

Siemens  
EcoTech



circuit breaker 3VA2 IEC Frame 100 breaking capacity class H Icu=85 kA @ 415 V  
4-pole, line protection ETU850, LSI, In=100 A overload protection Ir=40 A...100 A  
short-circuit protection Isd=0.6..10x In, li=1.5..12x In neutral conductor protection  
adjustable (OFF, up to 100%) 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                                                                     | ETU850                      |
| protection function of the overcurrent release                                                        | LSI                         |
| number of poles                                                                                       | 4                           |
| General technical data                                                                                |                             |
| insulation voltage / rated value                                                                      | 800 V                       |
| operating voltage / at AC / rated value                                                               | 690 V                       |
| power loss [W] / maximum                                                                              | 13.5 W                      |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole           | 4.5 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 | No                          |
| ground-fault monitoring version                                                                       | Without                     |
| product function                                                                                      |                             |
| • communication function                                                                              | Yes                         |
| • other measurement function                                                                          | Yes                         |
| Net Weight                                                                                            | 3.2 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                                                       | H                           |
| maximum short-circuit current breaking capacity (Icu)                                                 |                             |
| • at 240 V                                                                                            | 110 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>                                                                             | 85 kA<br>85 kA<br>55 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> | 110 kA<br>85 kA<br>85 kA<br>55 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>             | 242 kA<br>187 kA<br>187 kA<br>121 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 setting current (I <sub>N</sub> ) / for N-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                         | 20 A<br>100 A                                |
| design of the N-conductor protection                                                                                                                                                                 | adjustable OFF; 20% to 100%                  |
| product function / grounding protection                                                                                                                                                              | No                                           |
| <b>Mechanical Design</b>                                                                                                                                                                             |                                              |
| product component <ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• voltage trigger</li> <li>• trip indicator</li> </ul>                                                      | No<br>No<br>No                               |
| height [in]                                                                                                                                                                                          | 7.13 in                                      |
| height                                                                                                                                                                                               | 181 mm                                       |
| width [in]                                                                                                                                                                                           | 5.51 in                                      |
| width                                                                                                                                                                                                | 140 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                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|        |  | <a href="#">Miscellaneous</a>                                                       |  |  | <a href="#">Confirmation</a>                                                          |
| General Product Approval                                                                  | EMV                                                                                 | Test Certificates                                                                   |                                                                                     | Maritime application                                                                  |                                                                                       |
|        |  | <a href="#">Type Test Certificates/Test Report</a>                                  | <a href="#">Miscellaneous</a>                                                       | <a href="#">Special Test Certificate</a>                                              |  |
| Maritime application                                                                      |                                                                                     |                                                                                     |                                                                                     |                                                                                       | other                                                                                 |
|        |  |  |  | <a href="#">CCS (China Classification Society)</a>                                    | <a href="#">Miscellaneous</a>                                                         |
| other                                                                                     |                                                                                     | Dangerous goods                                                                     |                                                                                     | Environment                                                                           |                                                                                       |
| <a href="#">Miscellaneous</a>                                                             | <a href="#">Confirmation</a>                                                        |  | <a href="#">Transport Information</a>                                               | <a href="#">Environmental Confirmations</a>                                           | <a href="#">Environmental Confirmations</a>                                           |
| Environment                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |



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#### 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=3VA2010-6KP42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2010-6KP42-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2010-6KP42-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2010-6KP42-0AA0)

##### CAX-Online-Generator

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

##### Tender specifications

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

##### Characteristic curves

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





