



Circuit breaker Universal current 220 V DC 230/400 V AC 10kA, 1-pole, C, 20A

Model	
product brand name	SENTRON
product designation	Miniature circuit breaker
General technical data	
number of poles	1
design of pole	1P
tripping characteristic class	C
mechanical service life (operating cycles) typical	10 000
overvoltage category	III
degree of pollution	3
Voltage	
type of voltage of the operating voltage	AC/DC
insulation voltage (Ui)	
• at DC rated value	250 V
• 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	220 V
value range of the supply voltage frequency	50/60 Hz
operating voltage at DC rated value maximum	250 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
energy limitation class	3
Dissipation	
power loss [W] for rated value of the current at AC in hot operating state per pole	1.7 W

<b>suitability for operation</b>	Infrastructure / Industry / Mobility
<b>Product details</b>	
<b>product feature touch protection</b>	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>Short circuit</b>	
<b>short-circuit current breaking capacity (Icn)</b>	
• at DC according to EN 60898-2	10 kA
<b>Connections</b>	
<b>connectable conductor cross-section solid</b>	
• minimum	0.75 mm <sup>2</sup>
• maximum	35 mm <sup>2</sup>
<b>connectable conductor cross-section stranded</b>	
• minimum	0.75 mm <sup>2</sup>
• maximum	35 mm <sup>2</sup>
<b>connectable conductor cross-section finely stranded with core end processing</b>	
• minimum	0.75 mm <sup>2</sup>
• maximum	25 mm <sup>2</sup>
<b>AWG number as coded connectable conductor cross section</b>	
• minimum	18
• maximum	4
<b>tightening torque [lbf-in] with screw-type terminals</b>	
• minimum	22 lbf-in
• maximum	31 lbf-in
<b>tightening torque with screw-type terminals</b>	
• minimum	2.5 N·m
• maximum	3.5 N·m
position of power supply cord	AC as required, observe DC polarity
<b>Mechanical Design</b>	
<b>height</b>	90 mm
<b>width</b>	18 mm
<b>depth</b>	76 mm
<b>installation depth</b>	70 mm
<b>number of modular width units</b>	1
<b>fastening method</b>	DIN rail
<b>mounting position</b>	any
<b>net weight</b>	167 g
<b>Environmental conditions</b>	
<b>standard</b>	IEC / EN 60898-2, UL1077
vibration resistance according to IEC 60068-2-6	±1mm at 5 to 25Hz; 50m/s <sup>2</sup> at 25 to 150Hz
<b>ambient temperature during operation</b>	
• minimum	-40 °C
• maximum	70 °C
<b>ambient temperature during storage</b>	
• minimum	-40 °C
• maximum	75 °C
<b>number of test cycles for environmental testing according to IEC 60068-2-30</b>	6
<b>Environmental footprint</b>	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO <sub>2</sub> eq] total	13.3 kg

global warming potential [CO2 eq] during manufacturing	0.73 kg
global warming potential [CO2 eq] during operation	12.7 kg
global warming potential [CO2 eq] after end of life	-0.069 kg

#### Approvals Certificates

##### General Product Approval



[Miscellaneous](#)

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

[Special Test Certificate](#)



[Miscellaneous](#)

[Confirmation](#)

Railway	Dangerous goods	Environment
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[Special Test Certificate](#)

[Confirmation](#)

[Transport Information](#)



[Environmental Confirmations](#)

##### Environment

[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=5SY5120-7>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY5120-7>

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

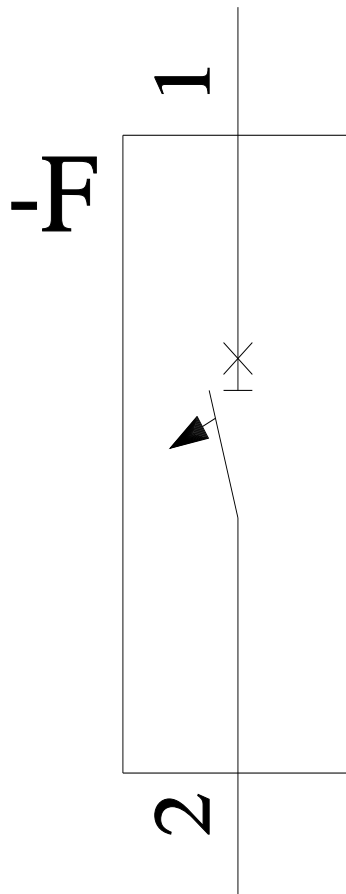
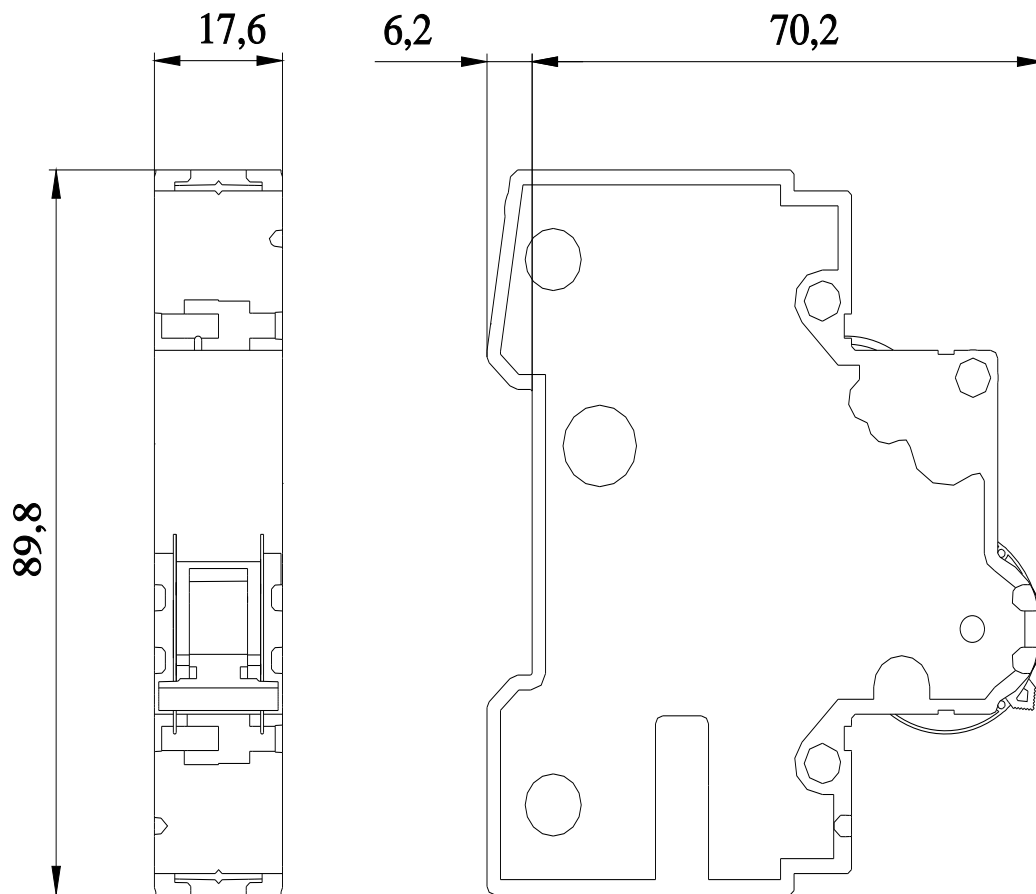
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY5120-7](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY5120-7)

CAX-Online-Generator

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

Tender specifications

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



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last modified:

4/15/2025 