3VA5120-4ED32-1AA0

Data sheet



circuit breaker 3VA5 UL frame 125 breaking capacity class S 25kA @ 480 V 3-pole, line protection TM210, FTFM, In=20A overload protection Ir=20A fixed short-circuit protection Ii=15 x In UL489 SB (naval), 50 deg. cel. nut keeper kit on both sides

product designation / according to UL file SEAM Molded-case circuit breaker product designation / according to UL file SEAM System protection design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) design of the load switch / according to UL 489 / High-Intensity-Discharge circuit breaker (INT Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (INT Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (INT Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (INT Type) design of the overcurrent release ILI number of poles 3 3 General technical data operating voltage / at AC / rated value 6690 V power loss [W] / for rated value 690 V power loss [W] / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (operating cycles) / at AC-1 / at 380/415 V 8 800 electrical endurance (operating cycles) / at AC-1 / at 380/415 V 8 800 electrical endurance (operating cycles) / at A6-1 / at 380 V 4 800 electrical endurance (operating cycles) / at 800 V 9 v 9 v 9 v 9 v 9 v 9 v 9 v 9 v 9 v 9	Model	
product designation / according to UL file SEAM System protection design of the product System protection Yes Conditioning, and Refrigeration circuit breaker (HACR Type) design of the load switch / according to UL 489 / High-Intensity-Discharge circuit breaker (HID Type) design of the load switch / according to UL 489 / High-Intensity-Discharge circuit breaker (HID Type) design of the load switch / according to UL 489 / High-Intensity-Discharge circuit breaker (HID Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type) design of the overcurrent release TM210 protection function of the overcurrent release LI number of poles 3 3 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 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 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 580 V 4 000 electrical endurance (operating cycles) / at AC-1 / at 580 V 8 000 electrical endurance (operating cycles) / at AC-1 / at 580 V 8 000 electrical endurance (operating cycles) / at 600 V 9 000 Product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof without monitoring version without monitoring version without monitoring version without marking / according to UL 489 / 100%-rated breaker Operational current at 40 °C 20 A 4 45 °C 20 A 4 45 °C 20 A 5 46 °C 19 A 6 5 °C 19 A 6 6 °C 18 A 6	product brand name	SENTRON
design of the product design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) design of the load switch / according to UL 489 / High-Intensity- Discharge circuit breaker (HID Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type) design of the overcurrent release TM210 protection function of the overcurrent release protection function of the overcurrent release LI number of poles operating voltage / at AC / rated value operating voltage / at AC / rated value operating voltage / at AC / rated value opower loss [W] / maximum power loss [W] / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (operating cycles) / typical electrical endurance (operating cycles) / at AC-1 / at 690 V electrical endurance (operating cycles) / at AC-1 / at 690 V electrical endurance (operating cycles) / at AC-1 / at 690 V product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version without product fraction • communication function • communication function • communication function volument • at 40 °C at 45 °C at 45 °C at 65 °C a	product designation	Molded-case circuit breaker
design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refigeration circuit breaker (HACR Type) design of the load switch / according to UL 489 / High-Intensity-Discharge circuit breaker (HID Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type) design of the overcurrent release TM210 protection function of the overcurrent release LI number of poles 3 Ceneral technical data operating voltage / at AC / rated value power loss [W] / maximum 12.2 W power loss [W] / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (operating cycles) / typical electrical endurance (operating cycles) / at AC-1 / at 380/415 V electrical endurance (operating cycles) / at AC-1 / at 690 V electrical endurance (operating cycles) / at 480 V	product designation / according to UL file	SEAM
Conditioning, and Refrigeration circuit breaker (HACR Type) design of the load switch / according to UL 489 / High-Intensity-Discharge circuit breaker (HID Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type) design of the overcurrent release TM210 protection function of the overcurrent release LI number of poles 3 General technical data operating voltage / at AC / rated value operating state / per pole mechanical service life (operating cycles) / typical electrical endurance (operating cycles) / at AC-1 / at 380/415 V electrical endurance (operating cycles) / at AC-1 / at 690 V electrical endurance (operating cycles) / a	design of the product	System protection
design of the load switch / according to UL 489 / Switching Duty circuit treaker (SWD Type) design of the overcurrent release protection function of the overcurrent release I		Yes
design of the overcurrent release TM210 protection function of the overcurrent release LI number of poles 3 Ceneral technical data operating voltage / at AC / rated value 690 V power loss [W] / maximum 12.2 W power loss [W] / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (operating cycles) / typical 20 000 electrical endurance (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 product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version without product function No other measurement function No Net Weight 0.951 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C 20 A • at 55 °C 20 A • at 55 °C 19 A • at 60 °C 19 A		Yes
