SIEMENS

Data sheet 5SY4113-7



Miniature circuit breaker 230/400 V 10kA, 1-pole, C, 13 A, D=70 mm

product brand name product designation Miniature circuit breaker General technical data number of poles design of pole 1P tripping characteristic class CC C mechanical service life (operating cycles) typical overvoltage category III degree of pollution 3 Voltage Vitye of voltage of the operating voltage insulation voltage (Ui) • with single-phase operation at AC rated value • with multi-phase operation at AC rated value • with multi-phase operation at AC rated value supply voltage with single-phase operation at AC rated value value value and of the supply voltage with single-phase operation at AC rated value • at Cared value maximum * To Voltage of the supply voltage requency operating voltage at DC rated value maximum * To Voltage of the supply voltage requency • at AC rated value waximum * To Voltage of the supply voltage requency • at AC rated value maximum * To Voltage of the supply voltage requency • at AC rated value maximum * To Voltage of the supply voltage requency • at AC rated value maximum * To Voltage of the supply voltage requency • at AC rated value maximum * To Voltage of the supply voltage	Model		
Ceneral technical data	product brand name	SENTRON	
number of poles design of pole 1P	product designation	Miniature circuit breaker	
design of pole tripping characteristic class mechanical service life (operating cycles) typical overvoltage category degree of pollution Voltage type of voltage of the operating voltage insulation voltage (UI) • with single-phase operation at AC rated value • with multi-phase operation at AC rated value supply voltage with single-phase operation at AC rated value supply voltage with single-phase operation at AC rated value supply voltage with single-phase operation at AC rated value Supply voltage • at AC rated value • at AC rated value • with multi-phase operation at AC rated value Supply voltage • at AC rated value • at AC rated value • with multi-phase operation at AC rated value range of the supply voltage frequency operating voltage • at AC rated value • walue range of the supply voltage frequency operating voltage at DC rated value maximum 72 V Protection class protection class IP Switching capacity switching capacity current • at DC according to IEC 60947-2 rated value • at 35 °C rated value of the current at AC in hot operational current • at 35 °C rated value • at 40 °C rated value • at 45 °C rated value • at 50 °C rated value	General technical data		
tripping characteristic class mechanical service life (operating cycles) typical 10 000 overvoltage category IIII overvoltage category IIII overvoltage of pollution 3 overvoltage of the operating voltage of the operating voltage of the operating voltage of voltage of the operating voltage overvoltage (UI) • with single-phase operation at AC rated value • with multi-phase operation at AC rated value supply voltage with single-phase operation at AC rated value supply voltage with single-phase operation at AC rated value value ange of the supply voltage • at AC rated value	number of poles	1	
mechanical service life (operating cycles) typical overvoltage category dill degree of pollution 3 Voltage type of voltage of the operating voltage insulation voltage (UI) • with single-phase operation at AC rated value • with multi-phase operation at AC rated value supply voltage with single-phase operation at AC rated value supply voltage with single-phase operation at AC rated value supply voltage with single-phase operation at AC rated value supply voltage supply voltage supply voltage • at AC rated value 400 V value range of the supply voltage frequency operating voltage at DC rated value maximum 72 V Protection class IP IP20, with connected conductors Switching capacity current • at DC according to IEC 60947-2 rated value 15 kA according to IEC 60947-2 rated value 20 kA energy limitation class 3 Dissipation power loss [W] for rated value of the current at AC in hot operating state per pole Current • at 35 °C rated value 13 A cat 45 °C rated value 2.38 A cat 45 °C rated value 3.45 °C rated value 3.45 °C rated value 4.45 °C rated value 3.45 °C rated value 4.45 °C rated value 5.45 °C rated value 6.45 °C rated value 7.47 °C rated value 7.48 °C rated valu	design of pole	1P	
overvoltage category degree of pollution Voltage type of voltage of the operating voltage insulation voltage (Ui) • with single-phase operation at AC rated value • with multi-phase operation at AC rated value supply voltage with single-phase operation at AC rated value supply voltage with single-phase operation at AC rated value supply voltage • at AC rated value value range of the supply voltage frequency operating voltage at DC rated value maximum 72 V Protection class protection class IP IP20, with connected conductors witching capacity current • at DC according to IEC 60947-2 rated value • 10 kA • according to IEC 60947-2 rated value • 10 kA • according to IEC 60947-2 rated value • 10 kA • according to IEC 60947-2 rated value • 10 kA • according to IEC 60947-2 rated value • 10 kA • according to IEC 60947-2 rated value • 10 kA • according to IEC 60947-2 rated value • 11 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947-2 rated value • 12 kA • according to IEC 60947	tripping characteristic class	C	
