## **SIEMENS**

Data sheet 5SY4103-8



Miniature circuit breaker 230/400 V 10kA, 1-pole, D, 3 A, D=70 mm

product transf name product designation Miniature circuit breaker  Ceneral technical data		
product designation Miniature circuit breaker  General technical data number of poles 1 design of pole 1P tripping characteristic class D mechanical service life (operating cycles) typical 10 000 overvoltage category III degree of pollution 3 Voltage Why e of voltage of the operating voltage AC insulation voltage (II) • with single-phase operation at AC rated value 440 V • with multi-phase operation at AC rated value 440 V supphy voltage with single-phase operation at AC rated value 230 V Supphy voltage with single-phase operation at AC rated value 400 V • at DC rated value 60 V value range of the supphy voltage frequency 50/60 Hz operating voltage at DC rated value maximum 72 V Protection class IP Protection class IP IP20, with connected conductors  witching capacity switching capacity current • at DC according to IEC 60947-2 rated value 15 kA • according to IEC 60947-2 rated value 35 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 49es conclined terminal top 49es combined terminal botton 49es conclined terminal botton 49es combined terminal botton 49es	Model	
Concrat technical data  number of poles 1 design of pole 1P 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 230 V  Supply voltage with single-phase operation at AC rated value 230 V  Supply voltage  supply voltage  • at AC rated value 400 V  • at DC rated value Makinum 72 V  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  Dissipation  power loss [VI] for rated value of the current at AC in hot operating tate per pole  sultage tate of the capacity of the current at AC in hot operating tate per pole  sultability for operation Product details  Product of the surperation Mechanical engineering / industry  Product details  Product of the surperation Yes  • combined terminal bottom Yes • enemtal conductor switching  Product feature	product brand name	SENTRON
rumber of poles 1 design of pole 1P 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 (II)  • 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  • at AC rated value 400 V • at DC rated value 60 V suburature 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 15 kA according to IEC 60947-2 rated value 35 kA  Dissipation  power loss [W] for rated value of the current at AC in hot operating voltage product details  product details  product details  product details  product component • combined terminal bottom 4 Se • combined terminal bottom 4 Se • combined terminal bottom 5 Se • combined terminal bottom 6 Se • combined terminal bottom 7 Se • combined terminal bottom 8 Se • combined terminal bottom 8 Se • combined terminal bottom 9 Se • combined terminal bottom	product designation	Miniature circuit breaker
design of pole 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 230 V  Supply voltage with single-phase operation at AC rated value 230 V  Supply voltage  • at AC rated value 400 V  • at DC rated value 60 V  value range of the supply voltage frequency 50/80 Hz  operating voltage at DC rated value maximum 72 V  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 IEC 60947-2 rated value 35 kA  Dissipation  power loss [W] for rated value of the current at AC in hot operating state per pole  sultability for operation Mechanical engineering / industry  Product details    Product details   Product	General technical data	
tripping characteristic class mechanical service life (operating cycles) typical mechanical service life (operating cycles) typical overvoltage category lill degree of pollution 3  Voltage type of voltage of the operating voltage with single-phase operation at AC rated value with single-phase operation at AC rated value with multi-phase operation at AC rated value with multi-phase operation at AC rated value auphy voltage with single-phase operation at AC rated value 30 V  Supply voltage at AC rated value at AC rated value at AC rated value for V 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 switching capacity switching capacity ourent at DC according to IEC 60947-2 rated value according to IEC 60947-2 rated value 15 kA according to IEC 60947-2 rated value 35 kA  Dissipation  power loss IM 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 top combined terminal top combined terminal bottom combined terminal co	number of poles	1
mechanical service life (operating cycles) typical overvoltage category degree of pollution 3  **Voltage**  type of voltage of the operating voltage type of voltage of the operating voltage  **with single-phase operation at AC rated value **with multi-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 frequency **supply voltage at DC rated value maximum **protection class  **protection class IP  **Protection class  **protection class IP  **protection class I	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 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 maximum **72 V  **Protection class **protection class IP **Switching capacity current **at DC according to IEC 60947-2 rated value **at DC according to IEC 60947-2 rated value **at DC according to IEC 60947-2 rated value **according to IEC 60947-2 rated value	tripping characteristic class	D
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  ■ at AC rated value  ● at AC rated value  ● at C rated value  ● at DC rated value  ● at DC rated value  ● at DC rated value  ■ Supply voltage frequency  poperating voltage at DC rated value maximum  72 V  Protection class  protection class IP  Switching capacity current  ● at DC according to IEC 60947-2 rated value  ■ be according to IEC 60947-2 rated value  ■ caccrding to IEC 60947-2 rated value  ■ according to IEC 60947-2 rated value  ■ be according to IEC 60947-2 rated value  ■ combined terminal top  ■ combined terminal top  ■ combined terminal top  ■ combined terminal bottom	mechanical service life (operating cycles) typical	10 000
Voltage type of voltage of the operating voltage type of 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  • 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  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 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  Newer 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 • neutral conductor switching  No	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 230 V  Supply voltage supply voltage • at AC 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 switching capacity switching to EN 60898 rated value • at DC according to EC 60947-2 rated value • according to EC 60947-0 rated value • according to EC 60	degree of pollution	3
