

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



| Model                                                              |                           |
|--------------------------------------------------------------------|---------------------------|
| Product brand name                                                 | SENTRON                   |
| Product designation                                                | Miniature circuit breaker |
| General technical data                                             |                           |
| Number of poles                                                    | 4                         |
| Number of poles / Note                                             | 4P                        |
| Tripping characteristic class                                      | B                         |
| circuit-breaker / Design                                           | 5SY4                      |
| Mechanical service life (switching cycles) / typical               | 10 000                    |
| Overvoltage category                                               | III                       |
| Degree of pollution                                                | 3                         |
| Voltage                                                            |                           |
| Insulation voltage                                                 |                           |
| • 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                     |

|                                                                                             |                                   |
|---------------------------------------------------------------------------------------------|-----------------------------------|
| Supply voltage                                                                              |                                   |
| Type of voltage                                                                             | AC                                |
| Operating current / at AC / rated value                                                     | 20 A                              |
| Supply voltage                                                                              |                                   |
| • at AC / rated value                                                                       | 400 V                             |
| Operating voltage                                                                           |                                   |
| • at DC / rated value / maximum                                                             | 72 V                              |
| Supply voltage frequency                                                                    |                                   |
| • rated value                                                                               | 50/60 Hz                          |
| Protection class                                                                            |                                   |
| Protection class IP                                                                         | IP20, with connected conductors   |
| Switching capacity                                                                          |                                   |
| Switching capacity current                                                                  |                                   |
| • at DC / acc. to IEC 60947-2 / rated value                                                 | 15 kA                             |
| • acc. to EN 60898 / rated value                                                            | 10 kA                             |
| • acc. to IEC 60947-2 / rated value                                                         | 20 kA                             |
| Energy limiting class                                                                       | 3                                 |
| Dissipation                                                                                 |                                   |
| Power loss [W] / for rated value of the current / at AC / in hot operating state / per pole | 2.2 W                             |
| Current                                                                                     |                                   |
| Tripping residual / rated value / derated current / at 40 Cel                               | 19.04 A                           |
| Suitability for operation                                                                   | Mechanical engineering / industry |
| Product details                                                                             |                                   |
| Product function / neutral conductor switching                                              | No                                |
| Product feature / Touch protection                                                          | Yes                               |
| Product component                                                                           |                                   |
| • combined terminal top                                                                     | Yes                               |
| • combined terminal bottom                                                                  | Yes                               |
| Product feature                                                                             |                                   |
| • Properties for main switches in accordance with EN 60204-1                                | Yes                               |
| • halogen-free                                                                              | Yes                               |
| • sealable                                                                                  | Yes                               |
| • silicon-free                                                                              | Yes                               |
| Product extension / can be installed / supplementary devices                                | Yes                               |
| Short circuit                                                                               |                                   |
| Breaking capacity short-circuit current (I <sub>cn</sub> )                                  |                                   |
| • at AC / acc. to UL 1077 and CSA C22.2 No.235                                              | 5 kA                              |

| Connections                                                                      |                                                      |
|----------------------------------------------------------------------------------|------------------------------------------------------|
| 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                                                  |
| Mechanical Design                                                                |                                                      |
| Height                                                                           | 90 mm                                                |
| Width                                                                            | 72 mm                                                |
| Depth                                                                            | 76 mm                                                |
| Installation depth                                                               | 70 mm                                                |
| Number of width units                                                            | 4                                                    |
| Mounting type                                                                    | Quick assembly system                                |
| Mounting position                                                                | any                                                  |
| Net weight                                                                       | 610 g                                                |
| Environmental conditions                                                         |                                                      |
| Influence of the surrounding temperature                                         | max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C |
| Ambient temperature                                                              |                                                      |
| • minimum                                                                        | -40 °C                                               |
| • maximum                                                                        | 70 °C                                                |
| Ambient temperature / during storage                                             |                                                      |
| • minimum                                                                        | -40 °C                                               |
| • maximum                                                                        | 75 °C                                                |
| Number of test cycles / for environmental testing / acc. to IEC 60068-2-30       | 6                                                    |

## Certificates

### Reference code

- acc. to DIN EN 61346-2
- acc. to DIN EN 81346-2

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## General Product Approval



[Miscellaneous](#)

### Declaration of Conformity



### Test Certificates

[Miscellaneous](#)

[Special Test Certificate](#)

### Shipping Approval



### Shipping Approval

### Railway

[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=5SY4420-6>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY4420-6>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY4420-6](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4420-6)

### CAX-Online-Generator

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

### Tender specifications

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





