SIEMENS

Data sheet



circuit breaker 3VM1 IEC frame 160 breaking capacity class S Icu=36kA @ 415V 4-pole, line protection TM220, ATFM, In=160A overload protection Ir=112A...160A 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	38 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	12.67 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	1.286 kg
Current	
operational current	
• at 40 °C	160 A
• at 45 °C	160 A
● at 50 °C	160 A
● at 55 °C	158 A
• at 60 °C	155 A
• at 65 °C	153 A
• at 70 °C	150 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	
product feature / for L-tripping / can be switched on/off	No
adjustable response value setting current (Ir) / of the L-trip / with l2t characteristic	
• minimum	112 A
• maximum	160 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
• minimum	1 s
• maximum	1s
adjustable response value setting current (li) / for I-tripping	
• minimum	1 600 A
• maximum	1 600 A
adjustable setting current (InN) / for N-tripping	
• minimum	160 A
• maximum	160 A
adjustable current response value current / of instantaneous short-circuit trip unit	
maximum	1 600 A
design of the N-conductor protection	100%
product function / grounding protection	No
Mechanical Design	
Mechanical Design product component	
	No
product component	No No
product component • undervoltage release	
product component • undervoltage release • voltage trigger	No
product component	No No
product component	No No 5.12 in
product component	No No 5.12 in 130 mm
product component	No No 5.12 in 130 mm 4 in
product component • undervoltage release • voltage trigger • trip indicator height [in] height width [in]	No No 5.12 in 130 mm 4 in 101.6 mm
product component	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in
product component • undervoltage release • voltage trigger • trip indicator height [in] height width [in] width depth [in]	No No 5.12 in 130 mm 4 in 101.6 mm 2.76 in
product component • 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
product component • 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
product component • 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	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
product component • 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	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
product component • 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
product component • 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
product component • 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 Silver
product component • 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
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product component • 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
product component • 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
product component • 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 Environmental conditions	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
product component 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 Environmental conditions protection class IP / on the front	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)

 $\underline{https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VM1116-4GE42-0AA0}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3VM1116-4GE42-0AA0

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

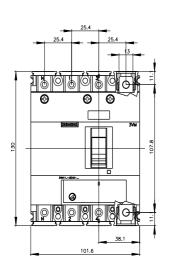
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VM1116-4GE42-0AAl

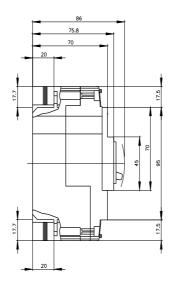
CAx-Online-Generator

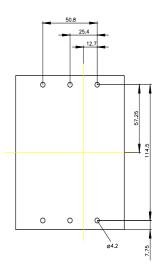
http://www.siemens.com/cax

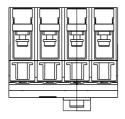
Tender specifications

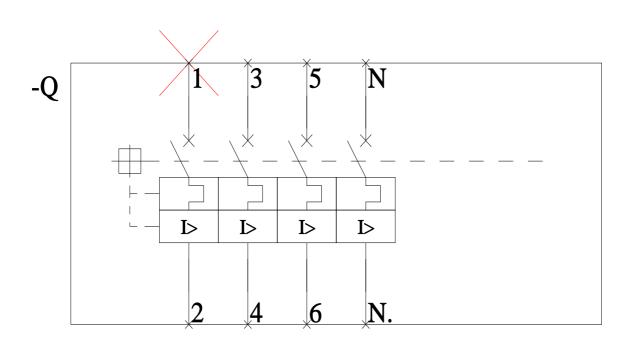
http://www.siemens.com/specifications











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