SIEMENS

Data sheet 3NP1143-1JC10

SENTRON, Fuse switch disconnector 3NP1, 3-pole, NH1, 250 A, for Rittal busbar system 60 mm, flat terminal, Cover level 32/70 mm



Model	
Product brand name	SENTRON
Product designation	3NP1 fuse switch disconnector
Design of the product	cover level 32/70 mm
Busbar design	busbar thickness 5 or 10 mm
Design of the safety monitoring	Without
Design of the operating mechanism	Cover handle
Design of the load switch / Strip form	No
Type of the driving mechanism / motor drive	No

General technical data	
Number of poles	3
Type of device	For Rittal 60 mm busbar system
Size of disconnecting link	1 and 0
Size of fuse link	NH0, NH1
Continuous current / at 35 °C / rated value	250 A
Let-through current / with closed switch / maximum permissible	32 kA
cut-off value I**2t,max. / 500 V	780 000 A²·s
Power factor	

• at AC-23 B • with capacitive load • vith capacitive load	● at AC-22 B	0.65
circuit-breaker / Design 3NP11 Mechanical service life (switching cycles) / typical 1 600 Fuse system LV HRC fuse Voltage Insulation voltage / rated value 690 V Power factor / at AC-21 B 0.95 Surge voltage resistance / rated value 8 kV Protection class IP • with closed switch / with cover or cable lug cover • with closed switch / without cover or cable lug cover • on the front IP40 • open IP20 Electricity Continuous current • rated value 250 A 245 A 250 C / rated value 233 A 250 C / rated value 233 A 255 C / rated value 255 C	● at AC-23 B	0.45
Mechanical service life (switching cycles) / typical 1 600	with capacitive load	-0.25
Voltage	circuit-breaker / Design	3NP11
Insulation voltage / rated value 690 V Power factor / at AC-21 B Surge voltage resistance / rated value 8 kV Protection class Protection class IP • with closed switch / without cover or cable lug cover • with closed switch / without cover or cable lug cover • with closed switch / without cover or cable lug cover • on the front IP40 • open IP20 Electricity Continuous current • rated value 250 A • at 40 °C / rated value 245 A • at 45 °C / rated value 233 A • at 55 °C / rated value 233 A Let-through current / with high-speed activation / maximum permissible Let-through current / lc / maximum permissible • 400 V • 500V cut-off value I**2t,max. / 400 V 780 000 A*s Main circuit Operating voltage • at AC / rated value / maximum • at DC / rated value / maximum	Mechanical service life (switching cycles) / typical	1 600
Insulation voltage / rated value	Fuse system	LV HRC fuse
Power factor / at AC-21 B 0.95	Voltage	
Surge voltage resistance / rated value 8 kV Protection class Protection class IP • with closed switch / with cover or cable lug cover • with closed switch / without cover or cable lug cover • with closed switch / without cover or cable lug cover • on the front IP40 • open IP20 Electricity Continuous current • rated value 250 A • at 40 °C / rated value 245 A • at 45 °C / rated value 233 A • at 55 °C / rated value 233 A • at 55 °C / rated value 233 A Let-through current / with high-speed activation / maximum permissible Let-through current / lc / maximum permissible Let-through current / lc / maximum permissible • 400 V • 500V cut-off value I**2t,max. / 400 V Main circuit Operating voltage • at AC / rated value / maximum • at DC / rated value / maximum • at DC / rated value / maximum • at DC / rated value / maximum • at 400 V / maximum • at 500 V / maximum 72 A • at 500 V / maximum	Insulation voltage / rated value	690 V
Protection class IP • with closed switch / with cover or cable lug cover • with closed switch / without cover or cable lug cover • on the front IP40 • open IP20 Electricity Continuous current • rated value 250 A • at 40 °C / rated value 245 A • at 45 °C / rated value 233 A • at 55 °C / rated value 233 A Let-through current / with high-speed activation / maximum permissible Let-through current / lc / maximum permissible Let-through current / lc / maximum permissible a 400 V • 500V Cut-off value I**2t_max. / 400 V Auxiliary circuit Auxiliary circuit Page 1840 Page 245 Page 255 Page 256 Pa	Power factor / at AC-21 B	0.95
Protection class IP with closed switch / with cover or cable lug cover with closed switch / without cover or cable lug cover with closed switch / without cover or cable lug cover on the front pepen Electricity Continuous current rated value at 40 °C / rated value at 50 °C / rated value at 55 °C / rated value 233 A Let-through current / with high-speed activation / maximum permissible Let-through current / c / maximum permissible Let-through current / c / maximum permissible at 400 V 500 V cut-off value I**2t,max. / 400 V Alan circuit Operating voltage at AC / rated value / maximum 690 V at DC / rated value / maximum 440 V Operating current / with capacitive load at 400 V / maximum 72 A at 500 V / maximum 72 A at 500 V / maximum 72 A at 500 V / maximum 55 A Auxillary circuit	Surge voltage resistance / rated value	8 kV
