Fuse Devices

Mounting Application

Design

DIN-rail

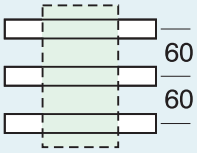
SG80911



D0 D0 Fuse-Bases

D0 D0 Switch-Disconnectors

C Cylindrical Switch-Disconnectors



Busbar
60 mm

SG82311



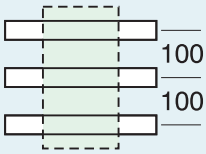
D0 D0 Fuse-Bases

D0 D0 Switch-Disconnectors

C Cylindrical Switch-Disconnectors

D DII Fuse-Bases, DIII Fuse-Bases

NH NH Fuse-Switch-Disconnectors

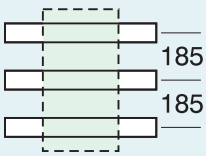


Busbar
100 mm

SG45512



NH NH Fuse-Switch-Disconnectors

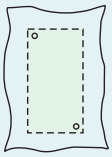


Busbar
185 mm

SG46912



NH NH Fuse-Switch-Disconnectors



Mounting Plate

SG45512



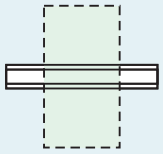
NH NH Fuse-Switch-Disconnectors

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Fuse Devices

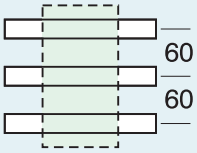
Mounting Application

Design


DIN-rail

SG80911

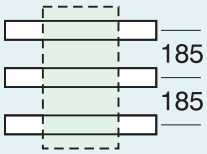

D0 D0 Fuse-Bases
D0 D0 Switch-Disconnectors
C Cylindrical Switch-Disconnectors



Busbar
60 mm

SG82311

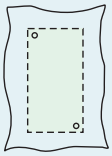

D0 D0 Fuse-Bases
D0 D0 Switch-Disconnectors
C Cylindrical Switch-Disconnectors
D DII Fuse-Bases, DIII Fuse-Bases
NH NH Fuse-Switch-Disconnectors



Busbar
185 mm

SG47012


NH NH Fuse-Switch-Disconnectors


Mounting Plate

SG45612


NH NH Fuse-Switch-Disconnectors

Fuse-Base D01+D02

Rated Current/Poles/Width			Type Designation	Article No.	Units per package

Fuse-Base FCFBD02DI

- One design for Fuse-links size D02 and D01, because adapter springs for screw caps D02 are in scope of delivery
- Only screw cap D02 for all applications necessary
- Mounting on DIN-rail or mounting plate possible
- Finger and hand touch safe according to BGV A3, ÖVE-EN 6
- Fuse-base is equipped with holes for sealing

SG80211



63 A	1	27 mm	FCFBD02DI-1	148599	15/60
63 A	3	81 mm	FCFBD02DI-3	148810	5/20

Screw Caps Z-D0./SK

wa_sg04013



D01	max. 16 A	Z-D01/SK	100650	20
D02	max. 63 A	Z-D02/SK	100651	20

Adapter Spring Z-D02/SIKA-HF

- To apply D01-Fuse-links into the screw cap Z-D02/SK

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D02-D01	Z-D02/SIKA-HF	263149	50 / 3000

Accessories for FCFBD02DI-.

Fuse-links Z-D0./SE-...
Cartridge-ring adapter inserts Z-D02-PE-... und Z-D02-D01-PE-...
Adapter spring Z-D02/SIKA-HF (Scope of delivery)
Cartridge-ring adapter insert plier Z-D0-PE-z see chapter Accessories Fuse Devices
For busbar blocks and feed terminals refer to the technical part, fuse-switch-disconnector, and ordering part, busbar systems.

