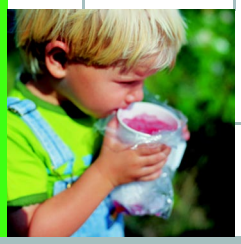
1 Low-Voltage Fuse Systems



For dimensions and terminal allocations please refer to the catalog ET B1.T “Technical Information on the ET B1 Catalog”, available on the ET 01 CD-ROM.

When it gets really hot:

Low voltage fuse systems

- Our low voltage fuses provide protection against overloads and short circuits for lines, equipment and systems - avoiding damage and subsequent costs.

The traditional solutions are still the best.

BETA Fuse systems

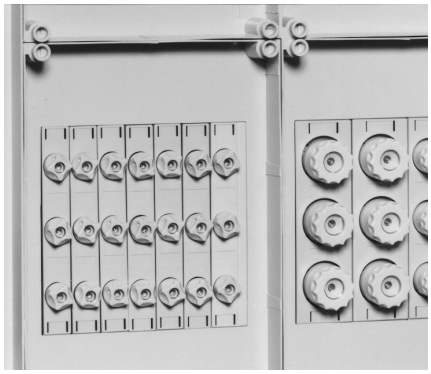
- They have a very high breaking capacity, compact dimensions, precisely graded selectivity and are very easy to install and maintain. On top of all this, they are also extremely cost-effective.

Introduction

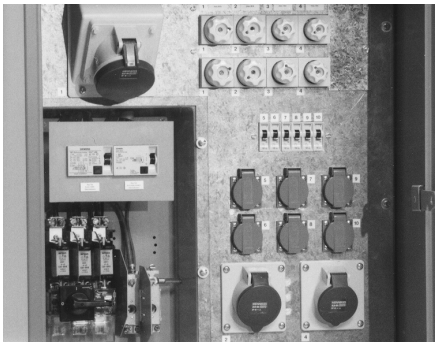
Installation

The variety of low-voltage fuses can be built in all common distribution boards and switchgear.

MINIZED switch disconnectors and NEOZED fuses in a small distribution board



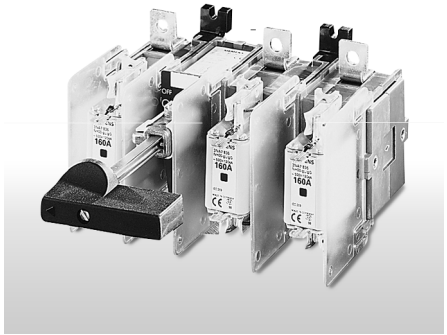
NEOZED and DIAZED bus-mounting fuses of the SR60 60-mm busbar system in a SIKUS floor-mounted distribution board



DIAZED fuses and LV HRC fuses in a building-site distribution board

LV HRC fuse links in fuse bases and in-line fuse switch-disconnectors in a floor-mounted SIKUS distribution board

LV HRC fuse links with combination alarm in a 3NP3 fuse switch disconnector



LV HRC fuse links with combination alarm in a 3KL5 fuse switch disconnector

Overview

Areas of application

The area of application of fuses ranges from installation systems in residential, non-residential, commercial and industrial buildings to switchgear of power supply companies.

Fuses protect cables and lines against overload and short-circuit currents.

In addition to this, they are suitable for protecting equipment and devices. They, for example,

- protect motors in case of transient operational overloading
- provide protection against occasionally occurring short-circuits.

They protect human beings in fault conditions against inadmissible touch voltages in TN and TT networks.

They provide back-up protection for miniature circuit-breakers and residual current operated circuit-breakers.

The high degree of selectivity guarantees optimum protection in radial and meshed networks.

Fuse systems

Within the low-voltage range of up to 1000 V, fuse systems are distinguished as follows:

- Fuse systems that can be handled by non-specialists such as:
  NEOZED and DIAZED, whose design guarantees "non-interchangeability of the rated current" and protection against contact.
- Fuse systems that can only be handled by specialists such as:
  LV HRC fuses, where neither "non-interchangeability of the rated current" as a result of the design nor protection against contact is required.

Sizes

The sizes of low-voltage fuses are defined in the DIN VDE 0636 standard.

- NEOZED fuses are available in the sizes
  D01, D02 and D03
- DIAZED fuses are available in the sizes
  E 16, DII, DIII and DIV
- LV HRC fuses are available in the sizes
  000, 00, 0, 1, 2, 3, 4 and 4a

Utilization categories

The utilization categories of low-voltage fuses are defined in the IEC 60 269 standard. Utilization category gG is defined for cable and conductor protection.

According to the DIN VDE 0636 standard, the former designation for cable and conductor protection was gL, now gG is also valid. In order to avoid misunderstandings, the designation gL/gG is used in the catalog during the transitional period. The utilization category aM for switchgear protection in the short-circuit range is defined equally according to IEC 60 269 and DIN VDE 0636.

Planning, characteristics

For planning purposes, the catalog I2.21 is available with detailed data and characteristics on the interactive catalog ET 01.

Technical data

		MINIZED screw connection	MINIZED draw-out-assembly	NEOZED	DIAZED	LV HRC fuses	SITOR	Cylindrical fuses
Standards		DIN VDE 0638 EN 60 947-3		DIN VDE 0636 DIN VDE 0680 IEC 60 269 EN 60 269	DIN VDE 0635 DIN VDE 0636 DIN VDE 0680 IEC 60 269 IEC 60 241 CEE 16 EN 60 269	DIN VDE 0636 DIN VDE 0680 IEC 60 269 EN 60 269	DIN VDE 0636 IEC 60 269 EN 60 269	IEC 60 269 NF C 60 200 NF C 63 210 NF C 63 211 NBN C 63 269-2-EN-2-1 CEI 32-4
Dimensions		DIN 43 880		DIN VDE 49 522 DIN VDE 49 523 DIN VDE 49 524 DIN VDE 49 525	DIN VDE 49 510 DIN VDE 49 511 DIN VDE 49 514 DIN VDE 49 515 DIN VDE 49 516	DIN 43 620	DIN 43 620 DIN 43 623	IEC 60 269-2-1
Utilization categories		gL/gG			gL/gG, gR slow, quick	gL/gG, aM	aR, gR	gG, aM
Rated voltage:	V AC V DC	400/415 48/110	400 48/110	400 250	500/690/750 500/600/750	500/690 250/440	600/690/1000	400/500
Rated current range	A	2 to 63		2 to 100		2 to 1,250	16 to 630	0.5 to 100
Rated breaking capacity	kA AC kA DC	50 8			50, 40 (E16), 8, 1.6 (E16)	120 25	> 50	
Mounting position		any, but preferably vertical	preferably vertical	any, but preferably vertical				
Resistance to climate	°C	up to 45 at 95 % rel. humidity				-30 ... +50 at 95 % rel. humidity		up to 45 at 95 % rel. humidity
Non-interchangeability		using adapter sleeves			using screw adapters	not required		

Introduction

Overview

Fuse monitoring

Fuse monitoring is technically not comparable with miniature circuit-breakers with contacts. Auxiliary circuit switches cannot be attached to a fuse. There are still some solutions that offer the required monitoring function in order to guarantee power supply and avoid unnecessary downtimes.

The 5TE5 802 light indicator visually signals phase failures. All 3 phases are displayed on one device one below the other. Therefore, the phases are clearly assigned (see chapter “Signaling Devices”).

The 3NX1 021 signal detector is mounted onto the LV HRC fuse link with non-insulated grip lugs. A special signal detector link trips in the event of a fault condition and operates a contact.

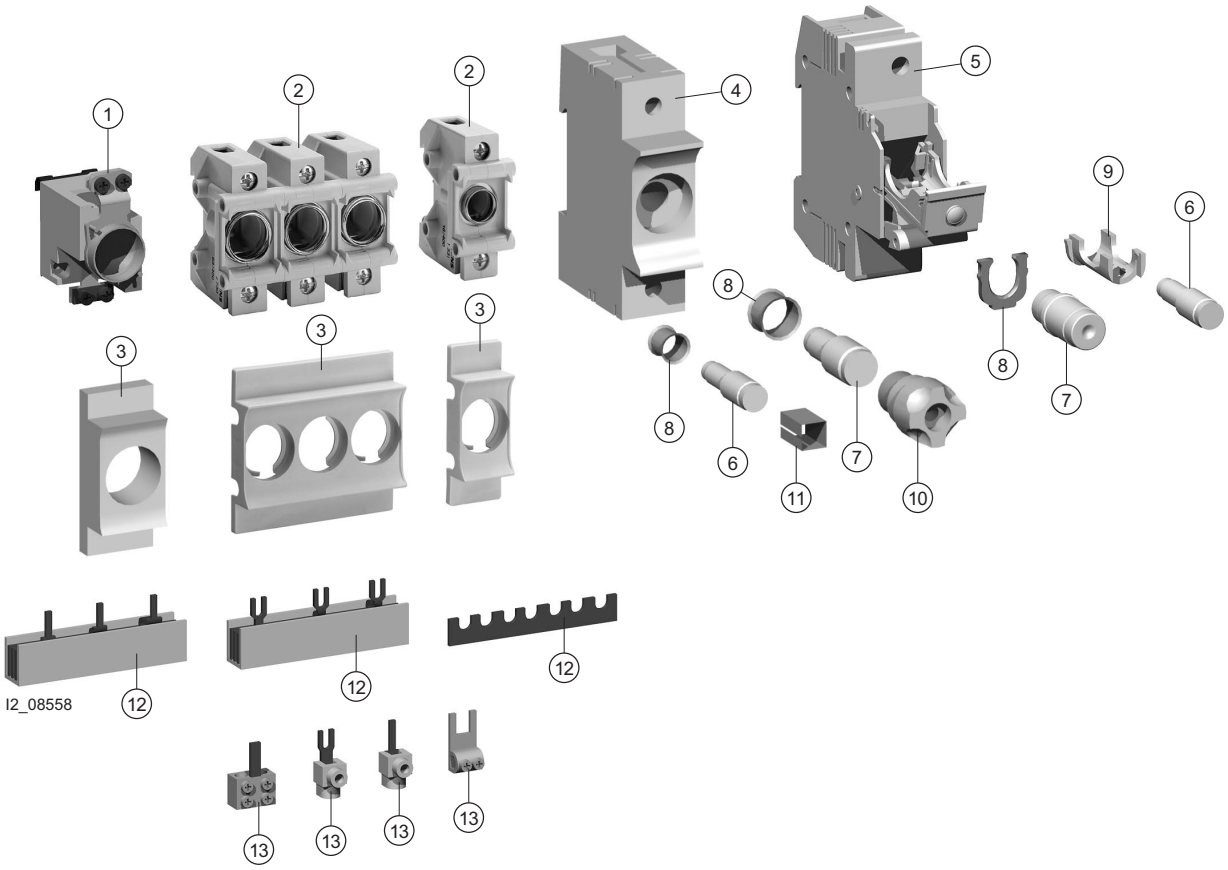
The 5TT3 421 phase monitor visually signals phase failures. The phases are clearly assigned. In case of a phase failure, it also switches a relay with a contact for messages (see chapter “Monitoring Devices”).

The 5TT3 170 fuse monitor is assigned to a particular fuse. It monitors the voltages in front of and behind a fuse, but equally detects reverse voltages. In the event of a fault, a relay is switched (see chapter “Monitoring Devices”).

The 5TT3 460 centralized fault indicator processes all faults.
The faults are then signaled in the form of a centralized fault indication and must be acknowledged after being removed. The signal inputs can be switched as open-circuit or closed-circuit input (see chapter “Signaling Devices”).

If more than 4 fault signal inputs are required, the centralized fault indicator can be supplemented by another 4 inputs using the 5TT3 461 expansion fault signaling unit. Depending on the extension, up to 40 fault signal inputs can be processed this way (see chapter “Signaling Devices”).

Overview



The NEOZED component system

As a result of the thoroughly arranged system, the components can be combined in any way as to meet the various requirements and to facilitate different installation methods.
As modular installation devices, the bases or switch disconnectors are mounted in distribution boards according to DIN 43 880. In switchgear cabinets, they are mounted onto standard mounting rails according to EN 50 021. However, bases excessively designed for screw fixing are also available.

① NEOZED base, ceramic
② NEOZED base, molded plastic
③ NEOZED cover
④ NEOZED base, BGV A2 (VBG4)
⑤ MINIZED switch disconnector D02, draw-out assembly
⑥ NEOZED fuse link D01
⑦ NEOZED fuse link D02
⑧ NEOZED adapter sleeve
⑨ NEOZED adapter D01
⑩ NEOZED screw cap
⑪ NEOZED retaining spring
⑫ Busbar, insulated or non-insulated, 1- or 3-phase, fork-type terminals or pins
⑬ Terminal, insulated or non-insulated, for one or two conductors, fork-type terminals or pins

NEOZED Fuses

Overview

Correct infeed

All NEOZED bases must be fed from the bottom to ensure an insulated threaded ring when the fuse link is being removed.

Types of connection

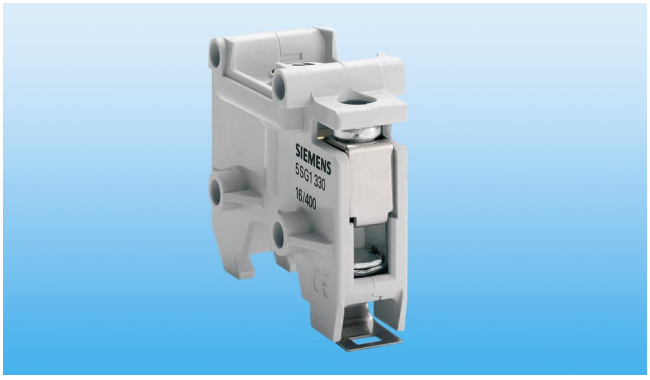
The terminals of the NEOZED bases are available in different versions to facilitate various installation methods.

.

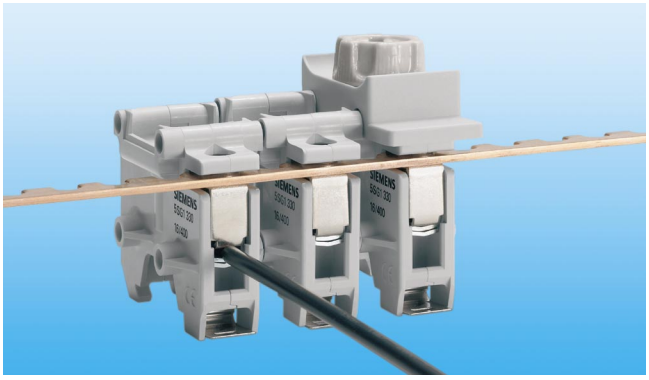
Terminals

The terminals of NEOZED bases feature the following combinations: KK, SS, KS, BF and R.

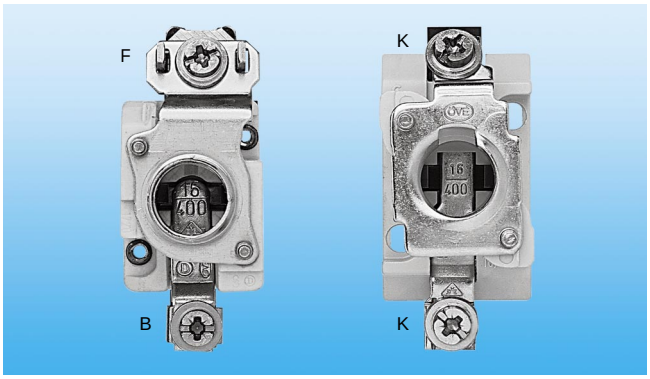
The conventional designation signifies the following, e.g.
"KS"= :
1st letter:
screw head contact, incoming feeder, bottom terminal
2nd letter:
saddle terminal at the outgoing feeder, top terminal



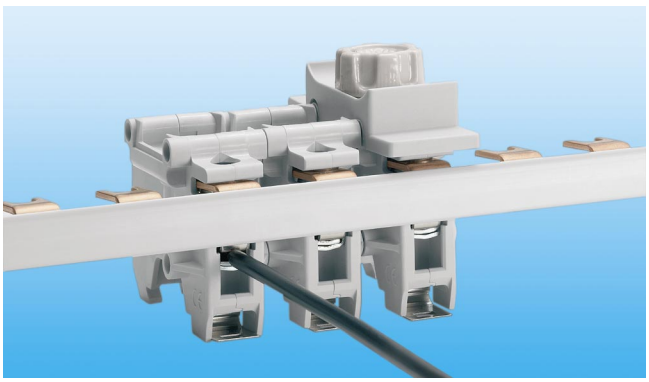
NEOZED base D01 with:
R = anti-slip terminal



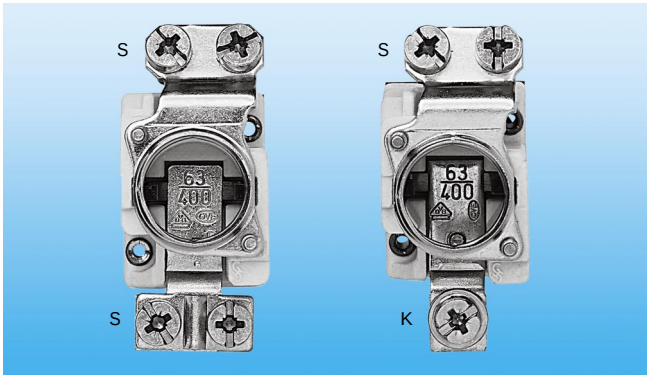
NEOZED base D01 for 16 A, 5SG1 330 with terminal version "R", mounted onto a 5SH5 321 busbar in fork-type version, non-insulated. The feeding conductors are clamped with the 5SH5 325 terminal. The busbar has a load capacity of up to 116 A.



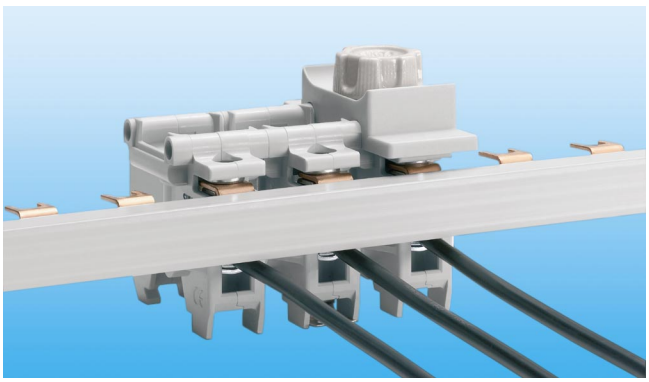
NEOZED base with:
B = clamp-type terminal
F = two-conductor connection
K = screw head contact



NEOZED base D01 for 16 A, 5SG1 330 with terminal version "R", mounted onto a 5SH5 517 busbar. The feeding conductors are clamped with the 5SH5 328 fixing clamp. The busbar has a load capacity of up to 160 A.



NEOZED base D01 with:
K = screw head contact
S = saddle terminal



NEOZED base D01 for 16 A, 5SG5 330 with terminal version "R", mounted onto a three-phase 5SH5 515 busbar. The feeding conductors are clamped with the 5SH5 328 fixing clamp.The busbar has a load capacity of up to 120 A.

Technical data

MINIZED switch disconnectors, NEOZED disconnectors

		5SG7 7	5SG7 1.1	5SG7 1.2
Valid standards		DIN VDE 0638/09.81, EN 60 947-3/12.92		
Dimensions		DIN 43 880		
Main switch characteristic		DIN VDE 0113		
Dielectric characteristic		DIN VDE 0110		
Rated voltage U_c	V	230/400 AC, 240/415 AC		
	V	48 DC 1-pole, 110 DC 2-pole in series		
Rated current I_c		16	63	
Rated insulation voltage	V AC	400	456	
Rated impulse withstand voltage	V AC	2500		
Rated breaking capacity	kA	50 AC		
Utilization category acc. to DIN VDE 0638	A	AC-22 (16), AC-23 (10), DC-22 (16)		
Utilization category acc. to DIN EN 60 947-3	A	AC-22b (16), AC-23b (10), DC-22b (16)		
Sealable when switched on		yes		
Mounting position		vertical		
Mounting depth	mm	55		70
Degree of protection acc. to DIN 40 050 in distribution board with front cover		IP 00		
Ambient temperature	°c	-5 ... +40, humidity 90 % at 20		

Terminals of NEOZED bases, NEOZED disconnectors and MINIZED switch disconnectors

Terminal		**B**	**F**	**K**			**S**		**R**		**FR1**	**FR2**
Size		D01	D01	D01	D02	D03	D02	D03	D01	D02	D01	D02
Conductor cross sections												
rigid, minimum	mm^2	1,5	1,5	1,5	1,5	10	1,5	10	1,5	1,5	1,5	1,5
rigid, maximum	mm2	4	4	4	25	50	25	50	16	16	16	16
flexible with sleeve, min.	mm^2	1	1	1	1	10	1	10	1	1	1	1

Terminal designations

B = clamp-type terminal
F = two-conductor connection
K = screw head contact
S = saddle terminal
R = anti-slip terminal
FR1 = anti-slip terminal
FR2 = anti-slip terminal

Anti-slip terminals differ in the
- terminal level for the conductors
- terminal level for the busbars
- busbar version (fork-type or pin)
- modular size

Different versions cannot be busbar mounted with each other. For an easier assignment of the busbars, the terminal designations FR1 and FR2 were newly introduced.

NEOZED fuses

Overview

Function

MINIZED switch disconnectors belong to the NEOZED fuse range. They completely disconnect the phase in the incoming and outgoing cable by switching off. They are suited to NEOZED fuse links.

A mechanical interlock prevents closing if NEOZED fuse links have not been correctly screwed in or plugged in.

Product Range

- MINIZED switch disconnectors D01, draw-out assembly, 55 mm mounting depth
- MINIZED switch disconnectors D02, screw connection, 55 mm mounting depth
- MINIZED switch disconnectors D02, draw-out assembly, 70 mm mounting depth

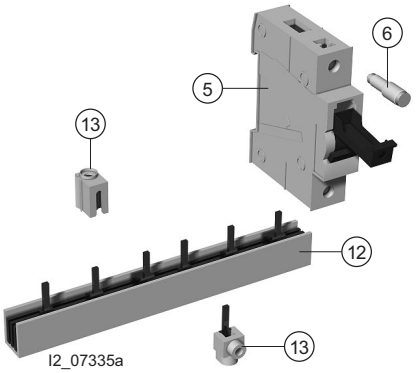
Universal application

The MINIZED switch disconnectors D02 can accept both D02 and D01 fuse links. For inserting D01 fuse links, a retaining spring is used in the screw cap or an adapter sleeve is plugged into the drawer, depending on the version.

