

Fuse Systems

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Fuse Systems

Introduction

Overview

Devices	Page	Application	Standards	Used in		
				Non-residential buildings	Residential buildings	Industry
 <p>NEOZED fuse systems</p>	5/4	MINIZED switch disconnectors, bases, fuse links from 2 A to 63 A of operational class gG and accessories. Everything you need for a complete system.	Fuse system: IEC 60269-3; DIN VDE 0636-3 Safety switching devices: IEC/EN 60947-3 DIN VDE 0638; EN 60947-3 (VDE 0660-107)	✓	✓	✓
 <p>DIAZED fuse systems</p>	5/12	Fuse links from 2 A to 100 A in various operational classes, base versions with classic screw base connections. A widely used fuse system.	IEC 60269-3; DIN VDE 0635; DIN VDE 0636-3; CEE 16	✓	✓	✓
Cylindrical fuse systems						
 <p>Cylindrical fuse links and cylindrical fuse holders</p>	5/18	Line protection or protection of switching devices. The fuse holders with touch protection ensure the safe "no-voltage" replacement of fuse links. Auxiliary switches can be retrofitted.	IEC 60269-1, -2, -3; NF C 60-200; NF C 63-210, -211; NBN C 63269-2, CEI 32-4, -12 Fuse holders: File No. E171267	✓	✓	✓
 <p>Fuse holders in size 10 x 38 mm and Class CC</p>	5/22	For installing fused loaded motor starter combinations.	IEC 60269-1,-2; IEC 60947-4; UL 4248-1, File No. E171267 CSA 250269, 6225-01 Auxiliary switches: UL 508, File No. E334003	✓	--	✓
 <p>Class CC fuse systems</p>	5/26	These comply with the American standard and have UL and CSA approval, for customers exporting OEM products and machine builders. Modern design with touch protection according to BGV A3 for use in "branch circuit protection".	Fuse holders: UL 4248-1, E171267 CSA 22.2 Fuse links: UL 248-4, File No. E258218, CSA 231237, 1422-02 and 1422-82	✓	✓	✓
 <p>Busbar systems</p>	5/28	Busbars for NEOZED fuse bases, NEOZED fuse disconnectors, MINIZED switch disconnectors, DIAZED fuse systems and for the cylindrical fuse systems. Compact cylindrical fuse holders for busbars	EN 60439-1 (VDE 0660-500) UL 4248-1, E337131	✓	✓	✓

Devices	Page	Application	Standards	Used in			
				Non-residential buildings	Residential buildings	Industry	
3NA, 3ND LV HRC fuse systems							
	LV HRC fuse links	5/34	Fuse links from 2 A to 1250 A for selective line protection and system protection in non-residential buildings, industry and power utilities.	IEC 60269-1, -2; EN 60269-1; DIN VDE 0636-2; CSA 16325 - 1422-02	✓	✓	✓
	LV HRC signal detectors	5/43	Signal detectors for when a fuse is tripped on all LV HRC fuse links with combination or front indicators with non-insulated grip lugs. Plus the comprehensive accessory range required for LV HRC fuse systems.	--	✓	✓	✓
	LV HRC fuse bases and accessories	5/45	Fuse bases for screw or snap-on mounting onto standard mounting rails, available as 1-pole or 3-pole version.	IEC 60269-1, -2; EN 60269-1; DIN VDE 0636-2 UL 4248-1, File No. E171267-IZLT2 (only downstream from the branch protection) CSA C22.2 No. 4248.1-07	✓	✓	✓
SITOR semiconductor fuses							
	LV HRC design	5/53	Fuse links in LV HRC design and a huge variety of models support a wide range of applications from 500 V to 1500 V and 150 A to 1600 A. Fuses with slotted blade contacts, bolt-on links or female thread and special designs.	UL 4248-13, File No. E167357-JFHR2	--	--	✓
	Cylindrical fuse design	5/63	Fuse links, fuse holders – usable as fuse switch disconnectors and fuse bases up to 600/690 V AC and 400/700 V DC from 1 A to 100 A in the sizes 10 x 38 mm, 14 x 51 mm and 22 x 58 mm.	Fuse links: UL 4248-13, File No. E167357-JFHR2 CSA 248170, 1422-30 Fuse holders: UL 4248-1, File No. E171267-IZLT CSA 248170, 6225-01	--	--	✓
	NEOZED, DIAZED design	5/67	NEOZED fuse links for 400 V AC and 250 V DC and DIAZED for 500 V AC and 500 V DC.	--	--	--	✓
Photovoltaic fuses							
	PV cylindrical fuses	5/70	Fuses with a rated voltage of 1000 V DC and 1500 V and gPV operational class for the protection of photovoltaic modules, their connecting cables and other components.	IEC 60269-6	✓	✓	✓
	PV cumulative fuses	5/72	Fuses with a rated voltage of 1000 V and 1500 V DC, a rated current of 63 A to 630 A and operational class gPV for the protection of connecting cables and other components.	IEC60269-6	✓	✓	✓

Fuse Systems

NEOZED Fuse Systems

Introduction

Overview

The NEOZED fuse system is primarily used in distribution technology and industrial switchboard assemblies. The system is easy to use and is also approved for domestic installation.

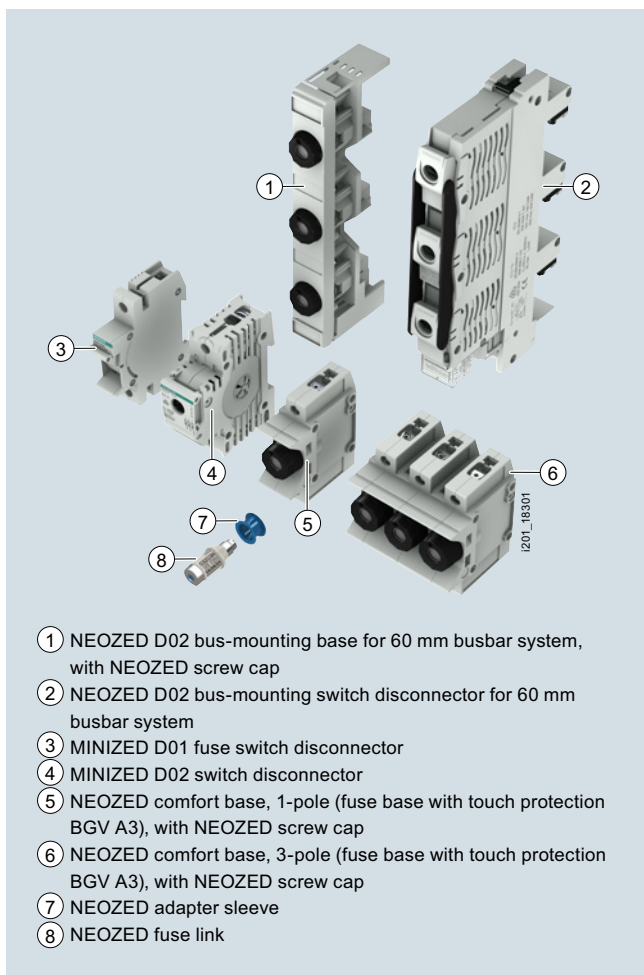
The MINIZED switch disconnectors are primarily used in switchboard assemblies and control engineering. They are approved for switching loads as well as for safe switching in the event of short circuits. The MINIZED D02 is also suitable for use upstream of the meter in household applications in compliance with the recommendations of the VDEW according to TAB.

Due to its compact design, the MINIZED D01 fuse switch disconnecter is primarily used in control engineering.

The NEOZED fuse bases are the most cost-effective solution for using NEOZED fuses. All NEOZED bases must be fed from the bottom to ensure that the threaded ring is insulated during removal of the fuse link. The terminals of the NEOZED bases are available in different versions and designs to support the various installation methods.

Benefits

5



Compared to the older DIAZED fuse system, the NEOZED fuse system is significantly more modern:

- Much more compact which saves space in the distribution board
- Modern devices like the MINIZED switching devices, which combine the functions of a switch disconnecter and a fuse base
- Wide range of accessories, such as busbars for one, two, or three-phase wiring
- Modern terminals for MINIZED D02 and NEOZED comfort bases: Visible, clear and controllable connection simplifies cable entry

Double terminal chambers permit connection of two wires of different cross-sections

- Lower power loss of the fuse links

Even when compared to the internationally prevalent cylindrical fuse system, the NEOZED fuse system has considerable advantages:

- Non-interchangeability – thanks to use of adapter sleeves (i.e. it is not possible to insert a fuse for larger currents). This is a requirement of numerous wiring regulations in Germany and other European countries.
- Switching devices with load switching characteristics allow the safe switching of load currents up to 63 A

Technical specifications

		NEOZED fuse links							
		5SE2							
Standards		IEC 60269-3; DIN VDE 0636-3							
Operational class		gG							
Rated voltage U_n	V AC	400							
	V DC	250							
Rated current I_n	A	2 ... 100							
Rated breaking capacity	kA AC	50							
	kA DC	8							
Non-interchangeability		Using adapter sleeves							
Resistance to climate	°C	Up to 45 at 95 % rel. humidity							
Ambient temperature	°C	-5 ... +40, humidity 90 % at 20							
		MINIZED switch disconnectors	MINIZED fuse switch disconnectors	Fuse bases, made of ceramic			Comfort bases	Fuse bases	
		D02	D01	D01	D02	D03	D01/02		
		5SG71	5SG76	5SG15	5SG16	5SG18	5SG1.01	5SG1.30	
				5SG55	5SG56		5SG5.01	5SG1.31	
								5SG5.30	
Standards		DIN VDE 0638; EN 60947-3 (VDE 0660-107) IEC/EN 60947-3		IEC 60269-3; DIN VDE 0636-3					
Main switch characteristic EN 60204-1		Yes	--	--					
Insulation characteristic EN 60664-1		Yes	--	--					
Rated voltage U_n	V AC	230/400, 240/415			400				
	• 1P V DC	65	48	250					
	• 2P in series V DC	130	110	250					
Rated current I_n	A	63	16	16	63	100	16/63	16/63	
Rated insulation voltage	V AC	500	690	--					
Rated impulse withstand voltage	kV AC	6	6	--					
Overvoltage category		IV	IV	--					
Utilization category acc. to VDE 0638				--					
• AC-22	A	63	16	--					
Utilization category acc. to EN 60947-3				--					
• AC-22 A	A	--	16	--					
• AC-22 B	A	63	--	--					
• AC-23 B	A	35	--	--					
• DC-22 B	A	63	--	--					
Sealable When switched on		Yes		Yes, with sealable screw caps					
Mounting position		Any, preferably vertical							
Reduction factor of I_n with 18 pole				--					
• Side-by-side mounting		0.9	--	--					
• On top of one another, with vertical standard mounting rail		0.87	--	--					
Degree of protection acc. to IEC 60529		IP20, with connected conductors ¹⁾							
Terminals With touch protection acc. to BGV A3		Yes		No			Yes		
Ambient temperature	°C	-5 ... +40, humidity 90 % at 20							
Terminal versions		Box terminals	Box terminal	B	K, S	K/S	Box terminal	Box terminal	
Conductor cross-sections				--					
• Solid and stranded	mm ²	1.5 ... 35	1.5 ... 16	1.5 ... 4	2.5 ... 25	10 ... 50	0.75 ... 35	1.5 ... 35	
• Flexible, with end sleeve	mm ²	1.5 ... 35	1.5 ... 10	1.5 ... 4	1.5 ... 16	10 ... 35	--	--	
Tightening torque	Nm	2.5 ... 3	2.5	1.2	2	3.5/2.5	3.5	3	

¹⁾ Degree of protection IP20 is tested according to regulations using a straight test finger (from the front), with the device mounted and equipped with a cover, housing or some other enclosure.

Fuse Systems

NEOZED Fuse Systems

Introduction

More information

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Fuse bases D01 with terminal version BB

- Incoming feeders, clamp-type terminal B
- Outgoing feeders, clamp-type terminal B



Fuse bases D02, with terminal version KS




- Incoming feeders, screw head contact K
- Outgoing feeders, saddle terminal S



Fuse bases D02, with terminal version SS

- Incoming feeders, saddle terminal S
- Outgoing feeders, saddle terminal S

Selection and ordering data






Size	I_n	Identification color	Mounting width	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS* P. unit	PG	Weight per PU approx. kg
	A		MW							
NEOZED fuse links, rated voltage 400 V AC/250 V DC, operational class gG										
	D01	2	Pink	--	▶ 5SE2302		1	10/2000 units	1BM	0.006
		4	Brown	--	▶ 5SE2304		1	10/2000 units	1BM	0.006
		6	Green	--	▶ 5SE2306		1	10/2000 units	1BM	0.007
		10	Red	--	▶ 5SE2310		1	10/2000 units	1BM	0.007
		13	Black	--	▶ 5SE2013-2A		1	10 units	1BM	0.007
		16	Gray	--	▶ 5SE2316		1	10/2000 units	1BM	0.007
	D02	20	Blue	--	▶ 5SE2320		1	10/1200 units	1BM	0.012
		25	Yellow	--	▶ 5SE2325		1	10/1200 units	1BM	0.013
		32	Violet	--	▶ 5SE2332		1	10/1200 units	1BM	0.014
		35	Black	--	▶ 5SE2335		1	10/1200 units	1BM	0.014
		40	Black	--	▶ 5SE2340		1	10/1200 units	1BM	0.013
		50	White	--	▶ 5SE2350		1	10/1200 units	1BM	0.014
	D03	63	Copper	--	▶ 5SE2363		1	10/1200 units	1BM	0.015
		80	Blue	--	▶ 5SE2280		1	10 units	1BM	0.038
		100	Red	--	▶ 5SE2300		1	10 units	1BM	0.040

Fuse Systems

NEOZED Fuse Systems

MINIZED switch disconnectors and MINIZED fuse switch disconnectors




Selection and ordering data

Size	Number of poles	I_n A	Mounting width MW	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
MINIZED switch disconnectors with fuses using draw-out technology with touch protection to BGV A3 (adapter sleeves not included in the scope of delivery)										
	D02	1P	63	1.5	5SG7113		1	1/78 units	1BM	0.135
		1P+N	63	3	5SG7153		1	1 unit	1BM	0.245
		2P	63	3	5SG7123		1	1 unit	1BM	0.277
		3P	63	4.5	5SG7133		1	1/24 units	1BM	0.409
		3P+N	63	6	5SG7163		1	1 unit	1BM	0.491
Versions for Austria only, with permanently fitted adapter sleeves, incl. fuse link										
	D02	3P	25	4.5	5SG7133-8BA25		1	1 unit	1BM	0.446
			35		5SG7133-8BA35		1	1 unit	1BM	0.423
			50		5SG7133-8BA50		1	1 unit	1BM	0.425
Reducers For fuse links D01 in MINIZED switch disconnectors D02										
					5SH5527		1	10/100 units	1CU	0.001
Auxiliary switches (AS) For MINIZED D02 switch disconnectors										
		1 NO + 1 NC		0.5	5ST3010		1	1 unit	1AD	0.055
		2 NO			5ST3011		1	1/138 units	1AD	0.065
		2 NC			5ST3012		1	1/138 units	1AD	0.066
Technical specifications see chapter "Miniature Circuit Breakers" -> "Additional components"										
Auxiliary switches (AS) with TEST button For MINIZED D02 switch disconnectors										
		1 NO + 1 NC		0.5	5ST3010-2		1	1 unit	1AD	0.071
		2 NO			5ST3011-2		1	1 unit	1AD	0.068
		2 NC			5ST3012-2		1	1 unit	1AD	0.071
For technical specifications see chapter "Miniature Circuit Breakers" -> "Additional components"										
MINIZED fuse switch disconnectors Using draw-out technology with touch protection acc. to BGV A3										
	D01	1P	6 ¹⁾	1	5SG7611-0KK06		1	12 units	1BM	0.079
		3P	6 ¹⁾	3	5SG7631-0KK06		1	4 units	1BM	0.238
		1P	10	1	5SG7611-0KK10		1	12 units	1BM	0.077
		3P	10	3	5SG7631-0KK10		1	4 units	1BM	0.237
		1P	16	1	5SG7611-0KK16		1	12 units	1BM	0.072
		1P+N	16	2	5SG7651-0KK16		1	6 units	1BM	0.154
		2P	16	2	5SG7621-0KK16		1	6 units	1BM	0.158
		3P	16	3	5SG7631-0KK16		1	4 units	1BM	0.216
		3P+N	16	4	5SG7661-0KK16		1	3 units	1BM	0.317

¹⁾ For 2 A, 4 A, 6 A fuses.

For busbars, see page 5/30.

Selection and ordering data

	Size	Number of poles	I_n	Matching cover ¹⁾	Terminals ²⁾	Mounting width	DT	Article No. www.siemens.com/ product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
			A			MW							
	NEOZED comfort bases made of molded plastic With touch protection according to BGV A3												
	D01	1P	16	--		1.5		5SG1301		1	3/72 units	1BM	0.134
	D02		63	--				5SG1701		1	3/72 units	1BM	0.131
	D01	3P	16	--		4.5		5SG5301		1	1 unit	1BM	0.401
	D02		63	--				5SG5701		1	1/30 units	1BM	0.397
	NEOZED fuse bases made of molded plastic For snap-on mounting on standard mounting rails, with cover												
	D01	1P	16	(A1)		1.5		5SG1330		1	6/108 units	1BM	0.075
	D02		63	(A1)		1.5		5SG1730		1	6/108 units	1BM	0.089
	For snap-on mounting on standard mounting rails, without cover												
	D01	1P	16	A1		1.5		5SG1331		1	6/144 units	1BM	0.069
	D02		63	A1		1.5		5SG1731		1	6/144 units	1BM	0.083
	For snap-on mounting on standard mounting rails, with cover												
	D01	3P	16			4.5		5SG5330		1	2/108 units	1BM	0.226
	D02		63			4.5		5SG5730		1	2/108 units	1BM	0.269
	NEOZED fuse bases made of ceramic For snap-on mounting on standard mounting rails, with cover												
	D01	1P	16	(A4)		BB	1.5		5SG1553		1	6/90 units	1BM
D02		63	(A10)		SS	1.5		5SG1653		1	6/108 units	1BM	0.092
D02		63	(A10)		KS	1.5		5SG1693		1	6/108 units	1BM	0.085
For snap-on mounting on standard mounting rails, without cover													
D01	1P	16	A4, A8		BB	1.5		5SG1595		1	6 units	1BM	0.064
D02		63	A10, A8		SS	1.5		5SG1655		1	6 units	1BM	0.085
D02		63	A10, A8		KS	1.5		5SG1695		1	6 units	1BM	0.077
D03		100	A6, A9		KS	2.5		5SG1812		1	10 units	1BM	0.204
For snap-on mounting on standard mounting rails, with cover													
D01	3P	16			BB	4.5		5SG5553		1	2/40 units	1BM	0.212
D02		63			SS	4.5		5SG5653		1	2/108 units	1BM	0.290
D02		63			KS	4.5		5SG5693		1	2 units	1BM	0.265






¹⁾ Covers with brackets are part of the scope of delivery.
Covers without brackets are not part of the scope of delivery.

²⁾ For terminal versions, see page 5/6.









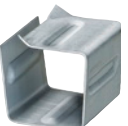
Fuse Systems

NEOZED Fuse Systems

NEOZED fuse bases and accessories

Size	I_n	Matching cover	Mounting width	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
	A		MW							
NEOZED covers										
Made of molded plastic, plug-in, for fuse bases made of molded plastic										
	D01, D02	A1	1.5		5SH5244		1	15 units	1BM	0.007
For fuse bases made of ceramic										
	D01	A4	1.5		5SH5251		1	15 units	1BM	0.009
	D02	A10	1.5		5SH5253		1	15 units	1BM	0.009
	Screw-on									
	D03	A6	2.5		5SH5233		1	20 units	1BM	0.021
NEOZED caps										
Made of molded plastic, plug-in										
	D01, D02	A8			5SH5235		1	5 units	1BM	0.029
	Screw-on									
	D03	A9			5SH5234		1	10 units	1BM	0.065

NEOZED fuse bases and accessories

Size	For fuse links	Identification color	Mounting width	DT	Article No. www.siemens.com/product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS* P. unit	PG	Weight per PU approx. kg
	A		MW							
NEOZED screw caps										
Molded plastic, with inspection hole										
	D01				5SH4116		1	10/1000 units	1BM	0.009
	D02				5SH4163		1	10/200 units	1BM	0.011
Ceramic										
	D01, sealable				5SH4316		1	20 units	1BM	0.017
	D02, sealable				5SH4363		1	20 units	1BM	0.019
	D03				5SH4100		1	10 units	1BM	0.089
Ceramic, with inspection hole										
	D01				5SH4317		1	20 units	1BM	0.017
	D02				5SH4362		1	20/800 units	1BM	0.017
NEOZED adapter sleeves										
	D01	2	Pink		5SH5002		1	50/2800 units	1BM	0.001
		4	Brown		5SH5004		1	50/2800 units	1BM	0.001
		6	Green		5SH5006		1	50/2800 units	1BM	0.001
		10/13	Red		5SH5010		1	50/2800 units	1BM	0.001
	D02	20	Blue		5SH5020		1	50/2800 units	1BM	0.001
		25	Yellow		5SH5025		1	50/2800 units	1BM	0.001
		32	Violet		5SH5032		1	50 units	1BM	0.002
		35/40	Black		5SH5035		1	50/2800 units	1BM	0.001
		50	White		5SH5050		1	50/2800 units	1BM	0.001
	D03	80	Silver		5SH5080		1	25 units	1BM	0.002
For fuse links D01 in base D02 and MINIZED D02 switch disconnectors										
	D02	2	Pink		5SH5402		1	10/2800 units	1BM	0.002
		4	Brown		5SH5404		1	10/2800 units	1BM	0.002
		6	Green		5SH5406		1	10/2800 units	1BM	0.002
		10/13	Red		5SH5410		1	10/2800 units	1BM	0.002
		16	Gray		5SH5416		1	10/2800 units	1BM	0.002
NEOZED adapter sleeve fitters										
					5SH5100		1	1/10 units	1BM	0.029
NEOZED retaining springs										
For fuse links D01 in screw caps										
	D02	2 ... 16			5SH5400		1	25/2800 units	1BM	0.002

Fuse Systems

DIAZED fuse systems

Overview

The DIAZED fuse system is one of the oldest fuse systems in the world. It was developed by Siemens as far back as 1906. It is still the standard fuse system in many countries to this day. It is particularly widely used in the harsh environments of industrial applications.

The series is available with rated voltages from 500 V to 750 V.

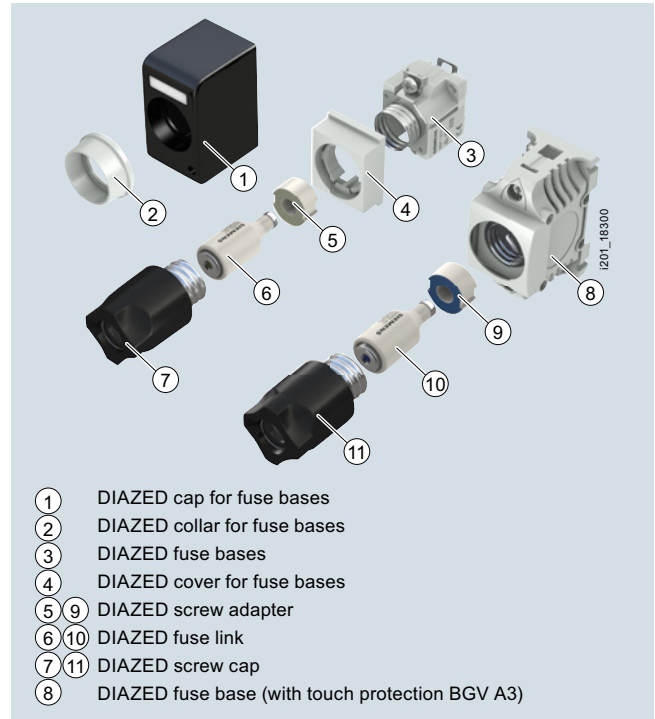
All DIAZED bases must be fed from the bottom to ensure an insulated threaded ring when the fuse link is being removed. Reliable contact of the fuse links is only ensured when used together with DIAZED screw adapters.

The terminals of the DIAZED bases are available in different versions and designs to support the various installation methods.

The high-performing EZR bus-mounting system for screw fixing is an outstanding feature. The busbars, which are particularly suited for bus-mounting bases, have a load capacity of up to 150 A with lateral infeed.

DIAZED stands for **D**iametral gestuftes **z**weiteiliges Si-**c**herungssystem mit **E**disongewinde (diametral two-step fuse system with Edison screw).