Switch-Disconnector-Fuse D01

Poles/Rated uninterrupted current (A)		Type Designation	Article No.	Units per package

With visual tripping indicator Z-SLS/D01 (empty)

- Rated operational voltage 230/400 VAC
  1-pole 60 VDC, 2-pole 110 VDC
- Suitable for fuse-links with operating classes gG (gL) , aM
- Mechanical current coding is integrated
- Lead-sealable
- Supply side from top or bottom

SG80411



1	max. 16 A	Z-SLS/D01/1	263155	18 / 180
1+N	max. 16 A	Z-SLS/D01/1+N	263158	9 / 90
2	max. 16 A	Z-SLS/D01/2	263156	9 / 90
3	max. 16 A	Z-SLS/D01/3	263157	6 / 60
3+N	max. 16 A	Z-SLS/D01/3+N	263159	4 / 40

Accessories

Fuse-links Z-D01/SE-.. see chapter Accessories Fuse Devices

Fuse-Switch-Disconnector D02+D01

SG80611



Poles/Rated uninterrupted current (A)	Type Designation	Article No.	Units per package

Standard Z-SLS/NEOZ (empty)

- Rated operational voltage 230/400 VAC
  1-pole 110 VDC, 2-pole 220 VDC
- Suitable for fuse-links with operating classes gG (gL) , aM
- Mechanical current coding with Fuse-link set
- Lead-sealable
- Supply side from top or bottom

1	max. 63 A	Z-SLS/NEOZ/1	248235	12 / 120
1+N	max. 63 A	Z-SLS/NEOZ/1+N	248237	6 / 60
2	max. 63 A	Z-SLS/NEOZ/2	248233	6 / 60
3	max. 63 A	Z-SLS/NEOZ/3	248234	4 / 40
3+N	max. 63 A	Z-SLS/NEOZ/3+N	248236	3 / 30

Fuse-Switch-Disconnector D02+D01

SG80711



Poles/Rated uninterrupted current (A)	Type Designation	Article No.	Units per package

- Rated operational voltage 1-pole 60-230 VAC / 60-110 VDC
  2-pole 60-400 VAC / 60-220 VDC
  1+N, 3-pole, 3+N 60-400 VAC
- Mechanical current coding with Fuse-link set
- Lead-sealable
- Supply side from top or bottom

Complete with captive current code Z-SLS/CEK

1-pole	10 A	Z-SLS/CEK10/1	272587	12 / 120
1-pole	16 A	Z-SLS/CEK16/1	263135	12 / 120
1-pole	25 A	Z-SLS/CEK25/1	263136	12 / 120
3-pole	16 A	Z-SLS/CEK16/3	248243	4 / 40
3-pole	25 A	Z-SLS/CEK25/3	248244	4 / 40
3-pole	35 A	Z-SLS/CEK35/3	248245	4 / 40
3-pole	40 A	Z-SLS/CEK40/3	150687	4 / 16
3-pole	50 A	Z-SLS/CEK50/3	248246	4 / 40
3-pole	63 A	Z-SLS/CEK63/3	263160	4 / 40

With fuse monitoring Z-SLK/NEOZ (empty)

- Rated operational voltage 1-pole 60-230 VAC / 60-110 VDC
  2-pole 60-400 VAC / 60-220 VDC
  1+N, 3-pole, 3+N 60-400 VAC
- Mechanical current coding with Fuse-link set
- Lead-sealable
- Supply side from top or bottom

SG80911



1+HS	max. 63 A	Z-SLK/NEOZ/1	248238	6 / 60
2+HS	max. 63 A	Z-SLK/NEOZ/2	248239	4 / 40
3+HS	max. 63 A	Z-SLK/NEOZ/3	248240	3 / 30
3+N+HS	max. 63 A	Z-SLK/NEOZ/3+N	248241	2 / 20

Accessories for Z-SLS/NEOZ, Z-SLS/CEK, Z-SLK/NEOZ, Z-SLK/D0

Metal locking device f. 1-pole Z-SLZ/SC
Plastic locking device f. 1-pole Z-SLZ/SP
Fuse-link set with visual tripping indicator Z-SLS/B-..
Fuse-link set without visual tripping indicator Z-SLS/E-..
Plug-in Busbars ...

