



circuit breaker 3VA1 IEC frame 1000 breaking capacity class M $I_{cu}=55kA$
@ 415V 4-pole, line protection TM240, ATAM, $I_n=800A$ overload protection
 $I_r=560A...800A$ short-circuit protection $I_i=5...10 \times I_n$ N conductor protection
100% nut keeper kit

Model

product brand name	SENTRON
product designation	Molded case circuit breaker
Product version	Line protection
design of the overcurrent release	TM240
protection function of the overcurrent release	LI
number of poles	4

General technical data

insulation voltage / rated value	800 V
Max. rated operational voltage U_e with DC	1 000 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	240 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	80 W
mechanical service life (switching cycles) / typical	10 000
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	4 600
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	3 200
Neutral conductors / upgradeable/retrofitable	No
ground-fault monitoring version	Without
product function	
• communication function	No
• other measurement function	No
Net Weight	17.66 kg

Current

continuous current / rated value / maximum	1 000 A
Courant permanent assigné I_u	800 A
operational current	
• at 40 °C	800 A
• at 45 °C	800 A
• at 50 °C	800 A
• at 55 °C	780 A
• at 60 °C	761 A
• at 65 °C	741 A
• at 70 °C	722 A

Switching capacity according to IEC 60947

switching capacity class of the circuit breaker	M
breaking capacity maximum short-circuit current (I_{cu})	
• at 240 V	85 kA
• at 415 V	55 kA
• at 440 V	55 kA

• at 500 V • at 690 V	36 kA
breaking capacity operating short-circuit current (Ics)	25 kA
• at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	85 kA
	55 kA
	55 kA
	36 kA
	19 kA
short-circuit current making capacity (Icm)	
• at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	187 kA
	121 kA
	121 kA
	75.6 kA
	52.5 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

reference value setting current (I _r) / for L-tripping / with I _{2t} characteristic	x I _n
set values setting current (I _r) / for L-tripping / with I _{2t} characteristic	0.7;0.8;0.9;1
adjustable response factor setting current (I _r) / for L-tripping / with I _{2t} characteristic / minimum	0.7
adjustable response factor setting current (I _r) / for L-tripping / with I _{2t} characteristic / maximum	1
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic / minimum	560 A
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic / maximum	800 A
type of value list delay time (t _r) / for L-tripping / with I _{2t} characteristic	Fest
reference value delay time (t _r) / for L-tripping / with I _{2t} characteristic	s
set values delay time (t _r) / for L-tripping / with I _{2t} characteristic	1
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic / minimum	1 s
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic / maximum	1 s
adjustable response value setting current (I _i) / for I-tripping / maximum	8 000 A
adjustable response value setting current (I _i) / for I-tripping / minimum	4 000 A
reference value setting current (I _i) / for I-tripping	x I _n
type of value list setting current (I _i) / for I-tripping	St
adjustable absolute value setting current (I _{nN}) / for N-tripping / maximum	800 A
adjustable absolute value setting current (I _{nN}) / for N-tripping / minimum	800 A
Adjustable response value current / I _i min.	4 000 A
Adjustable response value current / I _i max.	8 000 A
design of the N-conductor protection	100%
Ground fault protection / tripping switchable / I _{2t} =ON/OFF	No

Mechanical Design

height [in]	12.6 in
Height	320 mm
width [in]	11.02 in
Width	280 mm
depth [in]	4.72 in
depth	120 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.	20 x 4 mm

Type of connectable conductor cross-section, connection screw, width x thickness , max.	50 x 28 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

product component	
• undervoltage release	No
• voltage trigger	No
• trip indicator	No
number of CO contacts / for auxiliary contacts	0

Accessories

product extension / optional / motor drive	No
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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

Certificates

reference code / according to IEC 81346-2	Q
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General Product Approval

EMC

[Confirmation](#)



[Miscellaneous](#)



Declaration of Conformity

Test Certificates

Marine / Shipping



[Miscellaneous](#)

[Special Test Certificate](#)



Marine / Shipping

other



[Environmental Confirmations](#)

[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=3VA1580-5GF42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1580-5GF42-0AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1580-5GF42-0AA0

CAX-Online-Generator

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

Tender specifications

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