Benefits








Technical specifications

			5SA, 5SB, 5SC, 5SD, 5SF
Standards			IEC 60269-3; DIN VDE 0635; DIN VDE 0636-3; CEE 16
Operational class	Acc. to IEC 60269; DIN VDE 0636		gG
Characteristic	Acc. to DIN VDE 0635		Slow and quick
Rated voltage U_n	V AC V DC	500, 690, 750 500, 600, 750	
Rated current I_n	A	2 ... 100	
Rated breaking capacity	kA AC kA DC	50, 40 at E16 8, 1.6 at E16	
Overvoltage category		III II (DIAZED fuse bases made of molded plastic for use at 690 V AC / 600 V DC)	
Mounting position		Any, preferably vertical	
Non-interchangeability		Using screw adapter or adapter sleeves	
Degree of protection	Acc. to IEC 60529		IP20, with connected conductors ¹⁾
Resistance to climate	°C		Up to 45, at 95 % rel. humidity
Ambient temperature	°C		-5 ... +40, humidity 90 % at 20

¹⁾ Degree of protection IP20 is tested according to regulations using a straight test finger (from the front), with the device mounted and equipped with a cover, housing or some other enclosure.

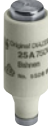





		Terminal version									
		B		K			S		R		
Size		DII	DIII	NDz	DII	DIII	DIII	DIV	DII	DIII	
Conductor cross-sections											
• Rigid, min.	mm ²	1.5	2.5	1.0	1.5	2.5	2.5	10	1.5	1.5	
• Rigid, max.	mm ²	10	25	6	10	25	25	50	35	35	
• Flexible, with end sleeve	mm ²	10	25	6	10	25	25	50	35	35	
Tightening torque											
• Screw M4	Nm	1.2							--		
• Screw M5	Nm	2.0							--		
• Screw M6	Nm	2.5							3.0		
• Screw M8	Nm	3.5							--		

Selection and ordering data

Size	U_n	I_n	Identification color	Thread	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
V AC/V DC		A									
DIAZED fuse links											
Operational class gG											
	DII	500/500	2	Pink	E27	5SB211		1	25/125 units	1BM	0.026
			4	Brown		5SB221		1	25/125 units	1BM	0.026
			6	Green		5SB231		1	25/125 units	1BM	0.026
			10	Red		5SB251		1	25/125 units	1BM	0.027
			16	Gray		5SB261		1	25/125 units	1BM	0.028
			20	Blue		5SB271		1	25/125 units	1BM	0.030
		25	Yellow	5SB281	1	25/125 units	1BM	0.032			
	DIII	500/500	32	Violet	E33	5SB4010		1	25/400 units	1BM	0.049
			35	Black		5SB411		1	25/400 units	1BM	0.050
			50	White		5SB421		1	25/400 units	1BM	0.051
			63	Copper		5SB431		1	25/400 units	1BM	0.054
	DIV	500/400	80	Silver	R1¼"	5SC211		1	3 units	1BM	0.114
			100	Red		5SC221		1	3 units	1BM	0.116
Characteristic: Slow											
	TNDz	500/500	2	Pink	E16	5SA211		1	10/200 units	1BM	0.011
			4	Brown		5SA221		1	10/200 units	1BM	0.011
			6	Green		5SA231		1	10/200 units	1BM	0.012
			10	Red		5SA251		1	10/200 units	1BM	0.012
			16	Gray		5SA261		1	10/200 units	1BM	0.014
			20	Blue		5SA271		1	10/200 units	1BM	0.015
		25	Yellow	5SA281	1	10/200 units	1BM	0.016			
For operational class gG, use 5SF1 and 5SF5 fuse base made of ceramic											
For 2 A ... 25 A, use screw adapter DII											
	DIII	690/600	2	Pink	E33	5SD8002		1	5 units	1BM	0.068
			4	Brown		5SD8004		1	5 units	1BM	0.070
			6	Green		5SD8006		1	5 units	1BM	0.069
			10	Red		5SD8010		1	5 units	1BM	0.069
			16	Gray		5SD8016		1	5 units	1BM	0.071
			20	Blue		5SD8020		1	5 units	1BM	0.071
			25	Yellow		5SD8025		1	5 units	1BM	0.074
			35	Black		5SD8035		1	5 units	1BM	0.076
			50	White		5SD8050		1	5 units	1BM	0.080
63	Copper	5SD8063	1	5 units	1BM	0.081					

Fuse Systems







DIAZED fuse systems

	Size	U_n	I_n	Identifi- cation color	Thread	Terminals	DT	Article No. www.siemens.com/ product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
		V AC/ V DC	A										
DIAZED fuse links													
Characteristic: Quick, also for direct current railway facilities For 2 A ... 25 A, use screw adapter DII													
	DIII	750/750	2	Pink	E33			5SD601		1	5 units	1BM	0.071
			4	Brown				5SD602		1	5 units	1BM	0.069
			6	Green				5SD603		1	5 units	1BM	0.070
			10	Red				5SD604		1	5 units	1BM	0.069
			16	Gray				5SD605		1	5 units	1BM	0.071
			20	Blue				5SD606		1	5 units	1BM	0.071
			25	Yellow				5SD607		1	5 units	1BM	0.077
			35	Black				5SD608		1	5 units	1BM	0.076
			50	White				5SD610		1	5 units	1BM	0.080
			63	Copper				5SD611		1	5 units	1BM	0.083
DIAZED fuse bases made of ceramic													
1P, for standard mounting rail													
	NDz	500/500	25		E16	KK ²⁾		5SF1012		1	5 units	1BM	0.065
	DII		25		E27	BB ²⁾		5SF1005		1	5/100 units	1BM	0.099
	DIII ¹⁾		63		E33	BS ²⁾		5SF1205		1	5/70 units	1BM	0.148
	DIII ¹⁾		63		E33	SS ²⁾		5SF1215		1	5 units	1BM	0.144
1P, for screw fixing													
	NDz	500/500	25		E16	KK ²⁾		5SF101		1	5 units	1BM	0.062
	DII		25		E27	BB ²⁾		5SF1024		1	5/100 units	1BM	0.098
	DIII ¹⁾		63		E33	BS ²⁾		5SF1224		1	5 units	1BM	0.143
DIAZED fuse bases made of molded plastic													
With touch protection according to BGV A3													
1P, for standard mounting rail or screw fixing													
	DII	500/500	25		E27	RR		5SF1060		1	3/36 units	1BM	0.154
	DIII ¹⁾		63		E33	RR		5SF1260		1	3/132 units	1BM	0.193
3P, for standard mounting rail or screw fixing													
	DII	500/500	25		E27	RR		5SF5068		1	1/36 units	1BM	0.454
	DIII ¹⁾		63		E33	RR		5SF5268		1	1/44 units	1BM	0.580
DIAZED EZR bus-mounting bases													
1P, to snap onto EZR busbars for screw fixing													
	DII	500/500	25		E27	B ²⁾		5SF6005		1	5 units	1BM	0.084
	DIII	500/500	63		E33	B ²⁾		5SF6205		1	5 units	1BM	0.127

¹⁾ Also for 690 V AC/600 V DC. For overvoltage category, see page 5/12.

²⁾ For terminal versions, see page 5/17.

DIAZED fuse systems

	Size	U_n	I_n	Thread	Terminals	DT	Article No. www.siemens.com/ product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
		V AC/V DC	A									
DIAZED components 750 V												
	DIAZED fuse bases 1P, for screw fixing with fine thread and cap											
	DIII	750/750	63	E33S	KK ¹⁾		5SF4230		1	1 unit	1BM	0.501
	DIAZED screw caps made of ceramic, with fine thread											
	DIII	750/750	63	E33S			5SH1161		1	5 units	1BM	0.116
DIAZED screw caps												
Molded plastic, with inspection hole, black, not for SILIZED fuse links												
	NDz	500/500	25	E16			5SH112		1	20 units	1BM	0.012
	DII		25	E27			5SH1221		1	5/200 units	1BM	0.024
	DIII		63	E33			5SH1231		1	5/5000 units	1BM	0.033
Ceramic												
	DII	500/500	25	E27			5SH112		1	50/200 units	1BM	0.036
	DIII		63	E33			5SH113		1	30 units	1BM	0.063
Ceramic, with inspection hole, sealable												
	DII	500/500	25	E27			5SH122		1	50/5000 units	1BM	0.040
	DIII		63	E33			5SH123		1	30/5000 units	1BM	0.066
Ceramic, extended version												
	DIII	690/600	63	E33			5SH1170		1	5 units	1BM	0.105



¹⁾ For terminal versions, see page 5/17.

Fuse Systems

DIAZED fuse systems

	Size	Thread	For fuse links	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
DIAZED screw adapters										
	NDz	E16	2		5SH328		1	20 units	1BM	0.003
			4		5SH331		1	20 units	1BM	0.001
			6		5SH305		1	20 units	1BM	0.001
			10		5SH306		1	20 units	1BM	0.002
			16		5SH307		1	20 units	1BM	0.001
Also for 5SF230 to 750 V										
	DII	E27	2		5SH310		1	25/1500 units	1BM	0.014
			4		5SH311		1	25/1500 units	1BM	0.014
			6		5SH312		1	25/1500 units	1BM	0.015
			10		5SH313		1	25/1500 units	1BM	0.014
			16		5SH314		1	25/1500 units	1BM	0.014
			20		5SH315		1	25/1500 units	1BM	0.014
Also for 5SF230 to 750 V										
	DIII	E33	32		5SH327		1	25 units	1BM	0.024
			35		5SH317		1	25/850 units	1BM	0.024
			50		5SH318		1	25/850 units	1BM	0.022
			63		5SH320		1	25/850 units	1BM	0.020
DIAZED adapter sleeves for screw caps										
	For DII fuse links in DIII base				5SH302		1	10 units	1BM	0.011
DIAZED adapter sleeve fitters										
	DII/DIII				5SH3703		1	10 units	1BM	0.046
DIAZED caps made of molded plastic										
	NDz	E16			5SH201		1	5 units	1BM	0.044
	DII	E27			5SH202		1	5 units	1BM	0.052
	DIII	E33			5SH222		1	5 units	1BM	0.070

DIAZED fuse systems

Size	Thread	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
DIAZED cover rings								
Ceramic DII and DIII, also for EZR bus-mounting base								
	DII	E27	5SH332		1	10 units	1BM	0.022
	DIII	E33	5SH334		1	10 units	1BM	0.037
Made of molded plastic, also for EZR bus-mounting base								
	DII	E27	5SH3401		1	5/60 units	1BM	0.013
	DIII	E33	5SH3411		1	5/60 units	1BM	0.020

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More information



DIII fuse bases with terminal version BS

- Outgoing feeders (top), saddle terminal S
- Incoming feeders (bottom), clamp-type terminal B



NDZ fuse bases with terminal version KK

- Outgoing feeders (top), screw head contact K
- Incoming feeders (bottom), screw head contact K



DIII fuse bases with terminal version BB

- Outgoing feeders (top), clamp-type terminal B
- Incoming feeders (bottom), clamp-type terminal B



DIII fuse bases with terminal version SS

- Outgoing feeders (top), saddle terminal S
- Incoming feeders (bottom), saddle terminal S

Fuse Systems

Cylindrical Fuse Systems

Cylindrical fuse links and cylindrical fuse holders

Overview

Cylindrical fuses are standard in Europe. There are a range of different cylindrical fuse links and holders that comply with the standards IEC 60269-1, -2 and -3, and which are suitable for use in industrial applications. In South West Europe they are also approved for use in residential buildings.

The cylindrical fuse holders are also approved according to UL 512. The cylindrical fuse holders are tested and approved as fuse disconnectors according to the switching device standard IEC 60947-3. They are not suitable for switching loads.

Cylindrical fuse holders can be supplied with or without signal detectors. In the case of devices with signal detector, a small electronic device with LED is located behind an inspection window in the plug-in module. If the inserted fuse link is tripped, this is indicated by the LED flashing.




The switching state of the fuse holder can be signaled over a laterally retrofitted auxiliary switch, which enables the integration of the fuses in the automation process.

Benefits

- Devices with pole number 1P+N are available in a single modular width. This reduces the footprint by 50 %
- The sliding catch for type ranges 8 x 32 mm and 10 x 38 mm enables the removal of individual devices from the assembly
- Space for a spare fuse in the plug-in module enables the fast replacement of fuses. This saves time and money and increases system availability
- A flashing LED signals that a fuse link has been tripped. This enables fast detection during runtime

Technical specifications







		Cylindrical fuse links						
		3NW63..	3NW60..	3NW61..	3NW62..	3NW80..	3NW81..	3NW82..
Size	mm x mm	8 x 32	10 x 38	14 x 51	22 x 58	10 x 38	14 x 51	22 x 58
Standards		IEC 60269-1, -2, -3; NF C 60-200; NF C 63-210, -211; NBN C 63269-2, CEI 32-4, -12						
Operational class		gG					aM	
Rated voltages U_n	V AC	400	400 or 500					
Rated current I_n	A	2 ... 20	0.5 ... 32	4 ... 50	8 ... 100	0.5 ... 32	2 ... 50	10 ... 100
Rated breaking capacity								
• 500 V version	kA AC	--	120	100		120	100	
• 400 V version	kA AC	20	120	20		120	20	
Mounting position		Any, preferably vertical						

		Cylindrical fuse holders			
		3NW73..	3NW70..	3NW71..	3NW72..
Size	mm x mm	8 x 32	10 x 38	14 x 51	22 x 58
Standards		IEC 60269-1, -2, -3; NF C 60-200, NF C 63-210, -211; NBN C 63269-2-1; CEI 32-4, -12; UL 4248-1			
Approvals	Acc. to UL Acc. to CSA	-- --	 	 --	-- --
Rated voltage U_n	Acc. to UL/CSA V AC	400 400	690 600		
Rated current I_n	A AC	20	32	50	100
Rated breaking capacity	kA	20	100		
Breaking capacity		AC-20B (switching without load), DC-20B			
No-voltage changing of fuse links		Yes			
Sealable when installed		Yes			
Mounting position		Any, preferably vertical			
Degree of protection	Acc. to IEC 60529	IP20, with connected conductors ¹⁾			
Terminals with touch protection according to BGV A3 at incoming and outgoing feeder		Yes			
Ambient temperature	°C	-5 ... +40, humidity 90 % at +20			
Conductor cross-sections					
• Rigid	mm ²	0.5 ... 10		2.5 ... 10	4 ... 10
• Stranded	mm ²	0.5 ... 10		2.5 ... 25	4 ... 50
• Finely stranded, with end sleeve	mm ²	0.5 ... 10 ²⁾		2.5 ... 16	4 ... 35
• AWG (American Wire Gauge)	AWG	--	10 ... 20	6 ... 10	--
Tightening torque	Nm	1.2		2.0	2.5

¹⁾ Degree of protection IP20 is tested according to regulations using a straight test finger (from the front), with the device mounted and equipped with a cover, housing or some other enclosure.

²⁾ Max. cross-section 10 mm² with K28 crimper from Klauke.


Selection and ordering data

	Size	I_n	U_n	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx.
	mm x mm	A	V AC							kg
Cylindrical fuse links, operational class gG										
	8 x 32	2	400		3NW6302-1		1	10 units	1BM	0.005
		4			3NW6304-1		1	10 units	1BM	0.005
		6			3NW6301-1		1	10 units	1BM	0.005
		10			3NW6303-1		1	10 units	1BM	0.005
		16			3NW6305-1		1	10 units	1BM	0.005
		20			3NW6307-1		1	10 units	1BM	0.005
	10 x 38	0.5	500		3NW6000-1		1	10 units	1BM	0.007
		1			3NW6011-1		1	10 units	1BM	0.008
		2			3NW6002-1		1	10/3000 units	1BM	0.008
		4			3NW6004-1		1	10/3000 units	1BM	0.008
		6			3NW6001-1		1	10/3000 units	1BM	0.008
		8			3NW6008-1		1	10 units	1BM	0.008
		10			3NW6003-1		1	10/3000 units	1BM	0.008
		12			3NW6006-1		1	10/100 units	1BM	0.008
		16			3NW6005-1		1	20/3000 units	1BM	0.009
		20			3NW6007-1		1	20/3000 units	1BM	0.009
		25			3NW6010-1		1	20/3000 units	1BM	0.009
32	3NW6012-1	1	20/3000 units	1BM	0.009					
	14 x 51	4	500		3NW6104-1		1	10 units	1BM	0.022
		6			3NW6101-1		1	10 units	1BM	0.021
		8			3NW6108-1		1	10/100 units	1BM	0.018
		10			3NW6103-1		1	10 units	1BM	0.021
		12			3NW6106-1		1	10/100 units	1BM	0.017
		16			3NW6105-1		1	10 units	1BM	0.021
		20			3NW6107-1		1	10 units	1BM	0.021
		25			3NW6110-1		1	10 units	1BM	0.020
		32			3NW6112-1		1	10 units	1BM	0.022
		40			3NW6117-1		1	10 units	1BM	0.022
		50			3NW6120-1		1	10 units	1BM	0.022
	22 x 58	16	500		3NW6205-1		1	10 units	1BM	0.050
		20			3NW6207-1		1	10 units	1BM	0.054
		25			3NW6210-1		1	10 units	1BM	0.045
		32			3NW6212-1		1	10 units	1BM	0.051
		40			3NW6217-1		1	10 units	1BM	0.048
		50			3NW6220-1		1	10 units	1BM	0.051
		63			3NW6222-1		1	10 units	1BM	0.055
		80			3NW6224-1		1	10 units	1BM	0.055
100	3NW6230-1	1	10 units	1BM	0.055					
Cylindrical fuse links, operational class aM										
	10 x 38	0.5	500		3NW8000-1		1	10 units	1BM	0.008
		1			3NW8011-1		1	10/200 units	1BM	0.008
		2			3NW8002-1		1	10/200 units	1BM	0.008
		4			3NW8004-1		1	10/200 units	1BM	0.008
		6			3NW8001-1		1	10/200 units	1BM	0.008
		8			3NW8008-1		1	10 units	1BM	0.008
		10			3NW8003-1		1	10/200 units	1BM	0.007
		12			3NW8006-1		1	10/200 units	1BM	0.008
		16			3NW8005-1		1	20/200 units	1BM	0.009
		20			3NW8007-1		1	20 units	1BM	0.008
		25			3NW8010-1		1	20 units	1BM	0.009
32	3NW8012-1	1	20 units	1BM	0.008					
	14 x 51	2	500		3NW8102-1		1	10/50 units	1BM	0.018
		4			3NW8104-1		1	10 units	1BM	0.018
		6			3NW8101-1		1	10/50 units	1BM	0.019
		8			3NW8108-1		1	10/50 units	1BM	0.018
		10			3NW8103-1		1	10 units	1BM	0.021
		12			3NW8106-1		1	10/50 units	1BM	0.021
		16			3NW8105-1		1	10 units	1BM	0.021
		20			3NW8107-1		1	10 units	1BM	0.020
		25			3NW8110-1		1	10 units	1BM	0.022
		32			3NW8112-1		1	10 units	1BM	0.019
		40			3NW8117-1		1	10 units	1BM	0.021
		50			3NW8120-1		1	10 units	1BM	0.021


Fuse Systems


Cylindrical Fuse Systems

Cylindrical fuse links and cylindrical fuse holders



	Size	I_n	U_n	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
	mm × mm	A	V AC							
	22 × 58	16	500		3NW8205-1		1	10/50 units	1BM	0.045
		20		3NW8207-1		1	10 units	1BM	0.054	
		25		3NW8210-1		1	10 units	1BM	0.051	
		32		3NW8212-1		1	10 units	1BM	0.054	
		40		3NW8217-1		1	10 units	1BM	0.049	
		50		3NW8220-1		1	10 units	1BM	0.054	
		63		3NW8222-1	400		1	10 units	1BM	0.055
		80		3NW8224-1			1	10 units	1BM	0.056
		100		3NW8230-1			1	10 units	1BM	0.055

5

	Number of poles	I_n	For fuse links of size	Mount- ing width	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg	
		A	mm × mm	MW								
	Cylindrical fuse holders with signal detector											
	1P	20	8 × 32	1		3NW7314		1	1 unit	1BM	0.069	
		32	10 × 38	1		3NW7014		1	1/120 units	1BM	0.065	
		50	14 × 51	1.5		3NW7112		1	1 unit	1BM	0.101	
		100	22 × 58	2		3NW7212		1	1 unit	1BM	0.165	
	1P+N	20	8 × 32	1		3NW7354		1	1 unit	1BM	0.092	
		32	10 × 38	1		3NW7054		1	1 unit	1BM	0.082	
		50	14 × 51	3		3NW7152		1	1 unit	1BM	0.231	
		100	22 × 58	4		3NW7252		1	1 unit	1BM	0.360	
	2P	20	8 × 32	2		3NW7324		1	1 unit	1BM	0.141	
32		10 × 38	2		3NW7024		1	1 unit	1BM	0.140		
50		14 × 51	3		3NW7122		1	1 unit	1BM	0.222		
100		22 × 58	4		3NW7222		1	1 unit	1BM	0.329		
3P	20	8 × 32	3		3NW7334		1	1 unit	1BM	0.203		
	32	10 × 38	3		3NW7034		1	1 unit	1BM	0.196		
	50	14 × 51	4.5		3NW7132		1	1 unit	1BM	0.315		
	100	22 × 58	6		3NW7232		1	1 unit	1BM	0.495		
3P+N	20	8 × 32	3		3NW7364		1	1 unit	1BM	0.218		
	32	10 × 38	3		3NW7064		1	1 unit	1BM	0.216		
	50	14 × 51	6		3NW7162		1	1 unit	1BM	0.439		
	100	22 × 58	8		3NW7262		1	1 unit	1BM	0.686		

	Cylindrical fuse holders without signal detector											
	1P	20	8 × 32	1		3NW7313		1	1/120 units	1BM	0.067	
		32	10 × 38	1		3NW7013		1	1/120 units	1BM	0.061	
		50	14 × 51	1.5		3NW7111		1	1/73 units	1BM	0.106	
		100	22 × 58	2		3NW7211		1	1 unit	1BM	0.167	
	1P+N	20	8 × 32	1		3NW7353		1	1 unit	1BM	0.078	
		32	10 × 38	1		3NW7053		1	1/120 units	1BM	0.079	
		50	14 × 51	3		3NW7151		1	1 unit	1BM	0.234	
		100	22 × 58	4		3NW7251		1	1 unit	1BM	0.365	
	2P	20	8 × 32	2		3NW7323		1	1 unit	1BM	0.137	
32		10 × 38	2		3NW7023		1	1/60 units	1BM	0.123		
50		14 × 51	3		3NW7121		1	1 unit	1BM	0.214		
100		22 × 58	4		3NW7221		1	1 unit	1BM	0.316		

Cylindrical fuse links and cylindrical fuse holders

	Number of poles	I_n	For fuse links of size	Mounting width	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg	
		A	mm × mm	MW								
	Cylindrical fuse holders without signal detector											
	3P											
		20	8 × 32	3		3NW7333		1	1 unit	1BM	0.207	
		32	10 × 38	3		3NW7033		1	1/60 units	1BM	0.187	
		50	14 × 51	4.5		3NW7131		1	1/28 units	1BM	0.306	
		100	22 × 58	6		3NW7231		1	1 unit	1BM	0.503	
	3P+N											
		20	8 × 32	3		3NW7363		1	1 unit	1BM	0.210	
		32	10 × 38	3		3NW7063		1	1/60 units	1BM	0.215	
		50	14 × 51	6		3NW7161		1	1 unit	1BM	0.434	
	100	22 × 58	8		3NW7261		1	1 unit	1BM	0.685		
	Auxiliary switches											
	For indicating disconnection of the fuse link, solely for application of striker fuse links. For retrofitting using the factory-fitted brackets. Contact: 250 V AC, 5 A Minimum contact load: 12 V, 25 mA											
			14 × 51	0.5		3NW7901		1	1 unit	1BM	0.053	
			22 × 58			3NW7902		1	1 unit	1BM	0.048	
	For indicating the switching state of the fuse holder. For retrofitting using the factory-fitted brackets. Contact: 230 V AC, 6 A/110 V DC, 1 A Minimum contact load: 12 V, 25 mA Terminals 1.5 mm ² - 0.5 Nm											
		10 × 38	0.5		3NW7903		1	1 unit	1BM	0.051		

More information

Mounting

Fuse holders, sizes 8 × 32 mm und 10 × 38 mm, have a sliding catch that enables the removal of individual devices from the assembly.

The infeed can be from the top or the bottom. Because the cylindrical fuse holders are fitted with the same anti-slip terminals at the top and the bottom, the devices can also be bus-mounted at the top or the bottom.

Auxiliary switches

Auxiliary switches are available for the cylindrical fuse holders. These are simply clipped onto the base using the factory-fitted brackets.

Sizes 8 × 32 mm und 10 × 38 mm:

The auxiliary switches support the remote display of the switching state ON or OFF of the fuse holder.

Sizes 14 × 51 mm und 22 × 58 mm:

The auxiliary switches support the remote display of fuse failure. However, fuse links with strikers are required for this function. When the fuse is tripped, a small striking pin – the striker – shoots out of the front of the fuse. Over an armature link in the auxiliary switch, the kinetic energy of this striker is used to switch a mini switch, which then initializes this signal over a floating contact.

