



CIRCUIT BREAKER 3VA6 UL FRAME 600 BREAKING CAPACITY CLASS M 35KA @ 480V 3-POLE, LINE PROTECTION ETU560, LSIG, IN=600A OVERLOAD PROTECTION IR=240A ...600A SHORT CIRCUIT PROTECTION ISD=0,6..10X IN, II=1,5..10X IN NEUTRAL PROTECTION OPTIONAL WITH EXT. CT,UPTO 160% GROUND-FAULT-PROTECTION IG=0,2... 1 X IN, TG=0,05-0,8S W/O CONNECTION

Model	
Product brand name	SENTRON
Product designation	Molded-case circuit breaker
Design of the product	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
Protective function of the overcurrent release	LSIG
Number of poles	3
General technical data	
Tension assignée d'isolement $U_i$	600 V
Max. rated operational voltage $U_e$ with AC 50/60Hz	600 V
Active power loss / for rated value of the current / at AC / in hot operating state / per device	151 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	50.33 W
Mechanical service life (switching cycles) / typical	15 000

Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	4 000
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	2 500
Electrical endurance (switching cycles) / at 480 V / at 50/60 Hz	4 000
Electrical endurance (switching cycles) / at 600 V / at 50/60 Hz	3 000
Neutral conductors / upgradeable/retrofitable	Yes
Ground fault monitoring version	Summation current formation L-conductor
Product function	
• communication function	Yes
• other measurement function	No

### Electricity

Marking / acc. to UL 489 / 100%-rated breaker	No
Max. rated operational voltage of the size of the circuit-breaker	600 A
Courant permanent assigné lu	600 A
Operating current	
• at 40 °C	600 A
• at 45 °C	600 A
• at 50 °C	570 A
• at 55 °C	540 A
• at 60 °C	510 A
• at 65 °C	480 A
• at 70 °C	450 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> )	
• at 240 V	85 kA
• at 415 V	55 kA
• at 690 V	6 kA
Operational short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 240 V	85 kA
• at 415 V	55 kA
• at 690 V	6 kA
Short-circuit current making capacity (I <sub>cm</sub> )	
• at 240 V	187 kA
• at 415 V	121 kA
• at 690 V	9 kA

### Switching capacity according to UL 489

Breaking capacity current	
• at 240 V	100 kA
• at 480 Y/277 V	35 kA
• at 480 V	35 kA
• at 600 Y/347 V	18 kA
• at 600 V	18 kA

#### Adjustable parameters

Adjustable response value current / I <sub>g</sub> min.	240 A
Adjustable response value current / I <sub>g</sub> min.	600 A
Adjustable response value current / I <sub>g</sub> min.	0.5
Adjustable response value current / I <sub>g</sub> min.	15
Adjustable response value current / I <sub>g</sub> min.	360 A
Adjustable response value current / I <sub>g</sub> min.	5 400 A
Adjustable response value current / I <sub>g</sub> min.	0.05 s
Adjustable response value current / I <sub>g</sub> min.	0.5 s
Adjustable response value current / I <sub>g</sub> min.	0.05 s
Adjustable response value current / I <sub>g</sub> min.	0.5 s
Adjustable response value current / I <sub>i</sub> min.	900 A
Adjustable response value current / I <sub>i</sub> max.	5 400 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.	120 A
Adjustable response value current / I <sub>g</sub> max.	600 A
Adjustable response value current / t <sub>g</sub> min.	0.05 s
Adjustable response value current / I <sub>g</sub> min.	0.8 s

#### Mechanical Design

Height [in]	9.8 in
Height	248 mm
Width [in]	5.4 in
Width	138 mm
Depth [in]	4.3 in
Depth	110 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

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

### 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?mfb=3VA6460-5JQ31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6460-5JQ31-0AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mfb=3VA6460-5JQ31-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA6460-5JQ31-0AA0)

### CAX-Online-Generator

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

### Tender specifications

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







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