



Miniature circuit breaker 230 V 10kA, 1+N-pole, D, 20 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 (switching cycles) / typical  | 10 000                          |
| overvoltage category  | III                             |
| degree of pollution   | 3                               |
| Voltage   |                                 |
| type of voltage / of the operating voltage  | AC                              |
| insulation voltage (U <sub>i</sub> )  |                                 |
| • with single-phase operation / at AC / rated value   | 250 V                           |
| supply voltage / with single-phase operation / at AC / rated value                          | 230 V                           |
| Supply voltage  |                                 |
| supply voltage  |                                 |
| • at AC / rated value   | 230 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 |
| Switching 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  | 20 kA                           |
| Dissipation   |                                 |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole | 1.6 W                           |
| Current   |                                 |
| operational current   |                                 |
| • at 35 °C / rated value  | 20 A                            |
| • at 40 °C / rated value  | 18.78 A                         |
| • at 45 °C / rated value  | 18.14 A                         |
| • at 50 °C / rated value  | 17.48 A                         |
| • at 55 °C / rated value  | 16.8 A                          |
| • at 60 °C / rated value  | 16.08 A                         |

|  |  |
|--|--|
| • at AC / rated value  | 20 A   |
| suitability for operation  | Mechanical engineering / industry                    |
| <b>Product details</b>   |  |
| product component  |  |
| • combined terminal top  | Yes  |
| • combined terminal bottom   | Yes  |
| • neutral conductor switching  | Yes  |
| product feature  |  |
| • properties for main switches in accordance with EN 60204-1                     | Yes  |
| • halogen-free   | Yes  |
| • sealable   | Yes  |
| • silicon-free   | Yes  |
| product extension / installable / supplementary devices                          | Yes  |
| <b>Short circuit</b>   |  |
| breaking capacity short-circuit current (I <sub>cn</sub> )                       |  |
| • at AC / according to UL 1077 and CSA C22.2 No.235                              | 5 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  | Any  |
| <b>Mechanical Design</b>   |  |
| height   | 90 mm  |
| width  | 36 mm  |
| depth  | 76 mm  |
| installation depth   | 70 mm  |
| number of modular width units  | 2  |
| fastening method   | Quick assembly system                                |
| mounting position  | any  |
| net weight   | 317 g  |
| <b>Environmental conditions</b>  |  |
| influence of the surrounding temperature   | max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C |
| standard   | IEC / EN 60898-1, IEC / EN 60947-2 / 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 to IEC 60068-2-30  | 6  |

## Certificates

reference code

- according to EN 61346-2
- according to IEC 81346-2

F

F

### General Product Approval



[Confirmation](#)



[Miscellaneous](#)

General Product Approval

EMC

Declaration of Conformity

Test Certificates



[Special Test Certificate](#)

[Miscellaneous](#)

Marine / Shipping

other



[Miscellaneous](#)

other

Railway

[Environmental Conformations](#)

[Confirmation](#)

[Vibration and Shock](#)

## Further information

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=5SY4520-8>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY4520-8>

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

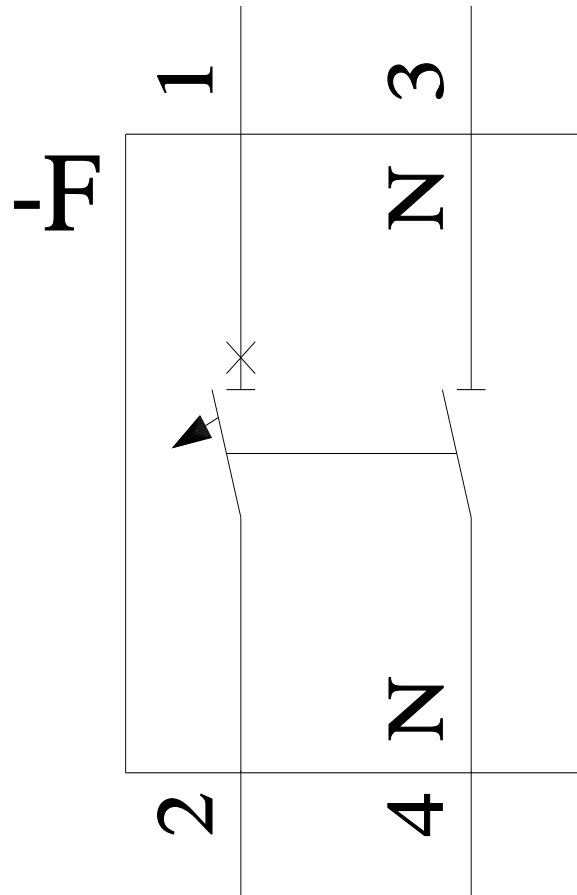
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY4520-8](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4520-8)

CAX-Online-Generator

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

Tender specifications

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



# CB

