



Miniature circuit breaker 400 V 10kA, 4-pole, A, 20A, D=70 mm

| Model                                                                               |                                 |
|-------------------------------------------------------------------------------------|---------------------------------|
| product brand name                                                                  | SENTRON                         |
| product designation                                                                 | Miniature circuit breaker       |
| General technical data                                                              |                                 |
| number of poles                                                                     | 4                               |
| design of pole                                                                      | 4P                              |
| tripping characteristic class                                                       | A                               |
| mechanical service life (operating cycles) typical                                  | 10 000                          |
| overvoltage category                                                                | III                             |
| degree of pollution                                                                 | 3                               |
| Voltage                                                                             |                                 |
| type of voltage of the operating voltage                                            | AC                              |
| insulation voltage (Ui)                                                             |                                 |
| • 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                                                              | 19.04 A                         |
| • at 50 °C rated value                                                              | 18.04 A                         |
| • at 55 °C rated value                                                              | 17.5 A                          |
| • at 60 °C rated value                                                              | 16.96 A                         |
| • at AC rated value                                                                 | 20 A                            |
| Supply voltage                                                                      |                                 |
| supply voltage                                                                      |                                 |
| • at AC                                                                             | 400 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                                              | 20 kA                           |
| Dissipation                                                                         |                                 |
| power loss [W] for rated value of the current at AC in hot operating state per pole | 2.5 W                           |
| suitability for operation                                                           | Infrastructure / Industry       |

|                                                                                     |                                                      |
|-------------------------------------------------------------------------------------|------------------------------------------------------|
| <b>Product details</b>                                                              |                                                      |
| <b>product feature touch protection</b>                                             | Yes                                                  |
| product component                                                                   |                                                      |
| • combined terminal top                                                             | Yes                                                  |
| • combined terminal bottom                                                          | Yes                                                  |
| • neutral conductor switching                                                       | No                                                   |
| <b>product feature</b>                                                              |                                                      |
| • 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>Product function</b>                                                             |                                                      |
| <b>set values setting current (Ii) for I-tripping</b>                               | 2,5                                                  |
| <b>reference value setting current (Ii) for I-tripping</b>                          | x In                                                 |
| <b>Short circuit</b>                                                                |                                                      |
| <b>short-circuit current breaking capacity (Icn)</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                                              |
| position of power supply cord                                                       | Any                                                  |
| <b>Mechanical Design</b>                                                            |                                                      |
| <b>height</b>                                                                       | 90 mm                                                |
| <b>width</b>                                                                        | 72 mm                                                |
| <b>depth</b>                                                                        | 76 mm                                                |
| <b>installation depth</b>                                                           | 70 mm                                                |
| <b>number of modular width units</b>                                                | 4                                                    |
| <b>fastening method</b>                                                             | DIN rail                                             |
| <b>mounting position</b>                                                            | any                                                  |
| <b>net weight</b>                                                                   | 641 g                                                |
| <b>Environmental conditions</b>                                                     |                                                      |
| <b>standard</b>                                                                     | 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 |
| <b>ambient temperature during operation</b>                                         |                                                      |
| • minimum                                                                           | -40 °C                                               |
| • maximum                                                                           | 70 °C                                                |
| <b>ambient temperature during storage</b>                                           |                                                      |
| • minimum                                                                           | -40 °C                                               |
| • maximum                                                                           | 75 °C                                                |
| <b>number of test cycles for environmental testing according to IEC 60068-2-30</b>  | 6                                                    |

## Approvals Certificates

### General Product Approval



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### General Product Approval

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## Further information

### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

### 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=5SY4420-5>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY4420-5>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY4420-5](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4420-5)

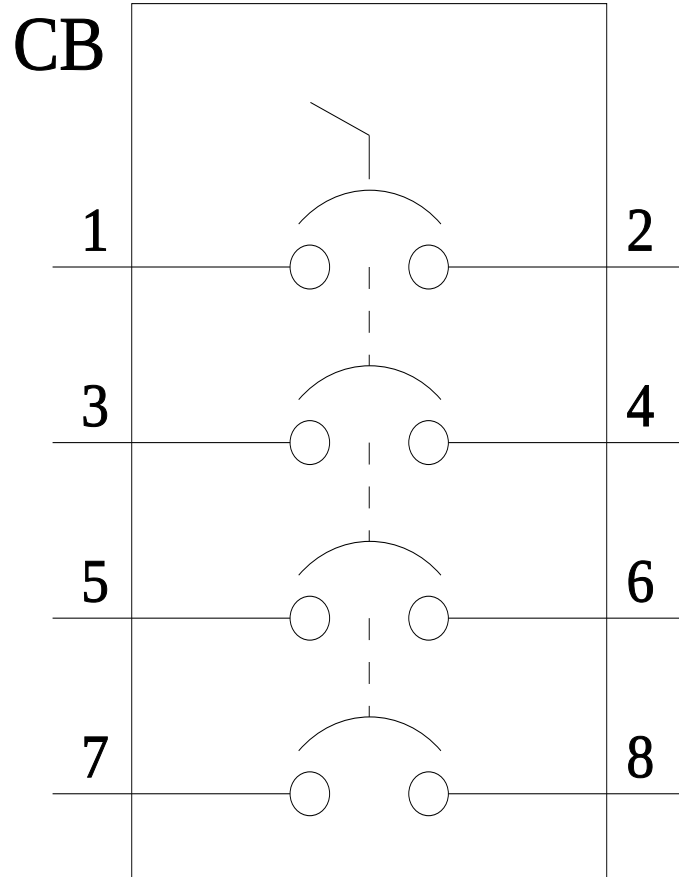
### CAX-Online-Generator

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

### Tender specifications

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





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