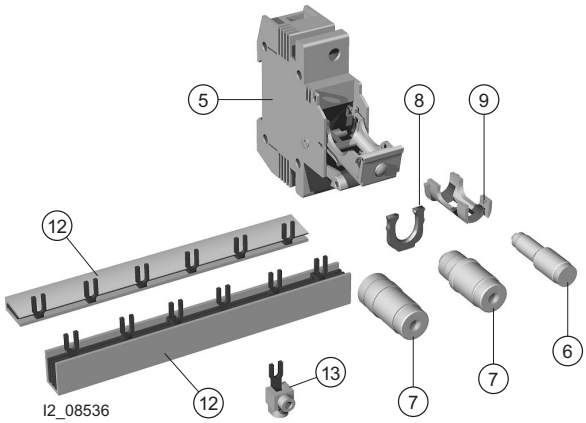
Busbar mounting

For the MINIZED switch disconnector D02, the incoming and outgoing terminals are identical and can be mounted on busbars. Infeed and/or busbar mounting is possible from the top or bottom.

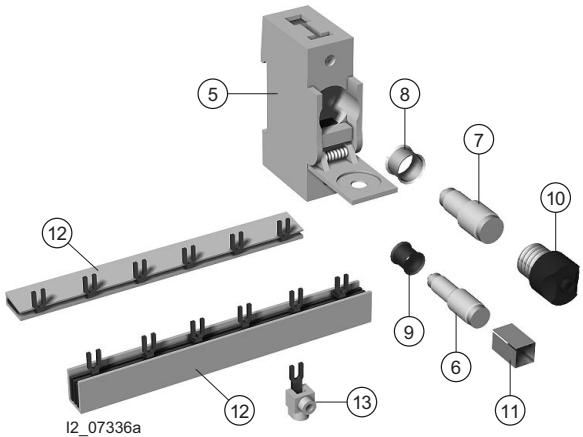
⑤ **MINIZED switch disconnector D01, draw-out assembly**
⑥ NEOZED fuse link D01
⑫ Busbar, insulated, pins
⑬ Terminal, non-insulated or insulated, pins



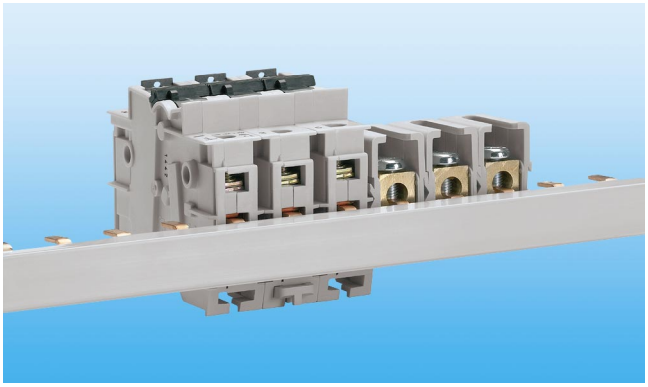
⑤ **MINIZED switch disconnector D02, draw-out assembly**
⑥ NEOZED fuse link D01
⑦ NEOZED fuse link D02
⑧ NEOZED adapter sleeve
⑨ NEOZED adapter
⑫ Busbar, insulated, 1-phase or 3-phase, fork-type terminals
⑬ Terminal, non-insulated or insulated, fork-type terminals



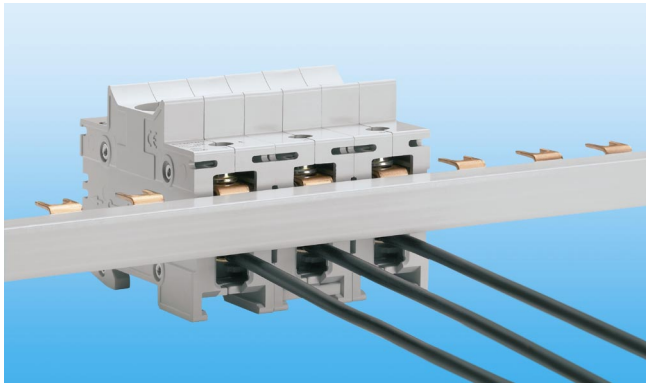
⑤ **MINIZED switch disconnector D02, screw connection**
⑥ NEOZED fuse link D01
⑦ NEOZED fuse link D02
⑧ NEOZED adapter sleeve
⑨ NEOZED adapter
⑩ NEOZED screw cap
⑪ NEOZED retaining spring
⑫ Busbar, insulated, 1-phase or 3-phase, fork-type terminals
⑬ Terminal, non-insulated or insulated, fork-type terminals



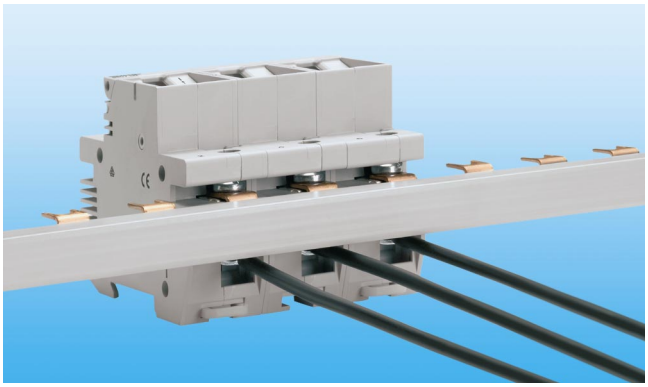
Overview



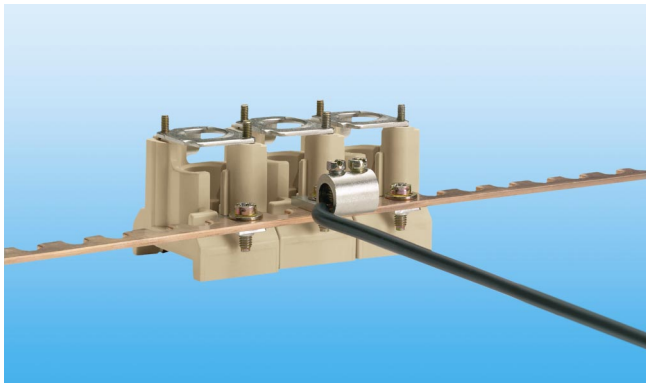
5SG7 733 NEOZED switch disconnectors with terminal version “FR1” mounted onto the 3-phase 5SH5 512 busbar. The feeding conductors are clamped to the 5ST2 157 terminal. The busbar has a load capacity of up to 120 A.



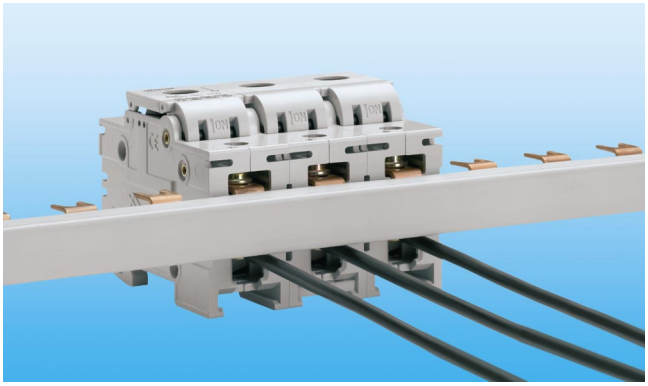
5SG5 300 NEOZED base with terminal version “FR2” mounted onto the 3-phase 5SH5 515 busbar. The feeding conductors are directly clamped to the base. The busbar has a load capacity of up to 120 A.



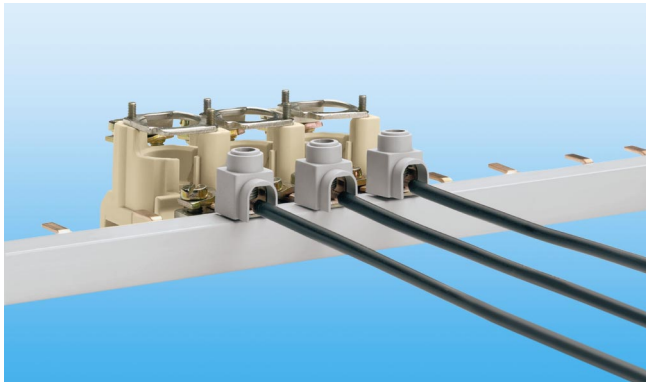
5SG7 132 NEOZED switch disconnector with terminal version “FR2” mounted onto the 3-phase 5SH5 515 busbar. The feeding conductors are directly clamped to the switch disconnector. The busbar has a load capacity of up to 120 A.



5SG1 504 NEOZED base with terminal version “K” mounted onto the 1-phase 5SH5 321 busbar. The feeding conductor is clamped to the 5SH5 325 terminal. The busbar has a load capacity of up to 116 A
.



5SG7 131 NEOZED switch disconnector with terminal version “FR2” mounted onto the 3-phase 5SH5 515 busbar. The feeding conductors are directly clamped to the switch disconnector.The busbar has a load capacity of up to 120 A.



5SG1 606 NEOZED base with terminal version “S” mounted onto the 3-phase 5SH5 323 busbar. The feeding conductors are clamped to the 5SH5 327 terminal. The busbar has a load capacity of up to120 A.

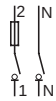
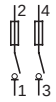
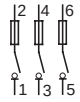
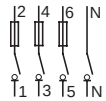
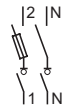
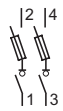
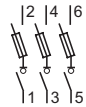
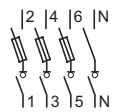
NEOZED fuses

Features

MINIZED switch disconnectors, draw-out assembly

- With draw-out assembly for safe, no-voltage changing of fuse links
- Suitable for direct starting on load
- Knob-operated switch and screw cap can be sealed
- With anti-slip terminal according to BGV A2 (VBG4) in the incoming and outgoing cable
- Special version for Italy for 25 A (only MINIZED switch disconnectors D01)

Selection and ordering data

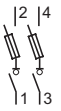
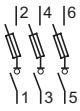
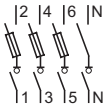
	Number of poles	I_n A	Terminals	MW	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
MINIZED switch disconnectors D01, draw-out assembly, 55 mm mounting depth									
	1	16	FR1	1	**5SG7 713**		016	0.080	3
Version for Italy only (no approvals)		25			**5SG7 713-1B**		016		
	1 + N	16	FR1	2	**5SG7 753**		016	0.150	2
Version for Italy only (no approvals)		25			**5SG7 753-1B**		016		
	2	16	FR1	2	**5SG7 723**		016	0.160	2
Version for Italy only (no approvals)		25			**5SG7 723-1B**		016		
	3	16	FR1	3	**5SG7 733**		016	0.250	1
Version for Italy only (no approvals)		25			**5SG7 733-1B**		016		
	3 + N	16	FR1	4	**5SG7 763**		016	0.310	1
Version for Italy only (no approvals)		25			**5SG7 763-1B**		016		
MINIZED switch disconnectors D02, draw-out assembly, 70 mm mounting depth									
	1	63	FR2	1.5	**5SG7 112**		016	0.132	3
	1 + N	63	FR2	3	**5SG7 152**		016	0.265	2
	2	63	FR2	3	**5SG7 122**		016	0.226	2
	3	63	FR2	4.5	**5SG7 132**		016	0.410	1
	3 + N	63	FR2	6	**5SG7 162**		016	0.520	1

Features

MINIZED switch disconnectors, screw connection

- With screw connection for safe, no-voltage changing of fuse links
- Suitable for direct starting on load
- Knob-operated switch and screw cap can be sealed
- With anti-slip terminal according to BGV A2 (VBG4) in the incoming and outgoing cable

Selection and ordering data

		Number of poles	I_n A	Terminals	MW	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
	MINIZED switch disconnectors D02, screw connection, 55 mm mounting depth									
		1	63	FR2	1.5	**5SG7 111**		016	0.200	3
		Version for marine applications								
		1	63			**5SG7 111-1**		016		
		1 + N	63	FR2	3	**5SG7 151**		016	0.380	2
		2	63	FR2	3	**5SG7 121**		016	0.400	2
		Version for marine applications								
		2	63			**5SG7 121-1**		016		
		3	63	FR2	4.5	**5SG7 131**		016	0.620	1
		Versions for Austria (KELAG) only								
		3	25			**5SG7 810-8B**		016	0.630	
			35			**5SG7 811-8B**		016		
			50			**5SG7 812-8B**		016		
		Version for marine applications								
		3	63			**5SG7 131-1**		016	0.620	
		3 + N	63	FR2	6	**5SG7 161**		016	0.780	

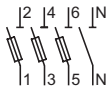
NEOZED fuses

Features

NEOZED fuse disconnectors D01

- With draw-out assembly for safe, no-voltage changing of fuse links
- Rated voltage: 415 V AC, 48 V DC
- No switching under load
- With anti-slip terminal according to BGV A2 (VBG4) in the incoming and outgoing cable
- Device mounting position: vertical only

Selection and ordering data

		Number of poles	I_n A	Terminals	MW	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
	NEOZED fuse disconnectors D01, draw-out assembly, 70 mm mounting depth									
		1	16	FR1	1	**5SG7 610**		016	0.080	12
		1 + N	16	FR1	2	**5SG7 650**		016	0.160	6
		2	16	FR1	2	**5SG7 620**		016	0.160	6
		3	16	FR1	3	**5SG7 630**		016	0.240	4
		3 + N	16	FR1	4	**5SG7 660**		016	0.320	3

Overview

Function of the MINIZED switch disconnectors

Left:
Closed state
The NEOZED fuse link has been tightly inserted. The withdrawable unit has snapped-in or the screw cap has been tightly closed.
The flap is closed.

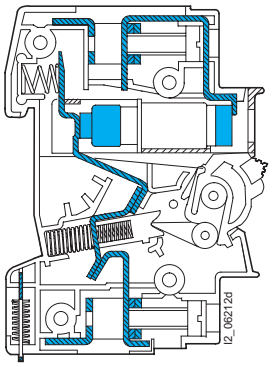
Center:
Open state
The flap is open.
The withdrawable unit is in the switch disconnector or the screw cap has been screwed in.

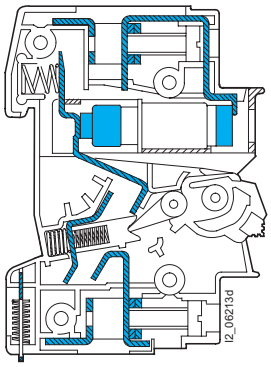
Right:
Open state
The flap is open and the screw cap has been screwed out.
The withdrawable unit with the fuse link has been pulled out and the fuse link and screw cap have been removed.

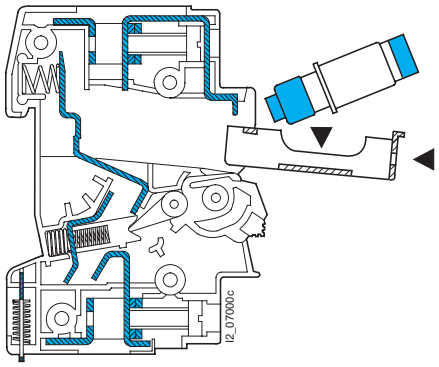
Safety

No-voltage changing of the fuse links

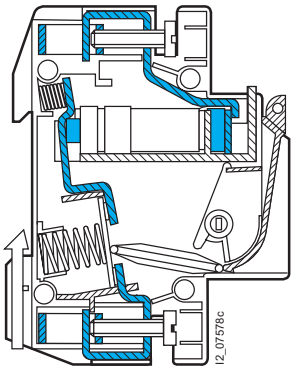
MINIZED switch disconnectors D01, draw-out assembly, 55 mm mounting depth

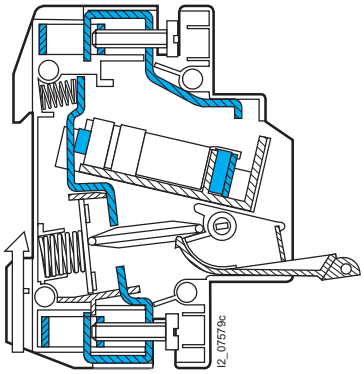


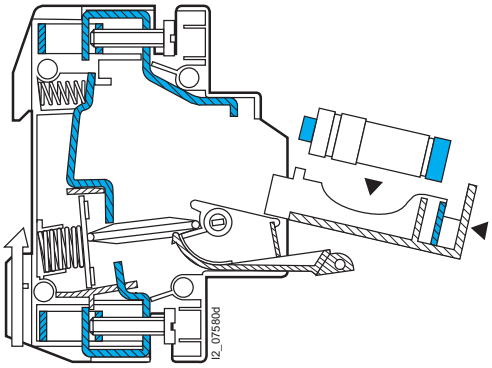




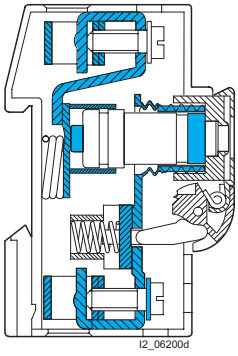
MINIZED switch disconnectors D02, draw-out assembly, 70 mm mounting depth



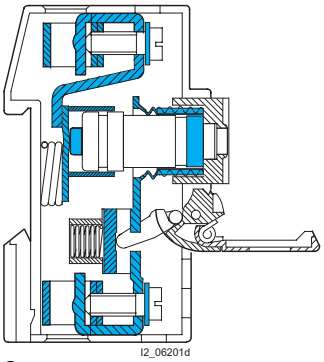




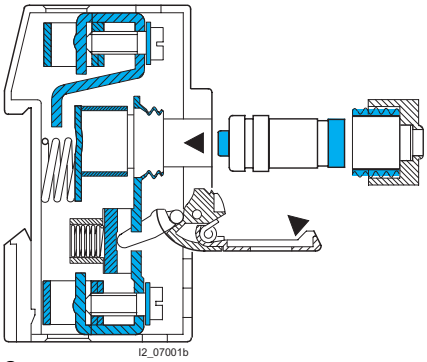
MINIZED switch disconnectors D02, screw connection, 55 mm mounting depth



Closed



Open



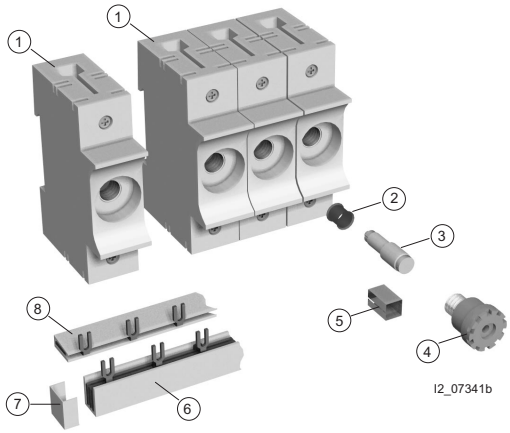
Open

NEOZED fuses

Features

- With screw connection for safe, no-voltage changing of fuse links
- With anti-slip terminal according to BGV A2 (VBG4) in the incoming and outgoing cable

① NEOZED base
② NEOZED adapter sleeve
③ NEOZED fuse link
④ NEOZED screw cap
⑤ NEOZED retaining spring
⑥ Three-phase busbar, insulated, fork-type terminals
⑦ End cap for busbar
⑧ Single-phase busbar, insulated, fork-type terminals



Selection and ordering data

	Size	Rated current A	Terminals[1]	MW	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
NEOZED base with protection against contact BGV A2 (VBG4) 70 mm mounting depth									
1-pole									
	D01 D02	16 63	FR2	1.5	**5SG1 300** **5SG1 700**		016 016	0.150	6
3-pole									
	D01 D02	16 63	FR2	4.5	**5SG5 300** **5SG5 700**		016 016	0.450	2
Busbar adapter for mounting onto 12 mm × 5 mm busbars, with 40 mm center clearance, device width 4.5 MW, with 3 mm × 16 mm^2 connection cables for mounting modular installation devices					**5SH5 503**		016	0.280	1
 Busbar adapter for mounting onto busbars with 60 mm center clearance, see SR60 busbar system									

1) For terminal version, see pages 1/8 and 1/9.

Selection and ordering data

	Size	I_n a	Suitable cover	Terminals [1]	MW	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
NEOZED base made of molded plastic, 70 mm mounting depth										
 **1-pole, with cover**										
	D01	16	(A1)	R	1.5	**5SG1 330**		016	0.068	15
	D02	63	(A1)	R	1.5	**5SG1 730**		016	0.087	
1-pole, without cover										
	D01	16	A1	R	1.5	**5SG1 331**		016	0.056	15
	D02	63	A1	R	1.5	**5SG1 731**		016	0.080	
 **3-pole, with cover**										
	D01	16	(A2)	R	4.5	**5SG5 330**		016	0.216	5
	D02	63	(A2)	R	4.5	**5SG5 730**		016	0.252	
NEOZED base made of molded plastic, 55 mm mounting depth										
 **1-pole, with cover**										
	D01	16	(A3)	KK	1.5	**5SG1 504**		016	0.066	20
	D02	63	(A3)	SS	1.5	**5SG1 604**		016	0.086	
	D02	63	(A3)	KS	1.5	**5SG1 614**		016	0.080	
 **1-pole, without cover**										
	D01	16	A3	KK	1.5	**5SG1 506**		016	0.050	20
	D02	63	A3	SS	1.5	**5SG1 606**		016	0.063	
	D02	63	A3	KS	1.5	**5SG1 616**		016		

Significance e.g. (A1): The cover is part of the delivery as a standard. It can, however, be ordered as a spare part.

1) For terminal version, see pages 1/8 and 1/9.

