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Low-Voltage Power Distribution and Electrical Installation Technology

Fuse Systems

Catalog Extract LV 10

Edition 04/2019

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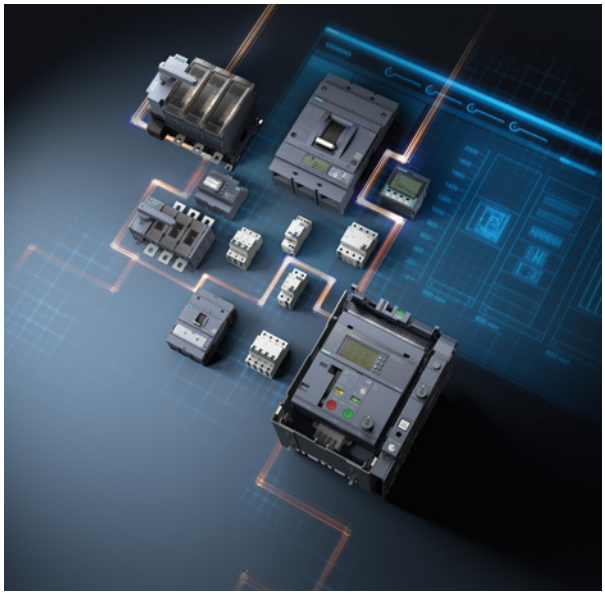
Low-Voltage Power Distribution and Electrical Installation Technology

Protection, Switching, Measuring and Monitoring Devices, Switchboards and Distribution Systems

SENTRON · SIVACON · ALPHA



Catalog LV 10 · 04/2019

You can find the updated catalog valid from October 2019 in the Siemens Industry Online Support under www.siemens.com/lowvoltage/catalogs

Supersedes:
Catalog LV 10 · 10/2018

Refer to the Industry Mall for current prices:
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The products in this catalog can also be found in the Interactive Catalog CA 01:
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The products and systems listed in this catalog are developed and manufactured using a certified quality management system in accordance with EN ISO 9001:2008.

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Opening Information

Ordering notes

Overview

Ordering special versions

When ordering products that differ from the standard versions listed in the catalog, **"–Z"** must be added to the Article No. indicated and the required features must be specified using alphanumeric order codes or plain text.

Ordering very small quantities

When very small orders are placed, the costs associated with order processing are greater than the order value. We therefore recommend that you combine several small orders. Where this is not possible, we regret that we are obliged to make a small processing charge: for orders with a net goods value of less than € 250 we charge a € 20 supplement to cover our order processing and invoicing costs.

Explanations of Selection and ordering data

Standard delivery time (SD)

► Preferred type — Preferred types are device types that can be delivered immediately ex works, i.e. they are dispatched within 24 hours.

Price units (PU)

The price unit defines the number of units, sets or meters to which the specified price applies.

Packaging size (PS)

The packaging size defines the number of units, sets or meters, for example, for outer packaging.

Only the quantity defined by the packaging size or a multiple thereof can be ordered.

Price group (PG)

Each product is allocated to a price group.

Example

5TT3400

SD: Preferred type
PG: 13C
Ordering quantity 1 unit or a multiple thereof

8US1923-5CA02

PG: 14O
Ordering quantity 10 units or a multiple thereof

8WH9000-1GA00

PG: 12X
Ordering quantity 50 units or a multiple thereof

SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
►	**5TT3400**		1	1 unit	1BK
	8US1923-5CA02		1	10 units	1CU
	8WH9000-1GA00		100	50 units	1BT

Note:

The article numbers shown here and the specifications regarding selection and ordering data are examples only. When ordering, always use the selection and ordering data in the product chapters.

Metal surcharges/export markings

To compensate fluctuating prices of raw materials (for example silver, copper, aluminum, lead, gold, dysprosium and neodymium), surcharges are calculated on a daily basis for products containing these raw materials using the metal factor.
A surcharge for the particular raw material is added to the price of a product if the basic quotations for this raw material are exceeded.

Each product's metal factor dictates for which raw materials the metal surcharges are calculated, from which quotation and with which calculation method (weight or percentage method).

An exact explanation of the metal factor can be found at:
www.siemens.com/automation/salesmaterial-as/catalog/en/terms_of_trade_en.pdf

A product's export markings/metal surcharges are updated daily at www.siemens.com/industrymall.

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For further technical product information:

Configuration Manual

Fuse Systems
Article No.: 3ZW1012-3NW10-0AC1

Siemens Industry Online Support:
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→ Entry type:
Application example
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Characteristic
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Technical data

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Overview

Devices		Page	Application	Standards	Used in		
					Non-residential buildings	Residential buildings	Industry
	**NEOZED fuse systems**	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 Fuse switching devices: IEC/EN 60947-3 DIN VDE 0638; EN 60947-3 (VDE 0660-107)	✓	✓	✓
	**DIAZED fuse systems**	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							
	**Cylindrical fuse links and cylindrical fuse holders**	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	✓	✓	✓
	**Fuse holders in size 10 x 38 mm and Class CC**	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	✓	--	✓
	**Class CC and Class J fuse systems**	5/26	Class CC and Class J 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	✓	✓	✓
	**Busbar systems**	5/31	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	✓	✓	✓

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Devices		Page	Application	Standards	Used in		
					Non-residential buildings	Residential buildings	Industry
3NA, 3ND LV HRC fuse systems							
	**LV HRC fuse links**	5/37	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**	5/46	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**	5/48	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 branch circuit protection) CSA C22.2 No. 4248.1-07	✓	✓	✓
SITOR semiconductor fuses							
	**LV HRC design**	5/56	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**	5/66	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 × 38 mm, 14 × 51 mm and 22 × 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**	5/70	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**	5/73	Fuses with a rated voltage of 1000 V and 1500 V DC and gPV operational class for the protection of photovoltaic modules, their connecting cables and other components.	IEC 60269-6	✓	✓	✓
	**PV cumulative fuses**	5/75	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	✓	✓	✓

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Introduction

Overview

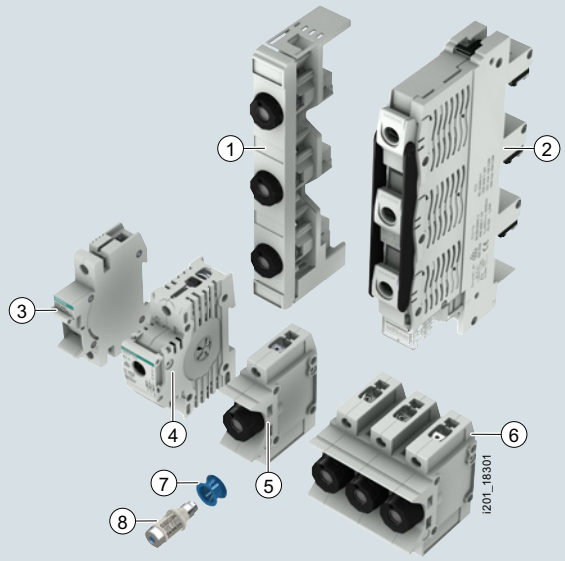
The NEOZED fuse system is primarily used in distribution technology and industrial switchboard assemblies. The system is easy to use and is also approved for domestic installation.

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 disconnector 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



1. NEOZED D02 bus-mounting base for 60 mm busbar system, with NEOZED screw cap
2. NEOZED D02 bus-mounting switch disconnector for 60 mm busbar system
3. MINIZED D01 fuse switch disconnector
4. MINIZED D02 switch disconnector
5. NEOZED comfort base, 1-pole (fuse base with touch protection BGV A3), with NEOZED screw cap
6. NEOZED comfort base, 3-pole (fuse base with touch protection BGV A3), with NEOZED screw cap
7. NEOZED adapter sleeve
8. NEOZED fuse link

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 disconnector 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.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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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°C, humidity 90% at 20°C

		MINIZED switch disconnectors	MINIZED fuse switch disconnectors	Fuse bases, made of ceramic			Comfort bases	Fuse bases
		D02	D01	D01	D02	D03	D01/02	D01/02
		5SG71	5SG76	5SG15 5SG55	5SG16 5SG56	5SG18	5SG1301 5SG1701 5SG5301 5SG5701	5SG1302 5SG1702 5SG5302 5SG5702
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 conditional short-circuit current	kA	50						
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°C, humidity 90% at 20°C						
Terminal versions		Box terminal	Box terminal	B	K, S	K/S	Box terminal	Box terminal
Conductor cross-sections	mm^2							
• Solid								Input 1 ... 35, Output 1 ... 25
• Solid and stranded	mm^2	1.5 ... 35	1.5 ... 16	1.5 ... 4	2.5 ... 25	10 ... 50	0.75 ... 35	Input 1.5 ... 25, Output 1 ... 25
• Flexible								Input 1.5 ... 25, Output 1 ... 25
• Flexible, with end sleeve	mm^2	1.5 ... 35	1.5 ... 10	1.5 ... 4	1.5 ... 16	10 ... 35	--	Input 0.75 ... 35, Output 1 ... 25
Tightening torque	Nm	2.5 ... 3	2	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.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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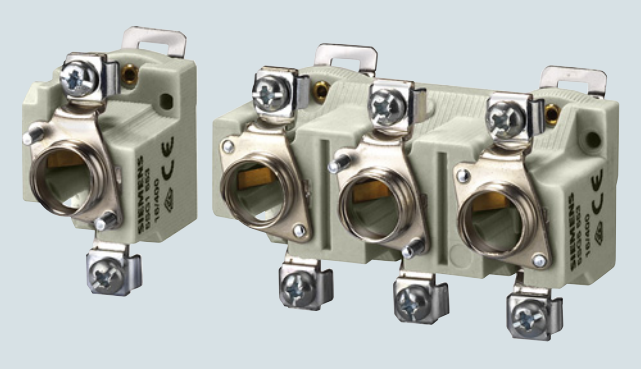
More information



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

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

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

[1] With tin-coated contacts
[2] With silver-plated contacts

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MINIZED switch disconnectors and MINIZED fuse switch disconnectors

Selection and ordering data

	Size	Number of poles	I_n	Mounting width	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
			A	MW	d					
	**MINIZED switch disconnectors with fuses** Using draw-out technology with touch protection to BGV A3 (adapter sleeves not included in the scope of delivery)[2]									
	D02	1P	63	1.5		**5SG7113**		1	1 unit	1BM
		1P+N	63	3		**5SG7153**		1	1 unit	1BM
		2P	63	3		**5SG7123**		1	1 unit	1BM
		3P	63	4.5		**5SG7133**		1	1 unit	1BM
		3P+N	63	6		**5SG7163**		1	1 unit	1BM
	Versions for Austria only, with permanently fitted adapter sleeves, incl. fuse link[2]									
	D02	3P	25	4.5		**5SG7133-8BA25**		1	1 unit	1BM
			35			**5SG7133-8BA35**		1	1 unit	1BM
			50			**5SG7133-8BA50**		1	1 unit	1BM
	**Reducers** For fuse links D01 in MINIZED D02 switch disconnectors					**5SH5527**		1	10 units	1CU
	**Auxiliary switches (AS)** For MINIZED D02 switch disconnectors									
	1 NO + 1 NC			0.5	▶	**5ST3010**		1	1 unit	1AD
	2 NO					**5ST3011**		1	1 unit	1AD
	2 NC					**5ST3012**		1	1 unit	1AD
	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
	2 NO					**5ST3011-2**		1	1 unit	1AD
	2 NC					**5ST3012-2**		1	1 unit	1AD
	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
		3P	6[1]	3		**5SG7631-0KK06**		1	4 units	1BM
		1P	10	1		**5SG7611-0KK10**		1	12 units	1BM
		3P	10	3		**5SG7631-0KK10**		1	4 units	1BM
		1P	16	1		**5SG7611-0KK16**		1	12 units	1BM
		1P+N	16	2		**5SG7651-0KK16**		1	6 units	1BM
		2P	16	2		**5SG7621-0KK16**		1	6 units	1BM
		3P	16	3		**5SG7631-0KK16**		1	4 units	1BM
		3P+N	16	4		**5SG7661-0KK16**		1	3 units	1BM

[1] For 2 A, 4 A, 6 A fuses.

[2] Do not use fuse links with nickel-plated contact caps.

For busbars, see page 5/33.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

	Size	Number of poles	I_n	Terminals[1]	Mounting width	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
			A		MW	d					
	NEOZED comfort bases made of molded plastic										
	With touch protection according to BGV A3										
	D01	1P	16	--	1.5		**5SG1301**		1	3 units	1BM
	D02		63	--			**5SG1701**		1	3 units	1BM
	D01	3P	16	--	4.5		**5SG5301**		1	1 unit	1BM
	D02		63	--			**5SG5701**		1	1 unit	1BM
	NEOZED fuse bases made of molded plastic										
	With touch protection according to BGV A3										
	D01	1P	16	--	1.5	▶	**5SG1302**		1	15 units	1BM
	D02		63	--	1.5	▶	**5SG1702**		1	15 units	1BM
	D01	3P	16	--	4.5	▶	**5SG5302**		1	5 units	1BM
	D02		63	--	4.5	▶	**5SG5702**		1	5 units	1BM
	With touch protection according to BGV A3, with LED signal detector[2]										
	D01	1P	16	--	1.5	▶	**5SG1302-1**		1	15 units	1BM
	D02		63	--	1.5	▶	**5SG1702-1**		1	15 units	1BM
	D01	3P	16	--	4.5	▶	**5SG5302-1**		1	5 units	1BM
	D02		63	--	4.5	▶	**5SG5702-1**		1	5 units	1BM
	NEOZED fuse bases made of ceramic										
	For snap-on mounting on standard mounting rails, with cover										
	D01	1P	16	BB	1.5		**5SG1553**		1	6 units	1BM
	D02		63	SS	1.5		**5SG1653**		1	6 units	1BM
	D02		63	KS	1.5		**5SG1693**		1	6 units	1BM
	For snap-on mounting on standard mounting rails, without cover										
	D03		100	KS	2.5		**5SG1812**		1	10 units	1BM
	For snap-on mounting on standard mounting rails, with cover										
	D01	3P	16	BB	4.5		**5SG5553**		1	2 units	1BM
	D02		63	SS	4.5		**5SG5653**		1	2 units	1BM
	D02		63	KS	4.5		**5SG5693**		1	2 units	1BM

[1] For terminal versions, see page 5/6.

[2] At least 50 V AC/DC

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NEOZED fuse bases and accessories

	Size	Matching cover	Mounting width	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
			MW	d					
	NEOZED covers								
	D03	A6	2.5		**5SH5233**		1	20 units	1BM

5

Minimum order quantity (PS) or a multiple thereof can be ordered.

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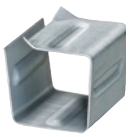
	Size	For fuse links A	Identification color	Mounting width MW	SD d	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
	NEOZED screw caps									
	Molded plastic, with inspection hole									
	D01					**5SH4116**		1	10 units	1BM
	D02					**5SH4163**		1	10 units	1BM
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

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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 are available with rated voltages from 500 V to 750 V.

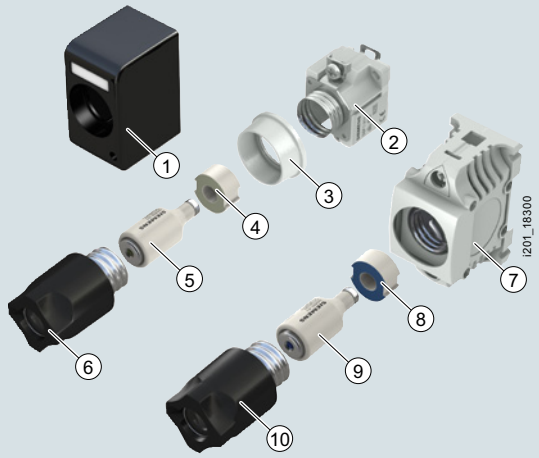
All DIAZED bases must be fed from the bottom to ensure an insulated threaded ring when the fuse link is being removed. Reliable contact of the fuse links is only ensured when used together with DIAZED screw adapters.

