

circuit breaker 3VA2 IEC frame 100 breaking capacity class M  
Icu=55kA @ 415V 4-pole, line protection ETU560, LSIG, In=100A  
overload protection Ir=40A...100A short-circuit protection  
I<sub>sd</sub>=0.6..10x I<sub>n</sub>, I<sub>i</sub>=1.5..12x I<sub>n</sub> N conductor protection adjustable  
(OFF, up to 100%) gr.-fault prot., can be sw. off I<sub>g</sub>=0.2...1 x I<sub>n</sub>=  
t<sub>g</sub>=0.05-0.8s clamp connection

| Model                                          |                             |
|------------------------------------------------|-----------------------------|
| product brand name                             | SENTRON                     |
| product designation                            | Molded case circuit breaker |
| Product version                                | Line protection             |
| design of the overcurrent release              | ETU560                      |
| protection function of the overcurrent release | LSIG                        |
| number of poles                                | 4                           |

| General technical data                                                                         |                                             |
|------------------------------------------------------------------------------------------------|---------------------------------------------|
| Tension assignée d'isolement U <sub>i</sub>                                                    | 800 V                                       |
| Max. rated operational voltage U <sub>e</sub> with AC 50/60Hz                                  | 690 V                                       |
| power loss [W] / maximum                                                                       | 13.5 W                                      |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole | 4.5 W                                       |
| mechanical service life (switching cycles) / typical                                           | 20 000                                      |
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz                      | 14 000                                      |
| Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz                          | 8 000                                       |
| Neutral conductors / upgradeable/retrofitable                                                  | No                                          |
| ground fault monitoring version                                                                | Summation current formation L + N conductor |
| product function                                                                               |                                             |
| • communication function                                                                       | Yes                                         |
| • other measurement function                                                                   | No                                          |
| net weight                                                                                     | 3.14 kg                                     |

| Current                                          |       |
|--------------------------------------------------|-------|
| Max. rated operational current of the frame size | 100 A |
| Courant permanent assigné 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           | M      |
| maximum short-circuit current breaking capacity (Icu)     |        |
| • at 240 V                                                | 85 kA  |
| • at 415 V                                                | 55 kA  |
| • at 440 V                                                | 55 kA  |
| • at 500 V                                                | 36 kA  |
| • at 690 V                                                | 2 kA   |
| operational short-circuit current breaking capacity (Ics) |        |
| • at 240 V                                                | 85 kA  |
| • at 415 V                                                | 55 kA  |
| • at 440 V                                                | 55 kA  |
| • at 500 V                                                | 36 kA  |
| • at 690 V                                                | 2 kA   |
| short-circuit current making capacity (Icm)               |        |
| • at 240 V                                                | 187 kA |
| • at 415 V                                                | 121 kA |
| • at 440 V                                                | 121 kA |
| • at 500 V                                                | 76 kA  |
| • at 690 V                                                | 3 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 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.                 | 60 A    |
| Adjustable response value current / I <sub>g</sub> min.                 | 1 000 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.                 | 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 / 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] | 7.1 in |
| Height      | 181 mm |
| width [in]  | 5.5 in |
| Width       | 140 mm |
| depth [in]  | 3.4 in |
| depth       | 86 mm  |

## Connections

|                                                                                 |                              |
|---------------------------------------------------------------------------------|------------------------------|
| arrangement of electrical connectors / for main current circuit                 | Front terminal               |
| type of electrical connection / for main current circuit                        | double-sided box terminal    |
| Type of connectable conductor cross-section, round conductor terminal, stranded | 1 x (6-120 mm <sup>2</sup> ) |

## 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                                                                                        |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------|-------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <br>CCC | <br>VDE | <b>CB</b><br>CB | <a href="#">Miscellaneous</a> | <br><b>EAC</b> | <br>RCM |

| Declaration of Conformity                                                                     | Test Certificates                                  |                               |                                          | Shipping Approval                                                                          |                                                                                                       |
|-----------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <br>EG-Konf. | <a href="#">Type Test Certificates/Test Report</a> | <a href="#">Miscellaneous</a> | <a href="#">Special Test Certificate</a> | <br>ABS | <br>BUREAU VERITAS |

| Shipping Approval                                                                        |                                                                                           | other                                              |                                          |                               |
|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------|-------------------------------|
| <br>LRS | <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=3VA2010-5JQ46-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2010-5JQ46-0AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2010-5JQ46-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2010-5JQ46-0AA0)

##### CAX-Online-Generator

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

##### Tender specifications

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



last modified:

10/30/2020