protection function of the overcurrent release number of poles 3 General technical data operating voltage / at AC / rated value power loss [W] / maximum power loss [W] / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (operating cycles) / typical electrical endurance (operating cycles) / typical electrical endurance (operating cycles) / at AC-1 / at 380/415 V electrical endurance (operating cycles) / at AC-1 / at 690 V electrical endurance (operating cycles) / at AC-1 / at 690 V electrical endurance (operating cycles) / at AC-1 / at 690 V electrical endurance (operating cycles) / at 600 V electrical endurance (operating cycles) / at 600 V electrical endurance (operating cycles) / at 600 V for outer feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version without product function communication function No Noter measurement function No Noter measurement function No Noter measurement function vertical endurance (operating cycles) / at 600 V et at 40 °C at 40 °C at 50 °C 19 A at 60 °C 19 A at 60 °C 19 A at 60 °C 18 A		Yes
number of poles 3	design of the overcurrent release	TM210
General technical data operating voltage / at AC / rated value 690 V power loss [W] / maximum 12.2 W power loss [W] / maximum 4.07 W power loss [W] / for rated value of the current / at AC / in hot operating state / per pole 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 480 V 8 000 electrical endurance (operating cycles) / at 480 V 4 000 product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version without product function No • other measurement function No Note Weight 0.951 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C • at 50 °C • at 55 °C • at 60 °C	protection function of the overcurrent release	Ш
operating voltage / at AC / rated value 690 V power loss [W] / maximum 12.2 W power loss [W] / for rated value of the current / at AC / in hot operating state / per pole 7 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 ABO V 8 000 electrical endurance (operating cycles) / at 600 V 4 000 product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version without product function No Net Weight 0.951 kg Current marking / according to UL 489 / 100%-rated breaker No operational current e at 40 °C 20 A e at 50 °C 19 A e at 60 °C 19 A e at 60 °C 19 A	number of poles	3
Dower loss [W] / maximum	General technical data	
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole 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 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 ground-fault monitoring version without product function	operating voltage / at AC / rated value	690 V
operating state / per pole 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 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 ground-fault monitoring version without product function No • ormmunication function No Net Weight 0.951 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C 20 A • at 45 °C 20 A • at 55 °C 19 A • at 60 °C 19 A • at 65 °C 18 A	power loss [W] / maximum	12.2 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 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 ground-fault monitoring version without product function • communication function • other measurement function No Net Weight Current marking / according to UL 489 / 100%-rated breaker operational current • at 40 °C • at 45 °C • at 45 °C • at 55 °C • at 60 °C • at 65 °C 19 A • at 65 °C 18 A		4.07 W
electrical endurance (operating cycles) / at AC-1 / at 690 V	mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at 480 V electrical endurance (operating cycles) / at 600 V product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version without product function • communication function • other measurement function No Net Weight Current marking / according to UL 489 / 100%-rated breaker operational current • at 40 °C • at 45 °C • at 55 °C • at 65 °C 19 A • at 65 °C 18 A	electrical endurance (operating cycles) / at AC-1 / at 380/415 V	8 000
electrical endurance (operating cycles) / at 600 V product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version product function communication function other measurement function No Net Weight Current marking / according to UL 489 / 100%-rated breaker operational current at 40 °C at 45 °C at 45 °C at 55 °C at 60 °C at 60 °C at 65 °C 19 A at 65 °C 18 A	electrical endurance (operating cycles) / at AC-1 / at 690 V	4 000
product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version without product function • communication function No • other measurement function No Net Weight 0.951 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C 20 A • at 45 °C 20 A • at 55 °C 19 A • at 65 °C 19 A • at 65 °C 18 A	electrical endurance (operating cycles) / at 480 V	8 000
/ short-circuit and overload proof ground-fault monitoring version without product function	electrical endurance (operating cycles) / at 600 V	4 000
product function		No
• communication function • other measurement function No Net Weight O.951 kg Current marking / according to UL 489 / 100%-rated breaker operational current • at 40 °C • at 45 °C • at 50 °C • at 55 °C • at 60 °C • at 65 °C 19 A • at 65 °C 18 A	ground-fault monitoring version	without
● other measurement function No Net Weight Current marking / according to UL 489 / 100%-rated breaker operational current ● at 40 °C ● at 45 °C ● at 50 °C ● at 55 °C ● at 65 °C 19 A ● at 65 °C 18 A	product function	
Net Weight 0.951 kg Current marking / according to UL 489 / 100%-rated breaker No operational current 20 A at 40 °C 20 A at 45 °C 20 A at 50 °C 19 A at 65 °C 19 A at 65 °C 18 A	• communication function	No
Current marking / according to UL 489 / 100%-rated breaker No operational current 20 A • at 40 °C 20 A • at 50 °C 19 A • at 55 °C 19 A • at 60 °C 19 A • at 65 °C 18 A	 other measurement function 	No
marking / according to UL 489 / 100%-rated breaker No operational current 20 A • at 40 °C 20 A • at 45 °C 20 A • at 50 °C 19 A • at 60 °C 19 A • at 65 °C 18 A	Net Weight	0.951 kg
operational current • at 40 °C • at 45 °C • at 50 °C • at 55 °C • at 60 °C • at 65 °C 19 A • at 65 °C 18 A	Current	
 at 40 °C at 45 °C at 50 °C at 55 °C at 60 °C at 65 °C 19 A at 65 °C 19 A 10 A 10 A 11 A 12 A 13 A 14 A 15 A 16 A 17 A 18 A 	marking / according to UL 489 / 100%-rated breaker	No
 at 45 °C at 50 °C at 55 °C at 60 °C at 65 °C 19 A at 65 °C 19 A at 65 °C 18 A 	operational current	
 at 50 °C at 55 °C 19 A at 60 °C at 65 °C 19 A 10 A<	• at 40 °C	20 A
• at 55 °C 19 A • at 60 °C 19 A • at 65 °C 18 A	• at 45 °C	20 A
• at 60 °C 19 A • at 65 °C 18 A	• at 50 °C	19 A
• at 65 °C 18 A	• at 55 °C	19 A
	• at 60 °C	19 A
• at 70 °C 18 A	• at 65 °C	18 A
	● at 70 °C	18 A

