

CIRCUIT BREAKER 3VA5 UL Frame 600 BREAKING CAPACITY CLASS M 35kA @ 480 V 3POLE, LINE PROTECTION TM230, FTAM, In=500A WITHOUT OVERLOAD PROTECTION IR=500A FIXED SHORT CIRCUIT PROTECTION Ii=5...10 x In W/O CONNECTION



Model	
Product brand name	SENTRON
Product designation	Molded-case circuit breaker
Product designation / according to UL file	MLAS
Product version	System protection
Design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)	Yes
Design of the overcurrent release	TM230
Protective function of the overcurrent release	LI
Number of poles	3

General technical data	
Rated insulation voltage Ui	800 V
Max. rated operational voltage Ue with AC 50/60Hz	600 V
Max. rated operational voltage Ue with DC	500 V
Power loss [W] / maximum	122.3 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	40.77 W
Latching - endurance	15 000

Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	4 000
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	2 700
Electrical endurance (switching cycles) / at 480 V / at 50/60 Hz	3 000
Electrical endurance (switching cycles) / at 600 V / at 50/60 Hz	2 700
Neutral conductors / upgradeable/retrofitable	No
Ground fault monitoring version	Without
Product function	
• communication function	No
• other measurement function	No

### Current

Marking / acc. to UL 489 / 100%-rated breaker	No
Max. rated operational current of the frame size	600 A
Rated continuous current I <sub>u</sub>	500 A
Operating 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	M
Maximum short-circuit current breaking capacity (I <sub>cu</sub> )	
• at 240 V	85 kA
• at 415 V	55 kA
• at 690 V	7 kA
Operational short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 240 V	85 kA
• at 415 V	55 kA
• at 690 V	6 kA
Short-circuit current making capacity (I <sub>cm</sub> )	
• at 240 V	187 kA
• at 415 V	116 kA
• at 690 V	13 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	
Breaking capacity current	
<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 480 V</li> <li>• at 600 V</li> </ul>	<ul style="list-style-type: none"> <li>85 kA</li> <li>35 kA</li> <li>18 kA</li> </ul>
Adjustable parameters	
Adjustable response value current / I <sub>r</sub> min.	500 A
Adjustable response value current / I <sub>r</sub> max.	500 A
Adjustable response value current / I <sub>i</sub> min.	2 500 A
Adjustable response value current / I <sub>i</sub> max.	5 000 A
Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF	No
Mechanical Design	
Height [in]	9.8 in
Height	248 mm
Width [in]	5.4 in
Width	138 mm
Depth [in]	4.3 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
Accessories	
Product extension / optional / motor drive	Yes
Environmental conditions	
Protection class IP / on the front	IP40
Ambient temperature	
<ul style="list-style-type: none"> <li>• during operation / minimum</li> <li>• during storage / minimum</li> <li>• during storage / maximum</li> </ul>	<ul style="list-style-type: none"> <li>-40 °C</li> <li>-40 °C</li> <li>80 °C</li> </ul>
Certificates	
Reference code / acc. to DIN EN 81346-2	Q
Certificate of suitability / as approval for NAVAL (no combat vessels) / Supplement SB	No



CCC



UL



VDE

[Miscellaneous](#)

RCM

Declaration of  
Conformity

other

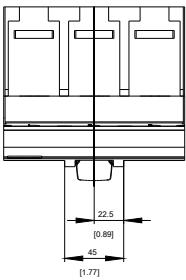
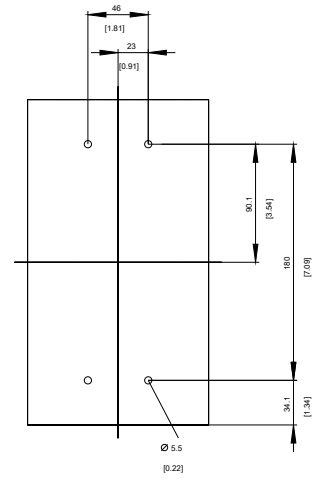
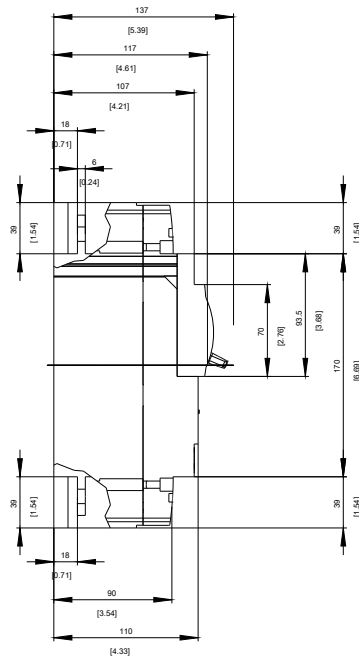
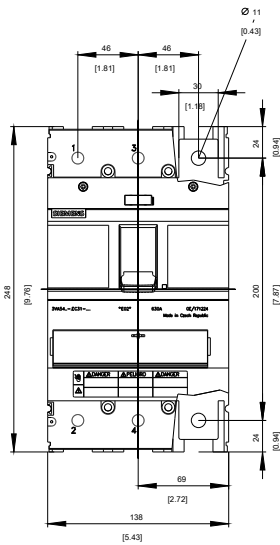


EG-Konf.

[Miscellaneous](#)

## Further information

**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=3VA5450-5EC31-0AA0>**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**<https://support.industry.siemens.com/cs/ww/en/ps/3VA5450-5EC31-0AA0>**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5450-5EC31-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5450-5EC31-0AA0)**CAX-Online-Generator**<http://www.siemens.com/cax>**Tender specifications**<http://www.siemens.com/specifications>



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12/10/2019