NEOZED fuses

Selection and ordering data

	Size	I_n A	Suitable cover	Terminals [1]	MW	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
NEOZED bases made of ceramic, 70 mm mounting depth										
 **1-pole, with cover**										
	D01	16	(A2)	BF	1.5	**5SG1 573**		016	0.083	20
	D02	63	(A2)	SS	1.5	**5SG1 673**		016	0.093	
	D02	63	(A2)	KS	1.5	**5SG1 683**		016	0.090	
 **1-pole, without cover**										
	D01	16	A4, A7, A8	BF	1.5	**5SG1 582**		016	0.071	20
	D02	63	A4, A7, A8	SS	1.5	**5SG1 672**		016	0.081	
	D02	63	A4, A7, A8	KS	1.5	**5SG1 682**		016	0.078	
	D02	100	A6, A9	KS	2.5	**5SG1 812**		016	0.176	10
 **Only for screw connection 1-pole, without cover**										
	D01	16	A4, A7, A8	BF	1.5	**5SG1 580**		016	0.061	20
	D02	63	A4, A7, A8	SS	1.5	**5SG1 670**		016	0.078	
	D03	100	A6, A9	KS	2.5	**5SG1 810**		016	0.176	10
 **1-pole, with cap**										
	D01	16	(A8)	BF	1.5	**5SG1 584**		016	0.105	20
	D02	63	(A8)	SS	1.5	**5SG1 684**		016	0.115	
	D03	100	(A8)	KS	2.5	**5SG1 813**		016	0.242	10
 **3-pole, with cover**										
	D01	16	(A5)	BF	4.5	**5SG5 573**		016	0.263	5
	D02	63	(A5)	SS	4.5	**5SG5 673**		016	0.293	
	D02	63	(A5)	KS	4.5	**5SG5 683**		016	0.290	
 **3-pole, without cover**										
	D01	16	A5	BF	4.5	**5SG5 572**		016	0.228	5
	D02	63	A5	SS	4.5	**5SG5 672**		016	0.265	
	D02	63	A5	KS	4.5	**5SG5 682**		016	0.255	
 **Only for screw connection 3-pole, without cover**										
	D01	16	A5	BF	4.5	**5SG5 570**		016	0.228	5
	D02	63	A5	SS	4.5	**5SG5 670**		016	0.260	
	D02	63	A5	KS	4.5	**5SG5 680**		016	0.250	

Significance e.g. (A1): The cover is part of the delivery as a standard. It can, however, be ordered as a spare part.

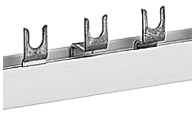
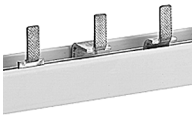
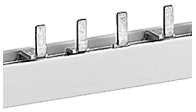
1) For terminal version, see pages 1/8 and1/9.

Selection and ordering data

		MW	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
	NEOZED covers made of molded plastic, clip-on type (except cover A6)						
	Cover A1	1.5	**5SH5 244**		016	0.008	15
	Cover A2	4.5	**5SH5 245**		016	0.017	5
	Cover A3	1.5	**5SH5 217**		016	0.012	50
	Cover A4	1.5	**5SH5 231**		016	0.012	50
	Cover A5	4.5	**5SH5 232**		016	0.035	5
	Cover A6, screw-on type	2.5	**5SH5 233**		016	0.021	20
	Cover A7	-	**5SH5 205**		016	0.011	100
	NEOZED caps made of molded plastic						
	Cover A8, clip-on type	-	**5SH5 235**		016	0.034	20
	Cover A9, screw-on type	-	**5SH5 234**		016	0.066	10

NEOZED fuses

Selection and ordering data

	Size	Length	Conductor cross sect.	Load capacity	For terminals[1)]	MW	Order No.	Price	Price group	Weight 1 item	Pack. unit
		approx. mm	mm^2	up to A				1 item		kg	Items
	Busbars										
	The load capacity values are valid for centered infeed.										
	Fork-type terminals, non-insulated										
	1-phase										
	D01	1000	20	116	R, K	1.5	**5SH5 321**		016	0.214	50
	D02	1000	36	168	R, K	1.5	**5SH5 322**		016	0.321	
	Fork-type terminals, insulated										
	1-phase										
	D01/D02	1000	24	160	R, FR2, K	1.5	**5SH5 517**		016	0.550	
	3-phase										
	D01/D02	1000	16	120	R, K	1.5	**5SH5 320**		016	0.843	20
	D01/D02	1000	16	120	FR2, K	1.5	**5SH5 515**		016	0.580	10
	Pins, insulated										
	Degree of pollution 2										
	1-phase										
	D01/D02	1000	16	130	S	1.5	**5SH5 324**		016	0.320	50
	3-phase										
	D01/D02	1000	16	120	S	1.5	**5SH5 323**		016	0.843	20
	D01	1000	16	120	FR1	1	**5SH5 512**		016	0.630	15
	D01	216	16	120	FR2, K	1.5	**5ST2 204**		027	0.090	25
	End caps										
	for 5SH5 320, 5SH5 323, 5SH5 512, 5ST2 204						**5SH5 514**		016	0.001	10
	for 5SH5 515, 5SH5 517, 5SH5 324						**5ST2 156**		027	0.017	

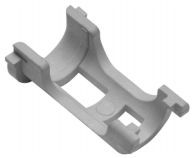
1) For terminal version, see pages 1/8 and 1/9.

Selection and ordering data

	Size	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
	Busbar terminals					
	non-insulated, fork-type for conductors from 6 mm^2 to 35 mm^2	**5SH5 325**		016	0.012	50
	non-insulated, pin-type for conductors from 6 mm^2 to 35 mm^2	**5ST2 203**		027	0.011	20
	insulated, for mounting onto fork-type or pin-type for conductors from 6 mm^2 to 35 mm^2 not suitable for 55 mm mounting depth	**5ST2 157**		027	0.030	10
	insulated, fork-type for conductors from 6 mm^2 to 25 mm^2	**5SH5 328**		016	0.014	
	insulated, pin-type for conductors from 2 mm^2 to 25 mm^2	**5SH5 327**		016	0.014	
	non-insulated, pin-type for two conductors from 2 mm^2 to 16 mm^2 each	**5SH5 326**		016	0.016	50
	NEOZED screw caps					
	molded plastic, with inspection hole to be used if a mounting depth of 55 mm is to be ensured.					
	D01	**5SH4 116**		016	0.007	20
	D02	**5SH4 163**		016	0.008	
	ceramic, sealable					
	D01	**5SH4 316**		016	0.014	
	D02	**5SH4 363**		016	0.015	
	D03	**5SH4 100**		016	0.070	10
	ceramic, with inspection hole					
	D01	**5SH4 317**		016	0.014	20
	D02	**5SH4 362**		016	0.017	

NEOZED fuses

Selection and ordering data

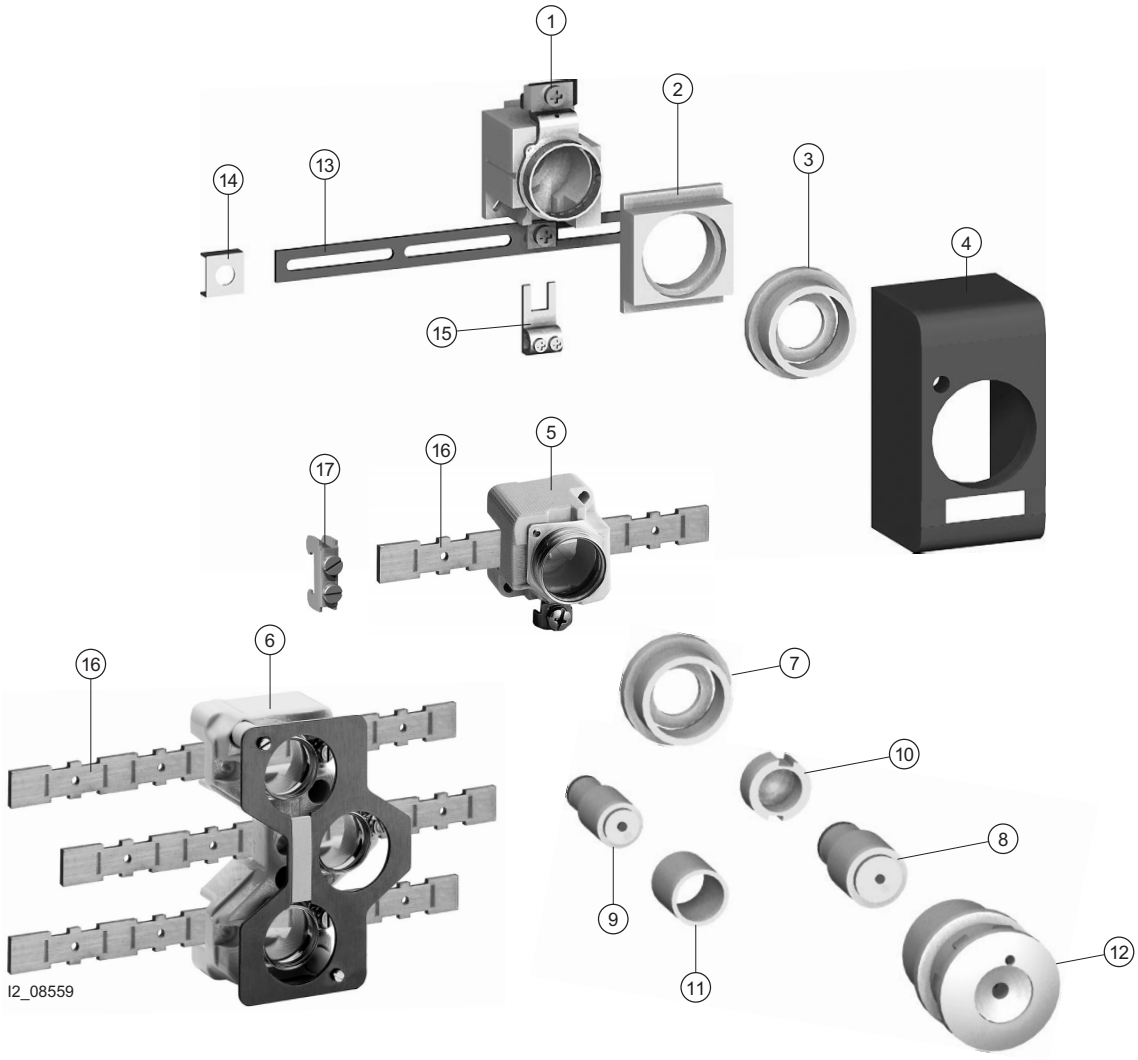
	Size	For fuse up to A	Identification color	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
	**NEOZED adapter sleeves**							
	D01	2	pink	**5SH5 002**		016	0.001	50
		4	brown	**5SH5 004**		016		
		6	green	**5SH5 006**		016		
		10	red	**5SH5 010**		016		
	D02	20	blue	**5SH5 020**		016	0.001	
		25	yellow	**5SH5 025**		016		
		35	black	**5SH5 035**		016		
		50	white	**5SH5 050**		016		
	D03	80	silver	**5SH5 080**		016	0.001	25
	for adaptation of NEOZED fuse links D01 from 2 to 16 A, which are inserted in NEOZED bases D02 or MINIZED switch disconnectors D02 with screw connection.							
	D02	2	pink	**5SH5 402**		016	0.001	50
		4	brown	**5SH5 404**		016		
		6	green	**5SH5 406**		016		
		10	red	**5SH5 410**		016		
		16	gray	**5SH5 416**		016		
	**Adapter sleeve** for MINIZED switch disconnectors D02 with draw-out assembly							
	D02	20	blue	**5SH5 521**		016	0.001	50
		25	yellow	**5SH5 522**		016		
		35	black	**5SH5 523**		016		
		50	white	**5SH5 524**		016		
	**NEOZED adapter D01** for MINIZED switch disconnectors D02, draw-out assembly for adaptation of NEOZED fuse links D01							
	D01	2 to 16	-	**5SH5 520**		016	0.020	20
	**NEOZED adapter sleeve fitter**			**5SH5 100**		016	0.016	1
	**NEOZED retaining spring** for adaptation of NEOZED screw caps D02 in order to adapt NEOZED fuse links D01							
	D02	2 to 16		**5SH5 400**		016	0.001	25
	for application in Germany's five new eastern states, for adaptation of DL screw caps to insert NEOZED fuse links D01 in DL bases.							
	DL	2 to 16		**5SH5 417**		016	0.001	

Selection and ordering data

	Size	I_n	Identification color	Order No.	Price	Price group	Weight 1 item	Pack. unit
		A			1 item		kg	Items
	NEOZED fuse links rated voltage 400 V AC, 250 V DC utilization category gL/gG							
	Bulk packaging in cardboard boxes							
	D01	2	pink	**5SE2 202**		016	0.006	50
		4	brown	**5SE2 204**		016		
		6	green	**5SE2 206**		016		
		10	red	**5SE2 210**		016	0.007	
		16	gray	**5SE2 216**		016		
	D02	20	blue	**5SE2 220**		016	0.012	
		25	yellow	**5SE2 225**		016	0.013	
		35	black	**5SE2 235**		016	0.014	
		50	white	**5SE2 250**		016	0.015	
		63	copper	**5SE2 263**		016	0.016	
	Consumer packing, package of 10							
	D01	2	pink	**5SE2 302**		016	0.006	10
		4	brown	**5SE2 304**		016		
		6	green	**5SE2 306**		016		
		10	red	**5SE2 310**		016	0.007	
		13	black	**5SE2 013-2A**		016		
		16	gray	**5SE2 316**		016		
	D02	20	blue	**5SE2 320**		016	0.012	
		25	yellow	**5SE2 325**		016	0.013	
		32	black	**5SE2 332**		016	0.014	
		35	black	**5SE2 335**		016	0.014	
		50	white	**5SE2 350**		016	0.015	
		40	black	**5SE2 340**		016	0.014	
		63	copper	**5SE2 363**		016	0.016	
	D03	80	silver	**5SE2 280**		016	0.040	
		100	red	**5SE2 300**		016	0.042	
	Version for Italy only (no approvals)							
	D01	20	blue	**5SE2 820**		016	0.011	50
		25	yellow	**5SE2 825**		016	0.012	

DIAZED fuses
85 mm mounting depth

Overview



The DIAZED component system

As a result of the thoroughly arranged system, the components can be combined in any way as to meet the various requirements and to facilitate the different installation methods. It is particularly suitable for tough operating conditions. As modular installation devices, the bases are mounted in distribution boards according to DIN 43 880 or in switchgear cabinets on a standard mounting rail according to EN 50 021. However, bases exclusively designed for screw fixing are also available.

A special busbar with oblong holes and a load capacity of up to 80 A facilitates adaptation during mounting.

The EZR bus-mounting system

The high-performing EZR bus-mounting system for screw connection 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.

① DIAZED base
② DIAZED cover
③ DIAZED cover ring
④ DIAZED cap
⑤ DIAZED bus-mounting base, EZR
⑥ DIAZED bus-mounting base, EZR, 3-phase
⑦ DIAZED cover ring, EZR for bus-mounting base
⑧ DIAZED fuse link DII
⑨ DIAZED fuse link NDz
⑩ DIAZED screw adapter
⑪ DIAZED adapter sleeve
⑫ DIAZED screw cap
⑬ Busbar, oblong hole, 1-phase
⑭ Clamp connection
⑮ Terminal, fork-type terminal, non-insulated
⑯ EZR busbar
⑰ EZR terminal

Overview

Correct infeed

All DIAZED bases must be fed from the bottom to ensure an insulated threaded ring when the fuse link is being removed.

Contact stability

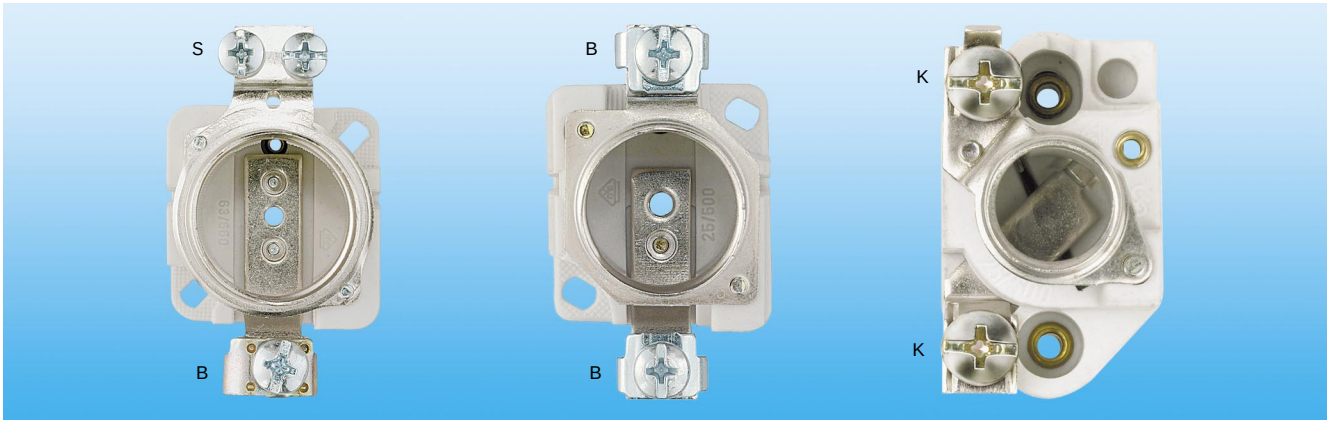
DIAZED screw adapters are absolutely necessary in the DIAZED base for stable contacting.

Types of connection

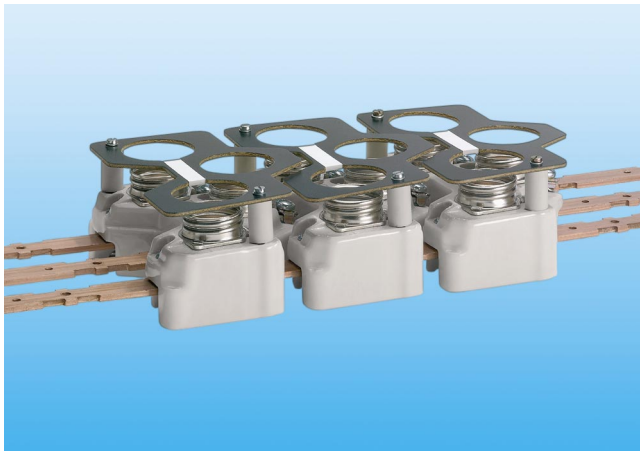
B = clamp-type terminal
K = screw head contact
S = saddle terminal

Designation system

The conventional designation signifies the following, e.g. “BS”= :
1st letter:
clamp-type terminal,
incoming cable, bottom terminal
2nd letter:
saddle terminal
outgoing cable, top terminal



5SF6 005 DIAZED bus-mounting base DII for 25 A with terminal version “B” mounted onto an EZR 5SH3 500 busbar. The feeding conductors are clamped to the 8JH4 122 bus-mounting terminal. The busbar has a load capacity of up to 150 A.



3-phase 5SF2 07 DIAZED bus-mounting base DII for 3 x 25 A with terminal version “B” mounted onto an EZR busbar. The busbar has a load capacity of up to 150 A.

DIAZED fuses
85 mm mounting depth

Technical data

DIAZED fuses

Standards		DIN VDE 0635, DIN VDE 0636, DIN VDE 0680, IEC 60 269, IEC 60 241, CEE 16, EN 60 269
Dimensions		DIN VDE 49 510, DIN VDE 49 511, DIN VDE 49 514, DIN VDE 49 515, DIN VDE 49 516
Characteristic		gL/gG, gR, slow and quick
Rated voltage	V AC	500, 690, 750
	V DC	500, 600, 750
Rated current range	A	2 to 100
Rated breaking capacity	kA AC	50, 40 with E 16
	kA DC	8, 1.6 with E 16
Mounting position		any, but preferably vertical
Non-interchangeability		due to screw adapter or adapter sleeves
Utilization category acc. to DIN VDE 40 050 in the distribution board		IP 20
Resistance to climate	°C	up to 45 at 95 % rel. humidity
Ambient temperature	°C	-5 ... +40, humidity 90 % at 20

Fixing clamps for DIAZED bases

Terminal		**B**		**K**			**S**	
Size		DII	DIII	NDz	DII	DIII	DIII	DIV
Conductor cross sections								
rigid, minimum	mm^2	1,5	2.5	1.0	1.5	2.5	2.5	10
rigid, maximum	mm^2	10	25	6	10	25	25	50
flexible with sleeve, min.	mm^2	10	25	6	10	25	25	50

Terminal designations

B = clamp-type terminal
K = screw head contact
S = saddle terminal

Selection and ordering data

	Size	I_n	Thread	Terminals[1)]	Order No.	Price	Price group	Weight 1 item	Pack. unit
		A				1 item		kg	Items
DIAZED bases									
1-pole									
	NDz	25	E 16	KK	**5SF1 012**		016	0.060	20
	DII	25	E 27	KB	**5SF1 005**		016	0.093	15
	DIII	63	E 33	BS	**5SF1 205**		016	0.191	
	DIII	63	E 33	SS	**5SF1 215**		016	0.154	
Only for screw-connection 1-pole									
	NDz	25	E 16	KK	**5SF1 01**		016	0.055	20
	DII	25	E 27	KB	**5SF1 024**		016	0.093	15
	DIII	63	E 33	BS	**5SF1 224**		016	0.137	
	DIII	63	E 33	SS	**5SF1 214**		016	0.141	
	DIV	100	R 1¼"	SS	**5SF1 40**		016	0.365	10
With cap and N-type fixpoint terminal 3-pole									
	DII	3×25	E 27	BB	**5SF5 067**		016	0.400	8
	DIII	3×63	E 33	BB	**5SF5 237**		016	0.580	
Only for screw connection with cap and N-type fixpoint terminal 3-pole									
	DII	3×25	E 27	KB	**5SF5 066**		016	0.410	
	DIII	3×63	E 33	KB	**5SF5 236**		016	0.590	
Rated voltage 750 V AC/DC only for DIAZED screw cap: 5SH1 161, only for DIAZED screw adapters DII and DIII, only for 5SD6 DIAZED fuse links with fine thread, with cap 1-pole									
	DIII	63	E 33S	KK	**5SF4 230**		016	0.460	1
DIAZED EZR bus-mounting base rated voltage 500 V AC, 500 V DC size DIII for 690 V AC, 600 DC, connection with clamp connection and clamp-type terminal, for mounting onto 5SH3 5 busbars only for screw connection 1-pole									
	DII	25	E 27	B	**5SF6 005**		016	0.072	20
	DIII	63	E 33	B	**5SF6 205**		016	0.135	15
3-pole									
	DII	3×25	E 27	B	**5SF2 07**		016	0.351	5

1) For terminal designations, see page 1/25.

