3VA5290-5ED32-1AA0

Data sheet



circuit breaker 3VA5 UL frame 250 breaking capacity class M 35kA @ 480 V 3-pole, line protection TM210, FTFM, In=90A overload protection Ir=90A fixed short-circuit protection Ii=10 x In UL489 SB (naval), 50 deg. cel. nut keeper kit on both sides

product designation / according to UL file MFAM Molded-case circuit breaker product designation / according to UL file MFAM System protection design of the product 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-bischarge circuit breaker (HOT Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (HOT Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (HOT Type) design of the covercurrent release TM210 protection function of the overcurrent release LI unumber of poles 3 Ceneral technical data operating voltage / at AC / rated value 690 V power loss [W] / maximum 25 W power loss [W] / for rated value of the current / at AC / in hot operating voltage / at AC / rated value 690 V power loss [W] / for rated value of the current / at AC / in hot operating service life (operating cycles) / at AC - / at 380/415 V alono electrical endurance (operating cycles) / at AC - / at 380/415 V alono electrical endurance (operating cycles) / at AC - / at 380/415 V alono electrical endurance (operating cycles) / at AC - / at 380/415 V alono electrical endurance (operating cycles) / at AC - / at 380/415 V alono electrical endurance (operating cycles) / at AC - / at 380/415 V alono version cycles / at AC - / at 380/415 V alono version cycles / at AC - / at 380/415 V alono version v	Model	
product designation / according to UL file	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 (HD Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (ISVID Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (ISVID 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 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 380/4 V electrical endurance (operating cycles) / at 400 V electrical endurance (operating cycles) / at 600 V product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof ground-fault monitoring version without volunt feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof ground-fault monitoring version without volunt feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof ground-fault monitoring version No Net Weight Current marking / according to UL 489 / 100%-rated breaker No operational current e at 40 °C 90 A e at 55 °C e at 65 °C e	product designation	Molded-case circuit breaker
design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refigeration circult 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 (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 Coneral technical data operating voltage / at AC / rated value 690 V power loss [W] / maximum 25 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 680 V 4 000 electrical endurance (operating cycles) / at 480 V 4 000 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 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 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 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 electrical endurance (operating cycles) / at 480 V 8 000 electrical endurance (operating cycles) / at 480 V 8 000 electrical endurance (operati	product designation / according to UL file	MFAM
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 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) / 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 69	design of the product	System protection
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 III 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 890 V electrical endurance (operating cycles) / at AC-1 / at 690 V electrical endurance (operating cycles) / at ABO V electrical endurance (operating cycles) / at 480 V electrical endurance (operating cycles) / at 480 V product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version without product function • other measurement function No Net Weight Curront marking / according to UL 489 / 100%-rated breaker operational current • at 440 °C • at 55 °C • at 50 °C • at 50 °C • at 60 °C • at 6		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 25 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 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 operational current 2.252 kg Current marking / according to UL 489 / 100%-rated breaker No operational current 2 at 40 °C 90 A 3 t 55 °C 90 A 3 t 55 °C 87.3 A 3 4 55.5 A 3 4 55.5 A 3 4 55.5 A 5		No
protection function of the overcurrent release		No
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 25 W power loss [W] / maximum 8.2 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) / 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 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 2.252 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C • at 55 °C • at 55 °C • at 60 °C • at 65 °C	protection function of the overcurrent release	LI
operating voltage / at AC / rated value 690 V power loss [W] / maximum 25 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 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 Net Weight 2.252 kg Current marking / according to UL 489 / 100%-rated breaker No operational current e at 40 °C 90 A e at 50 °C 90 A e at 55 °C 87.3 A e at 60 °C 85.5 A e at 60 °C 82.8 A	number of poles	3
power 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 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 Net Weight 2.252 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C 90 A • at 45 °C 90 A • at 55 °C 97.3 A • at 60 °C 85.5 A • at 65 °C 82.8 A	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 2.252 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C 90 A • at 50 °C 90 A • at 65 °C 87.3 A • at 60 °C • at 65 °C 82.8 A	power loss [W] / maximum	25 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 55 °C 90 A • at 55 °C 87.3 A • at 60 °C • at 65 °C 82.8 A		8.2 W
electrical endurance (operating cycles) / at AC-1 / at 690 V 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 vithout product function • communication function • other measurement function No No Net Weight Current marking / according to UL 489 / 100%-rated breaker • at 40 °C • at 45 °C • at 45 °C 90 A • at 55 °C 87.3 A • at 60 °C • at 65 °C 82.8 A	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 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 45 °C at 55 °C at 60 °C at 65 °C 82.8 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 65 °C at 65 °C at 65 °C by 00 A 82.8 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 2.252 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C 90 A • at 45 °C 90 A • at 55 °C 90 A • at 65 °C 87.3 A • at 60 °C • at 65 °C 82.8 A	electrical endurance (operating cycles) / at 480 V	8 000
/ short-circuit and overload proof ground-fault monitoring version ocommunication function other measurement function No Net Weight Current marking / according to UL 489 / 100%-rated breaker operational current oat 40 °C oat 45 °C oat 55 °C oat 60 °C oat 65 °C 82.8 A	electrical endurance (operating cycles) / at 600 V	4 000
product function		No
 ◆ communication function No Nother measurement function No Net Weight 2.252 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C • at 45 °C • at 50 °C • at 50 °C • at 60 °C • at 60 °C • at 65 °C 82.8 A 	ground-fault monitoring version	without
● other measurement function No Net Weight 2.252 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 ● 85.5 A ● at 65 °C ■ 82.8 A	product function	
Net Weight 2.252 kg Current marking / according to UL 489 / 100%-rated breaker No operational current 0 90 A • at 40 °C 90 A • at 50 °C 90 A • at 55 °C 87.3 A • at 60 °C 85.5 A • at 65 °C 82.8 A	• communication function	No
Current marking / according to UL 489 / 100%-rated breaker No operational current 90 A • at 40 °C 90 A • at 50 °C 90 A • at 55 °C 87.3 A • at 60 °C 85.5 A • at 65 °C 82.8 A	 other measurement function 	No
marking / according to UL 489 / 100%-rated breaker No operational current 90 A • at 40 °C 90 A • at 55 °C 90 A • at 55 °C 90 A • at 60 °C 87.3 A • at 65 °C 85.5 A • at 65 °C 82.8 A	Net Weight	2.252 kg
operational current • at 40 °C • at 45 °C • at 50 °C • at 55 °C • at 60 °C • at 65 °C • at 65 °C • at 65 °C	Current	
 at 40 °C at 45 °C at 50 °C at 55 °C at 60 °C at 65 °C 85.5 A at 65 °C 82.8 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 85.5 A at 65 °C 82.8 A 	operational current	
 at 50 °C at 55 °C at 60 °C at 65 °C 85.5 A 82.8 A 	• at 40 °C	90 A
 at 55 °C at 60 °C at 65 °C 87.3 A 85.5 A 82.8 A 	• at 45 °C	90 A
• at 60 °C 85.5 A • at 65 °C 82.8 A	• at 50 °C	90 A
• at 65 °C 82.8 A	● at 55 °C	87.3 A
	• at 60 °C	85.5 A
• at 70 °C 79.2 A	• at 65 °C	82.8 A
	• at 70 °C	79.2 A

