



circuit breaker 3VA6 UL frame 250 breaking capacity class H 65kA @ 480V 4-pole, line protection ETU560, LSIG, In=250A overload protection Ir=100A...250A short-circuit protection I<sub>sd</sub>=0.6...10x In, I<sub>i</sub>=1.5...10x In N conductor protection adjustable (OFF, up to 100%) ground-fault protection I<sub>g</sub>=0.2...1 x In= tg=0.05-0.8s 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	ETU560
protection function of the overcurrent release	LSIG
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	42 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	14 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	Summation current formation L + N-conductor
product function	
• communication function	Yes
• other measurement function	No
Net Weight	3.2 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	250 A
• at 45 °C	250 A
• at 50 °C	250 A
• at 55 °C	238 A
• at 60 °C	225 A
• at 65 °C	213 A
• at 70 °C	200 A
Switching capacity according to IEC 60947	
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 (Ics) <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 (Icm) <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

#### Switching capacity according to UL 489

current breaking capacity <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 480 V</li> <li>• at 600 Y/347 V</li> <li>• at 600 V</li> </ul>	100 kA 65 kA 22 kA 22 kA
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#### Adjustable parameters

adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	100 A 250 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	0.5 s 13 s
adjustable response value setting current (Isd) / of S-trip / with I0t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	150 A 2 500 A
adjustable response value setting current (Isd) / of S-trip / with I2t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	150 A 2 500 A
adjustable response value delay time (tsd) / for S-tripping / with I0t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	0.05 s 0.5 s
adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	0.05 s 0.5 s
adjustable response value setting current (Ii) / for I-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	375 A 2 500 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>	50 A 250 A
adjustable response value delay time (tg) / for G-tripping / with I0t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	0.05 s 0.8 s
adjustable response value setting current (Ig) / for G-tripping / with I2t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	50 A 250 A
adjustable response value delay time (tg) / for G-tripping / with I2t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	0.05 s 0.8 s
adjustable setting current (InN) / for N-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	50 A 250 A

adjustable delay time / of S-trip / with I2t characteristic	0.5 s
adjustable current response value current / of instantaneous short-circuit trip unit	
• minimum	375 A
• maximum	2 500 A
design of the N-conductor protection	adjustable OFF; 20% to 100%
product function / grounding protection	Yes
total break time / for G-tripping / with standard characteristic	
• initial value	0.05 s
• full-scale value	0.8 s

#### Mechanical Design

product component	
• undervoltage release	No
• voltage trigger	No
• trip indicator	No
height [in]	7.8 in
height	198 mm
width [in]	5.51 in
width	140 mm
depth [in]	3.39 in
depth	86 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
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#### Accessories

product extension / optional / motor drive	Yes
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#### 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

#### Certificates

reference code / according to IEC 81346-2	Q
certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	Yes

#### General Product Approval



[Confirmation](#)



[Miscellaneous](#)

General Product Approval	EMC	Declaration of Conformity	Marine / Shipping
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Marine / Shipping	other	Dangerous Good
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[Confirmation](#)

[Miscellaneous](#)

[Miscellaneous](#)

[Transport Information](#)

## Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

**Siemens is working on the renewal of the current EAC certificates.**

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

**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=3VA6225-6JQ41-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6225-6JQ41-0AA0>

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

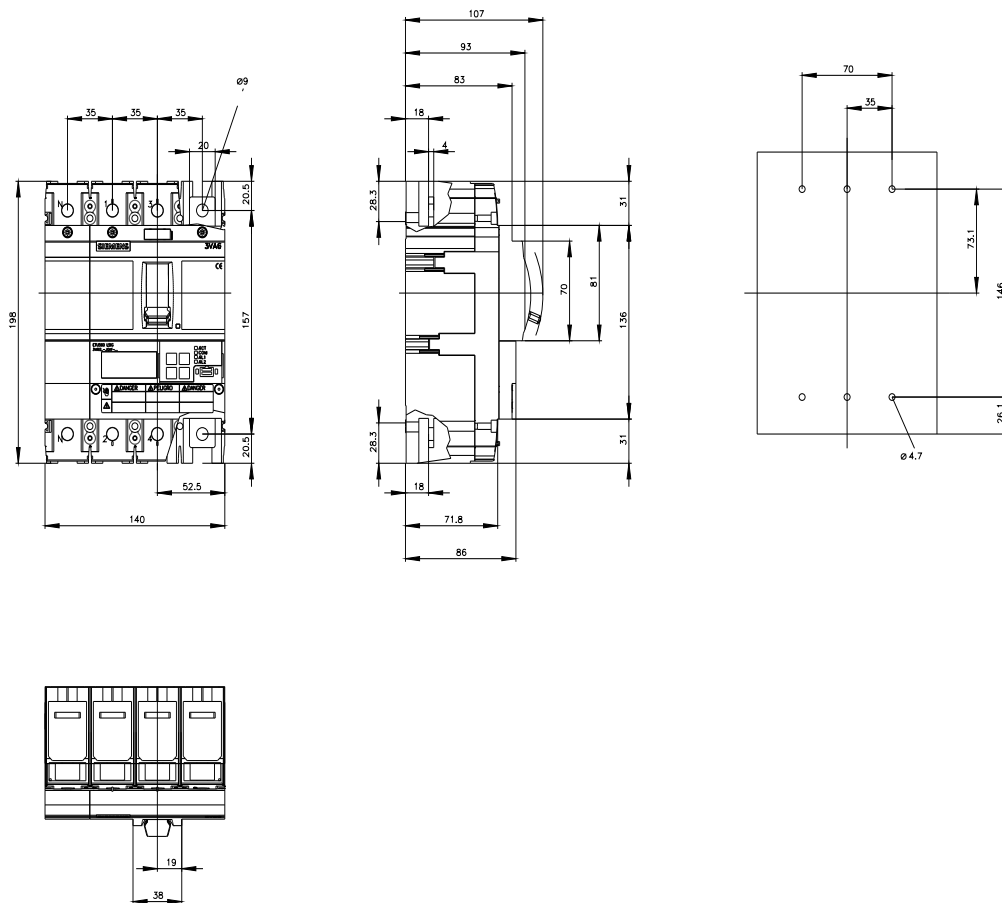
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA6225-6JQ41-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6225-6JQ41-0AA0)