DIAZED fuses
85 mm mounting depth

Selection and ordering data

Size	Thread	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
Mounting parts for DIAZED bases						
 **DIAZED busbar with oblong holes** approx. 1000 mm long						
Cross section: 12 mm × 2 mm, load capacity up to 80 A for DII, sufficient for 25 bases,		**5SH3 500**		016	0.095	25
Cross section 13 mm × 3 mm, load capacity up to 120 A for DIII, sufficient for 19 bases		**5SH3 501**		016	0.180	
 **Clamp connections** for busbars with oblong holes		**5SH3 503**		016	0.005	25
 **Terminals, non-insulated** Pin, for two conductors from 2 ×1.5 mm^2 up to 16 mm^2		**5SH5 326**		016	0.016	50
 fork-type terminal for conductors up to 35 mm^2		**5SH3 502**		016	0.010	25
 **Busbar for DIAZED EZR bus-mounting base** suitable for fork-type terminal connection, ready-made drilling with thread for screw adapters, approx. 2000 mm long Cross section 16 mm x 3 mm, load capacity up to 150 A						
for DII	sufficient for 42 bases 5SF6 005	**5SH3 54**		016	0.740	5
for DII and DIII	sufficient for 34 bases 5SF6 205	**5SH3 55**		016	0.740	
for DII	sufficient for 27 bases 5SF2 07	**5SH3 56**		016	0.740	
 **EZR bus-mounting terminal** non-insulated						
for conductors up to 16 mm^2		**8JH4 122**		113	0.012	50
for conductors up to 35 mm^2		**8JH4 124**		113	0.024	
DIAZED covers						
 **DIAZED cover** not for SILIZED fuse links made of molded plastic (5 DIAZED bases = 12 MW) 1-pole						
DII	E 27	**5SH2 032**		016	0.017	20
(4 DIAZED bases = 12 MW) DIII	E 33	**5SH2 232**		016	0.020	
 **Cap** molded plastic 1-pole						
NDz	E 16	**5SH2 01**		016	0.028	10
DII	E 27	**5SH2 02**		016	0.038	20
DIII	E 33	**5SH2 22**		016	0.048	
DIV	R 1¼"	**5SH2 40**		016	0.115	5
 **Cover ring** molded plastic also for EZR bus-mounting bases 1-pole						
DII	E 27	**5SH3 401**		016	0.013	100
DIII	E 33	**5SH3 411**		016	0.014	
 ceramic not for EZR bus-mounting bases 1-pole						
NDz	E 16	**5SH3 30**		016	0.020	
DII	E 27	**5SH3 32**		016	0.029	
DIII	E 33	**5SH3 34**		016	0.035	
DIV	R 1¼"	**5SH3 36**		016	0.097	10
EZR cover ring ceramic 1-pole						
DII	E 27	**5SH3 32**		016	0.029	100
DIII	E 33	**5SH3 34**		016	0.035	

Selection and ordering data

	Size	Thread	For fuse links A	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
	DIAZED screw adapters							
	NDz	E 16	2	**5SH3 28**		016	0.002	100
			4	**5SH3 31**		016		
			6	**5SH3 05**		016		
			10	**5SH3 06**		016	0.002	
			16	**5SH3 07**		016		
	also for mounting into DIAZED bases D III							
	DII [1]	E 27	2	**5SH3 10**		016	0.015	25
			4	**5SH3 11**		016		
			6	**5SH3 12**		016		
			10	**5SH3 13**		016	0.015	
			16	**5SH3 14**		016	0.014	
			20	**5SH3 15**		016	0.012	
			25	**5SH3 16**		016		
	DIII [1]	E 33	35	**5SH3 17**		016	0.019	
			50	**5SH3 18**		016	0.018	
			63	**5SH3 20**		016	0.017	
	**DIAZED adapter sleeve** for DIV bases							
	DIV	R 1¼"	80	**5SH3 21**		016	0.006	50
			100	**5SH3 22**		016	0.005	
	**DIAZED adapter sleeves** for snapping into DIAZED screw caps, if DIAZED fuse links E16 are inserted in DIAZED bases DII			**5SH3 01**		016	0.012	72
	if DIAZED fuse links DII are inserted in DIAZED bases DIII			**5SH3 02**		016	0.023	25
	**DIAZED adapter sleeve fitter for DII/DIII**			**5SH3 703**		016	0.025	1

1) Suitable for a rated voltage of up to 750 V.

DIAZED fuses
85 mm mounting depth

Selection and ordering data

	Size	I_n	Thread	Order No.	Price 1 item	Price group	Weight 1 item	Pack. unit
		A					kg	Items
DIAZED screw caps								
	**Rated voltage 500 V AC/DC**							
	not for SILIZED fuse links made of molded plastic, with inspection hole, gray							
	DII	25	E 27	**5SH1 221**		016	0.026	20
	DIII	63	E 33	**5SH1 231**		016	0.042	
	ceramic							
	NDz	25	E 16	**5SH1 11**		016	0.016	50
	narrow version, ceramic							
	DII	25	E 27	**5SH1 12**		016	0.034	25
	DIII	63	E 33	**5SH1 13**		016	0.059	
	Mushroom shape, ceramic, with inspection hole, sealable							
	DII	25	E 27	**5SH1 22**		016	0.050	50
	DIII	63	E 33	**5SH1 23**		016	0.080	
	Mushroom shape, made of ceramic							
	DIV	100	R 1¼"	**5SH1 14**		016	0.175	10
	**Rated voltage 750 V AC/DC**							
	only for 5SD6 DIAZED fuse links and 5SF4 230 DIAZED fuse bases made of ceramic, with fine thread							
	DIII	63	E 33S	**5SH1 161**		016	0.084	25
	**Rated voltage 690 V AC, 600 V DC**							
	only for 5SD8 DIAZED fuse links made of ceramic, prolonged version							
	DIII	63	E 33	**5SH1 170**		016	0.086	25

Selection and ordering data

	Size	I_n	Identification color	Thread	Order No.	Price	Price group	Weight 1 item	Pack. unit
		A				1 item		kg	Items
DIAZED fuse links Rated voltage 500 V AC/DC									
	DIN VDE 0635								
	Characteristic slow								
	TNDz	2	pink	E 16	**5SA2 11**		016	0.013	20
		4	brown		**5SA2 21**		016		
		6	green		**5SA2 31**		016		
		10	red		**5SA2 51**		016		
	TNDz	16	gray	E 16	**5SA2 61**		016	0.013	
		20	blue		**5SA2 71**		016	0.015	
		25	yellow		**5SA2 81**		016	0.016	
	Characteristic quick								
	NDz	2	pink	E 16	**5SA1 11**		016	0.013	
		4	brown		**5SA1 21**		016		
		6	green		**5SA1 31**		016		
		10	red		**5SA1 51**		016		
	NDz	16	gray	E 16	**5SA1 61**		016	0.013	
		20	blue		**5SA1 71**		016	0.015	
		25	yellow		**5SA1 81**		016	0.016	
	DIN VDE 0636, IEC 60 269								
	Utilization category gL/gG								
	DII	2	pink	E 27	**5SB2 11**		016	0.026	5
		4	brown		**5SB2 21**		016		
		6	green		**5SB2 31**		016		
		10	red		**5SB2 51**		016	0.027	
	DII	16	gray	E 27	**5SB2 61**		016	0.028	
		20	blue		**5SB2 71**		016	0.029	
		25	yellow		**5SB2 81**		016	0.031	
	DIII	35	black	E 33	**5SB4 11**		016	0.050	
		50	white		**5SB4 21**		016	0.051	
		63	copper		**5SB4 31**		016	0.054	
	DIV	80	silver	R 1¼"	**5SC2 11**		016	0.110	10
		100	red		**5SC2 21**		016		
	DIN VDE 0635								
	Characteristic quick for 5SB1 41 a DIAZED screw adapter for 6 A is used								
	DII	2	pink	E 27	**5SB1 11**		016	0.026	5
		4	brown		**5SB1 21**		016		
		6	green		**5SB1 31**		016		
	DII	10	red	E 27	**5SB1 41**		016	0.026	
		10	red		**5SB1 51**		016	0.027	
		16	gray		**5SB1 61**		016	0.028	
	DII	20	blue	E 27	**5SB1 71**		016	0.029	
		25	yellow		**5SB1 81**		016	0.031	
	DIII	35	black	E 33	**5SB3 11**		016	0.050	
		50	white		**5SB3 21**		016	0.051	
		63	copper		**5SB3 31**		016	0.054	
	DIV	80	silver	R 1¼"	**5SC1 11**		016	0.110	10
		100	red		**5SC1 21**		016		

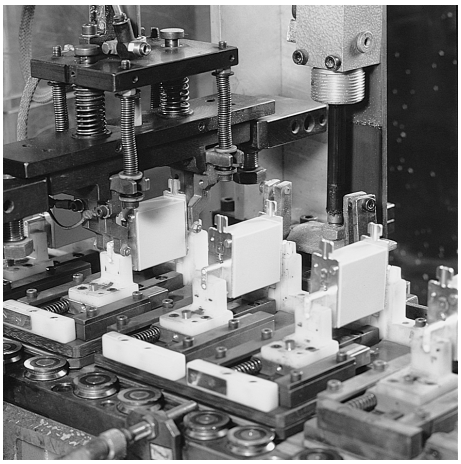
DIAZED fuses
85 mm mounting depth

Selection and ordering data

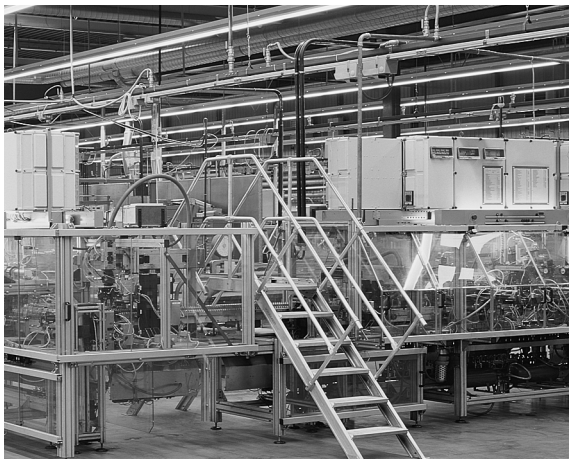
	Size	I_n	Identification color	Thread	Order No.	Price 1 item	Price group	Weight 1 item	Pack. unit
		A						kg	Items
	DIAZED fuse links								
	Rated voltage 690 V AC, 600 V DC DIN VDE 0636, IEC 60 269 utilization category gL/gG, for 2 to 25 A fuse links DIAZED screw adapters DII are used								
	DIII	2 4 6	pink brown green	E 33	**5SD8 002** **5SD8 004** **5SD8 006**		016 016 016	0.068	25
	DIII	10 16	red gray	E 33	**5SD8 010** **5SD8 016**		016 016	0.069	
	DIII	20 25	blue yellow	E 33	**5SD8 020** **5SD8 025**		016 016	0.071 0.072	
	DIII	35 50 63	black white copper	E 33	**5SD8 035** **5SD8 050** **5SD8 063**		016 016 016	0.078 0.080 0.082	
	Rated voltage 750 V AC, 750 V DC for DC railway systems VDE 0635 Characteristic quick, For 2 to 25 A fuse links DIAZED screw adapters DII are used								
	DIII	2 4 6	pink brown green	E 33	**5SD6 01** **5SD6 02** **5SD6 03**		016 016 016	0.068	
	DIII	10 16	red gray	E 33	**5SD6 04** **5SD6 05**		016 016	0.068 0.069	
	DIII	20 25 35	blue yellow black	E 33	**5SD6 06** **5SD6 07** **5SD6 08**		016 016 016	0.071 0.072 0.078	
	DIII	50 63	white copper	E 33	**5SD6 10** **5SD6 11**		016 016	0.080 0.082	
	SILIZED fuse links								
	Rated voltage 500 V AC, 500 V DC for semiconductor protection, designated with yellow ring DIN VDE 0636 Utilization category gR, super quick. For 30 A fuse links the DIAZED screw adapter DII for 25 A is used								
	DII	16 20 25	gray blue yellow	E 27	**5SD4 20** **5SD4 30** **5SD4 40**		016 016 016	0.028 0.029 0.031	5
		30			**5SD4 80**		016	0.031	
	DIII	35 50 63	black white copper	E 33	**5SD4 50** **5SD4 60** **5SD4 70**		016 016 016	0.050 0.051 0.054	
	DIV	80 100	silver red	R 1¼"	**5SD5 10** **5SD5 20**		016 016	0.110	10

Overview

Highly-automated manufacturing



An overview of the production line with integrated test stations



Automated manufacturing sequences guarantee quality and precision

Environmental protection is a continuous task of the modern industrial society and requires action!

Environmentally compatible recycling of LV HRC/HV HRC fuses

National and global environmental problems - for example changes in the climate and the atmosphere of the earth, the destruction of the ozone layer, the deterioration of the ground and water resources - have all proven the necessity of common action. The recycling law, which was enacted in Germany at the end of 1996, requires companies to recycle materials and thus to save resources.

Responsibility of the industry

Industry is requested to be aware of its responsibility towards future generations and to take the initiative. The manufacturers of low-voltage and high-voltage fuses as well as high-voltage HRC fuses are aware of this responsibility and are determined to focus more than ever on “protecting” the environment and taking care of natural resources.

How is recycling organized

Initiated by Siemens AG, various German manufacturers of LV/HV HRC fuses have formed the committee “NH/HH-Recycling e.V.”, which has been recognized as beneficial to common interests.

Taking into account the prevailing legal regulations, the committee wants to support the proper recycling of fuse links to contribute actively to the protection of the environment and its natural resources.

How are fuses recycled in Germany?

LV HRC and HV HRC fuse links without packaging will be accepted for recycling. The electrical wholesaler provides Euro pallet boxes for this purpose. If large quantities accumulate, Euro pallet boxes can be delivered to your location. For further information, please contact our regional Siemens A&D ET sales managers.

Material recycling

The disconnected fuses are completely melted down by an officially certified recycler. The copper and silver gained are put back into the materials cycle. Residuals such as inorganic waste are used in road and dam building. Profits made herewith will be assigned to environmental research for public interest by the “NH/HH-Recycling e.V.“ committee.

Our request: Take part in our approach and ask for the signs that stand for the recycling of LV HRC fuses.

LV HRC fuses

Overview

The product range

Areas of application
LV HRC fuses are used for installation systems in non-residential, commercial and industrial buildings as well as in switchgear of power supply companies. They therefore protect essential building parts and installations.

Non-interchangeability
LV HRC fuses are fuse systems to be operated by experts. There are no constructional requirements for a non-interchangeability of rated current and protection against contact.

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

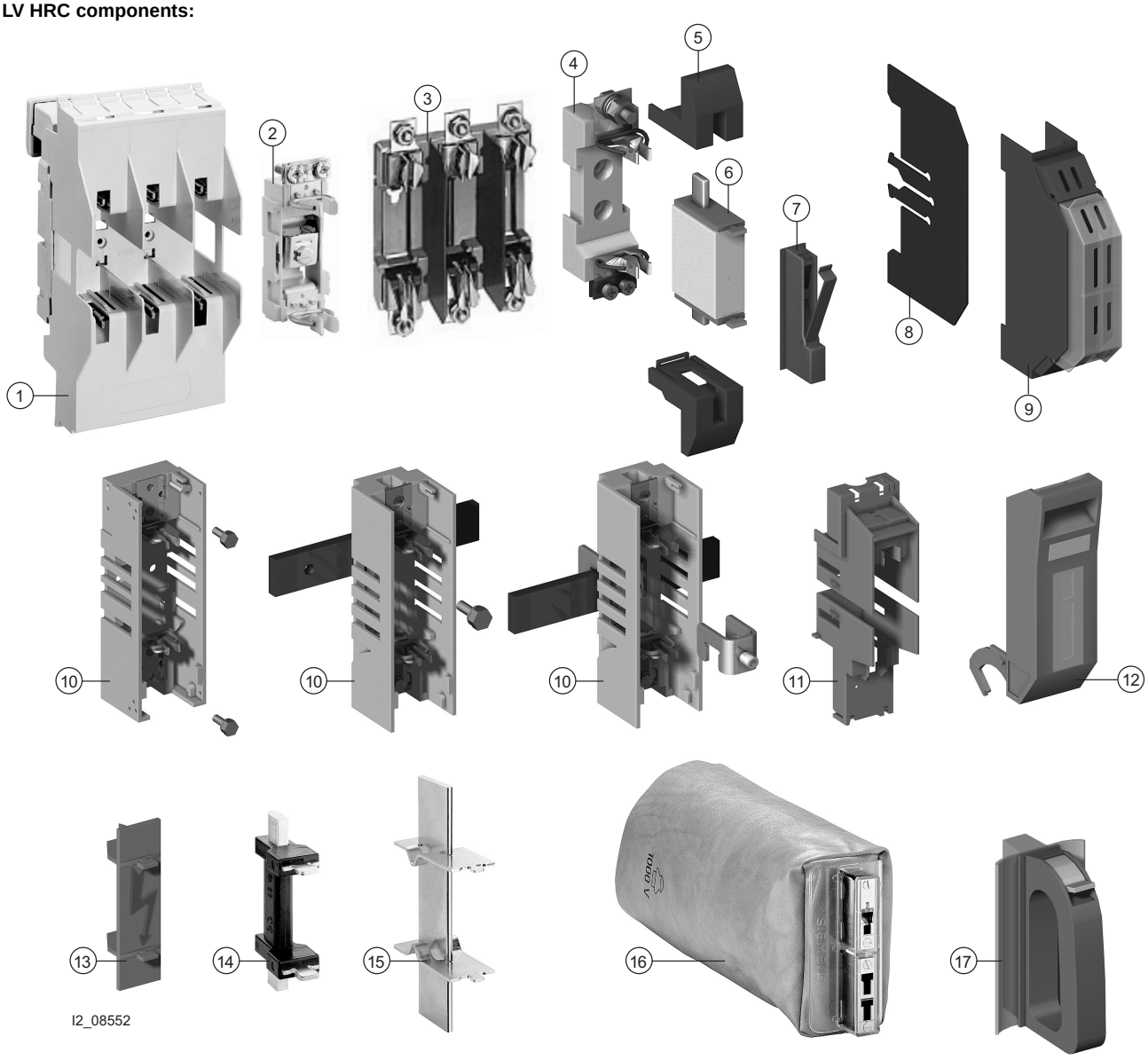
Sizes
LV HRC fuse links are available in the sizes 000, 00, 0, 1, 2, 3, 4 and 4a.

Utilization categories
Utilization category gL/gG is available for cable and conductor protection and aM for short-circuit protection of switchgear.

LV HRC components
LV HRC fuse links are made up of the following 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 phase barrier
⑨ LV HRC protective cover
⑩ LV HRC fuse bases with slewing equipment,
- for screw fixing on mounting plate
- for screw fixing on busbar system
- for claw fixing on busbar

⑪ LV HRC protective cover for LV HRC fuse bases with slewing equipment
⑫ LV HRC slewing equipment
⑬ LV HRC fuse base cover
⑭ LV HRC isolating link with insulated grip lugs
⑮ LV NRC isolating link with non-insulated grip-lugs
⑯ LCV HRC fuse puller with sleeve
⑰ LV HRC fuse puller

LV HRC components:



I2_08552

Overview

LV HRC fuse links with combination alarm

Impaired view
A quick detection of failed fuse links in switchgear is often not possible. If they are mounted in fuse bases with slewing equipment or LV HRC switch disconnectors, the sight is often impaired.
The LV HRC fuse links have a clearly visible center indicator
red: in operation
white: out of operation

Better safe than sorry
In addition to this, the LV HRC fuse links are equipped with a front indicator on the top. This considerably improves the sight on one or the other indicator.

The combination alarm
Siemens LV HRC fuse links are available with combination alarm, a combination of center indicator and front indicator. Thus, a failed LV HRC fuse link can be detected from different directions.

Front indicator
For standard applications which are characterized by freely accessible fuse links allowing an easy detection of failed fuse links, product series with front and without center indicators are available.

LV HRC fuses

Overview

LV HRC fuse links

		3NA6...-4	3NA6	3NA7	3NA6...-6	3NA7...-6	3NA3	3NA2	3NA3...-6	3ND1
Utilization categories		gL/gG								aM
Rated voltage U_c	V AC	400	500		690		500		690	
	V DC	250	440							-
Except sizes 000 and 00	V AC	-	500		690		500		690	500
	V DC	-	250							-
Rated current range I_c	A	10 to 400			2 to 315		2 to 1250	2 to 400	2 to 500	6 to 630
Rated breaking capacity	kA AC	120								
	V DC	25								
Combination alarm		yes					-			
Front indicator		-					yes			
Insulated metal grip lugs		yes		-	yes	-		yes	-	
Non-insulated metal grip lugs		-		yes	-	yes		-	yes	
Resistance to climate for 95% rel. humidity	°C	-20 ... +50								
Standards		DIN VDE 0636, DIN VDE 0680, IEC 60 269, EN 60 269								
Dimensions		DIN 43 620								

LV HRC fuse bases

Size		**00**	**0**	**1**	**2**	**3**	**4**	**4a**
Rated voltage U_c	V AC	690						
	V DC	440						
Except size 00	V AC	690						
	V DC	250						
Rated breaking capacity	kA AC	120						
	kA DC	25						
Screw-type terminal connection								
Screw		M8		M10		M12		M16
Nut		M8	-					
Max. tightening torque	Nm	14		38			65	
Clamp-type terminal connection								
Conductor cross section	mm^2	2.5 to 50		-				
Saddle-type terminal connection								
Conductor cross section	mm^2	6 to 70	-					
Terminal strip								
Conductor cross section, 3 conductors	mm^2	1.5 to 16	-					

LV HRC fuse bases with slewing equipment

Size		**00**	**1**	**3**	**4 A**
Rated voltage U_c	V AC	690			
	V DC	440			
Power loss	W	4	5	20	32
Screw-type terminal connection					
Screw		M8	M10	M12	M16
Nut		M8	-		
max.	Nm	14	38		65

Overview

LV HRC fuses bases

Terminals for all applications

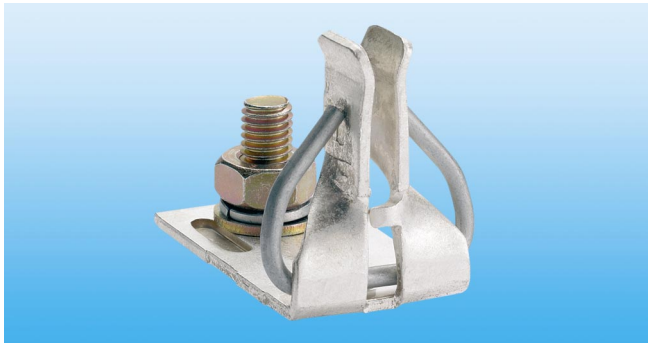
Terminals are as different as the requirements of individual systems.

Screw-type terminal connection with screw

The screw-type terminal connection is suitable for connecting busbars or cable lugs. It contains a torsion-proof screw connection with shim, spring washer and nut. When tightening the nut, the torque must be observed because of the considerable leverage effect.

Double busbar connection

This connection differs from screw-type terminal connections in so far as one busbar each can be led over and under the screw-type terminal connection.