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  • 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 • 35 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 details  product detaure	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	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     supply voltage	insulation voltage (Ui)	
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 switching capacity or IP20, with connected conductors  Suitching capacity or IP20, with connecte	<ul> <li>with single-phase operation at AC rated value</li> </ul>	440 V
Supply voltage  • at AC rated value	<ul> <li>with multi-phase operation at AC rated value</li> </ul>	440 V
supply voltage  • at AC rated value  • 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 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  13 kA  • according to IEC 60947-2 rated value  14 kA  • according to IEC 60947-2 rated value  15 kA  • according to IEC 60947-2 rated value  16 kA  • according to IEC 60947-2 rated value  17 kA  • according to IEC 60947-2 rated value  18 kA  • according to IEC 60947-2 rated value  19 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  19 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  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  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  10 kA  • according to IEC 60947-2 rated value  10 kA  • according to IEC 60947-2 rated value	supply voltage with single-phase operation at AC rated value	230 V
at AC rated value 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  Switching capacity  switching capacity  switching capacity current at DC according to IEC 60947-2 rated value 15 kA according to IEC 60947-2 rated value 10 kA according to IEC 60947-2 rated value 35 kA  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 neutral conductor switching No	Supply voltage	
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  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 35 kA  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     neutral conductor switching No	supply voltage	
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 10 kA • according to IEC 60947-2 rated value 35 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 • neutral conductor switching No  product feature	<ul> <li>at AC rated value</li> </ul>	400 V
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 60947-2 rated value  10 kA  • according to IEC 60947-2 rated value  35 kA  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 • neutral conductor switching  product feature	at DC rated value	60 V
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  10 kA • according to IEC 60947-2 rated value  235 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 • neutral conductor switching  product feature	value range of the supply voltage frequency	50/60 Hz
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 35 kA  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  • neutral conductor switching  product feature	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  10 kA  • according to IEC 60947-2 rated value  35 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 • neutral conductor switching  product feature	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  10 kA  • according to IEC 60947-2 rated value  25 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  • neutral conductor switching  product feature	protection class IP	IP20, with connected conductors
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 35 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 neutral conductor switching  product feature	Switching capacity	
according to EN 60898 rated value  according to IEC 60947-2 rated value  35 kA  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 eneutral conductor switching  product feature	switching capacity current	
according to IEC 60947-2 rated value  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     neutral conductor switching  product feature  35 kA  1.2 W  yes  No	<ul> <li>at DC according to IEC 60947-2 rated value</li> </ul>	15 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 • neutral conductor switching  product feature	<ul> <li>according to EN 60898 rated value</li> </ul>	10 kA
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  • neutral conductor switching  product feature	<ul> <li>according to IEC 60947-2 rated value</li> </ul>	35 kA
operating state per pole suitability for operation  Product details  product component  • combined terminal top • combined terminal bottom • neutral conductor switching  product feature	Dissipation	
Product details  product component		1.2 W
product component	suitability for operation	Mechanical engineering / industry
<ul> <li>combined terminal top</li> <li>combined terminal bottom</li> <li>neutral conductor switching</li> <li>product feature</li> </ul> Yes No	Product details	
<ul> <li>combined terminal bottom</li> <li>neutral conductor switching</li> <li>product feature</li> </ul> Yes No	product component	
● neutral conductor switching No product feature	<ul> <li>combined terminal top</li> </ul>	Yes
product feature	<ul> <li>combined terminal bottom</li> </ul>	Yes
	neutral conductor switching	No
properties for main switches in accordance with EN  Yes	product feature	
	<ul> <li>properties for main switches in accordance with EN</li> </ul>	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)	
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	
• minimum	0.75 mm <sup>2</sup>
maximum	35 mm²
connectable conductor cross-section finely stranded with core end processing	
• minimum	0.75 mm <sup>2</sup>
• 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	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	165 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	
minimum	-40 °C
• maximum	70 °C
ambient temperature during storage	
	40 °C
• minimum	-40 °C
maximum  number of test cycles for environmental testing according to IEC  60068 2 30	75 °C 6
60068-2-30	
General Product Approval	



