



MCB 5SY5 CRH 440V DC 10KA 2P C50

| Model   |                                      |
|---|--------------------------------------|
| product brand name  | SENTRON                              |
| product designation   | Miniature circuit breaker            |
| design of the product   | For railway applications             |
| General technical data  |                                      |
| number of poles   | 2                                    |
| design of pole  | 2P                                   |
| tripping characteristic class   | C                                    |
| mechanical service life (operating cycles) typical                                  | 10 000                               |
| overvoltage category  | 3                                    |
| degree of pollution   | 3                                    |
| Voltage   |                                      |
| type of voltage of the operating voltage  | DC                                   |
| insulation voltage (Ui)   |                                      |
| • at DC rated value   | 440 V                                |
| • operational current   |                                      |
| — at 40 °C rated value  | 47.2 A                               |
| — at 50 °C rated value  | 44.25 A                              |
| — at 55 °C rated value  | 42.65 A                              |
| — at 60 °C rated value  | 41.05 A                              |
| • operational current at AC rated value   | 50 A                                 |
| Supply voltage  |                                      |
| supply voltage  |                                      |
| • at DC rated value   | 440 V                                |
| operating voltage at DC rated value maximum   | 500 V                                |
| Protection class  |                                      |
| protection class IP   | IP20, with connected conductors      |
| Breaking Capacity   |                                      |
| switching capacity current  |                                      |
| • at DC according to IEC 60947-2 rated value  | 10 kA                                |
| Dissipation   |                                      |
| power loss [W] for rated value of the current at AC in hot operating state per pole | 3.8 W                                |
| suitability for operation   | Infrastructure / Industry / Mobility |
| Product details   |                                      |
| product feature touch protection  | Yes                                  |
| product component   |                                      |
| • combined terminal top   | Yes                                  |

|   |     |
|---|-----|
| • combined terminal bottom  | Yes |
| • neutral conductor switching   | No  |
| <b>product feature properties for main switches in accordance with EN 60204-1</b> | Yes |
| <b>product feature halogen-free</b>   | Yes |
| <b>product feature sealable</b>   | Yes |
| <b>product feature silicon-free</b>   | Yes |
| <b>product extension installable supplementary devices</b>                        | Yes |

### Connections

|   |                      |
|---|----------------------|
| <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>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              |
| <b>position of power supply cord</b>  | Consider polarity    |

### Mechanical Design

|                                      |          |
|--------------------------------------|----------|
| <b>height</b>                        | 90 mm    |
| <b>width</b>                         | 36 mm    |
| <b>depth</b>                         | 76 mm    |
| <b>installation depth</b>            | 70 mm    |
| <b>number of modular width units</b> | 2        |
| <b>fastening method</b>              | DIN rail |
| <b>mounting position</b>             | any      |
| <b>Net Weight</b>                    | 0.28 kg  |

### Environmental conditions

|  |  |
|--|--|
| <b>influence of the surrounding temperature</b>                                    | max. 95% RH up to 55°C, max. 55% RH up to 70°C, max. 35% RH up to 75°C                           |
| <b>vibration resistance according to IEC 60068-2-6</b>                             | ±1mm at 5 to 25 Hz; 50 m/s <sup>2</sup> at 25 to 150 Hz and 60 m/s <sup>2</sup> at 35 Hz (4 sec) |
| <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> | 28   |

### Approvals Certificates

|                    |                          |
|--------------------|--------------------------|
| <b>Environment</b> | General Product Approval |
|--------------------|--------------------------|

[Environmental Confirmations](#)

[Environmental Confirmations](#)



[Miscellaneous](#)



|                          |                      |       |
|--------------------------|----------------------|-------|
| General Product Approval | Maritime application | other |
|--------------------------|----------------------|-------|

[Confirmation](#)



[CCS \(China Classification Society\)](#)



[Confirmation](#)

[Confirmation](#)[Transport Information](#)**Further information****Information on the packaging**<https://support.industry.siemens.com/cs/ww/en/view/109813875>**Information for data generation and storage**<https://support.industry.siemens.com/cs/ww/en/view/109995012>**Information- and Downloadcenter (Catalogs, Brochures,...)**<https://www.siemens.com/lowvoltage/catalogs>**Industry Mall (Online ordering system)**<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=5SY5250-7CC12>**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**<https://support.industry.siemens.com/cs/ww/en/ps/5SY5250-7CC12>**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY5250-7CC12](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY5250-7CC12)**CAX-Online-Generator**<https://www.siemens.com/cax>**Tender specifications**<https://www.siemens.com/specifications>**Characteristic curves**[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)



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