

Circuit breaker Universal current 220 V DC 230/400 V AC 10kA, 1-pole, C, 2A



| Model  |                                 |
|--|---------------------------------|
| product brand name   | SENTRON                         |
| product designation  | Miniature circuit breaker       |
| General technical data                                       |                                 |
| number of poles  | 1                               |
| design of pole   | 1P                              |
| tripping characteristic class                                | C                               |
| mechanical service life (operating cycles) typical           | 10 000                          |
| overvoltage category   | 3                               |
| degree of pollution  | 3                               |
| Voltage  |                                 |
| type of voltage of the operating voltage                     | AC/DC                           |
| insulation voltage (Ui)                                      |                                 |
| • at DC rated value  | 250 V                           |
| • with single-phase operation at AC rated value              | 440 V                           |
| • with multi-phase operation at AC rated value               | 440 V                           |
| supply voltage with single-phase operation at AC rated value | 230 V                           |
| • operational current  |                                 |
| — at 40 °C rated value                                       | 1.9 A                           |
| — at 50 °C rated value                                       | 1.8 A                           |
| — at 55 °C rated value                                       | 1.75 A                          |
| — at 60 °C rated value                                       | 1.7 A                           |
| • operational current at AC rated value                      | 2 A                             |
| Supply voltage   |                                 |
| supply voltage   |                                 |
| • at AC  | 400 V                           |
| • at DC rated value  | 220 V                           |
| value range of the supply voltage frequency                  | 50/60 Hz                        |
| operating voltage at DC rated value maximum                  | 250 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                           |
| energy limitation class                                      | 3                               |
| Dissipation  |                                 |

|   |  |
|---|--|
| power loss [W] for rated value of the current at AC in hot operating state per pole | 1.2 W  |
| <b>suitability for operation</b>  | Infrastructure / Industry / Mobility                                   |
| <b>Product details</b>  |  |
| product feature touch protection  | Yes  |
| product component   |  |
| • combined terminal top   | Yes  |
| • combined terminal bottom  | Yes  |
| • neutral conductor switching   | No   |
| product feature properties for main switches in accordance with EN 60204-1          | Yes  |
| product feature halogen-free  | Yes  |
| product feature sealable  | Yes  |
| product feature silicon-free  | Yes  |
| product extension installable supplementary devices                                 | Yes  |
| <b>Short circuit</b>  |  |
| short-circuit current breaking capacity (Icn)                                       |  |
| • at DC according to EN 60898-2   | 10 kA  |
| <b>Connections</b>  |  |
| connectable conductor cross-section solid   |  |
| • minimum   | 0.75 mm <sup>2</sup>   |
| • maximum   | 35 mm <sup>2</sup>   |
| connectable conductor cross-section stranded  |  |
| • minimum   | 0.75 mm <sup>2</sup>   |
| • maximum   | 35 mm <sup>2</sup>   |
| connectable conductor cross-section finely stranded with core end processing        |  |
| • minimum   | 0.75 mm <sup>2</sup>   |
| • maximum   | 25 mm <sup>2</sup>   |
| AWG number as coded connectable conductor cross section                             |  |
| • minimum   | 18   |
| • maximum   | 4  |
| tightening torque [lbf-in] with screw-type terminals                                |  |
| • minimum   | 22 lbf-in  |
| • maximum   | 31 lbf-in  |
| tightening torque with screw-type terminals   |  |
| • minimum   | 2.5 N·m  |
| • maximum   | 3.5 N·m  |
| position of power supply cord   | AC as required, observe DC polarity                                    |
| <b>Mechanical Design</b>  |  |
| height  | 90 mm  |
| width   | 18 mm  |
| depth   | 76 mm  |
| installation depth  | 70 mm  |
| number of modular width units   | 1  |
| fastening method  | DIN rail   |
| mounting position   | any  |
| Net Weight  | 172 g  |
| <b>Environmental conditions</b>   |  |
| influence of the surrounding temperature  | max. 95% RH up to 55°C, max. 55% RH up to 70°C, max. 35% RH up to 75°C |
| standard  | IEC / EN 60898-2, UL1077   |
| vibration resistance according to IEC 60068-2-6                                     | ±1mm at 5 to 25Hz; 50m/s <sup>2</sup> at 25 to 150Hz                   |
| ambient temperature during operation  |  |
| • minimum   | -40 °C   |
| • maximum   | 70 °C  |
| ambient temperature during storage  |  |
| • minimum   | -40 °C   |
| • maximum   | 75 °C  |
| number of test cycles for environmental testing according                           | 6  |