Voltage Volt	mechanical service life (operating cycles) typical	10 000	
type of voltage of the operating voltage insulation voltage (Ui) • with single-phase operation at AC rated value • with multi-phase operation at AC rated value • with multi-phase operation at AC rated value supply voltage with single-phase operation at AC rated value supply voltage supply voltage • at AC rated value • at AC rated value value range of the supply voltage frequency operating voltage at DC rated value maximum 72 V Protection class IP Switching capacity switching capacity switching capacity switching capacity or IEC 60947-2 rated value • according to IEC 60947-2 rated value • 10 kA • according to IEC 60947		III	
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insulation voltage (Ui) • with single-phase operation at AC rated value • with multi-phase operation at AC rated value supply voltage with single-phase operation at AC rated value supply voltage supply voltage • at AC rated value • at AC rated value value range of the supply voltage frequency operating voltage at DC rated value maximum Protection class protection class IP Switching capacity switching capacity current • at DC according to IEC 60947-2 rated value • according to IEC 60947-2 rated value energy limitation class Dissipation power loss [VI] for rated value of the current at AC in hot operating state per pole Current • at 35 °C rated value • at 45 °C rated value • at 45 °C rated value • at 50 °C rated value	Voltage		
 with single-phase operation at AC rated value with multi-phase operation at AC rated value supply voltage with single-phase operation at AC rated value supply voltage supply voltage at AC rated value value range of the supply voltage frequency operating voltage at DC rated value maximum 72 V Protection class protection class IP IP20, with connected conductors Switching capacity current at DC according to IEC 60947-2 rated value according to EN 60896 rated value according to IEC 60947-2 rated value according to IEC 60947-2 rated value according to IEC 60947-2 rated value power loss [W] for rated value of the current at AC in hot operating state per pole Current operational current at 35 °C rated value at 45 °C rated value at 50 °C rated value at 11.73 A 	type of voltage of the operating voltage	AC	
with multi-phase operation at AC rated value supply voltage with single-phase operation at AC rated value Supply voltage at AC rated value at AC rated value value range of the supply voltage frequency operating voltage at DC rated value maximum 72 V Protection class protection class IP Switching capacity switching capacity switching capacity current at DC according to IEC 60947-2 rated value according to EN 60898 rated value according to IEC 60947-2 rated value 10 kA according to IEC 60947-2 rated value according to IEC 60947-2 rated value 10 kA	insulation voltage (Ui)		
supply voltage Supply voltage supply voltage • at AC rated value • at AC rated value value range of the supply voltage frequency operating voltage at DC rated value maximum 72 V Protection class protection class IP Switching capacity switching capacity current • at DC according to IEC 60947-2 rated value • according to EN 60898 rated value • according to IEC 60947-2 rated value power loss [W] for rated value of the current at AC in hot operating state per pole Current operational current • at 35 °C rated value • at 45 °C rated value • at 50 °C rated value • 11.73 A		440 V	
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supply voltage • at AC rated value value range of the supply voltage frequency operating voltage at DC rated value maximum 72 V Protection class protection class IP IP20, with connected conductors Switching capacity switching capacity switching capacity to IEC 60947-2 rated value • at DC according to IEC 60947-2 rated value • according to EC 60947-2 rated value • according to IEC 60947-2 rated value • according to IEC 60947-2 rated value supplies to IEC 60947-2 rated value according to IEC 60947-2 rated value		230 V	
at AC rated value value range of the supply voltage frequency operating voltage at DC rated value maximum 72 V Protection class protection class IP IP20, with connected conductors Switching capacity switching capacity current at CC according to IEC 60947-2 rated value according to EC 60947-2 rated value according to IEC 60947-2 rated val	Supply voltage		
