



circuit breaker 3VA5 UL Frame 600 breaking capacity class C 100 kA @ 480 V 3-pole, line protection TM230, FTAM, In=500 A overload protection Ir = 500 A permanently set short-circuit protection Ii=5...10 x In UL489 SB (naval), 50 degrees Celsius without connection

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	CLAM
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	
power loss [W] / maximum	122 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	40.77 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	4 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	2 700
electrical endurance (operating cycles) / at 480 V	4 000
electrical endurance (operating cycles) / at 600 V	2 700
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
product function	
• communication function	No
• other measurement function	No
Net Weight	5.2 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	500 A
• at 45 °C	488 A
• at 50 °C	476 A
• at 55 °C	464 A
• at 60 °C	451 A
• at 65 °C	439 A
• at 70 °C	427 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	C
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	
<ul style="list-style-type: none"> • at 240 V • at 480 V • at 600 V 	<p>200 kA</p> <p>100 kA</p> <p>35 kA</p>

Adjustable parameters

adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>500 A</p> <p>500 A</p>
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>1 s</p> <p>1 s</p>
adjustable response value setting current (I _i) / for I-tripping	
<ul style="list-style-type: none"> • minimum • maximum 	<p>2 500 A</p> <p>5 000 A</p>
adjustable setting current (I _{nN}) / for N-tripping	
<ul style="list-style-type: none"> • minimum • maximum 	<p>0 A</p> <p>0 A</p>
product function / grounding protection	No

Mechanical Design

product component	
<ul style="list-style-type: none"> • undervoltage release • voltage trigger • trip indicator 	<p>No</p> <p>No</p> <p>No</p>
height [in]	9.76 in
height	248 mm
width [in]	5.43 in
width	138 mm
depth [in]	4.33 in
depth	110 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
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Accessories

product extension / optional / motor drive	Yes
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Environmental conditions

protection class IP / on the front	IP40
ambient temperature	
<ul style="list-style-type: none"> • during operation / minimum • during operation / maximum • during storage / minimum • during storage / maximum 	<p>-25 °C</p> <p>70 °C</p> <p>-40 °C</p> <p>80 °C</p>

Approvals / Certificates

General Product Approval



[Confirmation](#)



General Product Approval

EMV

Marine / Shipping

other



other	Environment
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Further information

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=3VA5450-7EC31-1AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5450-7EC31-1AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5450-7EC31-1AA0

CAX-Online-Generator

<http://www.siemens.com/cax>

Tender specifications

<http://www.siemens.com/specifications>





