



circuit breaker 3VA6 UL Frame 800 breaking capacity class M 35 kA @ 480 V 4-pole, line protection ETU330, LIG,  $I_n=600$  A overload protection, 100% rated  $I_r=240$  A ...600 A short-circuit protection  $I_i=1.5...12 \times I_n$  neutral conductor protection adjustable (OFF, 50%, 100%) ground-fault protection  $I_G=0.2... 1 \times I_n$ ,  $t_g=0.1/0.3$ s cable connection on two sides

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	MMAE
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 overcurrent release	ETU330
protection function of the overcurrent release	LIG
number of poles	4
General technical data	
insulation voltage / rated value	800 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	151 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	50.33 W
mechanical service life (operating cycles) / typical	10 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	5 100
electrical endurance (operating cycles) / at AC-1 / at 690 V	3 500
electrical endurance (operating cycles) / at 480 V	5 100
electrical endurance (operating cycles) / at 600 V	3 500
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
ground-fault monitoring version	Summation current formation L + N-conductor
product function	
• communication function	No
• other measurement function	No
Net Weight	20.089 kg
Current	
marking / according to UL 489 / 100%-rated breaker	Yes
operational current	
• at 40 °C	600 A
• at 45 °C	600 A
• at 50 °C	600 A
• at 55 °C	600 A
• at 60 °C	600 A
• at 65 °C	555 A
• at 70 °C	510 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> )	
<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 690 V</li> </ul>	85 kA 55 kA 25 kA
operating short-circuit current breaking capacity (I <sub>cs</sub> )	
<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 690 V</li> </ul>	85 kA 55 kA 19 kA
short-circuit current making capacity (I <sub>cm</sub> )	
<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 690 V</li> </ul>	187 kA 121 kA 53 kA
<b>Switching capacity according to UL 489</b>	
current breaking capacity	
<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 480 V</li> <li>• at 600 V</li> </ul>	100 kA 35 kA 25 kA
<b>Adjustable parameters</b>	
adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	250 A 600 A
adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	0.5 s 17 s
adjustable response value setting current (I <sub>l</sub> ) / for I-tripping	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	900 A 7 200 A
adjustable current response value current / for G-tripping / with standard characteristic	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>	120 A 600 A
adjustable response value delay time (t <sub>g</sub> ) / for G-tripping / with I <sub>0t</sub> characteristic	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	0.1 s 0.3 s
adjustable setting current (I <sub>nN</sub> ) / for N-tripping	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	300 A 600 A
design of the N-conductor protection	adjustable OFF; 50%; 100%
product function / grounding protection	Yes
<b>Mechanical Design</b>	
product component	
<ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• voltage trigger</li> <li>• trip indicator</li> </ul>	No No No
height [in]	12.91 in
height	328 mm
width [in]	11.02 in
type of connectable conductor cross-sections / of the round conductor terminal / stranded	2 x (4/0 - 600 kcmil)
width	280 mm
depth [in]	4.72 in
depth	120 mm
<b>Connections</b>	
arrangement of electrical connectors / for main current circuit	Front connection
type of electrical connection / for main current circuit	circular conductor terminal on both sides
<b>Auxiliary circuit</b>	
number of CO contacts / for auxiliary contacts	0

Accessories	
product extension / optional / motor drive	No
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



EG-Konf.





[Confirmation](#)



UL

[Miscellaneous](#)



EMV	Test Certificates	Maritime application	other	Dangerous goods
	<a href="#">Type Test Certificates/Test Report</a>		<a href="#">Confirmation</a>	<a href="#">Transport Information</a>

### 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=3VA6560-5HM46-2AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6560-5HM46-2AA0>

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

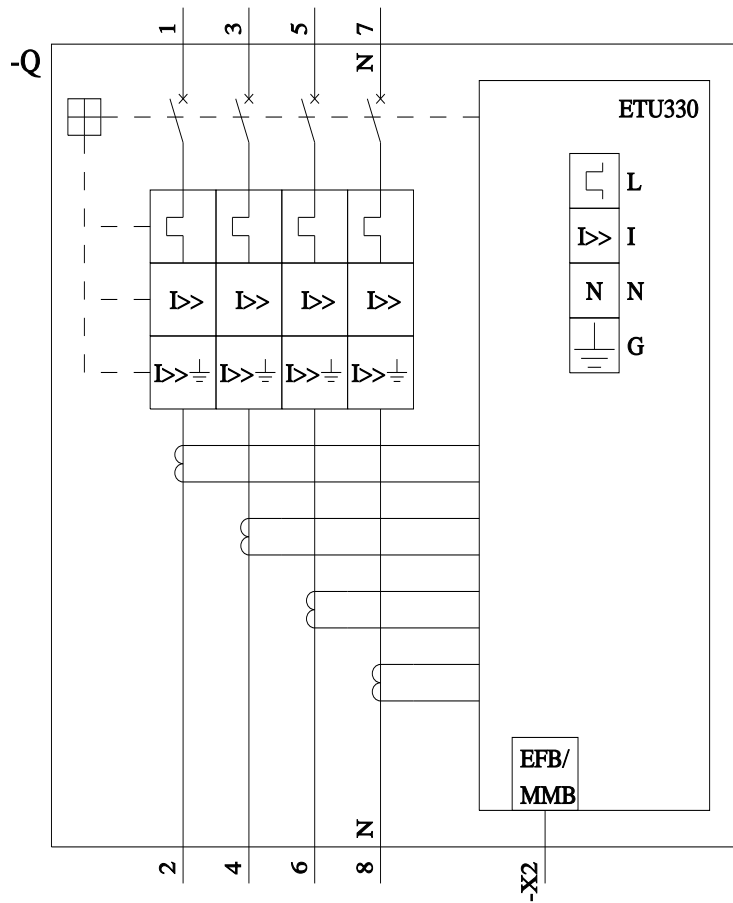
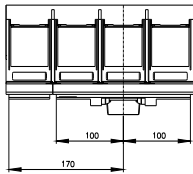
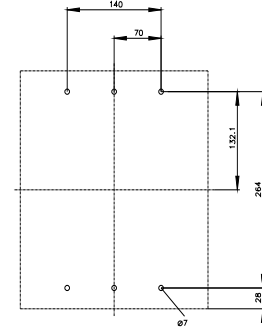
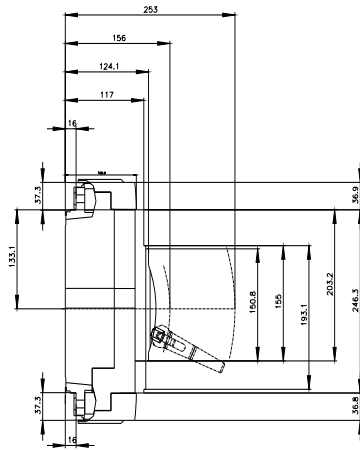
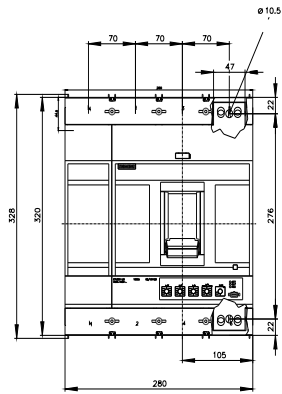
[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA6560-5HM46-2AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6560-5HM46-2AA0)

#### CAX-Online-Generator

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

#### Tender specifications

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





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