

circuit breaker 3VA6 UL frame 150 breaking capacity class C 100kA @ 480V 3-pole, line protection ETU560, LSIG,  $I_n=100A$  overload protection  $I_r=40A...100A$  short-circuit protection  $I_{sd}=0.6..10 \times I_n$ ,  $I_i=1.5..12 \times I_n$  N conductor protection optionally with external current transformer, up to 160% ground-fault protection  $I_g=0.2...1 \times I_n$ ,  $t_g=0.05-0.8s$  without connection



Model	
Product brand name	SENTRON
Product designation	Molded-case circuit breaker
Product designation / according to UL file	CDAE
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	ETU560
protection function of the overcurrent release	LSIG
Number of poles	3

General technical data	
Rated insulation voltage $U_i$	600 V
Max. rated operational voltage $U_e$ with AC 50/60Hz	600 V
Power loss [W] / maximum	13 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	4.33 W
Mechanical service life (switching cycles) / typical	20 000

Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	9 000
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	5 000
Electrical endurance (switching cycles) / at 480 V / at 50/60 Hz	9 000
Electrical endurance (switching cycles) / at 600 V / at 50/60 Hz	9 000
Neutral conductors / upgradeable/retrofitable	Yes
Ground fault monitoring version	Summation current formation L-conductor
Product function	
• communication function	Yes
• other measurement function	No

### Current

Marking / acc. to UL 489 / 100%-rated breaker	No
Max. rated operational current of the frame size	150 A
Rated continuous current I <sub>u</sub>	100 A
Operating 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
• at 70 °C	100 A

### Switching capacity according to IEC 60947

Switching capacity class of the circuit breaker	C
Maximum short-circuit current breaking capacity (I <sub>cu</sub> )	
• at 240 V	150 kA
• at 415 V	110 kA
• at 690 V	2.5 kA
Operational short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 240 V	150 kA
• at 415 V	110 kA
• at 690 V	2.5 kA
Short-circuit current making capacity (I <sub>cm</sub> )	
• at 240 V	330 kA
• at 415 V	242 kA
• at 690 V	3.8 kA

### Switching capacity according to UL 489

Breaking capacity current	
---------------------------	--

- at 240 V
- at 480 V
- at 600 V

200 kA  
100 kA  
35 kA

#### Adjustable parameters

Adjustable response value current / I <sub>g</sub> min.	40 A
Adjustable response value current / I <sub>g</sub> min.	100 A
Adjustable response value time / t <sub>r</sub> min.	0.5
Adjustable response value time / t <sub>r</sub> max.	25
Adjustable response value current / I <sub>g</sub> min.	60 A
Adjustable response value current / I <sub>g</sub> min.	1 000 A
Adjustable response value time / t <sub>sd</sub> min.	0.05 s
Adjustable response value time / t <sub>sd</sub> max.	0.5 s
Adjustable response value time / t <sub>sd</sub> min.	0.05 s
Adjustable response value time / t <sub>sd</sub> max.	0.5 s
Adjustable response value current / I <sub>i</sub> min.	150 A
Adjustable response value current / I <sub>i</sub> max.	1 200 A
Ground fault protection can be switched ON/OFF	Yes
Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF	Yes
Adjustable response value current / I <sub>g</sub> min.	20 A
Adjustable response value current / I <sub>g</sub> max.	100 A
Adjustable response value current / t <sub>g</sub> min.	0.05 s
Adjustable response value current / t <sub>g</sub> max.	0.8 s

#### Mechanical Design

Height [in]	7.8 in
Height	198 mm
Width [in]	4.1 in
Width	105 mm
Depth [in]	3.4 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
------------------------------------------------	---

#### Accessories

Product extension / optional / motor drive	Yes
--------------------------------------------	-----

#### 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 / acc. to DIN EN 81346-2	Q
Certificate of suitability / as approval for NAVAL (no combat vessels) / Supplement SB	Yes

### General Product Approval



General Product Approval	EMC	Declaration of Conformity	Shipping Approval	other
--------------------------	-----	---------------------------	-------------------	-------



[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=3VA6110-7JQ31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6110-7JQ31-0AA0>

