SIEMENS

## Data sheet 5SY4220-8



Miniature circuit breaker 400 V 10kA, 2-pole, D, 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 | D |
| mechanical service life (switching cycles) / typical | 10 000 |
| overvoltage category | III |
| 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 |
| **Supply voltage** | |
| supply voltage | |
| ● at AC / rated value | 400 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 |
| **Switching 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 |
| **Dissipation** | |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole | 1.6 W |
| **Current** | |
| operational current | |
| ● at 35 °C / rated value | 20 A |
| ● at 40 °C / rated value | 18.78 A |
| ● at 45 °C / rated value | 18.14 A |
| ● at 50 °C / rated value | 17.48 A |
| ● at 55 °C / rated value | 16.8 A |


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| | |
|---|---|
| ● at 60 °C / rated value | 16.08 A |
| ● at AC / rated value | 20 A |
| suitability for operation | Mechanical engineering / industry |
| **Product details** | |
| 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 |
| ● halogen-free | Yes |
| ● sealable | Yes |
| ● silicon-free | Yes |
| product extension / installable / supplementary devices | Yes |
| **Short circuit** | |
| breaking capacity short-circuit current (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 | Quick assembly system |
| mounting position | any |
| net weight | 321 g |
| **Environmental conditions** | |
| influence of the surrounding temperature | max. 95% to 55°C, max. 55% to 70°C, max. 35% 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 | |
| ● minimum | -40 °C |
| ● maximum | 75 °C |


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|---|---|
| number of test cycles / for environmental testing / according to IEC 60068-2-30 | 6 |

## Certificates

| | |
|---|---|
| reference code | |
| ● according to EN 61346-2 | F |
| ● according to IEC 81346-2 | F |

