SIEMENS

Data sheet

3VA5112-5EC31-1AA0



circuit breaker 3VA5 UL frame 125 breaking capacity class M 35kA @ 480V 3-pole, line protection TM230, FTAM, In=125A overload protection Ir=125A fixed short-circuit protection Ii=5...10 x In UL 489 SB (naval), 50° C without connection

product brand name SENTRON product designation / according to UL file Molded-case circuit breaker // design of the product System protection design of the load switch / according to UL 489 / Heahing, Ar Yes Conditioning, and Refigeration circuit breaker (HACR Type) Yes design of the load switch / according to UL 489 / High-Intensity- No Discharge circuit breaker (HOT Type) No design of the load switch / according to UL 489 / Switching Duty No circuit breaker (HOT Type) No design of the load switch / according to UL 489 / Switching Duty No circuit breaker (HOT Type) No design of the load switch / according to UL 489 / Switching Duty No orizuit breaker (HOT Type) No design of the load switch / according to UL 489 / Switching Duty No orizuit breaker (HOT Type) No design of the load switch / according to UL 489 / Switching Duty No orizuit breaker (HOT Type) Switching Duty geneticity divides / at cording to UL 489 / Switching Duty No power loss [W] / maximum 30.1 W power loss [W] / for ratel value of the c	Model	
product designation / according to UL file MEAM design of the product System protection design of the load switch / according to UL 489 / High-Intensity. Yes Discharge circuit breaker (HTU Type) No design of the load switch / according to UL 489 / High-Intensity. No design of the load switch / according to UL 489 / High-Intensity. No design of the load switch / according to UL 489 / Switching Duty circuit breaker (HTU Type) No design of the overcurrent release TM230 protection function of the overcurrent release Ll number of poles 3 General technical data 690 V operating voltage / at AC / rated value 690 V power loss [W] / for rated value of the current / at AC / in hot 10.03 W operating state / per pole 20 000 electrical endurance (operating cycles) / typical 20 000 electrical endurance (operating cycles) / typical 20 000 electrical endurance (operating cycles) / typical 8 000 electrical endurance (operating cycles) / typical 8 000 ground-fault monitoring version without product feature / for neutral	product brand name	SENTRON
design of the product System protection design of the load switch / according to UL 489 / Heating, Air Yes Conditioning, and Refrigerating circuit breaker (HACR Type) No design of the load switch / according to UL 489 / High-Intensity- No design of the load switch / according to UL 489 / High-Intensity- No design of the load switch / according to UL 489 / Switching Duty No circuit breaker (ISVD Type) No design of the load switch / according to UL 489 / Switching Duty No circuit breaker (ISVD Type) No design of the load switch / according to UL 489 / Intensity- No protection function of the overcurrent release TM230 protection function of the overcurrent release Ll number of poles 3 Ceneral technical data 690 V power loss [W] / maximum 30.1 W power loss [W] / for rated value of the current / at AC / in hot. 10.03 W operating solte / per pole 20 000 electrical endurance (operating cycles) / at AC-1 / at 380/415 V 8 000 electrical endurance (operating cycles) / at AC-1 / at 380/415 V 8 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000<	product designation	Molded-case circuit breaker
design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) Yes design of the load switch / according to UL 489 / High-Intensity- Discharge circuit breaker (HID Type) No design of the load switch / according to UL 489 / High-Intensity- Discharge circuit breaker (HD Type) No design of the code switch / according to UL 489 / High-Intensity- Discharge circuit breaker (HD Type) No design of the code switch / according to UL 489 / High-Intensity- Discharge circuit breaker (HD Type) No design of the code switch / according to UL 489 / High-Intensity- Discharge circuit breaker (HD Type) No operating voltage / at AC / rated value 690 V operating voltage / at AC / rated value of the current / at AC / in hot operating site / per pole 10.03 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 4 000 product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overload proof without ground-fault monitoring version without product function No other measurement function No other measurement function No other measurement function No other measurement functi	product designation / according to UL file	MEAM
Conditioning, and Refrigeration circuit breaker (HACR Type) No design of the load switch / according to UL 489 / High-Intensity- Discharge circuit breaker (HID Type) No design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type) No design of the overcurrent release TM230 protection function of the overcurrent release LI number of poles 3 Central tochnical data 690 V operating voltage / at AC / rated value 690 V power loss [W] / maximum 30.1 W operating voltage / at AC / rated value of the current / at AC / in hot operating state / per pole 20 000 electrical endurance (operating cycles) / typical 8 000 electrical endurance (operating cycles) / at 480 V 8 000 electrical endurance (operating cycles) / at 480 V 8 000 electrical endurance (operating cycles) / at 480 V 8 000 electrical endurance (operating cycles) / at 480 V 8 000 ground-fault monitoring version without product fleature / for neutral conductors / upgradable/retrofittable No other measurement function No other measurement function No other measurement function N	design of the product	System protection
Discharge circuit breaker (HID Type) No design of the load switch / according to UL 489 / Switching Duty No design of the overcurrent release TM230 protection function of the overcurrent release Ll number of poles 3 Ceneral technical data 690 V operating voltage / at AC / rated value 690 V power loss [W] / for rated value of the current / at AC / in hot 10.03 W operating state / per pole 20 000 electrical endurance (operating cycles) / ta AC-1 / at 380/415 V 8 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at AC0 V 8 000 electrical endurance (operating cycles) / at AC0 V 8 000 electrical endurance (operating cycles) / at A00 V 8 000 electrical endurance (operating cycles) / at A00 V 8 000 ground-fault monitoring version without product fauture / for neutral conductors / upgradable/retrofittable No / stotic/fuelt 0.88 kg Current 0.88 kg current 125 A et at 5 °C 119 A et at 60 °C 114 A		Yes
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protection function of the overcurrent release Ll number of poles 3 General technical data 690 V operating voltage / at AC / rated value 690 V power loss [W] / maximum 30.1 W power loss [W] / for rated value of the current / at AC / in hot 10.03 W operating state / per pole 20 000 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 4 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 product feature / for neutral conductors / upgradable/retrofittable // / short-circuit and overload proof without ground-fault monitoring version without product function No • other measurement function No Noterent 0.88 kg Current 125 A • at 40 °C 125 A • at 45 °C 122 A		No
number of poles 3 General technical data 690 V power loss [W] / maximum 30.1 W power loss [W] / for ated value of the current / at AC / in hot operating state / per pole 10.03 W mechanical service life (operating cycles) / thical 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 4 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at 800 V 8 000 electrical endurance (operating cycles) / at 800 V 4 000 ground-fault monitoring version without product function No • communication function No • other measurement function No • other measurement function No operational current 125 A • at 40 °C 125 A • at 45 °C 117 A • at 50 °C 117 A • at 60 °C 114 A • at 65 °C 112 A	design of the overcurrent release	TM230
