3VA5130-4EC31-1AA0

Data sheet



circuit breaker 3VA5 UL frame 125 breaking capacity class S 25kA @ 480V 3-pole, line protection TM230, FTAM, In=30A overload protection Ir=30A fixed short-circuit protection Ii=5...10 x In UL 489 SB (naval), 50° C without connection

product designation product designation product designation product designation product designation 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 (HIO Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (RIO Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (RIO Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (RIO Type) design of the load switch / according to UL 489 / Switching Duty circuit breaker (RIO Type) design of the overcurrent release protection function of the overcurrent release LI number of poles 3 General technical data operaling voltage / at AC / rated value power loss [W] / maximum 9.6 W power loss [W] / for rated value of the current / at AC / in hot operaling state / per pole mechanical service life (operating cycles) / it AC-1 / at 380/415 V electrical endurance (operating cycles) / at AC-1 / at 380 V electrical endurance (operating cycles) / at 480 V electrical endurance (operating cycles) / at 480 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 product function • communication function • other measurement function • other measurement function • other measurement function • other measurement function • at 40 °C • at 40 °C • at 50 °C • at 60 °	Model	
product designation / according to UL file SEAM System protection design of the product System protection 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 TM230 protection function of the overcurrent release II LI	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 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 of the overcurrent release protection function of the overcurrent release ILI number of poles 3 Ceneral 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 stale / 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 580/40 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at AC-1 / at 580 V electrical endurance (operating cycles) / at	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 overcurrent release TM230 protection function of the overcurrent release Inumber 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 690 V electrical endurance (operating cycles) / at AC-1 / at 690 V electrical endurance (operating cycles) / at 600 V product feature / for neutral conductors / upgradable/retrofittable / short-dircuit and overload proof ground-fault monitoring version product function • communication function • other measurement function No Net Weight Oursel at 40 °C at 45 °C at 45 °C at 65 °C a	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- bischarge 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 data perating voltage / at AC / rated value power loss [W] / maximum power loss [W] / for rated value of the current / at AC / in hot operating voltage / at AC / in hot operating state / per pole mechanical service life (operating cycles) / typical electrical endurance (operating cycles) / at AC -1 / at 890 V electrical endurance (operating cycles) / at AC -1 / at 890 V electrical endurance (operating cycles) / at AB0 V electrical endurance (operating cycles) / at 480 V electrical endurance (operating cycles) / at 800 V product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version without product function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • other measurement function • othe	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 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 switch is 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) / 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 600 V product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof ground-fault monitoring version without product function e ommunication function No No Net Weight Outerent marking / according to UL 489 / 100%-rated breaker operational current e at 40 °C e at 50 °C e at 55 °C e at 65 °C e at 65 °C e at 60 °C e at 60 °C e at 60 °C		Yes
design of the overcurrent release TM230 protection function of the overcurrent release LI number of poles 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 rechnical service life (operating cycles) / typical 20 000 electrical endurance (operating cycles) / typical 20 000 electrical endurance (operating cycles) / at AC-1 / at 390/415 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 eommunication function No eommunication function No Net Weight 0.88 kg Current marking / according to UL 489 / 100%-rated breaker No operational current e at 40 °C 30 A e at 50 °C 29 A e at 55 °C 28 A e at 60 °C 28 A		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 380/415 V electrical endurance (operating cycles) / at AC-1 / at 380 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 without product function oother measurement function No Net Weight 0.88 kg Current marking / according to UL 489 / 100%-rated breaker operational current • at 40 °C • at 45 °C • at 50 °C • at 50 °C • at 60 °C • at 60 °C • at 60 °C LI LI A B AC / / at AC / rated value 690 V 9.6 W 9.6 W 9.0 W		No
Number of poles 3	design of the overcurrent release	TM230
General technical data operating voltage / at AC / rated value 690 V power loss [W] / maximum 9.6 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 • communication function No Nother measurement function No Net Weight 0.88 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C 30 A • at 45 °C 29 A • at 50 °C 28 A • at 60 °C 28 A	protection function of the overcurrent release	Ц
operating voltage / at AC / rated value 690 V power loss [W] / maximum 9.6 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 • communication function • other measurement function No Net Weight Operational current marking / according to UL 489 / 100%-rated breaker operational current • at 40 °C • at 45 °C • at 45 °C • at 50 °C • at 50 °C • at 60 °C 28 A • at 60 °C	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 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 0.88 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C 30 A • at 45 °C 29 A • at 55 °C 28 A • at 60 °C 28 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 • other measurement function No Net Weight 0.88 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C 30 A • at 45 °C 29 A • at 50 °C 29 A • at 55 °C 28 A • at 60 °C 28 A	power loss [W] / maximum	9.6 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		3.2 W
electrical endurance (operating cycles) / at AC-1 / at 690 V electrical endurance (operating cycles) / at 480 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 product function ocommunication function No Net Weight O.88 kg Current marking / according to UL 489 / 100%-rated breaker operational current oct at 40 °C oct at 45 °C oct at 55 °C oct at 55 °C oct at 60 °C oct at 60 °C electrical endurance (operating cycles) / at 600 V 8 000 electrical endurance (operating cycles) / at 600 V 8 000 electrical endurance (operating cycles) / at 600 V 8 000 electrical endurance (operating cycles) / at 600 V 4 000 No No No No No No No O.88 kg Current electrical endurance (operating cycles) / at 600 V No Operational current oct at 400 °C oct at 600 °C 28 A oct at 600 °C	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 0.88 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C 30 A • at 45 °C 29 A • at 55 °C 29 A • at 55 °C 28 A • at 60 °C 28 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 without product function • communication function No • other measurement function No Net Weight 0.88 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C 30 A • at 45 °C 29 A • at 55 °C 28 A • at 60 °C 28 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 0.88 kg Current marking / according to UL 489 / 100%-rated breaker No operational current • at 40 °C 30 A • at 45 °C 29 A • at 50 °C 29 A • at 55 °C 28 A • at 60 °C 28 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 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 28 A	ground-fault monitoring version	without
● other measurement function No Net Weight 0.88 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 28 A	product function	
Net Weight 0.88 kg Current Marking / according to UL 489 / 100%-rated breaker No operational current 0 at 40 °C 30 A 0 at 45 °C 29 A 0 at 50 °C 29 A 0 at 55 °C 28 A 0 at 60 °C 28 A	 communication function 	No
Current marking / according to UL 489 / 100%-rated breaker No operational current 30 A • at 40 °C 30 A • at 45 °C 29 A • at 50 °C 29 A • at 55 °C 28 A • at 60 °C 28 A	other measurement function	No
marking / according to UL 489 / 100%-rated breaker No operational current 30 A • at 40 °C 30 A • at 45 °C 29 A • at 50 °C 29 A • at 55 °C 28 A • at 60 °C 28 A	Net Weight	0.88 kg
operational current • at 40 °C • at 45 °C • at 50 °C • at 55 °C • at 60 °C 28 A	Current	
 at 40 °C at 45 °C at 50 °C at 55 °C at 60 °C 28 A 	marking / according to UL 489 / 100%-rated breaker	No
 at 45 °C at 50 °C at 55 °C at 60 °C 29 A 29 A 28 A 28 A 	operational current	
 at 50 °C at 55 °C at 60 °C 29 A 28 A 28 A 	• at 40 °C	30 A
• at 55 °C 28 A • at 60 °C 28 A	• at 45 °C	29 A
• at 60 °C 28 A	• at 50 °C	29 A
	● at 55 °C	28 A
• at 65 °C 28 A	• at 60 °C	28 A
	• at 65 °C	28 A
• at 70 °C 27 A	● at 70 °C	27 A

Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	5
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	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	30 A
• maximum	30 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	150 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	30 30 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	Thursday and the second
number of CO contacts / for auxiliary contacts	0
number of CO contacts / for auxiliary contacts	U Company
	Voc
product extension / optional / motor drive	Yes
Environmental conditions	IDAO
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	
certificates certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	Yes

Confirmation









Miscellaneous

General Product Approval

EMC

Declaration of Conformity

Test Certificates

Marine / Shipping









Type Test Certificates/Test Report



Marine / Shipping

other



Confirmation

Miscellaneous

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)

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA5130-4EC31-1AA0

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

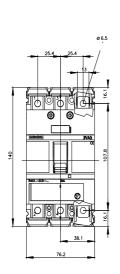
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5130-4EC31-1AA0

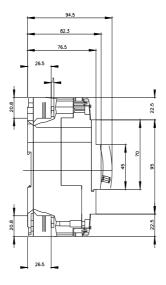
CAx-Online-Generator

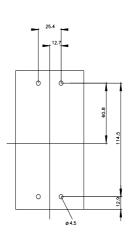
http://www.siemens.com/cax

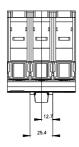
Tender specifications

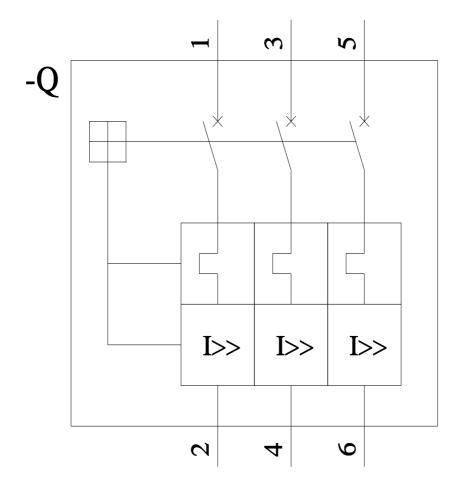
http://www.siemens.com/specifications

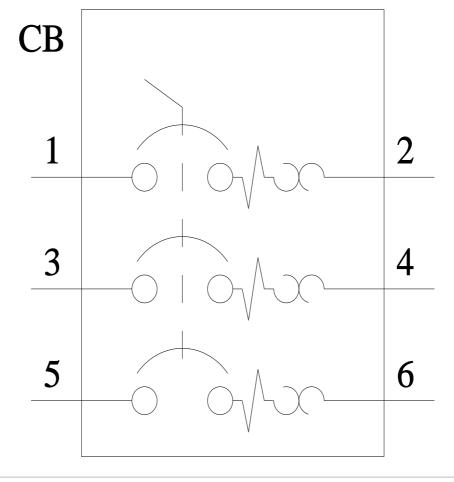












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Mouser Electronics

Authorized Distributor

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Siemens:

3VA51304EC311AA0