



Miniature circuit breaker 400 V 10kA, 4-pole, D, 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	4P
tripping characteristic class	D
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 (U _i)	
• 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	
supply voltage	
• at AC rated value	400 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
Switching capacity	
switching capacity current	
• at DC according to IEC 60947-2 rated value	15 kA
• according to EN 60898 rated value	10 kA
• according to IEC 60947-2 rated value	15 kA
Dissipation	
power loss [W] for rated value of the current at AC in hot operating state per pole	3.7 W
Current	
operational current	
• at 35 °C rated value	50 A
• at 40 °C rated value	48 A
• at 45 °C rated value	47 A
• at 50 °C rated value	45.95 A
• at 55 °C rated value	44.9 A
• at 60 °C rated value	43.8 A

<ul style="list-style-type: none"> ● at AC rated value 	50 A
suitability for operation	Mechanical engineering / industry
Product details	
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 	No
product feature	
<ul style="list-style-type: none"> ● properties for main switches in accordance with EN 60204-1 	Yes
<ul style="list-style-type: none"> ● halogen-free 	Yes
<ul style="list-style-type: none"> ● sealable 	Yes
<ul style="list-style-type: none"> ● silicon-free 	Yes
product extension installable supplementary devices	Yes
Short circuit	
short-circuit current breaking capacity (I _{cn})	
<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	Quick assembly system
mounting position	any
net weight	637 g
Environmental conditions	
influence of the surrounding temperature standard	max. 95% to 55°C, max. 55% to 70°C, max. 35% to 75°C 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 	-40 °C
<ul style="list-style-type: none"> ● maximum 	70 °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
General Product Approval	

[Confirmation](#)



[Miscellaneous](#)

General Product Approval EMC Declaration of Conformity Test Certificates



[Miscellaneous](#)



EG-Konf.



[Miscellaneous](#)

Test Certificates Marine / Shipping

[Special Test Certificate](#)



LRS



other Railway

[Environmental Confirmations](#)

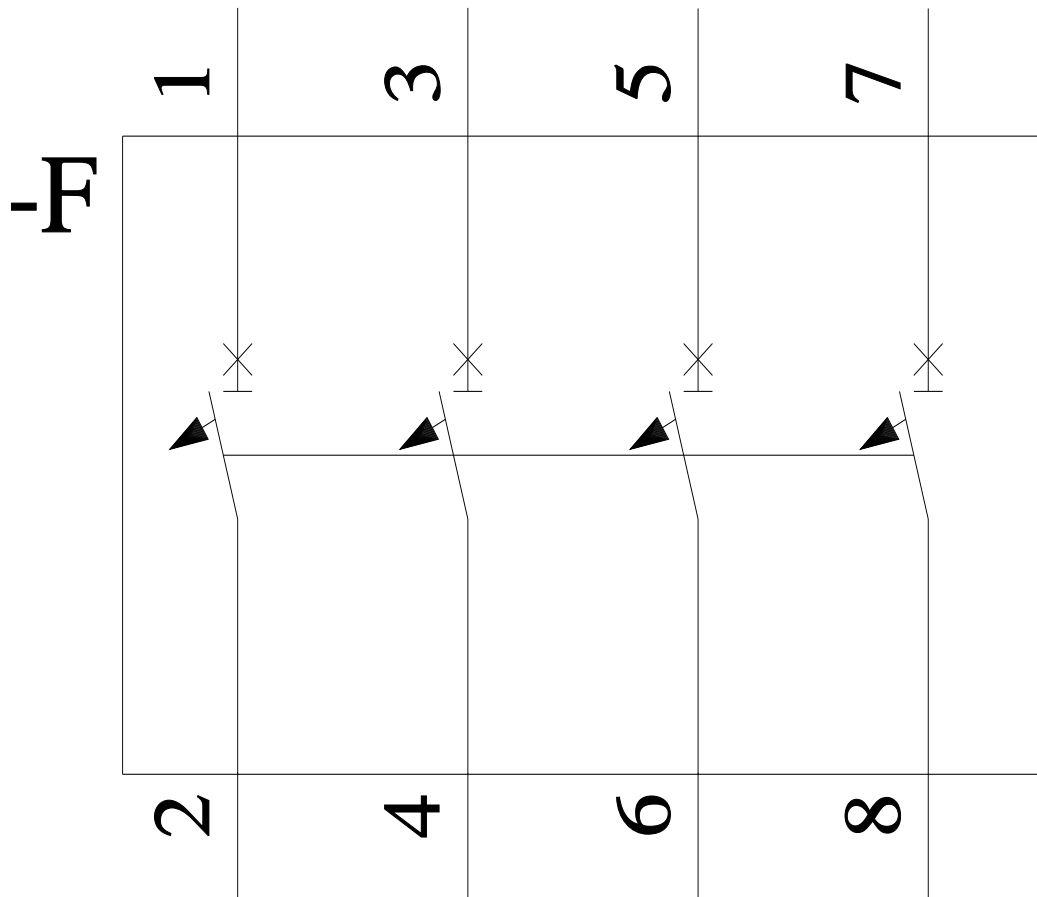
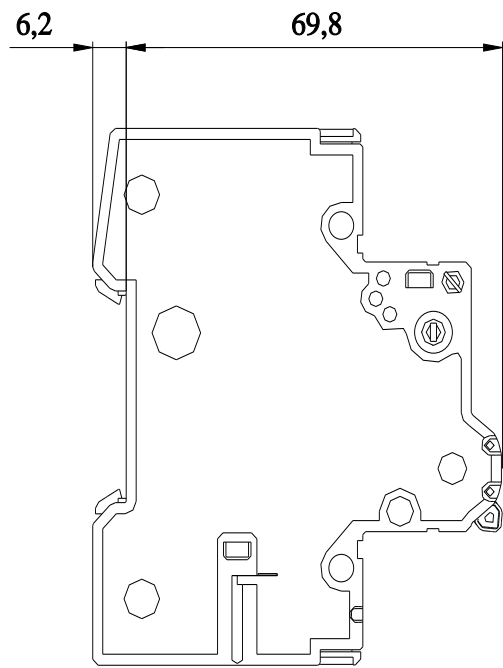
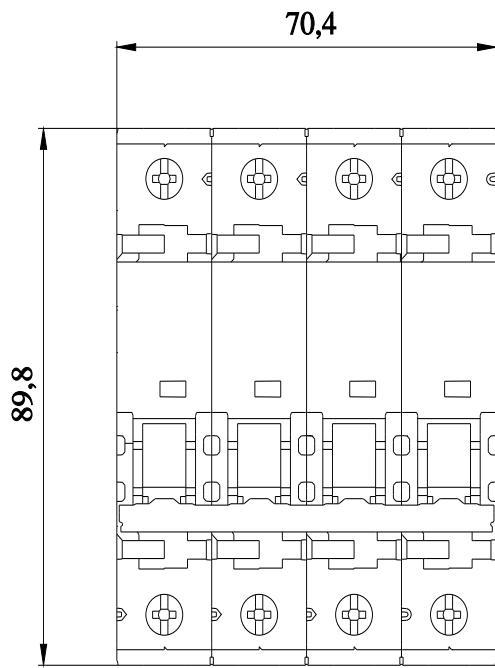
[Miscellaneous](#)

[Confirmation](#)

[Vibration and Shock](#)

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=5SY4450-8>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/5SY4450-8>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4450-8
- CAX-Online-Generator
<http://www.siemens.com/cax>
- Tender specifications
<http://www.siemens.com/specifications>



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