SIEMENS

## Data sheet 5SY4220-7



Miniature circuit breaker 400 V 10kA, 2-pole, C, 20 A, D=70 mm

| | |
|---|---|
| **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** | 3 |
| **degree of pollution** | 3 |
| **Voltage** | |
| **type of voltage of the operating voltage** | AC |
| **insulation voltage (Ui)** | |
| **• with single-phase operation at AC rated value** | 440 V |
| **• with multi-phase operation at AC rated value** | 440 V |
| **supply voltage with single-phase operation at AC rated value** | 230 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 |
| **• operational current at AC rated value** | 20 A |
| **Supply voltage** | |
| **supply voltage** | |
| • at AC | 400 V |
| • at DC rated value | 60 V |
| **value range of the supply voltage frequency** | 50/60 Hz |
| operating voltage at DC rated value maximum | 72 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 |
| • according to IEC 60947-2 rated value | 20 kA |
| **energy limitation class** | 3 |
| **Dissipation** | |


Subject to change without notice
© Copyright Siemens

| | |
|---|---|
| **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 |
| **Product details** | |
| **product feature touch protection** | Yes |
| **product component** | |
| ● combined terminal top | Yes |
| ● combined terminal bottom | Yes |
| ● neutral conductor switching | No |
| **product feature properties for main switches in accordance with EN 60204-1** | Yes |
| **product feature halogen-free** | Yes |
| **product feature sealable** | Yes |
| **product feature silicon-free** | Yes |
| **product extension installable supplementary devices** | Yes |
| **Product function** | |
| **set values setting current (Ii) for I-tripping** | 7,5 |
| **reference value setting current (Ii) for I-tripping** | x In |
| **Short circuit** | |
| **short-circuit current breaking capacity (Icn)** | |
| **● at AC according to UL 1077 and CSA C22.2 No.235** | 5 kA |
| **Connections** | |
| **connectable conductor cross-section solid** | |
| ● minimum | 0.75 mm² |
| ● maximum | 35 mm² |
| **connectable conductor cross-section stranded** | |
| ● minimum | 0.75 mm² |
| ● maximum | 35 mm² |
| **connectable conductor cross-section finely stranded with core end processing** | |
| ● minimum | 0.75 mm² |
| ● maximum | 25 mm² |
| **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** | Any |
| **Mechanical Design** | |
| **height** | 90 mm |
| **width** | 36 mm |
| **depth** | 76 mm |
| **installation depth** | 70 mm |
| **number of modular width units** | 2 |
| **fastening method** | DIN rail |
| **mounting position** | any |
| **Net Weight** | 309 g |
| **Environmental conditions** | |
| **influence of the surrounding temperature** | max. 95% RH up to 55°C, max. 55% RH up to 70°C, max. 35% RH up to 75°C |
| **standard** | IEC / EN 60898-1, IEC / EN 60947-2 / UL1077 |
| **vibration resistance according to IEC 60068-2-6** | ±1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz |
| **ambient temperature during operation** | |
| ● minimum | -40 °C |
| ● maximum | 70 °C |
| **ambient temperature during storage** | |


Subject to change without notice
© Copyright Siemens

| | |
|---|---|
| • minimum | -40 °C |
| • maximum | 75 °C |
| **number of test cycles for environmental testing according to IEC 60068-2-30** | 6 |

## Approvals Certificates

| Environment | | | | General Product Approval | |
|---|---|---|---|---|---|
| Environmental Con-firmations | | Environmental Con-firmations | | | |

| General Product Approval | | | | | |
|---|---|---|---|---|---|
| | | Miscellaneous | | | |

| General Product Approval | | EMV | Test Certificates | |
|---|---|---|---|---|
| Confirmation | | | Special Test Certific-ate | Miscellaneous |

