



CIRCUIT BREAKER 3VA6 UL FRAME 600 BREAKING CAPACITY CLASS M 35KA @ 480V 3-POLE, LINE PROTECTION ETU860, LSIG, IN=400A OVERLOAD PROTECTION IR=160A ...400A SHORT CIRCUIT PROTECTION ISD=0,6..10X IN, II=1,5..12X 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   | ETU860                      |
| 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                      | 70 W                        |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                        | 23.33 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/retrofittable                            | Yes                                     |
| Ground fault monitoring version   | Summation current formation L-conductor |
| Product function  |   |
| • communication function  | Yes                                     |
| • other measurement function  | Yes                                     |

### Electricity

|   |       |
|---|-------|
| Marking / acc. to UL 489 / 100%-rated breaker                     | Yes   |
| Max. rated operational voltage of the size of the circuit-breaker | 600 A |
| Courant permanent assigné lu                                      | 400 A |
| Operating 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 |
| • at 70 °C  | 400 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.                 | 160 A   |
| Adjustable response value current / I <sub>g</sub> min.                 | 400 A   |
| Adjustable response value current / I <sub>g</sub> min.                 | 0.5     |
| Adjustable response value current / I <sub>g</sub> min.                 | 25      |
| Adjustable response value current / I <sub>g</sub> min.                 | 240 A   |
| Adjustable response value current / I <sub>g</sub> min.                 | 4 000 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.                 | 600 A   |
| Adjustable response value current / I <sub>i</sub> max.                 | 4 800 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.                 | 80 A    |
| Adjustable response value current / I <sub>g</sub> max.                 | 400 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 |
|--|---|

#### 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

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

|                                 |            |                                  |
|---------------------------------|------------|----------------------------------|
| <b>General Product Approval</b> | <b>EMC</b> | <b>Declaration of Conformity</b> |
|---------------------------------|------------|----------------------------------|



|                          |              |
|--------------------------|--------------|
| <b>Shipping Approval</b> | <b>other</b> |
|--------------------------|--------------|



[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=3VA6440-5KQ31-2AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6440-5KQ31-2AA0>

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

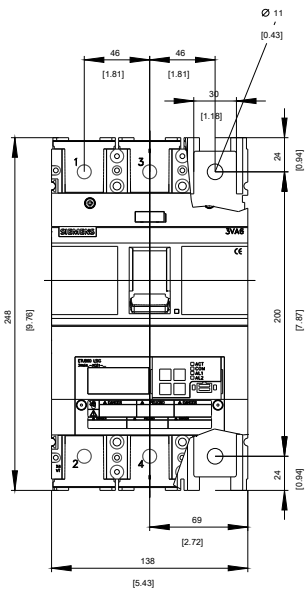
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA6440-5KQ31-2AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6440-5KQ31-2AA0)

