



circuit breaker 3VA6 UL Frame 250 breaking capacity class H 65 kA @ 480 V 3-pole, line protection ETU320, LI, In=100 A overload protection Ir=40 A...100 A short-circuit protection Ii=1.5...12 x In without connection

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	HFAE
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	ETU320
protection function of the overcurrent release	LI
number of poles	3
General technical data	
insulation voltage / rated value	800 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	6.7 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	2.23 W
mechanical service life (operating cycles) / typical	25 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	12 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	8 400
electrical endurance (operating cycles) / at 480 V	12 000
electrical endurance (operating cycles) / at 600 V	8 400
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
ground-fault monitoring version	without
product function	
• communication function	No
• other measurement function	No
Net Weight	2.5 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	100 A
• at 45 °C	100 A
• at 50 °C	100 A
• at 55 °C	100 A
• at 60 °C	100 A
• at 65 °C	100 A

<ul style="list-style-type: none"> <li>at 70 °C</li> </ul>	100 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 3 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 3 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 4.5 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>	40 A 100 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>	150 A 1 200 A
adjustable setting current (I <sub>n</sub> ) / for N-tripping	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	50 A 100 A
product function / grounding protection	No
<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]	7.8 in
height	198 mm
width [in]	4.13 in
width	105 mm
depth [in]	3.39 in
depth	86 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	
<ul style="list-style-type: none"> <li>during operation / minimum</li> <li>during operation / maximum</li> </ul>	-25 °C 70 °C

- during storage / minimum -40 °C
- during storage / maximum 80 °C

#### Environmental footprint

Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] / total	61.814 kg
global warming potential [CO2 eq] / during manufacturing	14.6 kg
global warming potential [CO2 eq] / during operation	48.9 kg
global warming potential [CO2 eq] / after end of life	-2.2 kg
Siemens Eco Profile (SEP)	Siemens EcoTech
reference code / according to IEC 81346-2	Q

#### Approvals / Certificates

##### General Product Approval



[Miscellaneous](#)



[Miscellaneous](#)



##### General Product Approval

EMV

Maritime application



##### Maritime application

other

Environment



[Miscellaneous](#)

[Environmental Confirmations](#)

Siemens EcoTech



#### 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=3VA6210-6HL31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6210-6HL31-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA6210-6HL31-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6210-6HL31-0AA0)

CAX-Online-Generator

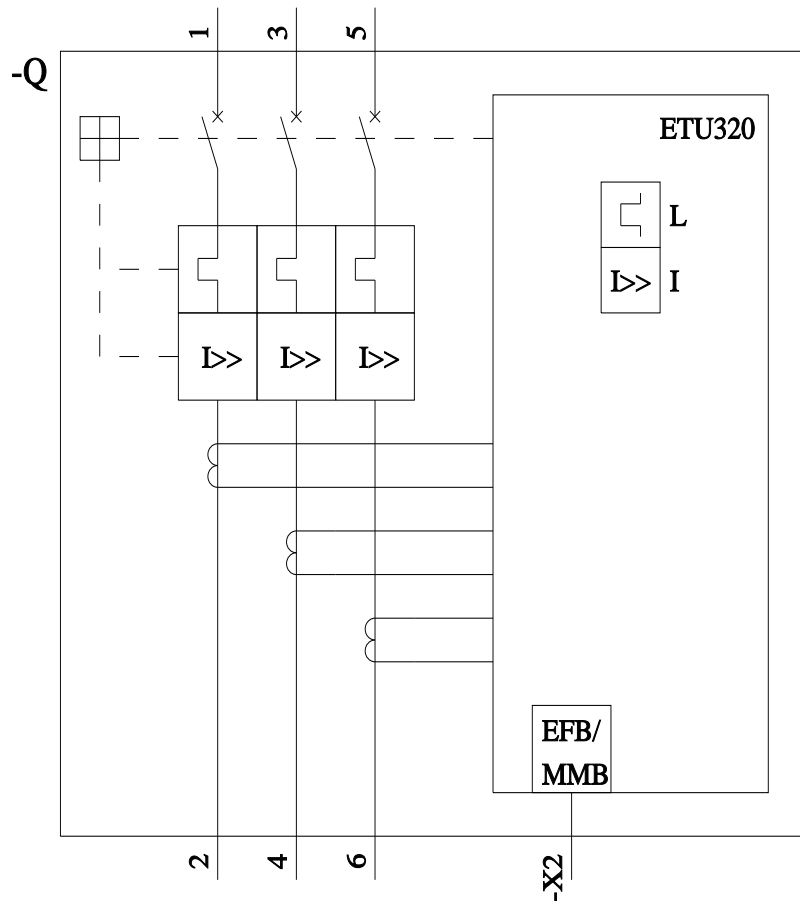
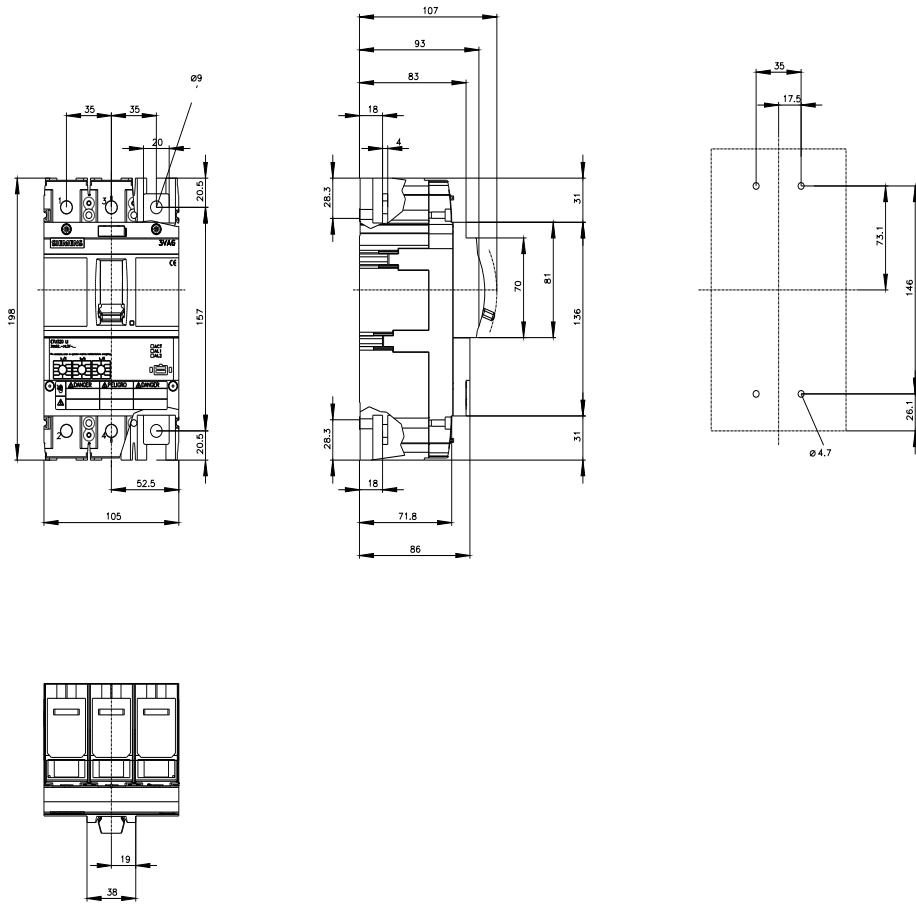
<https://www.siemens.com/cax>

Tender specifications

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

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)





last modified:

5/2/2025 

