

Circuit breaker Universal current 220 V DC 230/400 V AC 10kA, 1-pole, C, 20A



| Model | |
|---|---------------------------|
| product brand name | SENTRON |
| Product designation | Miniature circuit breaker |
| General technical data | |
| number of poles | 1 |
| Number of poles / Note | 1P |
| Tripping characteristic class | C |
| circuit-breaker / Design | 5SY5 |
| Mechanical service life (switching cycles) / typical | 10 000 |
| overvoltage category | III |
| Degree of pollution | 3 |
| Voltage | |
| Insulation voltage | |
| <ul style="list-style-type: none"> • at DC / rated value | 250 V |
| <ul style="list-style-type: none"> • with single-phase operation / at AC / rated value | 440 V |
| <ul style="list-style-type: none"> • with multi-phase operation / at AC / rated value | 440 V |

| | |
|--|-------|
| Supply voltage / with single-phase operation / at AC / rated value | 230 V |
|--|-------|

Supply voltage

| | |
|--|----------------|
| type of voltage | AC/DC |
| Operating current / at AC / rated value | 20 A |
| Supply voltage | |
| <ul style="list-style-type: none"> at AC / rated value at DC / rated value | 400 V 220 V |
| Operating voltage | |
| <ul style="list-style-type: none"> at DC / rated value / maximum | 250 V |
| Supply voltage frequency | |
| <ul style="list-style-type: none"> rated value | 50/60 Hz |

Protection class

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

Switching capacity

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

Dissipation

| | |
|---|-------|
| Power loss [W] / for rated value of the current / at AC / in hot operating state / per pole | 1.7 W |
|---|-------|

Current

| | |
|---|-------------------|
| Tripping residual / rated value / derated current / at 40 Cel | 18.78 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"> combined terminal top combined terminal bottom | Yes Yes |
| <ul style="list-style-type: none"> Product feature / Properties for main switches in accordance with EN 60204-1 product feature / halogen-free Product feature / sealable product feature / silicon-free | Yes Yes Yes Yes |
| Product extension / can be installed / supplementary devices | Yes |

Short circuit

| | |
|--|--|
| Breaking capacity short-circuit current (I _{cn}) | |
| <ul style="list-style-type: none"> • at DC / acc. to EN 60898-2 | 10 kA |
| Connections | |
| connectable conductor cross-section / solid | |
| <ul style="list-style-type: none"> • minimum • maximum | 0.75 mm ² 35 mm ² |
| Connectable conductor cross-section / stranded | |
| <ul style="list-style-type: none"> • minimum • maximum | 0.75 mm ² 35 mm ² |
| connectable conductor cross-section / finely stranded / with core end processing | |
| <ul style="list-style-type: none"> • minimum • maximum | 0.75 mm ² 25 mm ² |
| AWG number / as coded connectable conductor cross section | |
| <ul style="list-style-type: none"> • minimum • maximum | 18 4 |
| Tightening torque [lbf·in] / with screw-type terminals | |
| <ul style="list-style-type: none"> • minimum • maximum | 22 lbf·in 31 lbf·in |
| Tightening torque / with screw-type terminals | |
| <ul style="list-style-type: none"> • minimum • maximum | 2.5 N·m 3.5 N·m |
| Position / of power supply cord | AC as required, observe DC polarity |
| Mechanical Design | |
| Height | 90 mm |
| Width | 18 mm |
| Depth | 76 mm |
| installation depth | 70 mm |
| number of width units | 1 |
| Mounting type | Quick assembly system |
| mounting position | any |
| net weight | 167 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 | |
| <ul style="list-style-type: none"> • minimum • maximum | -40 °C 70 °C |
| Ambient temperature / during storage | |
| <ul style="list-style-type: none"> • minimum • maximum | -40 °C 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 |
| • Reference code / acc. to DIN EN 81346-2 | F |

| General Product Approval | Declaration of Conformity | Test Certificates |
|--------------------------|---------------------------|-------------------|
|--------------------------|---------------------------|-------------------|



CCC



UR



VDE

[Miscellaneous](#)



EG-Konf.

[Miscellaneous](#)

| Test Certificates | Railway |
|-------------------|---------|
|-------------------|---------|

[Special Test Certificate](#)

[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=5SY5120-7>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY5120-7>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY5120-7

CAX-Online-Generator

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

Tender specifications

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



