



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 nut keeper kit on two sides

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	CLAS
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	
insulation voltage / rated value	800 V
operating voltage / at DC / rated value	500 V
operating voltage / at AC / rated value	690 V
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/retrofittable / short-circuit and overload proof	No
product function	
• communication function	No
• other measurement function	No
Net Weight	5.496 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
maximum short-circuit current breaking capacity (I <sub>cu</sub> )	
• at 240 V	200 kA
• at 415 V	110 kA
• at 690 V	10 kA
operating short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 240 V	200 kA
• at 415 V	110 kA
• at 690 V	6 kA
short-circuit current making capacity (I <sub>cm</sub> )	
• at 240 V	440 kA
• at 415 V	242 kA
• at 690 V	17 kA
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 (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic	
• minimum	500 A
• maximum	500 A
adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic	
• minimum	1 s
• maximum	1 s
adjustable response value setting current (I <sub>i</sub> ) / for I-tripping	
• minimum	2 500 A
• maximum	5 000 A
adjustable setting current (I <sub>nN</sub> ) / 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]	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	Front connection
type of electrical connection / for main current circuit	nut keeper kit on both ends
type of connectable conductor cross-sections / for flat-bar terminal connection / minimum	20 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	35 x 10 mm
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	silver
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](#)



[Miscellaneous](#)



EMV	Marine / Shipping	other			Environment
-----	-------------------	-------	--	--	-------------



[Miscellaneous](#)

[Confirmation](#)

[Miscellaneous](#)

[Environmental Confirmations](#)

**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=3VA5450-7EC32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5450-7EC32-0AA0>

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

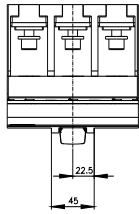
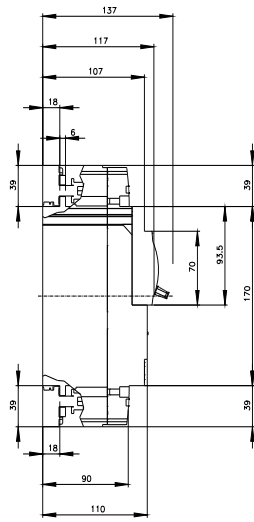
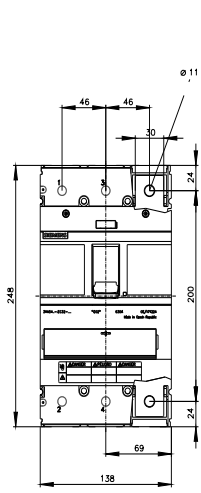
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5450-7EC32-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5450-7EC32-0AA0)

CAx-Online-Generator

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

Tender specifications

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



CB



last modified:

7/15/2022 

