



circuit breaker 3VA1 IEC Frame 250 breaking capacity class H $I_{cu}=70 \text{ kA} @ 415 \text{ V}$
 4-pole, line protection TM240, ATAM, $I_n=250 \text{ A}$ overload protection $I_r=175 \text{ A} \dots 250 \text{ A}$
 A short-circuit protection $I_i=5 \dots 10 \times I_n$ neutral conductor protection 100% nut
 keeper kit shunt trip (STL) 12-30 V DC; 24 V AC 50/60 Hz 2 auxiliary switches HQ
 1 trip alarm switch 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 + 1 trip alarm switch 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	57 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	19 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	250 A
• at 45 °C	250 A
• at 50 °C	250 A
• at 55 °C	243 A
• at 60 °C	237 A
• at 65 °C	230 A
• at 70 °C	223 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	H
maximum short-circuit current breaking capacity (I_{cu})	
• 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	175 A 250 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	1 250 A 2 500 A
adjustable setting current (InN) / for N-tripping • minimum • maximum	250 A 250 A
design of the N-conductor protection	100%
product function / grounding protection	No

Mechanical Design

product component • undervoltage release • voltage trigger • trip indicator	No Yes Yes
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	3
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Accessories	
product extension / optional / motor drive	Yes
manufacturer's article number	
• of the supplied basic switch	3VA12256GF420AA0
• of the integrated auxiliary switch/alarm switch	3VA9988-0AA12
• of the integrated auxiliary switch/alarm switch	3VA9988-0AB12
• 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		
			Miscellaneous	Special Test Certificate
	EG-Konf.	RCM		Type Test Certificates/Test Report

Maritime application				
ABS	BUREAU VERITAS	DNV	LRS	RMRS

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

other	Environment	
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=3VA1225-6GF42-0HH0
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3VA1225-6GF42-0HH0
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1225-6GF42-0HH0
CAX-Online-Generator https://www.siemens.com/cax
Tender specifications https://www.siemens.com/specifications
Characteristic curves <a href='https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>'>https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>