Fuse Systems

Cylindrical Fuse Systems

Fuse holders in size 10 x 38 mm and Class CC

Overview

A key feature of our three-pole fuse holders is their ultra compact design. With a width of only 45 mm, they are ideal for use with fused motor starter combinations. Because the contactor and the fuse holder have the same 45 mm width, they are easy to mount on top of one another. The strong current-limiting fuses ensure a type 2 protection level (coordination according to IEC 60947-4, no damage protection) for the contactor.

The UL version has an SCCR value of 200 kA. The accessories are generally UL-certified.

Customers can mount an auxiliary switch which signals the switching state or prevents the fuse holder from switching off under load by interrupting the contactor control, thus increasing safety for the operator and process. Busbars and a matching three-phase feeder terminal complete the product range.

Benefits

- Compact design, especially for motor starter combinations
- For IEC fuses of size 10 x 38 mm up to 32 A and Class CC UL fuses up to 30 A
- Meets the requirements of UL 508 with regard to clearances
- UL-approved microswitches, busbars and adapters for 60 mm busbar systems
- Optical signal detector for fast fault locating

5







Compact fuse holder Class CC with signal detector and mounted auxiliary switch.






Installation configuration of a cylindrical fuse holder and a SIRIUS contactor on busbar device for the 60 mm busbar system.

Technical specifications

		Cylindrical fuse holders 3NW70...-1	Fuse holders 3NW75...-1HG
Size	mm × mm	10 × 38	Class CC
Standards		IEC 60269; UL4248-1; CSA	UL4248-1; CSA
Approvals		 UL File Number E171267	 UL File Number E171267
			
Rated voltage U_n	V AC	690	600
Rated current I_n	A AC	32	30
Rated short-circuit strength	kA	120 (at 500 V) 80 (at 690 V)	200
Breaking capacity			
• Utilization category		AC-20B (switching without load)	--
Rated impulse withstand voltage	kV	6	
Overvoltage category		III	
Pollution degree		2	
Max. power dissipation of the fuse link	W	3	
No-voltage changing of fuse links	°C	-5 ... +40, humidity 90 % at +20	
Sealable when installed		Yes	
Lockable with padlock		Yes	
Mounting position		Any, preferably vertical	
Current direction		Any	
Degree of protection	Acc. to IEC 60529	IP20, with connected conductors ¹⁾	
Terminals with touch protection according to BGV A3 at incoming and outgoing feeder		Yes	
Ambient temperature	°C	-5 ... +40, humidity 90 % at +20	
Conductor cross-sections			
• Finely stranded, with end sleeve	mm ²	1 ... 4	
• AWG cables (American Wire Gauge)	AWG	18 ... 10	
Tightening torque			
• Terminal screws	Nm lbs/in.	1.5 13 PZ2	

¹⁾ Degree of protection IP20 is tested according to regulations using a straight test finger (from the front), with the device mounted and equipped with a cover, housing or some other enclosure.

		Auxiliary switches 3NW7903-1							
Standards		IEC 60947							
Approvals		  UL 508, UL File Number E334003							
Utilization category		AC-12	DC-13			AC-15			Acc. to UL
Rated voltage U_n	V AC	250	--	--	--	24	120	240	240
	V DC	--	24	120	240	--	--	--	--
Rated current I_n	A	5	2	0.5	0.25	4	3	1.5	5

		Busbars 5ST260.	
For cylindrical fuse holders		3NW70...-1	3NW75...-1HG
Pin spacing	mm	15	
Standards		EN 60974-1 (VDE 0660-100), IEC 60947-1:2004, UL 508, CSA 22.2	
Approvals		 UL 4248-1, UL File Number E337131	
Busbar material		E-Cu 58 F25	
Partition material		PA66-V0	
Lamp wire resistance/1.5 mm²	°C	960	
Insulation coordination		Overvoltage category III, degree of pollution 2	
Rated voltage U_n			
• Acc. to UL	V AC	--	600
• Acc. to IEC	V AC	690	--
Maximum busbar current I_n			
• Acc. to UL	A	--	65
• Acc. to IEC	A	80	--

Fuse Systems



Cylindrical Fuse Systems

Fuse holders in size 10 x 38 mm and Class CC

		Terminals 5ST2600	
For cylindrical fuse holders		3NW70...-1	3NW75...-1HG
Pin spacing	mm	15	
Standards		IEC 60999:2000, UL 508	
Approvals		Ⓢ, UL 4248-1, UL File Number E337131	
Enclosure/cover material		PA66-V0	
Lamp wire resistance/1 mm²	°C	960	
Temperature resistance PA66-V0, HDT B ISO 179, UL 94-V0/1.5	°C	200	
Insulation coordination		Overvoltage category III, degree of pollution 2	
Max. operational voltage U_{max}			
• Acc. to UL	V AC	--	600
• Acc. to IEC	V AC	690	--
Maximum electrical load I_{max}			
• Acc. to UL	A	--	65
• Acc. to IEC	A	80	--
Rated current I_n	A	63	
Conductor cross-sections			
• Solid/stranded	mm ²	2.5 ... 35	
• Finely stranded, with end sleeve	mm ²	2.5 ... 25	
Tightening torque of clamping screw	Nm	2.5 ... 3.5	

Fuse holders in size 10 x 38 mm and Class CC

Selection and ordering data

Number of poles	I_n	For fuse links of size	Mounting width	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx.
	A	mm x mm	MW							kg
3NW7 cylindrical fuse holders										
	Cylindrical fuse holders 									
	3P	32	10 x 38	2.5	3NW7033-1 3NW7034-1		1	1 unit	1BM	0.188
							1	1 unit	1BM	0.194
						3NW7533-1HG 3NW7534-1HG		1	1 unit	1DN
				1	1 unit			1DN	0.201	

Accessories

Auxiliary switches

AC-12, 5 A, max. 250 V, 1 NO, 1 NC

2.5

3NW7903-1

1

1 unit

1BM

0.017

Version	I_n	Pin spacing	Length	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx.
	A	mm	mm							kg

5ST2 60. busbar system

Busbars



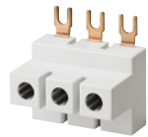
2 x 3P	63	15	45
3 x 3P			90
4 x 3P			135
5 x 3P			180

5ST2601
5ST2602
5ST2603
5ST2604

1	10 units	1AD	0.038
1	10 units	1AD	0.061
1	10 units	1AD	0.084
1	10 units	1AD	0.107

Accessories

Terminals

For conductor cross-section 2.5 mm² ... 35 mm²**5ST2600**

1

10 units

1AD

0.047

Length of adapter	Width of adapter	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx.
mm	mm							kg

Device adapters

Busbar device adapters¹⁾ with connecting cables (above)

Size S00,
rated voltage 690 V AC,
rated current 25 A,
1 support rail (35 mm),
connection cable AWG 12



200	45
260	

8US1251-5DS10
8US1251-5DT10

1

1 unit

1CU

0.285

1

1 unit

1CU

0.312

Accessories

Mounting rails for busbar device adapter

For assembly of additional devices

45

8US1998-7CB45

1

10 units

1CU

0.015



¹⁾ For further device adapters and accessories, see chapter "Busbar Systems".

Fuse Systems

Class CC fuse systems

Overview

Class CC fuses are used for "branch circuit protection".

The characteristic of the fuse links is designed and tested to comply with the US National Electrical Code NEC 210.20(A). This means that when subject to continuous operation, only 80 % of the rated current is permissible as operational current.

An operational current of 100 % of the rated current (30 A) is only permissible short-time.

The devices are prepared for the inscription labels of the ALPHA FIX terminal blocks 8WH8120-7AA15 and 8WH8120-7XA05.

There are three different series:

- Characteristic: Slow 3NW1...-0HG
For the protection of control transformers, reactors, inductances. Significantly slower than the minimum requirements specified by UL for Class CC Fuses of 12 s at $2 \times I_n$.

- Characteristic: Quick 3NW2 ...-0HG
For a wide range of applications, for the protection of lighting installations, heating, control systems.
- Characteristic: Slow, current-limiting, 3NW3...-0HG
Slow for overloads and quick for short circuits. High current limitation for the protection of motor circuits.

Note:

For class CC compact fuse holders for motor starter combinations, [see page 5/25](#).

Benefits

- For switchboard assemblies and machine manufacturers who export their systems to the USA or Canada
- Easier export due to UL and CSA approvals for typical applications
- Modern design with touch protection to BGV A3 ensures safe installation

Technical specifications

		Class CC fuse holders 3NW75.3-0HG	
Standards Approvals		UL 4248-1; CSA C22.2 UL 4248-1; UL File Number E171267; CSA C22.2	
Rated voltage U_n	V AC	600	
Rated current I_n	A	30	
Rated conditional short-circuit current	kA	200	
Breaking capacity		AC-20B (switching without load)	
• Utilization category			
Max. power dissipation of fuse links			
• With cable, 6 mm ²	W	3	
• With cable, 10 mm ²	W	4.3	
Rated impulse withstand voltage	kV	6	
Overvoltage category		II	
Pollution degree		2	
No-voltage changing of fuse links		Yes	
Sealable when installed		Yes	
Mounting position		Any	
Current direction		Any	
Degree of protection acc. to IEC 60529		IP20 ¹⁾	
Terminals with touch protection according to BGV A3 at incoming and outgoing feeder		Yes	
Ambient temperature	°C	45	
Conductor cross-sections			
• Solid and stranded	mm ²	1.5 ... 16	
• AWG conductor cross-section, solid and stranded	AWG	15 ... 5	
Tightening torque	Nm	2.5 (22 lbs/in.)	

¹⁾ Degree of protection IP20 is tested according to regulations using a straight test finger (from the front), with the device mounted and equipped with a cover, housing or some other enclosure.

		Class CC fuse links		
		3NW1...-0HG	3NW2...-0HG	3NW3...-0HG
Standards Approvals		UL 248-4; CSA C22.2 UL 248-4; UL File Number E258218; CSA C22.2		
Characteristic		Slow	Quick	Slow, current limiting
Rated voltage	V AC	600	600	600
	V DC	--	--	150 (3 ... 15 A) 300 (< 3 A, > 15 A)
Rated breaking capacity	kA AC	200		

Selection and ordering data

Number of poles	U_n	I_n	Mounting width	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
	V	A								
Class CC fuse holders										
1P	600	30		1	3NW7513-0HG		1	12 units	1DN	0.054
2P	600	30		2	3NW7523-0HG		1	6 units	1DN	0.103
3P	600	30		3	3NW7533-0HG		1	4 units	1DN	0.155



5

I_n ¹⁾	DT	Characteristic: Slow			Characteristic: Quick			PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
		Article No. www.siemens.com/product?Article No.	Price per PU	PG	DT	Article No. www.siemens.com/product?Article No.	Price per PU				
A											
Class CC fuse links											
0.6 (6/10)		3NW1006-0HG		1DN		--					
0.8 (8/10)		3NW1008-0HG		1DN		--					
1		3NW1010-0HG		1DN		3NW2010-0HG	1	10 units	1DN	0.009	
1.5 (1 ½)		3NW1015-0HG		1DN		--					
2		3NW1020-0HG		1DN		3NW2020-0HG	1	10 units	1DN	0.008	
2.5		3NW1025-0HG		1DN		--					
3		3NW1030-0HG		1DN		3NW2030-0HG	1	10 units	1DN	0.008	
4		3NW1040-0HG		1DN		3NW2040-0HG	1	10 units	1DN	0.008	
5		3NW1050-0HG		1DN		3NW2050-0HG	1	10 units	1DN	0.009	
6		3NW1060-0HG		1DN		3NW2060-0HG	1	10 units	1DN	0.008	
7.5		3NW1075-0HG		1DN		--					
8		3NW1080-0HG		1DN		3NW2080-0HG	1	10 units	1DN	0.008	
10		3NW1100-0HG		1DN		3NW2100-0HG	1	10/350 units	1DN	0.008	
12		--				3NW2120-0HG	1	10 units	1DN	0.008	
15		3NW1150-0HG		1DN		3NW2150-0HG	1	10/350 units	1DN	0.008	
20		3NW1200-0HG		1DN		3NW2200-0HG	1	10 units	1DN	0.008	
25		3NW1250-0HG		1DN		3NW2250-0HG	1	10 units	1DN	0.008	
30		3NW1300-0HG		1DN		3NW2300-0HG	1	10 units	1DN	0.008	

1) Values in brackets, American English wording.

I_n	DT	Characteristic: slow, current-limiting			PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
		Article No. www.siemens.com/product?Article No.	Price per PU	PG				
A								
Class CC fuse links								
1		3NW3010-0HG		1DN	1	10 units	1DN	0.008
2		3NW3020-0HG		1DN	1	10 units	1DN	0.008
3		3NW3030-0HG		1DN	1	10 units	1DN	0.008
4		3NW3040-0HG		1DN	1	10/350 units	1DN	0.008
5		3NW3050-0HG		1DN	1	10 units	1DN	0.008
6		3NW3060-0HG		1DN	1	10 units	1DN	0.008
8		3NW3080-0HG		1DN	1	10 units	1DN	0.008
10		3NW3100-0HG		1DN	1	10 units	1DN	0.008
12		3NW3120-0HG		1DN	1	10 units	1DN	0.008
15		3NW3150-0HG		1DN	1	10 units	1DN	0.008
20		3NW3200-0HG		1DN	1	10 units	1DN	0.008
25		3NW3250-0HG		1DN	1	10 units	1DN	0.008
30		3NW3300-0HG		1DN	1	10 units	1DN	0.008



Fuse Systems

Busbar systems

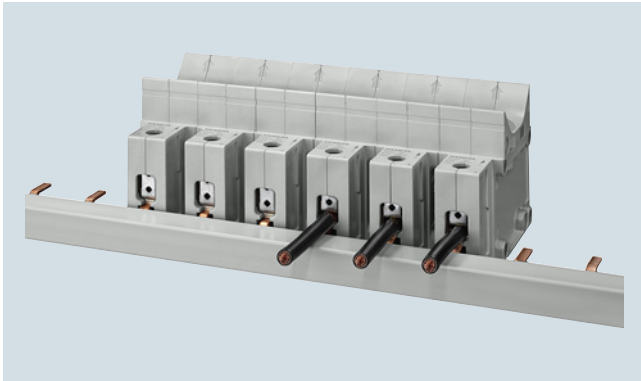
Overview

Busbars with pin-type connections can be used for NEOZED safety switching devices and fuse bases. Busbars in 10 mm² and 16 mm² versions are available.

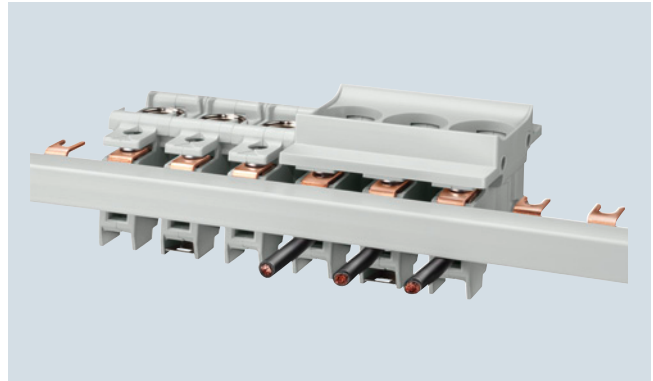
Busbars with fork plugs are used for the most frequently used NEOZED fuse bases made of ceramic.

Benefits

5



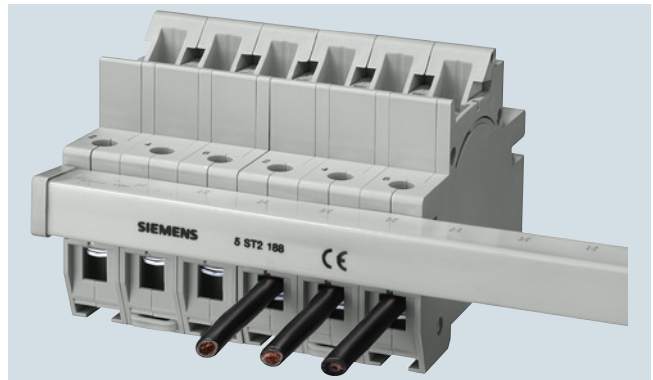
- Clear and visible conductor connection that can be easily checked when using the NEOZED D02 comfort base and which facilitates cable entry



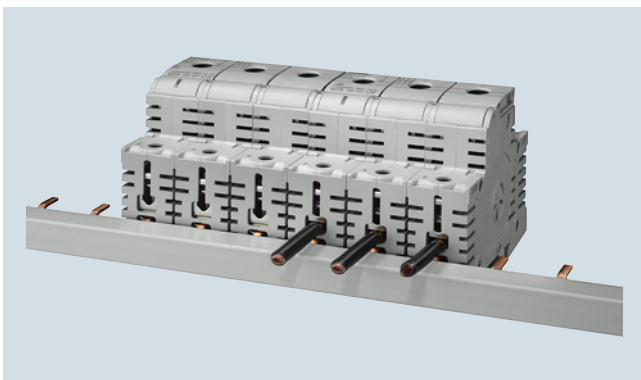
- Bus-mounting of NEOZED fuse bases made of molded plastic on 3-phase busbar with fork plug, which can be cut to length



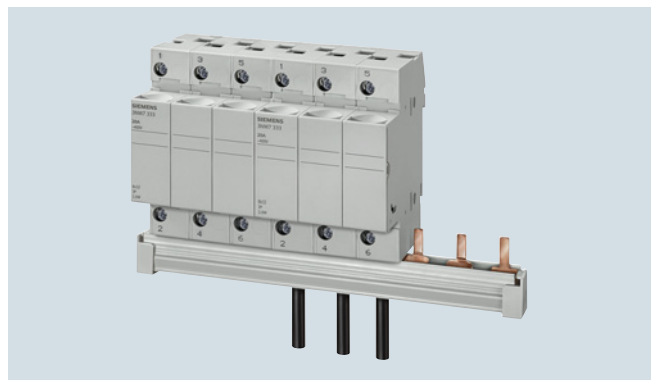
- Bus-mounting of NEOZED fuse bases made of ceramic on 3-phase busbar with fork plug, which can be cut to length



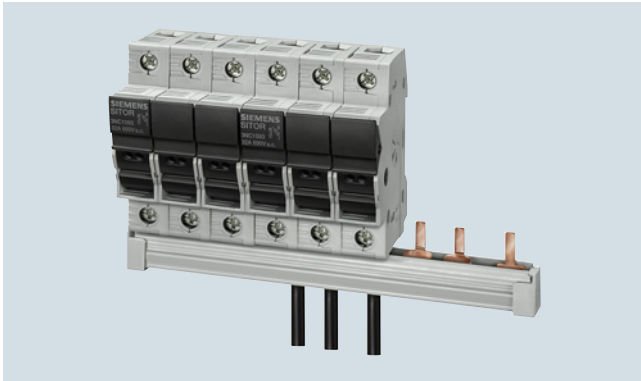
- Bus-mounting of MINIZED D01 fuse switch disconnectors on 3-phase busbar with fork plug, can be cut to length



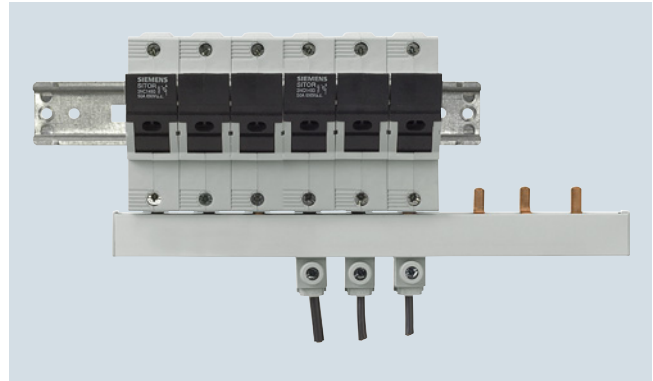
- Clear and visible conductor connection that can be easily checked when using MINIZED D02 switch disconnectors. This facilitates cable entry and saves time



- Bus-mounting of cylindrical fuse holders 8 × 32 mm and 10 × 38 mm with three-phase pin busbar which can be cut to length



- Bus-mounting of SITOP cylindrical fuse holders 10 mm x 38 mm with the same terminal connection as Class CC fuse holders with 3-phase pin busbar which can be cut to length



- Bus mounting with infeed through a connection terminal directly on the fuse holder up to a conductor cross-section of 25 mm²

Technical specifications

		5ST, 5SH
Standards		EN 60439-1 (VDE 0660-500): 2005-01
Busbar material		SF-Cu F 24
Partition material		Plastic, Cycloy 3600, Heat-resistant over 90 °C, flame-retardant, self-extinguishing, dioxin and halogen-free
Rated operational voltage U_c	V AC	400
Rated current I_n		
• Cross-section 10 mm ²	A	63
• Cross-section 16 mm ²	A	80
Rated impulse withstand voltage U_{imp}	kV	4
Test pulse voltage (1.2/50)	kV	6.2
Rated conditional short-circuit current I_{cc}	kA	25
Resistance to climate		
• Constant atmosphere	Acc. to DIN 50015	23/83; 40/92; 55/20
• Humid heat	Acc. to IEC 60068-2-30	28 cycles
Insulation coordination		
• Overvoltage category		III
• Pollution degree		2
Maximum busbar current I_S/phase		
• Infeed at the start of the busbar		
- Cross-section 10 mm ²	A	63
- Cross-section 16 mm ²	A	80
• Infeed at the center of the busbar		
- Cross-section 10 mm ²	A	100
- Cross-section 16 mm ²	A	130

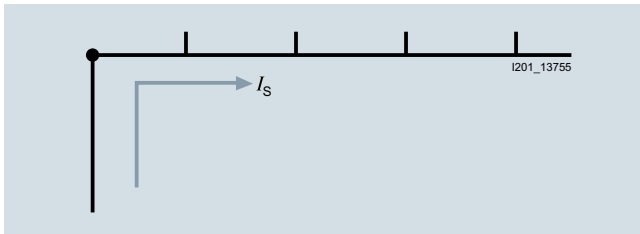
Fuse Systems

Busbar systems

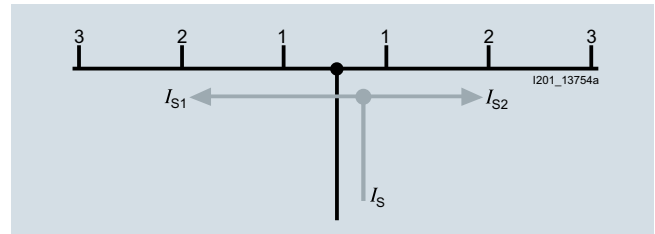
5ST37...-HG busbars acc. to UL 508

	5ST37...-0HG	5ST37...-2HG	5ST3770-0HG	5ST3770-1HG
Standards	UL 508, CSA C22.2 No. 14-M 95			
Approvals	UL 508 File No. E328403 CSA			
Operational voltage				
• Acc. to IEC	V AC	690		
• Acc. to UL 489	V AC	600		
Rated conditional short-circuit current	kA	10 (RMS symmetrical 600 V for three cycles)		
• Dielectric strength	kV/mm	25		
• Surge strength	kV	> 9.5		
Rated current	A	--	--	115
Maximum busbar current I_S/phase				
• Infeed at the start of the busbar	A	80	100	--
• Infeed at the center of the busbar	A	160	200	--
Insulation coordination				
• Overvoltage category	III			
• Pollution degree	2			
Busbar cross-section	mm ² Cu	18	25	--
Infeed	Any			
Conductor cross-sections	AWG	--	--	10 ... 1/0
	mm ²	--	--	6 ... 35
Terminals				
• Terminal tightening torque	Nm	--	--	5
	lbs/in.	--	--	35

Infeed at the start of the busbar





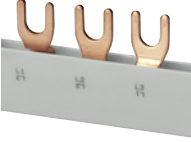


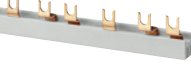

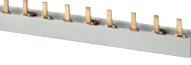

Infeed along the busbar or midpoint infeed



The sum of the output current per branch must not be greater than the busbar current $I_{S1,2}$ / phase.