Fuse-link sets complete

- For Z-SLS/NEOZ, Z-SLS/CEK, Z-SLK/NEOZ, Z-SLK/D0
- 1 set consists of 3 fuse-links, 3 gauge-pieces, 1 plastic box in the color of the visual tripping indicator - to snap on DIN-rail

SG81211



	Rated Current (A)	Type Designation	Article No.	Units per package
	With visual tripping indicator Z-SLS/B, rated operational voltage 60-400 V AC			
	1	Z-SLS/B-1A	268983	1 / 12 / 120
	2	Z-SLS/B-2A	268984	1 / 12 / 120
	4	Z-SLS/B-4A	268985	1 / 12 / 120
	6	Z-SLS/B-6A	268986	1 / 12 / 120
	10	Z-SLS/B-10A	268987	1 / 12 / 120
NEW	13	Z-SLS/B-13A	289972	1 / 12 / 120
	16	Z-SLS/B-16A	268988	1 / 12 / 120
	20	Z-SLS/B-20A	268989	1 / 12 / 120
	25	Z-SLS/B-25A	268990	1 / 12 / 120
NEW	32	Z-SLS/B-32A	289973	1 / 12 / 120
	35	Z-SLS/B-35A	268991	1 / 12 / 120
NEW	40	Z-SLS/B-40A	289974	1 / 12 / 120
	50	Z-SLS/B-50A	268992	1 / 12 / 120
	63	Z-SLS/B-63A	268993	1 / 12 / 120
	With visual tripping indicator Z-SLS/B, rated operational voltage 24-60 V AC / V DC			
	1	Z-SLS/B/24-1A	268994	1 / 12 / 120
	2	Z-SLS/B/24-2A	268995	1 / 12 / 120
	4	Z-SLS/B/24-4A	268996	1 / 12 / 120
	6	Z-SLS/B/24-6A	268997	1 / 12 / 120
	10	Z-SLS/B/24-10A	268998	1 / 12 / 120
NEW	13	Z-SLS/B/24-13A	289975	1 / 12 / 120
	16	Z-SLS/B/24-16A	268999	1 / 12 / 120
	20	Z-SLS/B/24-20A	269000	1 / 12 / 120
	25	Z-SLS/B/24-25A	269001	1 / 12 / 120
NEW	32	Z-SLS/B/24-32A	289976	1 / 12 / 120
	35	Z-SLS/B/24-35A	269002	1 / 12 / 120
NEW	40	Z-SLS/B/24-40A	289977	1 / 12 / 120
	50	Z-SLS/B/24-50A	269003	1 / 12 / 120
	63	Z-SLS/B/24-63A	269004	1 / 12 / 120
	Without visual tripping indicator Z-SLS/E, rated operational voltage 400 V AC, 220 V DC			
	2	Z-SLS/E-2A	263147	1 / 12 / 120
	4	Z-SLS/E-4A	263148	1 / 12 / 120
	6	Z-SLS/E-6A	269005	1 / 12 / 120
	10	Z-SLS/E-10A	269006	1 / 12 / 120
NEW	13	Z-SLS/E-13A	289978	1 / 12 / 120
	16	Z-SLS/E-16A	269007	1 / 12 / 120
	20	Z-SLS/E-20A	269008	1 / 12 / 120
	25	Z-SLS/E-25A	269009	1 / 12 / 120
NEW	32	Z-SLS/E-32A	289979	1 / 12 / 120
	35	Z-SLS/E-35A	269010	1 / 12 / 120
NEW	40	Z-SLS/E-40A	289990	1 / 12 / 120
	50	Z-SLS/E-50A	269011	1 / 12 / 120
	63	Z-SLS/E-63A	269012	1 / 12 / 120

Solid-link Set complete

- For Z-SLS/NEOZ, Z-SLK/NEOZ, Z-SLS/CEK
- 1 set consists of 3 solid-link inserts, 3 gauge-pieces, 1 plastic box to be snapped onto DIN rail
- By installing this set, the fuse-switch-disconnector is converted into a switch-disconnector

SG81311

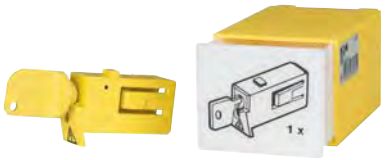


Rated Current	Type Designation	Article No.	Units per package
63 A	Z-SLS/TR-SET	100660	1 / 12 / 120

Switch-on-locking

- For Z-SLS/NEOZ, Z-SLS/CEK, Z-SLK/NEOZ, Z-SLK/D0
- Only one lock per device required

SG81011



	Type Designation	Article No.	Units per package
Plastic lock	Z-SLZ/SP	268981	1 / 12 / 120

