SIEMENS

Data sheet

3VA5210-5EC31-1AA0



circuit breaker 3VA5 UL frame 250 breaking capacity class M 35kA @ 480 V 3-pole, line protection TM230, FTAM, In=100A overload protection Ir=100A fixed short-circuit protection Ii=5...10 x In UL 489 SB (naval), 50° C without connection

product brand name SENTRON product designation / according to UL file MFAM design of the product System protection design of the load switch / according to UL 489 / Heading, Arr Yes Conditioning, and Refigeration circuit breaker (HACR Type) Yes design of the load switch / according to UL 489 / High-intensity- No Decknage circuit breaker (HD Type) No design of the load switch / according to UL 489 / High-intensity- No design of the load switch / according to UL 489 / High-intensity- No design of the load switch / according to UL 489 / Migh-intensity- No design of the load switch / according to UL 489 / Migh-intensity- No gortation to the overcurrent release TU230 protection function of the overcurrent release El number of poles 3 central technical data operating vicial portection function of the current / at AC / in hot power loss [W] / maximum 32 W power loss [W] / for rated value of the current / at AC / in hot 10.53 W electrical endurance (operating cycles) / ta OC / 1 at 800 V 4 000 electrical endurance (operating cycles) / ta OC / 1 at 800 V	Model	
product designation / according to UL file MFAM design of the product System protection design of the load switch / according to UL 489 / Heating, Arr Yes design of the load switch / according to UL 489 / High-Intensity- backnarge circuit breaker (HID Type) No design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type) No design of the overcurrent release TM230 protection function of the overcurrent release Ll number of poles 3 General technical data 900 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 10.53 W mechanical service life (operating cycles) / typical 20 000 electrical endurance (operating cycles) / typical 20 000 electrical endurance (operating cycles) / typical 8 000 ground-fault monitoring cycles) / ta AO V 4 000 product feature / for neutral conductors / upgra	product brand name	SENTRON
design of the product System protection design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigerater (HACR Type) Yes design of the load switch / according to UL 489 / High-Intensity- Discharge circuit breaker (HIOT Type) No design of the load switch / according to UL 489 / High-Intensity- Discharge circuit breaker (HIOT Type) No design of the load switch / according to UL 489 / Switching Duty circuit breaker (GND Type) No design of the load switch / according to UL 489 / Switching Duty circuit breaker (GND Type) No design of the load switch / according to UL 489 / Network No operating voltage / at AC / rated value 690 V operating voltage / at AC / rated value 690 V power loss [W] / maximum 32 W operating state / per pole 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 product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overload proof without product function No • etter measurement function No • etter rest 92 A • etter rest 97 A • at 60 °C 95 A	product designation	Molded-case circuit breaker
design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) Yes design of the load switch / according to UL 489 / High-Intensity- Discharge circuit breaker (HD Type) No design of the load switch / according to UL 489 / High-Intensity- Discharge circuit breaker (HD Type) No design of the load switch / according to UL 489 / Switching Duty drout breaker (SWD Type) No design of the load switch / according to UL 489 / Switching Duty drout breaker (SWD Type) No design of the load switch / according to UL 489 / Switching Duty drout breaker (SWD Type) No design of the load switch / according to UL 489 / Switching Duty drout breaker (SWD Type) No design of the load switch / according to UL 489 / Switching Duty drout breaker (SWD Type) No design of the load switch / according to UL 489 / Switching Duty drout breaker (SWD Type) No condition of the overcurrent release Ll number of poles 3 condition of the overcurrent release Ll number of poles 3 design of the overcurrent release Ll number of poles 00 design of the overcurrent release 10.53 W power loss [W] / for rated value of the current / at AC / in hot operating state / per pole 10.53 W mechanical service life (operating cycles) / at AC / 1 at 380/415 V 8 000 electric	product designation / according to UL file	MFAM
Conditioning, and Refrigeration circuit breaker (HACR Type) No design of the load switch / according to UL 489 / High-Intensity- Discharge circuit breaker (HID Type) No design of the load switch / according to UL 489 / Switching Duty circuit breaker (HID Type) No design of the overcurrent release TM230 protection function of the overcurrent release LI number of poles 3 General technical data 690 V operating voltage / at AC / rated value 690 V power loss [W] / maximum 32 W operating voltage / at AC / rated value of the current / at AC / in hot operating state / per pole 0000 electrical endurance (operating cycles) / typical 8000 electrical endurance (operating cycles) / at AC-1 / at 380/415 V 8000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4000 product feature / for neutral conductors / upgradable/retrofittable No oft-circuit and overload proof without product feature / for neutral conductors / upgradable/retrofittable No oft-circuit and overload proof No oft-circuit and overload proof No oft-circuit and overload proof No other measurement function <td>design of the product</td> <td>System protection</td>	design of the product	System protection