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

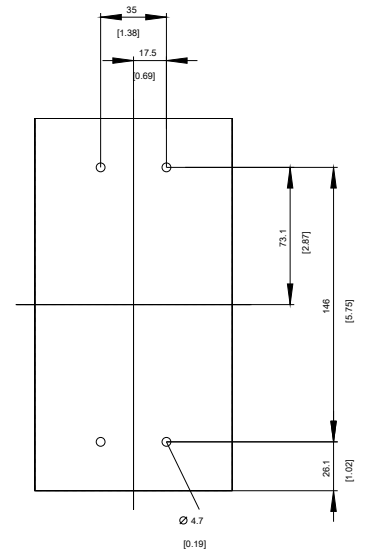
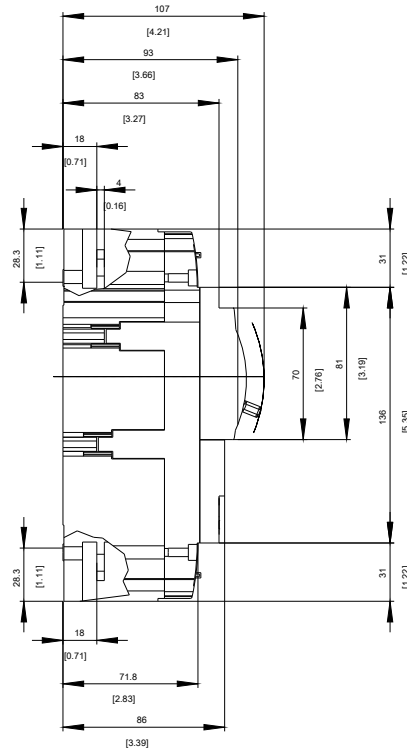
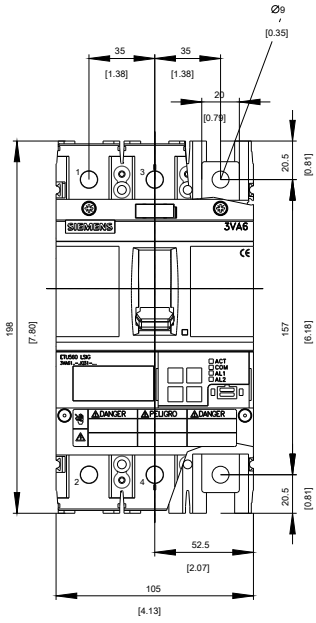
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA6110-7JQ31-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6110-7JQ31-0AA0)

#### CAX-Online-Generator

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

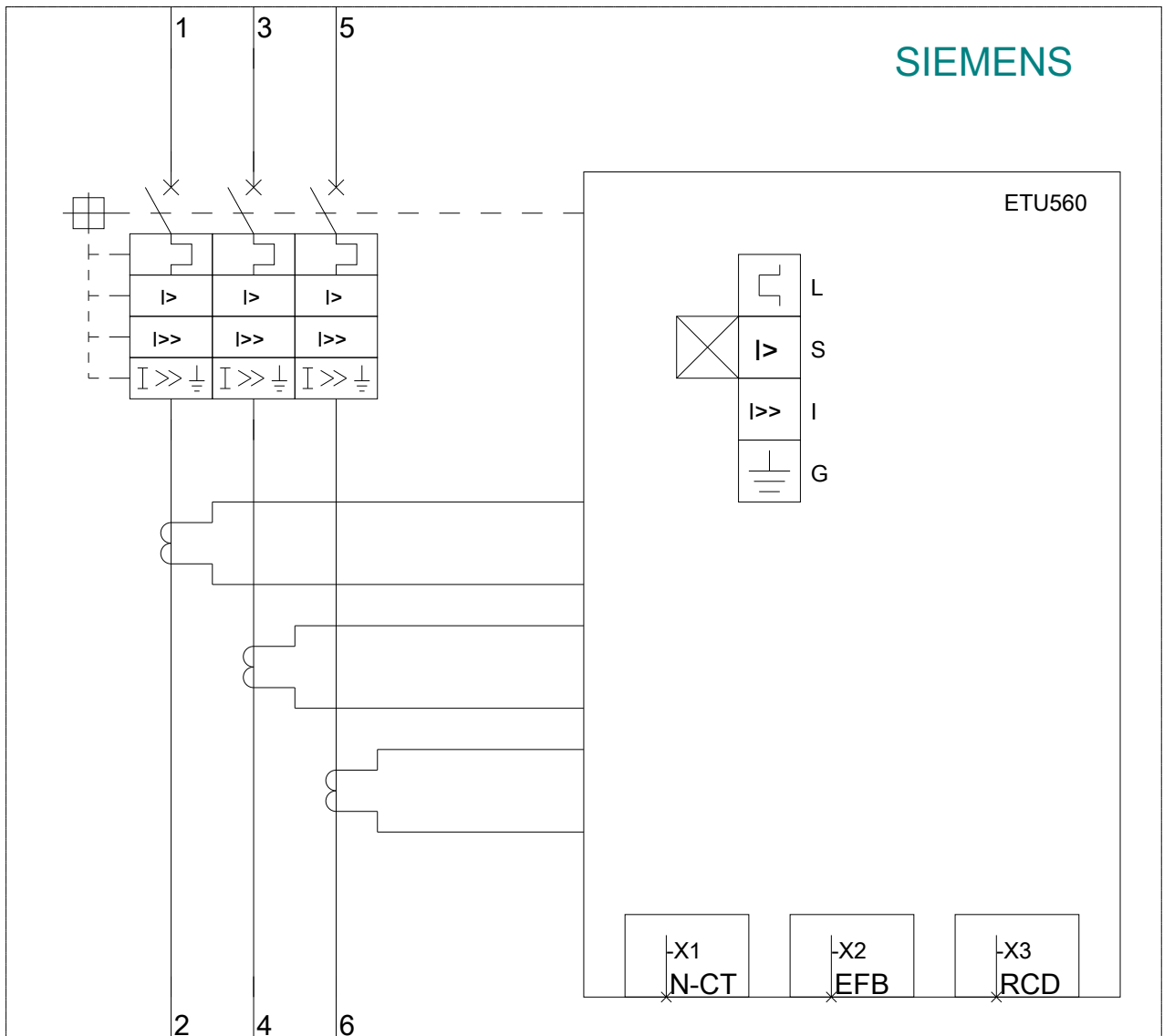
#### Tender specifications

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



-Q

SIEMENS





last modified:

08/05/2020