Selection and ordering data








	Phases	Conductor cross-section	Load capacity up to	Pin spacing	Length	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx.
		mm ²	A	MW	mm							kg
Busbars												
	For MINIZED D02 switch disconnectors For NEOZED D01/D02 comfort bases made of molded plastic 5SG1301, 5SG1701, 5SG5301, 5SG5701 For NEOZED D01/D02 fuse bases made of ceramic terminal version S (saddle terminal) For cylindrical fuse holder 14 x 51 mm For cylindrical fuse holder SITOP 14 x 51 mm Can be cut to length, without end caps											
	Single-phase	16	130	1.5	1016	▶	5ST3703		1	1 unit	1AD	0.185
	Three-phase	16	120	1.5	1016		5ST3714		1	1 unit	1AD	0.540

	Phases	Conductor cross-section mm ²	Load capacity up to A	Pin spacing MW	Length mm	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
For MINIZED D01 fuse switch disconnectors												
	Can be cut to length, without end caps											
	Single-phase	16	120	1	1000		5ST2190		1	1 unit	1AD	0.222
	Two-phase						5ST2191		1	1 unit	1AD	0.448
	Three-phase						5ST2192		1	1 unit	1AD	0.582
	Can be cut to length, with 2 end caps											
	Single-phase	16	120	1	220		5ST2186		1	1 unit	1AD	0.048
Two-phase						5ST2187		1	1 unit	1AD	0.092	
Three-phase						5ST2188		1	1 unit	1AD	0.112	
For NEOZED D01/D02 fuse bases												
<ul style="list-style-type: none"> • 5SG1.30, 5SG1.31, 5SG5.30 made of molded plastic • Made of ceramic, terminal version B and K (clamp-type terminal, screw head contact) 												
	Non-insulated											
	Single-phase	36	168	1.5			5SH5322		1	1 unit	1BM	0.260
	Can be cut to length, without end caps											
	Single-phase	24	160	1.5	1000		5SH5517		1	1 unit	1BM	0.342
	Three-phase											
	16	120	1.5	1000		5SH5320		1	1 unit	1BM	0.562	
For cylindrical fuse holder 8 x 32 mm and 10 x 38 mm												
For cylindrical fuse holder SITOR 10 x 38 mm												
For class CC fuse holder ¹⁾												
	Can be cut to length, without end caps											
	Single-phase	16	120	1	1016	▶	5ST3701		1	1 unit	1AD	0.201
	Two-phase		120	1		▶	5ST3705		1	1 unit	1AD	0.452
	Three-phase	16	120	1	1016	▶	5ST3710		1	1 unit	1AD	0.610
	Can be cut to length, with end caps											
	Single-phase	16		1	214	▶	5ST3700		1	1 unit	1AD	0.042
	Two-phase			1		▶	5ST3704		1	1 unit	1AD	0.097
	Three-phase			1		▶	5ST3708		1	1/125 units	1AD	0.116
End caps for busbars												
	For single-phase 5ST2190 busbars											
							5ST2196		1	10 units	1AD	0.001
	For 2-phase 5ST2191 busbars and for 3-phase 5ST2192 busbars											
							5ST2197		1	10 units	1AD	0.001
For single-phase 5ST37, 5SH55 busbars												
						5ST3748		1	10/5000 units	1AD	0.001	
For two-phase and three-phase 5ST37 and 5SH5320 busbars												
						5ST3750		1	10/2000 units	1AD	0.002	

¹⁾ For UL-approved busbars, see page 5/33.

Fuse Systems

Busbar systems

	Phases	Conductor cross-section mm ²	Load capacity up to A	Length mm	DT	Article No. www.siemens.com/ product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg	
	Touch protection for free connection of pin busbars Yellow (RAL1004) 5 x 1 pin					▶ 5ST3655		1	10 units	1AD	0.009	
	Terminals For NEOZED fuse bases D01/D02 made of ceramic For DIAZED fuse bases DII/DIII made of ceramic Terminal version S For conductors 2 ... 25					5SH5327		1	10/300 units	1BM	0.013	
	Terminal versions B and K For conductors 6 ... 25					5SH5328		1	10/300 units	1BM	0.013	
	For the infeed of fork-type or pin busbars For conductors 6 ... 35					5ST2157		1	5 units	1AD	0.030	
	Busbars For single-pole DIAZED fuse bases made of ceramic with terminal versions BB and BS Size DII, for 19 bases Single-phase 24					80	1000	5SH3500	1	1/25 units	1BM	0.120
	Size DIII, for 25 bases Single-phase 39					120	1000	5SH3501	1	1/25 units	1BM	0.200
	Bus-mounting terminals For DIAZED EZR bus-mounting bases Non-insulated For conductors 1.5 ... 16 For conductors 10 ... 35					8JH4122 8JH4124		1 1	10 units 10 units	1BR 1BR	0.010 0.024	

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5ST37. .-. HG busbars acc. to UL 508

	Pin spacing	Length	DT	Article No. www.siemens.com/ product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
	MW	mm							
5ST37. .-.HG busbars acc. to UL 508, 18 mm², can be cut, without end caps									
Single-phase									
	1	1000		5ST3701-0HG		1	1 unit	1AE	0.320
• For fuse holders 10 x 38 mm class CC (3NC1091, 3NW7513-0HG) or MCBs 1P (5SY)									
	1.5	1000		5ST3703-0HG		1	1 unit	1AE	0.277
• For fuse holders 14 x 51 mm (3NC1491, 3NW7111) or MCBs 1P (5SY, 5SP) with AS or FC									
Two-phase									
	1	1000		5ST3705-0HG		1	1 unit	1AE	0.640
• For fuse holders 10 x 38mm/class CC (3NC1092, 3NW7523-0HG) or MCBs 2P (5SY)									
Three-phase									
	1	1000		5ST3710-0HG		1	1 unit	1AE	0.820
• For fuse holders 10 x 38 mm/class CC (3NC1093, 3NW7533-0HG) or MCBs 3P (5SY)									
	1.5	1000		5ST3714-0HG		1	1 unit	1AE	0.780
• For fuse holders 14 x 51 mm (3NC1493, 3NW7131) or MCBs 1P (5SY, 5SP) with AS or FC									
5ST37. .-.HG busbars acc. to UL 508, 25 mm², can be cut, without end caps									
Single-phase									
	1.5	1000		5ST3701-2HG		1	1 unit	1AE	0.340
• For fuse holders 14 x 51 mm (3NC1491, 3NW7111) or MCBs 1P (5SP)									
Two-phase									
	1.5	1000		5ST3705-2HG		1	1 unit	1AE	0.770
• For fuse holders 14 x 51 mm (3NC1492, 3NW7121) or MCBs 2P (5SP)									
Three-phase									
	1.5	1000		5ST3710-2HG		1	1 unit	1AE	1.090
• For fuse holders 14 x 51 mm (3NC1493, 3NW7131) or MCBs 3P (5SP)									
End caps for 5ST37. .-.HG									
				5ST3748-0HG		1	10 units	1AE	0.001
				5ST3750-0HG		1	10 units	1AE	0.002
Terminals according to UL 508									
Infeed to device									
				5ST3770-0HG		1	10 units	1AE	0.033
• 35 mm ²									
Infeed to busbar									
				5ST3770-1HG		1	10 units	1AE	0.032
• 50 mm ²									
Touch protection cover for busbars according to UL 508									
				5ST3655-0HG		1	10 units	1AE	0.011
• 5 x 1 pin									

Fuse Systems

3NA, 3ND LV HRC Fuse Systems

LV HRC fuse links

Overview

LV HRC fuse systems (NH type) are used for installation systems in non-residential, commercial and industrial buildings as well as in switchboard assemblies of power utilities. They therefore protect essential building parts and systems.

LV HRC fuse systems (NH type) are fuse systems designed for operation by experts. There are no constructional requirements for non-interchangeability of rated current and touch protection.

The components and auxiliary equipment are designed in such a way as to ensure the safe replacement of LV HRC fuse systems or isolation of systems.

LV HRC fuse links are available in the sizes 000, 00, 0, 1, 2, 3, 4 and 4a.

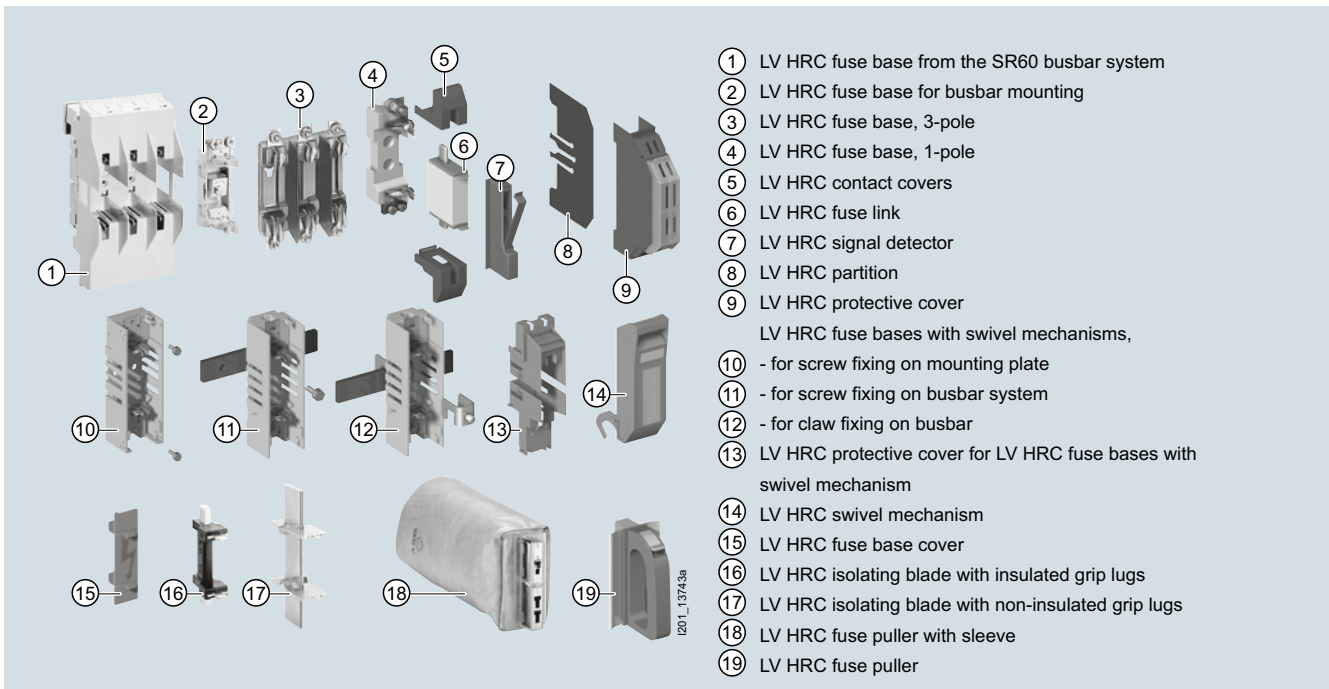
LV HRC fuse links are available in the following operational classes:

- gG for cable and line protection
- aM for short-circuit protection of switching devices in motor circuits
- gR or aR for protection of power semiconductors
- gS: The new gS operational class combines cable and line protection with semiconductor protection

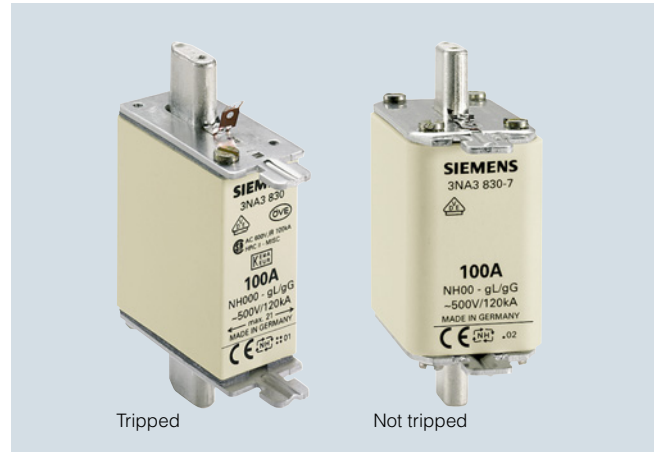
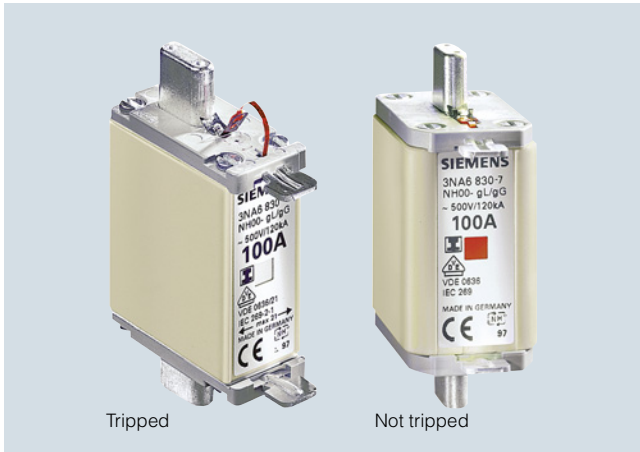
LV HRC fuse links of size 000 can also be used in LV HRC fuse bases, LV HRC fuse switch disconnectors, LV HRC fuse strips as well as LV HRC in-line fuse switch disconnectors of size 00.


The fuse links 300 A, 355 A and 425 A comply with the standard but do not have the VDE mark.

LV HRC components:



Benefits



- LV HRC fuse links with combination alarm signal the tripping of a fuse by a clear color change from red to white. This enables fast identification and replacement of the tripped fuse links. This increases system availability
- The insulated grip lugs made of metal are integrated in the top and bottom covers of the fuse link in molded plastic and provide greater safety during replacement. The mark shown below indicates that the grip lugs are insulated 
- In the standard series with front indicator, the front-mounted red indicator signals the tripping of a fuse
- LV HRC fuse links are always equipped with silver-plated contact pins. This means that they are non-corroding and have less contact resistance. This ensures the long-term operational safety of the plant

Technical specifications

		LV HRC fuse links					Operational class aM
		Operational class gG					
		3NA6...-4 3NA6...-4KK 3NA383-8	3NA6... 3NA6...-7 3NA7... 3NA7...-7	3NA3... 3NA3...-7	3NA6...-6 3NA7...-6	3NA3...-6	3ND1 3ND2
Standards		IEC 60269-1, -2; EN 60269-1; DIN VDE 0636					
Approvals		DIN VDE 0636-2; CSA 22.2 No.106, File Number 016325_0_00 (CSA approval of fuses 500 V for 600 V)					
Rated voltage U_n							
• Sizes 000 and 00	V AC	400	500	500	690 ¹⁾	690 ¹⁾	500
	V DC	--	250	250	250	250	--
• Sizes 1 and 2	V AC	400	500	500	690 ¹⁾	690 ¹⁾	690
	V DC	--	440	440	440	440	--
• Size 3	V AC	--	--	500	--	690 ¹⁾	690
	V DC	--	--	440	--	440	--
• Sizes 4 and 4a (IEC design)	V AC	--	--	500	--	--	--
	V DC	--	--	440	--	--	--
Rated current I_n	A	10 ... 400	2 ... 400	2 ... 1250	2 ... 315	2 ... 500	6 ... 630
Rated breaking capacity	kA AC	120					
	kA DC	--	25	--			
Contact pins		Non-corroding, silver-plated					
Resistance to climate	°C	-20 ... +50 at 95 % relative humidity					

¹⁾ Manufacturer's confirmation for 690 V +10 % rated voltage available on request.

Fuse Systems

3NA, 3ND LV HRC Fuse Systems

LV HRC fuse links

Selection and ordering data

Size	Mounting width mm	I_n A	U_n V AC/V DC	DT	Insulated grip lugs		PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg			
					Article No. www.siemens.com/ product?Article No.	Price per PU							
LV HRC fuse links with combination alarm, operational class gG													
000	21	10	400/--		3NA6803-4		1 3 units	1BM	1BM	0.130			
		16			3NA6805-4						1 3 units	1BM	0.131
		20			3NA6807-4						1 3 units	1BM	0.131
		25			3NA6810-4						1 3 units	1BM	0.132
		32			3NA6812-4						1 3 units	1BM	0.131
		35			3NA6814-4						1 3 units	1BM	0.131
		40			3NA6817-4						1 3 units	1BM	0.132
		50			3NA6820-4						1 3 units	1BM	0.130
		63			3NA6822-4						1 3 units	1BM	0.131
		80			3NA6824-4						1 3 units	1BM	0.131
100	3NA6830-4	1 3 units	1BM	0.132									
00	30	80	400/--		3NA6824-4KK		1 3 units	1BM	1BM	0.194			
		100			3NA6830-4KK						1 3 units	1BM	0.204
		125			3NA6832-4						1 3 units	1BM	0.202
		160			3NA6836-4						1 3 units	1BM	0.203
1	30	35	400/--		3NA6114-4		1 3 units	1BM	1BM	0.288			
		40			3NA6117-4						1 3 units	1BM	0.274
		50			3NA6120-4						1 3 units	1BM	0.277
		63			3NA6122-4						1 3 units	1BM	0.284
		80			3NA6124-4						1 3 units	1BM	0.275
		100			3NA6130-4						1 3 units	1BM	0.291
		125			3NA6132-4						1 3 units	1BM	0.286
		160			3NA6136-4						1 3 units	1BM	0.287
		47.2			3NA6140-4						1 3 units	1BM	0.443
		224			3NA6142-4						1 3 units	1BM	0.449
250	3NA6144-4	1 3 units	1BM	0.450									
2	47.2	50	400/--		3NA6220-4		1 3 units	1BM	1BM	0.460			
		63			3NA6222-4						1 3 units	1BM	0.455
		80			3NA6224-4						1 3 units	1BM	0.449
		100			3NA6230-4						1 3 units	1BM	0.458
		125			3NA6232-4						1 3 units	1BM	0.467
		160			3NA6236-4						1 3 units	1BM	0.465
		200			3NA6240-4						1 3 units	1BM	0.458
		224			3NA6242-4						1 3 units	1BM	0.459
		250			3NA6244-4						1 3 units	1BM	0.464
		57.8			3NA6250-4						1 3 units	1BM	0.659
		315			3NA6252-4						1 3 units	1BM	0.663
		355			3NA6254-4						1 3 units	1BM	0.658
		400			3NA6260-4						1 3 units	1BM	0.655







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Fuse Systems

3NA, 3ND LV HRC Fuse Systems


LV HRC fuse links

Size	Mounting width mm	I_n A	U_n V AC/ V DC	DT	Non-insulated grip lugs		PG	DT	Insulated grip lugs		PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg	
					Article No. www.siemens.com/ product?Article No.	Price per PU			Article No. www.siemens.com/ product?Article No.	Price per PU					
LV HRC fuse links with combination alarm, operational class gG															
	000	21	2 500/ 4 250 6 10 16 20 25 32 35 40 50 63 80 100			3NA7802				3NA6802		1	3 units	1BM	0.131
						3NA7804				3NA6804					
						3NA7801				3NA6801					
						3NA7803				3NA6803					
						3NA7805				3NA6805					
						3NA7807				3NA6807					
						3NA7810				3NA6810					
						3NA7812				3NA6812					
						3NA7814				3NA6814					
						3NA7817				3NA6817					
						3NA7820				3NA6820					
						3NA7822				3NA6822					
						3NA7824				3NA6824					
						3NA7830				3NA6830					
	00	30	80 500/ 100 250 125 160			3NA7824-7				3NA6824-7		1	3 units	1BM	0.202
						3NA7830-7				3NA6830-7					
						3NA7832				3NA6832					
						3NA7836				3NA6836					
	1	30	16 500/ 20 440 25 35 40 50 63 80 100 125 160 200 224 250			3NA7105				3NA6105		1	3 units	1BM	0.278
						3NA7107				3NA6107					
						3NA7110				3NA6110					
						3NA7114				3NA6114					
						3NA7117				3NA6117					
						3NA7120				3NA6120					
						3NA7122				3NA6122					
						3NA7124				3NA6124					
						3NA7130				3NA6130					
						3NA7132				3NA6132					
						3NA7136				3NA6136					
						3NA7140				3NA6140					
						3NA7142				3NA6142					
						3NA7144				3NA6144					
	2	47.2	35 500/ 50 440 63 80 100 125 160 200 224 250 57.8 300 315 355 400			3NA7214				3NA6214		1	3 units	1BM	0.463
						3NA7220				3NA6220					
						3NA7222				3NA6222					
						3NA7224				3NA6224					
						3NA7230				3NA6230					
						3NA7232				3NA6232					
						3NA7236				3NA6236					
						3NA7240				3NA6240					
						3NA7242				3NA6242					
						3NA7244				3NA6244					
						---				3NA6250					
						3NA7252				3NA6252					
						---				3NA6254					
						3NA7260				3NA6260					





Fuse Systems

3NA, 3ND LV HRC Fuse Systems

LV HRC fuse links

Size	Mounting width mm	I_n A	U_n V AC/V DC	DT	Non-insulated grip lugs		PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg													
					Article No. www.siemens.com/ product?ArticleNo.	Price per PU																	
LV HRC fuse links with front indicator, operational class gG																							
	21	2	500/250		3NA3802		1	3 units	1BM	0.127													
		4			3NA3804						1	3 units	1BM	0.130									
		6			3NA3801						1	3/126 units	1BM	0.131									
		10			3NA3803						1	3/126 units	1BM	0.128									
		16			3NA3805						1	3/126 units	1BM	0.131									
		20			3NA3807						1	3/126 units	1BM	0.130									
		25			3NA3810						1	3/126 units	1BM	0.130									
		32			3NA3812						1	3/126 units	1BM	0.128									
		35			3NA3814						1	3/126 units	1BM	0.131									
		40			3NA3817						1	3/126 units	1BM	0.130									
		50			3NA3820						1	3/126 units	1BM	0.131									
		63			3NA3822						1	3/126 units	1BM	0.131									
		80			3NA3824						1	3/126 units	1BM	0.130									
		100			3NA3830						1	3/126 units	1BM	0.131									
		000			21						125	400/250		3NA3832-8		1	3/60 units	1BM	0.126				
160	3NA3836-8		1	3/60 units		1BM	0.125																
00	30	35	500/250		3NA3814-7		1	3 units	1BM	0.203													
		50			3NA3820-7						1	3 units	1BM	0.204									
		63			3NA3822-7						1	3 units	1BM	0.195									
		80			3NA3824-7						1	3 units	1BM	0.205									
		100			3NA3830-7						1	3 units	1BM	0.201									
		125			3NA3832						1	3 units	1BM	0.206									
		160			3NA3836						1	3 units	1BM	0.205									
0	30	6	500/440		3NA3001		1	3 units	1BM	0.268													
		10			3NA3003						1	3 units	1BM	0.274									
		16			3NA3005						1	3 units	1BM	0.270									
		20			3NA3007						1	3 units	1BM	0.270									
		25			3NA3010						1	3 units	1BM	0.255									
		32			3NA3012						1	3 units	1BM	0.272									
		35			3NA3014						1	3 units	1BM	0.270									
		40			3NA3017						1	3 units	1BM	0.275									
		50			3NA3020						1	3 units	1BM	0.273									
		63			3NA3022						1	3 units	1BM	0.270									
		80			3NA3024						1	3 units	1BM	0.270									
		100			3NA3030						1	3 units	1BM	0.269									
		125			3NA3032						1	3 units	1BM	0.270									
		160			3NA3036						1	3 units	1BM	0.272									
		1			30						16	500/440		3NA3105		1	3 units	1BM	0.264				
20	3NA3107		1	3 units		1BM	0.283																
25	3NA3110		1	3 units		1BM	0.281																
35	3NA3114		1	3 units		1BM	0.287																
40	3NA3117		1	3 units		1BM	0.280																
50	3NA3120		1	3 units		1BM	0.285																
63	3NA3122		1	3/48 units		1BM	0.290																
80	3NA3124		1	3/48 units		1BM	0.278																
100	3NA3130		1	3/48 units		1BM	0.278																
125	3NA3132		1	3/48 units		1BM	0.287																
160	3NA3136		1	3/48 units		1BM	0.283																
47.2	30		200				3NA3140		1	3 units	1BM			0.436									
			224				3NA3142													1	3 units	1BM	0.448
			250				3NA3144													1	3 units	1BM	0.438





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Size	Mounting width mm	I_n A	U_n V AC/V DC	DT	Non-insulated grip lugs		PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg	
					Article No. www.siemens.com/ product?Article.No.	Price per PU					
LV HRC fuse links with front indicator, operational class gG											
	47.2	35	500/440		3NA3214		1	3 units	1BM	0.462	
		50			3NA3220		1	3 units	1BM	0.462	
		63			3NA3222		1	3 units	1BM	0.449	
		80			3NA3224		1	3 units	1BM	0.462	
		100			3NA3230		1	3 units	1BM	0.450	
		125			3NA3232		1	3/21 units	1BM	0.462	
		160			3NA3236		1	3/21 units	1BM	0.465	
		200			3NA3240		1	3/21 units	1BM	0.465	
		224			3NA3242		1	3 units	1BM	0.460	
		250			3NA3244		1	3/21 units	1BM	0.467	
		57.8			300		3NA3250	1	3/18 units	1BM	0.655
					315		3NA3252	1	3/18 units	1BM	0.650
					355		3NA3254	1	3/18 units	1BM	0.665
					400		3NA3260	1	3/18 units	1BM	0.650
	57.8	200	500/440		3NA3340		1	3 units	1BM	0.654	
		224			3NA3342		1	3 units	1BM	0.651	
		250			3NA3344		1	3 units	1BM	0.656	
		300			3NA3350		1	3 units	1BM	0.657	
		315			3NA3352		1	3 units	1BM	0.657	
		355			3NA3354		1	3 units	1BM	0.658	
		400			3NA3360		1	3 units	1BM	0.660	
		71.2			425		3NA3362	1	3 units	1BM	0.943
					500		3NA3365	1	3 units	1BM	0.943
					630		3NA3372	1	3 units	1BM	0.939
		Can only be used for 3NH3530 LV HRC fuse base									
	101.8	630	500/440		3NA3472		1	1 unit	1BM	2.546	
		800			3NA3475		1	1 unit	1BM	2.609	
		1000			3NA3480		1	1 unit	1BM	2.561	
		1250			3NA3482		1	1 unit	1BM	2.577	
Only for LV HRC base 3NH7520 or usable for fuse switch disconnectors with in-line design 3NJ5643-0BB00											
	101.8	500	500/440		3NA3665		1	1 unit	1BM	2.604	
		630			3NA3672		1	1 unit	1BM	2.674	
		800			3NA3675		1	1 unit	1BM	2.661	
		1000			3NA3680		1	1 unit	1BM	2.646	
		1250			3NA3682		1	1 unit	1BM	2.659	






Fuse Systems

3NA, 3ND LV HRC Fuse Systems

LV HRC fuse links

Size	Mounting width mm	I_n A	U_n V AC/ V DC	DT	Non-insulated grip lugs		PG	DT	Insulated grip lugs		PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg	
					Article No. www.siemens.com/ product?Article No.	Price per PU			Article No. www.siemens.com/ product?Article No.	Price per PU					
LV HRC fuse links with combination alarm, operational class gG															
	000	21	2	690 ¹⁾		3NA7802-6				3NA6802-6		1	3 units	1BM	0.123
			4	250		3NA7804-6				3NA6804-6					
			6			3NA7801-6				3NA6801-6					
			10			3NA7803-6				3NA6803-6					
			16			3NA7805-6				3NA6805-6					
			20			3NA7807-6				3NA6807-6					
			25			3NA7810-6				3NA6810-6					
			32			3NA7812-6				3NA6812-6					
			35			3NA7814-6				3NA6814-6					
			40			3NA7817-6KJ				3NA6817-6KJ					
50		3NA7820-6KJ	3NA6820-6KJ												
	00	30	40	690 ¹⁾		3NA7817-6				3NA6817-6		1	3 units	1BM	0.202
			50	250		3NA7820-6				3NA6820-6					
			63			3NA7822-6				3NA6822-6					
			80			3NA7824-6				3NA6824-6					
			100			3NA7830-6				3NA6830-6					
	1	30	50	690 ¹⁾		3NA7120-6				3NA6120-6		1	3 units	1BM	0.285
			63	440		3NA7122-6				3NA6122-6					
			80			3NA7124-6				3NA6124-6					
			100			3NA7130-6				3NA6130-6					
			125			3NA7132-6				3NA6132-6					
			160			3NA7136-6				3NA6136-6					
			47.2	200		3NA7140-6				3NA6140-6					
	2	47.2	80	690 ¹⁾		3NA7224-6				3NA6224-6		1	3 units	1BM	0.440
			100	440		3NA7230-6				3NA6230-6					
			125			3NA7232-6				3NA6232-6					
			160			3NA7236-6				3NA6236-6					
			200			3NA7240-6				3NA6240-6					
			57.8	224		3NA7242-6				3NA6242-6					
			250			3NA7244-6				3NA6244-6					
			300			3NA7250-6				3NA6250-6					
			315			3NA7252-6				3NA6252-6					

¹⁾ Manufacturer's confirmation for 690 V +10 % rated voltage available on request.