General technical data operating voltage / at AC / rated value 690 V power loss [W] / for rated value of the current / at AC / in hot operating state / per pole 30.1 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 4 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 product feature / for neutral conductors / upgradable/retrofittable No / stort-circuit and overload proof without ground-fault monitoring version without product function No • other measurement function No Net Weight 0.88 kg Current 125 A • at 40 °C 125 A • at 45 °C 119 A • at 55 °C 117 A • at 60 °C 114 A • at 65 °C 112 A	protection function of the overcurrent release	L
operating voltage / at AC / rated value 690 V power loss [W] / maximum 30.1 W power loss [W] / for rated value of the current / at AC / in hot operating state / per pole 10.03 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 4 000 electrical endurance (operating cycles) / at AC0 V 8 000 electrical endurance (operating cycles) / at 480 V 8 000 glocund-fault monitoring version without product feature / for neutral conductors / upgradable/retrofittable No / soft-circuit and overload proof without ground-fault monitoring version without product function No • other measurement function No • other measurement function No operating / according to UL 489 / 100%-rated breaker No operational current 125 A • at 40 °C 125 A • at 40 °C 119 A • at 50 °C 111 A • at 65 °C 112 A	number of poles	3
power loss [W] / maximum 30.1 W power loss [W] / for rated value of the current / at AC / in hot 10.03 W operating state / per pole 20 000 mechanical service life (operating cycles) / typical 20 000 electrical endurance (operating cycles) / ta AC-1 / at 380/415 V 8 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at AB0 V 8 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overhoad proof without product feature / for neutral conductors / upgradable/retrofittable No • other measurement function No • other measurement function No Net Weight 0.88 kg Current marking / according to UL 489 / 100%-rated breaker No operational current 125 A • at 40 °C 122 A • at 40 °C 122 A • at 55 °C 117 A • at 60 °C 114 A	General technical data	
power loss [W] / for rated value of the current / at AC / in hot 10.03 W operating state / per pole 20 000 mechanical service life (operating cycles) / typical 20 000 electrical endurance (operating cycles) / at 80-1 / at 380/415 V 8 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at 600 V 4 000 electrical endurance (operating cycles) / at 600 V 4 000 product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overload proof without ground-fault monitoring version without product function No • other measurement function No Net Weight 0.88 kg Current	operating voltage / at AC / rated value	690 V
operating state / per polemechanical service life (operating cycles) / typical20 000electrical endurance (operating cycles) / at AC-1 / at 380/415 V8 000electrical endurance (operating cycles) / at 690 V4 000electrical endurance (operating cycles) / at 690 V8 000electrical endurance (operating cycles) / at 800 V8 000electrical endurance (operating cycles) / at 800 V4 000product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proofNoground-fault monitoring versionwithoutproduct functionNo• communication functionNo• other measurement functionNoNet Weight0.88 kgCurrentmarking / according to UL 489 / 100%-rated breakeroperational current125 A• at 40 °C125 A• at 45 °C119 A• at 55 °C117 A• at 60 °C114 A• at 65 °C112 A	power loss [W] / maximum	30.1 W
electrical endurance (operating cycles) / at AC-1 / at 380/415 V 8 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at A80 V 8 000 electrical endurance (operating cycles) / at A80 V 8 000 electrical endurance (operating cycles) / at 600 V 4 000 product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overload proof without ground-fault monitoring version without product function No • other measurement function No • other measurement function No Net Weight 0.88 kg Current		10.03 W
electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at 480 V 8 000 electrical endurance (operating cycles) / at 600 V 4 000 product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof No ground-fault monitoring version without product function No • communication function No • other measurement function No Net Weight 0.88 kg Current marking / according to UL 489 / 100%-rated breaker operational current 125 A • at 40 °C 122 A • at 50 °C 119 A • at 55 °C 117 A • at 65 °C 112 A	mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at 480 V8 000electrical endurance (operating cycles) / at 600 V4 000product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proofNoground-fault monitoring versionwithoutproduct functionNo• communication functionNo• other measurement functionNoNet Weight0.88 kgCurrentmarking / according to UL 489 / 100%-rated breaker• at 40 °C125 A• at 40 °C122 A• at 45 °C119 A• at 55 °C117 A• at 65 °C112 A	electrical endurance (operating cycles) / at AC-1 / at 380/415 V	8 000
electrical endurance (operating cycles) / at 600 V 4 000 product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overload proof without ground-fault monitoring version without product function No • communication function No • other measurement function No Net Weight 0.88 kg Current No marking / according to UL 489 / 100%-rated breaker No operational current 125 A • at 40 °C 122 A • at 45 °C 119 A • at 55 °C 117 A • at 65 °C 112 A	electrical endurance (operating cycles) / at AC-1 / at 690 V	4 000
product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overload proof without ground-fault monitoring version without product function No • communication function No • other measurement function No Net Weight 0.88 kg Current marking / according to UL 489 / 100%-rated breaker No 125 A • at 40 °C 125 A • at 45 °C 122 A • at 55 °C 119 A • at 65 °C 114 A • at 65 °C 112 A	electrical endurance (operating cycles) / at 480 V	8 000
i short-circuit and overload proof without ground-fault monitoring version without product function No • communication function No • other measurement function No Net Weight 0.88 kg Current No marking / according to UL 489 / 100%-rated breaker No operational current 125 A • at 40 °C 122 A • at 50 °C 119 A • at 55 °C 117 A • at 60 °C 114 A • at 65 °C 112 A	electrical endurance (operating cycles) / at 600 V	4 000
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• communication functionNo• other measurement functionNoNet Weight0.88 kgCurrentmarking / according to UL 489 / 100%-rated breakerNooperational current125 A• at 40 °C122 A• at 45 °C122 A• at 55 °C119 A• at 60 °C114 A• at 60 °C112 A	ground-fault monitoring version	without
• other measurement functionNoNet Weight0.88 kgCurrentmarking / according to UL 489 / 100%-rated breakerNooperational currentNo• at 40 °C125 A• at 45 °C122 A• at 55 °C119 A• at 55 °C117 A• at 60 °C114 A• at 65 °C112 A	product function	
Net Weight0.88 kgCurrentmarking / according to UL 489 / 100%-rated breakerNooperational current• at 40 °C125 A• at 45 °C122 A• at 55 °C119 A• at 55 °C117 A• at 60 °C114 A• at 65 °C112 A	 communication function 	No
Current No marking / according to UL 489 / 100%-rated breaker No operational current 125 A • at 40 °C 125 A • at 45 °C 122 A • at 50 °C 119 A • at 55 °C 117 A • at 60 °C 114 A • at 65 °C 112 A	 other measurement function 	No
marking / according to UL 489 / 100%-rated breakerNooperational current	Net Weight	0.88 kg
operational current 125 A • at 40 °C 125 A • at 45 °C 122 A • at 50 °C 119 A • at 55 °C 117 A • at 60 °C 114 A • at 65 °C 112 A	Current	
• at 40 °C 125 A • at 45 °C 122 A • at 50 °C 119 A • at 55 °C 117 A • at 60 °C 114 A • at 65 °C 112 A	marking / according to UL 489 / 100%-rated breaker	No
• at 45 °C 122 A • at 50 °C 119 A • at 55 °C 117 A • at 60 °C 114 A • at 65 °C 112 A	operational current	
• at 50 °C 119 A • at 55 °C 117 A • at 60 °C 114 A • at 65 °C 112 A	• at 40 °C	125 A
• at 55 °C 117 A • at 60 °C 114 A • at 65 °C 112 A	• at 45 °C	122 A
• at 60 °C 114 A • at 65 °C 112 A	• at 50 °C	119 A
• at 65 °C 112 A	● at 55 °C	117 A
	● at 60 °C	114 A
• at 70 °C 109 A	● at 65 °C	112 A
	● at 70 °C	109 A

