SIEMENS

Data sheet

3VA5290-7EC31-1AA0



circuit breaker 3VA5 UL frame 250 breaking capacity class C 100kA @ 480V 3-pole, line protection TM230, FTAM, In=90A overload protection Ir=90A 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 CFAM design of the product System protection design of the foad switch / according to UL 489 / Hearing, Ar Yes Conditioning, and Refigeration dicult breaker (HACR Type) Yes design of the load switch / according to UL 489 / High-intensity- No Discharge circuit breaker (HOT Type) No design of the load switch / according to UL 489 / Switching Duty No ricuit breaker (WDT Type) No design of the load switch / according to UL 489 / Switching Duty No ricuit breaker (WDT Type) No design of the overcurrent release TU230 protecton function of the overcurrent release El number of poles 3 contral technical data 690 V power loss [W] / maximum 25 W power loss [W] / maximum 25 W electrical endurance (operating cycles) / ta AC / in hot 8.2 W electrical endurance (operating cycles) / ta AC / in at 890 V 4 000 electrical endurance (operating cycles) / at AC / in at 890 V 4 000 electrical endurance (Model	
product designation / according to UL file CFAM Gesign of the product System protection Gesign of the load switch / according to UL 489 / Heating, Ar Conditioning, and Refrigeration circuit breaker (HACR Type) Gesign of the load switch / according to UL 489 / High-Intensity: Discharge circuit breaker (INT Type) Gesign of the load switch / according to UL 489 / Kigh-Intensity: Discharge circuit breaker (INT Type) Gesign of the load switch / according to UL 489 / Switching Duty circuit breaker (INT Type) Gesign of the overcurrent release IL Innumber of poles General technical data General technical general general action in the overcurrent release IL Innumber of poles Gesign of the overcurrent release IL Innumber of poles Gesign of the overcurrent release IL Innumber of poles Gesign of the comparison of the overcurrent release IL Innumber of poles Gesign of the comparison of the comparison of the overcurrent release IL Innumber of poles Gesign of the comparison of the comparison of the overcurrent release IL Innumber of poles Gesign of the comparison of the comparison of the overcurrent release IL Innumber of poles Gesign of the comparison of the comparison of the overcurent release IL Innumber of poles Gesign of the comparison of the comparison of the overcurent release IL Innumber of poles General technical data General data General technical data General data General technical d	product brand name	SENTRON
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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 (HID 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 (SWD Type) No design of the overcurrent release TM230 protection function of the overcurrent release LI number of poles 3 contral tochnical data 690 V operating voltage / at AC / rated value 690 V power loss [W] / for arited value of the current / at AC / in hot operating state / per pole 82 W electrical endurance (operating cycles) / typical 20 000 electrical endurance (operating cycles) / typical 8000 electrical endurance (operating cycles) / at 480 V 8000 electrical endurance (operating cycles) / at 480 V 8000 electrical endurance (operating cycles) / at 480 V 8000 ground-fault monitoring version without product function No other measurement function No other measurement function No other measurement function No other measurement function 90 A	product designation / according to UL file	CFAM
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 (SWD Type) No design of the overcurrent release TM230 protection function of the overcurrent release LI operating voltage / at AC / rated value 690 V operating voltage / at AC / rated value 690 V power loss [W] / maximum 25 W operating voltage / at AC / rated value of the current / at AC / in hot operating state / per pole 8000 electrical endurance (operating cycles) / typical 8000 electrical endurance (operating cycles) / ta 480 V 8000 electrical endurance (operating cycles) / ta 480 V 8000 electrical endurance (operating cycles) / ta 480 V 8000 electrical endurance (operating cycles) / ta 480 V 8000 ground-fault monitoring version without product feature / for neutral conductors / upgradable/retrofittable No other measurement function No other measurement function No other measurement function No other measurement functi	design of the product	System protection
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circuit breaker (SWD Type) TM230 design of the overcurrent release Ll number of poles 3 coperating voltage / at AC / rated value 690 V power loss [W] / maximum 25 W power loss [W] / maximum 25 W mechanical service life (operating cycles) / typical 20 000 electrical endurance (operating cycles) / typical 8 000 electrical endurance (operating cycles) / typical 800 V 4 000 product feature / for neutral conductors / upgradable/retrofittable No / short-circuit and overtoad proof ground-fault monitoring version without product function No • other measurement function No • other measurement function No • other measurement function No • at 40 °C 90 A • at 40 °C 90 A <td>0 0 ,</td> <td>No</td>	0 0 ,	No
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jower loss [W] / maximum 25 W power loss [W] / for rated value of the current / at AC / in hot operating state / per pole 8.2 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 AC0 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 • other measurement function No Net Weight 2 kg Current eat 40 °C 90 A • at 40 °C 90 A • at 40 °C 90 A • at 45 °C 87.3 A • at 60 °C 85.5 A • at 60 °C 82.8 A	General technical data	
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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 / short-circuit and overload proofNoground-fault monitoring versionwithoutproduct functionNo• communication functionNo• other measurement functionNoNet Weight2 kgCurrentmarking / according to UL 489 / 100%-rated breaker• at 40 °C90 A• at 45 °C90 A• at 55 °C87.3 A• at 60 °C85.5 A• at 65 °C82.8 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 AC-1 / at 690 V 8 000 electrical endurance (operating cycles) / at AC-1 / at 690 V 8 000 electrical endurance (operating cycles) / at ABO 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 et 40 °C • at 40 °C 90 A • at 40 °C 90 A • at 45 °C 90 A • at 50 °C 87.3 A • at 60 °C 85.5 A • at 60 °C 82.8 A		8.2 W
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electrical endurance (operating cycles) / at 480 V8 000electrical endurance (operating cycles) / at 600 V4 000product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proofNoground-fault monitoring versionwithoutproduct functionNo• communication functionNo• other measurement functionNoNet Weight2 kgCurrentVmarking / according to UL 489 / 100%-rated breakerNo• at 40 °C90 A• at 45 °C90 A• at 55 °C87.3 A• at 65 °C82.8 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 90 A • at 40 °C 90 A • at 45 °C 90 A • at 55 °C 87.3 A • at 66 °C 82.8 A	electrical endurance (operating cycles) / at AC-1 / at 690 V	4 000
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/ 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 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	electrical endurance (operating cycles) / at 600 V	4 000
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• other measurement functionNoNet Weight2 kgCurrentmarking / according to UL 489 / 100%-rated breakerNooperational currentNo• at 40 °C90 A• at 45 °C90 A• at 55 °C90 A• at 55 °C87.3 A• at 60 °C85.5 A• at 65 °C82.8 A	product function	
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Current No marking / according to UL 489 / 100%-rated breaker No operational current 90 A • at 40 °C 90 A • at 45 °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 breakerNooperational current90 A• at 40 °C90 A• at 45 °C90 A• at 50 °C90 A• at 55 °C87.3 A• at 60 °C85.5 A• at 65 °C82.8 A	Net Weight	2 kg
operational current 90 A • at 40 °C 90 A • at 45 °C 90 A • at 55 °C 90 A • at 55 °C 87.3 A • at 60 °C 85.5 A • at 65 °C 82.8 A	Current	
• at 40 °C 90 A • at 45 °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	marking / according to UL 489 / 100%-rated breaker	No
• at 45 °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	operational current	
• at 50 °C 90 A • at 55 °C 87.3 A • at 60 °C 85.5 A • at 65 °C 82.8 A	• at 40 °C	90 A
• at 55 °C 87.3 A • at 60 °C 85.5 A • at 65 °C 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	С
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	200 kA
• at 480 V	100 kA
• at 600 V	35 kA
Adjustable parameters	
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic	
• minimum	90 A
maximum adjustable response value delay time (tr) / for L-tripping / with I2t absectaciatio	90 A
characteristic	1.
• minimum	1s
maximum	1 s
adjustable response value setting current (li) / for l-tripping minimum 	450 A
● minimum ● maximum	450 A 900 A
maximum adjustable setting current (InN) / for N-tripping	
minimum	0 A
• maximum	0 A
adjustable current response value current / of the current-	90 90 A
dependent overload release	
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	
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	1244
protection class IP / on the front	IP40
ambient temperature	05 %0
during operation / minimum	-25 °C
during operation / maximum	70 °C
during storage / minimum	-40 °C 80 °C
during storage / maximum Cortificatos	
Certificates certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	Yes
General Product Approval	

