## **SIEMENS**

Data sheet 5SY4102-7



Miniature circuit breaker 230/400 V 10kA, 1-pole, C, 2A, D=70 mm

product brand name product designation Minature circuit breaker  General technical data  number of poles	Model	
Ceneral technical data	product brand name	SENTRON
number of poles design of pole thipping characteristic class mechanical service life (operating cycles) typical overvoltage category degree of pollution 3  Voltago  type of voltage of the operating voltage insulation voltage (UII) • 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 value supply voltage with single-phase operation at AC rated value value supply voltage supply voltage  supply voltage  • at AC rated value • at DC rated value • at DC rated value • at DC rated value  sulue 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 IEC 60947-	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 DC rated value • at DC rated value value range of the supply voltage frequency operating voltage at DC rated value maximum 72 V  Protection class IP  protection class IP  switching capacity switching capacity current • at DC according to IEC 60947-2 rated value • according to TEC 60947-2 rated value • a	General technical data	
tripping characteristic class mechanical service life (operating cycles) typical overvoltage category III 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  **Supply voltage**  **Supply voltage**  **Supply voltage**  • at AC rated value • at DC rated value • at DC rated value • at DC rated value  **supply voltage frequency operating voltage at DC rated value maximum  **72 V**  **Protection class **protection class IP**  **protection class IP**  **switching capacity current • at DC according to IEC 60947-2 rated value • according to	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  supply voltage  at AC rated value 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 IP  Protection class IP  Switching capacity current  • at DC according to IEC 60947-2 rated value 15 kA  • according to IEC 60947-2 rated value 25 kA  • according to IEC 60947-2 rated value 35 kA  energy limitation class 3  Dissipation  power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation Mechanical engineering / industry  Product details  product component  • combined terminal top Yes  • combined terminal bottom Yes	design of pole	1P
overvoltage category 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  **Supply voltage  • at AC rated value • at DC rated value • according to lEC 60947-2 rated value • at DC according to IEC 60947-2 rated value • according to IEC 609	tripping characteristic class	С
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 value  Supply voltage  supply voltage  supply voltage  supply voltage  • at AC rated value • at DC rated value • at DC 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 current • at DC according to IEC 60947-2 rated value • according to IEC 60947-2 rated v	mechanical service life (operating cycles) typical	10 000
type of voltage of the operating 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  • at AC rated value • at DC rated value • at DC rated value • at DC rated value  • at DC rated value  • at DC rated value  • at DC rated value  • at DC rated value  • at DC rated value  • at DC rated value  • 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 IEC 60947-2 r	overvoltage category	III
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  supply voltage  • at AC rated value • at DC rated value • at DC 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 DC according to IEC 60947-2 rated value • at DC according to IEC 60947-2 rated value • a	degree of pollution	3
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  supply voltage  • at AC rated value  • at DC rated value  • at DC rated value  • at DC 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 IEC 60947-2 rated value • according to IEC 60947-2 rated value  • according to IEC 60947	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  supply voltage      at AC rated value     at DC 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	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  supply voltage      • at AC rated value	insulation voltage (Ui)	
supply voltage with single-phase operation at AC rated value  Supply voltage  supply voltage  • at AC rated value	<ul> <li>with single-phase operation at AC rated value</li> </ul>	440 V
supply voltage supply voltage  • at AC rated value • at DC 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 DC according to IEC 60947-2 rated value • according to EN 60898 rated value • according to IEC 60947-2 rated value saccording to IEC 60947-2 rated value • according to IEC 60947-2 rated value • according to IEC 60947-2 rated value saccording to IEC 60947-2 rated value • according to IEC 60947-2 rated value saccording to IEC 60947-2 rated value saccording to IEC 60947-2 rated value • according to IEC 60947-2 rated value saccording to IEC 60947-2 rated value saccor		440 V
supply voltage  • at AC rated value  • at DC 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  • acc		230 V
at AC rated value at DC rated value but DC rated value cange 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 CD according to IEC 60947-2 rated value according to IEC 60947-1 rated value according to IEC 60947-2 rated value according to IEC 60947-2 rated value according to IEC 60947-1 rated value according to IEC 60947-2 rated value according to IEC 60947-2 rated value according to IEC 60947-1 rated value according to IEC 60947-2 rated value according to IEC 60947-1 rated value according to IEC 60947-2 rated value according to IEC 60947-2 rated value according to IEC 60947-1 rated value according to IEC 60947-2 rated value acc	Supply voltage	
