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Data sheet 3VA5290-5EC31-1AA0

circuit breaker 3VA5 UL Frame 250 breaking capacity class M 35 kA @ 480 V 3-pole, line protection TM230, FTAM, In=90 A overload protection Ir=90 A permanently set short-circuit protection Ii=5...10 x In UL 489 SB (naval), 50° C without connection

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	MFAM
design of the product	System protection
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 / Switching Duty circuit breaker (SWD Type)	No
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] / 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 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
product function	
● communication function	No
● other measurement function	No
Net Weight	2 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational 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
● at 70 °C	79.2 A

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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 I2t 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	450 A
● maximum	900 A
adjustable setting current (InN) / for N-tripping	
● minimum	0 A
● maximum	0 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	
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
reference code / according to IEC 81346-2	Q
Approvals / Certificates	
General Product Approval	

Confirmation

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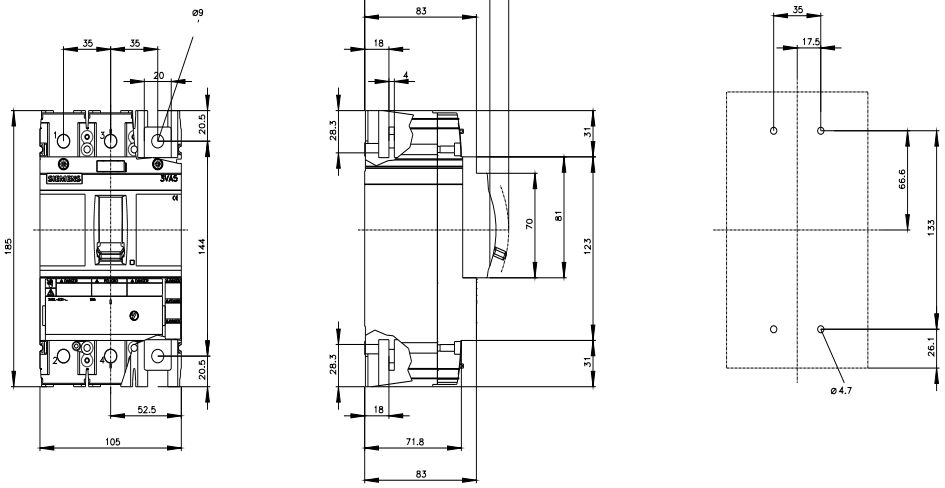
General Product Approval	EMV	Maritime application	other	
Miscellaneous			Confirmation	Miscellaneous

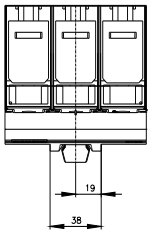
Environment

Environmental Confirmations

Further information

Information on the packaging
https://support.industry.siemens.com/cs/ww/en/view/109813875
Information for data generation and storage
https://support.industry.siemens.com/cs/ww/en/view/109995012
Information- and Downloadcenter (Catalogs, Brochures,…)
https://www.siemens.com/lowvoltage/catalogs
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA5290-5EC31-1AA0
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3VA5290-5EC31-1AA0
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5290-5EC31-1AA0
CAx-Online-Generator
https://www.siemens.com/cax
Tender specifications
https://www.siemens.com/specifications