Size	Mounting width mm	I_n A	U_n V AC/V DC	DT	Non-insulated grip lugs		PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg				
					Article No. www.siemens.com/ product?Article No.	Price per PU								
LV HRC fuse links with front indicator, operational class gG														
	000	21	690 ¹⁾ /250		3NA3802-6		1	3 units	1BM	0.128				
					3NA3804-6						1	3 units	1BM	0.129
					3NA3801-6						1	3 units	1BM	0.131
					3NA3803-6						1	3 units	1BM	0.132
					3NA3805-6						1	3 units	1BM	0.130
					3NA3807-6						1	3 units	1BM	0.129
					3NA3810-6						1	3 units	1BM	0.129
					3NA3812-6						1	3 units	1BM	0.130
					3NA3814-6						1	3 units	1BM	0.131
					3NA3817-6KJ						1	3 units	1BM	0.131
					3NA3820-6KJ						1	3 units	1BM	0.128
	00	30	690 ¹⁾ /250		3NA3817-6		1	3 units	1BM	0.204				
					3NA3820-6						1	3 units	1BM	0.207
					3NA3822-6						1	3 units	1BM	0.205
					3NA3824-6						1	3 units	1BM	0.204
					3NA3830-6						1	3 units	1BM	0.203
	1	30	690 ¹⁾ /440		3NA3120-6		1	3 units	1BM	0.279				
					3NA3122-6						1	3 units	1BM	0.289
					3NA3124-6						1	3 units	1BM	0.287
					3NA3130-6						1	3 units	1BM	0.291
					3NA3132-6						1	3 units	1BM	0.272
					3NA3136-6						1	3 units	1BM	0.290
					3NA3140-6						1	3 units	1BM	0.445
	2	47.2	690 ¹⁾ /440		3NA3224-6		1	3 units	1BM	0.456				
					3NA3230-6						1	3 units	1BM	0.468
					3NA3232-6						1	3 units	1BM	0.456
					3NA3236-6						1	3 units	1BM	0.463
					3NA3240-6						1	3 units	1BM	0.470
					3NA3242-6						1	3 units	1BM	0.615
					3NA3244-6						1	3 units	1BM	0.655
					3NA3250-6						1	3 units	1BM	0.657
					3NA3252-6						1	3 units	1BM	0.657
	3	57.8	690 ¹⁾ /440		3NA3344-6		1	3 units	1BM	0.643				
					3NA3352-6						1	3 units	1BM	0.651
					3NA3354-6						1	3 units	1BM	1.037
					3NA3360-6						1	3 units	1BM	1.038
					3NA3362-6						1	3 units	1BM	1.048
					3NA3365-6						1	3 units	1BM	0.982

¹⁾ Manufacturer's confirmation for 690 V +10 % rated voltage available on request.

Fuse Systems

3NA, 3ND LV HRC Fuse Systems

LV HRC fuse links

Size	Mounting width mm	I_n A	U_n V AC/V DC	DT	Non-insulated grip lugs		PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
					Article No. www.siemens.com/ product?Article No.	Price per PU				
LV HRC fuse links with front indicator, operational class aM										
	000	21	500/--		6		1	3 units	1BM	0.130
					10		1	3 units	1BM	0.130
					16		1	3 units	1BM	0.127
					20		1	3 units	1BM	0.129
					25		1	3 units	1BM	0.129
					32		1	3 units	1BM	0.131
					35		1	3 units	1BM	0.131
					40		1	3 units	1BM	0.131
					50		1	3 units	1BM	0.131
					63		1	3 units	1BM	0.130
					80		1	3 units	1BM	0.131
100		1	3 units	1BM	0.132					
	00	30	500/--		100		1	3 units	1BM	0.204
					125		1	3 units	1BM	0.204
					160		1	3 units	1BM	0.204
	1	30	690/--		63		1	3 units	1BM	0.281
					80		1	3 units	1BM	0.267
					100		1	3 units	1BM	0.286
		47.2			125		1	3 units	1BM	0.449
					160		1	3 units	1BM	0.447
					200		1	3 units	1BM	0.443
	2	47.2	690/--		125		1	3 units	1BM	0.465
					160		1	3 units	1BM	0.464
					200		1	3 units	1BM	0.467
		57.8			250		1	3 units	1BM	0.416
					315		1	3 units	1BM	0.661
					355		1	3 units	1BM	0.663
400		1	3 units	1BM	0.655					
	3	57.8	690/--		315		1	3 units	1BM	0.597
					355		1	3 units	1BM	0.662
					400		1	3 units	1BM	0.659
		71.2			500		1	3 units	1BM	1.044
					630		1	3 units	1BM	1.036

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Overview

LV HRC signal detectors are used for remotely indicating that the LV HRC fuse links have been tripped. Three different solutions are available:

- 3NX1021 signal detectors with signal detector link
The LV HRC signal detectors with signal detector link support monitoring of LV HRC fuse links with non-insulated grip lugs of sizes 000 to 4 at 10 A or more. The signal detector link is connected in parallel to the LV HRC fuse link. In the event of a fault, the LV HRC fuse links are released simultaneously with the LV HRC fuse detector link. A trip pin switches a floating microswitch.

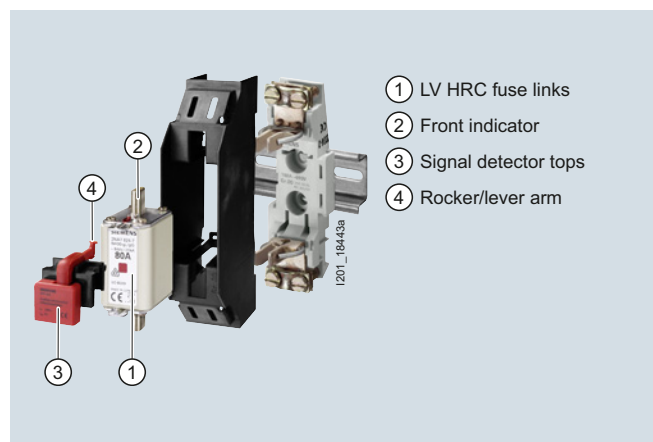
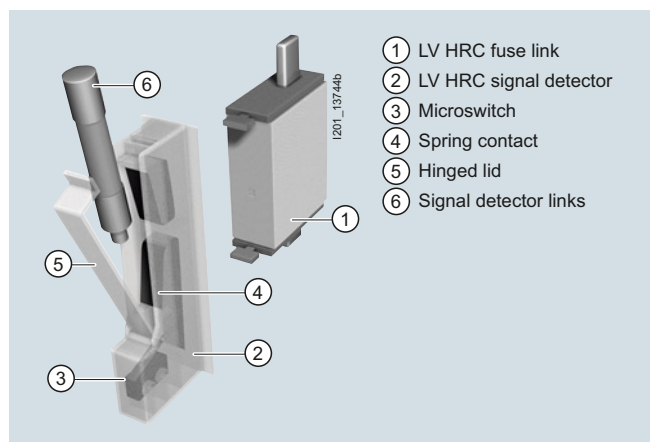
- 3NX1024 signal detector top
The signal detector top can be used with LV HRC fuse links, sizes 000, 00, 1 and 2, which are equipped with non-insulated grip lugs and have a front indicator or combination alarm. It is simply plugged into the grip lugs.
- 5TT3170 fuse monitor
If a fuse is tripped, the front indicator springs open and switches a floating microswitch. This solution should not be used for safety-relevant systems. For this purpose, we recommend our electronic fuse monitors.

Benefits

Uniform solution for all sizes

LV HRC signal detectors reliably indicate when a fuse has tripped. Tripped fuses are quickly located. This saves time and increases system availability.

The LV HRC signal detector top is a cost-effective solution for the monitoring of Siemens LV HRC fuse links of sizes 000, 00, 1 and 2.






Fuse Systems

3NA, 3ND LV HRC Fuse Systems

LV HRC signal detectors

Selection and ordering data

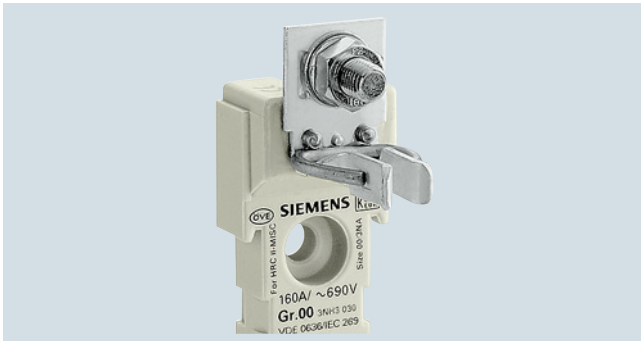
	Size	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
	000 ... 4		3NX1021		1	1/150 units	1BM	0.039
LV HRC signal detectors Only for SIEMENS 3NA3, 3NA7, 3ND LV HRC fuse links with non-insulated grip lugs <ul style="list-style-type: none"> Rated voltage up to 690 V AC/600 V DC Contact: Microswitches 250 V AC, 6 A Connection: Flat termination 2.3 mm 								
	000 ... 4		3NX1022		1	3 units	1BM	0.016
Signal detector links <ul style="list-style-type: none"> Rated voltage up to 690 V AC/600 V DC Response value > 9 V; 2.5 A; for standard applications Response value > 2 V; 7 A; only for meshed networks								
	000, 00, 1, 2		3NX1024		1	1 unit	1BM	0.027
Signal detector tops Only for SIEMENS 3NA3, 3NA7, 3ND LV HRC fuse links with non-insulated grip lugs <ul style="list-style-type: none"> Rated voltage up to 690 V AC/600 V DC Contact: Microswitch 230 V AC, 5 A, 1 CO Connection: Flat termination 2.3 mm 								

U_e	I_n	U_c	Mount- ing width	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
V AC	A	V	MW							
230	4	380 ... 415 3 AC	2	▶	5TT3170		1	1 unit	1BK	0.153
Fuse monitors For all low-voltage fuse systems. Can be used in asymmetric systems afflicted with harmonics and regenerative feedback motors. Signal also for disconnected loads.										

For more information on fuse monitors, see chapter "Monitoring Devices" → "Monitoring devices for electrical values", see page 12/9.

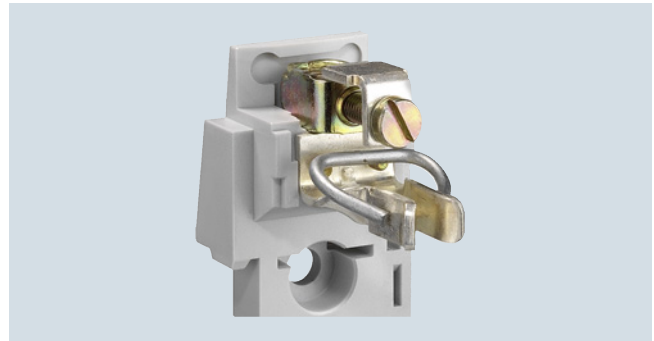
Overview

Terminals for all applications



Flat terminals with screws are suitable for connecting busbars or cable lugs. They have a torsion-proof screw connection with shim, spring washer and nut. When tightening the nut, always ensure compliance with the specified torque due to the considerable leverage effect.

The double busbar terminal differs from the flat terminal in that it supports connection of two busbars, one on the top and one at the bottom of the flat terminal.



The modern box terminal ensures efficient and reliable connection to the conductors. They support connection of conductors with or without end sleeves.



With the flat terminal with nut, terminal lug of the nut is torsion-proof. When tightening the nut, the torque must be observed because of the considerable leverage effect.



Up to three conductors can be clamped to the terminal strip.



The plug-in terminal is equipped for connecting two conductors.



One conductor can be clamped to the saddle-type terminal.

Fuse Systems

3NA, 3ND LV HRC Fuse Systems

LV HRC fuse bases and accessories

Benefits



- The silver-plated Lyra contact provides a large contact area for the pin of the LV HRC fuse link. This improves heat transmission and lowers the temperature. It also minimizes ageing of the fuse link in the maximum load range, in particular when using SITOR semiconductor fuses
- The large contact area also facilitates replacement of LV HRC fuse links
- The spring washer tensioning the contact is mechanically galvanized. This will prevent hydrogen embrittlement. The contact is resistant to aging and there will be no dreaded annealing of contacts, which considerably improves operating safety

5

Technical specifications

Size	LV HRC fuse bases, LV HRC bus-mounting bases						
	000/00	0	1	2	3	4	
Standards	IEC 60269-1, -2; EN 60269-1; DIN VDE 0636-2, UL 4248-1 (only downstream from the branch protection)						
Approvals	KEMA, UL File No: E171267-IZLT2						
Rated current I_n	A	160	160	250	400	630	1250
Rated voltage U_n	V AC	690 ¹⁾	690 ¹⁾				690
	V DC	250	440				440
Rated short-circuit strength	kA AC	120					
	kA DC	25					
Max. power dissipation of fuse links	W	12	25	32	45	60	90
Flat terminal							
Screw		M8		M10		M12	
Nut		M8	--				
Max. tightening torque	Nm	14		38			65
Plug-in terminal							
Conductor cross-section	mm ²	2.5 ... 50		--			
Saddle-type terminal							
Conductor cross-section	mm ²	6 ... 70	--				
Box terminal							
Conductor cross-section	mm ²	2.5 ... 50					
Terminal strips							
Conductor cross-section, 3-wire	mm ²	1.5 ... 16	--				
Max. torque for attachment of LV HRC fuse base	Nm	2		2.5			--

¹⁾ Extended rated voltage up to 1000 V (except LV HRC bus-mounting bases).

Size	LV HRC fuse bases with swivel mechanism			
	000/00	1	3	4a
Rated voltage U_n	V AC	690		
	V DC	440		
Max. power dissipation of fuse links	W	12	32	48
Flat terminal				
Screw		M8	M10	M12
Nut		M8	--	
Max. tightening torque	Nm	14	38	65



Selection and ordering data

Size	I_n	Version	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
LV HRC fuse bases									
Made of molded plastic, for standard rail mounting or screw fixing									
	000/00	160	1P With flat terminals, screw	3NH3051		1	1/20 units	1BM	0.140
		125	With box terminals, up to 50 mm ²	3NH3053		1	1/10 units	1BM	0.120
Made of ceramic for screw fixing									
	000/00	160	1P With flat terminals, screw	3NH3030		1	3/30 units	1BM	0.216
			With plug-in terminals	3NH3031		1	3 units	1BM	0.271
			With saddle-type terminals	3NH3032		1	3 units	1BM	0.219
			3P (incl. two partitions) With flat terminals	3NH4030		1	1/16 units	1BM	0.709
		With saddle-type terminals	3NH4032		1	1 unit	1BM	0.721	
Made of ceramic for screw fixing									
	0	160	1P With flat terminals	3NH3120		1	3 units	1BM	0.423
	Made of ceramic for screw fixing								
	1	250	1P With flat terminals	3NH3230		1	3 units	1BM	0.759
			With double busbar terminals	3NH3220		1	3 units	1BM	0.771
Ceramic supports on base plate for screw fixing									
	1	250	3P (incl. two partitions) With flat terminals	3NH4230		1	1 unit	1BM	2.069
	Made of ceramic for screw fixing								
	2	400	1P With flat terminals	3NH3330		1	1 unit	1BM	0.803
			With double busbar terminals	3NH3320		1	1 unit	1BM	0.818
Made of ceramic for screw fixing									
	3	630	1P With flat terminals	3NH3430		1	1 unit	1BM	1.072
			With double busbar terminals	3NH3420		1	1 unit	1BM	1.091






Fuse Systems

3NA, 3ND LV HRC Fuse Systems

LV HRC fuse bases and accessories

Size	I_n	Version	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
LV HRC fuse bases									
Ceramic supports on base plate for screw fixing (IEC design)									
	4	1250 1P		3NH3530		1	1 unit	1BM	3.259
With flat terminals									
LV HRC fuse bases with swivel mechanism									
With flat terminals ¹⁾									
	000/00	160 1P		3NH7030		1	1 unit	1BM	0.412
With screw fixing for mounting plate									
1	250 1P			3NH7230		1	1 unit	1BM	1.091
With screw fixing for mounting plate									
Can also be used for fuse links of size 2									
3	630 1P			3NH7330		1	1 unit	1BM	2.075
With screw fixing for mounting plate									






¹⁾ Size 000/00 with additionally enclosed saddle-type terminals

	Size	I_n	Version	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
LV HRC fuse bases with swivel mechanism									
	4a	1250	1P With screw fixing for mounting plate	3NH7520		1	1 unit	1BM	5.171
LV HRC protective covers for LV HRC fuse bases									
	As touch protection for contact pieces								
	000/00			3NX3105		1	2/20 units	1BM	0.016
	0			3NX3114		1	2/40 units	1BM	0.001
	1			3NX3106		1	2/20 units	1BM	0.022
	2			3NX3107		1	2/12 units	1BM	0.024
	3			3NX3108		1	2/10 units	1BM	0.029
LV HRC partitions for LV HRC fuse bases									
	As intermediate phase and end barrier								
			Type						
	000/00		3NH30/3NH40	3NX2023		1	2/400 units	1BM	0.024
	0		3NH31	3NX2030		1	2 units	1BM	0.038
	1		3NH32	3NX2024		1	2 units	1BM	0.051
	2		3NH33	3NX2025		1	2 units	1BM	0.066
	3		3NH34	3NX2026		1	2 units	1BM	0.077
LV HRC protective covers									
	000/00		1P and 3P	3NX3115		1	10 units	1BM	0.052
	000/00		When using fuse links with non-insulated grip lugs	3NX3116		1	10 units	1BM	0.022

Fuse Systems

3NA, 3ND LV HRC Fuse Systems

LV HRC fuse bases and accessories

Size	Version	DT	Article No. www.siemens.com/ product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
Fuse base covers								
	For LV HRC fuse bases, red, with inscription "Isolating point"		3NX1003 3NX1004		1	3 units	1BM	0.037
	000/00 1, 2, 3				1	3 units	1BM	0.089
Fuse pullers								
	For LV HRC fuse links		3NX1013 3NX1014		1	1 unit	1BM	0.309
	000 ... 3	Without sleeve With sleeve			1	1 unit	1BM	0.534
								
Isolating blades For LV HRC fuse bases and fuse switch disconnectors								
	With insulated grip lugs		3NG1002 3NG1102 3NG1202 3NG1302 3NG1402		1	3/30 units	1BM	0.076
	000/00	Silver-plated			1	1/10 units	1BM	0.121
	0				1	1/10 units	1BM	0.169
	1				1	1/5 units	1BM	0.229
	2				1	1/5 units	1BM	0.301
	With non-insulated grip lugs		3NG1503 3NG1505		1	3 units	1BM	0.720
	4	Tinned			1	1/5 units	1BM	0.721
	4a	Nickel-plated						

SITOR semiconductor fuses for 3NH bases: Assignment table

3NH bases are generally suitable for all LV HRC type fuses. LV HRC type fuses for SITOR semiconductor protection can also be used, although it must be noted that, compared to cable and line protection fuses, these get much hotter during operation. The following table contains the permissible load currents of the SITOR semiconductor fuses for installation in 3NH.

For installation in a base, it may therefore be necessary to operate the fuse under I_n (derating).

The values were determined using the conductor cross-sections specified in the table. If using smaller cross-sections, a considerably higher derating is required due to the lower heat dissipation.