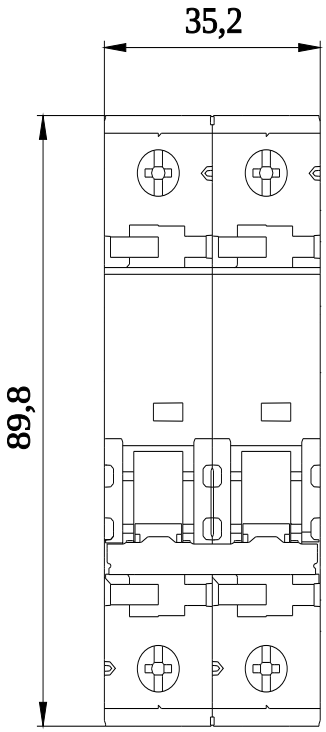
| Maritime application | | | | | other |
|---|---|---|---|---|---|
| | | | | | Confirmation |

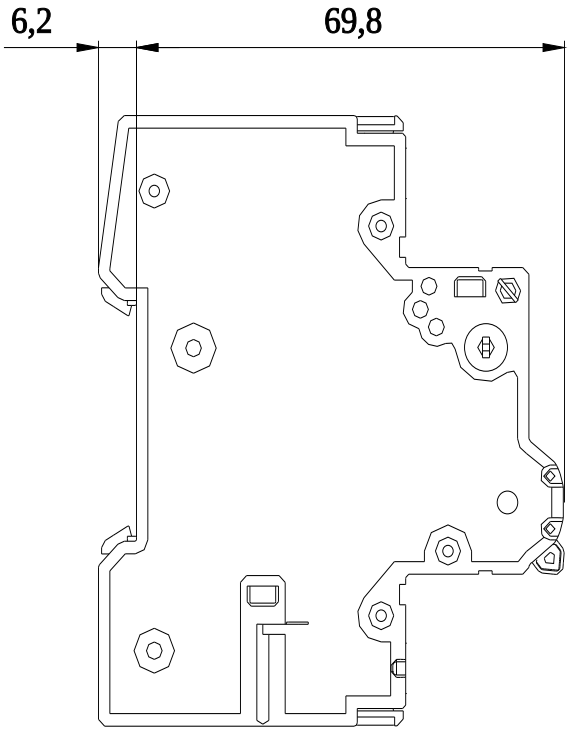
| other | Railway | |
|---|---|---|
| | Special Test Certific-ate | Confirmation |

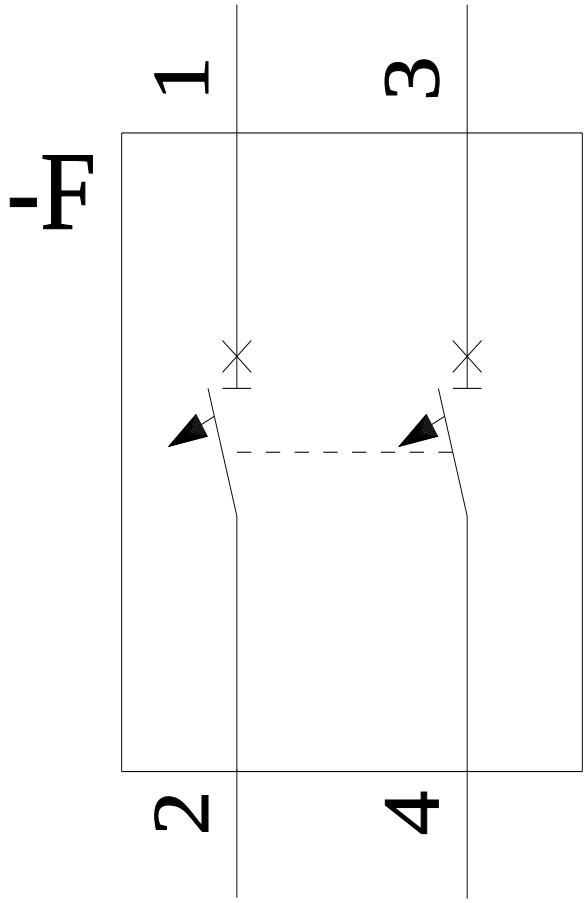
## Further information

**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=5SY4220-7
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/5SY4220-7
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4220-7
**CAx-Online-Generator**
https://www.siemens.com/cax
**Tender specifications**
https://www.siemens.com/specifications
**Kennlinien**
https://curves.simaris.siemens.com/curves/5SY4220-7


