SIEMENS

Data sheet 3NP1133-1BB22



FUSE-SWITCH-DISCONNECTOR 3-POLE, NH00, 160A 40MM BUSBAR SYSTEM COVER LEVEL 32/70 MM BOX TERMINAL FUSE MONITORING ELECTRONIC, EFM 10

Model	
product brand name	SENTRON
Product designation	Fuse switch disconnector
Design of the product	3-pole
Busbar design	busbar thickness 5 or 10 mm
Design of the safety monitoring	electronic EFM 10
Design of the operating mechanism	handle unit
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		snap on mount on busbar system Siemens 8US 40	
		mm	
Size of disconnecting link		00 and 000	
Size of fuse link		NH000, NH00	
Continuous current / at 35 °C / Rated value	Α	160	
Let-through current / with closed switch / maximum permissible	kA	23	
cut-off value I**2t,max. / 500 V	A²·s	158 000	
I2t value / with closed switch / maximum permissible	kA2.s	158	
Power factor			
● at AC-22 B		0.65	
● at AC-23 B		0.45	
 with capacitive load 		-0.25	
circuit-breaker / Design		3NP11	

Protection class IP with closed switch / with cover or cable lug cover with closed switch / without cover or cable lug cover on the front open Dissipation Active power loss maximum W 12 Electricity Continuous current Rated value A 160 A 155 A 145 A 145 A 145 A 145 A 145 A 140 A 155 °C / Rated value A 145 °C / Rated value A 145 °C / Rated value A 145 °C / Rated value A 155 °C / Rated value A 133 Let-through current / with high-speed activation / maximum permissible Let-through current / Ic / maximum permissible 400 V 500V A 23 000 cut-off value I**2t,max. / 400 V A*-s 158 000	Mechanical service life (switching cycles) / typical		2 000
Insulation voltage / Rated value	Fuse system	_	LV HRC fuse
Insulation voltage / Rated value	V-ll-v-	_	
Power factor / at AC-21 B Surge voltage resistance / Rated value KV 8		V	690
Surge voltage resistance / Rated value RV 8	-		
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 • open IP40 Protection Received Protection Prot		k\/	
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 • open IP20 Dissipation Active power loss • maximum W 12 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 A 140 • at 55 °C / Rated value A 140 Let-through current / with high-speed activation / maximum permissible • 400 V • 500V Cut-off value I**2t,max. / 400 V A 23 000 cut-off value I**2t,max. / 400 V Ain circut Operating voltage • with AC / Rated value / minimum • with AC / Rated value / maximum • with AC / Rated value / maximum • at AC-21 B / at 400 V / Rated value • at AC-21 B / at 500 V / Rated value • at AC-21 B / at 500 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 500 V / Rated value • at AC-22 B / at 500 V / Rated value • at AC-22 B / at 500 V / Rated value • at AC-22 B / at 500 V / Rated value • at AC-22 B / at 500 V / Rated value • at AC-22 B / at 500 V / Rated value • at AC-22 B / at 500 V / Rated value • at AC-22 B / at 500 V / Rated value • at AC-22 B / at 500 V / Rated value • at AC-22 B / at 500 V / Rated value • at AC-22 B / at 500 V / Rated value • at AC-22 B / at 500 V / Rated value • at AC-22 B / at 500 V / Rated value	ourge voltage resistance / Nation value	IX V	ŭ
with closed switch / with cover or cable lug cover with closed switch / without cover or cable lug cover • on the front • open	Protection class		
Cover • with closed switch / without cover or cable lug cover • on the front • open IP40 • open IP20 IP20 IP30 IP40 IP20 IP20 IP20 IP20 IP30 IP30			
over	•		IP40
	• with closed switch / without cover or cable lug		IP30
● open IP20 Dissipation Active power loss ● maximum W 12 Electricity Continuous current ● Rated value A 160 ● at 40 °C / Rated value A 155 ● at 55 °C / Rated value A 145 ● at 55 °C / Rated value A 140 ● at 50 °C / Rated value A 155 Let-through current / with high-speed activation / maximum permissible ■ 400 ∨ A 23 000 Let-through current / lc / maximum permissible ● 400 ∨ A 23 000 cut-off value I**2t,max. / 400 ∨ A*-s 158 000 Main circuit Operating voltage ● with AC / Rated value / minimum V 230 ● with AC / Rated value / maximum V 690 Operating current ● at AC-21 B / at 400 V / Rated value A 160 ● at AC-22 B / at 400 V / Rated value A 160 ● at AC-22 B / at 400 V / Rated value A 160 ● at AC-22 B / at 500 V / Rated value A 160 ● at AC-22 B / at 500 V / Rated value A 160 ● at AC-22 B / at 500 V / Rated value A 160 ● at AC-22 B / at 500 V / Rated value A 160 ● at AC-22 B / at 500 V / Rated value A 160 • at AC-22 B / at 500 V / Rated value A 160 • at AC-22 B / at 500 V / Rated value A 160 • at AC-22 B / at 500 V / Rated value A 160	cover		