The Siemens Lyra contact

The silver-plated Lyra contact provides a large contact area for the pin of the LV HRC fuse link. This limits heat transmission, thus reducing oxidation. The resulting power loss is diminished. The large contact area also facilitates the replacement of LV HRC fuse links.The contact is charged by the spring washer, which has been mechanically galvanized. This will prevent hydrogen embrittlement. The contact is resistant to aging and there will be no dreaded annealing of contacts, which essentially contributes to operational reliability.

Screw-type terminal connection with nut

With the screw-type terminal connection with nut, the nut is connected to the terminal lug in a torsion-proof way. When tightening the nut, the torque must be observed because of the considerable leverage effect.

Terminal strip

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

Clamp-type terminal connection

The clamp-type terminal connection is prepared for connecting two conductors.

Saddle-type terminal connection

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

LV HRC fuses

Selection and ordering data

		Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
LV HRC fuse bases						
	**Size 00, rated current 160 A** 1-pole with screw-type terminal connections, screw with clamp-type terminal connections with saddle-type terminal connections with screw-type terminal connection and terminal strip with screw-type terminal connections, nut with screw-type and saddle-type terminal connection	 **3NH3 030** **3NH3 031** **3NH3 032** **3NH3 035** **3NH3 038** **3NH3 050**		 014 014 014 014 014 014	 0.235 0.230 0.266 0.230 0.207 0.227	 3
	3-pole, with phase barriers with screw-type terminal connections with clamp-type terminal connections with saddle-type terminal connections with screw-type terminal connection/terminal strip	 **3NH4 030** **3NH4 031** **3NH4 032** **3NH4 035**		 014 014 014 014	 0.700 0.800 0.750	 1
	**Size 0, rated current 160 A** 1-pole with screw-type terminal connections with clamp-type terminal connections	 **3NH3 120** **3NH3 122**		 014 014	 0.460	 3
	**Size 1, rated current 250 A** 1-pole with screw-type terminal connections with double busbar connections	 **3NH3 230** **3NH3 220**		 014 014	 0.789	 3
	3-pole with screw-type terminal connections	 **3NH4 230**		 014	 2,100	 1
	**Size 2, rated current 400 A** 1-pole with screw-type terminal connections with double busbar connections	 **3NH3 330** **3NH3 320**		 014 014	 0.843 1,000	 1

Selection and ordering data

	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
LV HRC fuse bases					
 **Size 3, rated current 630 A**					
1-pole					
with screw-type terminal connections	**3NH3 430**		014	1,100	1
with double busbar connections	**3NH3 420**		014		
 **Size 4 (IEC), rated current 1250 A**					
1-pole					
with screw-type terminal connections	**3NH3 530**		014	3,000	1
 **LV HRC bus-mounting fuse base size 00, rated current 160 A for 12 x 5 mm to 12 x 10 mm busbars 40 mm busbar clearance**					
1-pole					
with saddle-type terminal connection top	**3NH3 036**		014	0.150	3
bottom	**3NH3 037**		014		
Terminal strip top	**3NH3 048**		014		1
 **Tandem design size 00, rated current 80 A**					
with phase barriers	**3NH4 037**		014	0.800	1
for 40 mm busbar system in SIPRO meter cabinets with non-interrupted phase barriers	**3NH4 045**		014	0.800	
 **with slewing equipment can be disconnected under load, degree of pollution 3 degree of protection: open IP10, closed IP 20 1-pole, with screw-type terminal connection, screw**					
Size 00, rated current 160 A with added saddle-type terminal connections					
with screw connection for mounting plate	**3NH7 030**		014	1,000	3
with claw fixing for non-perforated busbar	**3NH7 031**		014		
with screw fixing for perforated busbar	**3NH7 032**		014		
Size 1, rated current 250 A					
with screw fixing for mounting plate	**3NH7 230**		014	2,500	1
with claw fixing for non-perforated busbar	**3NH7 231**		014		
with screw fixing for perforated busbar	**3NH7 232**		014		
Size 3, rated current 630 A Also suitable for size 2, rated current 400 A					
with screw fixing for mounting plate	**3NH7 330**		014	4,800	
with claw-fixing for non-perforated busbar	**3NH7 331**		014		
with screw fixing for perforated busbar	**3NH7 332**		014		
 Size 4a, rated current 1250 A					
with screw fixing for mounting plate	**3NH7 520**		014	5,200	

LV HRC fuses

Selection and ordering data

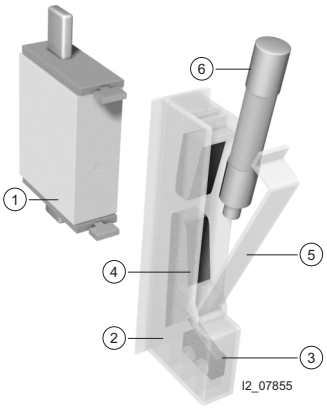
	Size	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
Mounting parts for LV HRC fuse bases						
 **LV HRC contact cover** as protection against contact for contact pieces						
	00	**3NX3 105**		014	0.013	20
	0	**3NX3 114**		014	0.010	10
	1	**3NX3 106**		014	0.027	20
	2	**3NX3 107**		014	0.031	20
	3	**3NX3 108**		014	0.038	
 **LV HRC partitions** for side-by-side mounting of LV HRC fuse bases and as end barrier for side-by-side arrangement						
Type						
3NH3 0/3NH4 0	00	**3NX2 023**		014	0.025	20
3NH3 1	0	**3NX2 030**		014	0.050	10
3NH3 2	1	**3NX2 024**		014	0.053	20
3NH3 3	2	**3NX2 025**		014	0.066	10
3NH3 4	3	**3NX2 026**		014	0.101	
 **LV HRC protective cover IP2X** for LV HRC fuse bases size 00 1- and 3-pole		**3NX3 115**		014	0.039	10
 **LV HRC cover IP2X** for LV HRC protective cover IP2X		**3NX3 116**		014	0.014	10
 **LV HRC contact cover for LV HRC bus-mounting bases** for mounting onto contacts to ensure protection against contact						
Outgoing terminal		**3NX3 105**		014	0.013	20
Incoming terminal		**3NX3 113**		014	0.006	
 **LV HRC partitions for LV HRC bus-mounting bases**						
Phase barrier		**3NX2 027**		014	0.017	20
End barrier		**3NX2 028**		014	0.020	
for 3NH4 037 and 3NH4 045 fuse bases		**3NX2 031**		014	0.050	10

Area of application

With the signal detector, LV HRC fuse links of 10 A or higher can be monitored. The signal detector can be mounted onto any LV HRC fuse link of size 000 to 4 with non-insulated grip lugs.
The signal detector link is parallel connected to the LV HRC fuse link via spring contacts.
In the event of a fault, the LV HRC fuse link is released simultaneously with the LV HRC fuse signaling link. A tripping pin in the LV HRC fuse signaling link switches a microswitch for 250 V AC/5 A.

In order to replace the signal detector link, the signal detector is removed from the LV HRC fuse link. It is then insulated.

① LV HRC fuse link
② Signal detector
③ Microswitch
④ Spring contact
⑤ Flap
⑥ Signal detector link



Selection and ordering data

	Size	Order No.	Price 1 item	Price group	Weight 1 item kg	Pack. unit Items
Mounting parts for LV HRC fuses						
 **LV HRC signal detector** for LV HRC fuse links with non-insulated grip lugs of size 000 to 4a. Rated voltage up to 690 V AC		**3NX1 021**		014	0.029	4
 **Signal detector link** Response value > 9 V; 2.5 A; for standard applications Response value > 2 V; 7 A; only for meshed systems		**3NX1 022** **3NX1 023**		014 014	0.013	12
 **Fuse puller** for LV HRC fuse links without sleeve	000 to 4	**3NX1 011**		014	0.310	1
 with sleeve	000 to 4	**3NX1 012**		014	0.500	
 **Isolating link** with insulated grip lugs, silver-plated, for LV HRC fuse bases and fuse switch disconnectors						
	000 + 00 0	**3NG1 002** **3NG1 102**		014 014	0.080 0.110	6
	1 2 3	**3NG1 202** **3NG1 302** **3NG1 402**		014 014 014	0.170 0.240 0.290	3
 with non-insulated grip lugs, size 4 tin-coated, size 4a nickel-plated						
	4 4a	**3NG1 503** **3NG1 505**		014 014	0.708 0.730	6 3
 **Fuse base cover** for LV HRC fuse bases according to DIN 43 620 red with yellow label "Netztrennstelle" (power supply isolation point)						
	000 + 00 1, 2, 3	**3NX1 003** **3NX1 004**		014 014	0.050 0.100	10

LV HRC fuses

Features

- According to DIN VDE 0660 Part 107, IEC 60 947-1 and IEC 60 947-3
- Rated operational voltage: 690 V AC
- Climate-proof

Selection and ordering data

I_u	For LV HRC links	Conductor cross section	Connecting point/adapter	Order No.	Price	Price group	Weight 1 item	Pack. unit
A	Size	mm^2			1 item		kg	Items
LV HRC fuse switch disconnectors for mounting into switchboards, STAB/SIKUS distribution boards, SIPRO meter cabinets and 8HP casings								
100 [1]	000	1.5 to 35 (SIGUT terminal)		**3NP40 10-0CH01**		103	0.581	1
160 [1]	00	2.5 to 2 × 70 (M 8) (screw-type terminal connection)		**3NP40 70-0CA01**		103	1.200	
160 [1]	00	2.5 to 50 (M8) (SIGUT terminal)		**3NP40 70-0CH01**		103	0.800	
250	1 and 0	up to 150 (M 10) (screw-type terminal connection)		**3NP42 70-0CA01**		103	2.300	
400	2 and 1	up to 240 (M 10) (screw-type terminal connection)		**3NP43 70-0CA01**		103	3.400	
630	3 and 2	up to 2 × 240 (M 12) (screw-type terminal connection)		**3NP44 70-0CA01**		103	4.600	
LV HRC fuse switch disconnectors for adaptation to 40 mm busbar systems								
Busbar dimensions: 12 mm × 5 mm and 12 mm × 10 mm								
With adapter:	screw-type for STAB/SIKUS distribution boards recessed-type for STAB/SIKUS distribution boards and SIPRO meter cabinets							
100	00	1.5 to 35 (SIGUT terminal)	top/screw-type bottom/screw-type	**3NP40 15-1CK01** **3NP40 15-1CJ01**		103 103	0.935 0.934	1
100	00	1.5 to 35 (SIGUT terminal)	top/recessed-type bottom/ recessed-type	**3NP40 15-0CK01** **3NP40 15-0CJ01**		103 103	0.997 0.950	
160	00	2.5 to 2 × 70 (screw-type terminal connection)	top/recessed-type bottom/ recessed-type	**3NP40 75-0CE01** **3NP40 75-0CF01**		103 103	1.150	
160	00	2.5 to 70 (SIGUT terminal)	top bottom	**3NP40 75-0CK01** **3NP40 75-0CJ01**		103 103	1.150	
160	00	2.5 to 2 × 70 (screw-type terminal connection)	top/screw-type bottom/screw-type	**3NP40 75-1CE01** **3NP40 75-1CF01**		103 103	1.100	
160	00	2.5 to 70 (SIGUT terminal)	top bottom	**3NP40 75-1CK01** **3NP40 75-1CJ01**		103 103	1.100	
250	0 and 1	up to 150 (screw-type terminal connection)	top or bottom/screw-type	**3NP42 75-1CG01**		103	4.000	

For all fuse switch-disconnectors with screw-type terminal connection, the corresponding cable lug covers (3NY7 101 to 3NY7 141) are to be used to provide safety from finger-touch according to VBG4.
With 3NP42 and 3NP43, a bar-thickness compensation is necessary if you want to mount them onto 5 mm thick copper busbars. 3NP44 can only be mounted on 10 mm thick busbars.
For other versions see the Low-Voltage Controlgear, Switchgear and Systems catalog.

1) AS with integrated snap-on mechanism for mounting rails and sealing lug.

Features

- Acc. to DIN VDE 0660 Part 107, IEC 60 947-1 7-3 and IEC 60 947-3
- Rated operational voltage 690 V AC
- Fully enclosed
- Climate-proof
- 3NP35: without high-speed closing

Selection and ordering data

	I_u	For LV HRC links	Conductor cross section	Version	Order No.	Price	Price group	Weight 1 item	Pack. unit
	A		mm^2			1 item		kg	Items
	LV HRC fuse switch disconnectors w. high-speed closing f. mounting in switchboards, STAB/SIKUS distribution boards and 8HP casings								
	160	000	1.5 to 35 (SIGUT terminal)	without AS	**3NP35 30-0CH00**		103	0.500	1
	160	00	2.5 to 120 (screw-type terminal connection)	without AS[1]	**3NP50 60-0CA00**		103	1.500	
				with NO+ 1 NC	**3NP50 60-0CA10**		103		
	160	00	2.5 to 50 (clamp connection)	without AS[1]	**3NP50 60-0CB00**		103	1.707	
				with NO+ 1 NC	**3NP50 60-0CB10**		103	1.780	
	250	0 and 1	6 to 150 (screw-type terminal connection)	without AS	**3NP52 60-0CA00**		103	5.670	
				with NO+ 1 NC	**3NP52 60-0CA10**		103	5.613	
	250	0 and 1	35 to 120 (clamp connection)	without AS	**3NP52 60-0CB00**		103	5.643	
				with NO+ 1 NC	**3NP52 60-0CB10**		103	5.814	
	400	1 and 2	6 to 240 (screw-type terminal connection)	without AS	**3NP53 60-0CA00**		103	6.850	
				with NO+ 1 NC	**3NP53 60-0CA10**		103	6.836	
	630	2 and 3	6 to 2 × 240 (screw-type terminal connection)	without AS	**3NP54 60-0CA00**		103	7.934	
				with NO+ 1 NC	**3NP54 60-0CA10**		103	8.100	

Accessories

	For fuse switch disconnectors	Conductor cross section	Version	Order No.	Price	Price group	Weight	Pack. unit
		mm^2					kg	
	Rapid mounting-plate				1 item		1 item	Items
	between 2 standard mounting rails according to DIN EN 50 022 Busbar center-to-center clearance: 125 mm							
	3NP35 30, 3NP40 70			**3NY7 322**		103	0.300	1
	3NP42 70, 3NP50 60			**3NY1 995**		103		
	Auxiliary switch for 3NP35, 3NP40-44			**3NY3 035**		103	0.010	1
	Triple terminal				1 set		1 set	
	3NP40 1 and 3NP40 7	2.5 to 16	for attach. to wrap around terminal	**3NY7 102**		103	0.120	1 set
	3NP40 1		for attach. screw-type term. con.	**3NY7 105**		103	0.200	
	Feeder terminal							
	3NP35 and 3NP40 1	25 to 95		**3NY1 236**		103	0.180	3 set
	Fixing clamp							
	3NP42	70 to 150		**3NY7 120**		103	0.200	1 set
	3NP43	120 to 240		**3NY7 130**		103	0.300	
	3NP44	150 to 300		**3NY7 140**		103	0.400	
	3-phase busbar with modular size 90 mm = 5 MW				1 item		1 item	Items
	3NP35 and 3NP40 1		for 2 isolators	**3NY1 237**		103	0.210	5
			for 3 isolators	**3NY1 238**		103	0.350	
			connecting bar	**3NY1 263**		103	0.210	
	Handle unit							
	gray with labeling field		for 3NP40 1	**3NY7 003**		103	0.150	1
	with voltage test holes		for 3NP40 7	**3NY7 001**		103	0.193	

For other versions, covers and molded plastic masking frames see the Low-Voltage Controlgear, Switchgear and Systems Catalog

1) For retrofitting, additional drillings are required on the fuse switch-disconnector.

LV HRC fuses

Technical data

LV HRC fuse switch disconnectors IEC 60 947-1, IEC 60 947-3, DIN VDE 0660 Part 107			**3NP35, 3NP40 1**	**3NP40 70**	**3NP42 7** [1]	**3NP43 7**	**3NP44 7**
Rated insulation voltage U_i		V AC	690				
Permissible ambient temperature		°C	-25 to +55 for operation[4], -50 ... +80 for storage				
Permissible mounting position			vertical or horizontal (reduced switching capacity when mounted horizontally)[7]				
Rated continuous current I_u		A	160		250	400	630
for fuse links acc. to DIN 43 620		Size	00 [2]	00	1 and 0	2 and 1	3
(when semiconductor protection fuse links are used, the rated current must be reduced - see catalog NS K and DA 94.1)							
Conventional free air thermal current I_{th}		A	160		250	400	630
Rated operational voltage U_e		50/60 Hz, V AC	690				
		V DC	220 (3 current paths in series)	440 (3 current paths connected in series) 220 (2 current paths connected in series)			
Rated conditional short-circuit current with fuses (with high-speed closing)							
with fuse links	Rated current	size/A	00 [2]/100 (35)	00/160 (100)		1/250 (200)	
at 500 V AC (690 V)		kA (rms value)	50 (50)	50 (30)		50 (50)	
Permissible cut-off current of the fuses		kA (peak value)	11 (5)	15 (8)		23 (19)	
Short-circuit strength with fuses (with closed disconnector)							
with fuse links	Rated current	size/A	00 [2]/100	00/160	1/250	2/400	3/630
up to 690 V		kA (rms value)	100	50			
Permissible cut-off current of the fuses		kA (peak value)	15		25	35	
Rated short-circuit making capacity with isolating links[3] (for high-speed closing) for		Size	00		1	2	3
at 500 V AC		kA (peak value)	2		-	-	-
Rated making and breaking capacity (infeed from the top and the bottom)							
at 400 V AC, with fuse links or isolating links[3]		Size	00 [2]	00	1	2	3
Rated breaking current I_c (p.f. = 0.35)		A (rms value)	800 (p.f. = 0.45)	800	2000	3200	5040
Rated operational current I_e	at AC-21b, AC-22b	A	160		250	400	630
	at AC-23b	A	100		250	400	630
at 500 V AC, with fuse links or isolating links[3]		Size	00 [2]	00	1	2	3
Rated breaking current I_c (p.f. = 0.35)		A (rms value)	320 (p.f. = 0.45)				
Rated operational current I_e	at AC-21b, AC-22b	A	160,100	160	250	400	630
	at AC-23b	A	40				
at 690 V AC, with fuse links or isolating links[3]		Size	00 [2]	00	1	2	3
Rated breaking current I_c (p.f. = 0.35)		A (rms value)	200 (p.f. = 0.45)	240	375	600	945
Rated operational current I_e	at AC-21b	A	160		250	400	630
	at AC-22b	A	50		250	400	630
	at AC-23b	A	25				
at 220 V DC, with fuse links or isolating links [3]		Size	00 [2]	00	1	2	3
breaking current I_c (L/R = 15 ms)		A	320		-		
Rated operational current I_e	at DC-23b	A	80		-		
Capacitor switching capacity							
at 400 V AC	Capacitor rating	kvar	50		-		
	Rated current I_n	A	72		-		
at 500 V AC	Capacitor rating	kvar	50		-		
	Rated current I_n	A	55		-		
Mechanical lifetime		operating cycles	2000		1600	1000	
Degree of protection with regard to operating side							
without molded plastic cover			IP 20				
with molded plastic cover	With closed handle unit		IP 30				
	With open handle unit		IP 20				
Power loss of the switch at I_{th} (plus power loss of the fuse links)							
without busbar adapter		W	4.5	10	-		
with busbar adapter		W	8.5	20	-		
Main conductor connection							
cable lug, max. conductor cross section (stranded)		mm^2	-	120		150	
clamp connections		mm^2	1.5-50 [5]	2.5-50		35-120	
busbar		mm	-	12-20		22-30	
Tightening torque (for terminal screws)							
with cable lug		Nm	-	9-11 (M 6)		35-45 (M 10)	
clamp connections		Nm	3-3.5	7-9 (M 6)		5-6 (2 × M 6)	
busbar		Nm	-	9-11 (M 6)		35-45 (M 10)	
Auxiliary switch 1 NO + 1 NC (accessory) (the same voltage must be applied to the NO and NC contacts)							
at 50/60 Hz to 400 V AC, rated operational current I_e	at AC-12/AC-15	A	-	16/6			
at 50/60 Hz to AC 230 V, rated operational current I_e	at AC-14	A	0.25	-			
	at AC-13	A	0.1 [6]	-			
Push-on connection (DIN 46 244)			A 2.8-0.5	A 6.3-0.8			

1) For use in meter cabinets acc. to DIN 43 870: Highest rated current of fuse links: 63 A (power loss ≤ 5.7 W); power loss of main current paths: 2.4 W.
2) 21 mm maximum width (acc. to IEC 60 269-2-1 and DIN 43 620).
3) Use silver-plated isolating links.
4) Without restriction when isolating links are used. If fuse links are used, manufacturers' stipulations are to be observed.
5) Finely stranded with end sleeve 1.5 mm^2 to 35 mm^2.
6) Applies for solid-state compatible auxiliary switches.
7) Exact values on request.

