



Miniature circuit breaker 230 V 10kA, 1+N-pole, B, 50 A, D=70 mm

Model	
product brand name	SENTRON
product designation	Miniature circuit breaker
General technical data	
number of poles	2
design of pole	1P+N
tripping characteristic class	B
mechanical service life (operating 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	250 V
supply voltage with single-phase operation at AC rated value	230 V
operational current	
• at 40 °C rated value	47.6 A
• at 50 °C rated value	45.1 A
• at 55 °C rated value	43.75 A
• at 60 °C rated value	42.4 A
• at AC rated value	50 A
Supply voltage	
supply voltage	
• at AC rated value	230 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	15 kA
energy limitation class	3
Dissipation	
power loss [W] for rated value of the current at AC in hot operating state per pole	4.3 W
Product details	
product component	

<ul style="list-style-type: none"> <li>combined terminal top</li> <li>combined terminal bottom</li> <li>neutral conductor switching</li> </ul>	Yes Yes Yes
product feature	
<ul style="list-style-type: none"> <li>properties for main switches in accordance with EN 60204-1</li> <li>halogen-free</li> <li>sealable</li> <li>silicon-free</li> </ul>	Yes Yes Yes Yes
product extension installable supplementary devices	Yes
<b>Product function</b>	
set values setting current (I <sub>i</sub> ) for I-tripping	4
reference value setting current (I <sub>i</sub> ) for I-tripping	x I <sub>n</sub>
<b>Short circuit</b>	
short-circuit current breaking capacity (I <sub>cn</sub> )	
<ul style="list-style-type: none"> <li>at AC according to UL 1077 and CSA C22.2 No.235</li> </ul>	5 kA
<b>Connections</b>	
connectable conductor cross-section solid	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	0.75 mm <sup>2</sup> 35 mm <sup>2</sup>
connectable conductor cross-section stranded	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	0.75 mm <sup>2</sup> 35 mm <sup>2</sup>
connectable conductor cross-section finely stranded with core end processing	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	0.75 mm <sup>2</sup> 25 mm <sup>2</sup>
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	18 4
tightening torque [lbf-in] with screw-type terminals	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	22 lbf-in 31 lbf-in
tightening torque with screw-type terminals	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	2.5 N·m 3.5 N·m
position of power supply cord	Any
<b>Mechanical Design</b>	
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	319 g
<b>Environmental conditions</b>	
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/s <sup>2</sup> at 25 to 150Hz
ambient temperature during operation	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	-40 °C 70 °C
ambient temperature during storage	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	-40 °C 75 °C
number of test cycles for environmental testing according to IEC 60068-2-30	6
<b>Approvals Certificates</b>	
<b>General Product Approval</b>	



[Confirmation](#)



General Product Approval

EMV

Test Certificates



[Miscellaneous](#)



[Miscellaneous](#)

[Special Test Certificate](#)

Marine / Shipping

other



[Miscellaneous](#)

other

Railway

Environment

[Confirmation](#)

[Confirmation](#)

[Environmental Confirmations](#)

Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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=5SY4550-6>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY4550-6>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY4550-6](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4550-6)

CAX-Online-Generator

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

Tender specifications

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



# CB



last modified:

8/25/2023 