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 **Dia**metral gestuftes **z**weiteiliges Sicherungssystem mit **Ed**isongewinde (diametral two-step fuse system with Edison screw).

Benefits



1 DIAZED cap for fuse bases
2 DIAZED fuse base
3 DIAZED collar for fuse bases
4 8 DIAZED screw adapter
5 9 DIAZED fuse link
6 10 DIAZED screw cap
7 DIAZED fuse base (with touch protection BGV A3)

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°C, humidity 90% at 20°C

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	DIII	DIII	DII	DIII
Conductor cross-sections							
• Rigid, min.	mm^2	1.5	2.5	2.5	2.5	1.5	1.5
• Rigid, max.	mm^2	10	25	25	25	35	35
• Flexible, with end sleeve	mm^2	10	25	25	25	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				--	

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

	Size	U_n	I_n	Identification color	Thread	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		V AC/ V DC	A			d					
	DIAZED fuse links										
	Operational class gG										
	DII	500/500	2	Pink	E27		**5SB211**		1	25 units	1BM
			4	Brown			**5SB221**		1	25 units	1BM
			6	Green			**5SB231**		1	25 units	1BM
			10	Red			**5SB251**		1	25 units	1BM
			16	Gray			**5SB261**		1	25 units	1BM
			20	Blue			**5SB271**		1	25 units	1BM
			25	Yellow			**5SB281**		1	25 units	1BM
	DIII	500/500	32	Violet	E33		**5SB4010**		1	25 units	1BM
			35	Black			**5SB411**		1	25 units	1BM
			50	White			**5SB421**		1	25 units	1BM
			63	Copper			**5SB431**		1	25 units	1BM
	DIV	500/400	80	Silver	R1¼"		**5SC211**		1	3 units	1BM
			100	Red			**5SC221**		1	3 units	1BM
	Characteristic: slow										
	TNDz	500/500	2	Pink	E16		**5SA211**		1	10 units	1BM
			4	Brown			**5SA221**		1	10 units	1BM
			6	Green			**5SA231**		1	10 units	1BM
			10	Red			**5SA251**		1	10 units	1BM
			16	Gray			**5SA261**		1	10 units	1BM
			20	Blue			**5SA271**		1	10 units	1BM
			25	Yellow			**5SA281**		1	10 units	1BM
	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
			4	Brown			**5SD8004**		1	5 units	1BM
			6	Green			**5SD8006**		1	5 units	1BM
			10	Red			**5SD8010**		1	5 units	1BM
			16	Gray			**5SD8016**		1	5 units	1BM
			20	Blue			**5SD8020**		1	5 units	1BM
			25	Yellow			**5SD8025**		1	5 units	1BM
			35	Black			**5SD8035**		1	5 units	1BM
			50	White			**5SD8050**		1	5 units	1BM
			63	Copper			**5SD8063**		1	5 units	1BM

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DIAZED fuse systems

	Size	U_n	I_n	Identification color	Thread	Terminals	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		V AC/ V DC	A				d					
	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
			4	Brown				**5SD602**		1	5 units	1BM
			6	Green				**5SD603**		1	5 units	1BM
			10	Red				**5SD604**		1	5 units	1BM
			16	Gray				**5SD605**		1	5 units	1BM
			20	Blue				**5SD606**		1	5 units	1BM
			25	Yellow				**5SD607**		1	5 units	1BM
			35	Black				**5SD608**		1	5 units	1BM
			50	White				**5SD610**		1	5 units	1BM
			63	Copper				**5SD611**		1	5 units	1BM
	DIAZED fuse bases made of ceramic											
	1P, for standard mounting rail											
	DII	500/500	25		E27	BB[2]		**5SF1005**		1	5 units	1BM
	DIII[1]		63		E33	BS[2]		**5SF1205**		1	5 units	1BM
	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 units	1BM
	DIII[1]		63		E33	RR		**5SF1260**		1	3 units	1BM
	3P, for standard mounting rail or screw fixing											
	DII	500/500	25		E27	RR		**5SF5068**		1	1 unit	1BM
	DIII[1]		63		E33	RR		**5SF5268**		1	1 unit	1BM

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

[2] For terminal versions, see page 5/17.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Size	U_n	I_n	Thread	Terminals	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		V AC/ V DC	A			d					
	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
	DIAZED screw caps Made of ceramic, with fine thread										
	DIII	750/750	63	E33S			**5SH1161**		1	5 units	1BM
	DIAZED screw caps										
	Molded plastic, with inspection hole, black, not for SILIZED fuse links										
	NDz	500/500	25	E16			**5SH1112**		1	20 units	1BM
	DII		25	E27			**5SH1221**		1	5 units	1BM
	DIII		63	E33			**5SH1231**		1	5 units	1BM
	Ceramic										
	DII	500/500	25	E27			**5SH112**		1	50 units	1BM
	DIII		63	E33			**5SH113**		1	30 units	1BM
	Ceramic, with inspection hole, sealable										
	DII	500/500	25	E27			**5SH122**		1	50 units	1BM
	DIII		63	E33			**5SH123**		1	30 units	1BM
	Ceramic, extended version										
	DIII	690/600	63	E33			**5SH1170**		1	5 units	1BM

[1] Terminal version KK: Screw head contact at incoming and outgoing feeder.

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DIAZED fuse systems

	Size	Thread	For fuse links A	SD d	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
	DIAZED screw adapters								
	Also for 5SF230 to 750 V								
	DII	E27	2		**5SH310**		1	25 units	1BM
			4		**5SH311**		1	25 units	1BM
			6		**5SH312**		1	25 units	1BM
			10		**5SH313**		1	25 units	1BM
			16		**5SH314**		1	25 units	1BM
			20		**5SH315**		1	25 units	1BM
			25		**5SH316**		1	25 units	1BM
	Also for 5SF230 to 750 V								
	DIII	E33	32		**5SH327**		1	25 units	1BM
			35		**5SH317**		1	25 units	1BM
			50		**5SH318**		1	25 units	1BM
			63		**5SH320**		1	25 units	1BM
	DIAZED adapter sleeves for screw caps								
	For DII fuse links in DIII base				**5SH302**		1	10 units	1BM
	DIAZED adapter sleeve fitters								
	DII/DIII				**5SH3703**		1	10 units	1BM
	DIAZED caps								
	Molded plastic								
	DII	E27			**5SH202**		1	5 units	1BM
	DIII	E33			**5SH222**		1	5 units	1BM

	Size	Thread	SD d	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
	DIAZED cover rings							
	Molded plastic							
	DII	E27		**5SH3401**		1	5 units	1BM
	DIII	E33		**5SH3411**		1	5 units	1BM

Minimum order quantity (PS) or a multiple thereof can be ordered.

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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

DII fuse bases with terminal version BB
- Outgoing feeders (top), clamp-type terminal B
- Incoming feeders (bottom), clamp-type terminal B

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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 × mm	8 × 32	10 × 38	14 × 51	22 × 58	10 × 38	14 × 51	22 × 58
Standards		IEC 60269-1, -2; 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, 500, 690						
Rated current I_n	A	2 ... 20	0.5 ... 32	4 ... 50	8 ... 100	0.5 ... 32	2 ... 50	10 ... 100
Rated breaking capacity								
• 690 V versions	kA AC	--	120 (32 A: 100)	120		--	120	
• 500 V versions	kA AC	--	120	100		120	100	
• 400 V versions	kA AC	20	120	20		120	20	
Mounting position		Any, preferably vertical						

			Cylindrical fuse holders			
			3NW73..	**3NW70..**	**3NW71..**	**3NW72..**
Size		mm × mm	8 × 32	10 × 38	14 × 51	22 × 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 V AC	400 400	690 600		
Rated current I_n		A AC	20	32	50	100
Rated breaking capacity		kA	20	100		
Breaking capacity • Utilization category			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°C, humidity 90% at +20°C			
Conductor cross-sections						
• Rigid • Stranded • Finely stranded, with end sleeve		mm^2 mm^2 mm^2	0.5 ... 10 0.5 ... 10 0.5 ... 10[2]		2.5 ... 10 2.5 ... 25 2.5 ... 16	4 ... 10 4 ... 50 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 mm^2 with K28 crimper from Klauke.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

	Size	I_n	U_n	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
	mm × mm	A	V AC	d					
	Cylindrical fuse links, operational class gG								
	8 × 32	2	400		**3NW6302-1**		1	10 units	1BM
		4			**3NW6304-1**		1	10 units	1BM
		6			**3NW6301-1**		1	10 units	1BM
		10			**3NW6303-1**		1	10 units	1BM
		16			**3NW6305-1**		1	10 units	1BM
		20			**3NW6307-1**		1	10 units	1BM
	10 × 38	0.5	500		**3NW6000-1**		1	10 units	1BM
		1			**3NW6011-1**		1	10 units	1BM
		2			**3NW6002-1**		1	10 units	1BM
		4			**3NW6004-1**		1	10 units	1BM
		6			**3NW6001-1**		1	10 units	1BM
		8			**3NW6008-1**		1	10 units	1BM
		10			**3NW6003-1**		1	10 units	1BM
		12			**3NW6006-1**		1	10 units	1BM
		16			**3NW6005-1**		1	20 units	1BM
		20			**3NW6007-1**		1	20 units	1BM
		25			**3NW6010-1**		1	20 units	1BM
		32	400		**3NW6012-1**		1	20 units	1BM
	14 × 51	4	690		**3NW6104-1**		1	10 units	1BM
		6			**3NW6101-1**		1	10 units	1BM
		8			**3NW6108-1**		1	10 units	1BM
		10			**3NW6103-1**		1	10 units	1BM
		12			**3NW6106-1**		1	10 units	1BM
		16			**3NW6105-1**		1	10 units	1BM
		20			**3NW6107-1**		1	10 units	1BM
		25			**3NW6110-1**		1	10 units	1BM
		32			**3NW6112-1**		1	10 units	1BM
		40	500		**3NW6117-1**		1	10 units	1BM
		50			**3NW6120-1**		1	10 units	1BM
	22 × 58	16	690		**3NW6205-1**		1	10 units	1BM
		20			**3NW6207-1**		1	10 units	1BM
		25			**3NW6210-1**		1	10 units	1BM
		32			**3NW6212-1**		1	10 units	1BM
		40			**3NW6217-1**		1	10 units	1BM
		50			**3NW6220-1**		1	10 units	1BM
		63	500		**3NW6222-1**		1	10 units	1BM
		80			**3NW6224-1**		1	10 units	1BM
		100			**3NW6230-1**		1	10 units	1BM
	Cylindrical fuse links, operational class aM								
	10 × 38	0.5	500		**3NW8000-1**		1	10 units	1BM
		1			**3NW8011-1**		1	10 units	1BM
		2			**3NW8002-1**		1	10 units	1BM
		4			**3NW8004-1**		1	10 units	1BM
		6			**3NW8001-1**		1	10 units	1BM
		8			**3NW8008-1**		1	10 units	1BM
		10			**3NW8003-1**		1	10 units	1BM
		12			**3NW8006-1**		1	10 units	1BM
		16			**3NW8005-1**		1	20 units	1BM
		20	400		**3NW8007-1**		1	20 units	1BM
		25			**3NW8010-1**		1	20 units	1BM
		32			**3NW8012-1**		1	20 units	1BM
	14 × 51	2	690		**3NW8102-1**		1	10 units	1BM
		4			**3NW8104-1**		1	10 units	1BM
		6			**3NW8101-1**		1	10 units	1BM
		8			**3NW8108-1**		1	10 units	1BM
		10			**3NW8103-1**		1	10 units	1BM
		12			**3NW8106-1**		1	10 units	1BM
		16	500		**3NW8105-1**		1	10 units	1BM
		20			**3NW8107-1**		1	10 units	1BM
		25			**3NW8110-1**		1	10 units	1BM
		32			**3NW8112-1**		1	10 units	1BM
		40			**3NW8117-1**		1	10 units	1BM
		50	400		**3NW8120-1**		1	10 units	1BM

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Minimum order quantity (PS) or a multiple thereof can be ordered.

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Cylindrical fuse links and cylindrical fuse holders

Size	I_n	U_n	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
mm × mm	A	V AC	d					
22 × 58	16	690		**3NW8205-1**		1	10 units	1BM
	20			**3NW8207-1**		1	10 units	1BM
	25			**3NW8210-1**		1	10 units	1BM
	32			**3NW8212-1**		1	10 units	1BM
	40			**3NW8217-1**		1	10 units	1BM
	50			**3NW8220-1**		1	10 units	1BM
	63	500		**3NW8222-1**		1	10 units	1BM
	80			**3NW8224-1**		1	10 units	1BM
	100			**3NW8230-1**		1	10 units	1BM

Number of poles	I_n	For fuse links of size	Mounting width	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
	A	mm × mm	MW	d					
Cylindrical fuse holders with signal detector[1)]									
1P									
	20	8 × 32	1		**3NW7314**		1	1 unit	1BM
	32	10 × 38	1		**3NW7014**		1	1 unit	1BM
	50	14 × 51	1.5		**3NW7112**		1	1 unit	1BM
	100	22 × 58	2		**3NW7212**		1	1 unit	1BM
1P+N									
	20	8 × 32	1		**3NW7354**		1	1 unit	1BM
	32	10 × 38	1		**3NW7054**		1	1 unit	1BM
	50	14 × 51	3		**3NW7152**		1	1 unit	1BM
	100	22 × 58	4		**3NW7252**		1	1 unit	1BM
2P									
	20	8 × 32	2		**3NW7324**		1	1 unit	1BM
	32	10 × 38	2		**3NW7024**		1	1 unit	1BM
	50	14 × 51	3		**3NW7122**		1	1 unit	1BM
	100	22 × 58	4		**3NW7222**		1	1 unit	1BM
3P									
	20	8 × 32	3		**3NW7334**		1	1 unit	1BM
	32	10 × 38	3		**3NW7034**		1	1 unit	1BM
	50	14 × 51	4.5		**3NW7132**		1	1 unit	1BM
	100	22 × 58	6		**3NW7232**		1	1 unit	1BM
3P+N									
	20	8 × 32	3		**3NW7364**		1	1 unit	1BM
	32	10 × 38	3		**3NW7064**		1	1 unit	1BM
	50	14 × 51	6		**3NW7162**		1	1 unit	1BM
	100	22 × 58	8		**3NW7262**		1	1 unit	1BM
Cylindrical fuse holders without signal detector									
1P									
	20	8 × 32	1		**3NW7313**		1	1 unit	1BM
	32	10 × 38	1		**3NW7013**		1	1 unit	1BM
	50	14 × 51	1.5		**3NW7111**		1	1 unit	1BM
	100	22 × 58	2		**3NW7211**		1	1 unit	1BM
1P+N									
	20	8 × 32	1		**3NW7353**		1	1 unit	1BM
	32	10 × 38	1		**3NW7053**		1	1 unit	1BM
	50	14 × 51	3		**3NW7151**		1	1 unit	1BM
	100	22 × 58	4		**3NW7251**		1	1 unit	1BM
2P									
	20	8 × 32	2		**3NW7323**		1	1 unit	1BM
	32	10 × 38	2		**3NW7023**		1	1 unit	1BM
	50	14 × 51	3		**3NW7121**		1	1 unit	1BM
	100	22 × 58	4		**3NW7221**		1	1 unit	1BM

[1)] Min. voltage of the signal detector: 48 V AC/DC

Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Number of poles	I_n	For fuse links of size	Mounting width	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		A	mm × mm	MW	d					
	Cylindrical fuse holders without signal detector									
	3P									
		20	8 × 32	3		**3NW7333**		1	1 unit	1BM
		32	10 × 38	3		**3NW7033**		1	1 unit	1BM
		50	14 × 51	4.5		**3NW7131**		1	1 unit	1BM
		100	22 × 58	6		**3NW7231**		1	1 unit	1BM
	3P+N									
		20	8 × 32	3		**3NW7363**		1	1 unit	1BM
		32	10 × 38	3		**3NW7063**		1	1 unit	1BM
		50	14 × 51	6		**3NW7161**		1	1 unit	1BM
		100	22 × 58	8		**3NW7261**		1	1 unit	1BM
	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									
	For fuse bases		14 × 51	0.5		**3NW7901**		1	1 unit	1BM
	For fuse bases		22 × 58			**3NW7902**		1	1 unit	1BM
	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 mm² - 0.5 Nm									
	For fuse holders		10 × 38 and 8 x 32	0.5		**3NW7903**		1	1 unit	1BM

More information

Mounting

Fuse holders, sizes 8 × 32 mm and 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 and 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 and 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.