Switching capacity according to IEC 60947 switching capacity class of the circuit breaker	S
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
Switching capacity according to UL 489	chapter
current breaking capacity	OF I.A
• at 240 V	65 kA
• at 480 V	25 kA
• at 600 Y/347 V	14 kA
Adjustable parameters	
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic	
• minimum	20 A
• maximum	20 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	300 A
• maximum	300 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	20 20 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	. 0.0
arrangement of electrical connectors / for main current circuit	Front connection
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	12 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	17 x 6.5 mm
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	
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 vessels) / supplement SB	Yes



Confirmation





Miscellaneous



EMC

Test Certificates

Marine / Shipping

other



Type Test Certificates/Test Report



Miscellaneous

Confirmation

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)

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA5120-4ED32-1AA0

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

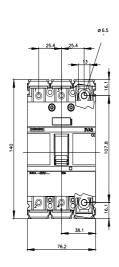
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5120-4ED32-1AA0

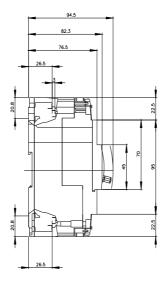
CAx-Online-Generator

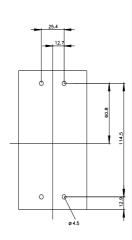
http://www.siemens.com/cax

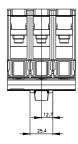
Tender specifications

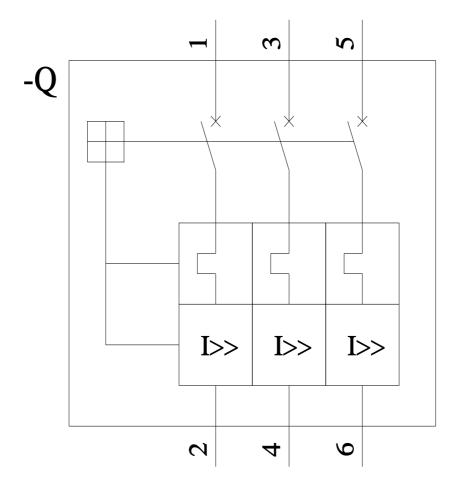
http://www.siemens.com/specifications

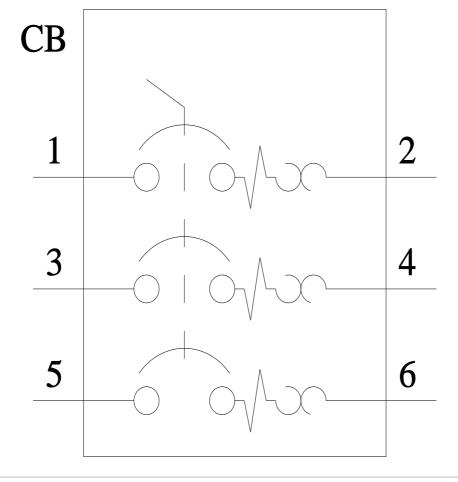












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Authorized Distributor

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Siemens:

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