

Circuit breaker Universal current 440 V DC 400 V AC 10kA, 2-pole, C, 20A



Model	
Product brand name	SENTRON
Product designation	Miniature circuit breaker
General technical data	
Number of poles	2
Number of poles / Note	2P
Tripping characteristic class	C
circuit-breaker / Design	5SY5
Mechanical service life (switching cycles) / typical	10 000
Overvoltage category	III
Degree of pollution	3
Voltage	
Insulation voltage	
<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>	<p>250 V</p> <p>440 V</p> <p>440 V</p>
Supply voltage	

Type of voltage	AC/DC
Operating current / at AC / rated value	20 A
Supply voltage	
• at AC / rated value	400 V
• at DC / rated value	440 V
Operating voltage	
• at DC / rated value / maximum	500 V
Supply voltage frequency	
• rated value	50/60 Hz

#### Protection class

Protection class IP	IP20, with connected conductors
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#### Switching capacity

Switching capacity current	
• at DC / acc. to IEC 60947-2 / rated value	15 kA
• acc. to EN 60898 / rated value	10 kA
Energy limiting class	3

#### Dissipation

Power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	1.7 W
Suitability for operation	universal current

#### Product details

Product function / neutral conductor switching	No
Product feature / Touch protection	Yes
Product component	
• combined terminal top	Yes
• combined terminal bottom	Yes
Product feature	
• Properties for main switches in accordance with EN 60204-1	Yes
• halogen-free	Yes
• sealable	Yes
• silicon-free	Yes
Product extension / can be installed / supplementary devices	Yes

#### Short circuit

Breaking capacity short-circuit current (I <sub>cn</sub> )	
• at DC / acc. to EN 60898-2	10 kA

#### Connections

Connectable conductor cross-section / solid	
• minimum	0.75 mm <sup>2</sup>

<ul style="list-style-type: none"> <li>• maximum</li> </ul>	35 mm <sup>2</sup>
Connectable conductor cross-section / stranded	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	0.75 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	35 mm <sup>2</sup>
Connectable conductor cross-section / finely stranded / with core end processing	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	0.75 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	25 mm <sup>2</sup>
AWG number / as coded connectable conductor cross section	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	18
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	4
Tightening torque [lbf·in] / with screw-type terminals	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	22 lbf·in
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	31 lbf·in
Tightening torque / with screw-type terminals	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	2.5 N·m
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	3.5 N·m
Position / of power supply cord	AC as required, observe DC polarity

### Mechanical Design





Height	90 mm
Width	36 mm
Depth	76 mm
Installation depth	70 mm
Number of width units	2
Mounting type	Quick assembly system
Mounting position	any
Net weight	324 g

### Environmental conditions

Influence of the surrounding temperature	max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C
Ambient temperature	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	-40 °C
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	70 °C
Ambient temperature / during storage	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	-40 °C
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	75 °C
Number of test cycles / for environmental testing / acc. to IEC 60068-2-30	6

### Certificates

Reference code	
<ul style="list-style-type: none"> <li>• acc. to DIN EN 61346-2</li> </ul>	F
<ul style="list-style-type: none"> <li>• acc. to DIN EN 81346-2</li> </ul>	F

General Product Approval			Declaration of Conformity	Test Certificates
 CCC	 UR	 VDE	<a href="#">Miscellaneous</a>	 EG-Konf.
				<a href="#">Miscellaneous</a>

Test Certificates	Railway		
<a href="#">Special Test Certificate</a>	<a href="#">Confirmation</a>	<a href="#">Vibration and Shock</a>	

#### Further information

**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=5SY5220-7>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY5220-7>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY5220-7](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY5220-7)

**CAX-Online-Generator**

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

**Tender specifications**

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