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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 contactors.

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

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 adapter for the 60 mm busbar system.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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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 • Acc. to UL • Acc. to CSA		, 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°C, humidity 90% at +20°C	
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°C, humidity 90% at +20°C	
Conductor cross-sections • Finely stranded, with end sleeve • AWG cables (American Wire Gauge)	 mm^2 AWG	 1 ... 4 18 ... 10	
Tightening torque • Terminal screws	Nm lb-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 V DC	250 --	-- 24	-- 120	-- 240	24 --	120 --	240 --	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 mm^2	°C	960	
Insulation coordination		Overvoltage category III, degree of pollution 2	
Rated operational voltage U_n • Acc. to UL • Acc. to IEC	 V AC V AC	 -- 690	 600 --
Maximum busbar current I_n • Acc. to UL • Acc. to IEC	 A A	 -- 80	 65 --

Minimum order quantity (PS) or a multiple thereof can be ordered.

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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, 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	
Maximum 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	mm²	2.5 ... 35	
• Finely stranded, with end sleeve	mm²	2.5 ... 25	
Tightening torque of clamping screw	Nm	2.5 ... 3.5	

Minimum order quantity (PS) or a multiple thereof can be ordered.

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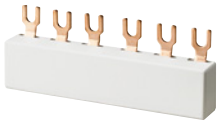
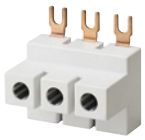
Selection and ordering data

	Number of poles	I_n	For fuse links of size	Mounting width	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		A	mm x mm	MW	d					
3NW7 cylindrical fuse holders										
	**Cylindrical fuse holders**									
	3P	32	10 x 38	2.5						
	Without signal detector					**3NW7033-1**		1	1 unit	1BM
	With signal detector					**3NW7034-1**		1	1 unit	1BM
	Fuse holders Class CC									
	3P	30	Class CC	2.5						
	Without signal detector					**3NW7533-1HG**		1	1 unit	1DN
	With signal detector					**3NW7534-1HG**		1	1 unit	1DN
Accessories										
	Auxiliary switches									
	AC-12, 5 A, max. 250 V, 1 NO, 1 NC			2.5		**3NW7903-1**		1	1 unit	1BM

	Version	I_n	Pin spacing	Length	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		A	mm	mm	d					
5ST2 60. busbar system										
	**Busbars**									
	2 x 3P	63	15	45		**5ST2601**		1	10 units	1AD
	3 x 3P			90		**5ST2602**		1	10 units	1AD
	4 x 3P			135		**5ST2603**		1	10 units	1AD
	5 x 3P			180		**5ST2604**		1	10 units	1AD
Accessories										
	**Terminals**									
	For conductor cross-sections 2.5 mm^2 ... 35 mm^2					**5ST2600**		1	10 units	1AD

		Length of adapter	Width of adapter	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		mm	mm	d					
Device adapters									
	**Busbar device adapters**[1] **with connecting cables (above)**								
	Size S00, rated voltage 690 V AC, rated current 25 A, 1 support rail (35 mm), connecting cable AWG 12								
		200	45		**8US1251-5DS10**		1	1 unit	1CU
		260			**8US1251-5DT10**		1	1 unit	1CU
Accessories									
	**Mounting rails for busbar device adapter**								
	For assembly of additional devices		45		**8US1998-7CB45**		1	10 units	1CU

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

Minimum order quantity (PS) or a multiple thereof can be ordered.

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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 × 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:

The products comply with the European Low Voltage Directive (LVD) and bear the CE mark. National wiring regulations must be observed for use in European installations.

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 / DC: 300
Rated current I_n	A	30
Rated conditional short-circuit current	kA	200
Breaking capacity • Utilization category		 AC-20B (switching without load)
Max. power dissipation of the fuse link • With cable, 6 mm² • With cable, 10 mm²	 W W	 3 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 -> from -5 to +40
Conductor cross-sections • Solid and stranded • AWG conductor cross-section, solid and stranded	 mm² AWG	 1.5 ... 16 15 ... 5
Tightening torque	Nm	2.5 (22 lb.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' 3NW1..-0HG only: CCC (waiver application)		
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		

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

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

	I_n [1]	SD	**Characteristic: slow** Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
	A	d					
	**Class CC fuse links**						
	0.6 (6/10) [1]		**3NW1006-0HG**		1	10 units	1DN
	0.8 (8/10) [1]		**3NW1008-0HG**		1	10 units	1DN
	1		**3NW1010-0HG**		1	10 units	1DN
	1.5 (1 ½) [1]		**3NW1015-0HG**		1	10 units	1DN
	2		**3NW1020-0HG**		1	10 units	1DN
	2.5		**3NW1025-0HG**		1	10 units	1DN
	3		**3NW1030-0HG**		1	10 units	1DN
	4		**3NW1040-0HG**		1	10 units	1DN
	5		**3NW1050-0HG**		1	10 units	1DN
	6		**3NW1060-0HG**		1	10 units	1DN
	7.5		**3NW1075-0HG**		1	10 units	1DN
	8		**3NW1080-0HG**		1	10 units	1DN
	10		**3NW1100-0HG**		1	10 units	1DN
	12		--				
	15		**3NW1150-0HG**		1	10 units	1DN
	20		**3NW1200-0HG**		1	10 units	1DN
	25		**3NW1250-0HG**		1	10 units	1DN
	30		**3NW1300-0HG**		1	10 units	1DN

	I_n [1]	SD	**Characteristic: quick** Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
	A	d					
	**Class CC fuse links**						
	0.6 (6/10) [1]		--				
	0.8 (8/10) [1]		--				
	1		**3NW2010-0HG**		1	10 units	1DN
	1.5 (1 ½) [1]		--				
	2		**3NW2020-0HG**		1	10 units	1DN
	2.5		--				
	3		**3NW2030-0HG**		1	10 units	1DN
	4		**3NW2040-0HG**		1	10 units	1DN
	5		**3NW2050-0HG**		1	10 units	1DN
	6		**3NW2060-0HG**		1	10 units	1DN
	7.5		--				
	8		**3NW2080-0HG**		1	10 units	1DN
	10		**3NW2100-0HG**		1	10 units	1DN
	12		**3NW2120-0HG**		1	10 units	1DN
	15		**3NW2150-0HG**		1	10 units	1DN
	20		**3NW2200-0HG**		1	10 units	1DN
	25		**3NW2250-0HG**		1	10 units	1DN
	30		**3NW2300-0HG**		1	10 units	1DN

[1] Values in brackets, American English wording.

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Class CC fuse systems

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

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Overview

The 30 A and 60 A fuse holders are modular installation devices for mounting on a DIN rail (standard mounting rail). These devices can also be mounted on the 60 mm busbar system using busbar adapters of appropriate width. The 100 A, 200 A and 400 A fuse holders are available as versions either for screwing onto a mounting plate or for directly mounting on the 60 mm busbar system

Note:

The products comply with the European Low Voltage Directive (LVD) and bear the CE mark. National wiring regulations must be observed for use in European installations.

For more information, see chapter "Busbar Systems".

Benefits

- For switchboard assemblies and machine manufacturers who export their switchboards to the USA or Canada
- Easier export due to UL and CSA approvals
- Modern fuse holder design with touch protection to BGV A3 ensures safe installation
- Fuse holders up to 200 A enable fuses to be changed in de-energized condition
- Efficient power distribution thanks to mounting the devices on 60 mm busbar system.

5

Technical specifications

		Class J fuse holders 3NW75.3-0HG				
Standards		UL 4248-1 Ed.1, UL 4248-8 Ed.1, UL File No. E171267 CSA File number 233322, Class number 6225-01				
Approvals		UL, CSA		c UL us		UL, CSA c UL us (busbar device)
Rated current I_n	A	30	60	100	200	400
Rated voltage U_n acc. to UL	V AC V DC	600 600				
Conditional rated current (SCCR withstand rating)		200				200 65 (busbar device)
Switching capacity Utilization category		AC-20B (switching without load) DC-20B (switching without load)				
Rated impulse withstand voltage	kV	No information as the devices are only tested and certified to UL/CSA and not to IEC				
Overvoltage category						
Pollution degree						
No-voltage changing of fuse links		Yes				No
Sealable when installed		Yes				
Mounting position		Any, preferably vertical				
Current direction		For surface mounting devices: any, for busbar devices: output via terminals				
Degree of protection acc. to IEC 60529		IP20				
Ambient temperature		-5 ... +40 °C				
Plastics		Self-extinguishing acc. to UL 94, tracking resistance min. CTI 200, halogen-free				
Temperature resistance		up to 125°C		up to 120°C		up to 125°C
Conductor cross-sections						
• Acc. to IEC/EN	mm^2	0.75 ... 50	2.5 ... 50	1.5 ... 70	35 ... 150	16 ... 300
• Acc. to UL/CSA	AWG	AWG 18 ... AWG 1	AWG 14 ... AWG 1	AWG 12 ... AWG 2/0	AWG 2 ... MCM 300	AWG 4 ... MCM 600
Tightening torque		up to 1 mm^2/>1 mm^2:				
• Acc. to IEC/EN	Nm	2.0 ... 2.5/3.5 ... 4.0	4.0	5	6	38
• Acc. to UL/CSA	lb.in.	18 ... 22/31 ... 35	35	45	53	336
Busbar devices						
Conductor cross-sections						
• Acc. to IEC/EN	mm^2	--	--	1.5 ... 70	35 ... 150	16 ... 300
• Acc. to UL/CSA	AWG			AWG 12 ... AWG 2/0	AWG 2 ... MCM 300	AWG 4 ... MCM 600
Tightening torque						
• Acc. to IEC/EN	Nm	--	--	5	6	32
• Acc. to UL/CSA	lb.in.			45	53	285

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

	Number of poles	U_n	I_n	Mounting width	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		V	A	mm	d					
	Class J fuse holders									
	• Modular devices for mounting on DIN mounting rail									
	1P	600	30	36 (2 MW)		**3NW7511-3HG**		1	6 units	1DN
	2P	600	30	72 (4 MW)		**3NW7521-3HG**		1	3 units	1DN
	3P	600	30	108 (6 MW)		**3NW7531-3HG**		1	2 units	1DN
	1P	600	60	40		**3NW7511-5HG**		1	6 units	1DN
	2P	600	60	80		**3NW7521-5HG**		1	3 units	1DN
	3P	600	60	120		**3NW7531-5HG**		1	2 units	1DN
	• For screwing onto mounting plate[1)]									
	3P	600	100	106		**3NW7531-6HG**		1	1 unit	1DN
	3P	600	200	184		**3NW7531-7HG**		1	1 unit	1DN
	3P	600	400	256		**3NW7531-8HG**		1	1 unit	1DN

[1)] For versions for direct mounting on 60 mm busbar system, see chapter "Busbar Systems" --> 8US 60 mm busbar systems up to 1600 A --> Built-in components

Minimum order quantity (PS) or a multiple thereof can be ordered.

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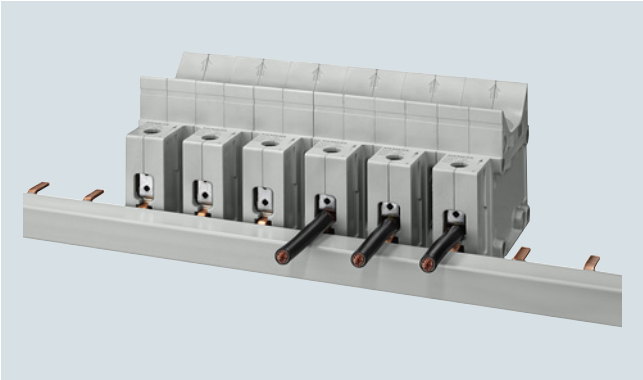
Overview

Busbars with pin-type connections can be used for NEOZED fuse devices and fuse bases. Busbars in 10 mm^2 and 16 mm^2 versions are available.

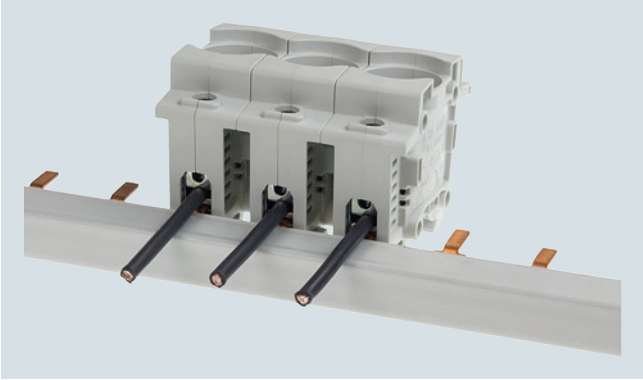
Busbars with fork plugs are used for the most frequently used NEOZED fuse bases made of ceramic.

Benefits

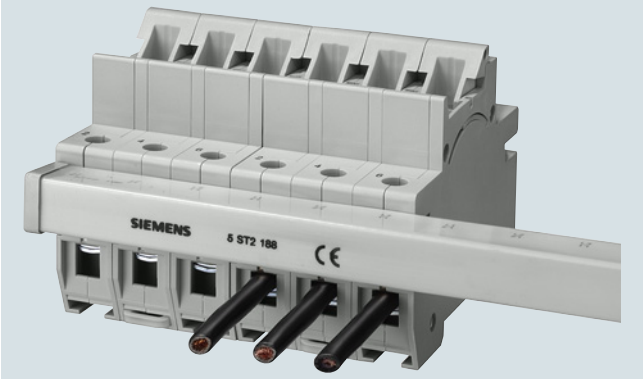


- Clear and visible conductor connection that can be easily checked when using the NEOZED D02 comfort base and which facilitates cable entry

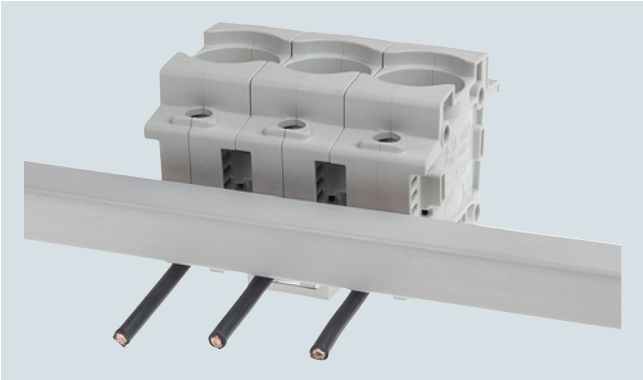
- Bus-mounting of NEOZED fuse bases made of ceramic on three-phase busbar with fork plug, which can be cut to length



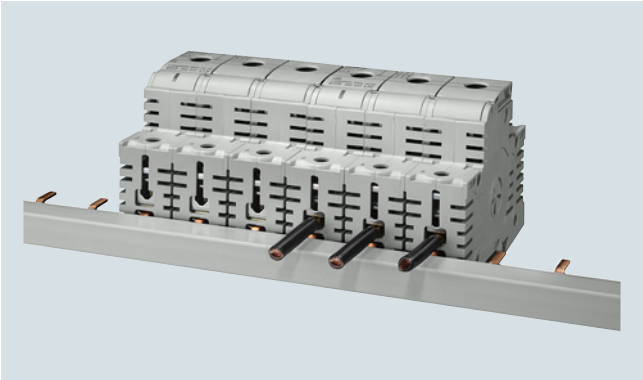
- Bus-mounting of the new NEOZED fuse base made of molded plastic on three-phase busbar with pin-type connection which can be cut to length, busbar at top for easily visible conductor connection