Discharge circuit breaker (HID Type) No design of the load switch / according to UL 489 / Switching Duty No circuit breaker (SWD Type) TM230 protection function of the overcurrent release Ll number of poles 3 Ceneral technical data 690 V power loss [W] / maximum 32 W power loss [W] / for rated value of the current / at AC / in hot operating soltage / at AC / rated value of the current / at AC / in hot operating state / per pole 10.53 W mechanical service life (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 AC0 V 8 000 electrical endurance (operating cycles) / at AC0 V 8 000 electrical endurance (operating cycles) / at AC0 V 8 000 ground-fault monitoring version without product fueature / for neutral conductors / upgradable/retrofittable No /short-circuit and overload proof without product function No • other measumenent func		Yes
circuit breaker (SWD Type) TM230 grotection function of the overcurrent release LI number of poles 3 General technical data 690 V operating voltage / at AC / rated value 690 V power loss [W] / maximum 32 W power loss [W] / for rated value of the current / at AC / in hot 10.53 W operating state / per pole nechnoical service life (operating cycles) / typical 20 000 electrical endurance (operating cycles) / typical 20 000 electrical endurance (operating cycles) / typical electrical endurance (operating cycles) / typical 20 000 electrical endurance (operating cycles) / typical electrical endurance (operating cycles) / typical 8 000 electrical endurance (operating cycles) / typical ground-fault monitoring cycles) / at AC-1 / at 380/415 V 8 000 electrical endurance (operating cycles) / typical ground-fault monitoring cycles) / at AC-1 / at 380/415 V 8 000 electrical endurance (operating cycles) / typical ground-fault monitoring cycles) / at AC-1 / at 380/415 V 8 000 electrical endurance (operating cycles) / at AC0 V ground-fault monitoring version without 9 product feature / for neutral conductors / upgradable/retrofittable / sother		No
protection function of the overcurrent release Ll number of poles 3 General technical data 690 V operating voltage / at AC / rated value 690 V power loss [M] / maximum 32 W power loss [M] / maximum 32 W mechanical service life (operating cycles) / typical 20 000 electrical endurance (operating cycles) / tat 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 AC-V 8 000 electrical endurance (operating cycles) / at AC-V 8 000 electrical endurance (operating cycles) / at AC-V 8 000 ground-fault conductors / upgradable/retrofittable // / short-circuit and overload proof without ground-fault monitoring version without operating / according to UL 489 / 100%-rated breaker No operational current - <td></td> <td>No</td>		No
number of poles 3 General technical data 690 V power loss [W] / maximum 32 W power loss [W] / maximum 32 W power loss [W] / trated value of the current / at AC / in hot operating state / per pole 10.53 W mechanical service life (operating cycles) / thycial 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 AC0 V 8 000 electrical endurance (operating cycles) / at A00 V 8 000 electrical endurance (operating cycles) / at A00 V 8 000 electrical endurance (operating cycles) / at A00 V 8 000 electrical endurance (operating cycles) / at 800 V 4 000 ground-fault monitoring cycles) / at A00 V 4 000 product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overload proof without ground-fault monitoring version without poduct finction No o other measurement function No o other measurement function No operating a coording to UL 489 / 100%-rated breaker No operational current 100 A • at 40 °C 97 A • at 50 °C	design of the overcurrent release	TM230
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 32 W 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 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 product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overload proof without ground-fault monitoring version without product function No • other measurement function No Net Weight 2 kg Current 100 A • at 40 °C 97 A • at 55 °C 95 A • at 55 °C 87 A	protection function of the overcurrent release	LI
operating voltage / at AC / rated value 690 V power loss [W] / maximum 32 W power loss [W] / for rated value of the current / at AC / in hot operating state / per pole 10.53 W 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 AC0 V 8 000 electrical endurance (operating cycles) / at AC0 V 8 000 electrical endurance (operating cycles) / at AC0 V 4 000 product feature / for neutral conductors / upgradable/retrofittable No / stort-circuit and overload proof No ground-fault monitoring version without product function No • communication function No Net Weight 2 kg Current marking / according to UL 489 / 100%-rated breaker No operational current 4140 °C 100 A • at 45 °C 95 A 95 A • at 55 °C 89 A<	number of poles	3
power loss [W] / maximum 32 W power loss [W] / for rated value of the current / at AC / in hot 10.53 W operating state / per pole 20 000 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 AC-1 / at 690 V 4 000 electrical endurance (operating cycles) / at AB0 V 8 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 4 000 product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overload proof without product feature / for neutral conductors / upgradable/retrofittable No • other measurement function No • other measurement function No Net Weight 2 kg Current 100 A • at 40 °C 97 A • at 40 °C 97 A • at 55 °C 97 A • at 55 °C 87 A	General technical data	
