



Miniature circuit breaker 400 V 10kA, 2-pole, A, 20A, 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	A
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	440 V
• with multi-phase operation at AC rated value	440 V
supply voltage with single-phase operation at AC rated value	230 V
operational current	
• at 40 °C rated value	18.78 A
• at 50 °C rated value	17.48 A
• at 55 °C rated value	16.8 A
• at 60 °C rated value	16.08 A
• at AC rated value	20 A
Supply voltage	
supply voltage	
• at AC rated value	400 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	20 kA
Dissipation	
power loss [W] for rated value of the current at AC in hot operating state per pole	2.5 W
Product details	
product component	

- combined terminal top - combined terminal bottom - neutral conductor switching	Yes Yes No
product feature	
- properties for main switches in accordance with EN 60204-1 - halogen-free - sealable - silicon-free	Yes Yes Yes Yes
product extension installable supplementary devices	Yes
Product function	
set values setting current (Ii) for I-tripping	2,5
reference value setting current (Ii) for I-tripping	x In
Short circuit	
short-circuit current breaking capacity (Icn)	
at AC according to UL 1077 and CSA C22.2 No.235	5 kA
Connections	
connectable conductor cross-section solid	
- minimum - maximum	0.75 mm ² 35 mm ²
connectable conductor cross-section stranded	
- minimum - maximum	0.75 mm ² 35 mm ²
connectable conductor cross-section finely stranded with core end processing	
- minimum - maximum	0.75 mm ² 25 mm ²
AWG number as coded connectable conductor cross section	
- minimum - maximum	18 4
tightening torque [lbf-in] with screw-type terminals	
- minimum - maximum	22 lbf-in 31 lbf-in
tightening torque with screw-type terminals	
- minimum - maximum	2.5 N-m 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	329 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/s ² at 25 to 150Hz
ambient temperature during operation	
- minimum - maximum	-40 °C 70 °C
ambient temperature during storage	
- minimum - maximum	-40 °C 75 °C
number of test cycles for environmental testing according to IEC 60068-2-30	6
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
Global Warming Potential [CO2 eq] total	16.8 kg

Global Warming Potential [CO2 eq] during manufacturing	1.13 kg
Global Warming Potential [CO2 eq] during operation	15.7 kg
Global Warming Potential [CO2 eq] after end of life	-0.00046 kg

Approvals Certificates

General Product Approval



[Confirmation](#)



General Product Approval	Test Certificates	Marine / Shipping
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[Miscellaneous](#)



[Miscellaneous](#)

[Special Test Certificate](#)

[Miscellaneous](#)



Marine / Shipping	other	Railway	Environment
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[Confirmation](#)

[Miscellaneous](#)

[Confirmation](#)

[EPD Typ II/III \(with life cycle assessment\)](#)

[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=5SY4220-5>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY4220-5>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4220-5

CAX-Online-Generator

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

Tender specifications

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



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