# **SIEMENS**

## **Data sheet**



circuit breaker 3VM1 IEC frame 160 breaking capacity class S Icu=36kA @ 415V 4-pole, line protection TM220, ATFM, In=25A overload protection Ir=18A...25A short-circuit protection Ii=12.8 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	9 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	2.83 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	1.2 kg
Current	
operational current	
• at 40 °C	25 A
● at 45 °C	25 A
● at 50 °C	25 A
● at 55 °C	24 A
• at 60 °C	24 A
• at 65 °C	23 A
• at 70 °C	23 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	25 kA
• at 500 V	7 kA
operating short-circuit current breaking capacity (lcs)	

• at 240 V	41 kA
● at 415 V	27 kA
• at 440 V	18 kA
• at 500 V	5 kA
short-circuit current making capacity (Icm)	
● at 240 V	121 kA
● at 415 V	76 kA
● at 440 V	53 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
	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	17 A
• maximum	25 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
• minimum	1 s
• maximum	1 s
adjustable response value setting current (Ii) / for I-tripping	
• minimum	320 A
maximum	320 A
adjustable setting current (InN) / for N-tripping	
• minimum	25 A
maximum	25 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	
<ul> <li>undervoltage release</li> </ul>	No
- and voltage release	
voltage trigger	No
· ·	No No
• voltage trigger	
<ul><li>voltage trigger</li><li>trip indicator</li></ul>	No
voltage trigger     trip indicator height [in]	No 5.12 in
<ul><li>voltage trigger</li><li>trip indicator</li><li>height [in]</li><li>height</li></ul>	No 5.12 in 130 mm
<ul> <li>voltage trigger</li> <li>trip indicator</li> <li>height [in]</li> <li>height</li> <li>width [in]</li> </ul>	No 5.12 in 130 mm 4 in
<ul> <li>voltage trigger</li> <li>trip indicator</li> <li>height [in]</li> <li>height</li> <li>width [in]</li> <li>width</li> </ul>	No 5.12 in 130 mm 4 in 101.6 mm
voltage trigger     trip indicator height [in] height width [in] width depth [in]	No 5.12 in 130 mm 4 in 101.6 mm 2.76 in
voltage trigger     trip indicator height [in] height width [in] width depth [in] depth	No 5.12 in 130 mm 4 in 101.6 mm 2.76 in
voltage trigger     trip indicator height [in] height width [in] width depth [in] depth Connections	No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm
voltage trigger     trip indicator height [in] height width [in] width depth [in] depth  Connections arrangement of electrical connectors / for main current circuit	No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm
voltage trigger     trip indicator height [in] height width [in] width depth [in] depth  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	No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front connection nut keeper kit on both ends
voltage trigger     trip indicator  height [in]  height  width [in]  width  depth [in]  depth  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	No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front connection nut keeper kit on both ends 12 x 1 mm
voltage trigger  trip indicator  height [in]  height  width [in]  width  depth [in]  depth  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 switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm
voltage trigger  trip indicator  height [in]  height  width [in]  width  depth [in]  depth  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 switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)  Auxiliary circuit	No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm  Silver  Tin
voltage trigger  trip indicator  height [in]  height  width [in]  width  depth [in]  depth  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 switch (N, 1, 3, 5)  design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm  Silver
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voltage trigger  trip indicator  height [in]  height  width [in]  width  depth [in]  depth  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 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	No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm  Silver  Tin
voltage trigger  trip indicator  height [in]  height  width [in]  width  depth [in]  depth  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 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	No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm  Silver  Tin
<ul> <li>voltage trigger</li> <li>trip indicator</li> <li>height [in]</li> <li>height width [in]</li> <li>width depth [in]</li> <li>depth</li> <li>Connections</li> <li>arrangement of electrical connectors / for main current circuit</li> <li>type of electrical connection / for main current circuit</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / minimum</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / maximum</li> <li>design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)</li> <li>design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)</li> <li>Auxiliary circuit</li> <li>number of CO contacts / for auxiliary contacts</li> <li>Accessories</li> <li>product extension / optional / motor drive</li> </ul>	No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front connection nut keeper kit on both ends 12 x 1 mm  17 x 6.5 mm  Silver  Tin
<ul> <li>voltage trigger</li> <li>trip indicator</li> <li>height [in]</li> <li>height</li> <li>width [in]</li> <li>width</li> <li>depth [in]</li> <li>depth</li> </ul> Connections <ul> <li>arrangement of electrical connectors / for main current circuit</li> <li>type of electrical connection / for main current circuit</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / minimum</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / maximum</li> <li>design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)</li> <li>design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)</li> </ul> Auxiliary circuit <ul> <li>number of CO contacts / for auxiliary contacts</li> </ul> Accessories <ul> <li>product extension / optional / motor drive</li> </ul> Environmental conditions	No         5.12 in         130 mm         4 in         101.6 mm         2.76 in         70 mm         Front connection         nut keeper kit on both ends         12 x 1 mm         17 x 6.5 mm         Silver         Tin         No
<ul> <li>voltage trigger</li> <li>trip indicator</li> <li>height [in]</li> <li>height</li> <li>width [in]</li> <li>width</li> <li>depth [in]</li> <li>depth</li> </ul> Connections <ul> <li>arrangement of electrical connectors / for main current circuit</li> <li>type of electrical connection / for main current circuit</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / minimum</li> <li>type of connectable conductor cross-sections / for flat-bar terminal connection / maximum</li> <li>design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)</li> <li>design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)</li> <li>Auxiliary circuit</li> <li>number of CO contacts / for auxiliary contacts</li> <li>Accessories</li> <li>product extension / optional / motor drive</li> <li>Environmental conditions</li> <li>protection class IP / on the front</li> </ul>	No         5.12 in         130 mm         4 in         101.6 mm         2.76 in         70 mm         Front connection         nut keeper kit on both ends         12 x 1 mm         17 x 6.5 mm         Silver         Tin         No

- 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** 



Confirmation

**Miscellaneous** 

**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)

 $\underline{https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VM1125-4GE42-0AA0}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3VM1125-4GE42-0AA0

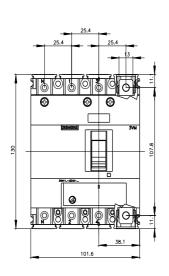
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

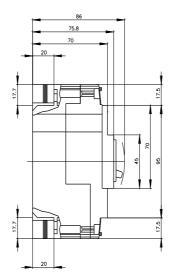
**CAx-Online-Generator** 

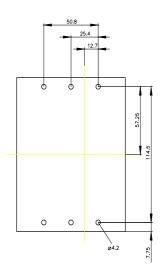
http://www.siemens.com/cax

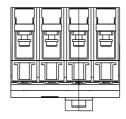
**Tender specifications** 

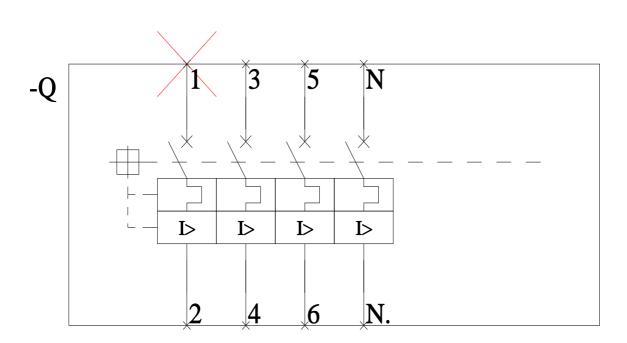
http://www.siemens.com/specifications











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