Switching capacity according to IEC 60947					
switching capacity class of the circuit breaker	М				
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	18 kA				
Adjustable parameters					
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic					
• minimum	125 A				
• maximum	125 A				
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic					
• minimum	1 s				
• maximum	1 s				
adjustable response value setting current (li) / for I-tripping					
• minimum	625 A				
• maximum	1 250 A				
adjustable setting current (InN) / for N-tripping					
• minimum	0 A				
• maximum	0 A				
adjustable current response value current / of the current- dependent overload release	125 125 A				
product function / grounding protection	No				
Mechanical Design					
product component					
 undervoltage release 	No				
 voltage trigger 	No				
trip indicator	No				
height [in]	5.51 in				
height	140 mm				
width [in]	3 in				
width	76.2 mm				
depth [in]	3.01 in				
depth	76.5 mm				
Connections					
arrangement of electrical connectors / for main current circuit	Without connection				
type of electrical connection / for main current circuit	Without				
Auxiliary circuit					
number of CO contacts / for auxiliary contacts	0				
Accessories					
product extension / optional / motor drive	Yes				
Environmental conditions					
protection class IP / on the front					
	IP40				
ambient temperature	25 °C				
during operation / minimum	-25 °C				
during operation / maximum	70 °C				
during storage / minimum	-40 °C				
during storage / maximum	80 °C				
Certificates certificate of suitability / as approval for NAVAL (no combat	Yes				
vessels) / supplement SB					
General Product Approval					
Confirmation	Miscellaneous				
<u> </u>					
CCC UL	UL VDE				

