

Circuit breaker Universal current 440 V DC 400 V AC 10kA, 2-pole, B, 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	B
circuit-breaker / Design	5SY5
Mechanical service life (switching cycles) / typical	10 000
Overvoltage category	III
Degree of pollution	3
Voltage	
Insulation voltage	
• 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	

Type of voltage	AC/DC
Operating current / at AC / rated value	20 A
Supply voltage • at AC / rated value • at DC / rated value	400 V 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 • acc. to EN 60898 / rated value	15 kA 10 kA
Energy limiting class	3

Dissipation

Power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	2.2 W
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Current

Tripping residual / rated value / derated current / at 40 Cel	18.78 A
Suitability for operation	universal current

Product details

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

Short circuit

Breaking capacity short-circuit current (I _{cn}) • at DC / acc. to EN 60898-2	10 kA
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Connections

Connectable conductor cross-section / solid	
• minimum	0.75 mm ²
• maximum	35 mm ²
Connectable conductor cross-section / stranded	
• minimum	0.75 mm ²
• maximum	35 mm ²
Connectable conductor cross-section / finely stranded / with core end processing	
• minimum	0.75 mm ²
• maximum	25 mm ²
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	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	328 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	
• minimum	-40 °C
• maximum	70 °C
Ambient temperature / during storage	
• minimum	-40 °C
• maximum	75 °C
Number of test cycles / for environmental testing / acc. to IEC 60068-2-30	6

Certificates

Reference code	
• acc. to DIN EN 61346-2	F
• acc. to DIN EN 81346-2	F

General Product Approval	Declaration of Conformity	Test Certificates
 CCC	 UR	 VDE
	Miscellaneous	 EG-Konf.
		Miscellaneous

Test Certificates	Railway
Special Test Certificate	Confirmation
	Vibration and Shock

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=5SY5220-6>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY5220-6>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY5220-6

CAX-Online-Generator

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

Tender specifications

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

