



CIRCUIT BREAKER 3VA2 IEC FRAME 630 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 4-POLE, LINE PROTECTION ETU860, LSIG, IN=500A OVERLOAD PROTECTION IR=200A ...500A SHORT CIRCUIT PROTECTION ISD=0,6..10X IN, II=1,5..14X IN NEUTRAL PROTECTION ADJUSTABLE (OFF, UPTO 100%) GROUND-FAULT, SWITCHABLE IG=0,2... 1 X IN, TG=0,05-0,8S BUSBAR CONNECTION

| Model                                                                                                                |                             |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brandname                                                                                                    | SENTRON                     |
| Product designation                                                                                                  | Molded case circuit breaker |
| Design of the product                                                                                                | Line protection             |
| Type of load switch / according 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                                                                                                      | 4                           |
| General technical data                                                                                               |                             |
| Tension assignée d'isolement Ui                                                                                      | 800 V                       |
| Max. rated operational voltage Ue with AC 50/60Hz                                                                    | 690 V                       |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device                     | 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                                       |
| Neutral conductors / upgradeable/retrofitable                             | 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                                      |

## Electricity

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Marking / according to UL 489 / 100%-rated breaker                | No    |
| Max. rated operational voltage of the size of the circuit-breaker | 630 A |
| Courant permanent assigné Iu                                      | 500 A |
| 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 (Icu)     |        |
| • at 240 V                                                | 85 kA  |
| • at 415 V                                                | 55 kA  |
| • at 690 V                                                | 6 kA   |
| Operational short-circuit current breaking capacity (Ics) |        |
| • at 240 V                                                | 85 kA  |
| • at 415 V                                                | 55 kA  |
| • at 690 V                                                | 6 kA   |
| Short-circuit current making capacity (Icm)               |        |
| • 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                      |
| Design of the N-conductor protection                                                            | adjustable OFF; 20% bis 100% |
| 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]  | 5.4 in |
| Depth       | 137 mm |

#### Connections

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Arrangement of electrical connectors / for main current circuit | Front terminal |
| Type of electrical connection / for main current circuit        | Lug terminal   |

#### 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 |

| General Product Approval                                                                 | EMC                                                                                      | Declaration of Conformity                                                                       | Test Certificates                                 |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <br>CCC | <br>RCM | <br>EG-Konf. | <a href="#">Typprüfbescheinigung/Werkszeugnis</a> |

| Test Certificates       | Shipping Approval                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">sonstig</a> | <br>ABS <br>BUREAU VERITAS <br>GL <br>LRS <br>RMRS |

## other

[sonstig](#)

## Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<http://www.siemens.com/lowvoltage/catalogs>

**Industry Mall (Online ordering system)**

<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA2450-5KQ42-0AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA2450-5KQ42-0AA0/all>

**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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