SIEMENS

Data sheet 5SY4102-7

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



Model	
Product brand name	SENTRON
Product designation	Miniature circuit breaker
General technical data	
Number of poles	1
Number of poles / Note	1P
Tripping characteristic class	С
circuit-breaker / Design	5SY4
Mechanical service life (switching cycles) / typical	10 000
Overvoltage category	III
Degree of pollution	3
Voltage	
Insulation voltage	
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

Type of voltage Operating current / at AC / rated value Supply voltage • at AC / rated value Operating voltage • at DC / rated value / maximum Supply voltage frequency • rated value Frotection class Protection class IP IP20, with connected conductors Switching capacity Switching capacity Switching capacity Switching capacity current • at DC / acc, to IEC 60947-2 / rated value • acc, to EN 60998 / rated value • acc, to EC 60947-2 / rated value • acc, to EC 60947-2 / rated value • acc, to IEC 60947-2 / rated value Prower 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 feature / Touch protection Yes Product component • combined terminal bottom Yes Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free • sealable • silicon-free • Yes Product extension / can be installed / supplementary devices Shot circuit Breaking capacity short-circuit current (Icn) • at AC / acc, to UL 1077 and CSA C22.2 No.235 Connectable conductor cross-section / solid	Supply voltage	
Supply voltage • at AC / rated value Operating voltage • at DC / rated value / maximum 72 V Supply voltage frequency • rated value Frotection class P Frotection class P IP20, with connected conductors Switching capacity Switching capacity Switching capacity current • at DC / acc. to IEC 60947-2 / rated value • acc. to EN 60898 / rated value • acc. to EN 60898 / rated value • acc. to IEC 60947-2 / rated value • ac	Type of voltage	AC
at AC / rated value Act DC / rated value / maximum 72 V Supply voltage frequency • rated value ** rated value ** rated value ** rated value ** rated value Protection class Protection class IP Protection class IP IP20, with connected conductors Switching capacity Switching capacity Switching capacity Switching capacity Switching capacity current • at DC / scc. to IEC 60947-2 / rated value • acc. to EN 60998 / rated value • acc. to IEC 60947-2 / rated value • rated value of the current / at AC / in hot operating state / per pote Suitability for operation Product feature Product feature / Touch protection Product feature / Touch protection Product component • combined terminal bottom Product feature • Properties for main switches in accordance with EN 60204-1 • hatogen-free • sealable • sealable • silcon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 Short circuit	Operating current / at AC / rated value	2 A
Operating voltage • at DC / rated value / maximum Supply voltage frequency • rated value Frotection class Protection class IP IP20, with connected conductors Switching capacity Switching capacity Switching capacity current • at DC / acc, to IEC 60947-2 / rated value • acc, to IEC 60947-2 / rated value Prower 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 fraction / neutral conductor switching Product feature / Touch protection Yes Product traction / neutral conductor switching Product details Product details Product details Product details Product details Product component • combined terminal top • combined terminal bottom Yes Product feature • Properties for main switches in accordance with EN 60204-1 • hatogen-free • sealable • silicon-free Yes Yes Yes Yes Yes Yes Yes	Supply voltage	
• at DC / rated value / maximum Supply voltage frequency • rated value Fotection class Protection class IP IP20, with connected conductors Switching capacity Switching capacity Switching capacity current • at DC / acc. to IEC 60947-2 / rated value • acc. to IEC 60947-2 / rated value	• at AC / rated value	400 V
Supply voltage frequency	Operating voltage	
Protection class Protection class IP IP20, with connected conductors Switching capacity Switching capacity Switching capacity current • at DC / acc, to IEC 60947-2 / rated value • acc, to IEC 60947-2 / rate	• at DC / rated value / maximum	72 V
Protection class Protection class IP Switching capacity Switching capacity current • at DC / acc. to IEC 60947-2 / rated value • acc. to EN 60898 / rated value • acc. to IEC 60947-2 / rated value • acc. to IEC 60947-2 / rated value State	Supply voltage frequency	
Protection class IP Switching capacity Switching capacity current • at DC / acc. to IEC 60947-2 / rated value • acc. to EN 60998 / rated value • acc. to IEC 60947-2 / rated value • 10 kA • acc. to IEC 60947-2 / rated value 15 kA • 10 kA •	• rated value	50/60 Hz
Switching capacity at DC / acc. to IEC 60947-2 / rated value acc. to EN 60898 / rated value acc. to IEC 60947-2 / rated value acc. to IEC 60947-2 / rated value acc. to IEC 60947-2 / rated value 35 kA Energy limiting 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 details Product feature / Touch protection Product reminal top combined terminal top combined terminal bottom Product feature Properties for main switches in accordance with EN 60204-1 halogen-free sealable slicon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) at AC / acc. to UL 1077 and CSA C22.2 No.235 5 kA Connections	Protection class	
Switching capacity current • at DC / acc. to IEC 60947-2 / rated value • acc. to EN 60898 / rated value • acc. to IEC 60947-2 / rated value • Document of the current / at AC / in hot operating state / per pole Suitability for operation Mechanical engineering / industry Product details Product dunction / neutral conductor switching Product function / neutral conductor switching Product component • combined terminal top • combined terminal bottom Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free • sealable • sealable • sealable • silicon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 5 kA	Protection class IP	IP20, with connected conductors
Switching capacity current • at DC / acc. to IEC 60947-2 / rated value • acc. to EN 60898 / rated value • acc. to IEC 60947-2 / rated value • Document of the current / at AC / in hot operating state / per pole Suitability for operation Mechanical engineering / industry Product details Product dunction / neutral conductor switching Product function / neutral conductor switching Product component • combined terminal top • combined terminal bottom Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free • sealable • sealable • sealable • silicon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 5 kA	Switching capacity	
acc. to EN 60998 / rated value acc. to IEC 60947-2 / rated value 35 kA Energy limiting 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 details Product feature / Touch protection Product component combined terminal top combined terminal bottom Product feature Properties for main switches in accordance with EN 60204-1 halogen-free sealable silicon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) at AC / acc. to UL 1077 and CSA C22.2 No.235 Short connections		