Technical data

LV HRC fuse switch disconnectors			3NP50	3NP52	3NP53	3NP54
IEC 60 947-1, IEC 60 947-3, DIN VDE 0660 Part 107						
Rated operational voltage U_e		50/60 Hz, V AC V DC	690 440 (3 current paths connected in series) 220 (2 current paths connected in series and with 3VU13 fuse monitoring)			
Rated insulation voltage U_i		V AC	690 [1]			
Rated continuous current I_u for fuse links acc. to DIN 43 620 (when semiconductor protection fuse links are used, the rated current must be reduced - see catalog NS K and DA 94.1)		A Size	160 00	250 1 and 0	400 2 and 1	630 3 and 2
Conventional free air thermal current I_{th}		A	160	250	400	630
Rated conditional short-circuit current with fuses (for high-speed closing)						
with fuse links	Rated current	size/A	00/160	1/250	2/400	3/630
at 500 V AC		kA (rms value)	50			
Permissible cut-off current of the fuses		kA (peak value)	15	25	40	50
Short-circuit strength with fuses (with closed disconnector)						
with fuse links	Rated current	size/A	00/160	1/250	2/400	3/630
at 500 V AC		kA (rms value)	100		50	
Permissible cut-off current of the fuses		kA (peak value)	23	32	40	60
Rated short-circuit making capacity with isolating links [2]		Size	00	1	2	3
at 500 V AC		kA (peak value)	6	17		
Breaking capacity with fuse links (infeed from the top and the bottom)						
at 400 V AC, with fuse links		Size	00	1 / 0	2 / 1	3 / 2
Rated breaking current I_c (p.f. = 0.35)		A (rms value)	1600	2500 / 1600	4000 / 2500	5040 / 4000
Rated operational current I_e	at AC-21b, AC-22b, AC-23b	A	160	250 / 160	400 / 250	630 / 400
at 500 V AC, with fuse links		Size	00	1 / 0	2 / 1	3 / 2
Breaking current I_c (p.f. = 0.35)		A (rms value)	1600	2500 / 1600	4000 / 2500	5040 / 4000
Rated operational current I_e	at AC-21b, AC-22b, AC-23b	A	160	250 / 160	400 / 250	630 / 400
at 690 V AC, with fuse links		Size	00	1 / 0	2 / 1	3 / 2
Breaking current I_c (p.f. = 0.35)		A (rms value)	800	1280 / 1000	2520 / 1600	3200 / 2520
Rated operational current I_e	at AC-21b, AC-22b	A	160	250 / 160	400 / 250	630 / 400
	at AC-23b	A	100	160 / 125	315 / 200	400 / 315
at 220 V DC, with fuse links		Size	00	1 / 0	2 / 1	3 / 2
Breaking current I_c (L/R = 15 ms)		A	640	1000 / 640	1600	2520 / 1600
Rated operational current I_e	at DC-23b	A	160	250 / 160	400 / 250	630 / 400
Breaking capacity when mounted horizontally						
at 400 V AC, with fuse links		Size	00	1 / 0	2 / 1	3 / 2
Breaking current I_c (p.f. = 0.35)		A (arms value)	1300	1500 / 1500	2000	2520
Rated operational current I_e	at AC-21b, AC-22b, AC-23b	A	160	250 / 160	315 / 250	400
Breaking capacity with isolating links [2] (infeed from the top and bottom) [3]						
at 400 V AC, with isolating links		Size	00	1	2	3
Breaking current I_c (p.f. = 0.35)		A (arms value)	1600	2500		4000
Rated operational current I_e	at AC-21b, AC-22b	A	160	250	400	630
	at AC-23b	A	160	250	315	500
at 500 V AC, with isolating links		Size	00	1	2	3
Breaking current I_c (p.f. = 0.35)		A (arms value)	1300	2500		4000
Rated operational current I_e	at AC-21b, AC-22b	A	160	250	400	630
	at AC-23b	A	160	250	315	500
at 690 V AC, with isolating links		Size	00	1	2	3
Breaking current I_c (p.f. = 0.35)		A (arms value)	800	1280	1600	2520
Rated operational current I_e	at AC-21b, AC-22b	A	160	250	400	630
	at AC-23b	A	100	160	200	315
at 220 V DC, with isolating links		Size	00	1	2	3
Breaking current I_c (L/R = 15 ms)		A	640	1000	1600	
Rated operational current I_e	at DC-23b	A	160	200	400	
Breaking capacity when mounted horizontally						
at 500 V AC, with isolating links		Size	00	1	2	3
Breaking current I_c (p.f. = 0.35)		A (arms value)	1300	1500	2000	2520
Rated operational current I_e	at AC-21b, AC-22b, AC-23b	A	160	250	315	400

For further technical data, see the Low-Voltage Contractor, Switchgear and Systems catalog.

1) U_i = 1000 V is possible when maintaining pollution degree 2 (instead of 3).
2) Use silver-plated isolating links.
3) When electronic fuse monitoring is used, infeed must be from the top.

LV HRC fuses

Selection and ordering data

	I_n	Width	Insulated metal grip lugs		Price group	Weight 1 item	Pack. unit
			Order No.	Price 1 item			
	A	mm				kg	Items
LV HRC fuse links with combination alarm Rated voltage 400 V AC, 250 V DC Utilization category gL/gG, for cable and conductor protection							
	LV HRC fuse links of size 000 can also be used in LV HRC bases, LV HRC fuse switch-disconnectors, LV HRC fuse strips as well as in LV HRC in-line fuse switch disconnectors of size 00						
	**Size 000**	10		**3NA6 803-4**	013	0.135	9
		16		**3NA6 805-4**	013		
		20		**3NA6 807-4**	013		
		25		**3NA6 810-4**	013		
		32		**3NA6 812-4**	013		
		35		**3NA6 814-4**	013		
		40		**3NA6 817-4**	013		
		50		**3NA6 820-4**	013		
		63		**3NA6 822-4**	013		
		80		**3NA6 824-4**	013		3
		100		**3NA6 830-4**	013		
	**Size 00**	80	30	**3NA6 824-4KK**	013	0.200	3
		100		**3NA6 830-4KK**	013		
		125		**3NA6 832-4**	013		
		160		**3NA6 836-4**	013		
	**Size 1**	35	30	**3NA6 114-4**	013	0.290	3
		40		**3NA6 117-4**	013		
		50		**3NA6 120-4**	013		
		63		**3NA6 122-4**	013		
		80		**3NA6 124-4**	013		
		100		**3NA6 130-4**	013		
		125		**3NA6 132-4**	013		
		160		**3NA6 136-4**	013		
		200	47.2	**3NA6 140-4**	013	0.430	
		224		**3NA6 142-4**	013		
		250		**3NA6 144-4**	013		
	**Size 2**	50	47.2	**3NA6 220-4**	013	0.450	3
		63		**3NA6 222-4**	013		
		80		**3NA6 224-4**	013		
		100		**3NA6 230-4**	013		
		125		**3NA6 232-4**	013		
		160		**3NA6 236-4**	013		
		200		**3NA6 240-4**	013		
		224		**3NA6 242-4**	013		
		250		**3NA6 244-4**	013		
		300		**3NA6 250-4**	013		
		315	57.8	**3NA6 252-4**	013	0.650	
		355		**3NA6 254-4**	013		
		400		**3NA6 260-4**	013		

For characteristics see the ET 01 interactive catalog (CD-ROM).

Selection and ordering data

		I_n	Width	Non-insulated metal grip lugs		Insulated metal grip lugs		Price group	Weight 1 item	Pack. unit
				Order No.	Price	Order No.	Price			
		A	mm		1 item		1 item		kg	Items
LV HRC fuse links with combination alarm Rated voltage 500 V AC, 440 V DC (except sizes 000 and 00: 500 V AC, 250 V DC) Utiliz. category gL/gG, for cable and conductor protec-										
	LV HRC fuse links of size 000 can also be used in LV HRC bases, LV HRC fuse switch-disconnectors, LV HRC fuse strips as well as in LV HRC in-line fuse switch disconnectors of size 00									
	**Size 000**	10	21	**3NA7 803**		**3NA6 803**		013	0.135	9
		16		**3NA7 805**		**3NA6 805**		013		
		20		**3NA7 807**		**3NA6 807**		013		
		25		**3NA7 810**		**3NA6 810**		013		
		32		**3NA7 812**		**3NA6 812**		013		
		35		**3NA7 814**		**3NA6 814**		013		
		40		**3NA7 817**		**3NA6 817**		013		
		50		**3NA7 820**		**3NA6 820**		013		
		63		**3NA7 822**		**3NA6 822**		013		
		80		**3NA7 824**		**3NA6 824**		013		
		100		**3NA7 830**		**3NA6 830**		013		
	**Size 00**	80	30	**3NA7 824-7**		**3NA6 824-7**		013	0.211	3
		100		**3NA7 830-7**		**3NA6 830-7**		013		
		125		**3NA7 832**		**3NA6 832**		013		
		160		**3NA7 836**		**3NA6 836**		013		
	**Size 1**	16	30	**3NA7 105**		**3NA6 105**		013	0.290	3
		20		**3NA7 107**		**3NA6 107**		013		
		25		**3NA7 110**		**3NA6 110**		013		
		35		**3NA7 114**		**3NA6 114**		013		
		40		**3NA7 117**		**3NA6 117**		013		
		50		**3NA7 120**		**3NA6 120**		013		
		63		**3NA7 122**		**3NA6 122**		013		
		80		**3NA7 124**		**3NA6 124**		013		
		100		**3NA7 130**		**3NA6 130**		013		
		125		**3NA7 132**		**3NA6 132**		013		
		160		**3NA7 136**		**3NA6 136**		013		
		200	47.2	**3NA7 140**		**3NA6 140**		013	0.440	
		224		**3NA7 142**		**3NA6 142**		013		
		250		**3NA7 144**		**3NA6 144**		013		
	**Size 2**	35	47.2	**3NA7 214**		**3NA6 214**		013	0.450	3
		50		**3NA7 220**		**3NA6 220**		013		
		63		**3NA7 222**		**3NA6 222**		013		
		80		**3NA7 224**		**3NA6 224**		013		
		100		**3NA7 230**		**3NA6 230**		013		
		125		**3NA7 232**		**3NA6 232**		013		
		160		**3NA7 236**		**3NA6 236**		013		
		200		**3NA7 240**		**3NA6 240**		013		
		224		**3NA7 242**		**3NA6 242**		013		
		250		**3NA7 244**		**3NA6 244**		013		
		315	57.8	**3NA7 252**		**3NA6 252**		013	0.660	
		400		**3NA7 260**		**3NA6 260**		013		

For characteristics see the ET 01 interactive catalog (CD-ROM).

LV HRC fuses

Selection and ordering data

LV HRC fuse links with combination alarm
Rated voltage 690 V AC, 440 V DC
(except sizes 000 and 00: 690 V AC, 250 V DC
Utilization category gL/gG, for cable and conductor 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 in LV HRC in-line fuse switch disconnectors of size 00.
The 300 A fuse links do not conform to a VDE mark.
They correspond to the standard, but are not permissible.

	I_n	Width	Non-insulated metal grip lugs		Insulated metal grip lugs		Price group	Weight 1 item	Pack. unit
			Order No.	Price 1 item	Order No.	Price 1 item			
	A	mm						kg	Items
Size 000	2	21	**3NA7 802-6**		**3NA6 802-6**		013	0.135	3
	4		**3NA7 804-6**		**3NA6 804-6**		013		
	6		**3NA7 801-6**		**3NA6 801-6**		013		
	10		**3NA7 803-6**		**3NA6 803-6**		013		
	16		**3NA7 805-6**		**3NA6 805-6**		013		
	20		**3NA7 807-6**		**3NA6 807-6**		013		
	25		**3NA7 810-6**		**3NA6 810-6**		013		
	32		**3NA7 812-6**		**3NA6 812-6**		013		
	35		**3NA7 814-6**		**3NA6 814-6**		013		
Size 00	40	30	**3NA7 817-6**		**3NA6 817-6**		013	0.211	3
	50		**3NA7 820-6**		**3NA6 820-6**		013		
	63		**3NA7 822-6**		**3NA6 822-6**		013		
	80		**3NA7 824-6**		**3NA6 824-6**		013		
	100		**3NA7 830-6**		**3NA6 830-6**		013		
Size 1	50	30	**3NA7 120-6**		**3NA6 120-6**		013	0.290	3
	63		**3NA7 122-6**		**3NA6 122-6**		013		
	80		**3NA7 124-6**		**3NA6 124-6**		013		
	100		**3NA7 130-6**		**3NA6 130-6**		013		
	125		**3NA7 132-6**		**3NA6 132-6**		013		
	160		**3NA7 136-6**		**3NA6 136-6**		013		
	200	47.2	**3NA7 140-6**		**3NA6 140-6**		013	0.440	
Size 2	80	47.2	**3NA7 224-6**		**3NA6 224-6**		013	0.450	3
	100		**3NA7 230-6**		**3NA6 230-6**		013		
	125		**3NA7 232-6**		**3NA6 232-6**		013		
	160		**3NA7 236-6**		**3NA6 236-6**		013		
	200		**3NA7 240-6**		**3NA6 240-6**		013		
	224	57.8	**3NA7 242-6**		**3NA6 242-6**		013	0.660	
	250		**3NA7 244-6**		**3NA6 244-6**		013		
	300		**3NA7 250-6**		**3NA6 250-6**		013		
	315		**3NA7 252-6**		**3NA6 252-6**		013		

Further versions on request.
For characteristics see the ET 01 interactive catalog (CD-ROM).

Selection and ordering data

		I_n	Width	Non-insulated metal grip lugs		Price group	Weight 1 item	Pack. unit
				Order No.	Price			
		A	mm		1 item		kg	Items
LV HRC fuse links Rated voltage 500 V AC, 440 V DC (except sizes 000 and 00: 500 V AC, 250 V DC) Utilization category gL/gG, for cable and conductor 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 in LV HRC in-line fuse switch disconnectors of size 00							
	**Size 000**	2	21	**3NA3 802**		013	0.133	9
		4		**3NA3 804**		013		
		6		**3NA3 801**		013		
		10		**3NA3 803**		013		
		16		**3NA3 805**		013		
		20		**3NA3 807**		013		
		25		**3NA3 810**		013		
		32		**3NA3 812**		013		
		35		**3NA3 814**		013		
		40		**3NA3 817**		013		
		50		**3NA3 820**		013		
		63		**3NA3 822**		013		
		80		**3NA3 824**		013		
		100		**3NA3 830**		013		
	**Size 00**	35	30	**3NA3 814-7**		013	0.200	3
		50		**3NA3 820-7**		013		
		63		**3NA3 822-7**		013		
		80		**3NA3 824-7**		013		
		100		**3NA3 830-7**		013		
		125		**3NA3 832**		013	0.220	
		160		**3NA3 836**		013		
	Size 0	6	30	**3NA3 001**		013	0.340	3
		10		**3NA3 003**		013		
		16		**3NA3 005**		013		
		20		**3NA3 007**		013		
		25		**3NA3 010**		013		
		32		**3NA3 012**		013		
		35		**3NA3 014**		013		
		40		**3NA3 017**		013		
		50		**3NA3 020**		013		
		63		**3NA3 022**		013		
		80		**3NA3 024**		013		
		100		**3NA3 030**		013		
		125		**3NA3 032**		013		
		160		**3NA3 036**		013		
	**Size 1**	16	30	**3NA3 105**		013	0.290	3
		20		**3NA3 107**		013		
		25		**3NA3 110**		013		
		35		**3NA3 114**		013	0.300	
		40		**3NA3 117**		013		
		50		**3NA3 120**		013		
		63		**3NA3 122**		013		
		80		**3NA3 124**		013		
		100		**3NA3 130**		013		
		125		**3NA3 132**		013		
		160		**3NA3 136**		013		
		200	47.2	**3NA3 140**		013	0.440	
		224		**3NA3 142**		013		
		250		**3NA3 144**		013		

For characteristics see the ET 01 interactive catalog (CD-ROM).

LV HRC fuses

Selection and ordering data

	I_n	Width	Non-insulated metal grip lugs		Price group	Weight 1 item	Pack. unit
			Order No.	Price 1 item			
	A	mm				kg	Items
LV HRC fuse links Rated voltage 500 V AC, 440 V DC Utilization category gL/gG, for cable and conductor protection							
	The 300 A, 355 A and 425 A fuse links do not conform to a VDE mark. They correspond to the standard, but are not permissible.						
 **Size 2**	35	47.2	**3NA3 214**		013	0.450	3
	50		**3NA3 220**		013		
	63		**3NA3 222**		013		
	80		**3NA3 224**		013		
	100		**3NA3 230**		013		
	125		**3NA3 232**		013		
	160		**3NA3 236**		013		
	200		**3NA3 240**		013		
	224		**3NA3 242**		013		
	250		**3NA3 244**		013		
	300	57.8	**3NA3 250**		013	0.650	
	315		**3NA3 252**		013		
	355		**3NA3 254**		013		
	400		**3NA3 260**		013		
 **Size 3**	200	57.8	**3NA3 340**		013	0.650	3
	224		**3NA3 342**		013		
	250		**3NA3 344**		013		
	300		**3NA3 350**		013		
	315		**3NA3 352**		013		
	355		**3NA3 354**		013		
	400		**3NA3 360**		013		
	425	71.2	**3NA3 362**		013	1,000	
	500		**3NA3 365**		013		
	630		**3NA3 372**		013		
 **Size 4**	630	101.8	**3NA3 472**		013	2,500	1
	800		**3NA3 475**		013		
	1000		**3NA3 480**		013		
	1250		**3NA3 482**		013		
Size 4a	500	101.8	**3NA3 665**		013	2,700	1
	630		**3NA3 672**		013		
	800		**3NA3 675**		013		
	1000		**3NA3 680**		013	2,840	
	1250		**3NA3 682**		013		

For characteristics see the ET 01 interactive catalog (CD-ROM).

Selection and ordering data

	I_n	Width	Insulated metal grip lugs		Price group	Weight 1 item	Pack. unit
			Order No.	Price 1 item			
	A	mm				kg	Items
LV HRC fuse links with combination alarm Rated voltage 500 V AC, 440 V DC (except sizes 000 and 00: 500 V AC, 250 V DC) Utilization category gL/gG, for cable and conductor protection							
	The 300 A and 355 A fuse links do not conform to a VDE mark. They correspond to the standard, but are not permissible.						
Size 000	2	21	**3NA2 802**		013	0.140	9
	4		**3NA2 804**		013		
	6		**3NA2 801**		013		
	10		**3NA2 803**		013		
	16		**3NA2 805**		013		
	20		**3NA2 807**		013		
	25		**3NA2 810**		013		
	32		**3NA2 812**		013		
	35		**3NA2 814**		013		
	40		**3NA2 817**		013		
	50		**3NA2 820**		013		
	63		**3NA2 822**		013		
	80		**3NA2 824**		013		
	100		**3NA2 830**		013		
Size 00	125	30	**3NA2 832**		013	0.210	3
	160		**3NA2 836**		013		
Size 1	16	30	**3NA2 105**		013	0.290	3
	20		**3NA2 107**		013		
	25		**3NA2 110**		013		
	35		**3NA2 114**		013		
	40		**3NA2 117**		013		
	50		**3NA2 120**		013		
	63		**3NA2 122**		013		
	80		**3NA2 124**		013		
	100		**3NA2 130**		013		
	125		**3NA2 132**		013		
	160		**3NA2 136**		013		
	200	47.2	**3NA2 140**		013	0.440	
	224		**3NA2 142**		013		
	250		**3NA2 144**		013		
Size 2	35	47.2	**3NA2 214**		013	0.450	3
	50		**3NA2 220**		013		
	63		**3NA2 222**		013		
	80		**3NA2 224**		013		
	100		**3NA2 230**		013		
	125		**3NA2 232**		013		
	160		**3NA2 236**		013		
	200		**3NA2 240**		013		
	224		**3NA2 242**		013		
	250		**3NA2 244**		013		
	300	57.8	**3NA2 250**		013	0.660	
	315		**3NA2 252**		013		
	355		**3NA2 254**		013		
	400		**3NA2 260**		013		

For characteristics see the ET 01 interactive catalog (CD-ROM).

LV HRC fuses

Selection and ordering data

	I_n	Width	Non-insulated metal grip lugs		Price group	Weight 1 item	Pack. unit
			Order No.	Price 1 item			
	A	mm				kg	Items
LV HRC fuse links Rated voltage 690 V AC, 440 V DC (except sizes 000 and 00: 690 V AC, 250 V DC) Utilization category gL/gG, for cable and conductor protection							
The 300 A and 425 A fuse links do not conform to a VDE mark. They correspond to the standard, but are not permissible.							
 **Size 000**	2	21	**3NA3 802-6**		013	0.135	3
	4		**3NA3 804-6**		013		
	6		**3NA3 801-6**		013		
	10		**3NA3 803-6**		013		
	16		**3NA3 805-6**		013		
	20		**3NA3 807-6**		013		
	25		**3NA3 810-6**		013		
	32		**3NA3 812-6**		013		
	35		**3NA3 814-6**		013		
 **Size 00**	40	30	**3NA3 817-6**		013	0.200	3
	50		**3NA3 820-6**		013		
	63		**3NA3 822-6**		013		
	80		**3NA3 824-6**		013		
	100		**3NA3 830-6**		013		
Size 1	50	30	**3NA3 120-6**		013	0.290	3
	63		**3NA3 122-6**		013		
	80		**3NA3 124-6**		013		
	100		**3NA3 130-6**		013		
	125		**3NA3 132-6**		013		
	160		**3NA3 136-6**		013		
	200	47.2	**3NA3 140-6**		013	0.430	
Size 2	80	47.2	**3NA3 224-6**		013	0.430	3
	100		**3NA3 230-6**		013		
	125		**3NA3 232-6**		013		
	160		**3NA3 236-6**		013		
	200		**3NA3 240-6**		013		
	224	57.8	**3NA3 242-6**		013		
	250		**3NA3 244-6**		013	0.680	
	300		**3NA3 250-6**		013		
	315		**3NA3 252-6**		013		
 **Size 3**	250		**3NA3 344-6**		013	0.660	3
	315		**3NA3 352-6**		013		
	355	71.2	**3NA3 354-6**		013	1,000	
	400		**3NA3 360-6**		013		
	425		**3NA3 362-6**		013		
	500		**3NA3 365-6**		013		

For characteristics see the ET 01 interactive catalog (CD-ROM).

Selection and ordering data

		I_n	Width	Non-insulated metal grip lugs		Price group	Weight 1 item	Pack. unit
				Order No.	Price			
		A	mm		1 item		kg	Items
LV HRC fuse links Rated voltage 690 V AC (except sizes 000 and 00: 500 V AC) Utilization category aM, for switchgear protection in the short-circuit range								
	**Size 000**	6	21	**3ND1 801**		014	0.130	3
		10		**3ND1 803**		014		
		16		**3ND1 805**		014		
		20		**3ND1 807**		014		
		25		**3ND1 810**		014		
		32		**3ND1 812**		014		
		35		**3ND1 814**		014		
		40		**3ND1 817**		014		
		50		**3ND1 820**		014		
		63		**3ND1 822**		014		
		80		**3ND1 824**		014		
	Size 00	100	30	**3ND1 830**		014	0.190	3
		125		**3ND1 832**		014		
		160		**3ND1 836**		014		
	**Size 1**	63	46	**3ND1 122**		014	0.460	3
		80		**3ND1 124**		014		
		100		**3ND1 130**		014		
		125		**3ND1 132**		014		
		160		**3ND1 136**		014		
		200		**3ND1 140**		014	0.410	
		250		**3ND1 144**		014		
	**Size 2**	125	57	**3ND1 232**		014	0.700	3
		160		**3ND1 236**		014		
		200		**3ND1 240**		014		
		250		**3ND1 244**		014		
		315		**3ND1 252**		014	0.650	
		355		**3ND1 254**		014	0.700	
		400		**3ND1 260**		014	0.650	
	Size 3	315	71.2	**3ND1 352**		014	1.030	3
		355		**3ND1 354**		014		
		400		**3ND1 360**		014		
		500		**3ND1 365**		014		
		630		**3ND1 372**		014	1.000	

For characteristics see the ET 01 interactive catalog (CD-ROM).