### General Product Approval

Confirmation | Miscellaneous

### General Product Approval | EMC | Declaration of Conformity | Test Certificates

Miscellaneous | Special Test Certificate

### Test Certificates | Marine / Shipping

Miscellaneous

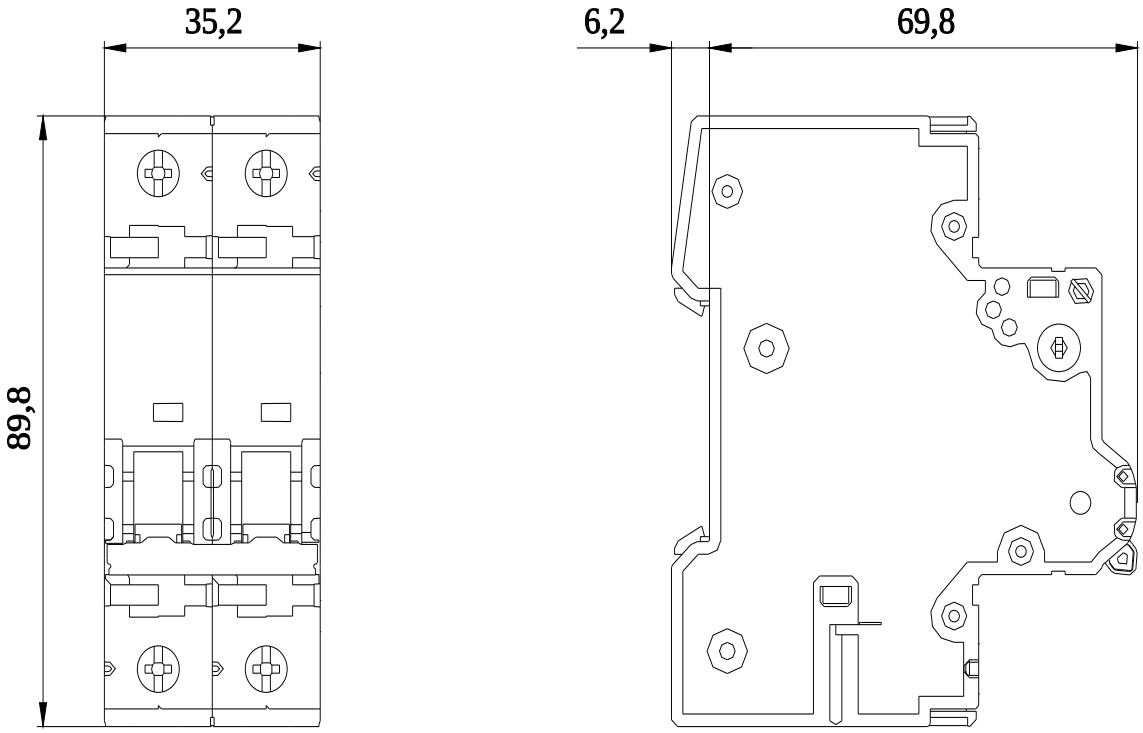
### other | Railway

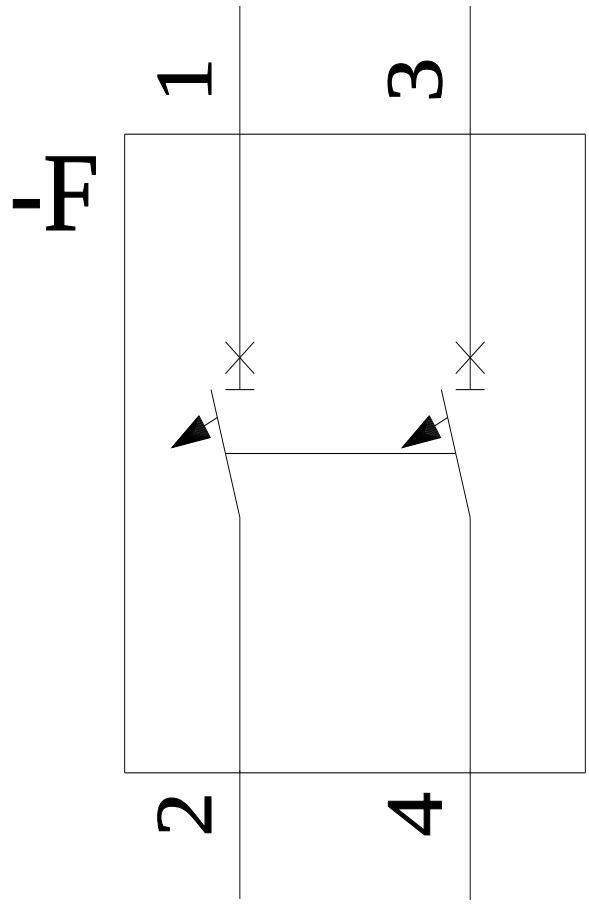
Miscellaneous | Environmental Confirmations | Confirmation | Vibration and Shock

## 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=5SY4220-8
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/5SY4220-8
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4220-8
**CAx-Online-Generator**
http://www.siemens.com/cax
**Tender specifications**
http://www.siemens.com/specifications

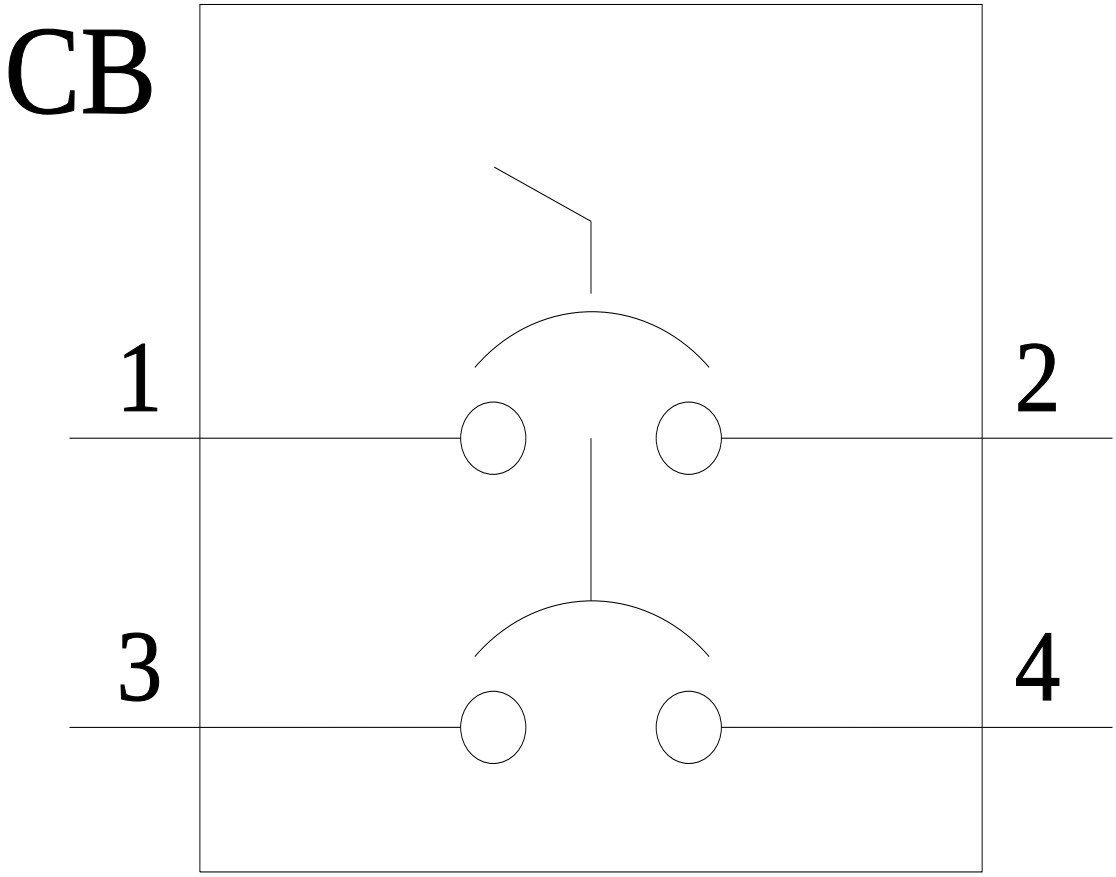

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