SITOR semiconductor fuse data						Permissible load currents of fuse when installed in: 3NH		
Type ¹⁾	Rated current I_n	Rated voltage U_n	Operational class	Size	Required conductor cross-section	Type	Size	Permissible load current ²⁾
--	A	V AC	--	--	mm ² Cu	--	--	A
3NC2423-0C/3C	150	500	gR	3	70	3NH3430/20	3	150
3NC2425-0C/3C	200	500	gR	3	95	3NH3430/20	3	190
3NC2427-0C/3C	250	500	gR	3	120	3NH3430/20	3	240
3NC2428-0C/3C	300	500	gR	3	185	3NH3430/20	3	285
3NC2431-0C/3C	350	500	gR	3	240	3NH3430/20	3	330
3NC2432-0C/3C	400	500	aR	3	240	3NH3430/20	3	400
3NC3336-1U	630	1000	aR	3	2 x (40 x 5)	3NH3430/20	3	560
3NC3337-1U	710	1000	aR	3	2 x (50 x 5)	3NH3430/20	3	600
3NC3338-1U	800	1000	aR	3	2 x (40 x 8)	3NH3430/20	3	660
3NC3340-1U	900	1000	aR	3	2 x (40 x 8)	3NH3430/20	3	750
3NC3341-1U	1000	1000	aR	3	2 x (50 x 8)	3NH3430/20	3	850
3NC3342-1U	1100	800	aR	3	2 x (50 x 8)	3NH3430/20	3	900
3NC3343-1U	1250	800	aR	3	2 x (50 x 8)	3NH3430/20	3	950
3NC3430-1U	315	1250	aR	3	2 x 95	3NH3430/20	3	310
3NC3432-1U	400	1250	aR	3	2 x 120	3NH3430/20	3	390
3NC3434-1U	500	1250	aR	3	2 x 150	3NH3430/20	3	460
3NC3436-1U	630	1250	aR	3	2 x (40 x 5)	3NH3430/20	3	560
3NC3438-1U	800	1100	aR	3	2 x (40 x 8)	3NH3430/20	3	690
3NC8423-0C/3C	150	690	gR	3	70	3NH3430/20	3	135
3NC8425-0C/3C	200	690	gR	3	95	3NH3430/20	3	180
3NC8427-0C/3C	250	690	gR	3	120	3NH3430/20	3	250
3NC8431-0C/3C	350	690	gR	3	240	3NH3430/20	3	315
3NC8434-0C/3C	500	690	gR	3	2 x 150	3NH3430/20	3	450
3NC8444-3C	1000	600	aR	3	2 x (60 x 6)	3NH3430/20	3	800
3NE1020-2	80	690	gR	00	25	3NH3030/4030	00	80
3NE1021-0	100	690	gS	00	35	3NH3030/4030	00	100
3NE1021-2	100	690	gR	00	35	3NH3030/4030	00	100
3NE1022-0	125	690	gS	00	50	3NH3030/4030	00	125
3NE1022-2	125	690	gR	00	50	3NH3030/4030	00	125
3NE1224-0	160	690	gS	1	70	3NH3230/4230	1	160
3NE1224-2/-3	160	690	gR	1	70	3NH3230/4230	1	160
3NE1225-0	200	690	gS	1	95	3NH3230/4230	1	200
3NE1225-2/-3	200	690	gR	1	95	3NH3230/4230	1	200/190
3NE1227-0	250	690	gS	1	120	3NH3230/4230	1	250
3NE1227-2/-3	250	690	gR	1	120	3NH3230/4230	1	250/235
3NE1230-0	315	690	gS	1	2 x 70	3NH3330/20	2	315
3NE1230-2/-3	315	690	gR	1	2 x 70	3NH3330/20	2	315
3NE1331-0	350	690	gS	2	2 x 95	3NH3330/20	2	350
3NE1331-2/-3	350	690	gR	2	2 x 95	3NH3330/20	2	350
3NE1332-0	400	690	gS	2	2 x 95	3NH3330/20	2	400
3NE1332-2/-3	400	690	gR	2	2 x 95	3NH3330/20	2	400
3NE1333-0	450	690	gS	2	2 x 120	3NH3430/20	3	450
3NE1333-2/-3	450	690	gR	2	2 x 120	3NH3430/20	3	450
3NE1334-0	500	690	gS	2	2 x 120	3NH3430/20	3	500
3NE1334-2/-3	500	690	gR	2	2 x 120	3NH3430/20	3	500
3NE1435-0	560	690	gS	3	2 x 150	3NH3430/20	3	560
3NE1435-2/-3	560	690	gR	3	2 x 150	3NH3430/20	3	560
3NE1436-0	630	690	gS	3	2 x 185	3NH3430/20	3	630
3NE1436-2/-3	630	690	gR	3	2 x 185	3NH3430/20	3	630
3NE1437-0	710	690	gS	3	2 x (40 x 5)	3NH3430/20	3	710
3NE1437-1	710	600	gR	3	2 x (40 x 5)	3NH3430/20	3	690
3NE1437-2/-3	710	690	gR	3	2 x (40 x 5)	3NH3430/20	3	710
3NE1438-0	800	690	gS	3	2 x (50 x 5)	3NH3430/20	3	800
3NE1438-1	800	600	gR	3	2 x (50 x 5)	3NH3430/20	3	750
3NE1438-2/-3	800	690	gR	3	2 x (50 x 5)	3NH3430/20	3	800
3NE1447-2/-3	670	690	gR	3	2 x (40 x 5)	3NH3430/20	3	670
3NE1448-2/-3	850	690	gR	3	2 x (40 x 8)	3NH3430/20	3	850
3NE1802-0	40	690	gS	000	10	3NH3030/4030	00	40
3NE1803-0	35	690	gS	000	6	3NH3030/4030	00	35
3NE1813-0	16	690	gS	000	1.5	3NH3030/4030	00	16
3NE1814-0	20	690	gS	000	2.5	3NH3030/4030	00	20

¹⁾ For permissible load currents for 3NE8...-0MK, see [Configuration Manual "Fuse Systems"](#) or on request.

²⁾ In the case of cyclic loads, the currents may have to be further reduced (precise values on request).

Fuse Systems

3NA, 3ND LV HRC Fuse Systems

LV HRC fuse bases and accessories

SITOR semiconductor fuse data						Permissible load currents of fuse when installed in: 3NH		
Type ¹⁾	Rated current I_n	Rated voltage U_n	Operational class	Size	Required conductor cross-section	Type	Size	Permissible load current ²⁾
--	A	V AC	--	--	mm ² Cu	--	--	A
3NE1815-0	25	690	gS	000	4	3NH3030/4030	00	25
3NE1817-0	50	690	gS	000	10	3NH3030/4030	00	50
3NE1818-0	63	690	gS	000	16	3NH3030/4030	00	63
3NE1820-0	80	690	gS	000	25	3NH3030/4030	00	80
3NE3221	100	1000	aR	1	35	3NH3230/4230	1	100
3NE3222	125	1000	aR	1	50	3NH3230/4230	1	125
3NE3224	160	1000	aR	1	70	3NH3230/4230	1	160
3NE3225	200	1000	aR	1	95	3NH3230/4230	1	200
3NE3227	250	1000	aR	1	120	3NH3230/4230	1	250
3NE3230-0B	315	1000	aR	1	185	3NH3330/20	2	305
3NE3231	350	1000	aR	1	240	3NH3330/20	2	335
3NE3232-0B	400	1000	aR	1	240	3NH3330/20	2	380
3NE3233	450	1000	aR	1	2 x 150	3NH3330/20	2	425
3NE3332-0B	400	1000	aR	2	240	3NH3430/20	3	400
3NE3333	450	1000	aR	2	2 x 150	3NH3430/20	3	450
3NE3334-0B	500	1000	aR	2	2 x 150	3NH3430/20	3	500
3NE3335	560	1000	aR	2	2 x 185	3NH3430/20	3	560
3NE3336	630	1000	aR	2	2 x 185	3NH3430/20	3	630
3NE3337-8	710	900	aR	2	2 x (40 x 5)	3NH3430/20	3	680
3NE3338-8	800	800	aR	2	2 x 240	3NH3430/20	3	700
3NE3340-8	900	690	aR	2	2 x (40 x 8)	3NH3430/20	3	750
3NE4101	32	1000	gR	0	6	3NH3120/4230	0/1	32
3NE4102	40	1000	gR	0	10	3NH3120/4230	0/1	40
3NE4117	50	1000	gR	0	10	3NH3120/4230	0/1	50
3NE4118	63	1000	aR	0	16	3NH3120/4230	0/1	63
3NE4120	80	1000	aR	0	25	3NH3120/4230	0/1	80
3NE4121	100	1000	aR	0	35	3NH3120/4230	0/1	100
3NE4122	125	1000	aR	0	50	3NH3120/4230	0/1	125
3NE4124	160	1000	aR	0	70	3NH3120/4230	0/1	160
3NE4327-0B	250	800	aR	2	150	3NH3330/20	2	240
3NE4330-0B	315	800	aR	2	240	3NH3330/20	2	300
3NE4333-0B	450	800	aR	2	2 x (30 x 5)	3NH3430/20	3	425
3NE4334-0B	500	800	aR	2	2 x (30 x 5)	3NH3430/20	3	475
3NE4337	710	800	aR	2	2 x (50 x 5)	3NH3430/20	3	630
3NE8015-1	25	690	gR	00	4	3NH3030/4030	00	25
3NE8003-1	35	690	gR	00	6	3NH3030/4030	00	35
3NE8017-1	50	690	gR	00	10	3NH3030/4030	00	50
3NE8018-1	63	690	gR	00	16	3NH3030/4030	00	63
3NE8020-1	80	690	aR	00	25	3NH3030/4030	00	80
3NE8021-1	100	690	aR	00	35	3NH3030/4030	00	100
3NE8022-1	125	690	aR	00	50	3NH3030/4030	00	125
3NE8024-1	160	690	aR	00	70	3NH3030/4030	00	160

¹⁾ For permissible load currents for 3NE8...-0MK, see Configuration Manual "Fuse Systems" or on request.

²⁾ In the case of cyclic loads, the currents may have to be further reduced (precise values on request).

Overview

SITOR semiconductor fuses protect power semiconductors from the effects of short circuits because the super quick-response disconnect characteristic is far quicker than with conventional LV HRC fuses. They protect high-quality devices and system components, such as converters with fuses in the input and the DC link, UPS systems and soft starters for motors.

Panel mounting requirements have given rise to various connection versions and designs.

The fuses with blade contacts comply with IEC 60269-2 and are suitable for installation in 3NH LV HRC fuse bases, in LV HRC fuse switch disconnectors and switch disconnectors with fuses. They also include fuses with slotted blade contacts for screw fixing with 110 mm mounting dimension, whose sizes are according to IEC 60269-4.

Fuses with slotted blade contacts for screw fixing with 80 mm or 110 mm mounting dimension are often screwed directly onto busbars for optimum heat dissipation. Even better heat transmission is provided by the compact fuses with M10 or M12 female thread, which are also mounted directly onto busbars.

Bolt-on links with 80 mm mounting dimension are another panel-mounting version for direct busbar mounting.

The fuses for SITOR thyristor sets, railway rectifiers or electrolysis systems were developed specially for these applications.

3NH LV HRC fuse bases suitable for use with SITOR semiconductor fuses and safety switching devices can also be found in this chapter, [see page 5/45 ff.](#)

Fuse characteristics, configuration notes and the assignments of SITOR semiconductor fuses to the fuse bases and 3NP and 3KL safety switching devices can be found in the Configuration Manual, "Fuse Systems" at: www.siemens.com/lowvoltage/manuals.

The new size 3 type ranges have a round ceramic body instead of a square one. These series are characterized by small I^2t values with low power dissipation and high capability under alternating load. The dimensions and functional values correspond to the current standards IEC 60269-4/EN 60269-4.

Note:

The ordering data of the fuses are listed in ascending order of the rated voltage in the selection tables.

Benefits

- SITOR semiconductor fuses have a high varying load factor, which ensures a high level of operational safety and plant availability – even when subject to constant load change
- The use of SITOR semiconductor fuses in 3NH LV HRC fuse bases or Siemens switch disconnectors has been tested with regard to heat dissipation and maximum current loading. This makes planning and dimensioning easier and prevents consequential damage
- Our high standard of quality ensures good compliance with the characteristic curve and accuracy. This ensures long-term protection of devices

Operational classes

Fuses are categorized according to function and operational classes. SITOR semiconductor fuses, in LV HRC design, are available in the following operational classes:

- aR: For the short-circuit protection of power semiconductors (partial range protection)
- gR: For the protection of power semiconductors (full range protection)
- gS: The gS operational class combines cable and line protection with semiconductor protection (full range protection)

Parallel-connected fuses

Parallel-connected fuses offer maximum current and energy limiting that is clearly better than in the case of comparable single fuses. They also fulfill the special requirements for UL-certified fuses according to which fuses must be connected in parallel at the factory. Here is the original wording of the NEC document: *240.8 Fuses and circuit breakers shall be permitted to be connected in parallel where they are factory assembled in parallel and listed as a unit. Individual fuses, circuit breakers, or combinations thereof shall not otherwise be connected in parallel.*

Fuse Systems









SITOR Semiconductor Fuses

LV HRC design

Selection and ordering data

Size	I_n	U_n	Operational class	Breaking I^2t value	Power loss	Varying load factor WL	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
A		V AC/ V DC		A ² s	W								
LV HRC design													
With slotted blade contacts with 2 oblong slots for M10 screw fixing, mounting dimension: 110 mm, or for installation in 3NA3 LV HRC fuse bases or switch disconnectors													
3	150	500	gR	33000	35	0.85		3NC2423-0C		1	3 units	1DM	0.979
	200			64000	40	0.85		3NC2425-0C		1	3 units	1DM	1.044
	250			99000	50	0.85		3NC2427-0C		1	3 units	1DM	0.981
	300			132000	65	0.85		3NC2428-0C		1	3 units	1DM	1.210
	350			249000	60	0.85		3NC2431-0C		1	3 units	1DM	0.981
	400	aR		390000	50	0.85		3NC2432-0C		1	3 units	1DM	0.986
With slotted blade contacts for M10 screw fixing, mounting dimension: 110 mm, or for installation in 3NA3 LV HRC fuse bases or switch disconnectors													
3	150	500	gR	33000	35	0.85		3NC2423-3C		1	3 units	1DM	0.969
	200			64000	40	0.85		3NC2425-3C		1	3 units	1DM	0.992
	250			99000	50	0.85		3NC2427-3C		1	3 units	1DM	0.999
	300			132000	65	0.85		3NC2428-3C		1	3 units	1DM	0.971
	350			249000	60	0.85		3NC2431-3C		1	3 units	1DM	1.046
	400	aR		390000	50	0.85		3NC2432-3C		1	3 units	1DM	0.968
1	160	690	gR	18600	32	1.0		3NE1224-3		1	3 units	1DM	0.605
	200			51800	35	1.0		3NE1225-3		1	3 units	1DM	0.587
	250			80900	37	1.0		3NE1227-3		1	3 units	1DM	0.610
	315			168000	40	1.0		3NE1230-3		1	3 units	1DM	0.601
2	350	690	gR	177000	43	1.0		3NE1331-3		1	3 units	1DM	0.751
	400			224000	50	1.0		3NE1332-3		1	3 units	1DM	0.680
	450			276500	58	1.0		3NE1333-3		1	3/12 units	1DM	0.755
	500			398000	64	1.0		3NE1334-3		1	3 units	1DM	0.745
3	150	690	gR	17600	40	0.85		3NC8423-3C		1	3 units	1DM	1.001
	200			38400	55	0.85		3NC8425-3C		1	3 units	1DM	1.000
	250			70400	72	0.85		3NC8427-3C		1	3 units	1DM	1.063
	350			176000	95	0.85		3NC8431-3C		1	3 units	1DM	1.003
	500			448000	130	0.85		3NC8434-3C		1	3 units	1DM	0.994
	1000	600	aR	2480000	140	0.95		3NC8444-3C		1	3 units	1DM	1.011
With slotted blade contacts for M12 screw fixing, mounting dimension: 110 mm, or for installation in 3NA3 LV HRC fuse bases or switch disconnectors													
3	560	690	gR	890000	60	1.0		3NE1435-3		1	3 units	1DM	1.094
	630			1390000	60	1.0		3NE1436-3		1	3 units	1DM	1.144
	670			1640000	64	1.0		3NE1447-3		1	3 units	1DM	1.088
	710			1818000	72	1.0		3NE1437-3		1	3 units	1DM	1.093
	800			2475000	84	1.0		3NE1438-3		1	3 units	1DM	0.001
	850			3640000	76	1.0		3NE1448-3		1	3 units	1DM	1.100
With M8 bolt-on links, mounting dimension: 80 mm, for screwing onto busbars or onto 3NH5423 fuse base NEW													
1	100	690/	aR	3200	25	On req.		3NE8221-3MK		1	3 units	1DM	0.410
	125	440		6000	28	On req.		3NE8222-3MK		1	3 units	1DM	0.410
	160			10500	35	On req.		3NE8224-3MK		1	3 units	1DM	0.412
	200			17500	42	On req.		3NE8225-3MK		1	3 units	1DM	0.412
	250			28500	53.5	On req.		3NE8227-3MK		1	3 units	1DM	0.412
	315			53500	61	On req.		3NE8230-3MK		1	3 units	1DM	0.413
	350			66000	69	On req.		3NE8231-3MK		1	3 units	1DM	0.411
	400			110000	70.5	On req.		3NE8232-3MK		1	3 units	1DM	0.412
	450			180000	71	On req.		3NE8233-3MK		1	3 units	1DM	0.411
	500			215000	84	On req.		3NE8234-3MK		1	3 units	1DM	0.413
	550			290000	87	On req.		3NE8235-3MK		1	3 units	1DM	0.412
	630			440000	96	On req.		3NE8236-3MK		1	3 units	1DM	0.412

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Size	I_n	U_n	Operational class	Breaking I^2t value	Power loss	Varying load factor WL	DT	Article No. www.siemens.com/product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx.
A	V AC			A ² s	W								kg
LV HRC design													
With slotted blade contacts for M12 screw fixing, mounting dimension: 80 mm													
	3	630	690 aR	244000	120	0.85		3NC3236-1U		1	3 units	1DM	0.810
		710		346000	130	0.85		3NC3237-1U		1	3 units	1DM	0.813
		800		498000	135	0.9		3NC3238-1U		1	3 units	1DM	0.811
		900		677000	145	0.9		3NC3240-1U		1	3 units	1DM	0.808
		1000		975000	155	0.95		3NC3241-1U		1	3 units	1DM	0.811
		1100		1382000	165	0.95		3NC3242-1U		1	3 units	1DM	0.808
		1250		1990000	175	0.95		3NC3243-1U		1	3 units	1DM	0.813
		1400	500	2100000	200	0.95		3NC3244-1U		1	3 units	1DM	0.815
		1600		2860000	240	0.9		3NC3245-1U		1	3 units	1DM	0.811
	With slotted blade contacts with 2 oblong slots for M10 screw fixing, mounting dimension: 110 mm, or for installation in 3NA3 LV HRC fuse bases or switch disconnectors												
	3	150	690 gR	17600	40	0.85		3NC8423-0C		1	3 units	1DM	0.998
		200		38400	55	0.85		3NC8425-0C		1	3 units	1DM	1.007
		250		70400	72	0.85		3NC8427-0C		1	3 units	1DM	1.006
		350		176000	95	0.85		3NC8431-0C		1	3 units	1DM	1.001
		500		448000	130	0.85		3NC8434-0C		1	3 units	1DM	1.069
With blade contacts for mounting in 3NA3 LV HRC fuse bases or switch disconnectors													
	3	710	600 gR	2460000	65	1.0		3NE1437-1		1	3 units	1DM	1.088
		800		3350000	72	1.0		3NE1438-1		1	3 units	1DM	1.152
	000	16	690 gS	200	4.0	1.0		3NE1813-0		1	3/120 units	1DM	0.134
		20		430	5.0	1.0		3NE1814-0		1	3/120 units	1DM	0.132
		25		780	5.0	1.0		3NE1815-0		1	3/120 units	1DM	0.129
		35		1700	3.5	1.0		3NE1803-0		1	3/120 units	1DM	0.134
		40		3000	3.0	1.0		3NE1802-0		1	3 units	1DM	0.136
		50		4400	6.0	1.0		3NE1817-0		1	3/120 units	1DM	0.130
		63		9000	7.0	1.0		3NE1818-0		1	3/120 units	1DM	0.133
		80		18000	8.0	1.0		3NE1820-0		1	3/120 units	1DM	0.135
	00	100	690 gS	33000	10	1.0		3NE1021-0		1	3/72 units	1DM	0.201
		125		63000	11	1.0		3NE1022-0		1	3/72 units	1DM	0.202
	1	160	690 gS	60000	24	1.0		3NE1224-0		1	3 units	1DM	0.578
		200		100000	27	1.0		3NE1225-0		1	3 units	1DM	0.582
		250		200000	30	1.0		3NE1227-0		1	3 units	1DM	0.589
		315		310000	38	1.0		3NE1230-0		1	3 units	1DM	0.577
	2	350	690 gS	430000	42	1.0		3NE1331-0		1	3 units	1DM	0.800
		400		590000	45	1.0		3NE1332-0		1	3 units	1DM	0.800
		450		750000	53	1.0		3NE1333-0		1	3 units	1DM	0.814
		500		950000	56	1.0		3NE1334-0		1	3/12 units	1DM	0.759
	3	560	690 gS	1700000	50	1.0		3NE1435-0		1	3 units	1DM	1.084
		630		2350000	55	1.0		3NE1436-0		1	3 units	1DM	1.140
		710		3400000	58	1.0		3NE1437-0		1	3 units	1DM	1.156
		800		5000000	58	1.0		3NE1438-0		1	3 units	1DM	1.124

Fuse Systems



SITOR Semiconductor Fuses

LV HRC design



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Size	I_n	U_n	Operational class	Breaking I^2t value	Power loss	Varying load factor WL	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg	
A	V	AC/DC		A ² s	W									
LV HRC design														
With blade contacts for mounting in 3NH3 LV HRC fuse bases or switch disconnectors NEW														
	000	6	690/440	gR	37	2.7	On req.	3NE8810-0MK		1	3 units	1DM	0.138	
		10			50	4.5	On req.	3NE8812-0MK		1	3 units	1DM	0.139	
		16			73	6.7	On req.	3NE8813-0MK		1	3 units	1DM	0.133	
		20			90	8	On req.	3NE8814-0MK		1	3 units	1DM	0.138	
		25			150	8.1	On req.	3NE8815-0MK		1	3 units	1DM	0.139	
		32			350	10.5	On req.	3NE8801-0MK		1	3 units	1DM	0.139	
		40			480	12	On req.	3NE8802-0MK		1	3 units	1DM	0.139	
		50			1050	14.5	On req.	3NE8817-0MK		1	3 units	1DM	0.137	
		63			1960	23	On req.	3NE8818-0MK		1	3 units	1DM	0.135	
		80		aR	2200	23.3	On req.	3NE8820-0MK		1	3 units	1DM	0.140	
		100			3650	27	On req.	3NE8821-0MK		1	3 units	1DM	0.140	
		125			7800	30	On req.	3NE8822-0MK		1	3 units	1DM	0.140	
		160	500/440		14000	34	On req.	3NE8824-0MK		1	3 units	1DM	0.139	
	With blade contacts for mounting in 3NA3 LV HRC fuse bases or switch disconnectors													
	00	25	690	gR	180	7	0.95	3NE8015-1		1	3 units	1DM	0.205	
		35			400	9	0.95	3NE8003-1		1	3/72 units	1DM	0.203	
		50			700	14	0.90	3NE8017-1		1	3/72 units	1DM	0.206	
		63			1400	16	0.95	3NE8018-1		1	3/72 units	1DM	0.205	
		80			5800	10.5	1.0	3NE1020-2		1	3 units	1DM	0.204	
		100			11000	12	1.0	3NE1021-2		1	3 units	1DM	0.199	
		125			23000	13.5	1.0	3NE1022-2		1	3 units	1DM	0.210	
		80		aR	2400	19	0.95	3NE8020-1		1	3/72 units	1DM	0.203	
		100			4200	22	0.95	3NE8021-1		1	3/72 units	1DM	0.203	
		125			6500	28	0.95	3NE8022-1		1	3/72 units	1DM	0.210	
		160			13000	38	0.95	3NE8024-1		1	3/72 units	1DM	0.205	
		1	100	690/440	aR NEW	6050	25.5	On req.	3NE8221-0MK		1	3 units	1DM	0.476
		125			8900	28.5	On req.	3NE8222-0MK		1	3 units	1DM	0.475	
		160			16200	37	On req.	3NE8224-0MK		1	3 units	1DM	0.480	
		200			26000	49	On req.	3NE8225-0MK		1	3 units	1DM	0.478	
		250			59000	52	On req.	3NE8227-0MK		1	3 units	1DM	0.477	
		315			120000	68	On req.	3NE8230-0MK		1	3 units	1DM	0.478	
		160	690	gR	18600	32	1.0	3NE1224-2		1	3/12 units	1DM	0.601	
		200			51800	35	1.0	3NE1225-2		1	3/12 units	1DM	0.608	
		250			80900	37	1.0	3NE1227-2		1	3/12 units	1DM	0.606	
		315			168000	40	1.0	3NE1230-2		1	3 units	1DM	0.604	
		2	350	690/440	aR NEW	83500	68.6	On req.	3NE8331-0MK		1	3 units	1DM	0.623
			400			136000	72.8	On req.	3NE8332-0MK		1	3 units	1DM	0.625
		450			207000	80.1	On req.	3NE8333-0MK		1	3 units	1DM	0.625	
		500			318000	77.5	On req.	3NE8334-0MK		1	3 units	1DM	0.599	
		550			399000	86.4	On req.	3NE8335-0MK		1	3 units	1DM	0.601	
		630			740000	90.7	On req.	3NE8336-0MK		1	3 units	1DM	0.603	
		350	690	gR	177000	43	1.0	3NE1331-2		1	3/12 units	1DM	0.822	
		400			224000	50	1.0	3NE1332-2		1	3 units	1DM	0.764	
		450			276500	58	1.0	3NE1333-2		1	3/12 units	1DM	0.818	
		500			398000	64	1.0	3NE1334-2		1	3 units	1DM	0.831	
		3	560	690	gR	890000	60	1.0	3NE1435-2		1	3 units	1DM	1.191
			630			1390000	60	1.0	3NE1436-2		1	3 units	1DM	1.201
		670			1640000	64	1.0	3NE1447-2		1	3 units	1DM	1.192	
		710			1818000	72	1.0	3NE1437-2		1	3 units	1DM	1.189	
		800			2475000	84	1.0	3NE1438-2		1	3 units	1DM	1.186	
		850			3640000	76	1.0	3NE1448-2		1	3 units	1DM	1.188	
	0	32	1000	gR	280	12	0.9	3NE4101		1	3 units	1DM	0.277	
		40			500	13	0.9	3NE4102		1	3 units	1DM	0.269	
		50			800	16	0.9	3NE4117		1	3 units	1DM	0.271	
		63		aR	1500	20	0.9	3NE4118		1	3 units	1DM	0.269	
		80			3000	22	0.9	3NE4120		1	3 units	1DM	0.270	
		100			6000	24	0.9	3NE4121		1	3 units	1DM	0.268	
		125			14000	30	0.9	3NE4122		1	3 units	1DM	0.276	
		160			29000	35	0.9	3NE4124		1	3 units	1DM	0.275	

* You can order this quantity or a multiple thereof.