Fuse-Switch-Disconnector D02+D01

SG80811



With visual tripping indicator Z-SLS/CB - Current coding by cartridge-ring adapter inserts

1	max. 63 A	Z-SLS/CB/1	248247	12 / 120
1+N	max. 63 A	Z-SLS/CB/1+N	167282	6 / 60
2	max. 63 A	Z-SLS/CB/2	248248	6 / 60
3	max. 63 A	Z-SLS/CB/3	248249	4 / 40
3+N	max. 63 A	Z-SLS/CB/3+N	167283	3 / 30

Accessories for Z-SLS/CB

Fuse-links Z-D0./SE-..
Cartridge-ring adapter inserts D01 Z-D02-D01/PE-..
Cartridge-ring adapter inserts D02 Z-D02/PE-..
Adapter spring D01 Z-SLS/CB-HF see chapter Accessories Fuse Devices

Adapter Spring

- For Z-SLS/CB/. for the use of fuse-links size D01

wa_sg02712



Size	Type Designation	Article No.	Units per package
D01	Z-SLS/CB-HF	263154	12 / 288

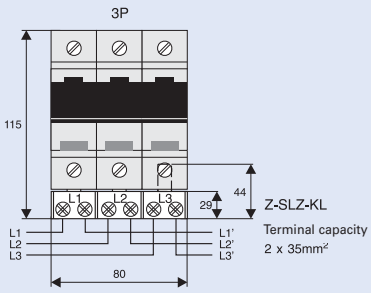
Double Terminal

- For Z-SLS/NEOZ, Z-SLS/CEK, Z-SLK/NEOZ, Z-SLK/D0

SG60212



Size	Type Designation	Article No.	Units per package
Terminal 2 x 3x35mm^2	Z-SLZ/KL	268982	15 / 150



Accessories for Z-SLS

For busbar blocks and feed terminals refer to the technical part, fuse-switch-disconnector, and ordering part, busbar systems.

xPole

Switch-Disconnector-Fuse D02+D01

SG11613



Poles/Rated uninterrupted current (A)		Type Designation	Article No.	Units per package
With visual tripping indicatior D02-LTS				
• Rated operational voltage 400 VAC • Suitable for fuse-links with operating classes gG (gL), aM • Only 4MU in width, busbar compatible to Xpole switchgear • Current coding with Cartridge-ring adapter inserts • Lead-sealable • Supply side from top or bottom • Version D02-LTS/63-3-HK with incorporated auxiliary switch • Delivered with Adapter Springs for fuse-links D01 or cylindrical fuse-links 10x38				
3	max. 63 A	D02-LTS/63-3	114320	3 / 54
3	max. 63 A	D02-LTS/63-3-HK	114322	3 / 54
3N	max. 63 A	D02-LTS/63-3N	114321	3 / 54

Accessories for D02-LTS/63-3..

D0 Fuse-links Z-D0./SE-...
Cartridge-ring adapter inserts D01: Z-D02-D01/PE-...
D02: Z-D02/PE-...
Adadpter Spring Z-D02-LTS-HF (scope of delivery)

C Fuse-links Z-C10/SE-...
Adadpter Spring Z-D02-LTS-HF (scope of delivery)

See chapter Accessories Fuse Devices

Adadpter Spring

- To accomodate D01 fuse-links or cylindrical fuse-links 10x38 in the Switch-disconnetor-fuse D02-LTS/63...

SG81811



Rated operational current Ie (A)	Size	Type Designation	Article No.	Units per package
16 32	D02-D01 C 10x38	Z-D02-LTS-HF	114323	12 / 288

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Fuse-Disconnector (empty)

- For cylindrical fuse-links
- The visual tripping indicator indicates the tripped fuse-link
- Lead-sealable

SG00612



SG36412



Poles	Size	Type Designation	Article No.	Units per package
For industry Z-SH.				
without visual tripping indicator				
1	10x38	Z-SH/1	263876	12 / 120
1+N	10x38	Z-SH/1N	263877	12 / 120
2	10x38	Z-SH/2	263878	6 / 60
3	10x38	Z-SH/3	263879	4 / 40
3+N	10x38	Z-SH/3N	263880	4 / 40
with visual tripping indicator				
1	10x38	Z-SHL/1	263883	12 / 120
1+N	10x38	Z-SHL/1N	263884	12 / 120
2	10x38	Z-SHL/2	263885	6 / 60
3	10x38	Z-SHL/3	263886	4 / 40
3+N	10x38	Z-SHL/3N	263887	4 / 40