Switching capacity according to IEC 60947	
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 chapter
Switching capacity according to UL 489	
current breaking capacity	
• at 240 V	85 kA
● at 480 V	35 kA
• at 600 V	18 kA
Adjustable parameters	
adjustable response value setting current (Ir) / of the L-trip / with l2t characteristic	
• minimum	90 A
• maximum	90 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
• minimum	1 s
• maximum	1 s
adjustable response value setting current (Ii) / for I-tripping	
• minimum	900 A
• maximum	900 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	90 90 A
product function / grounding protection	No
Mechanical Design	
product component	
undervoltage release	No
voltage trigger	No
• trip indicator	No
height [in]	7.28 in
height	185 mm
width [in]	4.13 in
width	105 mm
depth [in]	3.27 in
depth	83 mm
Connections	55
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	13 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	25 x 8 mm
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) $$	silver
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
ccessories	
product extension / optional / motor drive	Yes
invironmental 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	Yes
vessels) / supplement SB	











EMC

Declaration of Conformity

Marine / Shipping

other









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=3VA5290-5ED32-1AA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA5290-5ED32-1AA0

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

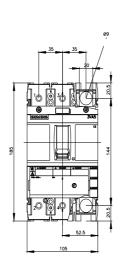
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5290-5ED32-1AA0

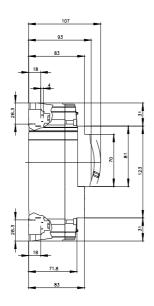
CAx-Online-Generator

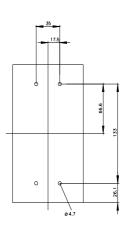
http://www.siemens.com/cax

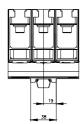
Tender specifications

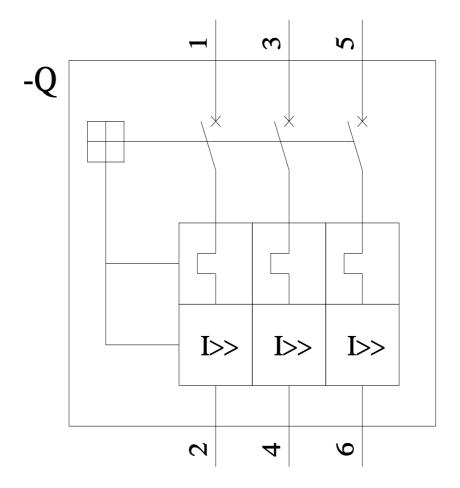
http://www.siemens.com/specifications

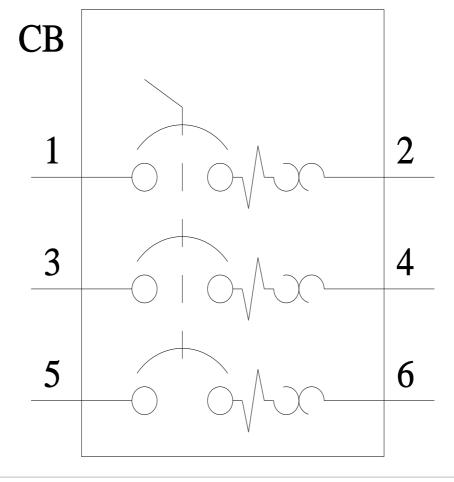












last modified: 7/15/2022 🖸

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Siemens:

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