



circuit breaker 3VA5 UL frame 1200 breaking capacity class M 35kA @ 480 V 3-pole, line protection TM230, FTAM, In=900A overload protection Ir=900A fixed short circuit protection Ii=5 - 10 x In w/o connection

Model	
product brand name	SETRON
product designation	Molded-case circuit breaker
product designation / according to UL file	MNAS
design of the product	System protection
design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)	Yes
design of the overcurrent release	TM230
protection function of the overcurrent release	LI
number of poles	3
General technical data	
insulation voltage / rated value	800 V
operating voltage / at DC / rated value	750 V
operating voltage / at AC / rated value	600 V
power loss [W] / maximum	167 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	167 W
mechanical service life (operating cycles) / typical	3 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	1 500
electrical endurance (operating cycles) / at AC-1 / at 690 V	500
electrical endurance (operating cycles) / at 480 V	1 500
electrical endurance (operating cycles) / at 600 V	500
product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof	No
product function	
• communication function	No
• phase failure detection	No
• other measurement function	No
Net Weight	24.635 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	900 A
• at 45 °C	868 A
• at 50 °C	837 A
• at 55 °C	805 A
• at 60 °C	774 A
• at 65 °C	742 A
• at 70 °C	710 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	M

maximum short-circuit current breaking capacity (I _{cu})	
• at 240 V	65 kA
• at 415 V	50 kA
• at 690 V	20 kA
operating short-circuit current breaking capacity (I _{cs})	
• at 240 V	35 kA
• at 415 V	25 kA
• at 690 V	15 kA
short-circuit current making capacity (I _{cm})	
• at 240 V	143 kA
• at 415 V	105 kA
• at 690 V	63 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
Switching capacity according to UL 489	
current breaking capacity	
• at 240 V	85 kA
• at 480 V	35 kA
• at 600 Y/347 V	25 kA
• at 600 V	25 kA
Adjustable parameters	
adjustable response value setting current (I _r) / of the L-trip / with I2t characteristic	
• minimum	900 A
• maximum	900 A
adjustable response value delay time (t _r) / for L-tripping / with I2t characteristic	
• minimum	1 s
• maximum	1 s
adjustable response value setting current (I _i) / for I-tripping	
• minimum	4 500 A
• maximum	9 000 A
adjustable current response value current / of instantaneous short-circuit trip unit	
• minimum	4 500 A
• maximum	9 000 A
product function / grounding protection	No
Mechanical Design	
product component	
• undervoltage release	No
• trip indicator	No
height [in]	8.14 in
height	207 mm
width [in]	8.99 in
width	228.4 mm
depth [in]	16 in
depth	406.4 mm
Connections	
type of electrical connection / for main current circuit	without terminals
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	silver
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
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	F
certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	No
General Product Approval	

[Confirmation](#)



[Miscellaneous](#)

General Product Approval	Declaration of Conformity	Test Certificates	Marine / Shipping	other
		EG-Konf.		

other

[Miscellaneous](#)

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=3VA5790-5EC31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5790-5EC31-0AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5790-5EC31-0AA0

CAX-Online-Generator

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

Tender specifications

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

The diagram shows a three-stage cascaded circuit within a rectangular box labeled "CB" in the top-left corner. The circuit is divided into three horizontal sections, each containing a stage of the cascade. The stages are numbered 1, 3, and 5 on the left, and 2, 4, and 6 on the right. Each stage consists of a series of components: a circle, a vertical line, a circle, a zigzag line, and a circle. The stages are connected in series, with the output of one stage feeding into the next. A feedback loop is shown at the top, connecting the output of stage 2 back to the input of stage 1. The feedback loop is represented by a line that goes up from stage 2, across the top, and down to stage 1.

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