



Miniature circuit breaker 400 V 6kA, 3+N-pole B, 50 A, D=70 mm

Model	
product brand name	SENTRON
product designation	Miniature circuit breaker
General technical data	
number of poles	4
design of pole	3P+N
tripping characteristic class	B
mechanical service life (operating cycles) typical	10 000
overvoltage category	3
degree of pollution	3
Voltage	
type of voltage of the operating voltage	AC
insulation voltage (Ui)	
<ul style="list-style-type: none"> with single-phase operation at AC rated value with multi-phase operation at AC rated value 	440 V 440 V
<ul style="list-style-type: none"> operational current <ul style="list-style-type: none"> at 40 °C rated value at 50 °C rated value at 55 °C rated value operational current at AC rated value 	48 A 45.95 A 44.9 A 50 A
Supply voltage	
supply voltage	
<ul style="list-style-type: none"> at AC at DC rated value 	400 V 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	
<ul style="list-style-type: none"> at DC according to IEC 60947-2 rated value according to EN 60898 rated value according to IEC 60947-2 rated value 	15 kA 6 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	4.3 W
suitability for operation	Infrastructure / Industry

Product details	
product feature touch protection	Yes
product component	
<ul style="list-style-type: none"> combined terminal top 	Yes
<ul style="list-style-type: none"> combined terminal bottom 	Yes
<ul style="list-style-type: none"> neutral conductor switching 	Yes
product feature properties for main switches in accordance with EN 60204-1	Yes
product feature halogen-free	Yes
product feature sealable	Yes
product feature silicon-free	Yes
product extension installable supplementary devices	Yes
Product function	
set values setting current (Ii) for I-tripping	4
reference value setting current (Ii) for I-tripping	x In
Short circuit	
short-circuit current breaking capacity (Icn)	
<ul style="list-style-type: none"> at AC according to UL 1077 and CSA C22.2 No.235 	5 kA
Connections	
connectable conductor cross-section solid	
<ul style="list-style-type: none"> minimum 	0.75 mm ²
<ul style="list-style-type: none"> maximum 	35 mm ²
connectable conductor cross-section stranded	
<ul style="list-style-type: none"> minimum 	0.75 mm ²
<ul style="list-style-type: none"> maximum 	35 mm ²
connectable conductor cross-section finely stranded with core end processing	
<ul style="list-style-type: none"> minimum 	0.75 mm ²
<ul style="list-style-type: none"> maximum 	25 mm ²
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> minimum 	18
<ul style="list-style-type: none"> maximum 	4
tightening torque [lbf·in] with screw-type terminals	
<ul style="list-style-type: none"> minimum 	22 lbf·in
<ul style="list-style-type: none"> maximum 	31 lbf·in
tightening torque with screw-type terminals	
<ul style="list-style-type: none"> minimum 	2.5 N·m
<ul style="list-style-type: none"> maximum 	3.5 N·m
position of power supply cord	Any
Mechanical Design	
height	90 mm
width	72 mm
depth	76 mm
installation depth	70 mm
number of modular width units	4
fastening method	DIN rail
mounting position	any
Net Weight	647 g
Environmental conditions	
influence of the surrounding temperature	max. 95% RH up to 55°C
standard	IEC / EN 60898-1, IEC / EN 60947-2 / UL1077
vibration resistance according to IEC 60068-2-6	±1mm at 5 to 25Hz; 50m/s ² at 25 to 150Hz
ambient temperature during operation	
<ul style="list-style-type: none"> minimum 	-25 °C
<ul style="list-style-type: none"> maximum 	55 °C
ambient temperature during storage	
<ul style="list-style-type: none"> minimum 	-40 °C
<ul style="list-style-type: none"> maximum 	75 °C

number of test cycles for environmental testing according to IEC 60068-2-30	6
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Environmental footprint

Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	40.2 kg
global warming potential [CO2 eq] during manufacturing	2.1 kg
global warming potential [CO2 eq] during operation	38.1 kg
global warming potential [CO2 eq] after end of life	-0.048 kg

Approvals Certificates

General Product Approval



[Confirmation](#)



General Product Approval	EMV	Test Certificates
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[Miscellaneous](#)



[Miscellaneous](#)

Maritime application	other
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other	Environment
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[Confirmation](#)



[Environmental Confirmations](#)

[Environmental Confirmations](#)

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=5SY6650-6>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY6650-6>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY6650-6

CAX-Online-Generator

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

Tender specifications

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





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