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Data sheet 5SY5420-7

Circuit breaker Universal current 880 V DC 400 V AC 10kA, 4-pole, C, 20A max. 1000 V DC

Model	
product brand name	SENTRON
product designation	Miniature circuit breaker
General technical data	
number of poles	4
design of pole	4P
tripping characteristic class	C
mechanical service life (operating cycles) typical	10 000
overvoltage category	II
degree of pollution	2
Voltage	
type of voltage of the operating voltage	AC/DC
insulation voltage (Ui)	
● at DC rated value	250 V
● with single-phase operation at AC rated value	440 V
● with multi-phase operation at AC rated value	440 V
operational current	
● at 40 °C rated value	19.04 A
● at 50 °C rated value	18.04 A
● at 55 °C rated value	17.5 A
● at 60 °C rated value	16.96 A
● at AC rated value	20 A
Supply voltage	
supply voltage	
● at AC	400 V
● at DC rated value	880 V
value range of the supply voltage frequency	50/60 Hz
operating voltage at DC rated value maximum	1 000 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
energy limitation class	3
Dissipation	
power loss [W] for rated value of the current at AC in hot operating state per pole	1.7 W
suitability for operation	Infrastructure / Industry / Mobility
Product details	

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product feature touch protection	Yes
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 (Icn)	
● at DC according to EN 60898-2	10 kA
Connections	
connectable conductor cross-section solid	
● minimum	0.75 mm²
● maximum	35 mm²
connectable conductor cross-section stranded	
● minimum	0.75 mm²
● maximum	35 mm²
connectable conductor cross-section finely stranded with core end processing	
● minimum	0.75 mm²
● maximum	25 mm²
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	AC as required, observe DC polarity
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	629 g
Environmental conditions	
standard	IEC / EN 60898-2, UL1077
vibration resistance according to IEC 60068-2-6	±1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz
ambient temperature during operation	
● minimum	-40 °C
● maximum	70 °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
Approvals Certificates	
General Product Approval	

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Confirmation				Miscellaneous	

General Product Approval	Test Certificates	other		Railway	
Miscellaneous	Special Test Certificate	Miscellaneous	Confirmation	Special Test Certificate	Confirmation

Dangerous goods	Environment			
Transport Information			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=5SY5420-7
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/5SY5420-7
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY5420-7
CAx-Online-Generator
http://www.siemens.com/cax
Tender specifications
http://www.siemens.com/specifications

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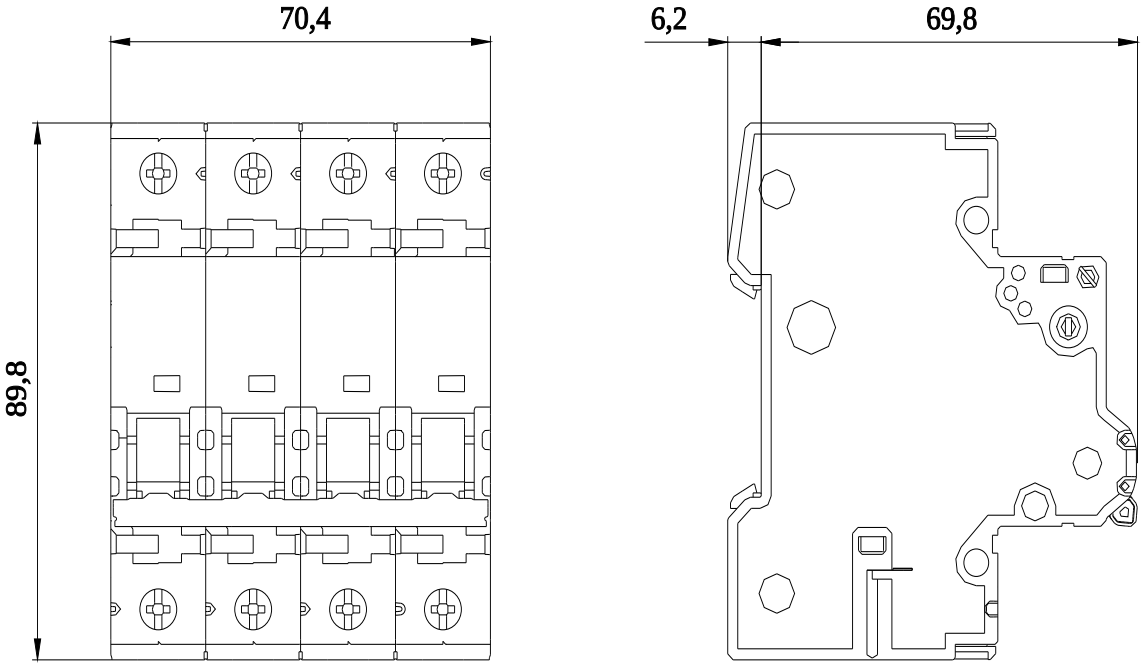