Dissipation Active power loss	• on the front		IP40
Active power loss	• open		IP20
Active power loss	Dissipation		
Continuous current			
Continuous current Rated value A 160 • at 40 °C / Rated value A 155 • at 45 °C / Rated value A 145 • at 50 °C / Rated value A 140 • at 55 °C / Rated value A 133 Let-through current / lc / maximum permissible KA 15 • 400 V A 23 000 • 500V A 23 000 cut-off value **2t,max. / 400 V A²-s 158 000 Main circuit Operating voltage • with AC / Rated value / minimum V 230 • with AC / Rated value / maximum V 690 Operating current • at AC-21 B / at 400 V / Rated value A 160 • at AC-21 B / at 500 V / Rated value A 160 • at AC-22 B / at 400 V / Rated value A 160 • at AC-22 B / at 400 V / Rated value A 160 • at AC-22 B / at 400 V / Rated value A 160 • at AC-22 B / at 500 V / Rated value A 160	• maximum	W	12
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 55 °C / Rated value A 140 at 55 °C / Rated value A 133 Let-through current / with high-speed activation / maximum permissible Let-through current / Ic / maximum permissible • 400 ∨ A 23 000 cut-off value I**2t,max. / 400 ∨ A 23 000 cut-off value I**2t,max. / 400 ∨ Main circuit Operating voltage • with AC / Rated value / minimum • with AC / Rated value / maximum Operating current • at AC-21 B / at 400 ∨ / Rated value • at AC-21 B / at 500 ∨ / Rated value • at AC-22 B / at 400 ∨ / Rated value • at AC-22 B / at 400 ∨ / Rated value • at AC-22 B / at 400 ∨ / Rated value • at AC-22 B / at 400 ∨ / Rated value • at AC-22 B / at 400 ∨ / Rated value • at AC-22 B / at 400 ∨ / Rated value • at AC-22 B / at 400 ∨ / Rated value • at AC-22 B / at 400 ∨ / Rated value • at AC-22 B / at 400 ∨ / Rated value • at AC-22 B / at 400 ∨ / Rated value • at AC-22 B / at 400 ∨ / Rated value • at AC-22 B / at 500 ∨ / Rated va	Electricity		
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 55 °C / Rated value A 140 at 55 °C / Rated value A 133 Let-through current / with high-speed activation / maximum permissible Let-through current / Ic / maximum permissible 400 V A 23 000 cut-off value I**2t,max. / 400 V A 23 000 cut-off value I**2t,max. / 400 V A 23 000 Main circuit Operating voltage with AC / Rated value / minimum v 230 with AC / Rated value / maximum V 690 Operating current at AC-21 B / at 400 V / Rated value at AC-21 B / at 500 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 500 V / Rated value at AC	Continuous current		
at 45 °C / Rated value at 50 °C / Rated value at 55 °C / Rated value at 55 °C / Rated value A 133 Let-through current / with high-speed activation / maximum permissible 400 V 500V A 23 000 cut-off value I**2t,max. / 400 V A²-s 158 000 Main circuit Operating voltage with AC / Rated value / minimum with AC / Rated value / maximum V 690 Operating current at AC-21 B / at 400 V / Rated value at AC-21 B / at 690 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 500 V / Rated value	Rated value	Α	160
at 50 °C / Rated value at 55 °C / Rated value at 55 °C / Rated value A 133 Let-through current / with high-speed activation / maximum permissible Let-through current / Ic / maximum permissible 400 V 500V A 23 000 cut-off value I*2t,max. / 400 V A²-s 158 000 Main circuit Operating voltage with AC / Rated value / minimum with AC / Rated value / maximum V 230 Operating current at AC-21 B / at 400 V / Rated value at AC-21 B / at 690 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 500 V / Rated value at AC-24 B / at 500 V / Rated value at AC-25 B / at 500 V / Rated value at AC-25 B / at 500 V / Rated value at AC-25 B / at	● at 40 °C / Rated value	Α	155
* at 55 °C / Rated value * A 133 Let-through current / with high-speed activation / maximum permissible * 400 V	• at 45 °C / Rated value	Α	145