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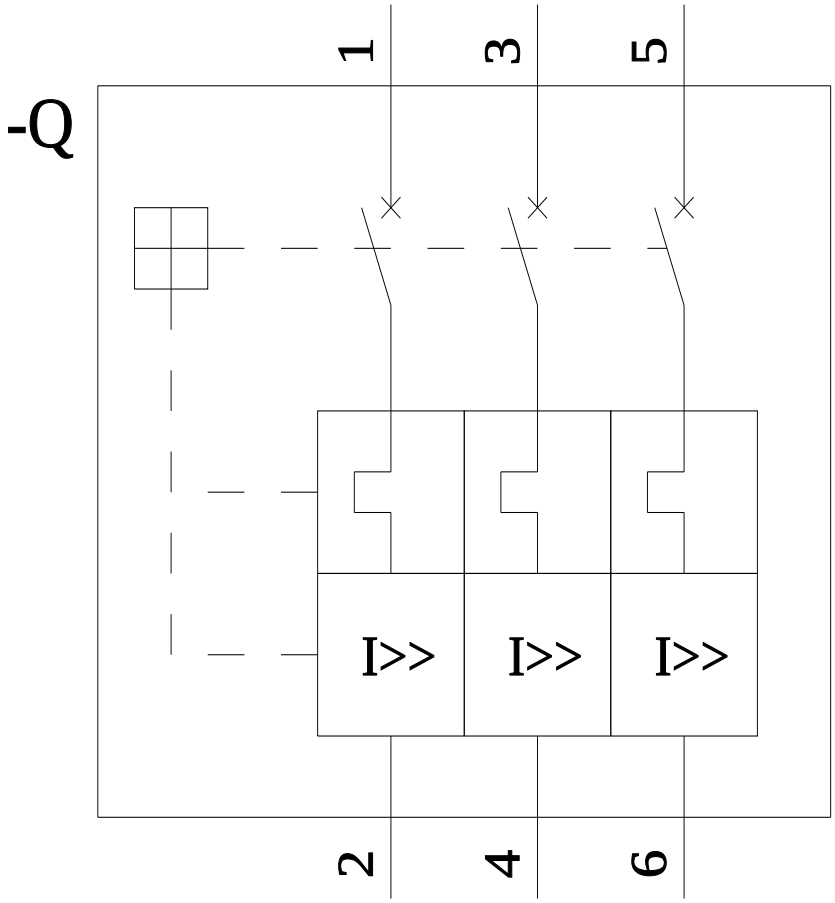

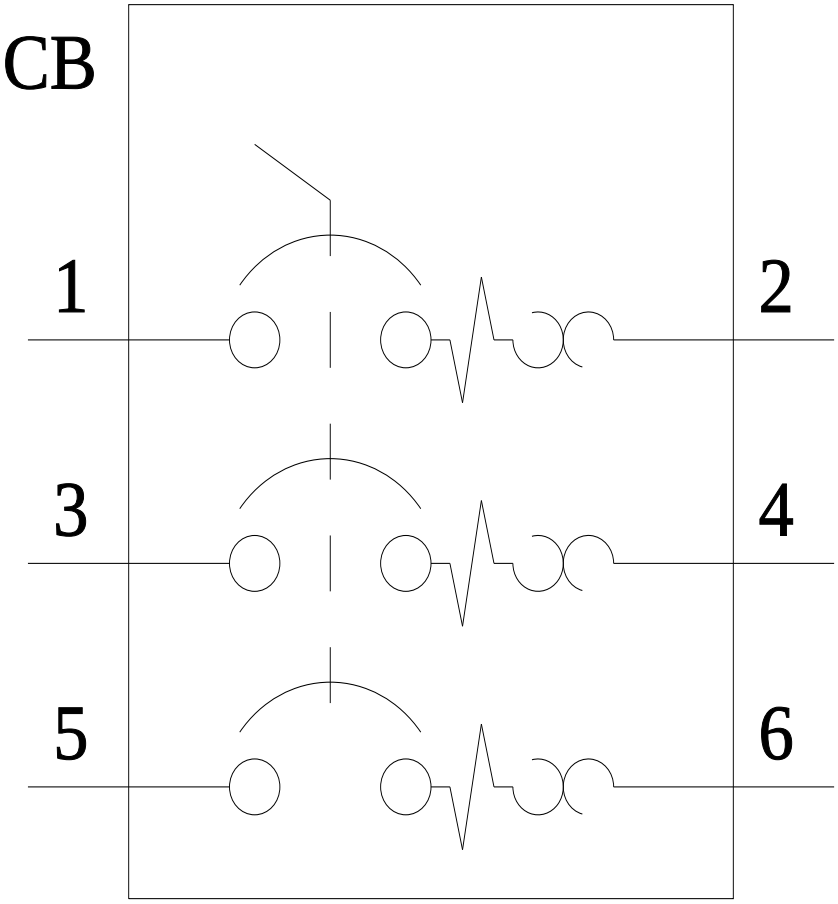

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