

MINIATURE CIRCUIT-BREAKER UNIV. CUR. DC 220V AC  
230/400V 10KA, 1-POLE, B, 63A 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                                      | 1                              |
| Number of poles / Note                               | 1P                             |
| Tripping characteristic class                        | B                              |
| circuit-breaker / Design                             | 5SY5                           |
| Mechanical service life (switching cycles) / typical | 10 000                         |
| Overvoltage category                                 | 3                              |
| Voltage                                              |                                |
| Type of voltage                                      | AC/DC                          |
| Insulation voltage                                   |                                |
| • at DC / rated value                                | 250 V                          |
| • with single-phase operation / at AC / rated value  | 250 V                          |
| • with multi-phase operation / at AC / rated value   | 440 V                          |

|                                                                              |                                 |
|------------------------------------------------------------------------------|---------------------------------|
| <b>Supply voltage</b>                                                        |                                 |
| 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                           |
| <b>Dissipation</b>                                                           |                                 |
| <b>Power loss [W]</b>                                                        |                                 |
| • for rated value of the current / at AC / in hot operating state / per pole | 6 W                             |
| • maximum                                                                    | 6 W                             |
| <b>Electricity</b>                                                           |                                 |
| Current / at AC / rated value                                                | 63 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 DC / acc. to EN 60898-2                                                 | 10 kA                           |
| <b>Number</b>                                                                |                                 |
| Number of test cycles / for environmental testing / acc. to IEC 60068-2-30   | 6                               |
| <b>Connections</b>                                                           |                                 |
| Connectable conductor cross-section / stranded                               |                                 |

|                                                                                                                                                                                                                                                                                 |                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>                                                                                                                                                                                                                     | 0.75 mm <sup>2</sup>                                                                         |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>                                                                                                                                                                                                                     | 35 mm <sup>2</sup>                                                                           |
| <b>Connectable conductor cross-section</b>                                                                                                                                                                                                                                      |                                                                                              |
| <ul style="list-style-type: none"> <li>• solid <ul style="list-style-type: none"> <li>— minimum</li> <li>— maximum</li> </ul> </li> <li>• finely stranded / with core end processing <ul style="list-style-type: none"> <li>— minimum</li> <li>— maximum</li> </ul> </li> </ul> | 0.75 mm <sup>2</sup><br>35 mm <sup>2</sup><br><br>0.75 mm <sup>2</sup><br>25 mm <sup>2</sup> |
| <b>AWG number / as coded connectable conductor cross section</b>                                                                                                                                                                                                                |                                                                                              |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                                                                                                                                                                  | 14<br>4                                                                                      |
| <b>Tightening torque [lbf·in] / with screw-type terminals</b>                                                                                                                                                                                                                   |                                                                                              |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                                                                                                                                                                  | 22 lbf·in<br>26 lbf·in                                                                       |
| <b>Tightening torque / with screw-type terminals</b>                                                                                                                                                                                                                            |                                                                                              |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                                                                                                                                                                  | 2.5 N·m<br>3 N·m                                                                             |

## Mechanical Design

|                              |                       |
|------------------------------|-----------------------|
| <b>Height</b>                | 90 mm                 |
| <b>Width</b>                 | 18 mm                 |
| <b>Depth</b>                 | 76 mm                 |
| <b>Mounting position</b>     | any                   |
| <b>Installation depth</b>    | 70 mm                 |
| <b>Number of width units</b> | 1                     |
| <b>Mounting type</b>         | Quick assembly system |
| <b>Net weight</b>            | 165 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>                                                                                                                             |                                                                         |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> <li>• during storage / minimum</li> <li>• during storage / maximum</li> </ul> | -40 °C<br>70 °C<br>-40 °C<br>75 °C                                      |

## Certificates

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

| General Product Approval                                                                 |                                                                                          | Declaration of<br>Conformity                                                             | Test<br>Certificates                                                                            |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <br>CCC | <br>VDE | <br>EAC | <br>EG-Konf. |

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|-------------------------|
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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/5SY5163-6KK11>

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

<http://support.automation.siemens.com/WW/view/en/5SY5163-6KK11/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY5163-6KK11](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY5163-6KK11)

**CAX-Online-Generator**

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

**Tender specifications**

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