SG00412



Rated Current (A)	Size	Type Designation	Article No.	Units per package
For household applications Z-SI., 1-pole				
without visual tripping indicator				
10	8.5x23	Z-SI/10/1	263889	12 / 120
16	10.3x25.8	Z-SI/16/1	263890	12 / 120
20	8.5x31.5	Z-SI/20/1	263891	12 / 120
25	10.3x31.5	Z-SI/25/1	263892	12 / 120
32	10.3x38	Z-SI/32/1	263893	12 / 120
with visual tripping indicator				
20	8.5x31.5	Z-SIL/20/1	263901	12 / 120
25	10.3x31.5	Z-SIL/25/1	263902	12 / 120
32	10.3x38	Z-SIL/32/1	263903	12 / 120

SG53912



Rated Current (A)	Size	Type Designation	Article No.	Units per package
For household applications Z-SI., 1+N-pole				
without visual tripping indicator				
10	8.5x23	Z-SI/10/1N	263894	12 / 120
16	10.3x25.8	Z-SI/16/1N	263895	12 / 120
20	8.5x31.5	Z-SI/20/1N	263896	12 / 120
25	10.3x31.5	Z-SI/25/1N	263897	12 / 120
32	10.3x38	Z-SI/32/1N	263898	12 / 120
with visual tripping indicator				
20	8.5x31.5	Z-SIL/20/1N	263938	12 / 120
25	10.3x31.5	Z-SIL/25/1N	263939	12 / 120
32	10.3x38	Z-SIL/32/1N	263940	12 / 120

Accessories for Z-SH., Z-SI.

Fuse-links Z-C/SE...
see chapter Accessories Fuse Devices

Fuse-Switch-Disconnector (empty) C10-SLS, VLC

- The visual tripping indicator indicates the tripped fuse-link
- Rated operational voltage 690 VAC
- For cylindrical fuse-links with operating classes gG (gL), aM
- Lead-sealable
- Supply side from top or bottom

SG27212



Number of Poles / Size		Type Designation	Article No.	Units per package
Size 10x38 C10-SLS, Rated operational current 32 A				
without Visual Tripping Indicator				
1	10x38	C10-SLS/32/1	112220	12 / 108
1+N	10x38	C10-SLS/32/1N	112221	12 / 108
2	10x38	C10-SLS/32/2	112222	6 / 54
3	10x38	C10-SLS/32/3	112223	4 / 36
3+N	10x38	C10-SLS/32/3N	112224	4 / 36
with Visual Tripping Indicator				
1	10x38	C10-SLS/32/1-L	112225	12 / 108
1+N	10x38	C10-SLS/32/1N-L	112226	12 / 108
2	10x38	C10-SLS/32/2-L	112227	6 / 54
3	10x38	C10-SLS/32/3-L	112228	4 / 36
3+N	10x38	C10-SLS/32/3N-L	112229	4 / 36

SG29112



Size 14x51 VLC14, Rated operational current 50 A				
without Visual Tripping Indicator				
1	14x51	VLC14-1P	285361	12 / 96
1+N	14x51	VLC14-1P+N	285362	6 / 48
2	14x51	VLC14-2P	285363	6 / 48
3	14x51	VLC14-3P	285364	4 / 32
3+N	14x51	VLC14-3P+N	285365	3 / 24
with Visual Tripping Indicator				
1	14x51	VLC14-1P/L	285371	12 / 96
2	14x51	VLC14-2P/L	285373	6 / 48
3	14x51	VLC14-3P/L	285374	4 / 32

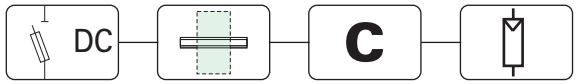
SG43612



Size 22x58 VLC22, Rated operational current 100 A				
without Visual Tripping Indicator				
1	22x58	VLC22-1P	285366	3 / 105
1+N	22x58	VLC22-1P+N	285367	2 / 48
2	22x58	VLC22-2P	285368	2 / 48
3	22x58	VLC22-3P	285369	1 / 35
3+N	22x58	VLC22-3P+N	285370	1 / 24
with Visual Tripping Indicator				
1	22x58	VLC22-1P/L	285376	3 / 105
2	22x58	VLC22-2P/L	285378	2 / 48
3	22x58	VLC22-3P/L	285379	1 / 35