Size	I_n	U_n	Operational classes	Breaking I^2t value	Power loss	Varying load factor WL	DT	Article No. www.siemens.com/product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
A	V AC/ V DC			A ² s	W								
LV HRC design With M8 bolt-on links, mounting dimension: 80 mm, for screwing onto busbars													
	000	20	690/ gR	83	7	0.9		3NE8714-1		1	10 units	1DM	0.139
		25	700 ¹⁾	140	9	0.9		3NE8715-1		1	10 units	1DM	0.143
		32		285	10	0.9		3NE8701-1		1	10 units	1DM	0.143
		40		490	12	0.9		3NE8702-1		1	10 units	1DM	0.139
		50		815	15	0.9		3NE8717-1		1	10 units	1DM	0.138
		63	aR	1550	16	0.95		3NE8718-1		1	10 units	1DM	0.144
		80		2700	18	0.9		3NE8720-1		1	10 units	1DM	0.138
		100		4950	19	0.95		3NE8721-1		1	10 units	1DM	0.138
		125		9100	23	0.95		3NE8722-1		1	10 units	1DM	0.142
		160		17000	31	0.9		3NE8724-1		1	10 units	1DM	0.146
		200		30000	36	0.9		3NE8725-1		1	10 units	1DM	0.139
		250		55000	42	0.9		3NE8727-1		1	10 units	1DM	0.134
	315		85500	54	0.85		3NE8731-1		1	10/70 units	1DM	0.141	
With M10 bolt-on links, mounting dimension: 80 mm, for screwing onto busbars or onto 3NH5323 fuse base NEW													
	00	80	690/ gR	3200	23.0	On req.		3NE8020-3MK		1	3 units	1DM	0.205
		100	440	5200	29.0	On req.		3NE8021-3MK		1	3 units	1DM	0.205
		350	aR	135000	58.8	On req.		3NE8031-3MK		1	3 units	1DM	0.209
		400		170000	74.5	On req.		3NE8032-3MK		1	3 units	1DM	0.211

1) DC voltage acc. to UL.

Size	I_n	U_n	Operational classes	Breaking I^2t value	Power loss	Varying load factor WL	DT	Article No. www.siemens.com/product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
A	V AC/ V DC			A ² s	W								
LV HRC design Parallel-connected fuses with slotted blade contacts for M12 screw fixing, mounting dimension: 110 mm (lateral 90 mm)													
	2 x 3	1000	690 gR	1400 000	138	1.0		3NB3350-1KK26		1	1 unit	1DM	2.475
		1100		3000 000	110			3NB3351-1KK26		1	1 unit	1DM	2.475
	2 x 3	1250		4100 000	104	1.0		3NB3352-1KK26		1	1 unit	1DM	2.480
		1350		4800 000	126			3NB3354-1KK26		1	1 unit	1DM	2.290
		1400		5200 000	127			3NB3355-1KK26		1	1 unit	1DM	2.480
	2 x 3	1600		6900 000	152	1.0		3NB3357-1KK26		1	1 unit	1DM	2.468
	1700		10000 000	143			3NB3358-1KK26		1	1 unit	1DM	2.486	
3 x 3	1700		6400000	179	1.0		3NB3358-1KK27		1	1 unit	1DM	3.460	
	1900		8200 000	196			3NB3362-1KK27		1	1 unit	1DM	3.460	
With slotted blade contacts for M10 screw fixing, mounting dimension: 110 mm, or for installation in 3NA3 LV HRC fuse bases or switch disconnectors													
	2	250	800 aR	29700	105	0.85		3NE4327-0B		1	3 units	1DM	0.779
		315		60700	120	0.85		3NE4330-0B		1	3 units	1DM	0.811
		450		191000	140	0.85		3NE4333-0B		1	3 units	1DM	0.810
		500		276000	155	0.85		3NE4334-0B		1	3 units	1DM	0.774
		710		923000	155	0.95		3NE4337		1	3 units	1DM	0.768

Fuse Systems

SITOR Semiconductor Fuses

LV HRC design

Size	I_n	U_n	Operational classes	Breaking I^2t value	Power loss	Varying load factor WL	DT	Article No. www.siemens.com/product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx.
A		V AC/ V DC		A ² s	W								kg
With slotted blade contacts for screw fixing M10, 110 mm mounting dimension, or for installation in 3NH3 LV HRC fuse bases or fuse switch disconnectors or on 3NH5463 fuse base													
1	32 ¹⁾	1000/600	gR	NEW	4500	9	On req.	3NE3201-0MK	1	1	3 units	1DM	0.595
	40 ¹⁾				6000	13	On req.	3NE3202-0MK	1	1	3 units	1DM	0.589
	50 ¹⁾				8000	18	On req.	3NE3217-0MK	1	1	3 units	1DM	0.581
	63 ¹⁾				9000	25	On req.	3NE3218-0MK	1	1	3 units	1DM	0.577
	100	1000 aR			4800	28	0.95	3NE3221	1	1	3 units	1DM	0.571
	125				7200	36	0.95	3NE3222	1	1	3 units	1DM	0.571
	160				13000	42	1.0	3NE3224	1	1	3 units	1DM	0.576
	200				30000	42	1.0	3NE3225	1	1	3 units	1DM	0.591
	250				48000	50	1.0	3NE3227	1	1	3 units	1DM	0.572
	315				80000	60	0.95	3NE3230-0B	1	1	3 units	1DM	0.589
	350				100000	75	0.95	3NE3231	1	1	3 units	1DM	0.596
	400	135000	85	0.9	3NE3232-0B	1	1	3 units	1DM	0.581			
	450	175000	95	0.9	3NE3233	1	1	3 units	1DM	0.590			
	500 ¹⁾	1000/600	NEW	NEW	500000	105	On req.	3NE3234-0MK08	1	1	3 units	1DM	0.593
	550 ¹⁾				700000	110	On req.	3NE3235-0MK08	1	1	3 units	1DM	0.593
	630 ¹⁾				850000	127	On req.	3NE3236-0MK08	1	1	3 units	1DM	0.596
	1) No grip lugs and therefore not suitable for mounting in 3NH3 LV HRC fuse bases or switch disconnectors												
2	400	1000 aR			135000	80	1.0	3NE3332-0B	1	1	3 units	1DM	0.738
	450				175000	90	1.0	3NE3333	1	1	3 units	1DM	0.801
	500				260000	90	1.0	3NE3334-0B	1	1	3 units	1DM	0.797
	560				360000	95	1.0	3NE3335	1	1	3 units	1DM	0.799
	630				600000	100	1.0	3NE3336	1	1	3 units	1DM	0.803
	710	900 aR			800000	105	1.0	3NE3337-8	1	1	3 units	1DM	0.807
	800				850000	130	0.95	3NE3338-8	1	1	3 units	1DM	0.810
	900				920000	165	0.95	3NE3340-8	1	1	3 units	1DM	0.806
	With slotted blade contacts for M10 screw fixing, mounting dimension: 130 mm												
3	100	1000 aR			13500	25	1.0	3NE3421-0C	1	1	3 units	1DM	1.223
	224				54000	85	1.0	3NE3626-0C	1	1	3 units	1DM	1.223
	315				218000	80	1.0	3NE3430-0C	1	1	3 units	1DM	1.224
	400				364000	110	1.0	3NE3432-0C	1	1	3 units	1DM	1.192
	450				488000	110	1.0	3NE3635-0C	1	1	3 units	1DM	1.198
	500				870000	95	1.0	3NE3434-0C	1	1	3 units	1DM	1.226
	630				1280000	132	1.0	3NE3636-0C	1	1	3 units	1DM	1.216
	710				1950000	145	1.0	3NE3637-0C	1	1	3 units	1DM	1.237
With slotted blade contacts for M12 screw fixing, mounting dimension: 140 mm													
3	710	1000 aR			1950000	145	1.0	3NE3637-1C	1	1	3 units	1DM	1.246
With slotted blade contacts for M12 screw fixing, mounting dimension: 110 mm, or for installation in 3NA3 LV HRC fuse bases or switch disconnectors													
3	630	1000 aR			418000	145	0.85	3NC3336-1U	1	1	3 units	1DM	1.081
	710				569000	150	0.85	3NC3337-1U	1	1	3 units	1DM	1.020
	800				819000	155	0.85	3NC3338-1U	1	1	3 units	1DM	0.961
	900				1160000	165	0.9	3NC3340-1U	1	1	3 units	1DM	1.039
	1000				1670000	170	0.9	3NC3341-1U	1	1	3 units	1DM	0.959
	1100	800			1910000	185	0.9	3NC3342-1U	1	1	3 units	1DM	1.077
	1250				2600000	210	0.9	3NC3343-1U	1	1	3 units	1DM	0.958
3	315	1250 aR			72500	80	0.95	3NC3430-1U	1	1	3 units	1DM	1.070
	400				163000	95	0.95	3NC3432-1U	1	1	3 units	1DM	1.022
	500				290000	115	0.90	3NC3434-1U	1	1	3 units	1DM	0.956
	630				650000	120	0.95	3NC3436-1U	1	1	3 units	1DM	1.027
	800				985000	145	0.90	3NC3438-1U	1	1	3 units	1DM	1.020

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Size	I_n	U_n	Operational class	Breaking I^2t value	Power loss	Varying load factor WL	DT	Article No. www.siemens.com/product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
A		VAC/DC		A ² s	W								
LV HRC design													
With slotted blade contacts for M10 screw fixing, mounting dimension: 210 mm													
3	160	1500	aR	54000	56	1.0		3NE5424-0C		1	2 units	1DM	1.995
	224			138000	80	1.0		3NE5426-0C		1	2 units	1DM	1.986
	315			311000	115	1.0		3NE5430-0C		1	2 units	1DM	1.260
	350			428000	135	1.0		3NE5431-0C		1	2 units	1DM	1.987
	450			870000	145	0.95		3NE5433-0C		1	2 units	1DM	2.001
With slotted blade contacts for M12 screw fixing, mounting dimension: 210 mm													
	450	1500	aR	870000	145	0.95		3NE5433-1C		1	2 units	1DM	1.991
With slotted blade contacts for M10 screw fixing, mounting dimension: 170 mm													
3	250	1500	aR	84000	130	1.0		3NE5627-0C		1	3 units	1DM	1.576
	450			590000	160	1.0		3NE5633-0C		1	3 units	1DM	1.595
	600			1950000	145	1.0		3NE5643-0C		1	3 units	1DM	1.606
With slotted blade contacts for screw fixing M10, 170 mm mounting dimension, for bolting onto busbars or onto 3NH5473 fuse base NEW													
2	40	1500/	gR	900	26	On req.		3NE5302-0MK06		1	1 unit	1DM	1.242
	50	1000		1800	27	On req.		3NE5317-0MK06		1	1 unit	1DM	1.233
	63			3100	34	On req.		3NE5318-0MK06		1	1 unit	1DM	1.238
	80		aR	3900	42	On req.		3NE5320-0MK06		1	1 unit	1DM	1.243
	100			8700	45	On req.		3NE5321-0MK06		1	1 unit	1DM	1.226
	125			11800	59	On req.		3NE5322-0MK06		1	1 unit	1DM	1.243
	160			37000	54	On req.		3NE5324-0MK06		1	1 unit	1DM	1.240
	200			70000	56	On req.		3NE5325-0MK06		1	1 unit	1DM	1.240
	250			165000	59	On req.		3NE5327-0MK06		1	1 unit	1DM	1.248
	315			250000	76	On req.		3NE5330-0MK06		1	1 unit	1DM	1.242
	400	1500/		470000	89	On req.		3NE5332-0MK06		1	1 unit	1DM	1.239
	500	1000		800000	109	On req.		3NE5334-0MK06		1	1 unit	1DM	1.249
	630			1100000	163	On req.		3NE5336-0MK06		1	1 unit	1DM	1.257
2*	630	1500/	aR	1100000	163	On req.		3NE5336-0MK06		1	1 unit	1DM	1.316
		1000											
* Special version with extended contacts, 190 mm mounting dimension, with fastening holes													
With slotted blade contacts for M10 screw fixing, mounting dimension: 210 mm													
3	200	2000	aR	138000	75	1.0		3NE7425-0U		1	2 units	1DM	2.156
	250			218000	110	1.0		3NE7427-0U		1	2 units	1DM	2.685
	350			555000	120	1.0		3NE7431-0U		1	2 units	1DM	2.175
	400			870000	150	1.0		3NE7432-0U		1	2 units	1DM	2.178
	450			960000	160	1.0		3NE7633-0U		1	2 units	1DM	2.173
	630			1950000	220	1.0		3NE7636-0U		1	2 units	1DM	2.184
With slotted blade contacts for M12 screw fixing, mounting dimension: 210 mm													
3	450	2000	aR	960000	160	1.0		3NE7633-1U		1	2 units	1DM	2.142
	525			1120000	210	1.0		3NE7648-1U		1	2 units	1DM	2.151
	630			1950000	220	1.0		3NE7636-1U		1	2 units	1DM	2.191
	710			3110000	275	1.0		3NE7637-1U		1	2 units	1DM	2.158
With slotted blade contacts for M12 screw fixing, mounting dimension: 260 mm													
3	125	2500	aR	34500	78	1.0		3NE9622-1C		1	1 unit	1DM	2.506
	400			620000	205	1.0		3NE9632-1C		1	1 unit	1DM	2.439
	500			1270000	235	1.0		3NE9634-1C		1	1 unit	1DM	2.350
	630			2800000	275	1.0		3NE9636-1C		1	1 unit	1DM	2.566
2	315	-/	aR NEW	300000	245	On req.		3NE9330-0MK07		1	1 unit	1DM	2.489
		3000											







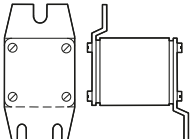
* You can order this quantity or a multiple thereof.

Fuse Systems

SITOR Semiconductor Fuses

LV HRC design

Size	I_n	U_n	Operational class	Breaking I^2t value	Power loss	Varying load factor WL	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx.
A	V AC			A ² s	W								kg
LV HRC design													
With M12 female thread at both ends for direct busbar mounting, flange dimensions 52 mm													
	3	630	690	aR	244000	125	0.9	3NC3236-6U		1	3 units	1DM	0.736
		710			346000	130	0.9	3NC3237-6U		1	3 units	1DM	0.787
		800			498000	135	0.95	3NC3238-6U		1	3 units	1DM	0.789
		900			677000	140	0.95	3NC3240-6U		1	3 units	1DM	0.795
		1000			975000	145	1.0	3NC3241-6U		1	3 units	1DM	0.791
		1100			1382000	150	1.0	3NC3242-6U		1	3 units	1DM	0.799
		1250			1990000	155	1.0	3NC3243-6U		1	3 units	1DM	0.741
		1400	500		2100000	175	1.0	3NC3244-6U		1	3 units	1DM	0.802
		1600			2860000	195	0.95	3NC3245-6U		1	3 units	1DM	0.805
	With M10 female thread at both ends for direct busbar mounting, flange dimensions 109 mm												
	3	450	1000	aR	488000	110	1.0	3NE3635-6		1	3 units	1DM	1.234
With M12 female thread at both ends for direct busbar mounting, flange dimensions 73 mm													
	3	630	1000	aR	418000	130	0.90	3NC3336-6U		1	3 units	1DM	0.892
		710			569000	140	0.90	3NC3337-6U		1	3 units	1DM	0.897
		800			819000	150	0.90	3NC3338-6U		1	3 units	1DM	0.995
		900			1160000	160	0.95	3NC3340-6U		1	3 units	1DM	0.900
		1000			1670000	165	0.95	3NC3341-6U		1	3 units	1DM	0.956
		1100	800		1910000	175	0.95	3NC3342-6U		1	3 units	1DM	0.897
		1250			2600000	185	0.95	3NC3343-6U		1	3 units	1DM	0.903
	3	315	1250	aR	72500	80	0.95	3NC3430-6U		1	3 units	1DM	0.896
		400			163000	95	0.95	3NC3432-6U		1	3 units	1DM	0.899
		500			290000	115	0.90	3NC3434-6U		1	3 units	1DM	0.886
	630			650000	120	0.95	3NC3436-6U		1	3 units	1DM	1.003	
	800	1100		985000	145	0.95	3NC3438-6U		1	3 units	1DM	0.945	

Size	I_n	U_n	Operational classes	Breaking I^2t value	Power loss	Varying load factor WL	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
A	V	AC		A ² s	W								
Fuses for special applications													
For screwing onto water-cooled busbars, for rectifiers in electrolysis systems													
	-- ¹⁾	350	800	aR	260000	80	0.9	3NC5531		1	3 units	1DM	0.632
		600	1000		888000	150	0.9	3NC5840		1	3 units	1DM	1.372
		630	800		888000	145	0.9	3NC5841		1	3 units	1DM	1.170
		800	1000		1728000	170	0.9	3NC5838		1	3 units	1DM	1.175
		710	900		620000	150	0.9	3NE6437-7		1	3 units	1DM	1.155
		1250	600		2480000	210	0.9	3NE9450-7		1	3 units	1DM	1.148
With M10 female thread at both ends for direct busbar mounting, flange dimensions 89 (99) ²⁾ mm, for air-cooled rectifiers in electrolysis systems													
	-- ¹⁾	710	900	aR	620000	150	0.9	3NE6437		1	3 units	1DM	0.982
		850	600	gR	2480000	85	1.0	3NE9440-6		1	3 units	1DM	0.995
		900	900	aR	1920000	170	0.9	3NE6444		1	3 units	1DM	1.153
		1250	600	aR	2480000	210	0.9	3NE9450		1	3 units	1DM	1.055
Fuses with installation holder for SITOR 6QG10 thyristor sets													
	-- ¹⁾	200	1000	aR	44000	50	0.85	3NE3525-5		1	2 units	1DM	0.700
		450			395000	90	0.85	3NE3535-5		1	2 units	1DM	0.735
Fuses with installation holder for SITOR 6QG11 thyristor sets													
	-- ¹⁾	50	1000	gR	1100	20	0.85	3NE4117-5		1	2 units	1DM	0.302
		100		aR	7400	35	0.85	3NE4121-5		1	2 units	1DM	0.305
		170		aR	60500	43	0.85	3NE4146-5		1	2 units	1DM	0.292
Fuses for special applications													
With female thread at both ends for SITOR 6QG12 thyristor sets, flange dimensions 77 mm													
	-- ¹⁾	250	800	aR	29700	105	0.85	3NE4327-6B		1	3 units	1DM	0.691
		315			60700	120	0.85	3NE4330-6B		1	3 units	1DM	0.690
		450			191000	140	0.85	3NE4333-6B		1	3 units	1DM	0.684
		500			276000	155	0.85	3NE4334-6B		1	3 units	1DM	0.678
		710			923000	155	0.95	3NE4337-6		1	3 units	1DM	0.687
Special design for mounting directly in the railway supply rectifier													
	-- ¹⁾	250	680	aR	635000	25	0.9	3NC7327-2		1	3 units	1DM	0.729
		350			1430000	32	0.9	3NC7331-2		1	3 units	1DM	0.696

¹⁾ Special design.

²⁾ Flange dimensions 99 mm only for 3NE6444.

Fuse Systems

SITOR Semiconductor Fuses

LV HRC design

Size	I_n	U_n	Operational classes	Breaking I^2t value	P_v Power loss	Varying load factor WL	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx.
A	V DC			A ² s	W								kg
Fuses for special applications													
DC fuses with slotted blade contacts for M12 screw fixing													
2L	400	900	gR	240000 ¹⁾	75	--		3NB1234-3KK20		1	2 units	1DM	0.991
1L	200	1250	aR	39000 ²⁾	50	--		3NB1126-4KK11		1	2 units	1DM	0.900
	250			80500 ²⁾	51	--		3NB1128-4KK11		1	2 units	1DM	0.899
2L	315			129000 ²⁾	63	--		3NB1231-4KK11		1	2 units	1DM	0.990
	400			290000 ²⁾	68	--		3NB1234-4KK11		1	2 units	1DM	1.000
3L	500			600000 ²⁾	89	--		3NB1337-4KK11		1	2 units	1DM	1.868
	800			1910000 ²⁾	135	--		3NB1345-4KK11		1	2 units	1DM	1.887
Parallel-connected DC fuses with slotted blade contacts for M12 screw fixing													
2 x 3L	800	1250	aR	1150000 ²⁾	160	--		3NB2345-4KK16		1	1 unit	1DM	3.540
	1000			2250000 ²⁾	195	--		3NB2350-4KK16		1	1 unit	1DM	3.839
	1400			5100000 ²⁾	250	--		3NB2355-4KK16		1	1 unit	1DM	3.540
	1600			7450000 ²⁾	275	--		3NB2357-4KK16		1	1 unit	1DM	3.855
3 x 3L	2100			1195000 ²⁾	365	--		3NB2364-4KK17		1	1 unit	1DM	5.440
	2400			18100000 ²⁾	445	--		3NB2366-4KK17		1	1 unit	1DM	5.440



1) I^2t at U_{VSI} 1400 V, I^2t at U_n 900 V is 180000 A²s

2) I^2t at U_{VSI} 1500 V; I^2t at U_n 1250 V is reduced by the factor $k = 0.79$.

Note:

VSI is the abbreviation for Voltage Sourced Inverter. The VSI voltage U_{VSI} is a DC test voltage defined in IEC 60269-4 specially for use in applications with energy stores. The extremely steep current rise in the event of a fault is characteristic of such applications.

For SITOR 3NB1 and 3NB2 semiconductor fuses, the VSI voltage and the applicable I^2t value are specified in the "Technical specifications" table; for all other SITOR semiconductor fuses, these values are available on request.

Version	For fuse series	I_n	U_n	Connection bolt	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx.
mm		A	V DC								kg
Fuse bases for SITOR fuses											
• With bolt-on links or slotted blade contacts											
• 1-pole											
75	3NC18	50	690	M5		3NH5723		1	3 units	1BM	0.187
80	3NE87, 3NC26	315	690	M8		3NH5023		1	3 units	1BM	0.304
	3NE80...-3MK	400	690	M10		3NH5323		1	3 units	1BM	0.350
	3NC32...-1U, 3NE82...-3MK	1600	690	M10		3NH5423		1	3 units	1BM	0.546
110	3NC24, 3NC33...-1U, 3NC34...-1U, 3NC84, 3NE1...- 3, 3NE32, 3NE33, 3NE34	1250	1250	M10		3NH5463		1	3 units	1BM	0.587
170	3NE53, 3NE56	630	1800	M10		3NH5473		1	3 units	1BM	0.700



Overview

SITOR cylindrical fuses protect power semiconductors from the effects of short-circuits because the super quick-response disconnect characteristic is far quicker than that of conventional fuses. They protect high-quality devices and system components such as semiconductor contactors, electronic relays (solid state), converters with fuses in the input and in the DC link, UPS systems and soft starters for motors up to 100 A.

The cylindrical design is approved for industrial applications. The cylindrical fuse links comply with IEC 60269.

Cylindrical fuse holders also comply with IEC 60269 and UL 512. The cylindrical fuse holders for 10 x 38 mm and 14 x 51 mm have been tested and approved as fuse switch disconnectors and the cylindrical fuse holders for 22 x 58 mm as fuse disconnectors according to the switching device standard IEC 60947-3. The utilization category and the tested current and voltage values are specified in the Table "Technical Specifications".

The cylindrical fuse holders have been specially developed for the application of SITOR fuse links with regard to heat tolerance and heat dissipation and are therefore not recommended for standard applications.

Cylindrical fuse bases do not offer the same comprehensive touch protection as the fuse holders, but have better heat dissipation. The single-pole cylindrical fuse bases for 14 x 51 mm and 22 x 58 mm allow modular expansion to multi-pole bases.

Benefits

- Cylindrical fuses have an extremely compact design and a correspondingly small footprint
- The cylindrical fuses have IEC and UL approval and are suitable for universal use worldwide
- The use of SITOR cylindrical fuses in the cylindrical fuse holders and bases has been tested with regard to heat dissipation and maximum current loading. This makes planning and dimensioning easier and prevents consequential damage
- The use of fuse holders as switch disconnectors expands the area of application of these devices and increases operating safety

Technical specifications

		Cylindrical fuse holders		
		3NC10	3NC14	3NC22
Size	mm x mm	10 x 38	14 x 51	22 x 58
Standards		UL 4248-1; CSA C22.2; IEC 60269-2, IEC 60947-3		
Approvals		UL 4248-1; UL File Number E171267; CSA C22.2 No. 39-M		
Rated voltage U_n	V AC	690; 600 acc. to UL/CSA		
Rated current I_n	A AC	32 30 acc. to UL/CSA	50 50 acc. to UL 40 acc. to CSA	100 80 acc. to UL/CSA
Rated conditional short-circuit current	kA	50	50 (100 at 400 V)	50 (100 at 500 V)
Breaking capacity				
• Utilization category		AC-22B (400 V)	AC-22B (400 V)	AC-20B (690 V)
Max. power dissipation of fuse links (conductor cross-section used)	W	3 (6 mm ²) 4.3 (10 mm ²)	5 (10 mm ²) 6.5 (25 mm ²)	9.5 (35 mm ²) 11 (50 mm ²)
Rated impulse withstand voltage	kV	6		
Overvoltage category		II		
Pollution degree		2		
No-voltage changing of fuse links		Yes		
Sealable when installed		Yes		
Mounting position		Any		
Current direction		Any		
Degree of protection acc. to IEC 60529		IP20, with connected conductors ¹⁾		
Terminals with touch protection according to BGV A3 at incoming and outgoing feeder		Yes		
Ambient temperature	°C	45		
Conductor cross-sections				
• Finely stranded, with end sleeve	mm ²	1.5 ... 16	1.5 ... 35	4 ... 50
• AWG (American Wire Gauge)	AWG	15 ... 5	14 ... 2	10 ... 1/0
Tightening torque	Nm lbs/in.	2.5 22	2.5 ... 3 22 ... 26	3.5 ... 4 31 ... 35



¹⁾ Degree of protection IP20 is tested according to regulations using a straight test finger (from the front), with the device mounted and equipped with a cover, housing or some other enclosure.