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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=3VA5290-7EC31-1AA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA5290-7EC31-1AA0

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

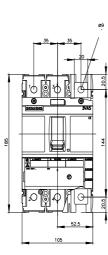
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5290-7EC31-1AA0

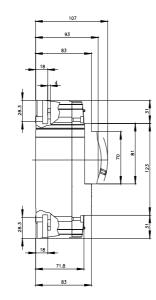
CAx-Online-Generator

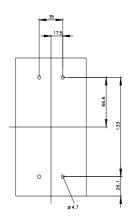
http://www.siemens.com/cax

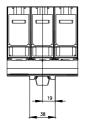
Tender specifications

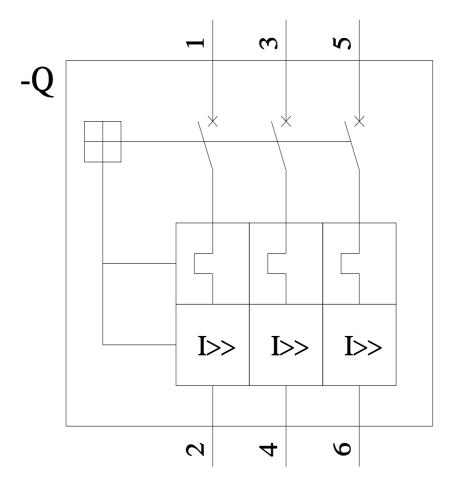
http://www.siemens.com/specifications

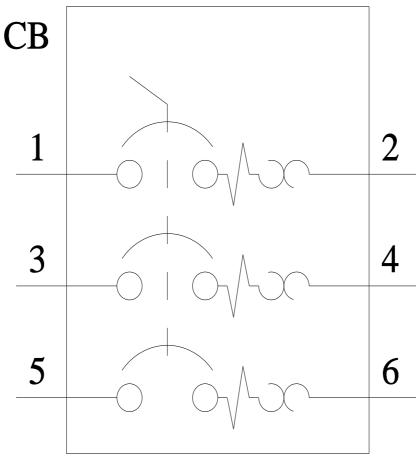












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