



Circuit breaker Universal current 880 V DC 400 V AC 10kA, 4-pole, B, 20A max. 1000 V DC

Model	
product brand name	SENTRON
product designation	Miniature circuit breaker
General technical data	
number of poles	4
design of pole	4P
tripping characteristic class	B
mechanical service life (operating cycles) typical	10 000
overvoltage category	2
degree of pollution	2
Voltage	
type of voltage of the operating voltage	AC/DC
insulation voltage (Ui)	
<ul style="list-style-type: none"> <li>at DC rated value</li> <li>with single-phase operation at AC rated value</li> <li>with multi-phase operation at AC rated value</li> </ul>	250 V 440 V 440 V
operational current	
<ul style="list-style-type: none"> <li>at 40 °C rated value</li> <li>at 50 °C rated value</li> <li>at 55 °C rated value</li> <li>at 60 °C rated value</li> </ul>	19.04 A 18.04 A 17.5 A 16.96 A
operational current at AC rated value	20 A
Supply voltage	
supply voltage	
<ul style="list-style-type: none"> <li>at AC</li> <li>at DC rated value</li> </ul>	400 V 880 V
value range of the supply voltage frequency	50/60 Hz
operating voltage at DC rated value maximum	1 000 V
Protection class	
protection class IP	IP20, with connected conductors
Breaking Capacity	
switching capacity current	
<ul style="list-style-type: none"> <li>at DC according to IEC 60947-2 rated value</li> <li>according to EN 60898 rated value</li> </ul>	15 kA 10 kA
energy limitation class	3
Dissipation	
power loss [W] for rated value of the current at AC in hot operating state per pole	2.2 W

<b>suitability for operation</b>	Infrastructure / Industry / Mobility
<b>Product details</b>	
<b>product feature touch protection</b>	Yes
<b>product component</b>	
• combined terminal top	Yes
• combined terminal bottom	Yes
• neutral conductor switching	No
<b>product feature properties for main switches in accordance with EN 60204-1</b>	Yes
<b>product feature halogen-free</b>	Yes
<b>product feature sealable</b>	Yes
<b>product feature silicon-free</b>	Yes
<b>product extension installable supplementary devices</b>	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
<b>position of power supply cord</b>	AC as required, observe DC polarity
<b>Mechanical Design</b>	
<b>height</b>	90 mm
<b>width</b>	72 mm
<b>depth</b>	76 mm
<b>installation depth</b>	70 mm
<b>number of modular width units</b>	4
<b>fastening method</b>	DIN rail
<b>mounting position</b>	any
<b>Net Weight</b>	629 g
<b>Environmental conditions</b>	
<b>influence of the surrounding temperature</b>	max. 95% RH up to 55°C, max. 55% RH up to 70°C, max. 35% RH up to 75°C
<b>standard</b>	IEC / EN 60898-2, UL1077
<b>vibration resistance according to IEC 60068-2-6</b>	±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>Approvals Certificates</b>	

Environment	General Product Approval				
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[Environmental Confirmations](#)

[Environmental Confirmations](#)



[Miscellaneous](#)



General Product Approval	Test Certificates	other
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[Confirmation](#)



[Special Test Certificate](#)



other	Railway	Dangerous goods	
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[Confirmation](#)

[Special Test Certificate](#)

[Confirmation](#)

[Transport Information](#)

**Further information**

- Information on the packaging  
<https://support.industry.siemens.com/cs/ww/en/view/109813875>
- Information for data generation and storage  
<https://support.industry.siemens.com/cs/ww/en/view/109995012>
- Information- and Downloadcenter (Catalogs, Brochures,...)  
<https://www.siemens.com/lowvoltage/catalogs>
- Industry Mall (Online ordering system)  
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=5SY5420-6>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)  
<https://support.industry.siemens.com/cs/ww/en/ps/5SY5420-6>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)  
[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY5420-6](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY5420-6)
- CAX-Online-Generator  
<https://www.siemens.com/cax>
- Tender specifications  
<https://www.siemens.com/specifications>
- Characteristic curves  
[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)



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last modified:

11/1/2025 