Confirmation







Miscellaneous

General Product Approval	EMC	Declaration of Conformity	Test Certificates
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**Miscellaneous** 







Special Test Certificate

**Test Certificates** 

Marine / Shipping

**Miscellaneous** 











other		Railway		Environment
Confirmation	Miscellaneous	Vibration and Shock	Confirmation	Environmental Con- firmations

## 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=5SY4103-8

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

https://support.industry.siemens.com/cs/ww/en/ps/5SY4103-8

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

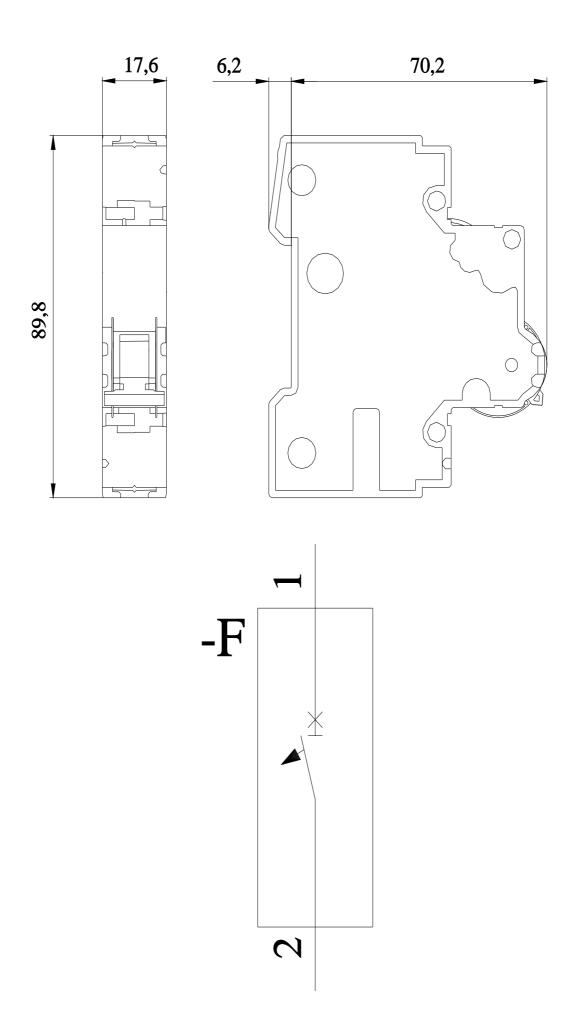
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=5SY4103-8

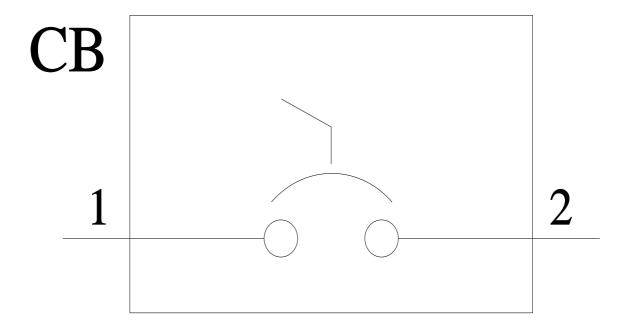
**CAx-Online-Generator** 

http://www.siemens.com/cax

Tender specifications

http://www.siemens.com/specifications





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