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



- Bus-mounting of the new NEOZED fuse base made of molded plastic on three-phase busbar with pin-type connection which can be cut to length, busbar at bottom for maximum conductor connection



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

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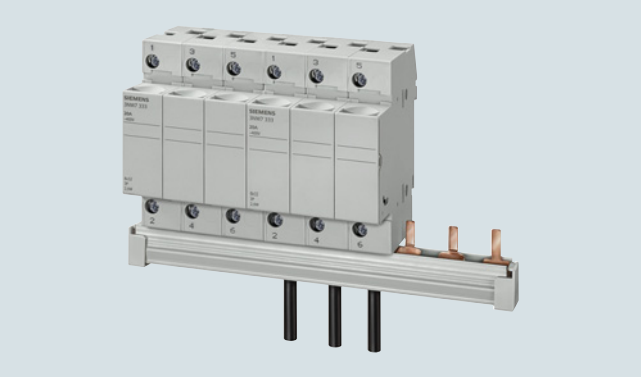
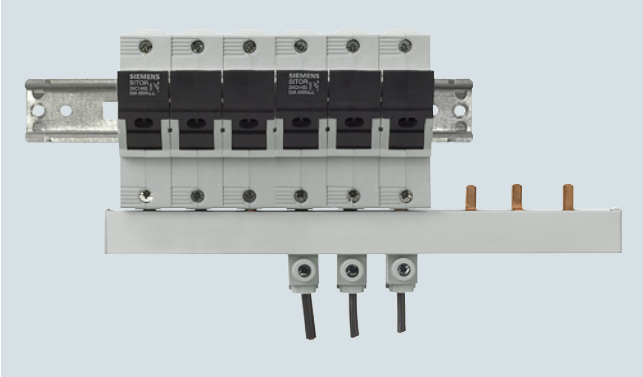
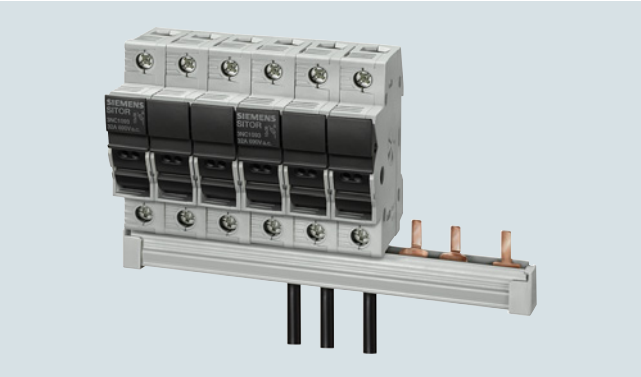
Busbar systems



- Bus-mounting of cylindrical fuse holders 8 × 32 mm and 10 × 38 mm with three-phase pin busbar that 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



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

Technical specifications

			5ST, 5SH
Standards			EN 60439-1 (VDE 0660-500): 2005-01
Busbar material			SF-Cu F 24
Partition material			Plastic, Cycoloy 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 mm²		A	63
• Cross-section 16 mm²		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 per phase			
• Infeed at the start of the busbar			
- Cross-section 10 mm²		A	63
- Cross-section 16 mm²		A	80
• Infeed at the center of the busbar			
- Cross-section 10 mm²		A	100
- Cross-section 16 mm²		A	130

Minimum order quantity (PS) or a multiple thereof can be ordered.

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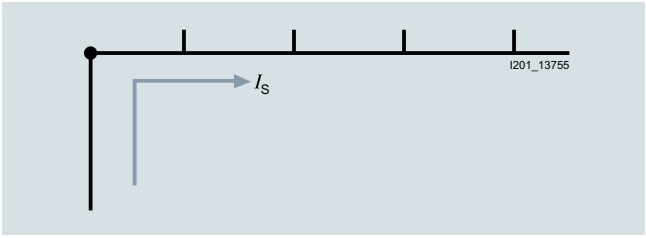
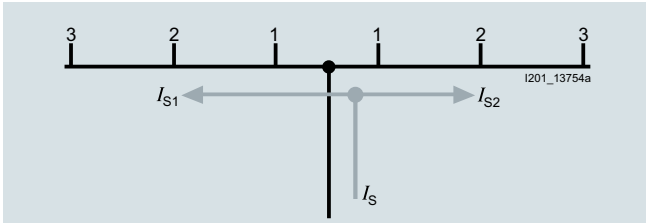
5ST37 . . - .HG busbars acc. to UL 508

		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 per 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	14 ... 1
	mm^2	--	--	6 ... 35	1.5 ... 50
Terminals					
• Terminal tightening torque	Nm	--	--	5	3.5
	lb-in	--	--	50	35

Infeed at the start of the busbar



Infeed along the busbar or midpoint infeed



The sum of the output currents 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	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		mm^2	A	MW	mm	d					
Busbars											
	For MINIZED D02 5SG71.3 switch disconnectors **For NEOZED D01/D02 fuse bases** made of molded plastic 5SG1301, 5SG1701, 5SG5301, 5SG5701, 5SG1302, 5SG1702, 5SG5302, 5SG5702 **For NEOZED D01/D02 fuse bases** made of ceramic terminal version S (saddle terminal) **For cylindrical fuse holder 14 × 51 mm** **For cylindrical fuse holder SITOR 14 × 51 mm** Can be cut to length, without end caps										
	Single-phase	16	130	1.5	1016	▶	**5ST3703**		1	1 unit	1AD
	Three-phase	16	120	1.5	1016		**5ST3714**		1	1 unit	1AD

Minimum order quantity (PS) or a multiple thereof can be ordered.

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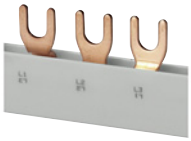
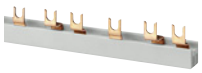
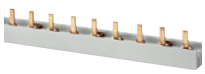
	Phases	Conductor cross-section	Load capacity up to	Pin spacing	Length	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		mm^2	A	MW	mm	d					
	For MINIZED D01 fuse switch disconnectors										
	Can be cut to length, without end caps										
	Single-phase	16	120	1	1000		**5ST2190**		1	1 unit	1AD
	Two-phase						**5ST2191**		1	1 unit	1AD
	Three-phase						**5ST2192**		1	1 unit	1AD
	Can be cut to length, with 2 end caps										
	Single-phase	16	120	1	220		**5ST2186**		1	1 unit	1AD
	Two-phase						**5ST2187**		1	1 unit	1AD
	Three-phase						**5ST2188**		1	1 unit	1AD
	For NEOZED D01/D02 fuse bases										
	• 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
	Can be cut to length, without end caps										
	Single-phase	24	160	1.5	1000		**5SH5517**		1	1 unit	1BM
	Three-phase	16	120	1.5	1000		**5SH5320**		1	1 unit	1BM
											
	For cylindrical fuse holder 8 × 32 mm and 10 × 38 mm **For cylindrical fuse holder SITOR 10 × 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
	Two-phase		120	1		▶	**5ST3705**		1	1 unit	1AD
	Three-phase	16	120	1	1016	▶	**5ST3710**		1	1 unit	1AD
											
	Can be cut to length, with end caps										
	Single-phase	16		1	214	▶	**5ST3700**		1	1 unit	1AD
	Two-phase			1		▶	**5ST3704**		1	1 unit	1AD
	Three-phase			1		▶	**5ST3708**		1	1 unit	1AD
	End caps for busbars										
	For single-phase 5ST2190 busbars						**5ST2196**		1	10 units	1AD
	For two-phase 5ST2191 busbars and for three-phase 5ST2192 busbars						**5ST2197**		1	10 units	1AD
	For single-phase 5ST37, 5SH55 busbars					▶	**5ST3748**		1	10 units	1AD
	For two-phase and three-phase 5ST37 and 5SH5320 busbars					▶	**5ST3750**		1	10 units	1AD

[1] For UL-approved busbars, see page 5/36.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Phases	Conductor cross-section	Load capacity up to	Length	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		mm²	A	mm	d					
	**Touch protection for free connection of pin busbars** Yellow (RAL 1004) 5 x 1 pin				►	**5ST3655**		1	10 units	1AD
	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 units	1BM
	Terminal versions B and K For conductors 6 ... 25					**5SH5328**		1	10 units	1BM
	For the infeed of fork-type or pin busbars For conductors 6 ... 35					**5ST2157**		1	5 units	1AD
	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

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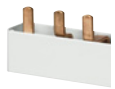
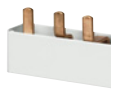
5ST37 . . - .HG busbars acc. to UL 508

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

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Minimum order quantity (PS) or a multiple thereof can be ordered.

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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.

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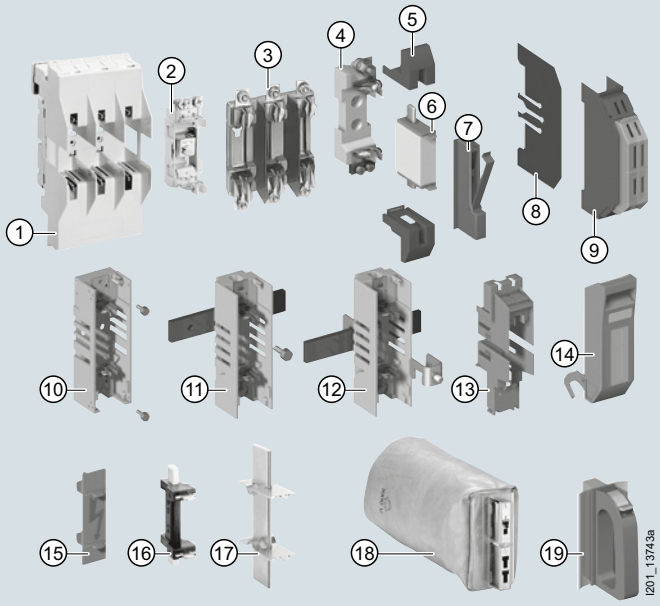
LV HRC components



1. LV HRC fuse base from the SR60 busbar system
2. LV HRC fuse base for busbar mounting
3. LV HRC fuse base, 3-pole
4. LV HRC fuse base, 1-pole
5. LV HRC contact covers
6. LV HRC fuse link
7. LV HRC signal detector
8. LV HRC partition
9. LV HRC protective cover

LV HRC fuse bases with swivel mechanisms,

10. - for screw fixing on mounting plate
11. - for screw fixing on busbar system
12. - for claw fixing on busbar
13. LV HRC protective cover for LV HRC fuse bases with swivel mechanism
14. LV HRC swivel mechanism
15. LV HRC fuse base cover
16. LV HRC isolating blade with insulated grip lugs
17. LV HRC isolating blade with non-insulated grip lugs
18. LV HRC fuse puller with sleeve
19. LV HRC fuse puller

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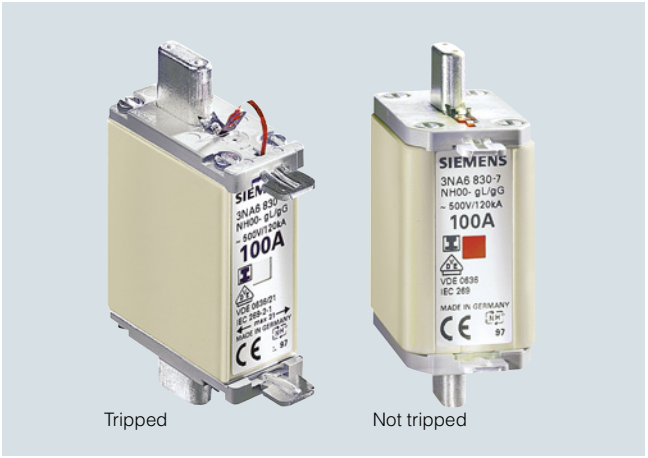
LV HRC fuse links

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 following mark 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 gG					Operational class aM
		3NA6...-4 3NA6...-4KK 3NA383.-8	3NA6... 3NA6...-7 3NA7... 3NA7...-7	3NA3... 3NA3...-7	3NA6...-6 3NA7...-6	3NA3...-6	3ND1 3ND2
Standards **Approvals**		IEC 60269-1, -2; EN 60269-1; DIN VDE 0636 DIN VDE 0636-2; CSA 22.2 No.106, File No. 016325_0_00 (CSA approval of fuses 500 V for 600 V)					
Rated voltage U_n							
• Sizes 000 and 00	V AC V DC	400 --	500 250	500 250	690[1] 250	690[1] 250	500 --
• Sizes 1 and 2	V AC V DC	400 --	500 440	500 440	690[1] 440	690[1] 440	690 --
• Size 3	V AC V DC	-- --	-- --	500 440	-- --	690[1] 440	690 --
• Sizes 4 and 4a (IEC design)	V AC V DC	-- --	-- --	500 440	-- --	-- --	-- --
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.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

	Size	Mounting width	I_n	U_n	SD	Insulated grip lugs Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		mm	A	V AC/ V DC	d					
	LV HRC fuse links with combination alarm, operational class gG									
	000	21	10	400/--		**3NA6803-4**		1	3 units	1BM
			16			**3NA6805-4**		1	3 units	1BM
			20			**3NA6807-4**		1	3 units	1BM
			25			**3NA6810-4**		1	3 units	1BM
			32			**3NA6812-4**		1	3 units	1BM
			35			**3NA6814-4**		1	3 units	1BM
			40			**3NA6817-4**		1	3 units	1BM
			50			**3NA6820-4**		1	3 units	1BM
			63			**3NA6822-4**		1	3 units	1BM
			80			**3NA6824-4**		1	3 units	1BM
			100			**3NA6830-4**		1	3 units	1BM
	00	30	80	400/--		**3NA6824-4KK**		1	3 units	1BM
			100			**3NA6830-4KK**		1	3 units	1BM
			125			**3NA6832-4**		1	3 units	1BM
			160			**3NA6836-4**		1	3 units	1BM
	1	30	35	400/--		**3NA6114-4**		1	3 units	1BM
			40			**3NA6117-4**		1	3 units	1BM
			50			**3NA6120-4**		1	3 units	1BM
			63			**3NA6122-4**		1	3 units	1BM
			80			**3NA6124-4**		1	3 units	1BM
			100			**3NA6130-4**		1	3 units	1BM
			125			**3NA6132-4**		1	3 units	1BM
			160			**3NA6136-4**		1	3 units	1BM
		47.2	200			**3NA6140-4**		1	3 units	1BM
			224			**3NA6142-4**		1	3 units	1BM
			250			**3NA6144-4**		1	3 units	1BM
	2	47.2	50	400/--		**3NA6220-4**		1	3 units	1BM
			63			**3NA6222-4**		1	3 units	1BM
			80			**3NA6224-4**		1	3 units	1BM
			100			**3NA6230-4**		1	3 units	1BM
			125			**3NA6232-4**		1	3 units	1BM
			160			**3NA6236-4**		1	3 units	1BM
			200			**3NA6240-4**		1	3 units	1BM
			224			**3NA6242-4**		1	3 units	1BM
			250			**3NA6244-4**		1	3 units	1BM
		57.8	300			**3NA6250-4**		1	3 units	1BM
			315			**3NA6252-4**		1	3 units	1BM
			355			**3NA6254-4**		1	3 units	1BM
			400			**3NA6260-4**		1	3 units	1BM

Minimum order quantity (PS) or a multiple thereof can be ordered.

