



circuit breaker 3VA1 IEC Frame 250 breaking capacity class H Icu=70 kA @ 415 V
4-pole, line protection TM240, ATAM, In=200 A overload protection Ir=140 A...200
A short-circuit protection Ii=5...10 x In N conductor unprotected nut keeper kit shunt
trip (STL) 12-30 V DC; 24 V AC 50/60 Hz 2 auxiliary switches HQ

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
design of the product	Line protection
design of the overcurrent release	TM240
protection function of the overcurrent release	LI
number of poles	4
design of the auxiliary release	shunt trip (STL)
design of the auxiliary switch	2 auxiliary switches HQ
General technical data	
insulation voltage / rated value	800 V
operating voltage / at DC / rated value	600 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	42 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	14 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	8 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	5 400
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
ground-fault monitoring version	Without
product function	
• communication function	No
• other measurement function	No
Net Weight	2.2 kg
Current	
operational current	
• at 40 °C	200 A
• at 45 °C	200 A
• at 50 °C	200 A
• at 55 °C	194 A
• at 60 °C	188 A
• at 65 °C	182 A
• at 70 °C	176 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	H
maximum short-circuit current breaking capacity (Icu)	
• at 240 V	100 kA

• at 415 V • at 440 V • at 500 V • at 690 V	70 kA 36 kA 15 kA 10 kA
operating short-circuit current breaking capacity (Ics) • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	100 kA 70 kA 36 kA 10 kA 5 kA
short-circuit current making capacity (Icm) • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	220 kA 154 kA 75.5 kA 30 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

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 • maximum	140 A 200 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic • minimum • maximum	1 s 1 s
adjustable response value setting current (Ii) / for I-tripping • minimum • maximum	1 000 A 2 000 A
adjustable setting current (InN) / for N-tripping • minimum • maximum	0 A 0 A
design of the N-conductor protection	without
product function / grounding protection	No

Mechanical Design

product component • undervoltage release • voltage trigger • trip indicator	No Yes No
height [in]	6.22 in
height	158 mm
width [in]	5.51 in
width	140 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-sections / for flat-bar terminal connection / minimum	13 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	25 x 8 mm
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	Silver
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	Silver

Auxiliary circuit

number of CO contacts / for auxiliary contacts	2
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Accessories	
product extension / optional / motor drive	Yes
manufacturer's article number	
• of the supplied basic switch	3VA12206EF420AA0
• of the integrated auxiliary switch/alarm switch	3VA9988-0AA12
• of the integrated auxiliary trip unit	3VA9688-0BL30

Environmental conditions	
protection class IP / on the front	IP40
ambient temperature	
• during operation / minimum	-25 °C
• during operation / maximum	70 °C
• during storage / minimum	-40 °C
• during storage / maximum	80 °C
reference code / according to IEC 81346-2	Q

Approvals / Certificates	
General Product Approval	



[Miscellaneous](#)



[Confirmation](#)

General Product Approval	EMV	Test Certificates
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[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Maritime application	
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[CCS \(China Classification Society\)](#)

other	Environment
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[Miscellaneous](#)

[Confirmation](#)



[Environmental Confirmations](#)

[Environmental Confirmations](#)

Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA1220-6EF42-0HC0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1220-6EF42-0HC0>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1220-6EF42-0HC0

CAX-Online-Generator

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

Tender specifications

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

Characteristic curves

https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>