at DC 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 DC according to IEC 60947-2 rated value 35 kA energy limitation class  Dissipation  power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation  Mechanical engineering / industry  Product details  product component combined terminal top Yes combined terminal bottom Yes	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  site in the conductors  Dissipation  power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation  Product details  product component • combined terminal top • combined terminal bottom  Yes  Yes	<ul> <li>at AC rated value</li> </ul>	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 • according to IEC 60947-2 rated value solution class  Dissipation  power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation  Product details  product component • combined terminal top • combined terminal bottom  Yes  Yes		60 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 9 according to IEC 60947-2 rated value 10 kA 9 according to IEC 60947-2 rated value 35 kA energy limitation class 3  Dissipation  power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation  Mechanical engineering / industry  Product details  product component • combined terminal top • combined terminal bottom  Yes  Yes	value range of the supply voltage frequency	
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 35 kA energy limitation class 3  Dissipation  power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation  Product details  product component • combined terminal top • combined terminal bottom  Yes	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 • according to IEC 60947-2 rated value 9 as kA energy limitation class  Dissipation  power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation  Product details  product component • combined terminal top • combined terminal bottom  Yes	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  • according to IEC 60947-2 rated value  35 kA  energy limitation class  3  Dissipation  power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation  Product details  product component  • combined terminal top  • combined terminal bottom  15 kA  10 kA  11 kA  12 kA  13 kA  14 kA  15 kA  16 kA  17 kA  18 kA  19 kA  10 kA  10 kA  11 kA  11 kA  12 kA  13 kA  14 kA  15 kA  16 kA  16 kA  17 kA  18 kA  19 kA  10 kA  10 kA  11 kA  11 kA  12 kA  13 kA  14 kA  15 kA  16 kA  16 kA  17 kA  18 kA  18 kA  19 kA  10 kA  10 kA  11 kA  10 kA	protection class IP	IP20, with connected conductors
<ul> <li>at DC according to IEC 60947-2 rated value</li> <li>according to EN 60898 rated value</li> <li>according to IEC 60947-2 rated value</li> <li>according to IEC 60947-2 rated value</li> <li>stA</li> <li>energy limitation class</li> <li>Dissipation</li> <li>power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation</li> <li>Mechanical engineering / industry</li> <li>Product details</li> <li>product component</li> <li>combined terminal top</li> <li>combined terminal bottom</li> <li>Yes</li> </ul>	Switching capacity	
<ul> <li>according to EN 60898 rated value</li> <li>according to IEC 60947-2 rated value</li> <li>as kA</li> <li>energy limitation class</li> <li>Dissipation</li> <li>power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation</li> <li>Mechanical engineering / industry</li> <li>Product details</li> <li>product component</li> <li>combined terminal top</li> <li>combined terminal bottom</li> <li>Yes</li> </ul>	0 , ,	
<ul> <li>according to IEC 60947-2 rated value energy limitation class</li> <li>Dissipation</li> <li>power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation</li> <li>Product details</li> <li>product component</li> <li>combined terminal top</li> <li>combined terminal bottom</li> <li>35 kA</li> <li>36</li> <li>Mechanical engineering / industry</li> <li>Yes</li> <li>combined terminal bottom</li> </ul>		15 kA
energy limitation class  Dissipation  power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation  Product details  product component  • combined terminal top • combined terminal bottom  3  Mechanical engineering / industry  Yes		10 kA
Dissipation  power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation  Product details  product component  • combined terminal top • combined terminal bottom  • combined terminal bottom  • combined terminal bottom		
power loss [W] for rated value of the current at AC in hot operating state per pole suitability for operation  Product details  product component  • combined terminal top • combined terminal bottom  1.2 W  Mechanical engineering / industry  Yes		3
operating state per pole suitability for operation  Mechanical engineering / industry  Product details  product component  • combined terminal top • combined terminal bottom  Yes		
Product details  product component  • combined terminal top  • combined terminal bottom  Yes		1.2 W
product component  • combined terminal top  • combined terminal bottom  Yes  Yes	suitability for operation	Mechanical engineering / industry
<ul> <li>combined terminal top</li> <li>combined terminal bottom</li> <li>Yes</li> </ul>	Product details	
• combined terminal bottom Yes	product component	
	<ul> <li>combined terminal top</li> </ul>	Yes
• neutral conductor switching No	<ul> <li>combined terminal bottom</li> </ul>	Yes
	<ul> <li>neutral conductor switching</li> </ul>	No