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LV HRC fuse links

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

Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Size	Mounting width	I_n	U_n	SD	**Non-insulated grip lugs** Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		mm	A	V AC/ V DC	d					
	LV HRC fuse links with front indicator, operational class gG									
	000	21	2	500/250		**3NA3802**		1	3 units	1BM
			4			**3NA3804**		1	3 units	1BM
			6			**3NA3801**		1	3 units	1BM
			10			**3NA3803**		1	3 units	1BM
			16			**3NA3805**		1	3 units	1BM
			20			**3NA3807**		1	3 units	1BM
			25			**3NA3810**		1	3 units	1BM
			32			**3NA3812**		1	3 units	1BM
			35			**3NA3814**		1	3 units	1BM
			40			**3NA3817**		1	3 units	1BM
			50			**3NA3820**		1	3 units	1BM
			63			**3NA3822**		1	3 units	1BM
			80			**3NA3824**		1	3 units	1BM
			100			**3NA3830**		1	3 units	1BM
			125	400/250		**3NA3832-8**		1	3 units	1BM
			160			**3NA3836-8**		1	3 units	1BM
	00	30	35	500/250		**3NA3814-7**		1	3 units	1BM
			50			**3NA3820-7**		1	3 units	1BM
			63			**3NA3822-7**		1	3 units	1BM
			80			**3NA3824-7**		1	3 units	1BM
			100			**3NA3830-7**		1	3 units	1BM
			125			**3NA3832**		1	3 units	1BM
			160			**3NA3836**		1	3 units	1BM
	0	30	6	500/440		**3NA3001**		1	3 units	1BM
			10			**3NA3003**		1	3 units	1BM
			16			**3NA3005**		1	3 units	1BM
			20			**3NA3007**		1	3 units	1BM
			25			**3NA3010**		1	3 units	1BM
			32			**3NA3012**		1	3 units	1BM
			35			**3NA3014**		1	3 units	1BM
			40			**3NA3017**		1	3 units	1BM
			50			**3NA3020**		1	3 units	1BM
			63			**3NA3022**		1	3 units	1BM
			80			**3NA3024**		1	3 units	1BM
			100			**3NA3030**		1	3 units	1BM
			125			**3NA3032**		1	3 units	1BM
			160			**3NA3036**		1	3 units	1BM
	1	30	16	500/440		**3NA3105**		1	3 units	1BM
			20			**3NA3107**		1	3 units	1BM
			25			**3NA3110**		1	3 units	1BM
			35			**3NA3114**		1	3 units	1BM
			40			**3NA3117**		1	3 units	1BM
			50			**3NA3120**		1	3 units	1BM
			63			**3NA3122**		1	3 units	1BM
			80			**3NA3124**		1	3 units	1BM
			100			**3NA3130**		1	3 units	1BM
			125			**3NA3132**		1	3 units	1BM
			160			**3NA3136**		1	3 units	1BM
		47.2	200			**3NA3140**		1	3 units	1BM
			224			**3NA3142**		1	3 units	1BM
			250			**3NA3144**		1	3 units	1BM

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LV HRC fuse links

	Size	Mounting width	I_n	U_n	SD	Non-insulated grip lugs Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		mm	A	V AC/ V DC	d					
	LV HRC fuse links with front indicator, operational class gG									
	2	47.2	35	500/440		**3NA3214**		1	3 units	1BM
			50			**3NA3220**		1	3 units	1BM
			63			**3NA3222**		1	3 units	1BM
			80			**3NA3224**		1	3 units	1BM
			100			**3NA3230**		1	3 units	1BM
			125			**3NA3232**		1	3 units	1BM
			160			**3NA3236**		1	3 units	1BM
			200			**3NA3240**		1	3 units	1BM
			224			**3NA3242**		1	3 units	1BM
			250			**3NA3244**		1	3 units	1BM
		57.8	300			**3NA3250**		1	3 units	1BM
			315			**3NA3252**		1	3 units	1BM
			355			**3NA3254**		1	3 units	1BM
			400			**3NA3260**		1	3 units	1BM
	3	57.8	200	500/440		**3NA3340**		1	3 units	1BM
			224			**3NA3342**		1	3 units	1BM
			250			**3NA3344**		1	3 units	1BM
			300			**3NA3350**		1	3 units	1BM
			315			**3NA3352**		1	3 units	1BM
			355			**3NA3354**		1	3 units	1BM
			400			**3NA3360**		1	3 units	1BM
		71.2	425			**3NA3362**		1	3 units	1BM
			500			**3NA3365**		1	3 units	1BM
			630			**3NA3372**		1	3 units	1BM
	Can only be used for 3NH3530 LV HRC fuse base									
	4 (IEC design)	101.8	630	500/440		**3NA3472**		1	1 unit	1BM
			800			**3NA3475**		1	1 unit	1BM
			1000			**3NA3480**		1	1 unit	1BM
			1250			**3NA3482**		1	1 unit	1BM
	Only for 3NH7520 LV HRC fuse base or usable for 3NJ5643-0BB00 fuse switch disconnectors with in-line design									
	4a	101.8	500	500/440		**3NA3665**		1	1 unit	1BM
			630			**3NA3672**		1	1 unit	1BM
			800			**3NA3675**		1	1 unit	1BM
			1000			**3NA3680**		1	1 unit	1BM
			1250			**3NA3682**		1	1 unit	1BM

Minimum order quantity (PS) or a multiple thereof can be ordered.

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

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

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LV HRC fuse links

	Size	Mounting width	I_n	U_n	SD	Non-insulated grip lugs Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		mm	A	V AC/ V DC	d					
	LV HRC fuse links with front indicator, operational class gG									
	000	21	2	690[1]/250		**3NA3802-6**		1 3 units		1BM
			4			**3NA3804-6**		1 3 units		1BM
			6			**3NA3801-6**		1 3 units		1BM
			10			**3NA3803-6**		1 3 units		1BM
			16			**3NA3805-6**		1 3 units		1BM
			20			**3NA3807-6**		1 3 units		1BM
			25			**3NA3810-6**		1 3 units		1BM
			32			**3NA3812-6**		1 3 units		1BM
			35			**3NA3814-6**		1 3 units		1BM
			40			**3NA3817-6KJ**		1 3 units		1BM
			50			**3NA3820-6KJ**		1 3 units		1BM
	00	30	40	690[1]/250		**3NA3817-6**		1 3 units		1BM
			50			**3NA3820-6**		1 3 units		1BM
			63			**3NA3822-6**		1 3 units		1BM
			80			**3NA3824-6**		1 3 units		1BM
			100			**3NA3830-6**		1 3 units		1BM
	1	30	50	690[1]/440		**3NA3120-6**		1 3 units		1BM
			63			**3NA3122-6**		1 3 units		1BM
			80			**3NA3124-6**		1 3 units		1BM
			100			**3NA3130-6**		1 3 units		1BM
			125			**3NA3132-6**		1 3 units		1BM
			160			**3NA3136-6**		1 3 units		1BM
		47.2	200			**3NA3140-6**		1 3 units		1BM
			250		▶	**3NA3144-6**		1 3 units		1BM
	2	47.2	80	690[1]/440		**3NA3224-6**		1 3 units		1BM
			100			**3NA3230-6**		1 3 units		1BM
			125			**3NA3232-6**		1 3 units		1BM
			160			**3NA3236-6**		1 3 units		1BM
			200			**3NA3240-6**		1 3 units		1BM
		57.8	224			**3NA3242-6**		1 3 units		1BM
			250			**3NA3244-6**		1 3 units		1BM
			300			**3NA3250-6**		1 3 units		1BM
			315			**3NA3252-6**		1 3 units		1BM
	3	57.8	250	690[1]/440		**3NA3344-6**		1 3 units		1BM
			315			**3NA3352-6**		1 3 units		1BM
		71.2	355			**3NA3354-6**		1 3 units		1BM
			400			**3NA3360-6**		1 3 units		1BM
			425			**3NA3362-6**		1 3 units		1BM
			500			**3NA3365-6**		1 3 units		1BM

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

Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Size	Mounting width	I_n	U_n	SD	Non-insulated grip lugs Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		mm	A	V AC/ V DC	d					
	LV HRC fuse links with front indicator, operational class aM									
	000	21	6	500/--		**3ND1801**		1	3 units	1BM
			10			**3ND1803**		1	3 units	1BM
			16			**3ND1805**		1	3 units	1BM
			20			**3ND1807**		1	3 units	1BM
			25			**3ND1810**		1	3 units	1BM
			32			**3ND1812**		1	3 units	1BM
			35			**3ND1814**		1	3 units	1BM
			40			**3ND1817**		1	3 units	1BM
			50			**3ND1820**		1	3 units	1BM
			63			**3ND1822**		1	3 units	1BM
			80			**3ND1824**		1	3 units	1BM
			100			**3ND1830-8**		1	3 units	1BM
	00	30	100	500/--		**3ND1830**		1	3 units	1BM
			125			**3ND1832**		1	3 units	1BM
			160			**3ND1836**		1	3 units	1BM
	1	30	63	690/--		**3ND2122**		1	3 units	1BM
			80			**3ND2124**		1	3 units	1BM
			100			**3ND2130**		1	3 units	1BM
		47.2	125			**3ND2132**		1	3 units	1BM
			160			**3ND2136**		1	3 units	1BM
			200			**3ND2140**		1	3 units	1BM
			250			**3ND2144**		1	3 units	1BM
	2	47.2	125	690/--		**3ND2232**		1	3 units	1BM
			160			**3ND2236**		1	3 units	1BM
			200			**3ND2240**		1	3 units	1BM
			250			**3ND2244**		1	3 units	1BM
		57.8	315			**3ND2252**		1	3 units	1BM
			355			**3ND2254**		1	3 units	1BM
			400			**3ND2260**		1	3 units	1BM
	3	57.8	315	690/--		**3ND2352**		1	3 units	1BM
			355			**3ND2354**		1	3 units	1BM
			400			**3ND2360**		1	3 units	1BM
		71.2	500			**3ND1365**		1	3 units	1BM
			630			**3ND1372**		1	3 units	1BM

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LV HRC signal detectors

Overview

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

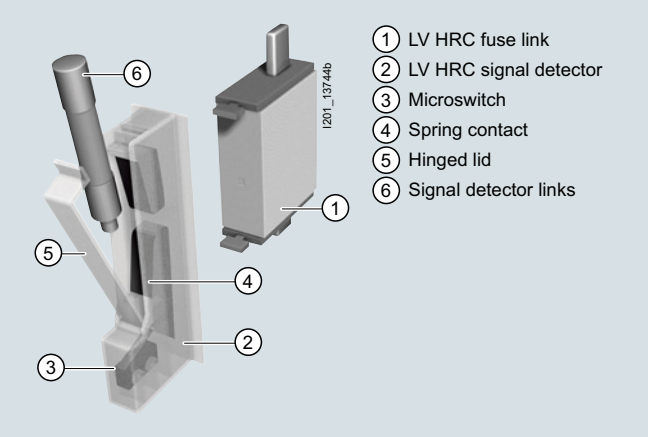
- 3NX1021 signal detectors with signal detector link
  The LV HRC signal detectors with signal detector link support monitoring of LV HRC fuse links with non-insulated grip lugs of sizes 000 to 4 at 10 A or more. The signal detector link is connected in parallel to the LV HRC fuse link.
  In the event 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.

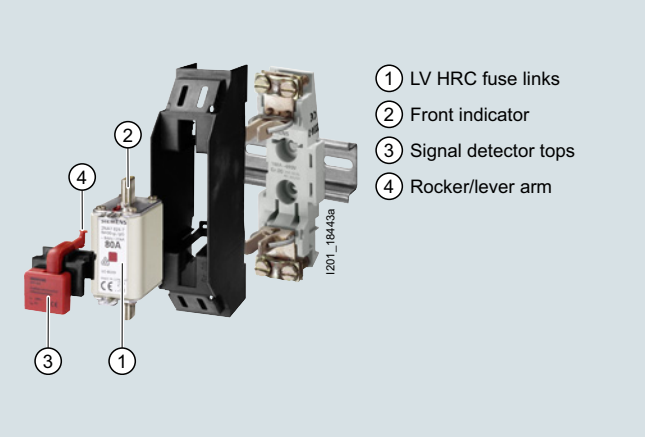
Benefits

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.





Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

		Size	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
			d					
	**LV HRC signal detectors** Only for SIEMENS 3NA3, 3NA7, 3ND LV HRC fuse links with non-insulated grip lugs • Rated voltage up to 690 V AC/600 V DC • Contact: Microswitches 250 V AC, 6 A • Connection: Flat connector 2.3 mm	000 ... 4		**3NX1021**		1	1 unit	1BM
	**Signal detector links** • Rated voltage up to 690 V AC/600 V DC							
	Response value > 9 V; 2.5 A; for standard applications	000 ... 4		**3NX1022**		1	3 units	1BM
	Response value > 2 V; 7 A; only for meshed networks			**3NX1023**		1	3 units	1BM
	**Signal detector tops** Only for SIEMENS 3NA3, 3NA7, 3ND LV HRC fuse links with non-insulated grip lugs • Rated voltage up to 690 V AC/600 V DC • Contact: Microswitch 230 V AC, 5 A, 1 CO • Connection: Flat connector 2.3 mm	000, 00, 1, 2		**3NX1024**		1	1 unit	1BM

		U_e	I_n	U_c	Mounting width	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		V AC	A	V	MW	d					
	**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.										
		230	4	380 ... 415 3 AC	2	►	**5TT3170**		1	1 unit	1BK
	**Electronic fuse monitoring for remote display of tripped fuses: 3KF9010-1AA00,** see chapter "Switch Disconnectors".										

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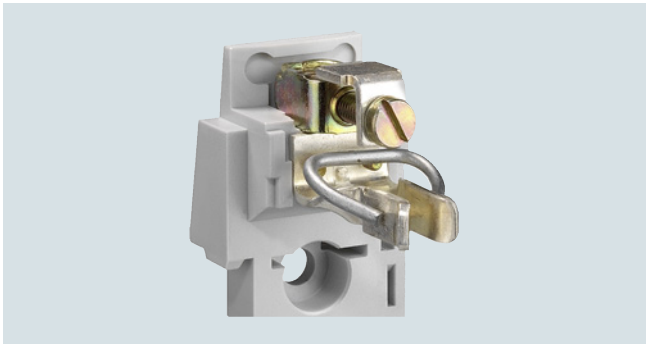
Overview

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.

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

Minimum order quantity (PS) or a multiple thereof can be ordered.

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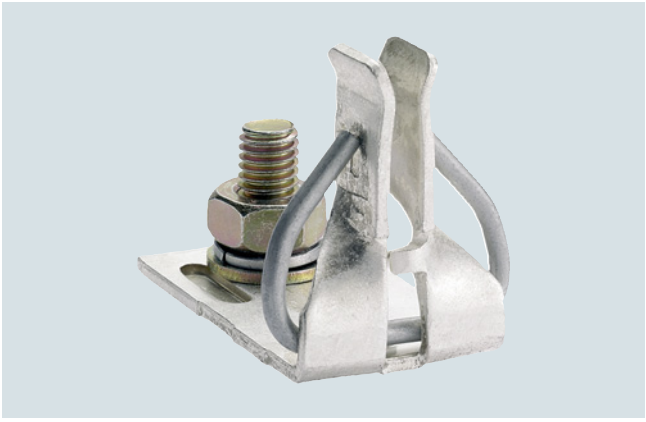
Benefits



- 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 aging 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

Technical specifications

		LV HRC fuse bases					
Size		**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	8		15			--

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

		LV HRC fuse bases with swivel mechanism			
Size		**000/00**	**1**	**3**	**4a**
Rated voltage U_n	V AC	690			
	V DC	440			
Rated conditional short-circuit current	kA	--			80
Rated short-time withstand current / 1s	kA	--			35
Max. power dissipation of fuse links	W	12	32	48	110
Flat terminal					
Screw		M8	M10	M12	M16
Nut		M8	--		
Max. tightening torque	Nm	14	38		65

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Selection and ordering data

	Size	I_n	Version	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		A		d					
	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 unit	1BM
	Made of ceramic for screw fixing								
	000/00	160	1P With flat terminals, screw With plug-in terminals With saddle-type terminals		**3NH3030** **3NH3031** **3NH3032**		1 1 1	3 units 3 units 3 units	1BM 1BM 1BM
			3P (incl. two partitions) With flat terminals With saddle-type terminals		**3NH4030** **3NH4032**		1 1	1 unit 1 unit	1BM 1BM
	Made of ceramic for screw fixing								
	**0**	160	1P With flat terminals		**3NH3120**		1	3 units	1BM
	Made of ceramic for screw fixing								
	**1**	250	1P With flat terminals With double busbar terminals		**3NH3230** **3NH3220**		1 1	3 units 3 units	1BM 1BM
	Ceramic supports on base plate for screw fixing								
	**1**	250	3P (incl. two partitions) With flat terminals		**3NH4230**		1	1 unit	1BM
	Made of ceramic for screw fixing								
	**2**	400	1P With flat terminals With double busbar terminals		**3NH3330** **3NH3320**		1 1	1 unit 1 unit	1BM 1BM
	Made of ceramic for screw fixing								
	**3**	630	1P With flat terminals With double busbar terminals		**3NH3430** **3NH3420**		1 1	1 unit 1 unit	1BM 1BM

Minimum order quantity (PS) or a multiple thereof can be ordered.