to IEC 60068-2-30

#### Environmental footprint

|  |           |
|--|-----------|
| Environmental Product Declaration(EPD)                 | Yes       |
| global warming potential [CO2 eq] total                | 13.3 kg   |
| global warming potential [CO2 eq] during manufacturing | 0.73 kg   |
| global warming potential [CO2 eq] during operation     | 12.7 kg   |
| global warming potential [CO2 eq] after end of life    | -0.069 kg |

#### Approvals Certificates

##### General Product Approval



[Confirmation](#)



##### General Product Approval

##### Test Certificates

##### Maritime application

##### other

##### [Miscellaneous](#)



##### [Special Test Certificate](#)



##### other

##### Railway

##### Dangerous goods

##### Environment

##### [Confirmation](#)

##### [Special Test Certificate](#)

##### [Confirmation](#)

##### [Transport Information](#)



#### Environment

##### [Environmental Confirmations](#)

##### [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=5SY5102-7>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY5102-7>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY5102-7](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY5102-7)

##### CAx-Online-Generator

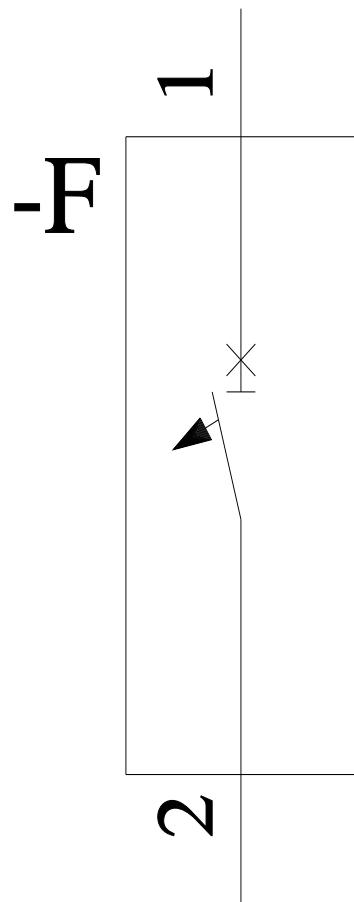
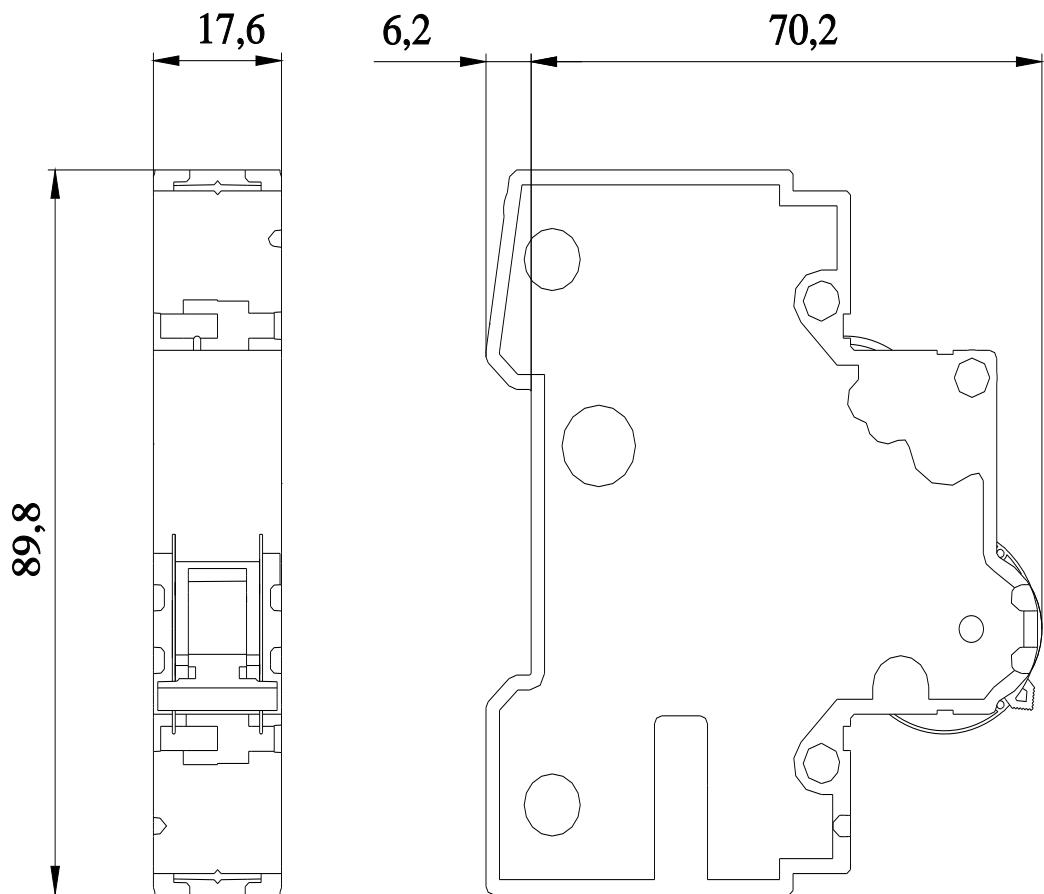
<https://www.siemens.com/cax>

