



circuit breaker 3VA2 IEC frame 630 breaking capacity class M  
Icu=55kA @ 415V 4-pole, line protection ETU860, LSIG, In=500A  
overload protection Ir=200A...500A short-circuit protection  
Isd=0.6..10x In, li=1.5..14x In N conductor protection adjustable  
(OFF, up to 100%) gr.-fault prot., can be sw. off Ig=0.2...1 x In=  
tg=0.05-0.8s nut keeper kit

| Model                                          |                             |
|------------------------------------------------|-----------------------------|
| product brand name                             | SENTRON                     |
| product designation                            | Molded case circuit breaker |
| Product version                                | Line protection             |
| design of the overcurrent release              | ETU860                      |
| protection function of the overcurrent release | LSIG                        |
| number of poles                                | 4                           |

| General technical data                                                                         |        |
|------------------------------------------------------------------------------------------------|--------|
| Tension assignée d'isolement Ui                                                                | 800 V  |
| Max. rated operational voltage Ue with AC 50/60Hz                                              | 690 V  |
| power loss [W] / maximum                                                                       | 99 W   |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole | 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                          | 4 000  |
| Neutral conductors / upgradeable/retrofittable                                                 | No     |

|                                 |                                             |
|---------------------------------|---------------------------------------------|
| ground fault monitoring version | Summation current formation L + N conductor |
| product function                |                                             |
| • communication function        | Yes                                         |
| • other measurement function    | Yes                                         |
| net weight                      | 5.7 kg                                      |

#### Current

|                                                  |       |
|--------------------------------------------------|-------|
| Max. rated operational current of the frame size | 630 A |
| Courant permanent assigné lu                     | 500 A |
| short-time withstand current (I <sub>cw</sub> )  |       |
| • at AC / limited to 0.5 s / rated value         | 6 kA  |
| • limited to 1 s                                 | 6 kA  |
| operating current                                |       |
| • at 40 °C                                       | 500 A |
| • at 45 °C                                       | 500 A |
| • at 50 °C                                       | 500 A |
| • at 55 °C                                       | 477 A |
| • at 60 °C                                       | 455 A |
| • at 65 °C                                       | 432 A |
| • at 70 °C                                       | 410 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 440 V                                                             | 55 kA  |
| • at 500 V                                                             | 36 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 440 V                                                             | 55 kA  |
| • at 500 V                                                             | 36 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   |

#### Adjustable parameters

|                                                         |       |
|---------------------------------------------------------|-------|
| Adjustable response value current / I <sub>g</sub> min. | 200 A |
| Adjustable response value current / I <sub>g</sub> min. | 500 A |

|                                                                                                 |         |
|-------------------------------------------------------------------------------------------------|---------|
| Adjustable response value current / I <sub>g</sub> min.                                         | 0.5     |
| Adjustable response value current / I <sub>g</sub> min.                                         | 20      |
| Adjustable response value current / I <sub>g</sub> min.                                         | 300 A   |
| Adjustable response value current / I <sub>g</sub> min.                                         | 5 000 A |
| Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF                              | Yes     |
| 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.                                         | 750 A   |
| Adjustable response value current / I <sub>i</sub> max.                                         | 7 000 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.                                         | 100 A   |
| Adjustable response value current / I <sub>g</sub> max.                                         | 500 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   |
| Adjustable response value current / for G-tripping / with I <sub>2t</sub> characteristic / min. | 0.2 A   |
| Adjustable response value current / for G-tripping / with I <sub>2t</sub> characteristic / max. | 1 A     |

#### Mechanical Design

|             |        |
|-------------|--------|
| height [in] | 9.8 in |
| Height      | 248 mm |
| width [in]  | 7.2 in |
| Width       | 184 mm |
| depth [in]  | 4.3 in |
| depth       | 110 mm |

#### Connections

|                                                                                         |                              |
|-----------------------------------------------------------------------------------------|------------------------------|
| arrangement of electrical connectors / for main current circuit                         | Front terminal               |
| type of electrical connection / for main current circuit                                | on both sides nut keeper kit |
| Type of connectable conductor cross-section, connection screw, width x thickness , min. | 20 x 1 mm                    |
| Type of connectable conductor cross-section, connection screw, width x thickness , max. | 35 x 10 mm                   |

#### 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 |
|-----------------------------------------|---|

| General Product Approval                                                                 | EMC                                                                                        | Declaration of Conformity                                                                       |
|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <br>CCC | <br>EAC   | <br>EG-Konf. |
| <br>VDE | <br>RCM |                                                                                                 |
| <a href="#">Miscellaneous</a>                                                            |                                                                                            |                                                                                                 |

| Test Certificates                                  | Shipping Approval                                                                                     |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <a href="#">Miscellaneous</a>                      | <br>ABS              |
| <a href="#">Special Test Certificate</a>           | <br>BUREAU VERITAS |
| <a href="#">Type Test Certificates/Test Report</a> | <br>LRS            |

| Shipping Approval                                                                           | other                                              |
|---------------------------------------------------------------------------------------------|----------------------------------------------------|
| <br>RMRS | <a href="#">CCS / China Classification Society</a> |
|                                                                                             | <a href="#">Manufacturer Declaration</a>           |
|                                                                                             | <a href="#">Miscellaneous</a>                      |