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

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

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LV HRC fuse bases and accessories

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

Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Size	Version	SD d	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
	**Fuse base covers**							
	For LV HRC fuse bases, red, with inscription "Isolating point"							
	000/00			**3NX1003**		1	3 units	1BM
	1[1], **2, 3**			**3NX1004**		1	3 units	1BM
	[1] Note: Restriction: Observe width 60 mm of the blank insert when using for LV HRC fuse bases or LV HRC fuse switching devices of size 1!							
	**Fuse pullers**							
	**000 to 3**	For LV HRC fuse links						
		Without sleeve		**3NX1013**		1	1 unit	1BM
		With sleeve		**3NX1014**		1	1 unit	1BM
	**Isolating blades For LV HRC fuse bases and fuse switch disconnectors**							
	With insulated grip lugs							
	000/00	Silver-plated		**3NG1002**		1	3 units	1BM
	0			**3NG1102**		1	1 unit	1BM
	1			**3NG1202**		1	1 unit	1BM
	2			**3NG1302**		1	1 unit	1BM
	3			**3NG1402**		1	1 unit	1BM
	With non-insulated grip lugs							
	4	Tin-coated		**3NG1503**		1	3 units	1BM
	4a	Nickel-plated		**3NG1505**		1	1 unit	1BM

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LV HRC fuse bases and accessories

SITOR semiconductor fuses for 3NH bases: Derating 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	--	--	mm² 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

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

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

Minimum order quantity (PS) or a multiple thereof can be ordered.

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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	--	--	mm² Cu	--	--	A
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
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" in SIOS or on request.

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

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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.

Information about 3NH LV HRC fuse bases suitable for use with SITOR semiconductor fuses can also be found in this chapter, see page 5/48 onwards.

Note:

For detailed information about 3KF and 3NP switch disconnectors, see chapter "Switch Disconnectors", sections "Switch Disconnectors with Fuses"/"Fuse Switch Disconnectors". Please note that the newly developed 3KF SITOR switch disconnectors have been specially provided with heat sinks to accommodate the higher temperatures of the SITOR fuses.

Fuse characteristics, configuration notes and the assignments of SITOR semiconductor fuses to the fuse bases and 3NP fuse switch disconnectors and 3KF switch disconnectors with fuses can be found in the Configuration Manual "Fuse Systems" in SIOS 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 (VDE 0636-4).

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. The use of gR fuses > 63 A as an overload protection device in switch disconnectors with fuses is not permitted due to the risk of overheating (with the exception of 3NE1).
- 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 general applications (e.g. cable and line protection) and for the protection of power semiconductors, optimized for low I^2t values (full range protection)
- gS: For general applications (e.g. cable and line protection) and for the protection of power semiconductors, optimized for low power loss (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.*

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

	Size	I_n	U_n	Operational class	Breaking value I^2t	Power loss	Varying load factor *WL*	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		A	V AC/ V DC		A^2s	W		d					
	LV HRC design												
	With slotted blade contacts with 2 oblong slots for M10 screw fixing, mounting dimension: 110 mm, or for installation in 3NH3 LV HRC fuse bases or switch disconnectors (see page 5/56)												
	3	150	500	gR[1)]	33000	35	0.85		**3NC2423-0C**		1	3 units	1DM
		200			64000	40	0.85		**3NC2425-0C**		1	3 units	1DM
		250			99000	50	0.85		**3NC2427-0C**		1	3 units	1DM
		300			132000	65	0.85		**3NC2428-0C**		1	3 units	1DM
		350			249000	60	0.85		**3NC2431-0C**		1	3 units	1DM
		400		aR	390000	50	0.85		**3NC2432-0C**		1	3 units	1DM
	With slotted blade contacts for M10 screw fixing, mounting dimension: 110 mm, or for installation in 3NH3 LV HRC fuse bases or switch disconnectors (see page 5/56)												
	3	150	500	gR[1)]	33000	35	0.85		**3NC2423-3C**		1	3 units	1DM
		200			64000	40	0.85		**3NC2425-3C**		1	3 units	1DM
		250			99000	50	0.85		**3NC2427-3C**		1	3 units	1DM
		300			132000	65	0.85		**3NC2428-3C**		1	3 units	1DM
		350			249000	60	0.85		**3NC2431-3C**		1	3 units	1DM
		400		aR	390000	50	0.85		**3NC2432-3C**		1	3 units	1DM
	1	160	690	gR[1)]	18600	32	1.0		**3NE1224-3**		1	3 units	1DM
		200			51 800	35	1.0		**3NE1225-3**		1	3 units	1DM
		250			80 900	37	1.0		**3NE1227-3**		1	3 units	1DM
		315			168 000	40	1.0		**3NE1230-3**		1	3 units	1DM
	2	350	690	gR	177000	43	1.0		**3NE1331-3**		1	3 units	1DM
		400			224000	50	1.0		**3NE1332-3**		1	3 units	1DM
		450			276500	58	1.0		**3NE1333-3**		1	3 units	1DM
		500			398000	64	1.0		**3NE1334-3**		1	3 units	1DM
	3	150	690	gR[1)]	17600	40	0.85		**3NC8423-3C**		1	3 units	1DM
		200			38400	55	0.85		**3NC8425-3C**		1	3 units	1DM
		250			70400	72	0.85		**3NC8427-3C**		1	3 units	1DM
		350			176000	95	0.85		**3NC8431-3C**		1	3 units	1DM
		500			448000	130	0.85		**3NC8434-3C**		1	3 units	1DM
		1000	600	aR	2480000	140	0.95		**3NC8444-3C**		1	3 units	1DM
	With slotted blade contacts for M12 screw fixing, mounting dimension: 110 mm, or for installation in 3NH3 LV HRC fuse bases or switch disconnectors (see page 5/56)												
	3	560	690	gR	890000	60	1.0		**3NE1435-3**		1	3 units	1DM
		630			1390000	60	1.0		**3NE1436-3**		1	3 units	1DM
		670			1640000	64	1.0		**3NE1447-3**		1	3 units	1DM
		710			1818000	72	1.0		**3NE1437-3**		1	3 units	1DM
		800			2475000	84	1.0		**3NE1438-3**		1	3 units	1DM
		850			3640000	76	1.0		**3NE1448-3**		1	3 units	1DM
	With M8 bolt-on links, mounting dimension: 80 mm, for screwing onto busbars or onto 3NH5423 fuse base												
	1	100	690/ 440	aR	3200	25	On req.		**3NE8221-3MK**		1	3 units	1DM
		125			6000	28	On req.		**3NE8222-3MK**		1	3 units	1DM
		160			10500	35	On req.		**3NE8224-3MK**		1	3 units	1DM
		200			17500	42	On req.		**3NE8225-3MK**		1	3 units	1DM
		250			28500	53.5	On req.		**3NE8227-3MK**		1	3 units	1DM
		315			53500	61	On req.		**3NE8230-3MK**		1	3 units	1DM
		350			66000	69	On req.		**3NE8231-3MK**		1	3 units	1DM
		400			110000	70.5	On req.		**3NE8232-3MK**		1	3 units	1DM
		450			180000	71	On req.		**3NE8233-3MK**		1	3 units	1DM
		500			215000	84	On req.		**3NE8234-3MK**		1	3 units	1DM
		550			290000	87	On req.		**3NE8235-3MK**		1	3 units	1DM
		630			440000	96	On req.		**3NE8236-3MK**		1	3 units	1DM

[1)] No overload protection when used in switch disconnectors

Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Size	I_n	U_n	Operational class	Breaking I^2t value	Power loss	Varying load factor *WL*	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		A	V AC		A^2s	W		d					
	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
		710			346000	130	0.85		**3NC3237-1U**		1	3 units	1DM
		800			498000	135	0.9		**3NC3238-1U**		1	3 units	1DM
		900			677000	145	0.9		**3NC3240-1U**		1	3 units	1DM
		1 000			975000	155	0.95		**3NC3241-1U**		1	3 units	1DM
		1 100			1382000	165	0.95		**3NC3242-1U**		1	3 units	1DM
		1250			1990000	175	0.95		**3NC3243-1U**		1	3 units	1DM
		1 400	500		2100000	200	0.95		**3NC3244-1U**		1	3 units	1DM
		1 600			2860000	240	0.9		**3NC3245-1U**		1	3 units	1DM
	With slotted blade contacts with 2 oblong slots for M10 screw fixing, mounting dimension: 110 mm, or for installation in 3NH3 LV HRC fuse bases or switch disconnectors (see page 5/56)												
	3	150	690	gR[1)]	17600	40	0.85		**3NC8423-0C**		1	3 units	1DM
		200			38400	55	0.85		**3NC8425-0C**		1	3 units	1DM
		250			70400	72	0.85		**3NC8427-0C**		1	3 units	1DM
		350			176000	95	0.85		**3NC8431-0C**		1	3 units	1DM
		500			448000	130	0.85		**3NC8434-0C**		1	3 units	1DM
	With blade contacts for mounting in 3NH3 LV HRC fuse bases or switch disconnectors (see page 5/56)												
	3	710	600	gR[1)]	2460000	65	1.0		**3NE1437-1**		1	3 units	1DM
		800			3350000	72	1.0		**3NE1438-1**		1	3 units	1DM
	000	16	690	gS	200	4.0	1.0		**3NE1813-0**		1	3 units	1DM
		20			430	5.0	1.0		**3NE1814-0**		1	3 units	1DM
		25			780	5.0	1.0		**3NE1815-0**		1	3 units	1DM
		35			1700	3.5	1.0		**3NE1803-0**		1	3 units	1DM
		40			3000	3.0	1.0		**3NE1802-0**		1	3 units	1DM
		50			4400	6.0	1.0		**3NE1817-0**		1	3 units	1DM
		63			9000	7.0	1.0		**3NE1818-0**		1	3 units	1DM
		80			18000	8.0	1.0		**3NE1820-0**		1	3 units	1DM
	00	100	690	gS	33000	10	1.0		**3NE1021-0**		1	3 units	1DM
		125			63000	11	1.0		**3NE1022-0**		1	3 units	1DM
	1	160	690	gS	60000	24	1.0		**3NE1224-0**		1	3 units	1DM
		200			100000	27	1.0		**3NE1225-0**		1	3 units	1DM
		250			200000	30	1.0		**3NE1227-0**		1	3 units	1DM
		315			310000	38	1.0		**3NE1230-0**		1	3 units	1DM
	2	350	690	gS	430000	42	1.0		**3NE1331-0**		1	3 units	1DM
		400			590000	45	1.0		**3NE1332-0**		1	3 units	1DM
		450			750000	53	1.0		**3NE1333-0**		1	3 units	1DM
		500			950000	56	1.0		**3NE1334-0**		1	3 units	1DM
	3	560	690	gS	1700000	50	1.0		**3NE1435-0**		1	3 units	1DM
		630			2350000	55	1.0		**3NE1436-0**		1	3 units	1DM
		710			3400000	58	1.0		**3NE1437-0**		1	3 units	1DM
		800			5000000	58	1.0		**3NE1438-0**		1	3 units	1DM

[1)] No overload protection when used in switch disconnectors

Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Size	I_n	U_n	Operational class	Breaking I^2t value	Power loss	Varying load factor *WL*	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		A	V AC/ V DC		A^2s	W		d					
	LV HRC design												
	With blade contacts for mounting in 3NH3 LV HRC fuse bases or switch disconnectors (see chapter "Switch Disconnectors", sections "Switch Disconnectors with Fuses" and "Fuse Switch Disconnectors")												
	000	6	690/ 440	gR	37	2.7	On req.		**3NE8810-0MK**		1	3 units	1DM
		10			50	4.5	On req.		**3NE8812-0MK**		1	3 units	1DM
		16			73	6.7	On req.		**3NE8813-0MK**		1	3 units	1DM
		20			90	8	On req.		**3NE8814-0MK**		1	3 units	1DM
		25			150	8.1	On req.		**3NE8815-0MK**		1	3 units	1DM
		32			350	10.5	On req.		**3NE8801-0MK**		1	3 units	1DM
		40			480	12	On req.		**3NE8802-0MK**		1	3 units	1DM
		50			1050	14.5	On req.		**3NE8817-0MK**		1	3 units	1DM
		63			1960	23	On req.		**3NE8818-0MK**		1	3 units	1DM
		80		aR	2200	23.3	On req.		**3NE8820-0MK**		1	3 units	1DM
		100			3650	27	On req.		**3NE8821-0MK**		1	3 units	1DM
		125			7800	30	On req.		**3NE8822-0MK**		1	3 units	1DM
		160	500/ 440		14000	34	On req.		**3NE8824-0MK**		1	3 units	1DM
	With blade contacts for mounting in 3NH3 LV HRC fuse bases or switch disconnectors (see page 5/56)												
	00	25	690	gR	180	7	0.95		**3NE8015-1**		1	3 units	1DM
		35			400	9	0.95		**3NE8003-1**		1	3 units	1DM
		50			700	14	0.90		**3NE8017-1**		1	3 units	1DM
		63			1400	16	0.95		**3NE8018-1**		1	3 units	1DM
		80			5800	10.5	1.0		**3NE1020-2**		1	3 units	1DM
		100			11000	12	1.0		**3NE1021-2**		1	3 units	1DM
		125			23000	13.5	1.0		**3NE1022-2**		1	3 units	1DM
		80		aR	2400	19	0.95		**3NE8020-1**		1	3 units	1DM
		100			4200	22	0.95		**3NE8021-1**		1	3 units	1DM
		125			6500	28	0.95		**3NE8022-1**		1	3 units	1DM
		160			13000	38	0.95		**3NE8024-1**		1	3 units	1DM
	1	100	690/ 440	aR	6050	25.5	On req.		**3NE8221-0MK**		1	3 units	1DM
		125			8900	28.5	On req.		**3NE8222-0MK**		1	3 units	1DM
		160			16200	37	On req.		**3NE8224-0MK**		1	3 units	1DM
		200			26000	49	On req.		**3NE8225-0MK**		1	3 units	1DM
		250			59000	52	On req.		**3NE8227-0MK**		1	3 units	1DM
		315			120000	68	On req.		**3NE8230-0MK**		1	3 units	1DM
		160	690	gR	18600	32	1.0		**3NE1224-2**		1	3 units	1DM
		200			51800	35	1.0		**3NE1225-2**		1	3 units	1DM
		250			80900	37	1.0		**3NE1227-2**		1	3 units	1DM
		315			168000	40	1.0		**3NE1230-2**		1	3 units	1DM
	2	350	690/ 440	aR	83500	68.6	On req.		**3NE8331-0MK**		1	3 units	1DM
		400			136000	72.8	On req.		**3NE8332-0MK**		1	3 units	1DM
		450			207000	80.1	On req.		**3NE8333-0MK**		1	3 units	1DM
		500			318000	77.5	On req.		**3NE8334-0MK**		1	3 units	1DM
		550			399000	86.4	On req.		**3NE8335-0MK**		1	3 units	1DM
		630			740000	90.7	On req.		**3NE8336-0MK**		1	3 units	1DM
		350	690	gR	177000	43	1.0		**3NE1331-2**		1	3 units	1DM
		400			224000	50	1.0		**3NE1332-2**		1	3 units	1DM
		450			276500	58	1.0		**3NE1333-2**		1	3 units	1DM
		500			398000	64	1.0		**3NE1334-2**		1	3 units	1DM
	3	560	690	gR	890000	60	1.0		**3NE1435-2**		1	3 units	1DM
		630			1390000	60	1.0		**3NE1436-2**		1	3 units	1DM
		670			1640000	64	1.0		**3NE1447-2**		1	3 units	1DM
		710			1818000	72	1.0		**3NE1437-2**		1	3 units	1DM
		800			2475000	84	1.0		**3NE1438-2**		1	3 units	1DM
		850			3640000	76	1.0		**3NE1448-2**		1	3 units	1DM
	0	32	1 000	gR	280	12	0.9		**3NE4101**		1	3 units	1DM
		40			500	13	0.9		**3NE4102**		1	3 units	1DM
		50			800	16	0.9		**3NE4117**		1	3 units	1DM
		63		aR	1500	20	0.9		**3NE4118**		1	3 units	1DM
		80			3000	22	0.9		**3NE4120**		1	3 units	1DM
		100			6000	24	0.9		**3NE4121**		1	3 units	1DM
		125			14000	30	0.9		**3NE4122**		1	3 units	1DM
		160			29000	35	0.9		**3NE4124**		1	3 units	1DM

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LV HRC design

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

[1] Observe DC voltage acc. to UL, time constant and minimum breaking current MBC (see "Technical specifications").