##### Tender specifications

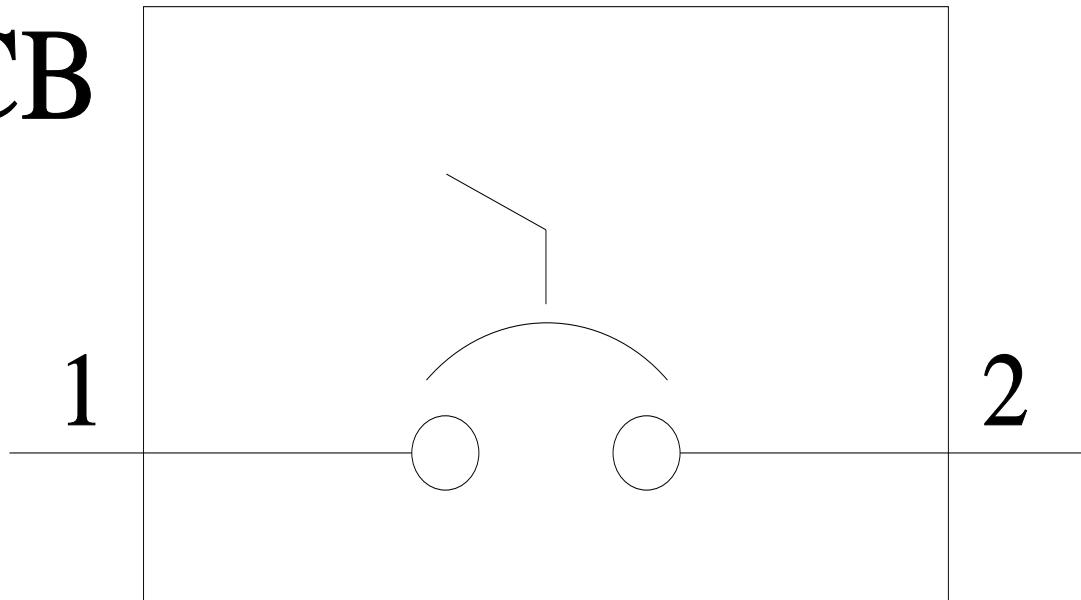
<https://www.siemens.com/specifications>

##### Characteristic curves

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



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