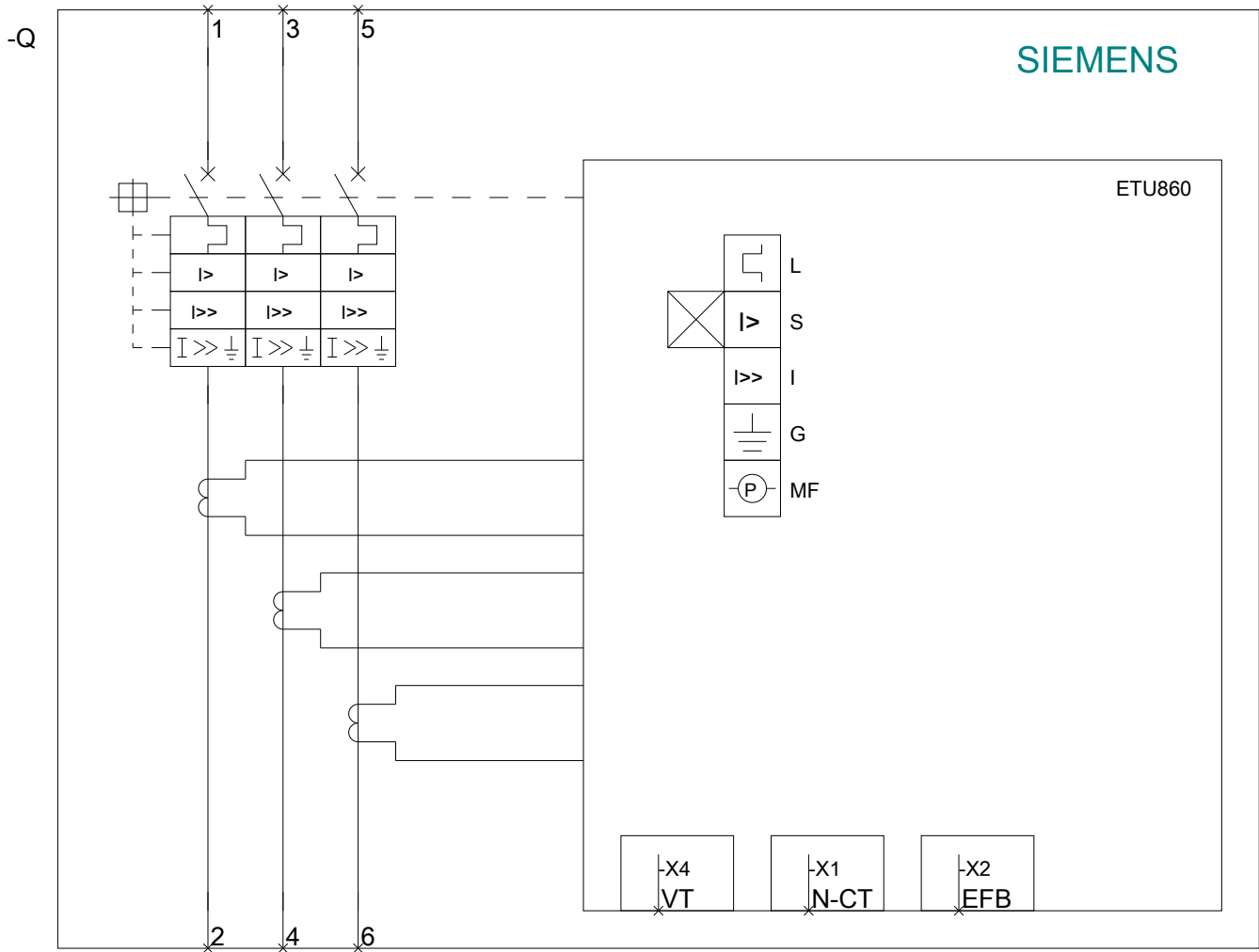
**CAX-Online-Generator**

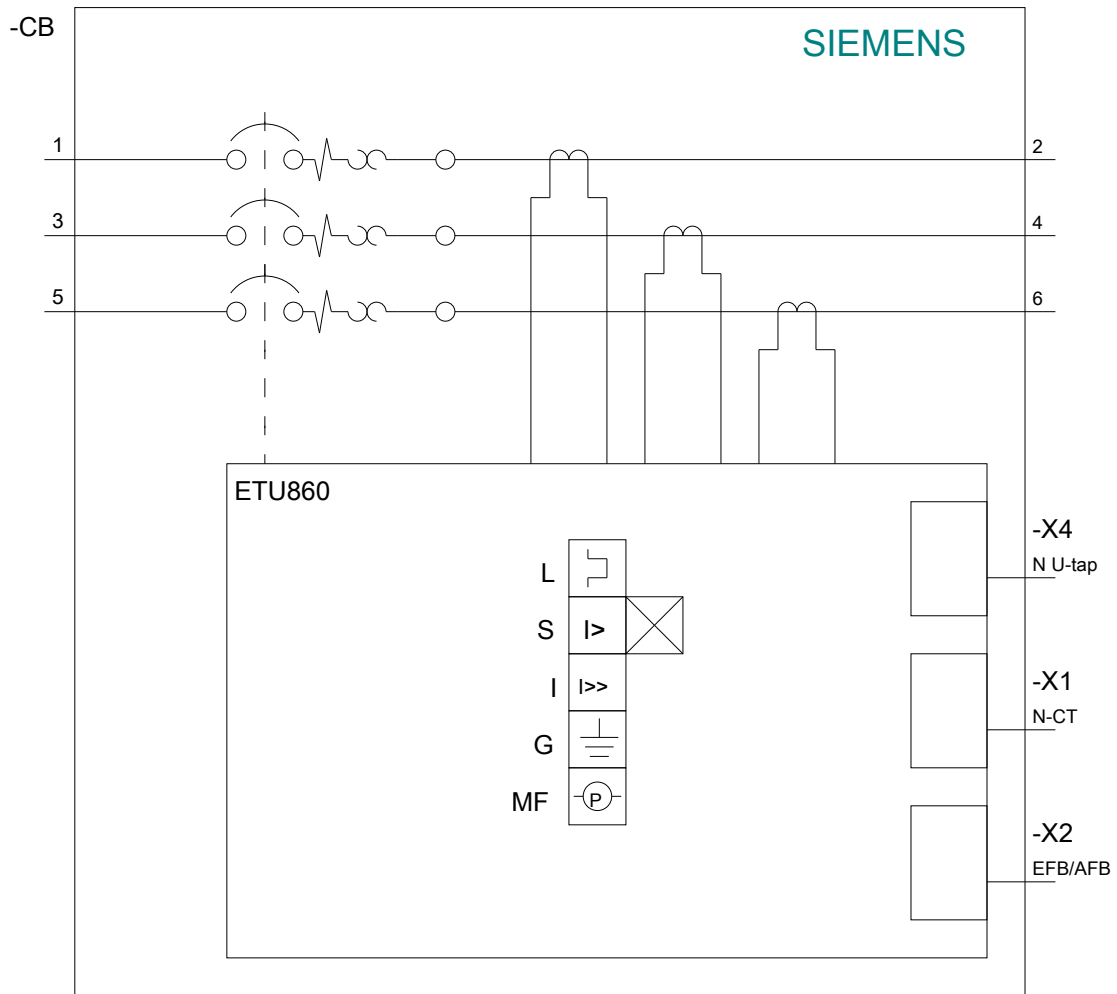
<http://www.siemens.com/cax>

**Tender specifications**

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







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