with closed switch / without cover or cable lug cover with closed switch / without cover or cable lug cover on the front pepen P40 P20 P20		
cover • with closed switch / without cover or cable lug cover • on the front • open P40 Open P20 P20	Protection class IP	
 with closed switch / without cover or cable lug cover on the front lP40 open IP20 Electricity Continuous current rated value at 40 °C / rated value at 45 °C / rated value at 55 °C / rated value at 55 °C / rated value at 55 °C / rated value bt 400 V at AC / rated value / maximum at 400 V / maximum at 400 V / maximum at 400 V / maximum at 55 A Auxiliary circuit	_	IP40
on the front		IDOO
• on the front • open P20 Electricity Continuous current • rated value • at 40 °C / rated value • at 45 °C / rated value • at 55 °C / rated value • at 55 °C / rated value 233 A • at 55 °C / rated value 233 A Let-through current / with high-speed activation / maximum permissible Let-through current / lc / maximum permissible • 400 V • 500V 32 000 A cut-off value I**2t,max. / 400 V 780 000 A²-s Main circuit Operating voltage • at AC / rated value / maximum • at DC / rated value / maximum 440 V • at DC / rated value / maximum 440 V Operating current / with capacitive load • at 400 V / maximum 72 A • at 500 V / maximum 55 A		11730
● open IP20 Electricity Continuous current ● rated value ● at 40 °C / rated value ● at 45 °C / rated value ● at 55 °C / rated value ● at 55 °C / rated value Elet-through current / with high-speed activation / maximum permissible Let-through current / Ic / maximum permissible ● 400 V ● 500V Sut-off value I**2t,max. / 400 V Table 000 A*-s Main circuit Operating voltage ● at AC / rated value / maximum ● at DC / rated value / maximum Add V ● at DC / rated value / maximum ● at 400 V / maximum ● at 400 V / maximum Add V Operating current / with capacitive load ● at 400 V / maximum Full Add V ● at 500 V / maximum Full Add V		IP40
Electricity Continuous current • rated value • at 40 °C / rated value • at 45 °C / rated value • at 50 °C / rated value • at 55 °C / rated value • at 55 °C / rated value • at 55 °C / rated value 233 A • at 55 °C / rated value 233 A Let-through current / with high-speed activation / maximum permissible Let-through current / Ic / maximum permissible • 400 V • 500V cut-off value I*2t,max. / 400 V 780 000 A²-s Main circuit Operating voltage • at AC / rated value / maximum • at DC / rated value / maximum • at DC / rated value / maximum • at DC / rated value / maximum • at OC / rated value / maximum • at OC / rated value / maximum • at OV / maximum Operating current / with capacitive load • at 400 V / maximum • at 500 V / maximum • at 500 V / maximum • at 500 V / maximum • 55 A		
Continuous current • rated value • at 40 °C / rated value • at 45 °C / rated value • at 45 °C / rated value • at 50 °C / rated value • at 55 °C / rated value • at 55 °C / rated value 233 A • at 55 °C / rated value 233 A Let-through current / with high-speed activation / maximum permissible Let-through current / lc / maximum permissible • 400 V • 500V 32 000 A cut-off value I**2t,max. / 400 V 780 000 A²-s Main circuit Operating voltage • at AC / rated value / maximum • at DC / rated value / maximum 440 V Operating current / with capacitive load • at 400 V / maximum 72 A • at 500 V / maximum 55 A Auxiliary circuit	Ореп	20
rated value at 40 °C / rated value at 45 °C / rated value at 55 °C / rated value 233 A Let-through current / with high-speed activation / maximum permissible tet-through current / Ic / maximum permissible • 400 V • 500V 32 000 A cut-off value I**2t,max. / 400 V Main circuit Operating voltage • at AC / rated value / maximum • at DC / rated value / maximum 440 V Operating current / with capacitive load • at 400 V / maximum • at 500 V / maximum		
at 40 °C / rated value at 45 °C / rated value at 50 °C / rated value at 50 °C / rated value 233 A at 55 °C / rated value 233 A Let-through current / with high-speed activation / maximum permissible Let-through current / lc / maximum permissible 400 V 500V 2000 A cut-off value **2t,max. / 400 V 82 000 A wain circuit Operating voltage at AC / rated value / maximum at DC / rated value / maximum 440 V at DC / rated value / maximum Operating current / with capacitive load at 400 V / maximum 72 A at 500 V / maximum 55 A Auxiliary circuit		050 A
