



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
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
insulation voltage (Ui)	
• 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	76.16 A
• at 50 °C rated value	72.16 A
• at 55 °C rated value	70 A
• at 60 °C rated value	67.84 A
• at AC rated value	80 A
Supply voltage	
supply voltage	
• at AC	400 V
• at DC rated value	60 V
value range of the supply voltage frequency	50/60 Hz
operating voltage at DC rated value maximum	72 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
Dissipation	
power loss [W] for rated value of the current at AC in hot operating state per pole	6.7 W
suitability for operation	Infrastructure / Industry
Product details	
product component	

combined terminal top	Yes
combined terminal bottom	Yes
neutral conductor switching	No
product feature	
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
Short circuit	
short-circuit current breaking capacity (I _{cn})	
at AC according 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 modular width units	1
fastening method	Quick assembly system
mounting position	any
net weight	172 g
Environmental conditions	
influence of the surrounding temperature	max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C
standard	IEC / EN 60898-1, IEC / EN 60947-2
vibration resistance according to IEC 60068-2-6	±1mm at 5 to 25Hz; 50m/s ² at 25 to 150Hz
ambient temperature during operation	
minimum	-25 °C
maximum	55 °C
ambient temperature during storage	
minimum	-40 °C
maximum	75 °C
number of test cycles for environmental testing according to IEC 60068-2-30	6
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
Global Warming Potential [CO ₂ eq] total	13.3 kg
Global Warming Potential [CO ₂ eq] during manufacturing	0.713 kg
Global Warming Potential [CO ₂ eq] during operation	12.7 kg
Global Warming Potential [CO ₂ eq] after end of life	-0.062 kg

Approvals Certificates

General Product Approval					Test Certificates
		Confirmation	Miscellaneous		Special Test Certificate

Test Certificates	other		Railway		Environment
Miscellaneous	Miscellaneous	Confirmation	Special Test Certificate	Confirmation	

Environment	
Environmental Confirmations	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=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>



CB



last modified:

7/18/2024 

