

**Siemens  
EcoTech**



circuit breaker 3VA6 UL Frame 600 breaking capacity class H 65 kA @ 480 V 4-pole, line protection ETU330, LIG,  $I_n=400$  A overload protection, 100% rated  $I_r=160$  A...400 A short-circuit protection  $I_i=1.5...12 \times I_n$  neutral conductor protection adjustable (OFF, 50%, 100%) ground-fault protection  $I_g=0.2...1 \times I_n=$  tg=0.1/0.3s without connection



Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	HLAE
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	70 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	23.33 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	3 500
electrical endurance (operating cycles) / at 480 V	4 000
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	6.9 kg
Current	
marking / according to UL 489 / 100%-rated breaker	Yes
operational current	
• at 40 °C	400 A
• at 45 °C	400 A
• at 50 °C	400 A
• at 55 °C	400 A
• at 60 °C	400 A
• at 65 °C	400 A

<ul style="list-style-type: none"> <li>at 70 °C</li> </ul>	400 A
<b>Switching capacity according to IEC 60947</b>	
switching capacity class of the circuit breaker	H
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>	110 kA 85 kA 6 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>	110 kA 85 kA 6 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>	242 kA 187 kA 9 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 65 kA 22 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>	150 A 400 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>i</sub> ) / for I-tripping <ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	600 A 4 800 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>	80 A 400 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>	200 A 400 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]	9.76 in
height	248 mm
width [in]	7.24 in
width	184 mm
depth [in]	4.33 in
depth	110 mm
<b>Connections</b>	
arrangement of electrical connectors / for main current circuit	Without connection
type of electrical connection / for main current circuit	Without
<b>Auxiliary circuit</b>	

number of CO contacts / for auxiliary contacts	0
<b>Accessories</b>	
product extension / optional / motor drive	Yes
<b>Environmental conditions</b>	
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
<b>Environmental footprint</b>	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] / total	495 kg
global warming potential [CO2 eq] / during manufacturing	28.7 kg
global warming potential [CO2 eq] / during operation	470 kg
global warming potential [CO2 eq] / after end of life	-4.07 kg
Siemens Eco Profile (SEP)	Siemens EcoTech
<b>reference code / according to IEC 81346-2</b>	Q

**Approvals / Certificates**

**General Product Approval**



[Miscellaneous](#)

General Product Approval	EMV	Test Certificates	Maritime application
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[Type Test Certificates/Test Report](#)



Maritime application	other	Dangerous goods	Environment
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[Confirmation](#)

[Miscellaneous](#)

[Transport Information](#)



