# **SIEMENS**

## **Data sheet**



circuit breaker 3VM1 IEC frame 160 breaking capacity class N Icu=25kA @ 415V 4-pole, line protection TM220, ATFM, In=40A overload protection Ir=28A...40A 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	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	11 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	3.6 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
other measurement function	No
Net Weight	1.27 kg
Current	
operational current	
• at 40 °C	40 A
• at 45 °C	40 A
• at 50 °C	40 A
• at 55 °C	39 A
• at 60 °C	39 A
• at 65 °C	38 A
• at 70 °C	37 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	N
maximum short-circuit current breaking capacity (lcu)	
• 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 chapter
Adjustable parameters	
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	28 A
• maximum	40 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
• minimum	1 s
maximum	1 s
adjustable response value setting current (li) / for I-tripping	
• minimum	400 A
• maximum	400 A
adjustable setting current (InN) / for N-tripping	
• minimum	40 A
• maximum	40 A
adjustable current response value current / of instantaneous short-circuit trip unit	
maximum	400 A
design of the N-conductor protection	100%
product function / grounding protection	No
Mechanical Design	
product component	
product component  • undervoltage release	No
	No No
undervoltage release	
<ul><li>undervoltage release</li><li>voltage trigger</li></ul>	No
<ul><li>undervoltage release</li><li>voltage trigger</li><li>trip indicator</li></ul>	No No
<ul> <li>undervoltage release</li> <li>voltage trigger</li> <li>trip indicator</li> <li>height [in]</li> </ul>	No No 5.12 in
<ul> <li>undervoltage release</li> <li>voltage trigger</li> <li>trip indicator</li> <li>height [in]</li> <li>height</li> </ul>	No No 5.12 in 130 mm
undervoltage release voltage trigger trip indicator height [in] height width [in]	No No 5.12 in 130 mm 4 in
<ul> <li>undervoltage release</li> <li>voltage trigger</li> <li>trip indicator</li> <li>height [in]</li> <li>height</li> <li>width [in]</li> <li>width</li> </ul>	No No 5.12 in 130 mm 4 in 101.6 mm
<ul> <li>undervoltage release</li> <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> </ul>	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in
undervoltage release voltage trigger trip indicator height [in] height width [in] width depth [in] depth	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in
undervoltage release voltage trigger trip indicator height [in] height width [in] width depth [in] depth Connections	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm
undervoltage release voltage trigger trip indicator height [in] height width [in] width depth [in] depth  Connections arrangement of electrical connectors / for main current circuit	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm
undervoltage release voltage trigger trip indicator height [in] height width [in] width depth [in] depth  Connections arrangement of electrical connectors / for main current circuit type of connectable conductor cross-sections / for flat-bar	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in 70 mm  Front connection nut keeper kit on both ends
undervoltage release 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 connectable conductor cross-sections / for flat-bar type of connectable conductor cross-sections / for flat-bar	No 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
undervoltage release 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 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
undervoltage release 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 No S.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>undervoltage release</li> <li>voltage trigger</li> <li>trip indicator</li> <li>height [in]</li> <li>height</li> <li>width [in]</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>	No 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
undervoltage release 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 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
undervoltage release 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 product extension / optional / motor drive	No No S.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
undervoltage release 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 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
undervoltage release 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 product extension / optional / motor drive	No 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>undervoltage release</li> <li>voltage trigger</li> <li>trip indicator</li> <li>height [in]</li> <li>height</li> <li>width [in]</li> <li>width</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> <li>Environmental conditions</li> </ul>	No 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>undervoltage release</li> <li>voltage trigger</li> <li>trip indicator</li> <li>height [in]</li> <li>height</li> <li>width [in]</li> <li>width</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> <li>Environmental conditions</li> <li>protection class IP / on the front</li> </ul>	No 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

- 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)

 $\underline{https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VM1140-3GE42-0AA0}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3VM1140-3GE42-0AA0

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

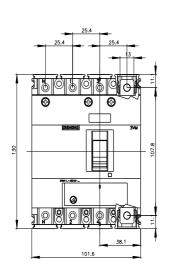
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VM1140-3GE42-0AAC

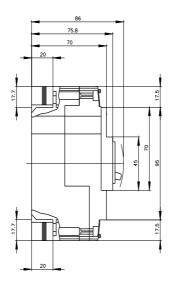
**CAx-Online-Generator** 

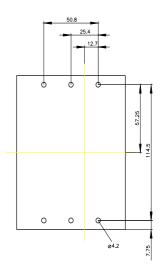
http://www.siemens.com/cax

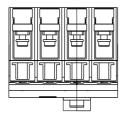
**Tender specifications** 

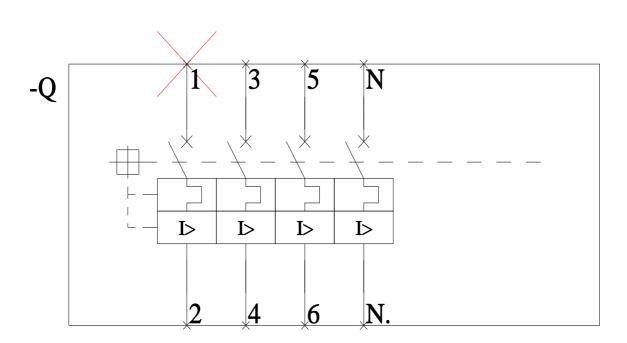
http://www.siemens.com/specifications











last modified: 3/12/2024 🖸