Subject to change without notice
© Copyright Siemens

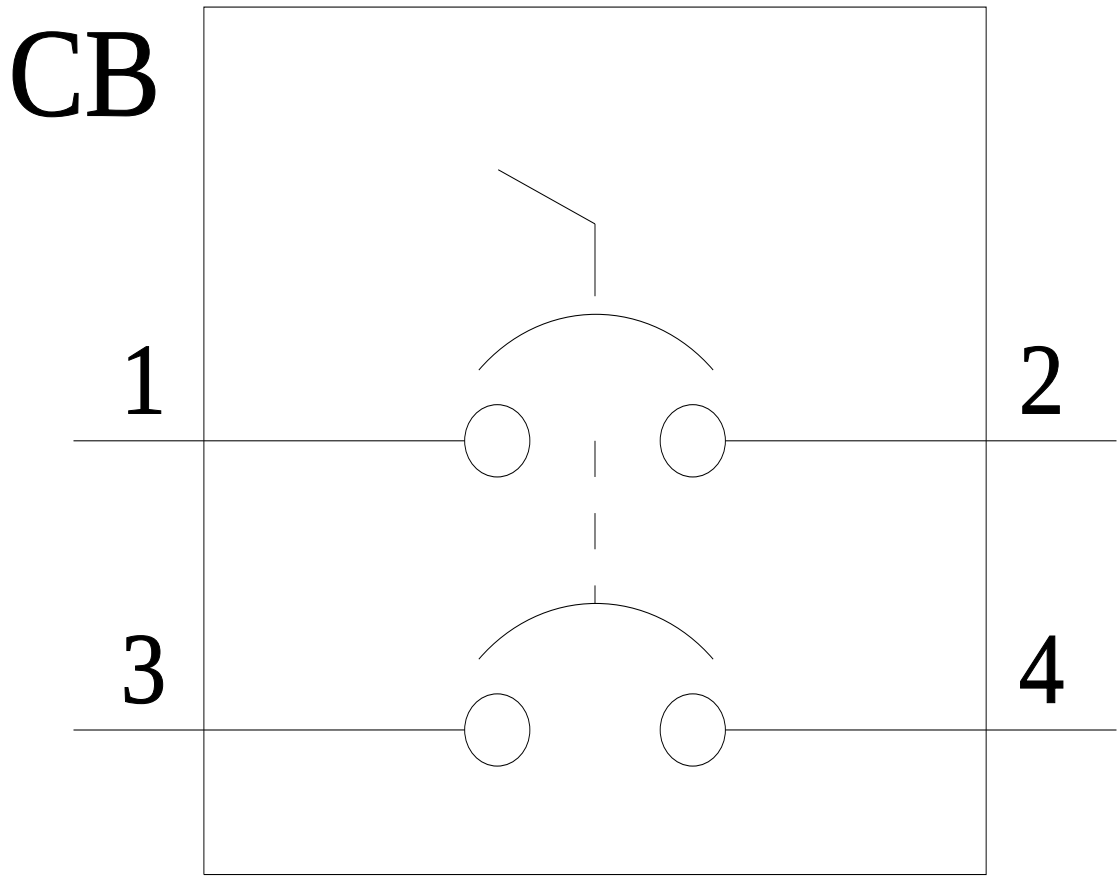




Subject to change without notice
© Copyright Siemens




**last modified:** 8/6/2025


Subject to change without notice
© Copyright Siemens

Subject to change without notice
© Copyright Siemens