Fuse Systems

SITOR Semiconductor Fuses

Cylindrical fuse design

Selection and ordering data

	Size	I_n	U_n	Breaking I^2t value	P_v Power loss	DT	Article No. www.siemens.com/ product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx.					
	mm x mm	A	V AC/ V DC	A ² s	W							kg					
Cylindrical fuse links, operational class gR NEW																	
	10 x 38	6	690/440	6.5	2.5		3NC1006-0MK		1	20 units	1DM	0.009					
		10		18	3.3	3NC1010-0MK											
		12		35	4	3NC1012-0MK											
		16	45	6	3NC1016-0MK												
		20	690/250	110	7.8	3NC1020-0MK											
		25		140	8.7	3NC1025-0MK											
	14 x 51	32		450	12	3NC1032-0MK											
		6	690/700	3.5	3.1		3NC1406-0MK		1	10 units	1DM	0.024					
		10		15	4.6	3NC1410-0MK											
		16		690/600	32	6.7	3NC1416-0MK										
		20	68		7.4	3NC1420-0MK											
		25	108	8.4	3NC1425-0MK												
	32	175	12.3	3NC1432-0MK													
	22 x 58	40	690/440	470	11.7	3NC1440-0MK											
		50		690/250	830	16.3	3NC1450-0MK										
		25	690/700		180	8.1	3NC2225-0MK		1	10 units	1DM	0.060					
		32	690/600	420	9	3NC2232-0MK											
		40	690/440	700	12.5	3NC2240-0MK											
50		690/250	1250	15.2	3NC2250-0MK												
63	2400		17.5	3NC2263-0MK													
80	4400	23	3NC2280-0MK														
100	11500	28.7	3NC2200-0MK														
Cylindrical fuse links, operational class aR																	
	10 x 38 ²⁾	3	600/700 ¹⁾	8	1.2		3NC1003		1	10 units	1DM	0.009					
		6		20	1.5	3NC1006											
		8		30	2	3NC1008											
		10	60	2.5	3NC1010												
		12	110	3	3NC1012												
		16	150	3.5	3NC1016												
		20	200	4.8	3NC1020												
		25	250	6	3NC1025												
		32	600/--	500	7.5	3NC1032											
		14 x 51	1	660/--	1.2	5	3NC1401							1	10 units	1DM	0.021
			2		10	3	3NC1402										
			3		15	2.5	3NC1403										
	4		25	3	3NC1404												
	5		690/800 ¹⁾	11	1.5	3NC1405											
	6			11	1.5	3NC1406											
	10		22	4	3NC1410												
	15		70	5.5	3NC1415												
	20		100	6	3NC1420												
	25		320	7	3NC1425												
	30		400	9	3NC1430												
	32		600	7.6	3NC1432												
	40	750	8	3NC1440													
	50	1800	9	3NC1450													
	NEW 63	690/250	2100	16.7	3NC1463-0MK												
22 x 58	20	690/700 ¹⁾	220	4.6	3NC2220		1	5 units	1DM	0.056							
	25		300	5.6	3NC2225												
	32		450	7	3NC2232												
	40	700	8.5	3NC2240													
	50	1350	9.5	3NC2250													
	63	2600	11	3NC2263													
	80	5500	13.5	3NC2280													
	100	8000	16	3NC2200													
	NEW 125	690/250	29000	35.3	3NC2211-0MK												

¹⁾ DC voltage acc. to UL.

²⁾ CCC approval in preparation

Cylindrical fuse design





Size	I_n	U_n	Breaking I^2t value	P_V Power loss	DT	Article No. www.siemens.com/ product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx.
mm x mm	A	V AC/ V DC	A ² s	W							kg
Cylindrical fuse links with striking pin, operational class aR											
	14 x 51	10	690/600 ¹⁾	32	4	3NC1410-5		1	10 units	1DM	0.023
		15		63	5.5	3NC1415-5		1	10 units	1DM	0.022
		20		234	6	3NC1420-5		1	10 units	1DM	0.024
		25		378	7	3NC1425-5		1	10 units	1DM	0.023
		30		466	9	3NC1430-5		1	10 units	1DM	0.022
		32		600	7.6	3NC1432-5		1	10 units	1DM	0.023
		40		750	8	3NC1440-5		1	10 units	1DM	0.023
		50		1800	9	3NC1450-5		1	10 units	1DM	0.023
	22 x 58	20	690/500 ¹⁾	240	5	3NC2220-5		1	5 units	1DM	0.039
		25		350	6	3NC2225-5		1	5 units	1DM	0.041
	32		500	8	3NC2232-5		1	5 units	1DM	0.066	
	40		800	9	3NC2240-5		1	5 units	1DM	0.064	
	50		1500	9.5	3NC2250-5		1	5 units	1DM	0.064	
	63		3000	11	3NC2263-5		1	5 units	1DM	0.061	
	80		6000	13.5	3NC2280-5		1	5 units	1DM	0.061	
22 x 58	100	600/500 ¹⁾	8500	16	3NC2200-5		1	5 units	1DM	0.061	
Cylindrical fuse links NEW											
	Operational class gS										
	22 x 127	1	1500/	2	2	3NC2301-0MK		1	5 units	1DM	0.110
		2	1000	4.4	2.5	3NC2302-0MK		1	5 units	1DM	0.110
		4		55	5.3	3NC2304-0MK		1	5 units	1DM	0.104
		6		150	6.4	3NC2306-0MK		1	5 units	1DM	0.102
		10		540	3.1	3NC2310-0MK		1	5 units	1DM	0.111
		16		1120	4.7	3NC2316-0MK		1	5 units	1DM	0.104
		20		2850	5.4	3NC2320-0MK		1	5 units	1DM	0.104
		25		3300	6.9	3NC2325-0MK		1	5 units	1DM	0.112
		32		9050	6.7	3NC2332-0MK		1	5 units	1DM	0.105
Operational class gR											
22 x 127	40	1500/ 1000	18500	9.4	3NC2340-0MK		1	5 units	1DM	0.112	
Operational class aR											
22 x 127	50	1500/ 1000	26000	11.6	3NC2350-0MK		1	5 units	1DM	0.112	
Cylindrical fuse links, with M8 bolt-on links NEW											
With bolt-on links: mounting dimension 75 mm, for screwing onto busbars or onto 5SH5723 fuse base											
Operational class gR											
18 x 88	10	690/ 440	17	4.3	3NC1810-0MK		1	3 units	1DM	0.042	
	16		52	4.4	3NC1816-0MK		1	3 units	1DM	0.042	
	20		90	6.5	3NC1820-0MK		1	3 units	1DM	0.043	
	25		160	8.5	3NC1825-0MK		1	3 units	1DM	0.043	
	32		400	8.9	3NC1832-0MK		1	3 units	1DM	0.057	
	40		600	11	3NC1840-0MK		1	3 units	1DM	0.043	
	50		1250	13.8	3NC1850-0MK		1	3 units	1DM	0.043	
With bolt-on links: mounting dimension 80 mm, for screwing onto busbars or onto 5SH5023 fuse base											
Operational class gR											
26 x 103	25	690/ 440	120	9.5	3NC2625-0MK		1	3 units	1DM	0.099	
	32		220	12.3	3NC2632-0MK		1	3 units	1DM	0.099	
	40		400	14.8	3NC2640-0MK		1	3 units	1DM	0.099	
	50		980	17.5	3NC2650-0MK		1	3 units	1DM	0.099	
	63		2050	18.8	3NC2663-0MK		1	3 units	1DM	0.099	
Operational class aR											
	80		3500	22.5	3NC2680-0MK		1	3 units	1DM	0.099	
	100		5400	31.5	3NC2600-0MK		1	3 units	1DM	0.099	
	125		11800	39	3NC2611-0MK		1	3 units	1DM	0.100	

1) DC voltage acc. to UL.

Fuse Systems

SITOR Semiconductor Fuses

Cylindrical fuse design

Version*	For fuse series	I_n	U_n	Connection bolt	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
mm		A	V DC								
 Fuse bases for SITOR fuses With bolt-on links or slotted blade contacts, 1-pole NEW											
75	3NC18	50	690	M5		3NH5723		1	3 units	1BM	0.187
80	3NE87, 3NC26	315	690	M8		3NH5023		1	3 units	1BM	0.304
Size	Version	Rated voltage		DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg	
mm x mm		V AC/V DC									
 Cylindrical fuse holders Can be used as fuse switch disconnectors ¹⁾											
10 x 38	1P 2P 3P	690/--			3NC1091 3NC1092 3NC1093		1	12 units	1DM	0.052	
14 x 51	1P	690/--			3NC1491 3NC1492 3NC1493		1	6 units	1DM	0.105	
	2P						1	3 units	1DM	0.228	
	3P						1	2 units	1DM	0.319	
22 x 58	1P	1500/1000			3NC2291 3NC2292 3NC2293		1	1 unit	1DM	0.192	
	2P						1	3 units	1DM	0.317	
	3P						1	2 units	1DM	0.471	
22 x 127 NEW	1P 2P 3P				3NC2391-0MK 3NC2392-0MK 3NC2393-0MK		1	4 units	1DM	0.488	
							1	2 units	1DM	0.981	
							1	1 unit	1DM	1.488	
 Cylindrical fuse holders Can be used as fuse switch disconnectors, with signaling switches for fuse links with striking pin ¹⁾											
14 x 51	1P	690/--			3NC1491-5 3NC2291-5		1	6 units	1DM	0.121	
22 x 58	1P						1	6 units	1DM	0.149	
 Cylindrical fuse bases											
10 x 38	1P 2P 3P	600/--			3NC1038-1 3NC1038-2 3NC1038-3		1	10 units	1DM	0.041	
							1	8 units	1DM	0.071	
							1	6 units	1DM	0.103	
 Fuse tongs											
	10 x 38, 14 x 51, 22 x 58				3NC1000		1	1 unit	1DM	0.071	

¹⁾ Please note the utilization category and current/voltage values; see "Technical specifications", page 5/67.

Overview

SILIZED is the brand name for NEOZED fuses (D0 fuses) and DIAZED fuses (D fuses) with super quick-response characteristic for semiconductor protection. The fuses are used in combination with fuse bases, fuse screw caps and accessory parts of the standard fuse system.

SILIZED semiconductor fuses protect power semiconductors from the effects of short circuits because the super quick disconnect characteristic is far quicker than that of conventional fuses. They protect high-quality devices and system components, such as semiconductor contactors, static relays, converters with fuses in the input and in the DC link, UPS systems and soft starters for motors up to 100 A.

When using fuse bases and fuse screw caps made of molded plastic, always heed the maximum permissible power loss values due to the high power loss (power dissipation) of the SILIZED fuses.

When using these components, the following maximum permissible power loss applies:

- NEOZED D02: 5.5 W
- DIAZED DII: 4.5 W
- DIAZED DIII: 7.0 W

This enables a partial thermal permanent load of only 50 %.

The DIAZED screw adapter DII for 25 A is used for the 30 A fuse link.

Benefits

- SILIZED semiconductor fuses have an extremely compact design. This means they have a very small footprint – particularly the NEOZED version
- The rugged and well-known DIAZED design complies with IEC 60269-3. It is globally renowned and can be used in many countries
- A wide range of fuse bases and accessories is available for the NEOZED and DIAZED versions of the SILIZED semiconductor fuses. This increases the application options in many devices

Technical specifications

	5SE13 NEOZED design fuse links		5SD4 DIAZED design fuse links
Standards	DIN VDE 0636-3; IEC 60269-3; EN 60269-4 (VDE 0636-4); IEC 60269-4		
Operational class	gR		
Characteristic	Quick-acting		
Rated voltage U_n	V AC	400	500
	V DC	250	500
Rated current I_n	A	10 ... 63	16 ... 100
Rated breaking capacity	kA AC	50	
	kA DC	8	
Mounting position	Any, preferably vertical		
Non-interchangeability	Using adapter sleeves		Using screw adapter or adapter sleeves
Resistance to climate	°C	Up to 45 at 95 % rel. humidity	
Ambient temperature	°C	-5 ... +40, humidity 90 % at 20	

Fuse Systems

SITOR Semiconductor Fuses

NEOZED, DIAZED design

Selection and ordering data

Size	I_e	U_e	Breaking I^2t value	Power loss	DT	Article No. www.siemens.com/ product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
A		V AC/ V DC	A ² s	W							
SILIZED fuse links, operational class gR											
D01	10	400/250	73	6.9		5SE1310		1	10/1500 units	1DM	0.007
	16		120	6.2		5SE1316		1	10/1500 units	1DM	0.007
D02	20		190	8.1		5SE1320		1	10 units	1DM	0.013
	25		215	8.2		5SE1325		1	10 units	1DM	0.011
	35		470	16.7		5SE1335		1	10 units	1DM	0.014
	50		1960	12.0		5SE1350		1	10 units	1DM	0.014
	63		4230	15.5		5SE1363		1	10 units	1DM	0.013
DII	16	500/500	60	12.1		5SD420		1	5 units	1DM	0.029
	20		139	12.3		5SD430		1	5 units	1DM	0.030
	25		205	12.5		5SD440		1	5 units	1DM	0.032
	30		310	13.5		5SD480		1	5 units	1DM	0.031
DIII	35		539	14.8		5SD450		1	5 units	1DM	0.051
	50		1250	18.5		5SD460		1	5 units	1DM	0.051
	63		1890	28		5SD470		1	5 units	1DM	0.055
DIV	80		4200	34.3		5SD510		1	3 units	1DM	0.117
	100		8450	41.5		5SD520		1	3 units	1DM	0.114



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Overview

Special demands are made on fuses for application in photovoltaic systems. These fuses have a high DC rated voltage and a tripping characteristic specially designed to protect PV modules and their connecting cables (the newly defined operational class gPV). It is also crucial that the PV fuses do not age in spite of strongly alternating load currents, in order to ensure high plant availability throughout the service life of the PV system. The fuses must also be able to withstand high temperature fluctuations without damage. These requirements were only incorporated into an international standard in recent years and have now been published as IEC 60269-6.

All Siemens photovoltaic fuse systems comply with this new standard. Furthermore, they also already comply with the recently agreed corrections to the characteristic curves, which will be incorporated in the next standard update.

The IEC cylindrical fuses used as phase fuses also correspond to the characteristic curves specified in UL standard UL 2579. The non-fusing current I_{nf} and fusing current I_f test currents are crucial to the shape of the characteristic curves.

Standard	I_{nf}	I_f
Current IEC standard	$1.13 \times I_n$	$1.45 \times I_n$
UL standard	$1.0 \times I_n$	$1.35 \times I_n$
Future IEC standard	$1.05 \times I_n$	$1.35 \times I_n$
Siemens fuses	$1.13 \times I_n$	$1.35 \times I_n$

These test currents of gPV phase fuses to 32 A apply for a conventional test duration of one hour; at I_{nf} , the fuse must not trip within an hour, at I_f , it must trip within an hour.

The PV cylindrical fuses of size 10 mm x 38 mm offer an especially space-saving solution for the protection of the strings.

The fuse holders of size 10 x 38 mm can be supplied in single-pole and two-pole versions with and without signal detectors. In the case of devices with signal detector, a small electronic device with LED is located behind an inspection window in the plug-in module. If the inserted fuse link is tripped, this is indicated by the LED flashing. The devices have a sliding catch that enables removal of individual devices from the assembly. The in-feed can be from the top or the bottom. Because the cylindrical fuse holders are fitted with the same anti-slip terminals at the top and the bottom, the devices can also be bus-mounted at the top or the bottom.

The PV fuses in LV HRC design are usually used as cumulative fuses upstream of the inverter. In addition, they can also be used for protecting groups (PV subarrays). For the PV cumulative fuses of size 1, standard LV HRC fuse bases are available. For PV cumulative fuses of size 1L, 1XL, 2L, 2XL and 3L, we have developed a special 3NH7...-4 fuse base with a swiveling mechanism which combines maximum touch protection with maximum user-friendliness. This makes it possible to change fuses safely and without the need for any tools, such as a fuse handle. This provides safe and fast access even in an emergency.

Our cylindrical fuse holders and fuse bases with swiveling mechanism comply with the IEC 60269-2 standard and are considered fuse disconnectors as defined in the IEC 60947 switchgear and controlgear standard. Under no circumstances are they suitable for switching loads.

To ensure that PV fuses are correctly selected and dimensioned, the specific operating conditions and the PV module data must be taken into account when calculating voltage and current ratings.

Benefits

- Protection of the modules and their connecting cables in the event of reverse currents
- Safe tripping in case of fault currents reduces the risk of fire due to DC electric arcs
- Safe separation when the fuse holder/fuse base is open



PV cylindrical fuse system, 3NH70...-4, 3NH60...-4







PV LV HRC fuse systems, 3NH73...-4, 3NE13...-4D

Fuse Systems

Photovoltaic fuses



PV cylindrical fuses

Technical specifications



	mm x mm	Cylindrical fuse links		Cylindrical fuse holders	
		3NW60...-4	3NW66...-4	3NW70...-4	3NW76...-4
Size		10 x 38	10 x 85		
Standards		IEC 60269-6		IEC 60269, IEC 60269-2, IEC 60947, UL 4248-1, -18	IEC 60269, IEC 60269-2, IEC 60947, UL 4248-1, -18
Approvals		UL 248-13, waiver certification for China (2 to 16 A)	 (File No. E469670)	 (File No. E355487),  (variants without signal detector)	 (E355487)
Operational class		gPV			
Rated voltage U_n	V DC	1000	1500 (20 A: 1200 V)	1000	1500
Rated current I_n	A DC	2 to 20	4 to 20	30	32
Rated short-circuit strength	kA	--	--	30	--
Rated breaking capacity	kA DC	30	10	--	--
Breaking capacity • Utilization category		--	--	AC-20B, DC-20B	--
Max. power dissipation of the fuse link	W	--	--	4	6
Rated impulse withstand voltage	kV	--	--	6	--
Overvoltage category		--	--	II	--
Pollution degree		--	--	2	--
No-voltage changing of fuse links		--	--	Yes	--
Sealable when installed		--	--	Yes	--
Mounting position		Any, preferably vertical			
Current direction		--	--	Any (signal detector with antiparallel LED)	
Degree of protection acc. to IEC 60529		--	--	IP20, with connected conductors ¹⁾	
Terminals with touch protection according to BGV A3 at incoming and outgoing feeder		--	--	Yes	
Ambient temperature	°C	-25 ... +55, humidity 90 % at +20			
Conductor cross-sections • Finely stranded, with end sleeve • AWG (American Wire Gauge)	mm ² AWG	--	--	0.75 ... 25 18 ... 4	--
Tightening torque	Nm	--	--	2.5	--

¹⁾ Degree of protection IP20 is tested according to regulations using a straight test finger (from the front), with the device mounted and equipped with a cover, housing or some other enclosure.

Selection and ordering data

Size	I_n	U_n	P_v	P_v at 70 % ¹⁾	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg			
												mm x mm	A DC	V DC
Cylindrical fuse links operational class gPV														
 3NW6004-4	10 x 38	2	1000	1.4	0.6	▶	3NW6002-4		1 20 units	1DN	0.008			
				1.6	0.7		3NW6004-4							
				1.7	0.7		3NW6001-4							
				1.9	0.8		3NW6008-4							
				2.3	1.0		3NW6003-4							
				2.7	1.1		3NW6006-4							
				3.2	1.3		3NW6005-4							
3.4	1.4	3NW6007-4												
 3NW6604-4	10 x 85	4	1500	2.7	1.1	3NW6604-4		1 10 units	1DN	0.016				
				3.0	1.2	3NW6601-4								
				3.6	1.5	3NW6608-4								
				3.7	1.6	3NW6603-4								
				3.3	1.4	3NW6606-4								
				3.7	1.6	3NW6605-4								
				4.0	1.7	3NW6607-4								
											1200	4.0	1.7	3NW6607-4

¹⁾ Tested in the fuse holder 3NW7013-4 or 3NW7613-4.

	Number of poles	I_n	For fuse links of size	Width	DT	Article No. www.siemens.com/ product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg
		A DC	mm x mm	MW							
 3NW7014-4	Cylindrical fuse holders, 1000 V with signal detector										
	1P	30	10 x 38	1		3NW7014-4		1	12 units	1DN	0.062
	2P	30	10 x 38	2		3NW7024-4		1	6 units	1DN	0.123
	Without signal detector										
	1P	30	10 x 38	1		3NW7013-4		1	12 units	1DN	0.064
	2P	30	10 x 38	2		3NW7023-4		1	6 units	1DN	0.122
 3NW7613-4	Cylindrical fuse holders, 1500 V										
	1P	32	10 x 85	1.3		3NW7613-4		1	5 units	1DN	0.102

Fuse Systems

Photovoltaic fuses





PV cumulative fuses

Technical specifications

	Fuse links						Fuse bases						
	3NE1...-4 / -4D / -4E / -5E						3NH7...-4						
Size	1	1L	2L	3L	1XL	2XL	1	1L	2L	3L	1XL	2XL	
Standards	IEC 60269-6						IEC 60269, IEC 60269-2, IEC 60947						
Operational class	gPV												
Rated voltage U_n	V DC	1000 at time constant (L/R) 3 ms 1500 at time constant (L/R) 3 ms					1000			1500			
Rated current I_n	A DC	63 ... 160	200/250	315/400	500/630	63 ... 200	250/315	160	250	400	630	250	400
Rated short-circuit strength	kA	--					30						
Rated breaking capacity	kA DC	30					--						
Breaking capacity		--											
• Utilization category		--											
Max. power dissipation of the fuse link	W	--					40	90	110	130	90	110	
No-voltage changing of fuse links		--					Yes						
Sealable when installed		--					Yes						
Mounting position		Any, preferably vertical											
Current direction		--					Any						
Ambient temperature	°C	-25 ... +55, humidity 90 % at +20											
Tightening torque	Nm	--					20						
Microswitch for Tripped signaling 5 A/250 V AC, 0.2 A/250 V DC		In the "fuse not blown" state, contacts 1 and 3 are closed.											

Selection and ordering data

	Size	I_n	U_n	P_v at U_n	DT	Article No. www.siemens.com/ product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx.
Fuse links operational class gPV											
 3NE1330-4D	1	63	1000	19		3NE1218-4		1	2 units	1DN	0.607
		80		20		3NE1220-4					
		100		24		3NE1221-4					
		125		26		3NE1222-4					
		160		32		3NE1224-4					
		200		51		3NE1225-4D					
	1L	250	54	3NE1227-4D							
		315	73	3NE1330-4D							
	2L	400	82	3NE1332-4D							
		500	100	3NE1434-4E							
	3L	630	110	3NE1436-4E							
		1XL	63	1500	20		3NE1218-5E		1	2 units	1DN
80	25		3NE1220-5E								
100	30		3NE1221-5E								
125	29		3NE1222-5E								
160	34		3NE1224-5E								
200	41		3NE1225-5E								
2XL	250	53	3NE1327-5E								
	315	63	3NE1330-5E								

	For fuse links of size	I_n	U_n	DT	Article No. www.siemens.com/ product?Article.No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG	Weight per PU approx. kg	
	A DC										
	Fuse bases with flat terminal										
	Standard ceramic fuse base ¹⁾										
	1	250	1000		3NH3230		1	3 units	1BM	0.759	
	Fuse bases with swiveling mechanism										
		1L	250	1000		3NH7260-4		1	1 unit	1DN	1.306
		2L	400	1000		3NH7360-4		1	1 unit	1DN	1.724
		3L	630	1000/1500		3NH7460-4		1	1 unit	1DN	2.224
		1XL	250	1500		3NH7261-4		1	1 unit	1DN	1.337
		2XL	400	1500		3NH7361-4		1	1 unit	1DN	1.729
	Fuse bases with swiveling mechanism and microswitches for tripped signaling of the fuse²⁾										
		1	250	1000		3NH7262-4KK01		1	1 unit	1DN	1.205
	2L	400	1000		3NH7360-4KK01		1	1 unit	1DN	1.781	
Accessories											
	Terminal covers for PV fuse bases with swiveling mechanism										
		1, 1L, 1XL				3NX3121		1	1 unit	1DN	0.067
		2L, 2XL				3NX3122		1	1 unit	1DN	0.129
		3L				3NX3123		1	1 unit	1DN	0.167

¹⁾ For further information, see [Catalog LV 11](#).

²⁾ Fuse must be inserted upside down.

Fuse Systems

Notes

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