



Miniature circuit breaker 230 V 10kA, 1+N-pole, D, 6 A, D=70 mm

| Model                                                                               |                                 |
|-------------------------------------------------------------------------------------|---------------------------------|
| product brand name                                                                  | SENTRON                         |
| product designation                                                                 | Miniature circuit breaker       |
| General technical data                                                              |                                 |
| number of poles                                                                     | 2                               |
| design of pole                                                                      | 1P+N                            |
| tripping characteristic class                                                       | D                               |
| mechanical service life (operating cycles) typical                                  | 10 000                          |
| overvoltage category                                                                | 3                               |
| degree of pollution                                                                 | 3                               |
| Voltage                                                                             |                                 |
| type of voltage of the operating voltage                                            | AC                              |
| insulation voltage (Ui)                                                             |                                 |
| • with single-phase operation at AC rated value                                     | 250 V                           |
| supply voltage with single-phase operation at AC rated value                        | 230 V                           |
| • operational current                                                               |                                 |
| — at 40 °C rated value                                                              | 5.63 A                          |
| — at 50 °C rated value                                                              | 5.24 A                          |
| — at 55 °C rated value                                                              | 5.04 A                          |
| — at 60 °C rated value                                                              | 4.82 A                          |
| • operational current at AC rated value                                             | 6 A                             |
| Supply voltage                                                                      |                                 |
| supply voltage                                                                      |                                 |
| • at AC                                                                             | 230 V                           |
| • at DC rated value                                                                 | 60 V                            |
| value range of the supply voltage frequency                                         | 50/60 Hz                        |
| operating voltage at DC rated value maximum                                         | 72 V                            |
| Protection class                                                                    |                                 |
| protection class IP                                                                 | IP20, with connected conductors |
| Breaking Capacity                                                                   |                                 |
| switching capacity current                                                          |                                 |
| • at DC according to IEC 60947-2 rated value                                        | 15 kA                           |
| • according to EN 60898 rated value                                                 | 10 kA                           |
| • according to IEC 60947-2 rated value                                              | 35 kA                           |
| Dissipation                                                                         |                                 |
| power loss [W] for rated value of the current at AC in hot operating state per pole | 1.6 W                           |

|                                                                                     |                                                                        |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <b>suitability for operation</b>                                                    | Infrastructure / Industry                                              |
| <b>Product details</b>                                                              |                                                                        |
| <b>product feature touch protection</b>                                             | Yes                                                                    |
| <b>product component</b>                                                            |                                                                        |
| • combined terminal top                                                             | Yes                                                                    |
| • combined terminal bottom                                                          | Yes                                                                    |
| • neutral conductor switching                                                       | Yes                                                                    |
| <b>product feature properties for main switches in accordance with EN 60204-1</b>   | Yes                                                                    |
| <b>product feature halogen-free</b>                                                 | Yes                                                                    |
| <b>product feature sealable</b>                                                     | Yes                                                                    |
| <b>product feature silicon-free</b>                                                 | Yes                                                                    |
| <b>product extension installable supplementary devices</b>                          | Yes                                                                    |
| <b>Product function</b>                                                             |                                                                        |
| <b>set values setting current (Ii) for I-tripping</b>                               | 14                                                                     |
| <b>reference value setting current (Ii) for I-tripping</b>                          | x I <sub>n</sub>                                                       |
| <b>Short circuit</b>                                                                |                                                                        |
| <b>short-circuit current breaking capacity (I<sub>cn</sub>)</b>                     |                                                                        |
| • at AC according to UL 1077 and CSA C22.2 No.235                                   | 5 kA                                                                   |
| <b>Connections</b>                                                                  |                                                                        |
| <b>connectable conductor cross-section solid</b>                                    |                                                                        |
| • minimum                                                                           | 0.75 mm <sup>2</sup>                                                   |
| • maximum                                                                           | 35 mm <sup>2</sup>                                                     |
| <b>connectable conductor cross-section stranded</b>                                 |                                                                        |
| • minimum                                                                           | 0.75 mm <sup>2</sup>                                                   |
| • maximum                                                                           | 35 mm <sup>2</sup>                                                     |
| <b>connectable conductor cross-section finely stranded with core end processing</b> |                                                                        |
| • minimum                                                                           | 0.75 mm <sup>2</sup>                                                   |
| • maximum                                                                           | 25 mm <sup>2</sup>                                                     |
| <b>AWG number as coded connectable conductor cross section</b>                      |                                                                        |
| • minimum                                                                           | 18                                                                     |
| • maximum                                                                           | 4                                                                      |
| <b>tightening torque [lbf·in] with screw-type terminals</b>                         |                                                                        |
| • minimum                                                                           | 22 lbf·in                                                              |
| • maximum                                                                           | 31 lbf·in                                                              |
| <b>tightening torque with screw-type terminals</b>                                  |                                                                        |
| • minimum                                                                           | 2.5 N·m                                                                |
| • maximum                                                                           | 3.5 N·m                                                                |
| <b>position of power supply cord</b>                                                | Any                                                                    |
| <b>Mechanical Design</b>                                                            |                                                                        |
| <b>height</b>                                                                       | 90 mm                                                                  |
| <b>width</b>                                                                        | 36 mm                                                                  |
| <b>depth</b>                                                                        | 76 mm                                                                  |
| <b>installation depth</b>                                                           | 70 mm                                                                  |
| <b>number of modular width units</b>                                                | 2                                                                      |
| <b>fastening method</b>                                                             | DIN rail                                                               |
| <b>mounting position</b>                                                            | any                                                                    |
| <b>Net Weight</b>                                                                   | 311 g                                                                  |
| <b>Environmental conditions</b>                                                     |                                                                        |
| <b>influence of the surrounding temperature</b>                                     | max. 95% RH up to 55°C, max. 55% RH up to 70°C, max. 35% RH up to 75°C |
| <b>standard</b>                                                                     | IEC / EN 60898-1, IEC / EN 60947-2 / UL1077                            |
| <b>vibration resistance according to IEC 60068-2-6</b>                              | ±1mm at 5 to 25Hz; 50m/s <sup>2</sup> at 25 to 150Hz                   |
| <b>ambient temperature during operation</b>                                         |                                                                        |
| • minimum                                                                           | -40 °C                                                                 |
| • maximum                                                                           | 70 °C                                                                  |
| <b>ambient temperature during storage</b>                                           |                                                                        |
| • minimum                                                                           | -40 °C                                                                 |

