

Circuit breaker Universal current 440 V DC 400 V AC 10kA, 2-pole, B, 10 A



| Model                                                |                           |
|------------------------------------------------------|---------------------------|
| Product brand name                                   | SENTRON                   |
| Product designation                                  | Miniature circuit breaker |
| General technical data                               |                           |
| Number of poles                                      | 2                         |
| Number of poles / Note                               | 2P                        |
| Tripping characteristic class                        | B                         |
| circuit-breaker / Design                             | 5SY5                      |
| Mechanical service life (switching cycles) / typical | 10 000                    |
| Overvoltage category                                 | III                       |
| Degree of pollution                                  | 3                         |
| Voltage                                              |                           |
| Insulation voltage                                   |                           |
| • at DC / rated value                                | 250 V                     |
| • with single-phase operation / at AC / rated value  | 440 V                     |
| • with multi-phase operation / at AC / rated value   | 440 V                     |
| Supply voltage                                       |                           |

|                                                                                                                       |                |
|-----------------------------------------------------------------------------------------------------------------------|----------------|
| Type of voltage                                                                                                       | AC/DC          |
| Operating current / at AC / rated value                                                                               | 10 A           |
| Supply voltage <ul style="list-style-type: none"> <li>• at AC / rated value</li> <li>• at DC / rated value</li> </ul> | 400 V<br>440 V |
| Operating voltage <ul style="list-style-type: none"> <li>• at DC / rated value / maximum</li> </ul>                   | 500 V          |
| Supply voltage frequency <ul style="list-style-type: none"> <li>• rated value</li> </ul>                              | 50/60 Hz       |

#### Protection class

|                     |                                 |
|---------------------|---------------------------------|
| Protection class IP | IP20, with connected conductors |
|---------------------|---------------------------------|

#### Switching capacity

|                                                                                                                                                                    |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Switching capacity current <ul style="list-style-type: none"> <li>• at DC / acc. to IEC 60947-2 / rated value</li> <li>• acc. to EN 60898 / rated value</li> </ul> | 15 kA<br>10 kA |
| Energy limiting class                                                                                                                                              | 3              |

#### Dissipation

|                                                                                             |       |
|---------------------------------------------------------------------------------------------|-------|
| Power loss [W] / for rated value of the current / at AC / in hot operating state / per pole | 1.3 W |
|---------------------------------------------------------------------------------------------|-------|

#### Current

|                                                               |                   |
|---------------------------------------------------------------|-------------------|
| Tripping residual / rated value / derated current / at 40 Cel | 9.39 A            |
| Suitability for operation                                     | universal current |

#### Product details

|                                                                                                                                                                                                    |                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Product function / neutral conductor switching                                                                                                                                                     | No                       |
| Product feature / Touch protection                                                                                                                                                                 | Yes                      |
| Product component <ul style="list-style-type: none"> <li>• combined terminal top</li> <li>• combined terminal bottom</li> </ul>                                                                    | Yes<br>Yes               |
| Product feature <ul style="list-style-type: none"> <li>• Properties for main switches in accordance with EN 60204-1</li> <li>• halogen-free</li> <li>• sealable</li> <li>• silicon-free</li> </ul> | Yes<br>Yes<br>Yes<br>Yes |
| Product extension / can be installed / supplementary devices                                                                                                                                       | Yes                      |

#### Short circuit

|                                                                                                                                           |       |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Breaking capacity short-circuit current (I <sub>cn</sub> ) <ul style="list-style-type: none"> <li>• at DC / acc. to EN 60898-2</li> </ul> | 10 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                                                  | AC as required, observe DC polarity |

## Mechanical Design

|                       |                       |
|-----------------------|-----------------------|
| Height                | 90 mm                 |
| Width                 | 36 mm                 |
| Depth                 | 76 mm                 |
| Installation depth    | 70 mm                 |
| Number of width units | 2                     |
| Mounting type         | Quick assembly system |
| Mounting position     | any                   |
| Net weight            | 322 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 | F |
| • acc. to DIN EN 81346-2 | F |

| General Product Approval                                                                 | Declaration of Conformity                                                               | Test Certificates                                                                               |
|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <br>CCC | <br>UR | <br>VDE        |
|                                                                                          | <a href="#">Miscellaneous</a>                                                           | <br>EG-Konf. |
|                                                                                          |                                                                                         | <a href="#">Miscellaneous</a>                                                                   |

| Test Certificates                        | Railway                             |
|------------------------------------------|-------------------------------------|
| <a href="#">Special Test Certificate</a> | <a href="#">Confirmation</a>        |
|                                          | <a href="#">Vibration and Shock</a> |

#### 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=5SY5210-6>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY5210-6>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY5210-6](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY5210-6)

##### CAX-Online-Generator

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

##### Tender specifications

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

