



circuit breaker 3VA1 IEC frame 160 breaking capacity class S $I_{cu}=36\text{kA}$ @ 415V 4-pole, line protection TM240, ATAM, $I_n=160\text{A}$ overload protection $I_r=112\text{A}\dots160\text{A}$ short-circuit protection $I_i=5\dots10 \times I_n$ N conductor unprotected clamp connection

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

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	38 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	9 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	6 300
product feature / for neutral conductors /	No
upgradable/retrofitable / short-circuit and overload proof	
ground-fault monitoring version	Without
product function	
• communication function	No
• other measurement function	No
Net Weight	1.333 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 (I_{cu})	
• at 240 V	55 kA
• at 415 V	36 kA
• at 440 V	25 kA
• at 500 V	7 kA
• at 690 V	7 kA
operating short-circuit current breaking capacity (I_{cs})	
• at 240 V	55 kA

• at 415 V • at 440 V • at 500 V • at 690 V	36 kA
short-circuit current making capacity (I _{cm})	25 kA
• at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	5 kA
design of short-circuit protection	5 kA
	121 kA
	75.6 kA
	52.5 kA
	11.9 kA
	11.9 kA
	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 (I _r) / of the L-trip / with I ² t characteristic	
• minimum • maximum	112 A
adjustable response value delay time (t _r) / for L-tripping / with I ² t characteristic	160 A
• minimum • maximum	1 s
adjustable response value setting current (I _i) / for I-tripping	1 s
• minimum • maximum	800 A
adjustable absolute value setting current (I _N) / for N-tripping	1 600 A
• minimum • maximum	0 A
design of the N-conductor protection	0 A
product function / grounding protection	without
	No

Mechanical Design

product component	No
• undervoltage release • voltage trigger • trip indicator	No
height [in]	No
height	5.12 in
width [in]	130 mm
type of connectable conductor cross-sections / of the round conductor terminal / stranded	4 in
width	1 x (1,5 - 70 mm ²)
depth [in]	101.6 mm
depth	2.76 in
	70 mm

Connections

arrangement of electrical connectors / for main current circuit	Front terminal
type of electrical connection / for main current circuit	box terminal on both sides
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)	Tin

Auxiliary circuit

number of CO contacts / for auxiliary contacts	0
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Accessories

product extension / optional / motor drive	Yes
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Environmental conditions

protection class IP / on the front	IP40
ambient temperature	
• during operation / minimum • during operation / maximum • during storage / minimum • during storage / maximum	-25 °C
	70 °C
	-40 °C
	80 °C

Certificates

reference code / according to IEC 81346-2

Q

General Product Approval



[Confirmation](#)



[Miscellaneous](#)

[KC](#)



EMC

Declaration of Conformity

Test Certificates



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

Marine / Shipping

other



[CCS / China Classification Society](#)

[Confirmation](#)

other

Environment

[Miscellaneous](#)

[Miscellaneous](#)

[Environmental Confirmations](#)

Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA1116-4EF46-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1116-4EF46-0AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1116-4EF46-0AA0

CAX-Online-Generator

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

Tender specifications

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



