

Miniature circuit breaker 230/400 V 10kA, 1-pole, C, 80 A, D=70 mm



Model	
Product brand name	SENTRON
Product designation	Miniature circuit breaker
General technical data	
Number of poles	1
Number of poles / Note	1P
Tripping characteristic class	C
circuit-breaker / Design	5SY4
Mechanical service life (switching cycles) / typical	10 000
Overvoltage category	III
Degree of pollution	3
Voltage	
Insulation voltage	
• 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

Supply voltage	
Type of voltage	AC
Operating current / at AC / rated value	80 A
Supply voltage	
• at AC / rated value	400 V
Operating voltage	
• at DC / rated value / maximum	72 V
Supply voltage frequency	
• rated value	50/60 Hz
Protection class	
Protection class IP	IP20, with connected conductors
Switching capacity	
Switching capacity current	
• at DC / acc. to IEC 60947-2 / rated value	15 kA
• acc. to EN 60898 / rated value	10 kA
Dissipation	
Power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	6.7 W
Current	
Tripping residual / rated value / derated current / at 40 Cel	76.16 A
Suitability for operation	Mechanical engineering / industry
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 (Icn)	
• at AC / acc. to UL 1077 and CSA C22.2 No.235	5 kA
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	Any

Mechanical Design

Height	90 mm
Width	18 mm
Depth	76 mm
Installation depth	70 mm
Number of width units	1
Mounting type	Quick assembly system
Mounting position	any
Net weight	177 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	-25 °C
• maximum	55 °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	
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- acc. to DIN EN 61346-2
- acc. to DIN EN 81346-2

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General Product Approval	Declaration of Conformity	Test Certificates	Railway
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[Miscellaneous](#)



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[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=5SY4180-7>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY4180-7>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4180-7

CAX-Online-Generator

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

Tender specifications

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