SITOR fuse links

Overview

Assignment to LV HRC fuse bases, LV HRC fuse switch disconnectors and LV HRC switch disconnectors for LV HRC fuse links

For SITOR fuse link	Rated current	Required conductor cross section	LV HRC fuse base		Suitable LV HRC fuse puller	LV HRC fuse switch disconnector		LV HRC switch-disconnector for LV HRC fuse links	
	I_n		Order No.	max. current[1]	Order No.	Order No.	max. current[1]	Order No.	max. current[1]
	A	mm² Cu		A			A		A
3NE8 015	25	4	**3NH3 030/**	25	**3NX1 011**	**3NP407/**	25	**3KL50 30/**	25
3NE8 003	35	6	**3NH4 030**	35		**3NP50**	35	**3KM50 30**	33
3NE8 017	50	10		50			45		45
3NE8 018	63	16		63			55		54
3NE8 020	80	25	**3NH3 030/**	80	**3NX1 011**	**3NP407/**	70	**3KL52 30/**	68
3NE8 021	100	35	**3NH4 030**	100		**3NP50**	85	**3KM52 30**	89
3NE8 022	125	50		125			100		106
3NE8 024	160	70		160			130		130
3NE8 015-1	25	4	**3NH3 030/**	25	**3NX1 011**	**3NP407/**	25	**3KL50 30/**	25
3NE8 003-1	35	6	**3NH4 030**	35		**3NP50**	35	**3KM50 30**	35
3NE8 017-1	50	10		50			45		45
3NE8 018-1	63	16		63			55		55
3NE8 020-1	80	25	**3NH3 030/**	80	**3NX1 011**	**3NP407/**	70	**3KL52 30/**	70
3NE8 021-1	100	35	**3NH4 030**	100		**3NP50**	85	**3KM52 30**	85
3NE8 022-1	125	50		125			100		100
3NE8 024-1	160	70		160			130		130
3NE1 813-0	16	1.5	**3NH3 030/**	16	**3NX1 011**	**3NP35/**	16	**3KL50 30/**	16
3NE1 814-0	20	2.5	**3NH4 030**	20		**3NP40**	20	**3KM50 30**	20
3NE1 815-0	25	4		25			25		25
3NE1 803-0	35	6		35			35		35
3NE1 802-0	40	10	**3NH3 030/**	40	**3NX1 011**	**3NP35/**	40	**3KL50 30/**	40
3NE1 817-0	50	10	**3NH4 030**	50		**3NP40**	50	**3KM50 30**	50
3NE1 818-0	63	16		63			63		63
3NE1 820-0	80	25		80			80	**3KL52 30/**	80
								3KM52 30	
3NE1 021-0	100	35	**3NH3 030/**	100	**3NX1 011**	**3NP407/**	100	**3KL52 30/**	100
3NE1 022-0	125	50	**3NH4 030**	125		**3NP50**	125	**3KM52 30**	125
3NE1 224-0	160	70	**3NH3 230/**	160	**3NX1 011**	**3NP42/**	160	**3KL55 30/**	160
3NE1 225-0	200	95	**3NH4 230**	200		**3NP52**	200	**3KM55 30**	200
3NE1 227-0	250	120		250			250		250
3NE1 230-0	315	2 × 70	**3NH3 330**	315		**3NP43/**	315	**3KL57 30/**	315
						3NP53		**3KM57 30**	
3NE1 331-0	350	2 × 95	**3NH3 330**	350	**3NX1 011**	**3NP43/**	350	**3KL57 30/**	330
3NE1 332-0	400	2 × 95		400		**3NP53**	400	**3KM57 30**	375
3NE1 333-0	450	2 × 120	**3NH3 430**	450		**3NP44/**	450	**3KL61 30**	450
3NE1 334-0	500	2 × 120		500		**3NP54**	500		500
3NE1 337-0	710	2 x 240							
3NE1 435-0	560	2 × 150	**3NH3 430**	560	**3NX1 011**	**3NP54**	560	**3KL61 30**	560
3NE1 436-0	630	2 × 185		630			630		630
3NE1 438-0	800	2 × 24							

For LV HRC fuse bases, see page 1/38.
For LV HRC fuse puller, see page 1/41.
For LV HRC fuse switch disconnectors, see page 1/42.
For LV HRC switch disconnectors, see the Low-Voltage Controlgear, Switchgear and Systems catalog.

1) The maximum currents are valid for natural air cooling. For higher air cooling rates of v ≥ 1 m/s the fuse links can be operated with rated current I_n.

Overview

Assignment to LV HRC fuse bases, LV HRC fuse switch disconnectors and LV HRC switch disconnectors for LV HRC fuse links

For SITOR fuse links	Rated current	Required conductor cross section	LV HRC fuse base		Suitable LV HRC fuse puller	LV HRC fuse switch disconnectors		LV HRC switch-disconnectors for LV HRC fuse links	
	I_n		Order No.	max. current[1]	Order No.	Order No.	max. current[1]	Order No.	max. current[1]
	A	mm² Cu		A			A		A
3NE4 101	32	6	**3NH3 120/**	32	**3NX1 011**	**3NP42** [2]**/**	32/32	**3KL55 30/**	32
3NE4 102	40	10	**3NH4 230**	40		**3NP52**	38/40	**3KM55 30**	40
3NE4 117	50	10		50			45/50		50
3NE4 118	63	16		63			59/63		63
3NE4 120	80	25	**3NH3 120/**	80	**3NX1 011**	**3NP42** [2]**/**	76/80	**3KL55 30/**	80
3NE4 121	100	35	**3NH4 230**	100		**3NP52**	90/95	**3KM55 30**	95
3NE4 122	125	50		125			115/120		120
3NE4 124	160	70		160			144/150		150
3NE3 221	100	35	**3NH3 220/**	100	**3NX1 011**	**3NP42** [2]**/**	90/100	**3KL55 30/**	90
3NE3 222	125	50	**3NH4 230**	125		**3NP52**	110/120	**3KM55 30**	110
3NE3 224	160	70		160			140/150		140
3NE3 225	200	95		200			175/190		175
3NE3 227	250	120		250			210/230		210
3NE3 230-0B	315	185	**3NH3 330**	305	**3NX1 011**	**3NP43/**	270/285	**3KL57 30/**	240
3NE3 231	350	240		335		**3NP53**	290/310	**3KM57 30**	265
3NE3 232-0B	400	240		380			310/330		290
3NE3 233	450	2 × 150		425			380/360		320
3NE3 332-0B	400	240	**3NH3 430**	400	**3NX1 011**	**3NP44/**	345/340	**3KL61 30** [2]	340
3NE3 333	450	2 × 150		450		**3NP54**	385/380		380
3NE3 334-0B	500	2 × 150		500			430/450		440
3NE3 335	560	2 × 185		560			490/510		500
3NE3 336	630	2 × 185	**3NH3 430**	630	**3NX1 011**	**3NP54**	560/580	**3KL61 30** [2]	540
3NE3 337-8	710	2 × 200		680		**3NP44/**	590/630	**3KL61 30**	600
3NE3 338-8	800			700		**3NP54**	605/630		630
3NE3 340-0	900			700			630/630		630

For LV HRC fuse bases, see page 1/38.
For LV HRC fuse puller, see page 1/41.
For LV HRC fuse switch disconnectors, see page 1/42.
For LV HRC switch disconnectors, see the Low-Voltage Controlgear, Switchgear and Systems catalog.

Area of application

SITOR fuse links are super-quick fuse links of the LV HRC type of construction for short-circuit protection of power semiconductors and especially of thyristors, GTOs and diodes. Owing to their design, the fuse links are particularly suitable under alternating loads. When considering the time constants in the shorted circuit, the SITOR fuse links can also be used in DC circuits. The 3NE3 2, 3NE3 3, 3NE4 1, 3NE8 0 and 3NE8 7...-1 series have, as a result of their super-quick characteristics, the utilization category aR (accompanied semiconductor protection), with the exception of the rated currents ≤ 63 A (the 3NE8 7..-1 series ≤ 50 A).

The new series 3NE1...-0 with rated currents from 16 A to 630 A has, on the other hand, utilization category gR (general purpose semiconductor protection). The fuse links of this series are suitable both for conductor protection (overload and short-circuit protection) and semiconductor protection.
Their overload behavior is matched to the operating conditions of voltage-source DC link converters (V converters).

For further information, see the DA 94.1 catalog.

Design

Series 3NE1 ...-0, 3NE4 1.., 3NE8 0..

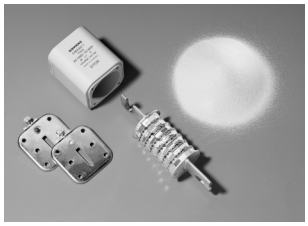
Acc. to DIN 43 620 and therefore suitable for use in LV HRC fuse bases and in fuse switch disconnectors.

Series 3NE3 2.., 3NE3 3..

Acc. to DIN 43 653 with 110 mm inside dimension (bolt-on links), also suitable for use in LV HRC fuse bases and in fuse switch-disconnectors.

Series 3NE8 7...-1

Acc. to DIN 43 653 with 80 mm inside dimension (bolt-on links), provided only for screwing into units.



1) The maximum currents are valid for natural air cooling. For higher air cooling rates of v ≥ 1 m/s the fuse links can be operated with rated current I_n.
2) When maintaining pollution degree 2 according to DIN VDE 0660 Part 100, the rated insulation voltage of the 3KL, 3KM and 3NP switch disconnectors (designed for pollution degree 3) is 1000 V.

SITOR fuse links

Features

- According to DIN VDE 0636 and IEC 60 269
- Dimensions according to DIN 43 620 (DIN 43 653 for 3NE8 7)
- Rated voltage: 660 V AC/690 V AC
- Utilization category gR (aR), for semiconductor protection
- Labeled: SITOR

Selection and ordering data

	Size	I_n	Width	Utilization category	Order No.	Price	Price group	Weight 1 item	Pack. unit
		A	mm			1 item		kg	Items
	Rated voltage 660 V AC for mounting into LV HRC fuse bases								
	00	25	30	gR	**3NE8 015**		131	0.200	1
		35			**3NE8 003**		131		
		50			**3NE8 017**		131		
		63			**3NE8 018**		131		
		80		aR	**3NE8 020**		131		
		100			**3NE8 021**		131		
		125			**3NE8 022**		131		
		160			**3NE8 024**		131		
	Rated voltage 690 V AC								
	With bolt-on links mounting dimension: 80 mm								
	00	20	21	gR	**3NE8 714-1**		131	0.130	5
		25			**3NE8 715-1**		131		
		32			**3NE8 701-1**		131		
		40			**3NE8 702-1**		131		
		50			**3NE8 717-1**		131		
		63		aR	**3NE8 718-1**		131		
		80			**3NE8 720-1**		131		
		100			**3NE8 721-1**		131		
		125			**3NE8 722-1**		131		
		160			**3NE8 724-1**		131		
		200			**3NE8 725-1**		131		
		250			**3NE8 727-1**		131		
		315			**3NE8 731-1**		131		
	for mounting into LV HRC fuse bases								
	00	25	30	gR	**3NE8 015-1**		131	0.200	1
		35			**3NE8 003-1**		131		
		50			**3NE8 017-1**		131		
		63			**3NE8 018-1**		131		
		80		aR	**3NE8 020-1**		131		
		100			**3NE8 021-1**		131		
		125			**3NE8 022-1**		131		
		160			**3NE8 024-1**		131		

For characteristics see the ET 01 interactive catalog (CD-ROM).
For further information and designs see the DA 94.1catalog.

Features

- According to DIN VDE 0636 and IEC 60 269
- Dimensions according to DIN 43 620 and DIN 43 653 with 110 mm inside dimension
- Rated voltage: 690 V AC/1000 AC
- Utilization category gR (aR), for semiconductor protection
- Labeled: SITOR

Selection and ordering data

Size	I_n	Width	Utilization category	Order No.	Price	Price group	Weight 1 item	Pack. unit
	A	mm			1 item		kg	Items
Rated voltage 600 V AC								
3	710	71.2	gR	**3NE1 437-1**		131	0.900	1
	800			**3NE1 438-1**		131		
Rated voltage 690 V AC								
For mounting into LV HRC fuse bases								
000	16	21	gR	**3NE1 813-0**		131	0.130	9
	20			**3NE1 814-0**		131		
	25			**3NE1 815-0**		131		
	35			**3NE1 803-0**		131		
	40			**3NE1 802-0**		131		
	50			**3NE1 817-0**		131		
	63			**3NE1 818-0**		131		
	80			**3NE1 820-0**		131		
00	100	30		**3NE1 021-0**		131	0.200	3
	125			**3NE1 022-0**		131		
1	160	52	gR	**3NE1 224-0**		131	0.550	
	200			**3NE1 225-0**		131		
	250			**3NE1 227-0**		131		
	315			**3NE1 230-0**		131		
2	350	60	gR	**3NE1 331-0**		131	0.700	
	400			**3NE1 332-0**		131		
	450			**3NE1 333-0**		131		
	500			**3NE1 334-0**		131		
3	560	71.2	gR	**3NE1 435-0**		131	0.900	1
	630			**3NE1 436-0**		131		
Rated voltage 1000 V AC								
For mounting into LV HRC fuse bases (observe the rated voltage of the LV HRC fuse bases)								
0	32	30	gR	**3NE4 101**		131	0.327	1
	40			**3NE4 102**		131	0.270	
	50			**3NE4 117**		131		
	63		aR	**3NE4 118**		131		
	80			**3NE4 120**		131		
	100			**3NE4 121**		131		
	125			**3NE4 122**		131		
	160			**3NE4 124**		131		

For characteristics see the ET 01 interactive catalog (CD-ROM).
For further information and designs see the DA 94.1. catalog

SITOR fuse links

Features

- According to DIN VDE 0636 and IEC 60 269
- Dimensions according to DIN 43 620
- Rated voltage: 690 V AC/1000 AC
- Utilization category aR for semiconductor protection
- Labeled: SITOR

Selection and ordering data

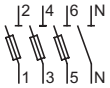
Size	I_n	Width	Utilization category	Order No.	Price	Price group	Weight 1 item	Pack. unit
	A	mm			1 item		kg	Items
Rated voltage 690 V AC								
with bolt-on links mounting dimension: 110 mm, also for mounting into LV HRC fuse bases (observe the rated voltage of LV HRC fuse bases)								
2	900	60	aR	**3NE3 340-8**		131	0.700	1
Rated voltage 800 V AC								
2	800	60	aR	**3NE3 338-8**		131	0.700	1
Rated voltage 900 V AC								
2	710	60	aR	**3NE3 337-8**		131	0.700	1
Rated voltage 1000 V AC								
1	100	52	aR	**3NE3 221**		131	0.550	1
	125			**3NE3 222**		131		
	160			**3NE3 224**		131		
	200			**3NE3 225**		131		
	250			**3NE3 227**		131		
	315			**3NE3 230-0B**		131		
	350			**3NE3 231**		131		
	400			**3NE3 232-0B**		131		
	450			**3NE3 233**		131		
2	400	60	aR	**3NE3 332-0B**		131	0.700	
	450			**3NE3 333**		131		
	500			**3NE3 334-0B**		131		
	560			**3NE3 335**		131		
	630			**3NE3 336**		131		

For characteristics see the ET 01 interactive catalog (CD-ROM).
For further information and designs see the DA 94.1 catalog.

Features

- IEC 60 269-2,
- NF C 63 210-63 211-60 200, NBN C 63 269-2 en -2-1
- Rated voltage 690 V AC
- No switching under load
- No-voltage changing of fuses
- Utilization category: AC-20b, DC, DC-20b.
- Without or with signal detector for signaling the tripping of the fuse link

Selection and ordering data

	I_n	For fuse Size	MW	Order No.	Price	Price group	Weight 1 item	Pack. unit
	A	mm x mm			1 item		kg	Items
Base for cylindrical fuses, draw-out assembly, 70 mm mounting depth								
without signal detector								
 1-pole								
	20	8.5 x 31.5	1	**3NW7 310**		018	0.058	12
	32	10 x 38	1	**3NW7 011**		018	0.080	
	50	14 x 51	1.5	**3NW7 111**		018	0.095	6
	100	22 x 58	2	**3NW7 211**		018	0.145	
1-pole + N								
	20	8.5 x 31.5	2	**3NW7 350**		018	0.120	
	32	10 x 38	2	**3NW7 051**		018	0.167	
	50	14 x 51	3	**3NW7 151**		018	0.215	3
	100	22 x 58	4	**3NW7 251**		018	0.330	
2-pole								
	20	8.5 x 31.5	2	**3NW7 320**		018	0.112	6
	32	10 x 38	2	**3NW7 021**		018	0.162	
	50	14 x 51	3	**3NW7 121**		018	0.195	1
	100	22 x 58	4	**3NW7 221**		018	0.300	
 3-pole								
	20	8.5 x 31.5	3	**3NW7 330**		018	0.167	4
	32	10 x 38	3	**3NW7 031**		018	0.243	
	50	14 x 51	4.5	**3NW7 131**		018	0.295	1
	100	22 x 58	6	**3NW7 231**		018	0.691	
3-pole + N								
	20	8.5 x 31.5	4	**3NW7 360**		018	0.227	3
	32	10 x 38	4	**3NW7 061**		018	0.327	
	50	14 x 51	6	**3NW7 161**		018	0.315	1
	100	22 x 58	8	**3NW7 261**		018	0.475	

Cylindrical fuses

Features

- IEC 60 269-2, NF C 63 210-63 211-60 200, NBN C 63 269-2 en -2-1, CEI 32-4
- Rated breaking capacity:
  - 100 kA AC
  - 400 V versions 20 kA AC
- Cylindrical fuses do not conform to DIN VDE 0636 and thus it is impossible for them to receive a VDE mark of conformity
- Sizes 8.5 mm x 31.5 mm and 10 mm x 38 mm are UL approved
- Sizes 14 mm x 51 mm and 22 mm x 58 mm UL approval on request

Selection and ordering data

Size	I_n	U_n	Order No.	Price	Price group	Weight 1 item	Pack. unit
mm × mm	A	V		1 item		kg	Items
Cylindrical fuses Utilization category gL/gG, for cable and conductor protection							
 8.5 × 31.5	2	400	**3NW6 302-1**		018	0.004	10
	4		**3NW6 304-1**		018		
	6		**3NW6 301-1**		018		
	10		**3NW6 303-1**		018		
	16		**3NW6 305-1**		018		
	20		**3NW6 307-1**		018		
 10 × 38	2	500	**3NW6 002-1**		018	0.008	10
	4		**3NW6 004-1**		018		
	6		**3NW6 001-1**		018		
	8		**3NW6 008-1**		018		
	10		**3NW6 003-1**		018		
	12		**3NW6 006-1**		018		
	16		**3NW6 005-1**		018		
	20		**3NW6 007-1**		018		
	25		**3NW6 010-1**		018		
	32	400	**3NW6 012-1**		018		
14 × 51	4	500	**3NW6 104-1**		018	0.019	10
	6		**3NW6 101-1**		018		
	8		**3NW6 108-1**		018		
	10		**3NW6 103-1**		018		
	12		**3NW6 106-1**		018		
	16		**3NW6 105-1**		018		
	20		**3NW6 107-1**		018		
	25		**3NW6 110-1**		018		
	32		**3NW6 112-1**		018		
	50	400	**3NW6 120-1**		018		
 22 × 58	8	500	**3NW6 208-1**		018	0.051	10
	10		**3NW6 203-1**		018		
	12		**3NW6 206-1**		018		
	16		**3NW6 205-1**		018		
	20		**3NW6 207-1**		018		
	25		**3NW6 210-1**		018		
	32		**3NW6 212-1**		018		
	40		**3NW6 217-1**		018		
	50		**3NW6 220-1**		018		
	63		**3NW6 222-1**		018		
	80		**3NW6 224-1**		018		
	100	400	**3NW6 230-1**		018		

Features

- IEC 60 269-2, NF C 63 210-63 211-60 200, NBN C 63 269-2 en -2-1, CEI 32-4
- Rated breaking capacity: 100 kA AC

Selection and ordering data

Size	I_n	U_n	Order No.	Price	Price group	Weight 1 item	Pack. unit
mm × mm	A	V		1 item		kg	Items
Cylindrical fuses Utilization category aM, for switchgear in the short-circuit range							
 10 × 38	0.5	500	**3NW8 000-1**		018	0.008	10
	1		**3NW8 011-1**		018		
	2		**3NW8 002-1**		018		
	4		**3NW8 004-1**		018		
	6		**3NW8 001-1**		018		
	8		**3NW8 008-1**		018		
	10		**3NW8 003-1**		018		
	16		**3NW8 005-1**		018		
	20		**3NW8 007-1**		018		
	25	400	**3NW8 010-1**		018		
14 × 51	2	500	**3NW8 102-1**		018	0.019	10
	4		**3NW8 104-1**		018		
	6		**3NW8 101-1**		018		
	8		**3NW8 108-1**		018		
	10		**3NW8 103-1**		018		
	16		**3NW8 105-1**		018		
	20		**3NW8 107-1**		018		
	25		**3NW8 110-1**		018		
	32		**3NW8 112-1**		018		
	40		**3NW8 117-1**		018		
	50	400	**3NW8 120-1**		018		
 22 × 58	10	500	**3NW8 203-1**		018	0.051	10
	16		**3NW8 205-1**		018		
	20		**3NW8 207-1**		018		
	25		**3NW8 210-1**		018		
	32		**3NW8 212-1**		018		
	40		**3NW8 217-1**		018		
	50		**3NW8 220-1**		018		
	63		**3NW8 222-1**		018		
	80		**3NW8 224-1**		018		
	100	400	**3NW8 230-1**		018		

SR60 busbar system

Overview

The SR60 busbar system is a component system for busbars for mounting into STAB and SIKUS distribution boards. The busbar clearance is 60 mm.

Basic elements

- Busbar routings
- Mounting components for mounting onto busbars
- Covers for ensuring protection against contact

Version

- DIN VDE 0636, DIN VDE 0660 Part 500/ Part 107
- Rated voltages: 690 V AC
- Rated short-circuit strength: 50 kA for a clearance of 250 mm between supports
- Rated current: depending on selected busbar up to 630 A AC
- The modular design facilitates planning and installation
- The design can be freely selected
- The terminal can be freely positioned
- Switchgear and modular installation devices can be integrated
- Adjustable multi-range busbar support for busbars 12 x 5 mm to 30 x 10 mm
- The set busbar width can be read at the side
- Fast mounting using mounting components which can be plugged on and locked in place
- Fast mounting using snap-on covers and shock-hazard protection elements
- Terminals can be retrofitted onto the busbars without having to be inserted

High-quality material

Busbar supports and fuse bases are manufactured from glass-fibre reinforced, thermoplastic polyester with the color RAL 7035, light gray. The material ensures excellent mechanical, chemical and electrical properties. Furthermore, the material has an extremely low flammability and meets the requirements of UL 94 V0.