Let-through current / with high-speed activation / maximum permissible Let-through current / Ic / maximum permissible • 400 V • 500V A 23 000 cut-off value I**2t,max. / 400 V A²-s 158 000 Main circuit Operating voltage • with AC / Rated value / minimum • with AC / Rated value / maximum V 690 Operating current • at AC-21 B / at 400 V / Rated value • at AC-21 B / at 690 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value • at AC-22 B / at 400 V / Rated value A 160 • at AC-22 B / at 400 V / Rated value A 160 • at AC-22 B / at 500 V / Rated value A 160 • at AC-22 B / at 500 V / Rated value A 160 • at AC-22 B / at 500 V / Rated value A 160	• at 50 °C / Rated value	Α	140
Let-through current / Ic / maximum permissible	• at 55 °C / Rated value	Α	133
Let-through current / Ic / maximum permissible	Let-through current / with high-speed activation /	kA	15
	maximum permissible		
● 500V cut-off value I**2t,max. / 400 V A²-s 158 000 Main circuit Operating voltage ● with AC / Rated value / minimum ● with AC / Rated value / maximum V 690 Operating current ● at AC-21 B / at 400 V / Rated value ● at AC-21 B / at 500 V / Rated value A 160 ● at AC-21 B / at 690 V / Rated value A 160 ● at AC-22 B / at 400 V / Rated value A 160 ● at AC-22 B / at 400 V / Rated value A 160 ● at AC-22 B / at 400 V / Rated value A 160 ● at AC-22 B / at 500 V / Rated value A 160 ● at AC-22 B / at 500 V / Rated value A 160			
cut-off value I**2t,max. / 400 V Main circuit Operating voltage V 230 • with AC / Rated value / minimum V 690 Operating current V 690 • at AC-21 B / at 400 V / Rated value A 160 • at AC-21 B / at 500 V / Rated value A 160 • at AC-21 B / at 690 V / Rated value A 160 • at AC-22 B / at 400 V / Rated value A 160 • at AC-22 B / at 500 V / Rated value A 160 • at AC-22 B / at 500 V / Rated value A 160	• 400 V	Α	23 000
Main circuit Operating voltage	• 500V	Α	23 000
Operating voltage • with AC / Rated value / minimum V 230 • with AC / Rated value / maximum V 690 Operating current • at AC-21 B / at 400 V / Rated value A 160 • at AC-21 B / at 500 V / Rated value A 160 • at AC-22 B / at 400 V / Rated value A 160 • at AC-22 B / at 500 V / Rated value A 160 • at AC-22 B / at 500 V / Rated value A 160	cut-off value I**2t,max. / 400 V	A²·s	158 000
 with AC / Rated value / minimum with AC / Rated value / maximum 690 Operating current at AC-21 B / at 400 V / Rated value at AC-21 B / at 500 V / Rated value at AC-21 B / at 690 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 500 V / Rated value at AC-22 B / at 500 V / Rated value at AC-22 B / at 500 V / Rated value at AC-22 B / at 500 V / Rated value 	Main circuit		
 with AC / Rated value / maximum Operating current at AC-21 B / at 400 V / Rated value at AC-21 B / at 500 V / Rated value at AC-21 B / at 690 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 500 V / Rated value at AC-22 B / at 500 V / Rated value at AC-22 B / at 500 V / Rated value 	Operating voltage		
Operating current • at AC-21 B / at 400 V / Rated value A 160 • at AC-21 B / at 500 V / Rated value A 160 • at AC-21 B / at 690 V / Rated value A 160 • at AC-22 B / at 400 V / Rated value A 160 • at AC-22 B / at 500 V / Rated value A 160	• with AC / Rated value / minimum	V	230
 at AC-21 B / at 400 V / Rated value at AC-21 B / at 500 V / Rated value at AC-21 B / at 690 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 500 V / Rated value at AC-22 B / at 500 V / Rated value 	with AC / Rated value / maximum	V	690
 at AC-21 B / at 500 V / Rated value at AC-21 B / at 690 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 500 V / Rated value A 160 A 160 	Operating current		
 at AC-21 B / at 690 V / Rated value at AC-22 B / at 400 V / Rated value at AC-22 B / at 500 V / Rated value A 160 A 160 	• at AC-21 B / at 400 V / Rated value	Α	160
 at AC-22 B / at 400 V / Rated value at AC-22 B / at 500 V / Rated value A 160 	• at AC-21 B / at 500 V / Rated value	Α	160
● at AC-22 B / at 500 V / Rated value A 160	• at AC-21 B / at 690 V / Rated value	Α	160
	• at AC-22 B / at 400 V / Rated value	Α	160
• at AC-22 B / at 690 V / Rated value A 125	• at AC-22 B / at 500 V / Rated value	Α	160
	● at AC-22 B / at 690 V / Rated value	Α	125

