



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
<b>insulation voltage (Ui)</b>	
• 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	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
suitability for operation	Infrastructure / Industry
Product details	

product feature touch protection	Yes
product component	
• combined terminal top	Yes
• combined terminal bottom	Yes
• neutral conductor switching	No
<b>product feature</b>	
• properties for main switches in accordance with EN 60204-1	Yes
• halogen-free	Yes
• sealable	Yes
• silicon-free	Yes
product extension installable supplementary devices	Yes
<b>Product function</b>	
set values setting current (Ii) for I-tripping	2,5
reference value setting current (Ii) for I-tripping	x In
<b>Short circuit</b>	
short-circuit current breaking capacity (Icn)	
• at AC according to UL 1077 and CSA C22.2 No.235	5 kA
<b>Connections</b>	
connectable conductor cross-section solid	
• minimum	0.75 mm <sup>2</sup>
• maximum	35 mm <sup>2</sup>
connectable conductor cross-section stranded	
• minimum	0.75 mm <sup>2</sup>
• maximum	35 mm <sup>2</sup>
connectable conductor cross-section finely stranded with core end processing	
• minimum	0.75 mm <sup>2</sup>
• maximum	25 mm <sup>2</sup>
AWG number as coded connectable conductor cross section	
• minimum	18
• maximum	4
tightening torque [lbf-in] with screw-type terminals	
• minimum	22 lbf-in
• maximum	31 lbf-in
tightening torque with screw-type terminals	
• minimum	2.5 N·m
• maximum	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
<b>fastening method</b>	Quick assembly system
mounting position	any
net weight	323 g
<b>Environmental conditions</b>	
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	
• minimum	-40 °C
• maximum	70 °C
ambient temperature during storage	
• minimum	-40 °C
• maximum	75 °C
number of test cycles for environmental testing according to IEC 60068-2-30	6
<b>Environmental footprint</b>	
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

[Miscellaneous](#)



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#### Marine / Shipping

#### other

#### Railway

#### Environment



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[Special Test Certificate](#)

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#### Environment

[Environmental Confirmations](#)

[Environmental Confirmations](#)

### Further information

#### 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](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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