

Siemens  
EcoTech



circuit breaker 3VA2 IEC Frame 100 breaking capacity class M Icu=55 kA @ 415 V  
4-pole, line protection ETU850, LSI, In=40 A overload protection Ir=16 A...40 A  
short-circuit protection Isd=0.6..10x In, li=1.5..12x In neutral conductor protection  
adjustable (OFF, up to 160%) terminal connection

| 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                                                                              | 2.2 W                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole           | 0.73 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                                                                                            | 40 A                        |
| • at 45 °C                                                                                            | 40 A                        |
| • at 50 °C                                                                                            | 40 A                        |
| • at 55 °C                                                                                            | 40 A                        |
| • at 60 °C                                                                                            | 40 A                        |
| • at 65 °C                                                                                            | 40 A                        |
| • at 70 °C                                                                                            | 40 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                        |
| operating 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                      |

|                                                                                                                               |                                     |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <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>      | 121 kA<br>121 kA<br>75.5 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>                                                | 16 A<br>40 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>                                                | 24 A<br>400 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>                                                | 24 A<br>400 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>                                                | 60 A<br>480 A                       |
| adjustable setting current (I <sub>N</sub> ) / for N-tripping                                                                 |                                     |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                | 16 A<br>64 A                        |
| design of the N-conductor protection                                                                                          | adjustable OFF; 40% to 160%         |
| 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                             |
| type of connectable conductor cross-sections / of the round conductor terminal / stranded                                     | 1 x (6 - 120 mm <sup>2</sup> )      |
| width                                                                                                                         | 140 mm                              |
| depth [in]                                                                                                                    | 3.39 in                             |
| depth                                                                                                                         | 86 mm                               |
| <b>Connections</b>                                                                                                            |                                     |
| arrangement of electrical connectors / for main current circuit                                                               | Front terminal                      |
| type of electrical connection / for main current circuit                                                                      | double-sided box terminal           |
| 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                                 |
| <b>Auxiliary circuit</b>                                                                                                      |                                     |
| number of CO contacts / for auxiliary contacts                                                                                | 0                                   |
| <b>Accessories</b>                                                                                                            |                                     |

|                                                          |                 |
|----------------------------------------------------------|-----------------|
| product extension / optional / motor drive               | Yes             |
| <b>Environmental conditions</b>                          |                 |
| 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           |
| <b>Environmental footprint</b>                           |                 |
| 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 |
|--------------------------|-----|-------------------|
|--------------------------|-----|-------------------|



[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

##### Maritime application



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

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

[Miscellaneous](#)

[Miscellaneous](#)

[Confirmation](#)



[Transport Information](#)

[Environmental Confirmations](#)

##### Environment

Siemens EcoTech



[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=3VA2040-5KP46-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2040-5KP46-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2040-5KP46-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2040-5KP46-0AA0)

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>)

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