|                                                                             |       |
|-----------------------------------------------------------------------------|-------|
| • maximum                                                                   | 75 °C |
| number of test cycles for environmental testing according to IEC 60068-2-30 | 6     |

#### Approvals Certificates

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|-------------|--------------------------|
|-------------|--------------------------|

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| Maritime application | other | Railway |
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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=5SY4506-8>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY4506-8>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY4506-8](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4506-8)

CAX-Online-Generator

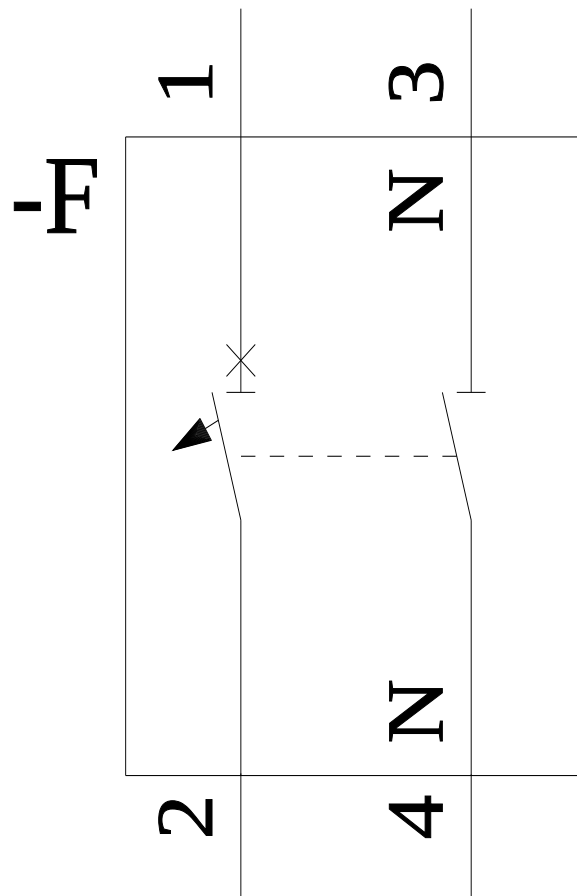
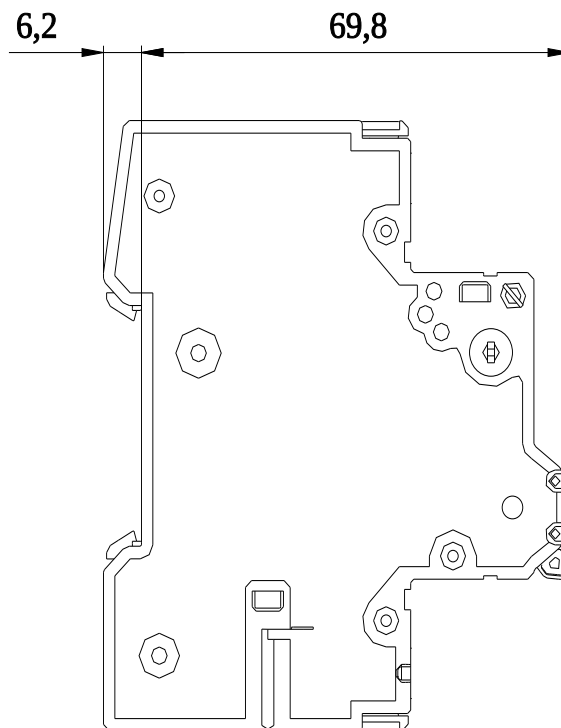
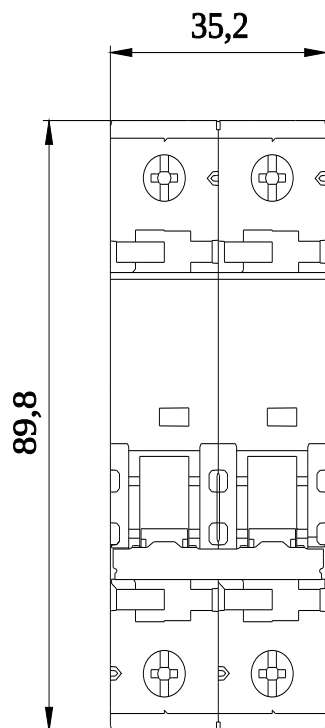
<https://www.siemens.com/cax>