at 45 °C / rated value at 50 °C / rated value at 50 °C / rated value at 55 °C / rated value 233 A Let-through current / with high-speed activation / maximum permissible Let-through current / Ic / maximum permissible 400 V 32 000 A 500V cut-off value I**2t,max. / 400 V 780 000 A²-s Main circuit Operating voltage at AC / rated value / maximum at AC / rated value / maximum at DC / rated value / maximum Operating current / with capacitive load at 400 V / maximum Operating current / with capacitive load at 400 V / maximum 72 A at 500 V / maximum 55 A		
at 55 °C / rated value at 55 °C / rated value 233 A Let-through current / with high-speed activation / maximum permissible Let-through current / Ic / maximum permissible 400 V 500V 32 000 A cut-off value **2t,max. / 400 V 780 000 A²-s Main circuit Operating voltage at AC / rated value / maximum at DC / rated value / maximum 440 V Operating current / with capacitive load at 400 V / maximum 72 A at 500 V / maximum 55 A Auxiliary circuit		
at 55 °C / rated value Let-through current / with high-speed activation / maximum permissible Let-through current / Ic / maximum permissible 400 V 500V cut-off value I**2t,max. / 400 V 780 000 A²-s Main circuit Operating voltage at AC / rated value / maximum at DC / rated value / maximum at DC / rated value / maximum 440 V Operating current / with capacitive load at 400 V / maximum 72 A at 500 V / maximum 55 A		
Let-through current / with high-speed activation / maximum permissible Let-through current / Ic / maximum permissible • 400 V • 500V 32 000 A cut-off value I**2t,max. / 400 V 780 000 A²-s Main circuit Operating voltage • at AC / rated value / maximum • at DC / rated value / maximum • at DC / rated value / maximum • at DC / rated value / maximum Operating current / with capacitive load • at 400 V / maximum • at 500 V / maximum 72 A • at 500 V / maximum 55 A		
maximum permissible Let-through current / Ic / maximum permissible • 400 V • 500V 32 000 A cut-off value **2t,max. / 400 V 780 000 A²-s Main circuit Operating voltage • at AC / rated value / maximum • at DC / rated value / maximum • at DC / rated value / maximum Operating current / with capacitive load • at 400 V / maximum • at 500 V / maximum 72 A • at 500 V / maximum 55 A		
400 V 500V 32 000 A 2000 A cut-off value I**2t,max. / 400 V 780 000 A*-s Main circuit Operating voltage • at AC / rated value / maximum • at DC / rated value • at DC / rated value / maximum Operating current / with capacitive load • at 400 V / maximum at 500 V / maximum Auxiliary circuit		25 kA
Soov cut-off value I**2t,max. / 400 V 780 000 A²-s Main circuit Operating voltage • at AC / rated value / maximum • at DC / rated value • at DC / rated value / maximum • at DC / rated value / maximum • at DC / rated value / maximum Operating current / with capacitive load • at 400 V / maximum • at 500 V / maximum Auxiliary circuit	Let-through current / Ic / maximum permissible	
cut-off value I**2t,max. / 400 V 780 000 A²-s Main circuit Operating voltage • at AC / rated value / maximum • at DC / rated value • at DC / rated value / maximum 440 V Operating current / with capacitive load • at 400 V / maximum 72 A • at 500 V / maximum 55 A	• 400 V	32 000 A
Main circuit Operating voltage • at AC / rated value / maximum • at DC / rated value • at DC / rated value / maximum 440 V Operating current / with capacitive load • at 400 V / maximum 72 A • at 500 V / maximum 55 A	• 500V	32 000 A
Operating voltage • at AC / rated value / maximum 690 V • at DC / rated value 440 V • at DC / rated value / maximum 440 V Operating current / with capacitive load • at 400 V / maximum 72 A • at 500 V / maximum 55 A	cut-off value I**2t,max. / 400 V	780 000 A²·s
 at AC / rated value / maximum at DC / rated value at DC / rated value / maximum at DC / rated value / maximum Operating current / with capacitive load at 400 V / maximum at 500 V / maximum 55 A Auxiliary circuit	Main circuit	
 at DC / rated value at DC / rated value / maximum 440 V Operating current / with capacitive load at 400 V / maximum at 500 V / maximum 55 A Auxiliary circuit	Operating voltage	
at DC / rated value / maximum Operating current / with capacitive load at 400 V / maximum at 500 V / maximum Auxiliary circuit	• at AC / rated value / maximum	690 V
Operating current / with capacitive load • at 400 V / maximum 72 A • at 500 V / maximum 55 A Auxiliary circuit	• at DC / rated value	440 V
at 400 V / maximum at 500 V / maximum Auxiliary circuit 72 A 55 A	• at DC / rated value / maximum	440 V
at 500 V / maximum 55 A Auxiliary circuit	Operating current / with capacitive load	
Auxiliary circuit	• at 400 V / maximum	72 A
	• at 500 V / maximum	55 A
Number of CO contacts / for auxiliary contacts 0		
	Number of CO contacts / for auxiliary contacts	0

