



circuit breaker 3VA1 IEC frame 160 breaking capacity class M Icu=55kA @ 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 2 auxiliary switches HQ 1 trip alarm switch HQ

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
Product version	Line protection
design of the overcurrent release	TM220
protection function of the overcurrent release	LI
number of poles	4
design of the auxiliary release	without auxiliary release
Auxiliary contact version	2 auxiliary switches + 1 trip alarm switch HQ
General technical data	
rated insulation voltage Ui	800 V
Max. rated operational voltage Ue with DC	600 V
power loss [W] / maximum	38 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	12.67 W
mechanical service life (switching cycles) / typical	20 000
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	9 000
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	6 300
Neutral conductors / upgradeable/retrofitable	No
ground-fault monitoring version	Without
product function	
• communication function	No
• other measurement function	No
Net Weight	1,276 kg
Current	
Max. rated operational current of the frame size	100 A
Courant permanent assigné lu	63 A
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	M
breaking capacity maximum short-circuit current (Icu)	

<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	85 kA 55 kA 36 kA 10 kA 10 kA
breaking capacity operating short-circuit current (Ics) <ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	85 kA 55 kA 36 kA 5 kA 5 kA
short-circuit current making capacity (Icm) <ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	187 kA 121 kA 75.6 kA 17 kA 17 kA
design of short-circuit protection	For switching power values in DC networks, see the 3VA molded case circuit breaker device manual; link to be found under Service & Support in the last chapter

Adjustable parameters

Adjustable response value current / li min.	630 A
Adjustable response value current / li max.	630 A
design of the N-conductor protection	100%
Ground fault protection / tripping switchable / I2t=ON/OFF	No

Mechanical Design

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 terminal
type of electrical connection / for main current circuit	nut keeper kit on both ends
Type of connectable conductor cross-section, connection screw, width x thickness , min.	12 x 1 mm
Type of connectable conductor cross-section, connection screw, width x thickness , max.	17 x 6.5 mm
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	Tin

Auxiliary circuit

product component <ul style="list-style-type: none"> • undervoltage release • voltage trigger • undervoltage release with leading contact • trip indicator 	No No No Yes
number of CO contacts / for auxiliary contacts	3

Accessories

product extension / optional / motor drive	Yes
manufacturer's article number <ul style="list-style-type: none"> • of the supplied basic switch • of the integrated auxiliary switch/alarm switch • of the integrated auxiliary switch/alarm switch 	3VA11165GE420AA0 3VA9988-0AA12 3VA9988-0AB12

Environmental conditions

protection class IP / on the front	IP40
ambient temperature <ul style="list-style-type: none"> • during operation / minimum • during operation / maximum • during storage / minimum 	-25 °C 70 °C -40 °C

• during storage / maximum

80 °C

Certificates

reference code / acc. to IEC 81346-2

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General Product Approval

EMC

Declaration of
Conformity



[Miscellaneous](#)



EG-Konf.

Declaration of
Conformity

Test Certificates

Marine / Shipping

[UK Declaration of
Conformity](#)

[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping

other



[CCS / China Classification Society](#)

[Miscellaneous](#)

[Miscellaneous](#)

Further information

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

<http://www.siemens.com/lowvoltage/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA1116-5GE42-0AH0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1116-5GE42-0AH0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1116-5GE42-0AH0

CAx-Online-Generator

<http://www.siemens.com/cax>

Tender specifications

<http://www.siemens.com/specifications>



