

MINIATURE CIRCUIT-BR. 400V 10KA, 3-POLE, C, 20A FOR  
RAILWAY APPLICATIONS



| Model                                                |                                |
|------------------------------------------------------|--------------------------------|
| product brandname                                    | SENTRON                        |
| Product designation                                  | 5SY miniature circuit breaker  |
| Design of the product                                | 5SY miniature circuit breakers |
| General technical data                               |                                |
| Number of poles                                      | 3                              |
| Number of poles / Note                               | 3P                             |
| Tripping characteristic class                        | C                              |
| circuit-breaker / Design                             | 5SY4                           |
| Mechanical service life (switching cycles) / typical | 20 000                         |
| Overvoltage category                                 | 3                              |
| Voltage                                              |                                |
| Type of voltage                                      | AC/DC                          |
| Insulation voltage                                   | 440 V                          |
| • with multi-phase operation / at AC / rated value   |                                |
| Supply voltage                                       |                                |
| Supply voltage / at AC / rated value                 | 400 V                          |

|                                                                                   |                                 |
|-----------------------------------------------------------------------------------|---------------------------------|
| <b>Protection class</b>                                                           |                                 |
| <b>Protection class IP</b>                                                        | IP20, with connected conductors |
| <b>Energy limiting class</b>                                                      | 3                               |
| <b>Switching capacity</b>                                                         |                                 |
| <b>Switching capacity current</b>                                                 |                                 |
| • 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                           |
| <b>Dissipation</b>                                                                |                                 |
| <b>Power loss [W]</b>                                                             |                                 |
| • for rated value of the current / at AC / in hot operating state / per pole      | 1.7 W                           |
| • maximum                                                                         | 5.1 W                           |
| <b>Electricity</b>                                                                |                                 |
| Current / at AC / rated value                                                     | 20 A                            |
| <b>Product details</b>                                                            |                                 |
| Product feature / Touch protection                                                | Yes                             |
| <b>Product component</b>                                                          |                                 |
| • combined terminal top                                                           | Yes                             |
| • combined terminal bottom                                                        | Yes                             |
| <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 / can be installed / supplementary devices                      | Yes                             |
| <b>Product function</b>                                                           |                                 |
| Product function / neutral conductor switching                                    | No                              |
| <b>Short circuit</b>                                                              |                                 |
| <b>Breaking capacity short-circuit current (I<sub>cn</sub>)</b>                   |                                 |
| • at AC / acc. to UL 1077 and CSA C22.2 No.235                                    | 5 kA                            |
| • at DC / acc. to EN 60898-2                                                      | 10 kA                           |
| <b>Number</b>                                                                     |                                 |
| <b>Number of test cycles / for environmental testing / acc. to IEC 60068-2-30</b> | 6                               |
| <b>Connections</b>                                                                |                                 |
| <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</b>                       |                      |
| • solid                                                          |                      |
| — minimum                                                        | 0.75 mm <sup>2</sup> |
| — maximum                                                        | 35 mm <sup>2</sup>   |
| • finely stranded / with core end processing                     |                      |
| — minimum                                                        | 0.75 mm <sup>2</sup> |
| — maximum                                                        | 25 mm <sup>2</sup>   |
| <b>AWG number / as coded connectable conductor cross section</b> |                      |
| • minimum                                                        | 14                   |
| • maximum                                                        | 4                    |
| <b>Tightening torque [lbf·in] / with screw-type terminals</b>    |                      |
| • minimum                                                        | 22 lbf·in            |
| • maximum                                                        | 26 lbf·in            |
| <b>Tightening torque / with screw-type terminals</b>             |                      |
| • minimum                                                        | 2.5 N·m              |
| • maximum                                                        | 3 N·m                |
| Position / of power supply cord                                  | Any                  |

#### Mechanical Design

|                              |                       |
|------------------------------|-----------------------|
| <b>Height</b>                | 90 mm                 |
| <b>Width</b>                 | 54 mm                 |
| <b>Depth</b>                 | 76 mm                 |
| <b>Mounting position</b>     | any                   |
| <b>Installation depth</b>    | 70 mm                 |
| <b>Number of width units</b> | 3                     |
| <b>Mounting type</b>         | Quick assembly system |
| <b>Net weight</b>            | 465 g                 |

#### Environmental conditions

|                                                 |                                                                         |
|-------------------------------------------------|-------------------------------------------------------------------------|
| <b>Influence of the surrounding temperature</b> | Max. 95% humidity                                                       |
| Shock resistance / acc. to IEC 60068-2-27       | 150m/s <sup>2</sup> at 11ms half-sine                                   |
| Vibration resistance / acc. to IEC 60068-2-6    | 50m/s <sup>2</sup> at 25 to 150Hz and 60m/s <sup>2</sup> at 35Hz (4sec) |
| <b>Ambient temperature</b>                      |                                                                         |
| • minimum                                       | -40 °C                                                                  |
| • maximum                                       | 70 °C                                                                   |
| • during storage / minimum                      | -40 °C                                                                  |
| • during storage / maximum                      | 75 °C                                                                   |

#### Certificates

|                                            |   |
|--------------------------------------------|---|
| Equipment marking / acc. to DIN EN 61346-2 | F |
|--------------------------------------------|---|

| General Product Approval | Declaration of Conformity |
|--------------------------|---------------------------|
|--------------------------|---------------------------|



CCC



VDE



[sonstig](#)



RCM



EG-Konf.

| Test Certificates | other |
|-------------------|-------|
|-------------------|-------|

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#### Further information

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

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

##### Industry Mall (Online ordering system)

<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/5SY4320-7KK11>

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

<http://support.automation.siemens.com/WW/view/en/5SY4320-7KK11/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY4320-7KK11](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4320-7KK11)

##### CAX-Online-Generator

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

##### Tender specifications

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

