

Siemens  
EcoTech



circuit breaker 3VA2 IEC Frame 100 breaking capacity class C  $I_{cu}=110\text{ kA @ }415\text{ V}$  3-pole, line protection ETU860, LSIG,  $I_n=100\text{ A}$  overload protection  $I_r=40\text{ A...100 A}$  short-circuit protection  $I_{sd}=0.6\text{...}10 \times I_n$ ,  $I_i=1.5\text{...}12 \times I_n$  neutral conductor protection optionally with external current transformer, up to 160% ground-fault protection, can be switched off  $I_g=0.2\text{...}1 \times I_n$ ,  $t_g=0.05\text{--}0.8\text{ s}$  nut keeper kit

| Model                                                                                                 |                                         |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------|
| product brand name                                                                                    | SENTRON                                 |
| product designation                                                                                   | Molded case circuit breaker             |
| design of the product                                                                                 | Line protection                         |
| design of the overcurrent release                                                                     | ETU860                                  |
| protection function of the overcurrent release                                                        | LSIG                                    |
| number of poles                                                                                       | 3                                       |
| General technical data                                                                                |                                         |
| insulation voltage / rated value                                                                      | 800 V                                   |
| operating voltage / at AC / rated value                                                               | 690 V                                   |
| power loss [W] / maximum                                                                              | 7.7 W                                   |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole           | 2.57 W                                  |
| mechanical service life (operating cycles) / typical                                                  | 25 000                                  |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                      | 15 000                                  |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                          | 10 500                                  |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof | Yes                                     |
| ground-fault monitoring version                                                                       | Summation current formation L-conductor |
| product function                                                                                      |                                         |
| • communication function                                                                              | Yes                                     |
| • other measurement function                                                                          | Yes                                     |
| Net Weight                                                                                            | 2.5 kg                                  |
| Current                                                                                               |                                         |
| operational 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                                                       | C                                       |
| maximum short-circuit current breaking capacity ( $I_{cu}$ )                                          |                                         |
| • at 240 V                                                                                            | 150 kA                                  |

|                                                                                                                                              |                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>                     | 110 kA<br>110 kA<br>85 kA<br>2 kA            |
| operating short-circuit current breaking capacity (Ics)                                                                                      |                                              |
| <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul> | 150 kA<br>110 kA<br>110 kA<br>85 kA<br>2 kA  |
| short-circuit current making capacity (Icm)                                                                                                  |                                              |
| <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul> | 330 kA<br>242 kA<br>242 kA<br>187 kA<br>3 kA |
| <b>Adjustable parameters</b>                                                                                                                 |                                              |
| product feature / for L-tripping / can be switched on/off                                                                                    | No                                           |
| adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic                            |                                              |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 40 A<br>100 A                                |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic                                |                                              |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 0.5 s<br>25 s                                |
| adjustable response value setting current (I <sub>sd</sub> ) / of S-trip / with I <sub>0t</sub> characteristic                               |                                              |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 60 A<br>1 000 A                              |
| adjustable response value setting current (I <sub>sd</sub> ) / of S-trip / with I <sub>2t</sub> characteristic                               |                                              |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 60 A<br>1 000 A                              |
| adjustable response value delay time (t <sub>sd</sub> ) / for S-tripping / with I <sub>0t</sub> characteristic                               |                                              |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 0.05 s<br>0.5 s                              |
| adjustable response value delay time (t <sub>sd</sub> ) / for S-tripping / with I <sub>2t</sub> characteristic                               |                                              |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 0.05 s<br>0.5 s                              |
| adjustable response value setting current (I <sub>i</sub> ) / for I-tripping                                                                 |                                              |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 150 A<br>1 200 A                             |
| adjustable current response value current / for G-tripping / with standard characteristic                                                    |                                              |
| <ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>                                                | 20 A<br>100 A                                |
| adjustable response value delay time (t <sub>g</sub> ) / for G-tripping / with I <sub>0t</sub> characteristic                                |                                              |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 0.05 s<br>0.8 s                              |
| adjustable response value setting current (I <sub>g</sub> ) / for G-tripping / with I <sub>2t</sub> characteristic                           |                                              |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 20 A<br>100 A                                |
| adjustable response value delay time (t <sub>g</sub> ) / for G-tripping / with I <sub>2t</sub> characteristic                                |                                              |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                               | 0.05 s<br>0.8 s                              |
| adjustable setting current (I <sub>nN</sub> ) / for N-tripping                                                                               |                                              |

|                                         |                             |
|-----------------------------------------|-----------------------------|
| • minimum                               | 20 A                        |
| • maximum                               | 160 A                       |
| design of the N-conductor protection    | adjustable OFF; 20% to 160% |
| product function / grounding protection | Yes                         |

#### Mechanical Design

|                        |         |
|------------------------|---------|
| product component      |         |
| • undervoltage release | No      |
| • voltage trigger      | No      |
| • trip indicator       | No      |
| height [in]            | 7.13 in |
| height                 | 181 mm  |
| width [in]             | 4.13 in |
| width                  | 105 mm  |
| depth [in]             | 3.39 in |
| depth                  | 86 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-sections / for flat-bar terminal connection / minimum | 13 x 1 mm                    |
| type of connectable conductor cross-sections / for flat-bar terminal connection / maximum | 25 x 8 mm                    |
| design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)        | tin                          |
| design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)     | tin                          |

#### 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  |

#### Environmental footprint

|                                                          |                 |
|----------------------------------------------------------|-----------------|
| global warming potential [CO2 eq] / total                | 61.814 kg       |
| global warming potential [CO2 eq] / during manufacturing | 14.6 kg         |
| global warming potential [CO2 eq] / during operation     | 48.9 kg         |
| global warming potential [CO2 eq] / after end of life    | -2.2 kg         |
| Siemens Eco Profile (SEP)                                | Siemens EcoTech |
| reference code / according to IEC 81346-2                | Q               |

#### Approvals / Certificates

#### General Product Approval



[Miscellaneous](#)



[Confirmation](#)

|                          |     |                   |                      |
|--------------------------|-----|-------------------|----------------------|
| General Product Approval | EMV | Test Certificates | Maritime application |
|--------------------------|-----|-------------------|----------------------|



[Miscellaneous](#)

[Special Test Certificates/Test Report](#)

[Type Test Certificates/Test Report](#)



| Maritime application | other |
|----------------------|-------|
|----------------------|-------|



[CCS \(China Classification Society\)](#)

[Miscellaneous](#)

| other | Dangerous goods | Environment |
|-------|-----------------|-------------|
|-------|-----------------|-------------|

[Miscellaneous](#)

[Confirmation](#)



[Transport Information](#)

[Environmental Confirmations](#)



| Environment |
|-------------|
|-------------|

[Environmental Confirmations](#)



| Further information |
|---------------------|
|---------------------|

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA2010-7KQ32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2010-7KQ32-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2010-7KQ32-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2010-7KQ32-0AA0)

CAX-Online-Generator

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

Tender specifications

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

Characteristic curves

[https://curves.simarisiemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simarisiemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>)