	Size	I_n	U_n	Operational class	Breaking I^2t value	Power loss	Varying load factor *WL*	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		A	V AC/ V DC		A^2s	W		d					
	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
		1100			3000 000	110			**3NB3351-1KK26**		1	1 unit	1DM
	2 x 3	1250			4100 000	104	1.0		**3NB3352-1KK26**		1	1 unit	1DM
		1350			4800 000	126			**3NB3354-1KK26**		1	1 unit	1DM
		1400			5200 000	127			**3NB3355-1KK26**		1	1 unit	1DM
	2 x 3	1600			6900 000	152	1.0		**3NB3357-1KK26**		1	1 unit	1DM
		1700			10000 000	143			**3NB3358-1KK26**		1	1 unit	1DM
	3 x 3	1700			6400000	179	1.0		**3NB3358-1KK27**		1	1 unit	1DM
		1900			8200 000	196			**3NB3362-1KK27**		1	1 unit	1DM
	With slotted blade contacts for M10 screw fixing, mounting dimension: 110 mm, or for installation in 3NH3 LV HRC fuse bases or switch disconnectors (see page 5/56)												
	2	250	800	aR	29700	105	0.85		**3NE4327-0B**		1	3 units	1DM
		315			60700	120	0.85		**3NE4330-0B**		1	3 units	1DM
		450			191000	140	0.85		**3NE4333-0B**		1	3 units	1DM
		500			276000	155	0.85		**3NE4334-0B**		1	3 units	1DM
		710			923000	155	0.95		**3NE4337**		1	3 units	1DM

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Size	I_n	U_n	Operational class	Breaking I^2t value	Power loss	Varying load factor *WL*	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
	A	V AC/ V DC		A^2s	W		d					
With slotted blade contacts for M10 screw fixing, 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/	gR	4500	9	On req.		**3NE3201-0MK**		1	3 units	1DM
	40[1]	600		6000	13	On req.		**3NE3202-0MK**		1	3 units	1DM
	50[1]			8000	18	On req.		**3NE3217-0MK**		1	3 units	1DM
	63[1]			9000	25	On req.		**3NE3218-0MK**		1	3 units	1DM
	100	1000	aR	4800	28	0.95		**3NE3221**		1	3 units	1DM
	125			7200	36	0.95		**3NE3222**		1	3 units	1DM
	160			13000	42	1.0		**3NE3224**		1	3 units	1DM
	200			30000	42	1.0		**3NE3225**		1	3 units	1DM
	250			48000	50	1.0		**3NE3227**		1	3 units	1DM
	315			80000	60	0.95		**3NE3230-0B**		1	3 units	1DM
	350			100000	75	0.95		**3NE3231**		1	3 units	1DM
	400			135000	85	0.9		**3NE3232-0B**		1	3 units	1DM
	450			175000	95	0.9		**3NE3233**		1	3 units	1DM
	500[1]	1000/		500000	105	On req.		**3NE3234-0MK08**		1	3 units	1DM
	550[1]	600		700000	110	On req.		**3NE3235-0MK08**		1	3 units	1DM
	630[1]			850000	127	On req.		**3NE3236-0MK08**		1	3 units	1DM
[1] No grip lugs and therefore not suitable for mounting in 3NH3 LV HRC fuse bases or switch disconnectors (see page 5/56)												
2	400	1000	aR	135000	80	1.0		**3NE3332-0B**		1	3 units	1DM
	450			175000	90	1.0		**3NE3333**		1	3 units	1DM
	500			260000	90	1.0		**3NE3334-0B**		1	3 units	1DM
	560			360000	95	1.0		**3NE3335**		1	3 units	1DM
	630			600000	100	1.0		**3NE3336**		1	3 units	1DM
	710	900	aR	800000	105	1.0		**3NE3337-8**		1	3 units	1DM
	800	800		850000	130	0.95		**3NE3338-8**		1	3 units	1DM
	900	690		920000	165	0.95		**3NE3340-8**		1	3 units	1DM
With slotted blade contacts for M10 screw fixing, mounting dimension: 130 mm												
3	100	1000	aR	13500	25	1.0		**3NE3421-0C**		1	3 units	1DM
	224			54000	85	1.0		**3NE3626-0C**		1	3 units	1DM
	315			218000	80	1.0		**3NE3430-0C**		1	3 units	1DM
	400			364000	110	1.0		**3NE3432-0C**		1	3 units	1DM
	450			488000	110	1.0		**3NE3635-0C**		1	3 units	1DM
	500			870000	95	1.0		**3NE3434-0C**		1	3 units	1DM
	630			1280000	132	1.0		**3NE3636-0C**		1	3 units	1DM
	710			1950000	145	1.0		**3NE3637-0C**		1	3 units	1DM
With slotted blade contacts for M12 screw fixing, mounting dimension: 140 mm												
3	710	1000	aR	1950000	145	1.0		**3NE3637-1C**		1	3 units	1DM
With slotted blade contacts for M12 screw fixing, mounting dimension: 110 mm, or for installation in 3NH3 LV HRC fuse bases or switch disconnectors (see page 5/56)												
3	630	1000	aR	418000	145	0.85		**3NC3336-1U**		1	3 units	1DM
	710			569000	150	0.85		**3NC3337-1U**		1	3 units	1DM
	800			819000	155	0.85		**3NC3338-1U**		1	3 units	1DM
	900			1160000	165	0.9		**3NC3340-1U**		1	3 units	1DM
	1000			1670000	170	0.9		**3NC3341-1U**		1	3 units	1DM
	1100	800		1910000	185	0.9		**3NC3342-1U**		1	3 units	1DM
	1250			2600000	210	0.9		**3NC3343-1U**		1	3 units	1DM
3	315	1250	aR	72500	80	0.95		**3NC3430-1U**		1	3 units	1DM
	400			163000	95	0.95		**3NC3432-1U**		1	3 units	1DM
	500			290000	115	0.90		**3NC3434-1U**		1	3 units	1DM
	630			650000	120	0.95		**3NC3436-1U**		1	3 units	1DM
	800	1100		985000	145	0.90		**3NC3438-1U**		1	3 units	1DM

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	Size	I_n	U_n	Operational class	Breaking I^2t value	Power loss	Varying load factor *WL*	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		A	V AC/ V DC		A^2s	W		d					
	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
		224			138000	80	1.0		**3NE5426-0C**		1	2 units	1DM
		315			311000	115	1.0		**3NE5430-0C**		1	2 units	1DM
		350			428000	135	1.0		**3NE5431-0C**		1	2 units	1DM
		450			870000	145	0.95		**3NE5433-0C**		1	2 units	1DM
	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
	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
		450			590000	160	1.0		**3NE5633-0C**		1	3 units	1DM
		600			1950000	145	1.0		**3NE5643-0C**		1	3 units	1DM
	With slotted blade contacts for M10 screw fixing, 170 mm mounting dimension, for bolting onto busbars or onto 3NH5473 fuse base												
	2	40	1500/ 1000	gR	900	26	On req.		**3NE5302-0MK06**		1	1 unit	1DM
		50			1800	27	On req.		**3NE5317-0MK06**		1	1 unit	1DM
		63			3100	34	On req.		**3NE5318-0MK06**		1	1 unit	1DM
		80		aR	3900	42	On req.		**3NE5320-0MK06**		1	1 unit	1DM
		100			8700	45	On req.		**3NE5321-0MK06**		1	1 unit	1DM
		125			11800	59	On req.		**3NE5322-0MK06**		1	1 unit	1DM
		160			37000	54	On req.		**3NE5324-0MK06**		1	1 unit	1DM
		200			70000	56	On req.		**3NE5325-0MK06**		1	1 unit	1DM
		250			165000	59	On req.		**3NE5327-0MK06**		1	1 unit	1DM
		315			250000	76	On req.		**3NE5330-0MK06**		1	1 unit	1DM
		400	1500/ 1000		470000	89	On req.		**3NE5332-0MK06**		1	1 unit	1DM
		500			800000	109	On req.		**3NE5334-0MK06**		1	1 unit	1DM
		630			1100000	163	On req.		**3NE5336-0MK06**		1	1 unit	1DM
	2*	630	1500/ 1000	aR	1100000	163	On req.		**3NE5336-0MK66**		1	1 unit	1DM
	* 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
		250			218000	110	1.0		**3NE7427-0U**		1	2 units	1DM
		350			555000	120	1.0		**3NE7431-0U**		1	2 units	1DM
		400			870000	150	1.0		**3NE7432-0U**		1	2 units	1DM
		450			960000	160	1.0		**3NE7633-0U**		1	2 units	1DM
		630			1950000	220	1.0		**3NE7636-0U**		1	2 units	1DM
	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
		525			1120000	210	1.0		**3NE7648-1U**		1	2 units	1DM
		630			1950000	220	1.0		**3NE7636-1U**		1	2 units	1DM
		710			3110000	275	1.0		**3NE7637-1U**		1	2 units	1DM
	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
		400			620000	205	1.0		**3NE9632-1C**		1	1 unit	1DM
		500			1270000	235	1.0		**3NE9634-1C**		1	1 unit	1DM
		630			2800000	275	1.0		**3NE9636-1C**		1	1 unit	1DM
	2	315	--/ 3000	aR	300000	245	On req.		**3NE9330-0MK07**		1	1 unit	1DM

Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Size	I_n	U_n	Operational class	Breaking I^2t value	Power loss	Varying load factor *WL*	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		A	V AC		A^2s	W		d					
	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
		710			346000	130	0.9		**3NC3237-6U**		1	3 units	1DM
		800			498000	135	0.95		**3NC3238-6U**		1	3 units	1DM
		900			677000	140	0.95		**3NC3240-6U**		1	3 units	1DM
		1 000			975000	145	1.0		**3NC3241-6U**		1	3 units	1DM
		1 100			1382000	150	1.0		**3NC3242-6U**		1	3 units	1DM
		1250			1990000	155	1.0		**3NC3243-6U**		1	3 units	1DM
		1 400	500		2100000	175	1.0		**3NC3244-6U**		1	3 units	1DM
		1 600			2860000	195	0.95		**3NC3245-6U**		1	3 units	1DM
	With M10 female thread at both ends for direct busbar mounting, flange dimensions 109 mm												
	3	450	1 000	aR	488000	110	1.0		**3NE3635-6**		1	3 units	1DM
	With M12 female thread at both ends for direct busbar mounting, flange dimensions 73 mm												
	3	630	1 000	aR	418000	130	0.90		**3NC3336-6U**		1	3 units	1DM
		710			569000	140	0.90		**3NC3337-6U**		1	3 units	1DM
		800			819000	150	0.90		**3NC3338-6U**		1	3 units	1DM
		900			1160000	160	0.95		**3NC3340-6U**		1	3 units	1DM
		1 000			1670000	165	0.95		**3NC3341-6U**		1	3 units	1DM
		1 100	800		1910000	175	0.95		**3NC3342-6U**		1	3 units	1DM
		1250			2600000	185	0.95		**3NC3343-6U**		1	3 units	1DM
	3	315	1250	aR	72500	80	0.95		**3NC3430-6U**		1	3 units	1DM
		400			163000	95	0.95		**3NC3432-6U**		1	3 units	1DM
		500			290000	115	0.90		**3NC3434-6U**		1	3 units	1DM
		630			650000	120	0.95		**3NC3436-6U**		1	3 units	1DM
		800	1100		985000	145	0.95		**3NC3438-6U**		1	3 units	1DM

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Minimum order quantity (PS) or a multiple thereof can be ordered.

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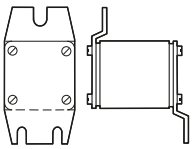
LV HRC design

	Size	I_n	U_n	Operational class	Breaking I^2t value	Power loss	Varying load factor *WL*	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		A	V AC		A^2s	W		d					
	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
		600	1000		888000	150	0.9		**3NC5840**		1	3 units	1DM
		630	800		888000	145	0.9		**3NC5841**		1	3 units	1DM
		800	1000		1728000	170	0.9		**3NC5838**		1	3 units	1DM
		710	900		620000	150	0.9		**3NE6437-7**		1	3 units	1DM
		1250	600		2480000	210	0.9		**3NE9450-7**		1	3 units	1DM
	With M10 female thread at both ends for direct busbar mounting, flange dimensions 89 (99)[2] mm, for air-coole rectifiers in electrolysis systems												
	--[1]	710	900	aR	620000	150	0.9		**3NE6437**		1	3 units	1DM
		850	600	gR	2480000	85	1.0		**3NE9440-6**		1	3 units	1DM
		900	900	aR	1920000	170	0.9		**3NE6444**		1	3 units	1DM
		1250	600	aR	2480000	210	0.9		**3NE9450**		1	3 units	1DM
	Fuses with installation holder for SITOR 6QG10 thyristor sets												
	--[1]	200	1000	aR	44000	50	0.85		**3NE3525-5**		1	2 units	1DM
		450			395000	90	0.85		**3NE3535-5**		1	2 units	1DM
	Fuses with installation holder for SITOR 6QG11 thyristor sets												
	--[1]	50	1000	gR	1100	20	0.85		**3NE4117-5**		1	2 units	1DM
		100		aR	7400	35	0.85		**3NE4121-5**		1	2 units	1DM
		170		aR	60500	43	0.85		**3NE4146-5**		1	2 units	1DM
	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
		315			60700	120	0.85		**3NE4330-6B**		1	3 units	1DM
		450			191000	140	0.85		**3NE4333-6B**		1	3 units	1DM
		500			276000	155	0.85		**3NE4334-6B**		1	3 units	1DM
		710			923000	155	0.95		**3NE4337-6**		1	3 units	1DM
	Special design for mounting directly in the railway supply rectifier												
	--[1]	250	680	aR	635000	25	0.9		**3NC7327-2**		1	3 units	1DM
		350			1430000	32	0.9		**3NC7331-2**		1	3 units	1DM

[1] Special design.

