

Miniature circuit breaker 400 V 10kA, 4-pole, B, 50 A, D=70 mm



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	5SY4
Mechanical service life (switching cycles) / typical	10 000
Oversvoltage category	III
Voltage	
Insulation voltage	
<ul style="list-style-type: none"> <li>• with single-phase operation / at AC / rated value</li> </ul>	440 V
<ul style="list-style-type: none"> <li>• with multi-phase operation / at AC / rated value</li> </ul>	440 V
Supply voltage / with single-phase operation / at AC / rated value	230 V
Supply voltage	

Type of voltage	AC
Current / at AC / rated value	50 A
Supply voltage	
• at AC / rated value	400 V
Operating voltage	
• at DC / rated value / maximum	72 V
Supply voltage frequency	
• rated value	50/60 Hz

<b>Protection class</b>	
Protection class IP	IP20, with connected conductors

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

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

<b>Current</b>	
Tripping residual / rated value / derated current / at 40 Cel	48 A
Suitability for operation	Mechanical engineering / industry

<b>Product details</b>	
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

<b>Short circuit</b>	
Breaking capacity short-circuit current (I <sub>cn</sub> )	
• at AC / acc. to UL 1077 and CSA C22.2 No.235	5 kA

## Connections

<ul style="list-style-type: none"><li>• Connectable conductor cross-section<ul style="list-style-type: none"><li>— solid</li><li>— stranded</li></ul></li><li>• Connectable conductor cross-section / finely stranded / with core end processing</li></ul>	0.75 ... 35 mm <sup>2</sup> 0.75 ... 35 mm <sup>2</sup> 0.75 ... 25 mm <sup>2</sup>
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	Any

## 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	650 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"><li>• during storage</li></ul>	-40 ... +70 °C -40 ... +75 °C

## Certificates

Reference code <ul style="list-style-type: none"><li>• acc. to DIN EN 61346-2</li><li>• acc. to DIN EN 81346-2</li></ul>	F F
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## General Product Approval



CCC



IMQ



UR



VDE



RCM

[Miscellaneous](#)

Declaration of  
Conformity

Test Certificates

Shipping Approval



EG-Konf.

[Miscellaneous](#)

[Special Test Certificate](#)



ABS



BUREAU  
VERITAS

Lloyd's  
Register

LRS

Shipping Ap-  
proval

Railway



RINA

[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=5SY4450-6>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY4450-6>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY4450-6](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4450-6)

**CAX-Online-Generator**

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

**Tender specifications**

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