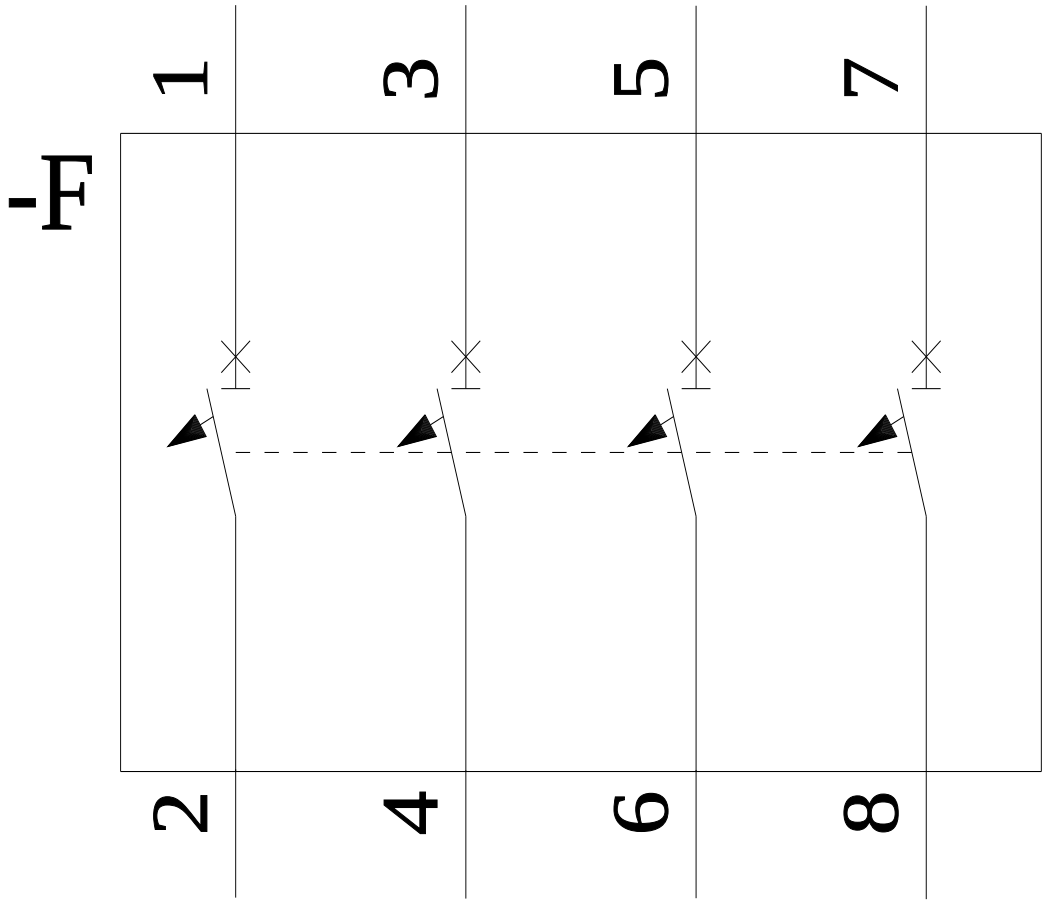

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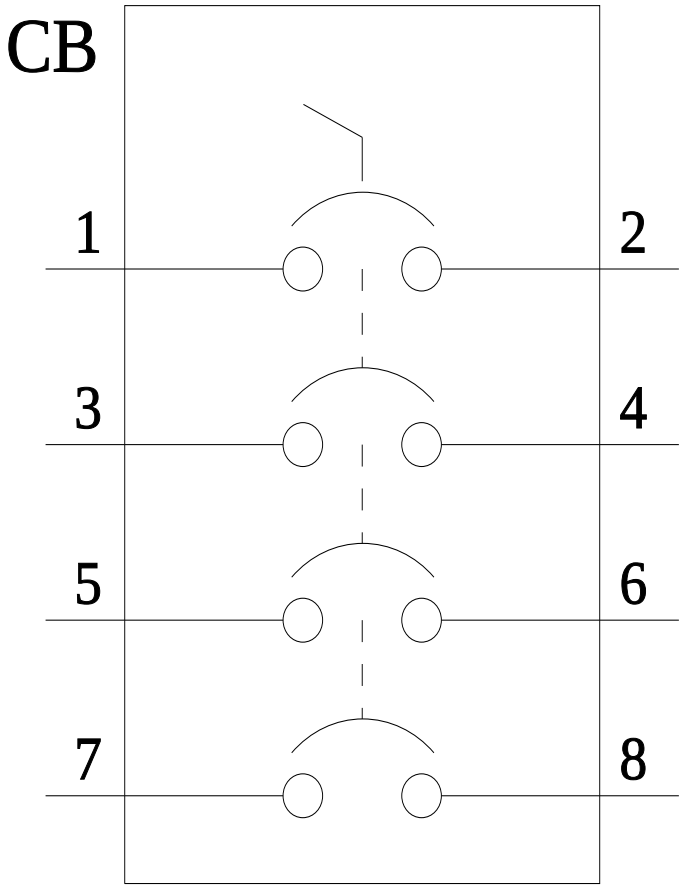

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