Tender specifications

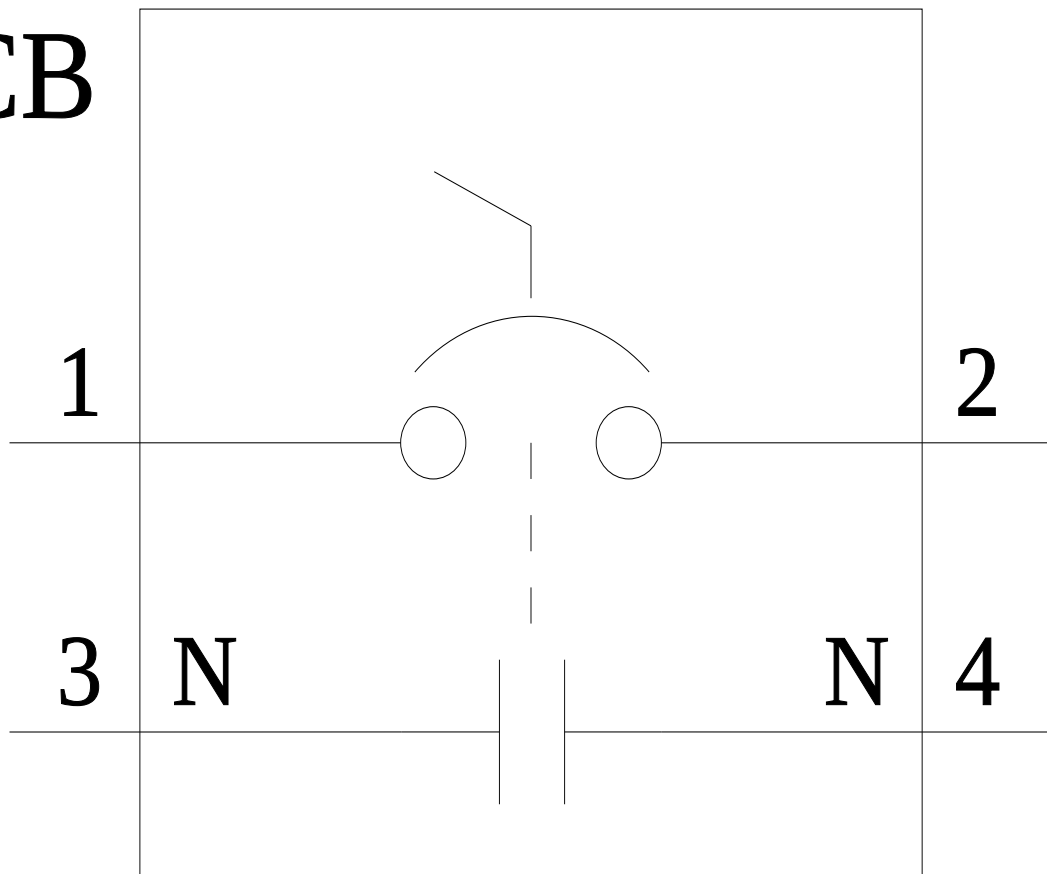
<https://www.siemens.com/specifications>

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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