acc. to IEC 60947-2 / rated value Energy limiting 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 feature / Touch protection Product reature / Touch protection Product component • combined terminal top • combined terminal bottom Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free • sealable • sealable • sealable • silicon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 Short connections	• at DC / acc. to IEC 60947-2 / rated value	15 kA
acc. to IEC 60947-2 / rated value Energy limiting 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 function / neutral conductor switching Product component • combined terminal top • combined terminal bottom Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free • sealable • sealable • sealable • sealable • Troduct extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 Short connections	• acc. to EN 60898 / rated value	10 kA
Energy limiting 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 function / neutral conductor switching Product feature / Touch protection Product component • combined terminal top • combined terminal bottom Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free • sealable • sealable • sealable • sealable • Troduct extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 Table 1.2 W 1		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 function / neutral conductor switching Product feature / Touch protection Product component • combined terminal top • combined terminal bottom Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free • sealable • sealable • sealable • sealable • sealable • sealable / yes Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 5 kA Connections		3
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 function / neutral conductor switching Product feature / Touch protection Product component • combined terminal top • combined terminal bottom Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free • sealable • silicon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 1.2 W		
/ in hot operating state / per pole Suitability for operation Mechanical engineering / industry Product details Product function / neutral conductor switching No Product cature / Touch protection Yes Product component • combined terminal top Yes • combined terminal bottom Yes Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free Yes • sealable Yes • salable Yes Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 SkA Connections	•	1.2 \
Product details Product function / neutral conductor switching Product feature / Touch protection Product component • combined terminal top • combined terminal bottom Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free • sealable • silicon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 SkA Connections		1.2 VV
Product function / neutral conductor switching Product feature / Touch protection Product component • combined terminal top • combined terminal bottom Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free • sealable • sealable • silicon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 No Yes Yes ShA Connections	Suitability for operation	Mechanical engineering / industry
Product feature / Touch protection Product component • combined terminal top • combined terminal bottom Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free • sealable • silicon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 ShA Connections	Product details	
Product component • combined terminal top • combined terminal bottom Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free • sealable • sealable • silicon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 Short connections	Product function / neutral conductor switching	No
combined terminal top combined terminal bottom Product feature Properties for main switches in accordance with EN 60204-1 halogen-free sealable sealable silicon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) at AC / acc. to UL 1077 and CSA C22.2 No.235 Feature Yes SkA Connections	Product feature / Touch protection	Yes
combined terminal bottom Product feature Properties for main switches in accordance with EN 60204-1 halogen-free sealable silicon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) at AC / acc. to UL 1077 and CSA C22.2 No.235 Connections	Product component	
Product feature • Properties for main switches in accordance with EN 60204-1 • halogen-free Yes • sealable Yes • silicon-free Yes Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 Connections	 combined terminal top 	Yes
Properties for main switches in accordance with EN 60204-1 halogen-free Yes sealable Yes silicon-free Yes Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) at AC / acc. to UL 1077 and CSA C22.2 No.235 Connections	 combined terminal bottom 	Yes
EN 60204-1 • halogen-free • sealable • silicon-free Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 Connections	Product feature	
sealable silicon-free Yes Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) at AC / acc. to UL 1077 and CSA C22.2 No.235 Connections		Yes
* silicon-free Yes Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) * at AC / acc. to UL 1077 and CSA C22.2 No.235 Connections Yes Yes Yes Yes	• halogen-free	Yes
Product extension / can be installed / supplementary devices Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 Connections Yes Yes	• sealable	Yes
Short circuit Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 Connections	• silicon-free	Yes
Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 5 kA Connections	•	Yes
Breaking capacity short-circuit current (Icn) • at AC / acc. to UL 1077 and CSA C22.2 No.235 5 kA Connections	Short circuit	
Connections		
	• at AC / acc. to UL 1077 and CSA C22.2 No.235	5 kA
Connectable conductor cross-section / solid		
	Connectable conductor cross-section / solid	

• minimum	0.75 mm ²
• 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	Any
Mechanical Design	
Height	90 mm
Width	18 mm
Depth	76 mm
Installation depth	70 mm
Number of width units	1
Mounting type	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
Ambient temperature	
• minimum	-40 °C
• maximum	70 °C
Ambient temperature / during storage	
• minimum	-40 °C
• maximum	75 °C
Number of test cycles / for environmental testing / acc. to IEC 60068-2-30	6
Certificates	
Reference code	
• acc. to DIN EN 61346-2	F

F

General Product Approval











Miscellaneous

General	Declaration of	Test Certificates	Shipping Approval
Product Ap-	Conformity		
proval			

KC



Miscellaneous

Special Test Certificate





Sh	ipp	ing	App	roval
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Railway





Confirmation

Vibration and Shock

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=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