Planning

When dimensioning the busbar routings as a function of the rated currents, the ambient temperature and the Cu busbar temperature must be observed. The location and the ability of the busbar system to dissipate heat through convection is extremely significant. As the conditions can be different in each distribution system, planning instructions are available in the manual “Technical Information”.

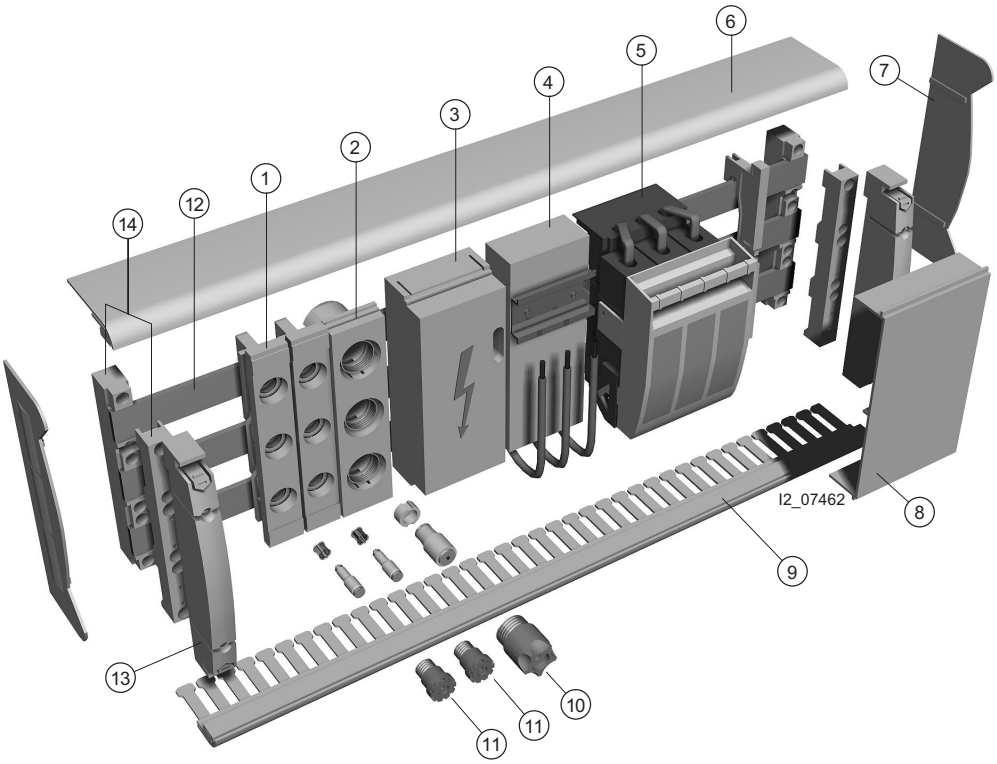
Panel widths:

The SR60 busbar system is designed for ALPHA distribution systems and is suitable for the following panel widths
W1 = 250 mm
W2 = 500 mm
W3 = 750 mm
W4 = 1000 mm
W5 = 1250 mm.

If the SR60 busbar-system is used in the center panel of an ALPHA 630 floor-mounted distribution board (SIKUS), the panel width must be 1340 mm (B5).

For mounting into ALPHA 160 (STAB 8GD1/2) wall-mounted distribution boards and ALPHA 630 (SIKUS) floor-mounted distribution boards one 8GD9 611 support per stay is required for stay mounting.

The panel widths determine the required busbar length.



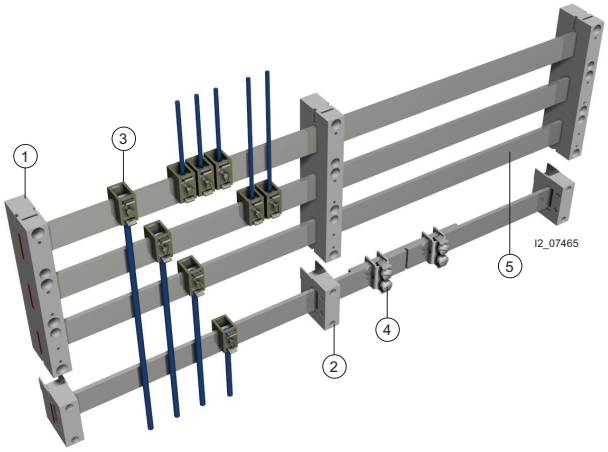
① Three-pole DIAZED bus-mounting bases
② Three-pole NEOZED bus-mounting bases
③ Field supply
④ Adapter for modular installation devices according to DIN 43 880
⑤ LV HRC fuse switch disconnectors
⑥ Edge
⑦ End cover
⑧ Residual field cover
⑨ Partition
⑩ DIAZED Fuses
⑪ NEOZED Fuses
⑫ Busbars
⑬ Support for the residual field cover
⑭ Busbar support

Not illustrated:
LV HRC bus-mounting fuse base

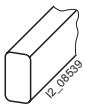
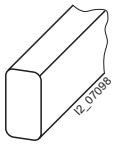
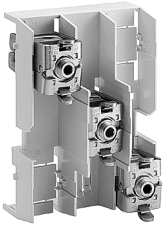
Overview

The busbar supports are set by adjusting their spacers to the required busbar dimensions. After inserting the busbars in the busbar supports, they are positioned by screwing together the busbar supports. The recommended spacing for supports is 250 mm. The terminals can be subsequently mounted onto the busbars without having to be laterally inserted.

① Busbar support, 3-phase
② N/PE busbar support
③ Incoming and outgoing terminals
④ Terminal
⑤ Busbar



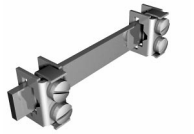
Selection and ordering data

	Busbar size H x D	Rated current	Busbar length	Panel width	Order No.	Price	Price group	Weight 1 item	Pack. unit
	mm × mm	A	mm			1 item		kg	Items
Busbar routing									
	For busbars								
	12 × 5	250	241	W1	**8GD9 182**		042	0.160	10
			491	W2	**8GD9 183**		042	0.328	
			741	W3	**8GD9 184**		042	0.495	
			991	W4	**8GD9 185**		042	0.662	
			1241	W5	**8GD9 186**		042	0.828	
			1340	W5	**8GD9 333**		042	0.900	
	20 × 5	300	200	W1	**8GD9 187**		042	0.289	
			450	W2	**8GD9 188**		042	0.567	
			700	W3	**8GD9 190**		042	0.846	
			950	W4	**8GD9 191**		042	1.124	
			1200	W5	**8GD9 192**		042	1.469	
			1350	W5	**8GD9 335**		042	1.700	
	20 × 10	400	200	W1	**8GD9 233**		042	0.580	5
			450	W2	**8GD9 234**		042	1.130	
			700	W3	**8GD9 235**		042	1.690	
			950	W4	**8GD9 236**		042	2.250	
			1200	W5	**8GD9 237**		042	2.940	
			1350	W5	**8GD9 337**		042	3.300	10
	30 × 5	350	200	W1	**8GD9 193**		042	0.434	
			450	W2	**8GD9 194**		042	0.851	
			700	W3	**8GD9 195**		042	1.268	
			950	W4	**8GD9 196**		042	1.686	
			1200	W5	**8GD9 197**		042	2.203	
			1350	W5	**8GD9 336**		042	2.500	
	30 × 10	630	200	W1	**8GD9 238**		042	0.870	5
			450	W2	**8GD9 240**		042	1.700	
			700	W3	**8GD9 241**		042	2.540	
			950	W4	**8GD9 242**		042	3.370	
			1200	W5	**8GD9 243**		042	4.410	
	**SR60 terminal plate** 3-phase, for conductors from 150 mm^2 to 300 mm^2 (illustration without cover)				**5SH3 535**		016	1.657	1
	**Connector block for SR60 busbars** 3-phase, for conductors from 35 mm^2 to 120 mm^2				**8US19 21-1AA00**		103	0.590	1

SR60 busbar system

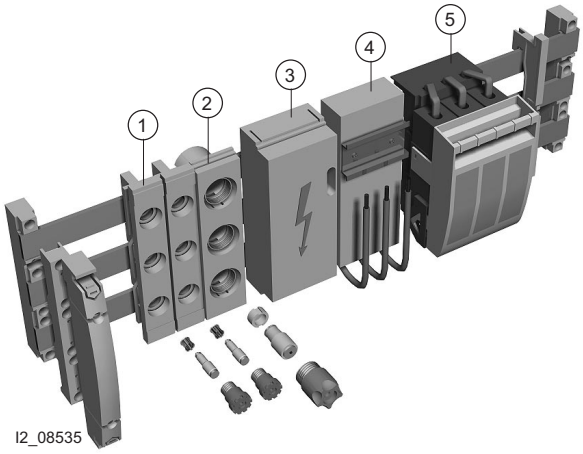
Selection and ordering data

		Dimensions W x H x D	Order No.	Price	Price group	Weight 1 item	Pack. unit
		mm × mm × mm		1 item		kg	Items
Busbar routing							
	**Busbar support for SR60 busbar system** for 5 or 10 mm thick busbars and a 12, 15, 20, 25 or 30 mm busbar height						
	60 mm busbar distance						
	external 3-phase	20 × 220 × 50/55	**8US19 23-2AA00**		103	0.160	10
	internal 3-phase	20 × 185 × 50/55	**8US19 23-3AA00**		103	0.150	
	internal 4-phase	20 × 245 × 50/55	**8US19 23-4AA00**		103	0.200	
	**N/PE busbar support** for mounting onto busbar supports, can also be used as single support						
	1-phase	20 × 90 × 50/55	**5SH3 506**		016	0.070	

		Conductor cross section	Tightening torque	Order No.	Price	Price group	Weight	Pack. unit
		up to mm²	Nm				kg	
Terminals					1 item		1 item	Items
 8JH4 102  8JH4 104	**Terminals for one busbar** 12 mm × 5 mm	1.5 to 16	1.4	**8JH4 102**		113	0.010	50
		16 to 35	3.0	**8JH4 104**		113	0.030	
 8JH4 105  8JK3 061		16 to 70	6.0	**8JH4 105**		113	0.030	25
		16 to 95	10.0	**8JH4 106**		113	0.070	
		25 to 120	10.0	**8JK3 061**		113	0.090	10
		16		**8GR5 282**		040	0.012	100
		35		**8GR5 460**		040	0.040	20
		50		**8GR5 461**		040	0.034	
 8GR5 448  8GR5 450	12 mm × 10 mm	16		**8GR5 448**		040	0.023	50
		35		**8GR5 450**		040	0.046	20
		70		**8GR5 451**		040	0.055	
		120		**8GR5 452**		040	0.108	
 8GR5 451  8GR5 452								
 8JH4 105  8JK3 061	**Terminal for two busbars** 12 mm × 10 mm	16 to 35	6.0	**8JH4 105**		113	0.030	25
		16 to 70	10.0	**8JH4 106**		113	0.070	
		25 to 50	10.0	**8JK3 061**		113	0.090	10
	**Extension terminal** for 12 mm × 5 mm busbar busbar for mounting on-site (1 set = 2 items)		6.0	**8JK3 201**	1 set	113	1 set 0.100	5 sets
	**Terminal for circular conductor**				1 item		1 item	Items
	20 mm × 5 mm to 30 mm × 10 mm	150 to 240		**8US19 41-2BB00**		103	0.280	6

Overview

① Three-pole DIAZED bus-mounting bases
② Three-pole NEOZED bus-mounting bases
③ Field supply
④ Adapter for modular installation devices according to DIN 43 880
⑤ LV HRC fuse switch disconnectors



Selection and ordering data

Size	Rated current	Rated voltage	Order No.	Price	Price group	Weight 1 item	Pack. unit
	A	V		1 item		kg	Items
Mounting components							
NEOZED SR60 bus-mounting base for busbar thickness 5 mm for NEOZED adapter sleeves 3-pole							
D02	63	400	**5SG6 202**		016	0.141	10
excess width with clearance for wiring							
D02	63	400	**5SG6 204**		016	0.154	
for busbar thickness 10 mm NEOZED adapter sleeves 3-pole							
D02	63	400	**5SG6 203**		016	0.138	
excess width with clearance for wiring							
D02	63	400	**5SG6 205**		016	0.149	
DIAZED SR60 bus-mounting base for busbar thickness 5 mm for use of DIAZED SR60 adapter rings 3-pole							
DII	25	500	**5SF6 014**		016	0.230	10
DIII	63	690	**5SF6 214**		016	0.318	
for use of DIAZED screw adapters 3-pole							
DII	25	500	**5SF6 015**		016	0.222	
DIII	63	690	**5SF6 215**		016	0.310	
For busbar thickness 10 mm for use of DIAZED adapter rings 3-pole							
DII	25	500	**5SF6 016**		016	0.233	
DIII	63	690	**5SF6 216**		016	0.316	
for use of DIAZED screw adapters 3-pole							
DII	25	500	**5SF6 017**		016	0.220	
DIII	63	690	**5SF6 217**		016	0.328	

SR60 busbar system

Selection and ordering data

	Size	Width	Order No.	Price	Price group	Weight 1 item	Pack. unit
		mm		1 item		kg	Items
Mounting components							
	**NEOZED SR60 cover**						
	D02	27	**5SH5 241**		016	0.026	10
	excessive width with wiring space						
	D02	36	**5SH5 242**		016	0.031	
	with double width for a larger clearance for wiring						
	D02	54	**5SH5 243**		016	0.040	
	**DIAZED SR60 cover**						
	DII	42	**5SH2 042**		016	0.050	10
	DIII	57	**5SH2 242**		016	0.061	
	with double width for more wiring space						
	DII	84	**5SH2 043**		016	0.084	
	DIII	114	**5SH2 243**		016	0.106	

	Size	Thread	For fuse links	Order No.	Price	Price group	Weight 1 item	Pack. unit
			A		1 item		kg	Items
	DIAZED SR60 adapter rings only for DIAZED SR60 bus-mounting bases							
	DII	E 27	2	**5SH3 071**		016	0.005	25
			4	**5SH3 072**		016		
			6	**5SH3 073**		016		
			10	**5SH3 074**		016		
			16	**5SH3 075**		016		
			20	**5SH3 076**		016	0.004	
	DIII	E 33	2	**5SH3 078**		016	0.008	50
			4	**5SH3 080**		016		
			6	**5SH3 081**		016		
			10	**5SH3 082**		016		
			16	**5SH3 083**		016		
			20	**5SH3 084**		016	0.006	
			25	**5SH3 085**		016	0.007	25
			35	**5SH3 086**		016	0.006	
			50	**5SH3 087**		016	0.005	

For NEOZED screw caps, adapter sleeves and fuse links, see chapter NEOZED fuses.
For DIAZED screw caps, adapter sleeves and fuse links, see chapter DIAZED fuses.

Selection and ordering data

Mounting components

SR60 LV HRC bus-mounting fuse base
Size 00
with cover, top terminals,
for 5 and 10 mm busbar thickness
3-pole
terminals up to 70 mm^2
rated voltage 690 V AC

	Width	Order No.	Price	Price group	Weight 1 item	Pack. unit
	mm		1 item		kg	Items
with saddle-type terminal connection		**3NH4 052**		014	0.641	1
with screw-type terminal connection, screw M8		**3NH4 053**		014	0.646	

Busbar adapter for SR60 busbars
Height 182 mm with AWG 10 connection cables for any device up to 32 A

like motor feeders with 3VU13 circuit-breakers and contactors						
with 1 mounting rail of 35 mm	54	**8US12 61-5NA00**		103	0.241	1
with 2 mounting rails of 35 mm, 105 mm tier spacing	54	**8US12 61-6NA00**		103	0.270	
	108	**8US12 81-6NA00**		103	0.430	
like 3VU16 circuit-breaker						
with 1 mounting rail of 35 mm	72	**8US12 11-5NE00**		103	0.300	
for motor feeders with 3VU16 circuit-breakers and contactors as well as 3VH16 SIKUFEST starter combination up to 28 A						
with 2 mounting rails of 35 mm, 85 mm tier spacing	72	**8US12 71-2NA20**		103	0.320	

for any device up to 80 A
like 3VU16 circuit-breaker >32 A,
motor feeders with 3VU16 circuit-breakers and 3TF35 contactors as well as the 3VH16 35 SIKUFEST starter combination

with 2 mounting rails of 35 mm, 85 mm tier spacing	72	**8US12 71-6MA20**		103	0.400	

For further busbar adapters and fuse switch-disconnectors, see the Low-Voltage Controlgear, Switchgear and Systems catalog.

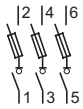
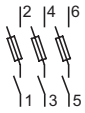
Fuse switch disconnectors for SR60 busbars
climate-proof, rated operational voltage 690 V AC
scope of delivery without LV HRC fuse links
size 00: for LV HRC fuse links with 21 mm width

I_u	For LV HRC links	Conductor cross section	Type of connection/ adapter	Order No.	Price	Price group	Weight 1 item	Pack. unit
A	Size	up to mm^2			1 item		kg	Items
100	00	1.5 to 35	top	**3NP40 16-1CK01**		103	0.470	1
			bottom	**3NP40 16-1CJ01**		103		
160	00	to 2 × 70	top	**3NP40 76-1CE01**		103	1.150	
			bottom	**3NP40 76-1CF01**		103		
160	00	2.5 to 70 (SIGUT terminal)	top	**3NP40 76-1CK01**		103		
			bottom	**3NP40 76-1CJ01**		103		
250	0 and 1	max. 150	top or bottom	**3NP42 76-1CG01**		103	3.600	
400	2	max. 240	top or bottom	**3NP43 76-1CG01**		103	4.500	
630	3	max. 2 × 240	top or bottom	**3NP44 76-1CG01**		103	4.300	

For further busbar adapters and fuse switch-disconnectors, see the Low-Voltage Controlgear, Switchgear and Systems catalog.

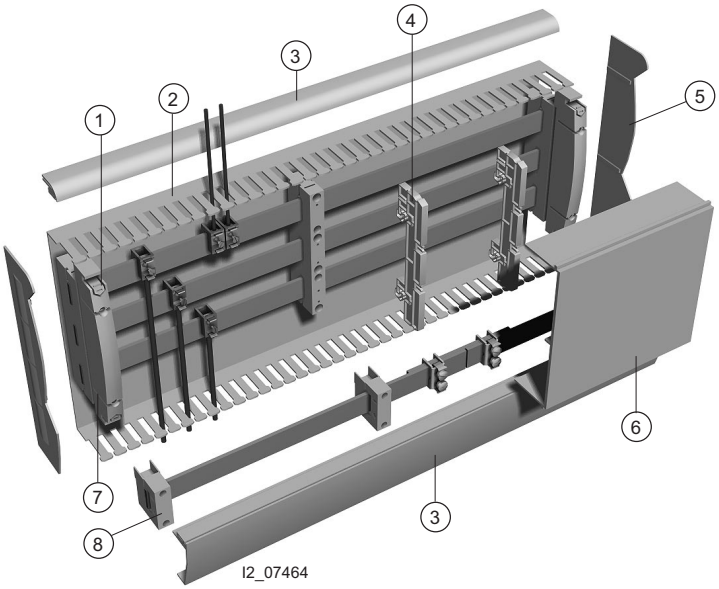
SR60 busbar system

Selection and ordering data

	Rated current AC	Rated voltage AC	Order No.	Price	Price group	Weight 1 item	Pack. unit
	A	V		1 item		kg	Items
Mounting components							
 **NEOZED SR60 bus-mounting switch disconnector** for busbar thickness 5 and 10 mm for 3-phase busbar system 3-pole Size D02 	63	400	**5SG7 230**		016	0.700	1
SR60 bus-mounting disconnector **for 10 x 38 mm cylindrical fuses** for busbar thickness 5 and 10 mm for 3-phase busbar system 3-pole 	32	690	**3NW7 430**		018	0.695	1
Auxiliary circuit switch 1 changeover contact, 24 to 230 V AC, 2 A AC, p.f. = 2 A			**5SH5 525**		016	0.007	10
Lateral module for NEOZED SR60 bus-mounting switch disconnectors for a better heat dissipation at a continuous load of over 35 A width: 9 mm			**5SH5 526**		016	0.040	5
Reducer for NEOZED fuse links D01 in the SR60 bus-mounting switch disconnector			**5SH5 527**		016	0.001	20

Overview

① Edge support
② Base
③ Edge
④ Support for the residual field cover
⑤ End cover
⑥ Residual field cover
⑦ Busbar support, 3-phase
⑧ N/PE busbar support



Selection and ordering data

		Length	Order No.	Price	Price group	Weight	Pack. unit
		mm				kg	
SR60 covers				1 item		1 item	Items
	**Base**						
	Height 230 mm	1100	**5SH3 526**		016	1.100	2
	290 mm		**5SH3 527**		016	1.300	
	Residual field cover						
	Depth 32 mm	1000 NEW	**5SH3 537**		016	0.075	2
	**Cover profile for busbars**			1 meter		1 meter	meter
	12 x 5 mm	2000	**8GR5 010**		040	0.040	50 m
				1 item		1 item	Items
	to 30 x 5 mm	1000	**8US19 22-2AA00**		103	0.070	10
	to 30 x 10 mm		**8US19 22-2BA00**		103	0.080	10
	**Edge**						
	H x W 17 x 36 mm	1100	**5SH3 528**		016	0.311	2
	77 x 36 mm		**5SH3 530**		016	0.583	
	**Partition**						
	slotted						
	H x W 17 x 86 mm	1100	**5SH3 531**		016	0.365	4

SR60 busbar system

Selection and ordering data

		Order No.	Price	Price group	Weight	Pack. unit
					kg	
DIAZED covers			1 item		1 item	Items
	**End cover for busbar support, lateral** Height 230 mm	**5SH3 533**		016	0.038	4
	290 mm (1 set = 2 items)	**5SH3 534**	1 set	016	1 set 0.048	2 sets
	End cover for busbar support, top 3-pole (1 item)	**8US19 22-1AC00**	1 item	103	1 item 0.021	Items 10
	4-pole (1 set = 2 items)	**8US19 22-1AB00**	1 set	103	1 set 0.056	5 sets
	**Edge support and support for partition**	**5SH3 532**	1 item	016	1 item 0.106	Items 2
	**Support for the residual field cover** for the residual field cover	**5SH3 536**		016	0.040	10