



Circuit breaker Universal current 440 V DC 400 V AC 10kA, 2-pole, C, 20A

| Model                                                                               |                                      |
|-------------------------------------------------------------------------------------|--------------------------------------|
| product brand name                                                                  | SENTRON                              |
| product designation                                                                 | Miniature circuit breaker            |
| 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                                                                | III                                  |
| degree of pollution                                                                 | 3                                    |
| Voltage                                                                             |                                      |
| type of voltage of the operating voltage                                            | AC/DC                                |
| insulation voltage (Ui)                                                             |                                      |
| • 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                                |
| operational current                                                                 |                                      |
| • at 40 °C rated value                                                              | 18.78 A                              |
| • at 50 °C rated value                                                              | 17.48 A                              |
| • at 55 °C rated value                                                              | 16.8 A                               |
| • at 60 °C rated value                                                              | 16.08 A                              |
| • at AC rated value                                                                 | 20 A                                 |
| Supply voltage                                                                      |                                      |
| supply voltage                                                                      |                                      |
| • at AC                                                                             | 400 V                                |
| • at DC rated value                                                                 | 440 V                                |
| value range of the supply voltage frequency                                         | 50/60 Hz                             |
| 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                                        | 15 kA                                |
| • according to EN 60898 rated value                                                 | 10 kA                                |
| energy limitation class                                                             | 3                                    |
| Dissipation                                                                         |                                      |
| power loss [W] for rated value of the current at AC in hot operating state per pole | 1.7 W                                |
| suitability for operation                                                           | Infrastructure / Industry / Mobility |
| Product details                                                                     |                                      |

|                                                                                     |                                                      |
|-------------------------------------------------------------------------------------|------------------------------------------------------|
| <b>product feature touch protection</b>                                             | Yes                                                  |
| product component                                                                   |                                                      |
| • combined terminal top                                                             | Yes                                                  |
| • combined terminal bottom                                                          | Yes                                                  |
| • neutral conductor switching                                                       | No                                                   |
| <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 installable supplementary devices                                 | Yes                                                  |
| <b>Short circuit</b>                                                                |                                                      |
| <b>short-circuit current breaking capacity (I<sub>cn</sub>)</b>                     |                                                      |
| • at DC according to EN 60898-2                                                     | 10 kA                                                |
| <b>Connections</b>                                                                  |                                                      |
| <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>AWG number as coded connectable conductor cross section</b>                      |                                                      |
| • minimum                                                                           | 18                                                   |
| • maximum                                                                           | 4                                                    |
| <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                                              |
| position of power supply cord                                                       | AC as required, observe DC polarity                  |
| <b>Mechanical Design</b>                                                            |                                                      |
| <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>                                                             | Quick assembly system                                |
| <b>mounting position</b>                                                            | any                                                  |
| <b>net weight</b>                                                                   | 322 g                                                |
| <b>Environmental conditions</b>                                                     |                                                      |
| <b>standard</b>                                                                     | IEC / EN 60898-2, UL1077                             |
| vibration resistance according to IEC 60068-2-6                                     | ±1mm at 5 to 25Hz; 50m/s <sup>2</sup> at 25 to 150Hz |
| <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>  | 6                                                    |
| <b>Approvals Certificates</b>                                                       |                                                      |
| <b>General Product Approval</b>                                                     |                                                      |



[Confirmation](#)



| General Product Approval | Test Certificates | Marine / Shipping | other |
|--------------------------|-------------------|-------------------|-------|
|--------------------------|-------------------|-------------------|-------|

[Miscellaneous](#)



[Miscellaneous](#)

[Special Test Certificate](#)



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| other | Railway | Dangerous goods | Environment |
|-------|---------|-----------------|-------------|
|-------|---------|-----------------|-------------|

[Miscellaneous](#)

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[Environmental Confirmations](#)

#### Environment

[Environmental Confirmations](#)

#### Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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=5SY5220-7>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY5220-7>

