## 3VA5120-5ED32-1AA0

**Data sheet** 



circuit breaker 3VA5 UL frame 125 breaking capacity class M 35kA @ 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 MEAM Molded-case circuit breaker product designation / according to UL file MEAM System protection design of the product According to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) design of the load switch / according to UL 489 / High-intensity-bischarge circuit breaker (HOI Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (HOI Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (HOI Type) design of the covercurrent release TW210 protection function of the overcurrent release LLI number of poles 3 Ceneral technical data operating voltage / at AC / rated value 680 V power loss [MJ / maximum 12.2 W power loss [MJ / maximum 12.2 W power loss [MJ / for rated value of the current / at AC / in hot operating study for protection deviate per pole mechanical service life (operating cycles) / at AC-1 / at 590 V 4000 electrical endurance (operating cycles) / at AC-1 / at 590 V 4000 electrical endurance (operating cycles) / at AC-1 / at 590 V 4000 electrical endurance (operating cycles) / at AC-1 / at 590 V 4000 electrical endurance (operating cycles) / at AC-1 / at 590 V 4000 electrical endurance (operating cycles) / at AC-1 / at 590 V 4000 electrical endurance (operating cycles) / at AC-1 / at 590 V 4000 electrical endurance (operating cycles) / at 600 V 4000 V	Model	
product designation / according to UL file design of the product design of the product System protection  Ves  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 / Switching Duty circuit breaker (SWD Type) design of the overcurrent release protection function of the overcurrent release ILI number of poles  General technical data operating voltage / at AC / rated value 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 AG-1 / at 380/415 V electrical endurance (operating cycles) / at AG-1 / at 380 V electrical endurance (operating cycles) / at AG-1 / at 690 V product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version product function  • ommunication function • other measurement function No No No Operational current • at 40 °C • at 45 °C • at 65 °C	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  I unmber 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 380/415 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 frection  • communication function  • communication function  • other measurement function  • other measurement function  • at 40 °C  • at 45 °C  • at 65 °C	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 overcurrent release TMZ10 protection function of the overcurrent release LI number of poles 3  Ceneral technical data Operating voltage / at AC / rated value 690 V Operating voltage / at AC / rated	product designation / according to UL file	MEAM
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 voltage / at AC / rated value 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 380/415 V electrical endurance (operating cycles) / at AC-1 / at 680 V electrical enduran	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 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) / 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 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 4 000 electrical endurance (operating cycles) / at 800 V 4 000 electrical endurance (operating cycles) / at 800 V 4 000 electrical endurance (operating cycles) / at 800 V 4 000 electrical endurance (operating cycles) / at 800 V 5 electrical endurance (operating cycles) / at 800 V 5 electrical endurance (operating cycles) / at 800 V 5 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V 6 000 electrical endurance (operating cycles) / at 800 V		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  product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof  ground-fault monitoring version  without  product function  • communication function  • communication function  No  Note Weight  Operational current  marking / according to UL 489 / 100%-rated breaker  operational current  • at 40 °C  • at 55 °C  • at 55 °C  • at 60 °C  • at 65 °C		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 600 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 70 p	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 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 A60 V 8 000 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 • 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 19 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 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 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 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  • 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 60 °C • at 60 °C • at 65 °C  without  without  No  No  No  No  2.0 A  2.0 A  2.0 A  3.1 B  4.1	electrical endurance (operating cycles) / at 600 V	4 000
product function		No
<ul> <li>◆ communication function</li> <li>♦ other measurement function</li> <li>No</li> <li>Net Weight</li> <li>0.951 kg</li> </ul> Current marking / according to UL 489 / 100%-rated breaker <ul> <li>operational current</li> <li>♦ at 40 °C</li> <li>♦ at 45 °C</li> <li>♦ at 50 °C</li> <li>♦ at 55 °C</li> <li>♦ at 60 °C</li> <li>♦ at 60 °C</li> <li>♦ at 65 °C</li> <li>♦ at 65 °C</li> </ul>	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	Current	
<ul> <li>at 40 °C</li> <li>at 45 °C</li> <li>at 50 °C</li> <li>at 55 °C</li> <li>at 60 °C</li> <li>at 65 °C</li> <li>19 A</li> <li>at 65 °C</li> <li>19 A</li> <li>10 A</li> <li>10 A</li> <li>10 A</li> <li>10 A</li> <li>11 A</li> <li>12 A</li> <li>13 A</li> <li>14 A</li> <li>15 A</li> <li>16 A</li> <li>17 A</li> <li>18 A</li> <li>18 A</li> </ul>	marking / according to UL 489 / 100%-rated breaker	No
<ul> <li>at 45 °C</li> <li>at 50 °C</li> <li>at 55 °C</li> <li>at 60 °C</li> <li>at 65 °C</li> <li>19 A</li> <li>19 A</li> <li>19 A</li> <li>19 A</li> <li>19 A</li> <li>19 A</li> </ul>	operational current	
<ul> <li>at 50 °C</li> <li>at 55 °C</li> <li>19 A</li> <li>at 60 °C</li> <li>at 65 °C</li> <li>19 A</li> <li>10 A&lt;</li></ul>	• 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	• at 65 °C	18 A
	● at 70 °C	18 A