value range of the supply voltage frequency operating voltage at DC rated value maximum Protection class protection class IP IP20, with connected conductors Switching capacity switching capacity current • at DC according to IEC 60947-2 rated value • according to EN 60898 rated value • according to IEC 60947-2 rated value • according to IEC 60947-2 rated value • according to IEC 60947-2 rated value energy limitation class Dissipation power loss [W] for rated value of the current at AC in hot operating state per pole Current operational current • at 35 °C rated value • at 40 °C rated value • at 45 °C rated value • at 45 °C rated value • at 50 °C rated value	supply voltage		
protection class IP IP20, with connected conductors Switching capacity switching capacity current • at DC according to IEC 60947-2 rated value • according to EN 60898 rated value • according to IEC 60947-2 rated value energy limitation class 3 Dissipation power loss [W] for rated value of the current at AC in hot operating state per pole Current operational current • at 35 °C rated value • at 40 °C rated value • at 45 °C rated value • at 50 °C rated value	 at AC rated value 	400 V	
Protection class protection class IP IP20, with connected conductors Switching capacity switching capacity current • at DC according to IEC 60947-2 rated value • according to EN 60898 rated value • according to IEC 60947-2 rated value • according to IEC 60947-2 rated value energy limitation class 3 Dissipation power loss [W] for rated value of the current at AC in hot operating state per pole Current operational current • at 35 °C rated value • at 40 °C rated value • at 45 °C rated value • at 50 °C rated value 11.73 A	value range of the supply voltage frequency	50/60 Hz	
protection class IP Switching capacity switching capacity current • at DC according to IEC 60947-2 rated value • according to EN 60898 rated value • according to IEC 60947-2 rated value • according to IEC 60947-2 rated value 20 kA energy limitation class 3 Dissipation power loss [W] for rated value of the current at AC in hot operating state per pole Current operational current • at 35 °C rated value • at 40 °C rated value • at 45 °C rated value • at 50 °C rated value	operating voltage at DC rated value maximum	72 V	
Switching capacity switching capacity current • at DC according to IEC 60947-2 rated value • according to EN 60898 rated value • according to IEC 60947-2 rated value • according to IEC 60947-2 rated value 20 kA energy limitation class 3 Dissipation power loss [W] for rated value of the current at AC in hot operating state per pole Current operational current • at 35 °C rated value • at 40 °C rated value • at 45 °C rated value • at 50 °C rated value	Protection class	Protection class	
switching capacity current • at DC according to IEC 60947-2 rated value • according to EN 60898 rated value • according to IEC 60947-2 rated value • according to IEC 60947-2 rated value energy limitation class 20 kA energy limitation class 3 Dissipation power loss [W] for rated value of the current at AC in hot operating state per pole Current operational current • at 35 °C rated value • at 40 °C rated value • at 45 °C rated value • at 50 °C rated value	protection class IP	IP20, with connected conductors	
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 according to EN 60898 rated value according to IEC 60947-2 rated value according to IEC	switching capacity current		
 according to IEC 60947-2 rated value energy limitation class Dissipation power loss [W] for rated value of the current at AC in hot operating state per pole Current operational current at 35 °C rated value at 40 °C rated value at 45 °C rated value at 45 °C rated value at 50 °C rated value at 50 °C rated value at 50 °C rated value 	 at DC according to IEC 60947-2 rated value 	15 kA	
energy limitation class Dissipation power loss [W] for rated value of the current at AC in hot operating state per pole Current operational current • at 35 °C rated value • at 40 °C rated value • at 45 °C rated value • at 50 °C rated value • at 50 °C rated value 11.73 A	 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 Current operational current • at 35 °C rated value • at 40 °C rated value • at 45 °C rated value • at 50 °C rated value		20 kA	
power loss [W] for rated value of the current at AC in hot operating state per pole Current operational current • at 35 °C rated value • at 40 °C rated value • at 45 °C rated value • at 50 °C rated value • at 50 °C rated value 12.05 A • at 50 °C rated value 11.73 A	energy limitation class	3	
operating state per pole Current operational current • at 35 °C rated value • at 40 °C rated value • at 45 °C rated value • at 50 °C rated value	Dissipation		
operational current • at 35 °C rated value • at 40 °C rated value • at 45 °C rated value • at 50 °C rated value 12.05 A • at 50 °C rated value 11.73 A		1.4 W	
 at 35 °C rated value at 40 °C rated value at 45 °C rated value at 50 °C rated value at 50 °C rated value at 50 °C rated value 	Current		
 at 40 °C rated value at 45 °C rated value at 50 °C rated value 12.38 A 12.05 A 11.73 A 	operational current		
 at 45 °C rated value at 50 °C rated value 12.05 A 11.73 A 	 at 35 °C rated value 	13 A	
• at 50 °C rated value 11.73 A		12.38 A	
	 at 45 °C rated value 	12.05 A	
• at 55 °C rated value 11.38 A			
	 at 55 °C rated value 	11.38 A	