product feature • properties for main switches in accordance with EN Yes 60204-1 • halogen-free Yes • sealable Yes • silicon-free Yes product extension installable supplementary devices Yes Short circuit short-circuit current breaking capacity (Icn) 5 kA • at AC according to UL 1077 and CSA C22.2 No.235 connectable conductor cross-section solid 0.75 mm<sup>2</sup> • minimum maximum 35 mm<sup>2</sup> connectable conductor cross-section stranded 0.75 mm<sup>2</sup> • minimum 35 mm<sup>2</sup> connectable conductor cross-section finely stranded with core end processing 0.75 mm<sup>2</sup> minimum • maximum 25 mm<sup>2</sup> AWG number as coded connectable conductor cross section 18 • minimum • 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 Any Mechanical Design height 90 mm width 18 mm depth 76 mm installation depth 70 mm number of modular width units 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 IEC / EN 60898-1, IEC / EN 60947-2 / UL1077 standard 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 70 °C maximum ambient temperature during storage -40 °C • minimum maximum 75 °C number of test cycles for environmental testing according to IEC 60068-2-30 **General Product Approval** 

Confirmation









**Miscellaneous** 

General Product Approval EMC Declaration of Conformity



**Miscellaneous** 







**Test Certificates** 

Marine / Shipping

**Miscellaneous** 

Special Test Certificate









Marine / Shipping

other

Railway

Environment



**Miscellaneous** 

Confirmation

Confirmation

Vibration and Shock

Environmental Confirmations

## **Further information**

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=5SY4102-7

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

https://support.industry.siemens.com/cs/ww/en/ps/5SY4102-7

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

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=5SY4102-7

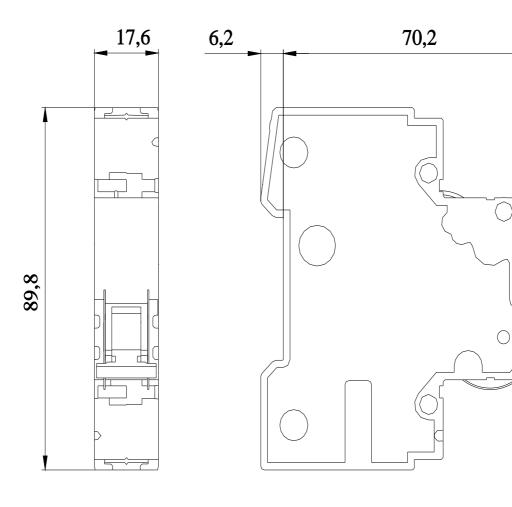
**CAx-Online-Generator** 

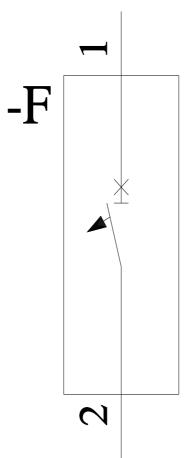
http://www.siemens.com/cax

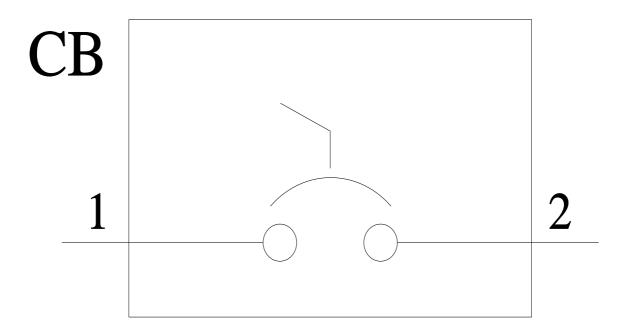
Tender specifications

http://www.siemens.com/specifications









last modified: 2/7/2023 🖸

