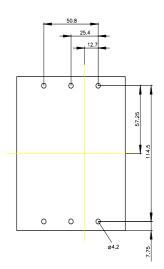
http://www.siemens.com/cax

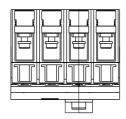
**Tender specifications** 

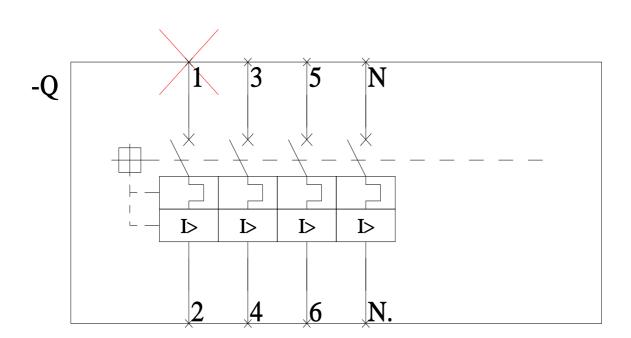
http://www.siemens.com/specifications











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