switching capacity class of the circuit breaker	M
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	
• at 240 V	85 kA
• at 480 V	35 kA
• at 600 Y/347 V	18 kA
Adjustable parameters	10 KA
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic	22.4
• minimum	20 A
maximum     adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	20 A
• minimum	1 s
• maximum	15
adjustable response value setting current (li) / for I-tripping	10
minimum	300 A
maximum	300 A
	500 A
adjustable setting current (InN) / for N-tripping	0.4
• minimum	0 A
maximum  adjustable current response value current / of the current	0 A 20 20 A
adjustable current response value current / of the current-dependent overload release	
product function / grounding protection	No
Mechanical Design	
product component	
undervoltage release	No
<ul> <li>voltage trigger</li> </ul>	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	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











EMC

**Test Certificates** 

Marine / Shipping

other



Type Test Certificates/Test Report



Confirmation

**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=3VA5120-5ED32-1AA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA5120-5ED32-1AA0

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

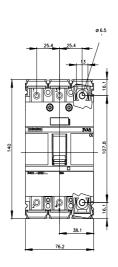
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA5120-5ED32-1AA0

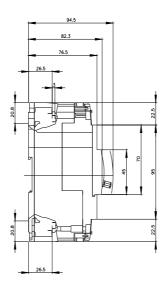
CAx-Online-Generator

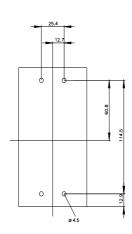
http://www.siemens.com/cax

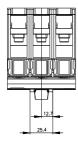
**Tender specifications** 

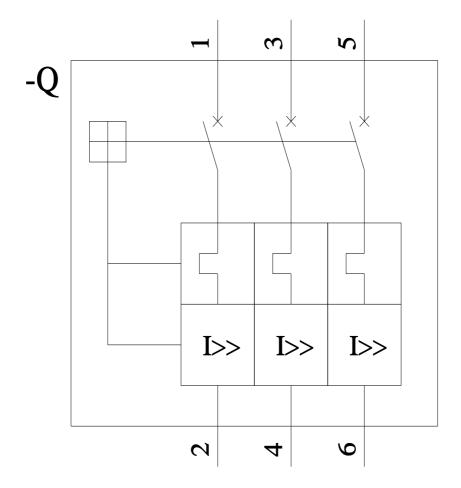
http://www.siemens.com/specifications

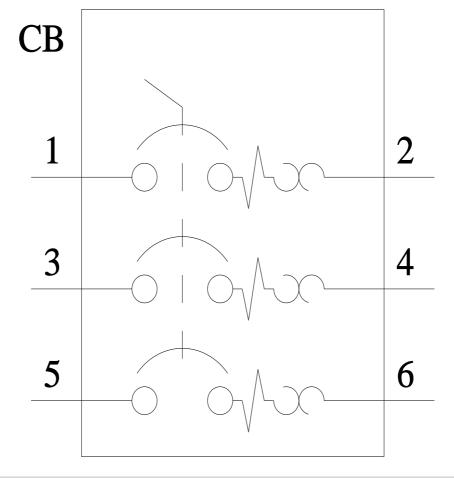












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