3VA5145-5EC36-1AA0

Data sheet



circuit breaker 3VA5 UL frame 125 breaking capacity class M 35kA @ 480 V 3-pole, line protection TM230, FTAM, In=45A overload protection Ir=45A fixed short-circuit protection Ii=5...10 x In UL489 SB (naval), 50 deg. cel. cable connection on both sides

product brand name product designation product designation / according to UL file 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 Discharge circuit breaker (HOT Type) design of the load switch / according to UL 489 / High-intensity Discharge circuit breaker (HOT Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (ROT Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (ROT Type) design of the overcurrent release protection function of the overcurrent release I LI Discharge (SWD Type) design of the overcurrent release protection function of the overcurrent release protection function design of the overcurrent release protection function (SWD Type) 11.4 W Dower loss [W] / maximum 11.4 W Dower loss [W] / morated value of the current / at AC / in hot operating voltage / at AC / at AC / in the operation of the overcurrent overcurren	Model	
product designation / according to UL file System protection design of the product 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 (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 LI number of poles 3 Ceneral technical data operating voitage / 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 electrical endurance (operating cycles) / at AC-1 / at 690 V electrical endurance (operating cycles) / at AC v / at 480 V electrical endurance (operating cycles) / at 480 V electrical endurance (operating cycles) / at 480 V electrical endurance (operating cycles) / at 800 V electrica	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 (IBT 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 voercurrent release protection function of the overcurrent release protection function for function for overcurrent release protection function for overcurrent release protection function for function fu	product designation	Molded-case circuit breaker
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 load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type) design of the overcurrent release TM230 protection function of the overcurrent release ILI 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 380415 V electrical endurance (operating cycles) / at AC-1 / at 380415 V electrical endurance (operating cycles) / at 480 V ele	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 (HHDT 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 LL number of poles General technical data operating voltage / at AC / rated value opwer loss [W] / maximum 11.4 W opwer 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 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 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 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 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 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 60 V electr	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 protection function of the overcurrent release protection function of the overcurrent release LI number of poles 3 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 AC-1 / at 690 V product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version 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 No No No No No No 45 A 44 A 4 at 45 °C 41 45 °C 41 60 °C 42 A		Yes
design of the overcurrent release		Yes
protection function of the overcurrent release LI 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) / 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 690 V electrical endurance (operating cycles) / at 600 V electrical endurance (operating cycles) / at 600 V electrical endurance (operating cycles) / at 600 V for outcome feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version without product function communication function No No other measurement function No No other measurement function Authority According to UL 489 / 100%-rated breaker operational current et at 40 °C at 45 °C at 55 °C 43 A at 60 °C 42 A at 60 °C 42 A at 60 °C 42 A		No
Number of poles 3	design of the overcurrent release	TM230
Ceneral technical data	protection function of the overcurrent release	Ц
Operating voltage / at AC / rated value	number of poles	3
Dower loss [W] / maximum	General technical data	
Dower loss [W] / for rated value of the current / at AC / in hot operating state / per pole 20 000	operating voltage / at AC / rated value	690 V
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 electrical endurance (operating cycles) / 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 • other measurement function No Net Weight Ouesting / 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 42 A • at 65 °C 42 A	power loss [W] / maximum	11.4 W
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 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 • 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 43 A • at 60 °C • at 65 °C 42 A		3.8 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 electrical endurance (operating cycles) / at 600 V product feature / for neutral conductors / upgradable/retrofittable / 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 • at 40 °C • at 45 °C • at 45 °C • at 45 °C • at 55 °C • at 60 °C • at 60 °C • at 65 °C 42 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 55 °C 44 A • at 60 °C • at 65 °C • at 65 °C • at 65 °C • at 65 °C 42 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 no 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 45 °C 44 A at 55 °C 43 A at 60 °C at 65 °C 42 A at 65 °C 42 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 45 A • at 45 °C 44 A • at 50 °C 44 A • at 55 °C 43 A • at 60 °C 42 A • at 65 °C 42 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 • 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 60 °C • at 65 °C 42 A		No
● 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 50 °C ● at 55 °C ● at 60 °C ● at 65 °C No No No 45 A 44 A 44 A 43 A 44 A 44 A 46 A 47 A 48 A 49 A 40 A 41 A 42 A 42 A	ground-fault monitoring version	without
● other measurement function No Net Weight 0.951 kg Current marking / according to UL 489 / 100%-rated breaker operational current ● at 40 °C ● at 45 °C ● at 45 °C ● at 50 °C ● at 60 °C ● at 65 °C ● 42 A ● at 65 °C No 0.951 kg No 45 A 45 A 45 A 44 A 42 A 42 A	product function	
Net Weight 0.951 kg Current marking / according to UL 489 / 100%-rated breaker No operational current 45 A • at 40 °C 45 A • at 45 °C 44 A • at 50 °C 44 A • at 55 °C 43 A • at 60 °C 42 A • at 65 °C 42 A	 communication function 	No
Current marking / according to UL 489 / 100%-rated breaker No operational current 45 A • at 40 °C 45 A • at 45 °C 44 A • at 50 °C 44 A • at 55 °C 43 A • at 60 °C 42 A • at 65 °C 42 A	 other measurement function 	No
marking / according to UL 489 / 100%-rated breaker No operational current 45 A • at 40 °C 45 A • at 45 °C 44 A • at 50 °C 44 A • at 55 °C 43 A • at 60 °C 42 A • at 65 °C 42 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 • 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 • 42 A	marking / according to UL 489 / 100%-rated breaker	No
 at 45 °C at 50 °C 44 A at 55 °C 43 A at 60 °C at 65 °C 42 A 	operational current	
• at 50 °C 44 A • at 55 °C 43 A • at 60 °C 42 A • at 65 °C 42 A	• at 40 °C	45 A
• at 55 °C 43 A • at 60 °C 42 A • at 65 °C 42 A	• at 45 °C	44 A
• at 60 °C 42 A • at 65 °C 42 A	● at 50 °C	44 A
• at 65 °C 42 A	• at 55 °C	43 A
	• at 60 °C	42 A
e at 70 °C	• at 65 °C	42 A
₹ at 10 0	● at 70 °C	41 A

