

Circuit breaker Universal current 880 V DC 400 V AC 10kA, 4-pole, B, 50 A max. 1000 V DC



Model

Product brand name	SENTRON
Product designation	Miniature circuit breaker

General technical data

Number of poles	4
Number of poles / Note	4P
Tripping characteristic class	B
circuit-breaker / Design	5SY5
Mechanical service life (switching cycles) / typical	5 000
Overvoltage category	II

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

Type of voltage	AC/DC
-----------------	-------

Current / at AC / rated value	50 A
Supply voltage	
• at AC / rated value	400 V
• at DC / rated value	880 V
Operating voltage	
• at DC / rated value / maximum	1 000 V
Supply voltage frequency	
• rated value	50/60 Hz

Protection class

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

Switching capacity

Switching capacity current	
• at DC / acc. to IEC 60947-2 / rated value	15 kA
• acc. to EN 60898 / rated value	10 kA
Energy limiting class	3

Dissipation

Power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	4.3 W
---	-------

Current

Tripping residual / rated value / derated current / at 40 Cel	48 A
Suitability for operation	universal current

Product details

Product function / neutral conductor switching	No
Product feature / Touch protection	Yes
Product component	
• combined terminal top	Yes
• combined terminal bottom	Yes
Product feature	
• Properties for main switches in accordance with EN 60204-1	Yes
• halogen-free	Yes
• sealable	Yes
• silicon-free	Yes
Product extension / can be installed / supplementary devices	Yes

Short circuit

Breaking capacity short-circuit current (I _{cn})	
• at DC / acc. to EN 60898-2	10 kA

Connections

<ul style="list-style-type: none"> • Connectable conductor cross-section <ul style="list-style-type: none"> — solid — stranded • Connectable conductor cross-section / finely stranded / with core end processing 	0.75 ... 35 mm ² 0.75 ... 35 mm ² 0.75 ... 25 mm ²
AWG number / as coded connectable conductor cross section	18 ... 4
Tightening torque [lbf·in] / with screw-type terminals	22 ... 31 lbf·in
Tightening torque / with screw-type terminals	2.5 ... 3.5 N·m
Position / of power supply cord	AC as required, observe DC polarity

Mechanical Design

Height	90 mm
Width	72 mm
Depth	76 mm
Installation depth	70 mm
Number of width units	4
Mounting type	Quick assembly system
Mounting position	any
Net weight	651 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	-40 ... +70 °C
<ul style="list-style-type: none"> • during storage 	-40 ... +75 °C

Certificates

Reference code	
<ul style="list-style-type: none"> • acc. to DIN EN 61346-2 • acc. to DIN EN 81346-2 	F F

General Product Approval	Declaration of Conformity	Railway
---------------------------------	----------------------------------	----------------



UR

[Miscellaneous](#)



EG-Konf.

[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=5SY5450-6>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY5450-6>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY5450-6