• at AC-23 B / at 400 V / Rated value	Α	160
• at AC-23 B / at 500 V / Rated value	Α	63
• at AC-23 B / at 690 V / Rated value	Α	35
 with capacitive load / at 400 V / maximum 	Α	72
• with capacitive load / at 500 V / maximum	Α	55
Auxiliary circuit		
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		Yes
 Phase failure monitoring 		No
undervoltage release		No
 undervoltage release with leading contact 		No
Product property / sealable		Yes
Product expansion		
Auxiliary switch		Yes
• optional		
 locking capability 		Yes
— motor drive		No
 Phase failure monitoring 		Yes
— Voltage trigger		No
 Overvoltage protection monitoring 		Yes
Product function		
Product function		
• fuse monitoring		Yes
Overvoltage protection monitoring		No
Short circuit		
Conditional short-circuit current (Iq)		
Rated value	kA	80

• with AC / at 500 V / with high-speed activation / Rated value	kA	80
• with AC / at 690 V / with high-speed activation / Rated value	kA	80
• with closed switch / with AC / at 500 V / Rated value	kA	120
• with closed switch / with AC / at 690 V / Rated value	kA	120

Connections		
Arrangement of electrical connectors / for main		other
current circuit		
Connectable conductor cross-section / for main		
contacts		
single or multi-stranded / minimum	mm²	6
single or multi-stranded / maximum	mm²	70
 finely stranded / with core end processing / minimum 	mm²	6
 finely stranded / with core end processing / maximum 	mm²	50
stranded / minimum	mm²	6
• stranded / maximum	mm²	70
Tightening torque / with screw-type terminals		
• minimum	N·m	10
• maximum	N·m	10
Type of connectable conductor cross-section / of the laminated conductors / maximum		9 x 8 mm
Type of electrical connection / for main current circuit		box terminals

Mechanical Design		
Height	mm	210.4
Width	mm	105.8
Depth	mm	177.4
mounting position		horizontally or vertically
Mounting type		busbar mounting
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	mm	40

Environmental conditions		
Ambient temperature		

during operation / minimum	°C	-25
during operation / maximum	°C	55
during storage / minimum	°C	-50
• during storage / maximum	°C	80

Certificates		
Equipment marking		
• acc. to DIN EN 61346-2	Q	
● acc. to DIN EN 81346-2	Q	

General Product Approval



CB











Declaration of Conformity	Test Certificates	Shipping Ap	pproval		
	Type Test	2 &		T.1. T.	



Type Test
Certificates/Test
Report





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Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/lowvoltage/catalogs

Industry Mall (Online ordering system)

https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3NP11331BB22

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

http://support.automation.siemens.com/WW/view/en/3NP11331BB22/all

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

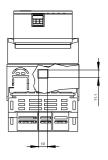
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3NP11331BB22

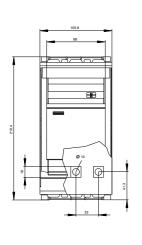
CAx-Online-Generator

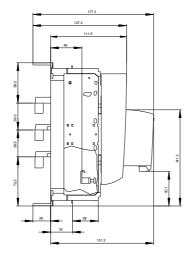
http://www.siemens.com/cax

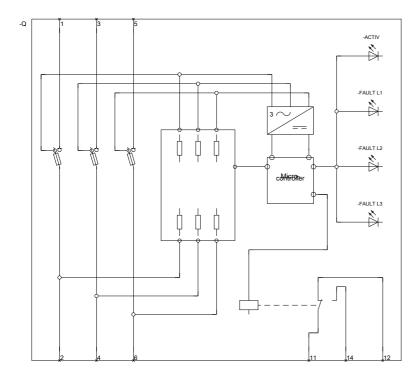
Tender specifications

http://ausschreibungstexte.siemens.com/tiplv









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