[2] Flange dimensions 99 mm only for 3NE6444.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Size	I_n	U_n	Operational class	Breaking I^2t value	P_v power loss	Varying load factor *WL*	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		A	V DC		A^2s	W		d					
	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
	1L	200	1250	aR	39000[2]	50	--		**3NB1126-4KK11**		1	2 units	1DM
		250			80500[2]	51	--		**3NB1128-4KK11**		1	2 units	1DM
	2L	315			129000[2]	63	--		**3NB1231-4KK11**		1	2 units	1DM
		400			290000[2]	68	--		**3NB1234-4KK11**		1	2 units	1DM
	3L	500			600000[2]	89	--		**3NB1337-4KK11**		1	2 units	1DM
		800			1910000[2]	135	--		**3NB1345-4KK11**		1	2 units	1DM
	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
		1000			2250000[2]	195	--		**3NB2350-4KK16**		1	1 unit	1DM
		1400			5100000[2]	250	--		**3NB2355-4KK16**		1	1 unit	1DM
		1600			7450000[2]	275	--		**3NB2357-4KK16**		1	1 unit	1DM
	3 x 3L	2100			1195000[2]	365	--		**3NB2364-4KK17**		1	1 unit	1DM
		2400			18100000[2]	445	--		**3NB2366-4KK17**		1	1 unit	1DM

[1] I^2t at U_{VSI} 1400 V, I^2t at U_n 900 V is 180000 A^2s

[2] I^2t at U_{VSI} 1500 V; I^2t at U_n 1250 V is reduced with 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	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
	mm		A	V AC/ V DC		d					
	**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
	80	3NE87, 3NC26	315	690	M8		**3NH5023**		1	3 units	1BM
		3NE80..-3MK	400	690	M10		**3NH5323**		1	3 units	1BM
		3NE82..-3MK	1600	690	M10		**3NH5423**		1	3 units	1BM
	110	3NC24, 3NC33..-1U, 3NC34..-1U, 3NC84, 3NE1…-3, 3NE32, 3NE33	1250	1250	M10		**3NH5463**		1	3 units	1BM
	170	3NE53, 3NE56	630	1800	M10		**3NH5473**		1	3 units	1BM

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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 × 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

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 general applications (e.g. cable and line protection) and for the protection of power semiconductors, optimized for low I^2t values (full range protection)
- gS: For general applications (e.g. cable and line protection) and for the protection of power semiconductors, optimized for low power loss (full range protection)

Technical specifications

		Cylindrical fuse holders		
		3NC10	**3NC14**	**3NC22**
Size	mm × mm	10 × 38	14 × 51	22 × 58
Standards		UL 4248-1; CSA C22.2; IEC 60269-2, IEC 60947-3		
Certifications		UL, CC, GS	UL, CC, GS	UL, GS
Approvals		UL 4248-1; UL File No. E171267; CSA C22.2 No. 39-M		
Rated voltage U_n	V AC V DC	690; 600 acc. to UL/CSA 800		
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 • AWG (American Wire Gauge)	 mm^2 AWG	 1.5 ... 16 15 ... 5	 1.5 ... 35 14 ... 2	 4 ... 50 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.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

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

[1] Observe DC voltage acc. to UL, time constants and minimum breaking current MBC (see "Technical specifications").
[2] CCC approval

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Cylindrical fuse design

	Size	I_n	U_n	Breaking I^2t value	P_V power loss	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
	mm × mm	A	V AC/ V DC	A^2s	W	d					
	Cylindrical fuse links with striking pin, operational class aR										
	14 × 51	10	690/600[1]	32	4		**3NC1410-5**		1	10 units	1DM
		15		63	5.5		**3NC1415-5**		1	10 units	1DM
		20		234	6		**3NC1420-5**		1	10 units	1DM
		25		378	7		**3NC1425-5**		1	10 units	1DM
		30		466	9		**3NC1430-5**		1	10 units	1DM
		32		600	7.6		**3NC1432-5**		1	10 units	1DM
		40		750	8		**3NC1440-5**		1	10 units	1DM
		50		1800	9		**3NC1450-5**		1	10 units	1DM
	22 × 58	20	690/500[1]	240	5		**3NC2220-5**		1	5 units	1DM
		25		350	6		**3NC2225-5**		1	5 units	1DM
		32		500	8		**3NC2232-5**		1	5 units	1DM
		40		800	9		**3NC2240-5**		1	5 units	1DM
		50		1500	9.5		**3NC2250-5**		1	5 units	1DM
		63		3000	11		**3NC2263-5**		1	5 units	1DM
		80		6000	13.5		**3NC2280-5**		1	5 units	1DM
	22 × 58	100	600/500[1]	8500	16		**3NC2200-5**		1	5 units	1DM
	Cylindrical fuse links										
	Operational class gS										
	22 × 127	1	1500/ 1000	2	2		**3NC2301-0MK**		1	5 units	1DM
		2		4.4	2.5		**3NC2302-0MK**		1	5 units	1DM
		4		55	5.3		**3NC2304-0MK**		1	5 units	1DM
		6		150	6.4		**3NC2306-0MK**		1	5 units	1DM
		10		540	3.1		**3NC2310-0MK**		1	5 units	1DM
		16		1120	4.7		**3NC2316-0MK**		1	5 units	1DM
		20		2850	5.4		**3NC2320-0MK**		1	5 units	1DM
		25		3300	6.9		**3NC2325-0MK**		1	5 units	1DM
		32		9050	6.7		**3NC2332-0MK**		1	5 units	1DM
	Operational class gR										
	22 × 127	40	1500/ 1000	18500	9.4		**3NC2340-0MK**		1	5 units	1DM
	Operational class aR										
	22 × 127	50	1500/ 1000	26000	11.6		**3NC2350-0MK**		1	5 units	1DM
	**Cylindrical fuse links, with M8 bolt-on links**										
	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
		16		52	4.4		**3NC1816-0MK**		1	3 units	1DM
		20		90	6.5		**3NC1820-0MK**		1	3 units	1DM
		25		160	8.5		**3NC1825-0MK**		1	3 units	1DM
		32		400	8.9		**3NC1832-0MK**		1	3 units	1DM
		40		600	11		**3NC1840-0MK**		1	3 units	1DM
		50		1250	13.8		**3NC1850-0MK**		1	3 units	1DM
	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
		32		220	12.3		**3NC2632-0MK**		1	3 units	1DM
		40		400	14.8		**3NC2640-0MK**		1	3 units	1DM
		50		980	17.5		**3NC2650-0MK**		1	3 units	1DM
		63		2050	18.8		**3NC2663-0MK**		1	3 units	1DM
	Operational class aR										
		80		3500	22.5		**3NC2680-0MK**		1	3 units	1DM
		100		5400	31.5		**3NC2600-0MK**		1	3 units	1DM
		125		11800	39		**3NC2611-0MK**		1	3 units	1DM

[1] DC voltage acc. to UL.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Version	For fuse series	I_n	U_n	Connection bolt	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
	mm		A	V DC		d					
	**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
	80	3NE87, 3NC26	315	690	M8		**3NH5023**		1	3 units	1BM

	Size	Version	Rated voltage	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
	mm × mm		V AC/ V DC	d					
	**Cylindrical fuse holders** Can be used as fuse switch disconnectors[1]								
	10 × 38	1P	690/800		**3NC1091**		1	12 units	1DM
		2P			**3NC1092**		1	6 units	1DM
		3P			**3NC1093**		1	4 units	1DM
	14 × 51	1P			**3NC1491**		1	6 units	1DM
		2P			**3NC1492**		1	3 units	1DM
		3P			**3NC1493**		1	2 units	1DM
	22 × 58	1P			**3NC2291**		1	1 unit	1DM
		2P			**3NC2292**		1	3 units	1DM
		3P			**3NC2293**		1	2 units	1DM
	22 × 127	1P	1500/1000		**3NC2391-0MK**		1	4 units	1DM
		2P			**3NC2392-0MK**		1	2 units	1DM
		3P			**3NC2393-0MK**		1	1 unit	1DM
	**Cylindrical fuse holders** Can be used as fuse switch disconnectors[1] With signaling switches for fuse links with striking pin[2]								
	14 × 51	1P	690/800		**3NC1491-5**		1	6 units	1DM
	22 × 58	1P			**3NC2291-5**		1	6 units	1DM
	**Cylindrical fuse bases**								
	10 × 38	1P	600/--		**3NC1038-1**		1	10 units	1DM
		2P			**3NC1038-2**		1	8 units	1DM
		3P			**3NC1038-3**		1	6 units	1DM
	**Fuse tongs**								
	10 × 38, 14 × 51, 22 × 58				**3NC1000**		1	1 unit	1DM

[1] Please note the utilization category and current/voltage values; see "Technical specifications", page 5/70.

[2] Microswitch 5 A, 250 V AC

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Overview

SILIZED is the brand name for NEOZED fuses (D0 fuses) and DIAZED fuses (D fuses) with super-quick-acting 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-acting 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		Super-quick-acting	
Rated voltage U_n	V AC V DC	400 250	500 500
Rated current I_n	A	10 ... 63	16 ... 100
Rated breaking capacity	kA AC kA DC	50 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°C, humidity 90% at 20°C	

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

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

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Minimum order quantity (PS) or a multiple thereof can be ordered.

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Introduction

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.

The latest standardization effort was published as a draft standard in 2017 and is expected to be available in the form of Amendment A1 to IEC 60269-6 in the middle of 2018; several months later than EN. It should be noted that renewed changes in low and high test currents, as well as in conventional times, i.e. current-time characteristic curves, have been incorporated into this latest version. A distinction is now made between fuses for the protection of the strings and fuses for the protection of the array or subarray. This satisfies the different requirements in the PV panel (protection against reverse currents) and in the area downstream (viewed from the infeed direction) of the generator terminal boxes (essentially short-circuit protection).

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 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.

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, the 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 as 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, 3NW70..-4, 3NW60..-4

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

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Technical specifications

		Cylindrical fuse links		Cylindrical fuse holders	
		3NW60..-4	**3NW66..-4**	**3NW70..-4**	**3NW76..-4**
Size	mm x mm	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°C, humidity 90% at +20°C			
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]	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
	mm x mm	A DC	V DC	W	W	d					
	Cylindrical fuse links, operational class gPV										
 3NW6004-4	10 x 38	2	1000	1.4	0.6	►	**3NW6002-4**		1	20 units	1DN
		4		1.6	0.7		**3NW6004-4**		1	20 units	1DN
		6		1.7	0.7		**3NW6001-4**		1	20 units	1DN
		8		1.9	0.8		**3NW6008-4**		1	20 units	1DN
		10		2.3	1.0		**3NW6003-4**		1	20 units	1DN
		12		2.7	1.1		**3NW6006-4**		1	20 units	1DN
		16		3.2	1.3		**3NW6005-4**		1	20 units	1DN
		20		3.4	1.4		**3NW6007-4**		1	20 units	1DN
 3NW6604-4	10 x 85	4	1500	2.7	1.1		**3NW6604-4**		1	10 units	1DN
		6		3.0	1.2		**3NW6601-4**		1	10 units	1DN
		8		3.6	1.5		**3NW6608-4**		1	10 units	1DN
		10		3.7	1.6		**3NW6603-4**		1	10 units	1DN
		12		3.3	1.4		**3NW6606-4**		1	10 units	1DN
		16		3.7	1.6		**3NW6605-4**		1	10 units	1DN
		20	1200	4.0	1.7		**3NW6607-4**		1	10 units	1DN

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

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PV cylindrical fuses

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

Minimum order quantity (PS) or a multiple thereof can be ordered.

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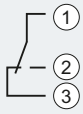
Technical specifications

		Fuse links 3NE1...-4 / -4D / -4E / -5E						Fuse bases 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		--						AC-20B, DC-20B (switching without load)					
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°C, humidity 90% at +20°C											
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


3NE1330-4D

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

Minimum order quantity (PS) or a multiple thereof can be ordered.

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PV cumulative fuses

	For fuse links of size	I_n	U_n	SD	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS	PG
		A DC		d					
	Fuse bases with flat terminal								
 3NH3230	Standard ceramic fuse base								
	1	250	1000		**3NH3230**		1	3 units	1BM
	Fuse bases with swiveling mechanism								
 3NH7360-4	1L	250	1000		**3NH7260-4**		1	1 unit	1DN
	2L	400	1000		**3NH7360-4**		1	1 unit	1DN
	3L	630	1000/1500		**3NH7460-4**		1	1 unit	1DN
	1XL	250	1500		**3NH7261-4**		1	1 unit	1DN
	2XL	400	1500		**3NH7361-4**		1	1 unit	1DN
	Fuse bases with swiveling mechanism and microswitch for tripped signaling of the fuse[1)]								
	1	250	1000		**3NH7262-4KK01**		1	1 unit	1DN
	2L	400	1000		**3NH7360-4KK01**		1	1 unit	1DN

Accessories

	Terminal covers for PV fuse bases with swiveling mechanism								
 3NX3121	1, 1L, 1XL				**3NX3121**		1	1 unit	1DN
	2L, 2XL				**3NX3122**		1	1 unit	1DN
	3L				**3NX3123**		1	1 unit	1DN

[1)] Fuse must be inserted upside down.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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1. General standards

By using this catalog you can acquire hardware and software products described therein from Siemens AG subject to these conditions of sale and delivery (hereinafter: CSD). Please note: the scope, the quality and the conditions for supplies and services, including software products, by any Siemens group or Regional Company having a registered office outside of Germany, shall be subject exclusively to the General Terms and Conditions of the respective Siemens entity. These CSD apply exclusively for orders placed with Siemens AG, Germany.

1.1 For customers with a seat or registered office in Germany

For customers with a seat or registered office in Germany, the following shall be subordinate to these CSD

- for installation, the "Standard Terms and Conditions for Installation –Germany" and
- for Plant Analytics Services the "Standard Terms and Conditions for Plant Analytics Services – for Customers in Germany"[1)] and
- for standalone software products and software products that are part of another product or project, the "General License Conditions for Software Products for Automation and Drives for Customers with a Seat or Registered Office in Germany"[1)] and
- for other supplies and services, the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"[1)].
  In the event that such other supplies and services include open-source software, the conditions of which override the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"[1)], the product will be supplied with a notice detailing the special conditions that apply for the relevant open-source software. This applies accordingly in the case of a reference to other third-party software components.

1.2 For customers with a seat or registered office outside of Germany

For customers with a seat or registered office outside of Germany, the following shall be subordinate to these CSD

- for Plant Analytics Services the "Standard Terms and Conditions for Plant Analytics Services"[1)] (only available in English) and
- for services, the "International Terms & Conditions for Services"[1)] supplemented by the "Software Licensing Conditions"[1)] and
- for the supply of other hardware and software the "International Terms & Conditions for Products"[1)] supplemented by the "Software Licensing Conditions"[1)].

1.3 For customers with framework agreements

To the extent that our products and services are covered by an existing framework agreement, the conditions there apply instead of this CSD.

2. Prices

The prices are in € (euros) ex works, excluding packaging.

The sales tax (value added tax) is not included in the prices. It shall be debited separately at the respective rate according to the applicable legal regulations.

Prices are subject to change without prior notice. We will debit the prices valid at the time of delivery.

To compensate fluctuating prices of raw materials (for example silver, copper, aluminum, lead, gold, dysprosium and neodymium), surcharges are calculated on a daily basis for products containing these raw materials using the metal factor. A surcharge for the particular raw material is added to the price of a product if the basic quotations for this raw material are exceeded.

Each product's metal factor dictates for which raw materials the metal surcharges are calculated, from which quotation and with which calculation method (weight or percentage method).

An exact explanation of the metal factor can be found at: www.siemens.com/automation/salesmaterial-as/catalog/en/terms_of_trade_en.pdf

The surcharge will be calculated (except in the case of dysprosium and neodymium) on the basis of the official price on the day prior to receipt of the order or prior to the release order for calculation of the surcharge.

In the event of placement of an order, the relevant three-month average price from the quarter prior to order receipt or the release order shall be used with a one-month buffer to calculate the dysprosium and neodymium surcharge ("rare earths") (you will find details in the aforementioned explanation of the metal factor).

3. Additional terms and conditions

All dimensions are in mm. In Germany, according to the German law on units in metrology, data in inches only apply to devices for export.

Illustrations are not binding.

Insofar as there are no remarks on the corresponding pages of this catalog - especially with regard to data, dimensions and weights given - these are subject to change without prior notice.

[1)] You can download the text of the Siemens AG terms and conditions of trade at www.siemens.com/automation/salesmaterial-as/catalog/en/terms_of_trade_en.pdf

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4. Export regulations

We shall not be obligated to fulfill this agreement if such fulfillment is prevented by any impediments arising out of national or international foreign trade or customs requirements or any embargoes or other sanctions.

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