Siemens EcoTech



**Environment**

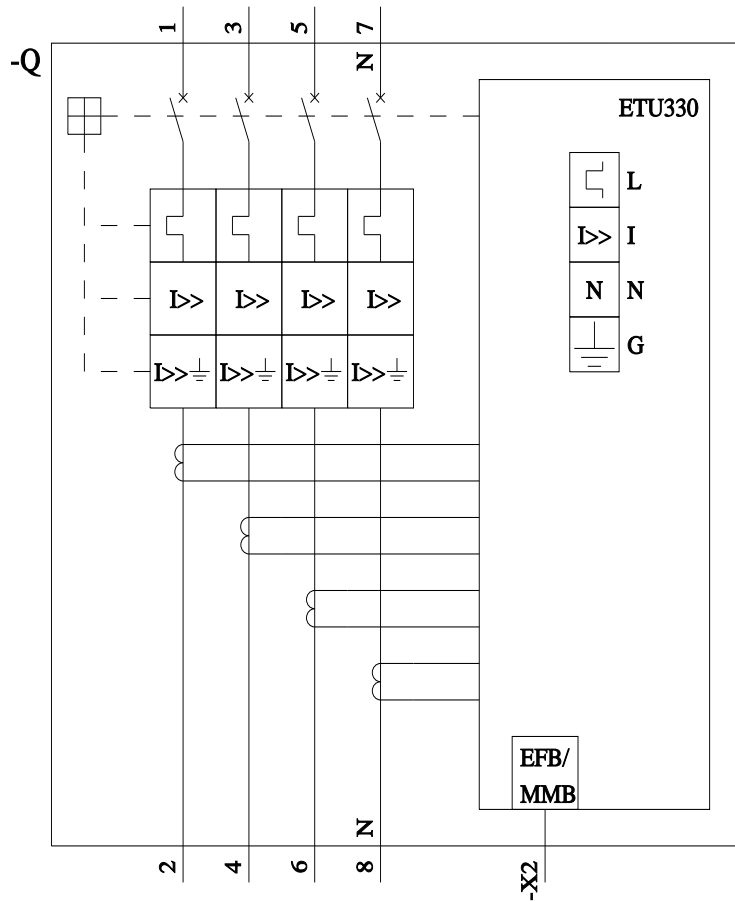
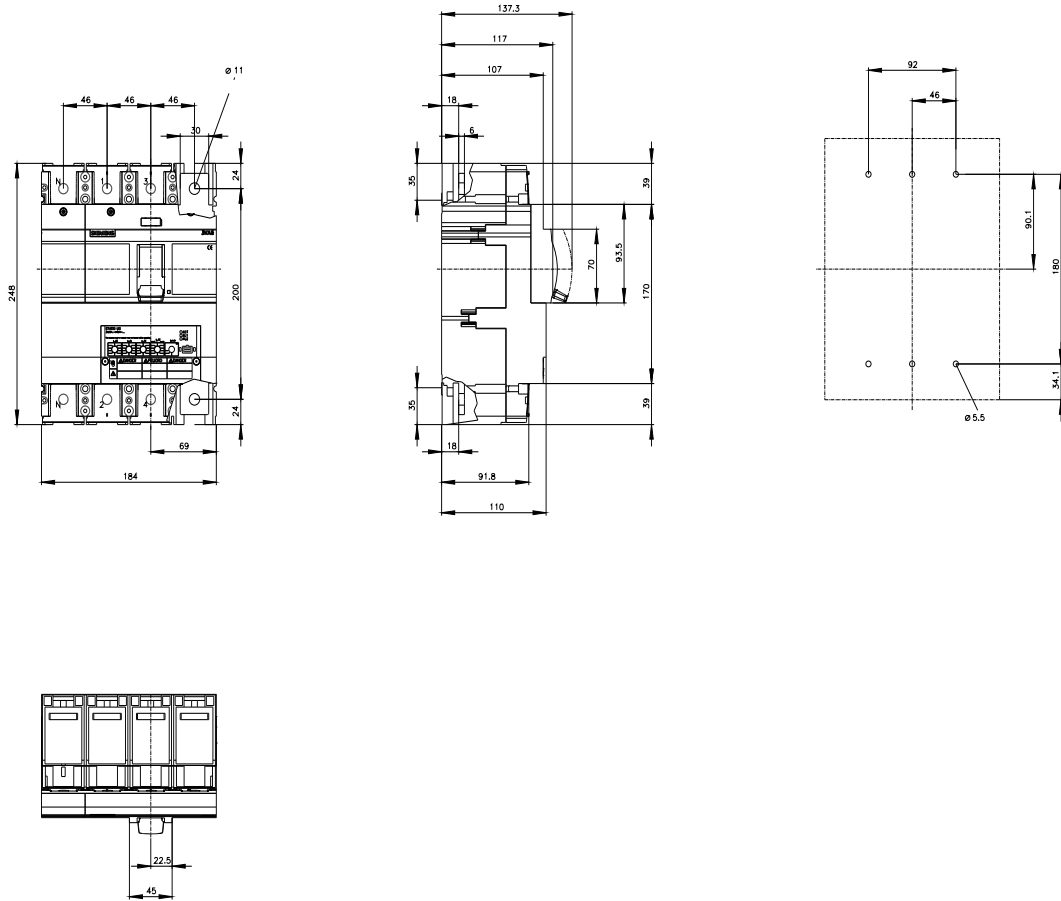
[Environmental Confirmations](#)

**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=3VA6440-6HM41-2AA0>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)  
<https://support.industry.siemens.com/cs/ww/en/ps/3VA6440-6HM41-2AA0>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)  
[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA6440-6HM41-2AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6440-6HM41-2AA0)
- CAX-Online-Generator  
<https://www.siemens.com/cax>

Tender specifications

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





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