



Miniature circuit breaker 400 V D=70 mm 25 kA according to EN 60947-2, 2P, D20

Model	
product brand name	SENTRON
product designation	Miniature circuit breaker
General technical data	
number of poles	2
design of pole	2P
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 (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 50 °C rated value	19.38 A
• at 55 °C rated value	18.74 A
• at AC rated value	20 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 IEC 60947-2 rated value	30 kA
Dissipation	
power loss [W] for rated value of the current at AC in hot operating state per pole	1.6 W
suitability for operation	Infrastructure / Industry
Product details	
product feature touch protection	Yes
product component	

- combined terminal top - combined terminal bottom - neutral conductor switching	Yes Yes No
product feature	
- properties for main switches in accordance with EN 60204-1 - halogen-free - sealable - silicon-free	Yes Yes Yes Yes
product extension installable supplementary devices	Yes
Product function	
set values setting current (Ii) for I-tripping	14
reference value setting current (Ii) for I-tripping	x I _n
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 - maximum	0.75 mm ² 35 mm ²
connectable conductor cross-section stranded	
- minimum - maximum	0.75 mm ² 35 mm ²
connectable conductor cross-section finely stranded with core end processing	
- minimum - maximum	0.75 mm ² 25 mm ²
AWG number as coded connectable conductor cross section	
- minimum - maximum	18 4
tightening torque [lbf-in] with screw-type terminals	
- minimum - maximum	22 lbf-in 31 lbf-in
tightening torque with screw-type terminals	
- minimum - maximum	2.5 N·m 3.5 N·m
position of power supply cord	Any
Mechanical Design	
height	90 mm
width	36 mm
depth	76 mm
installation depth	70 mm
number of modular width units	2
fastening method	DIN rail
mounting position	any
net weight	315 g
Environmental conditions	
standard	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	
- minimum - maximum	-25 °C 55 °C
ambient temperature during storage	
- minimum - maximum	-40 °C 75 °C
number of test cycles for environmental testing according to IEC 60068-2-30	6
Approvals Certificates	
General Product Approval	other



Miscellaneous



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=5SY8220-8>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SY8220-8>

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

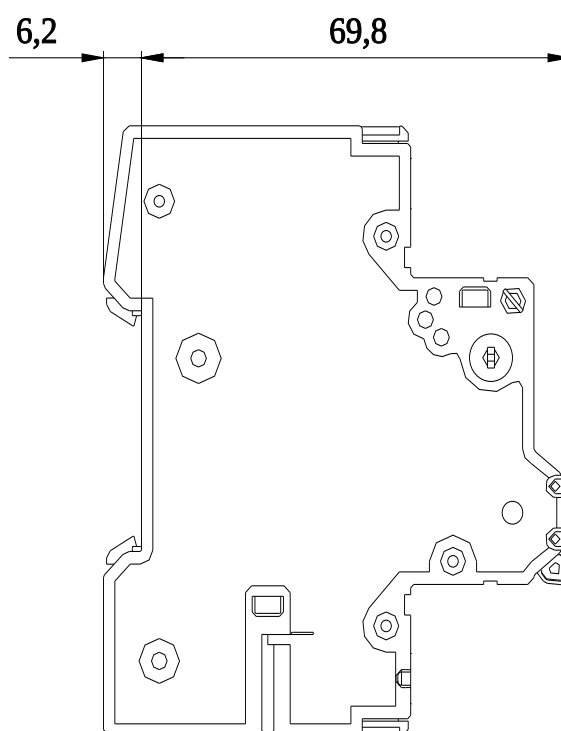
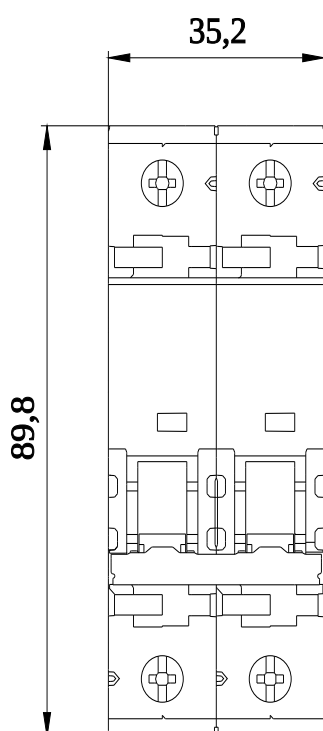
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY8220-8

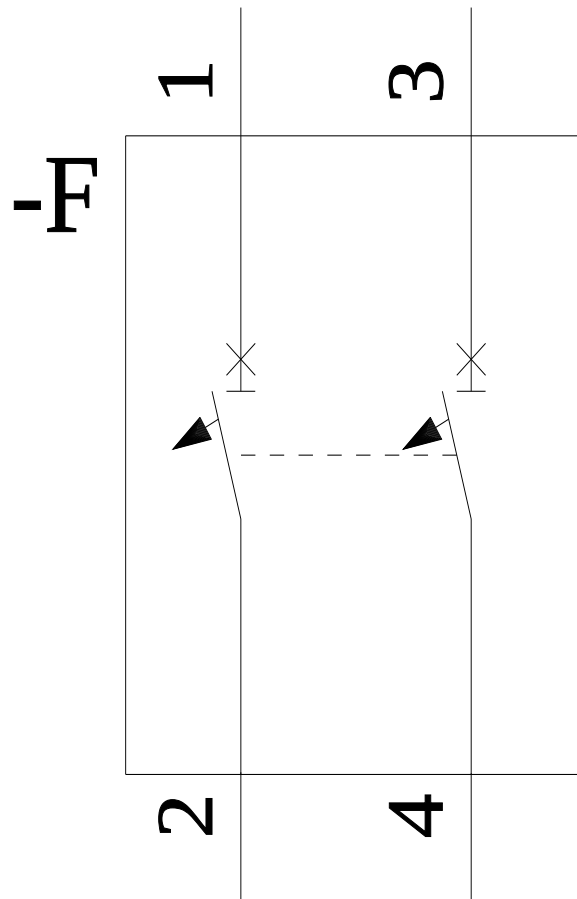
CAX-Online-Generator

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

Tender specifications

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





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