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

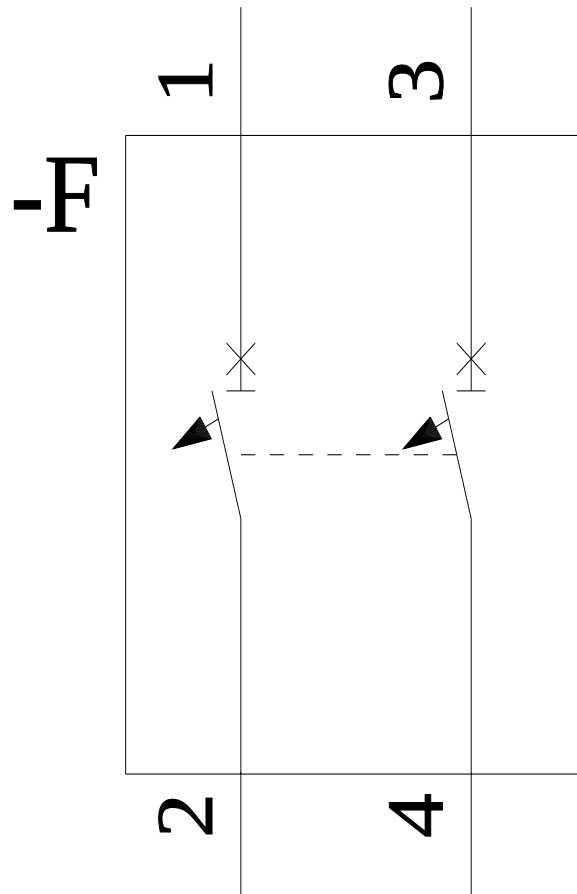
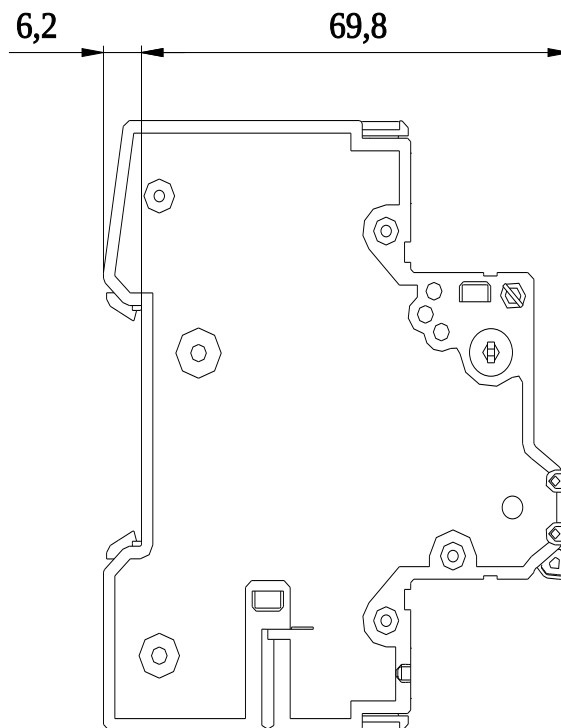
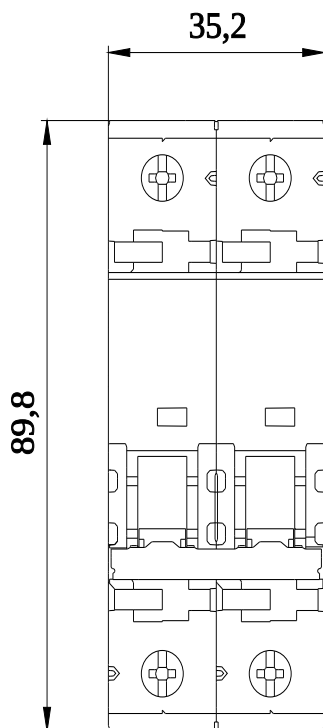
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY5220-7](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY5220-7)

CAX-Online-Generator

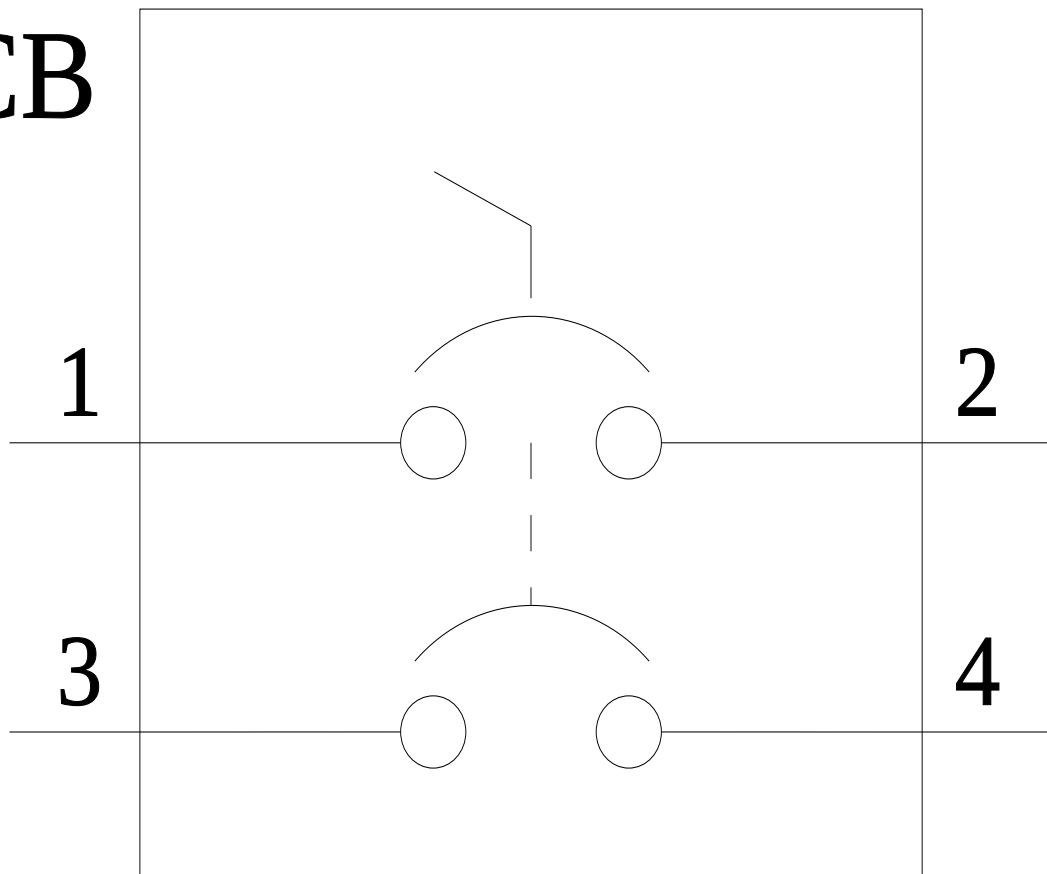
<http://www.siemens.com/cax>

Tender specifications

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# CB



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