General Product Ap- proval	EMC	Declaration of Conformit	y	Test Certificates	Marine / Shipping
EHC	RCM	UK CA	C C EG-Konf.	Type Test Certific- ates/Test Report	ABS
Marine / Shipping	other				
KARS	<u>Miscellaneous</u>	<u>Confirmation</u>	Miscellaneous		

Further information

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

https://press.siemens /global/en/pre 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=3VA5112-5EC31-1AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3VA5112-5EC31-1A/

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

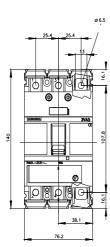
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5112-5EC31-1AA0

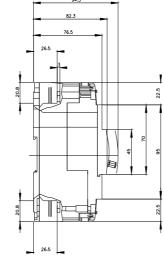
CAx-Online-Generator

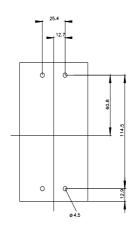
http://www.siemens.com/cax

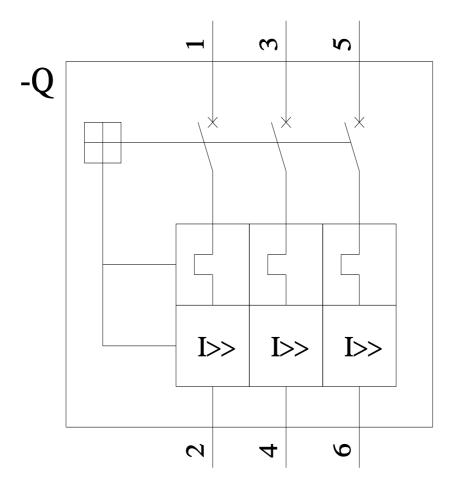
Tender specifications

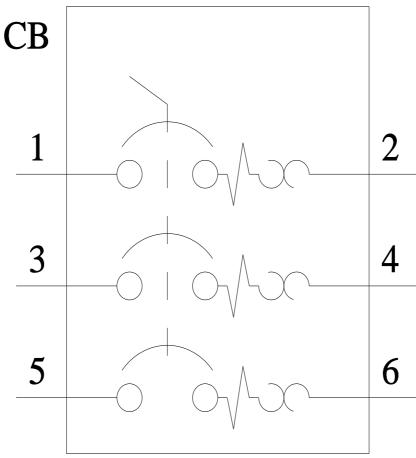
http://www.siemens.com/specifications











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Authorized Distributor

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Siemens: 3VA51125EC311AA0