switching capacity class of the circuit breaker design of short-circuit protection	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 Y/347 V	18 kA
Adjustable parameters	
adjustable response value setting current (Ir) / of the L-trip / with 12t characteristic	
• minimum	45 A
• maximum	45 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	225 A
• maximum	450 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	32 45 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
type of connectable conductor cross-sections / of the round conductor terminal / stranded	1 x (8 AWG - 3/0)
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	circular conductor terminal on both sides
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
Accessories	
product extension / optional / motor drive	Yes
Environmental conditions	100
	IP40
protection class IP / on the front	II → ∪
ambient temperature	25 °C
during operation / minimum	-25 °C
during operation / maximum	70 °C
during storage / minimum	-40 °C
during storage / maximum	0°C
Certificates certificate of suitability / as approval for NAVAL (no combat	Yes











General Product Approval

EMC

Declaration of Conformity

Test Certificates

Marine / Shipping









Type Test Certificates/Test Report



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=3VA5145-5EC36-1AA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA5145-5EC36-1AA0

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

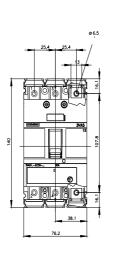
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5145-5EC36-1AA0

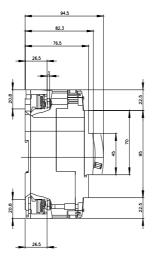
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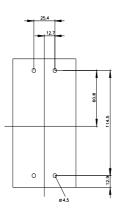
http://www.siemens.com/cax

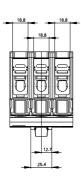
Tender specifications

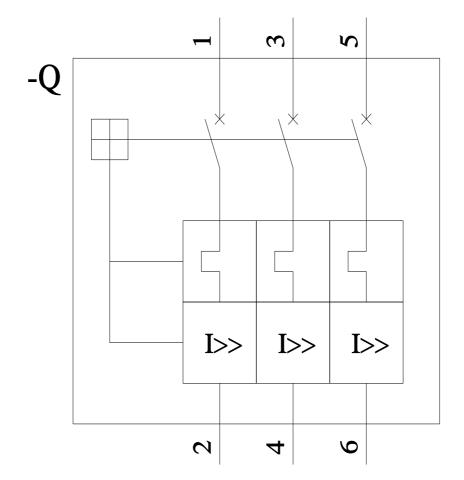
http://www.siemens.com/specifications

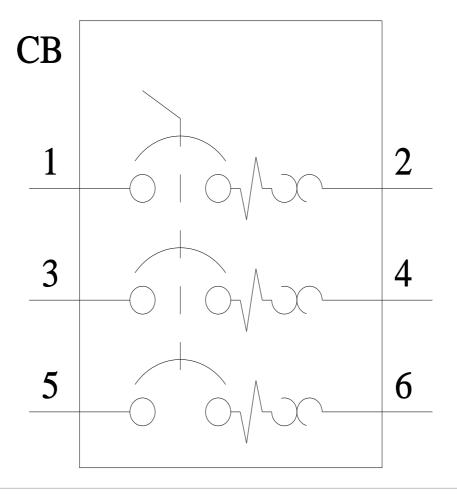












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Mouser Electronics

Authorized Distributor

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Siemens:

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