power loss [W] / for rated value of the current / at AC / in hot 10.53 W operating state / per pole 20 000 mechanical service life (operating cycles) / typical 20 000 electrical endurance (operating cycles) / at 80-1 / at 380/415 V 8 000 electrical endurance (operating cycles) / at AC-1 / at 380/415 V 8 000 electrical endurance (operating cycles) / at 400 V 8 000 electrical endurance (operating cycles) / at 600 V 4 000 product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overload proof without ground-fault monitoring version without product function No • other measurement function No • other measurement function No operational current 100 A • at 40 °C 100 A • at 45 °C 97 A • at 55 °C 92 A • at 60 °C 89 A • at 65 °C 87 A	operating voltage / at AC / rated value	690 V
operating state / per polemechanical service life (operating cycles) / typical20 000electrical endurance (operating cycles) / at AC-1 / at 380/415 V8 000electrical endurance (operating cycles) / at 690 V4 000electrical endurance (operating cycles) / at 690 V8 000electrical endurance (operating cycles) / at 800 V8 000electrical endurance (operating cycles) / at 800 V4 000product feature / for neutral conductors / upgradable/retrofittable / shot-circuit and overload proofNoground-fault monitoring versionwithoutproduct functionNo• communication functionNo• other measurement functionNoNet Weight2 kgCurrentImarking / according to UL 489 / 100%-rated breakeroperational current100 A• at 40 °C100 A• at 50 °C95 A• at 60 °C89 A• at 60 °C89 A• at 65 °C87 A	power loss [W] / maximum	32 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 A80 V 8 000 electrical endurance (operating cycles) / at A80 V 8 000 electrical endurance (operating cycles) / at 600 V 4 000 product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof No ground-fault monitoring version without product function No • communication function No • other measurement function No Net Weight 2 kg Current Int 40 °C • at 40 °C 100 A • at 45 °C 97 A • at 55 °C 92 A • at 60 °C 89 A • at 65 °C 87 A		10.53 W
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 No ground-fault monitoring version without product function No • communication function No • other measurement function No Net Weight 2 kg Current Int 40 °C • at 40 °C 100 A • at 45 °C 97 A • at 55 °C 92 A • at 60 °C 89 A • at 65 °C 87 A	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 No / short-circuit and overload proof without ground-fault monitoring version without product function No • communication function No • other measurement function No Net Weight 2 kg Current according to UL 489 / 100%-rated breaker operational current 100 A • at 40 °C 97 A • at 45 °C 95 A • at 55 °C 92 A • at 65 °C 87 A	electrical endurance (operating cycles) / at AC-1 / at 380/415 V	8 000
electrical endurance (operating cycles) / at 600 V 4 000 product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overload proof without ground-fault monitoring version without product function No • communication function No • other measurement function No Net Weight 2 kg Current No marking / according to UL 489 / 100%-rated breaker No operational current 100 A • at 40 °C 97 A • at 45 °C 95 A • at 55 °C 92 A • at 65 °C 87 A	electrical endurance (operating cycles) / at AC-1 / at 690 V	4 000
product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overload proof without ground-fault monitoring version without product function No • communication function No • other measurement function No Net Weight 2 kg Current Mo marking / according to UL 489 / 100%-rated breaker No operational current 100 A • at 40 °C 97 A • at 55 °C 92 A • at 60 °C 89 A • at 65 °C 87 A	electrical endurance (operating cycles) / at 480 V	8 000
/ short-circuit and overload proof without ground-fault monitoring version without product function No • communication function No • other measurement function No Net Weight 2 kg Current No marking / according to UL 489 / 100%-rated breaker No operational current 100 A • at 40 °C 97 A • at 50 °C 95 A • at 50 °C 92 A • at 60 °C 89 A • at 65 °C 87 A	electrical endurance (operating cycles) / at 600 V	4 000
product function No • communication function No • other measurement function No Net Weight 2 kg Current marking / according to UL 489 / 100%-rated breaker No operational current 100 A • at 40 °C 100 A • at 50 °C 97 A • at 55 °C 92 A • at 60 °C 89 A • at 65 °C 87 A		No
• communication functionNo• other measurement functionNoNet Weight2 kgCurrentmarking / according to UL 489 / 100%-rated breakeroperational currentNo• at 40 °C100 A• at 40 °C97 A• at 45 °C95 A• at 55 °C92 A• at 60 °C89 A• at 65 °C87 A	ground-fault monitoring version	without
• other measurement functionNoNet Weight2 kgCurrentmarking / according to UL 489 / 100%-rated breakerNooperational currentNo• at 40 °C100 A• at 45 °C97 A• at 55 °C95 A• at 55 °C92 A• at 60 °C89 A• at 65 °C87 A	product function	
Net Weight2 kgCurrentNomarking / according to UL 489 / 100%-rated breakerNooperational current100 A• at 40 °C100 A• at 45 °C97 A• at 55 °C95 A• at 60 °C89 A• at 65 °C87 A	 communication function 	No
Currentmarking / according to UL 489 / 100%-rated breakerNooperational current	 other measurement function 	No
marking / according to UL 489 / 100%-rated breakerNooperational current-• at 40 °C100 A• at 45 °C97 A• at 50 °C95 A• at 55 °C92 A• at 60 °C89 A• at 65 °C87 A	Net Weight	2 kg
operational current 100 A • at 40 °C 100 A • at 45 °C 97 A • at 50 °C 95 A • at 55 °C 92 A • at 60 °C 89 A • at 65 °C 87 A	Current	
• at 40 °C 100 A • at 45 °C 97 A • at 50 °C 95 A • at 55 °C 92 A • at 60 °C 89 A • at 65 °C 87 A	marking / according to UL 489 / 100%-rated breaker	No
• at 45 °C 97 A • at 50 °C 95 A • at 55 °C 92 A • at 60 °C 89 A • at 65 °C 87 A	operational current	
• at 50 °C 95 A • at 55 °C 92 A • at 60 °C 89 A • at 65 °C 87 A	• at 40 °C	100 A
• at 55 °C 92 A • at 60 °C 89 A • at 65 °C 87 A	● at 45 °C	97 A
• at 60 °C 89 A • at 65 °C 87 A	● at 50 °C	95 A
• at 65 °C 87 A	● at 55 °C	92 A
	● at 60 °C	89 A
• at 70 °C 84 A	● at 65 °C	87 A
	● at 70 °C	84 A

Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	Μ
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 I2t characteristic	
• minimum	100 A
maximum adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	100 A
minimum	1s
• maximum	15
adjustable response value setting current (li) / for I-tripping	13
minimum	500 A
• maximum	1 000 A
adjustable absolute value setting current (InN) / for N-tripping	
minimum	0 A
• maximum	0 A
adjustable current response value current / of the current-	100 100 A
dependent overload release product function / grounding protection	No
Mechanical Design	NU
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	
arrangement of electrical connectors / for main current circuit	Without connection
type of electrical connection / for main current circuit	Without
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
General Product Approval	
Confirmation	Miscellaneous
CCC	

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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=3VA5210-5EC31-1AA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA5210-5EC31-1AA0

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

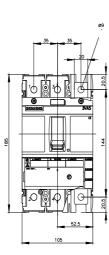
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5210-5EC31-1AA0

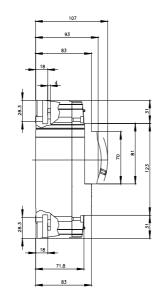
CAx-Online-Generator

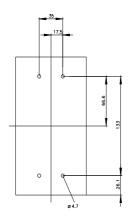
http://www.siemens.com/cax

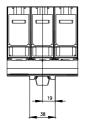
Tender specifications

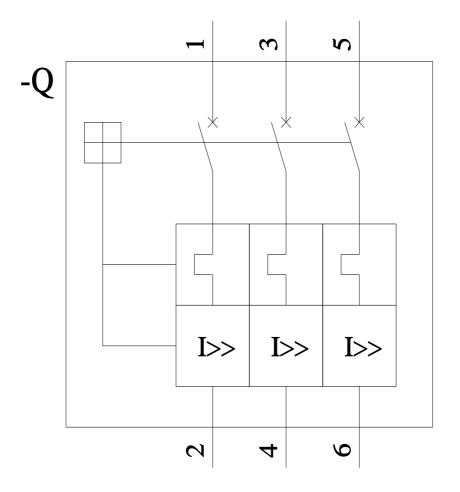
http://www.siemens.com/specifications

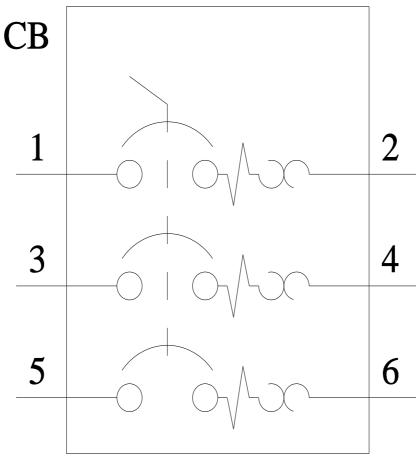












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