at CO °C mated	44.02.4
• at 60 °C rated value	11.02 A
at AC rated value suitability for operation	13 A Machanical engineering / industry
suitability for operation	Mechanical engineering / industry
Product details	
product component • combined terminal top	Yes
combined terminal top combined terminal bottom	Yes
neutral conductor switching	No
product feature	110
 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 AC according to UL 1077 and CSA C22.2 No.235	5 kA
Connections	
connectable conductor cross-section solid	
• minimum	0.75 mm²
• maximum	35 mm²
connectable conductor cross-section stranded	0.75
• minimum	0.75 mm ²
maximum	35 mm ²
connectable conductor cross-section finely stranded with core end processing • minimum	0.75 mm²
• maximum	25 mm ²
AWG number as coded connectable conductor cross	25 11111
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	31 IDI III
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	166 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 / UL1077
vibration resistance according to IEC 60068-2-6	±1mm at 5 to 25Hz; 50m/s² at 25 to 150Hz
ambient temperature during operation	40 °C
• minimum	-40 °C 70 °C
maximum ambient temperature during storage	70 0
ambient temperature during storage • minimum	-40 °C
maximum	75 °C
number of test cycles for environmental testing according to IEC 60068-2-30	6
Certificates	
reference code	

- according to EN 61346-2
- according to IEC 81346-2

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General Product Approval



Confirmation







Miscellaneous

General Product Approval

EMC

Declaration of Conformity

KC



Miscellaneous







Test Certificates

Marine / Shipping

Special Test Certificate

Miscellaneous









Marine / Shipping

other

Railway



Environmental Confirmations **Miscellaneous**

Vibration and Shock

Confirmation

Further information

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=5SY4113-7

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

https://support.industry.siemens.com/cs/ww/en/ps/5SY4113-7

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

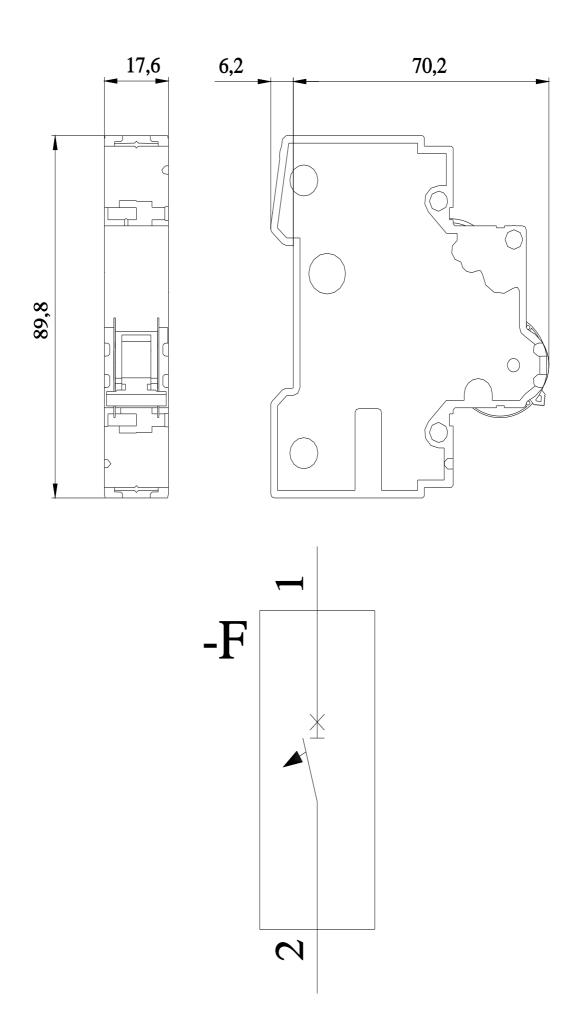
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4113-7

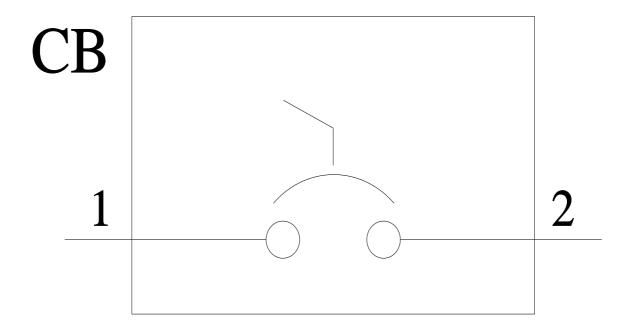
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://www.siemens.com/specifications





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