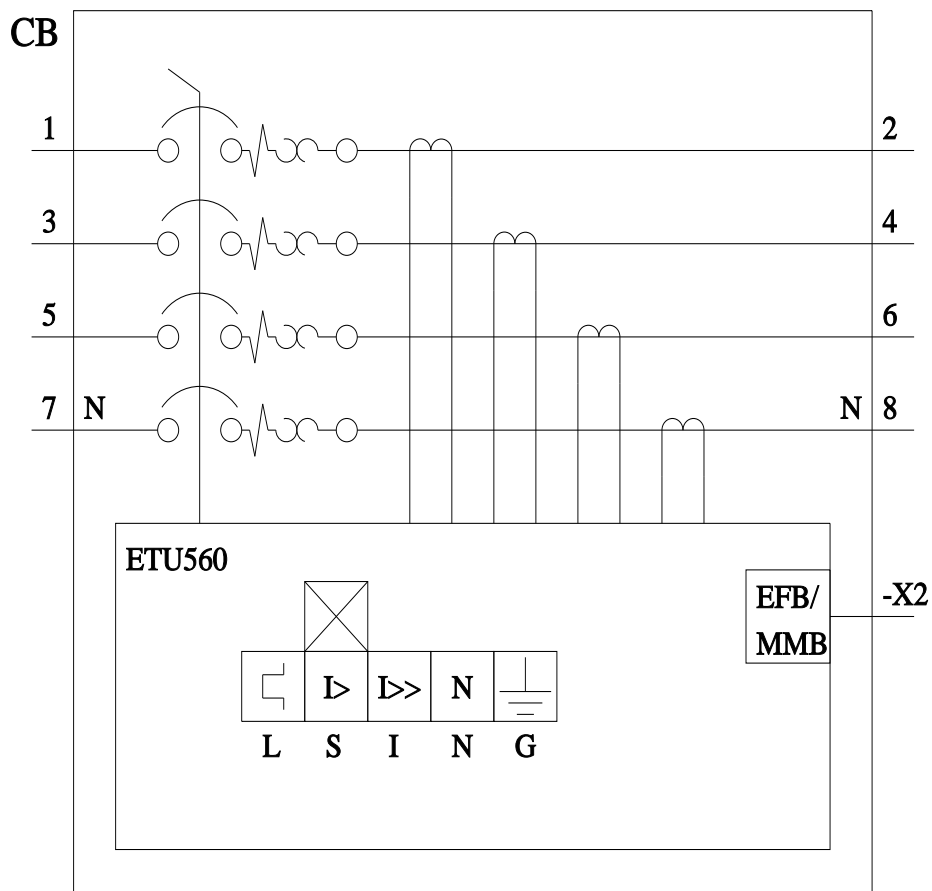
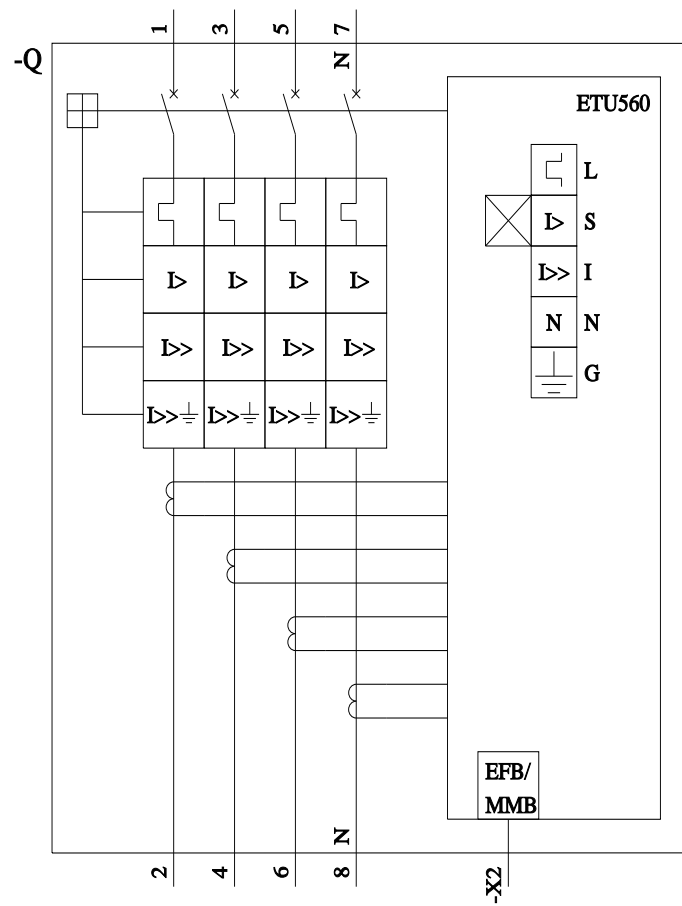
**CAX-Online-Generator**

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

**Tender specifications**

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





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