## 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=3VA2450-5KQ42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2450-5KQ42-0AA0>

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

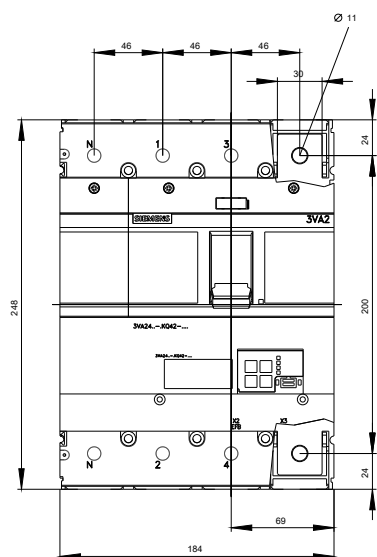
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2450-5KQ42-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2450-5KQ42-0AA0)

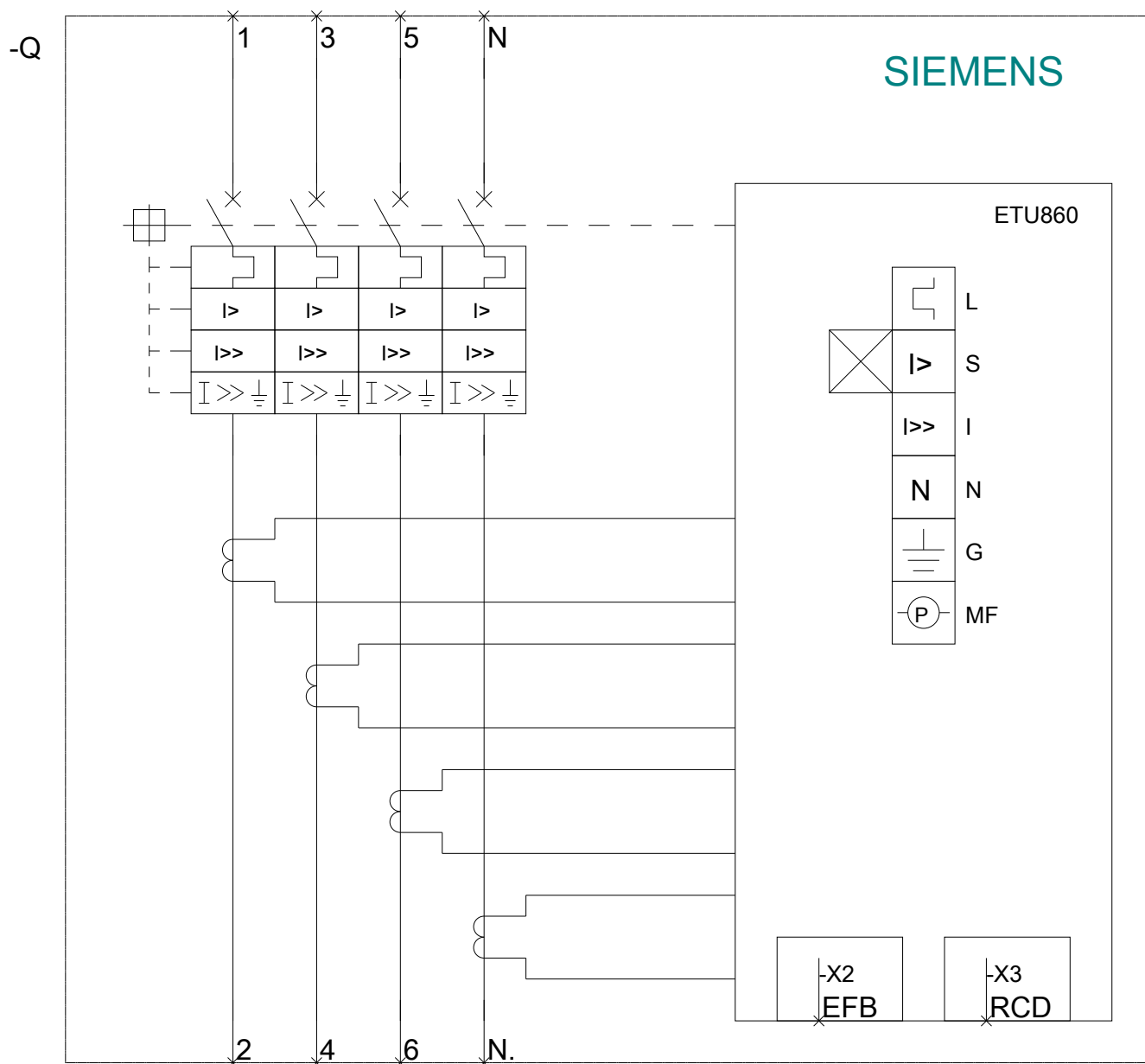
**CAX-Online-Generator**

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

**Tender specifications**

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





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