Number of NC contacts / for auxiliary contacts	0	
Number of NO contacts / for auxiliary contacts	0	
Suitability		
Suitability for use		
Main switch	No	
switch disconnector	Yes	
 EMERGENCY OFF switch 	No	
safety switch	Yes	
maintenance/repair switch	Yes	
Product details		
Product feature / interlock	Yes	
Product component		
Trip indicator	No	
 Phase failure monitoring 	No	
 undervoltage release 	No	
 undervoltage release with leading contact 	No	
Product feature / sealable	Yes	
Product extension		
Auxiliary switch	Yes	
• optional		
 locking capability 	Yes	
— motor drive	No	
 Phase failure monitoring 	Yes	
— fuse monitoring	Yes	
— Voltage trigger	No	
Overvoltage protection monitoring	Yes	
Product function		
Product function		
• fuse monitoring	No	
Overvoltage protection monitoring	No	
Short circuit		
Conditional short-circuit current (Iq)		
• rated value	80 kA	
 at AC / at 500 V / with high-speed activation / rated value 	80 kA	
• at AC / at 690 V / with high-speed activation / rated value	50 kA	
• with closed switch / at AC / at 500 V / rated value	120 kA	
 with closed switch / at AC / at 690 V / rated value 	100 kA	

Connections	
Arrangement of electrical connectors / for main	other
current circuit	
Connectable conductor cross-section / for main	
contacts	
single or multi-stranded / minimum	16 mm²
single or multi-stranded / maximum	150 mm²
• stranded / minimum	16 mm²
• stranded / maximum	150 mm²
Tightening torque / with screw-type terminals	
• minimum	10 N·m
• maximum	12 N·m
Type of electrical connection / for main current circuit	busbar connection
Mechanical Design	
Height	306 mm
Width	183.7 mm
Depth	138 mm
Mounting position	horizontal/vertical
Mounting type	busbar
Mounting type	
 floor mounting 	No
• front mounting	No
 front mounting with 4-hole attachment 	No
• front mounting with central attachment	No
• rail mounting	Yes
Busbar center-to-center spacing	60 mm
Net weight	2.85 kg
Environmental conditions	
Degree of pollution	3
Ambient temperature	
during operation / minimum	-25 °C
 during operation / maximum 	55 °C
during storage / minimum	-50 °C
during storage / maximum	80 °C
Certificates	
Reference code	
• acc. to DIN EN 61346-2	Q
• acc. to DIN EN 81346-2	Q

General Product Approval

Declaration of Conformity

Test Certificates





Miscellaneous



Type Test Certificates/Test Report

Special Test Certificate

Shipping Approval



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=3NP1143-1JC10

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

https://support.industry.siemens.com/cs/ww/en/ps/3NP1143-1JC10

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3NP1143-1JC10

CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://www.siemens.com/specifications