Accessories for C10-SLS, VLC14, VLC22

Fuse-links Z-C10/SE...
Z-C14/SE...
Z-C22/SE...
see chapter Accessories Fuse Devices



Fuse-Disconnector (empty) FCFDC10DI-..-SOL

- String protection of PV generator
- The visual tripping indicator indicates the tripped fuse-link
  50-400 V flashing
  400-1000 V permanent light
- Rated operational voltage 1000 VDC
- For cylindrical fuse-links photovoltaic application
- Lead-sealable

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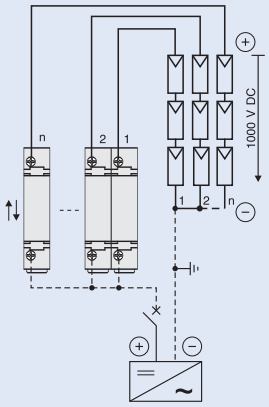


Number of Poles / Size		Type Designation	Article No.	Units per package
Size 10x38 FCFDC10DI, Rated operational current 25 A DC				
without Visual Tripping Indicator				
1	10x38	FCFDC10DI-1-SOL	137256	12 / 108
2	10x38	FCFDC10DI-2-SOL	137257	6 / 54
with Visual Tripping Indicator				
1	10x38	FCFDC10DI-1L-SOL	137258	12 / 108
2	10x38	FCFDC10DI-2L-SOL	137259	6 / 54

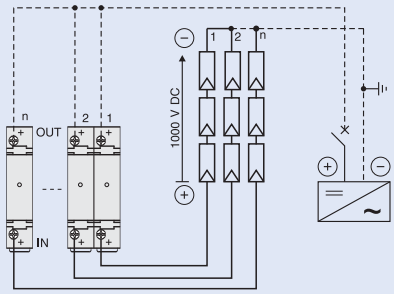
Application Photovoltaic

Earthed System

FCFDC10DI-1-SOL

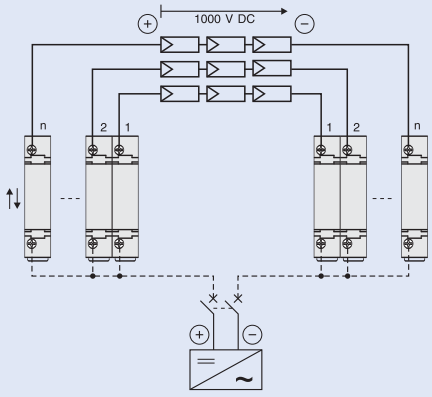


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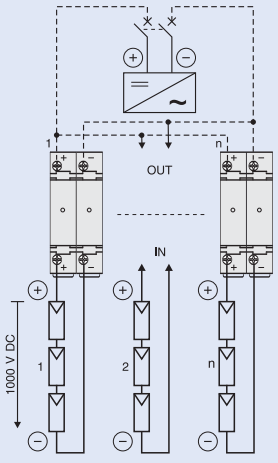


Unearthed System

FCFDC10DI-1-SOL



FCFDC10DI-2L-SOL



xPole

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Rated Operational Current Ie (A)	Rated Voltage Ue (V AC)	Size	Width	Utilisation	**Designation** Article No.	Notes	Units per Package

Slide Fuse-Base D02 (+D01)

- Incl. shock hazard protection cover with front and bottom plate and marking label
- Delivered empty, without screw caps

SG82411



max. 63	400	E18, D02	27	12 x 5/10 20 x 5/10 25 x 5/10	**D02-SO/63/3-R-27** 114315	Cartridge-ring adapter insert	10
			36	30 x 5/10 Double-T	**Z-D02/R/3-36** 100663	Cartridge-ring adapter insert	10
			54		**Z-D02/R/3-54** 100664	Cartridge-ring adapter insert	10

Cover

SG60412



Set for covering busbar support			36	D02	**Z-D02-S-AB-SET** 100662	Suitable for D02-SO/63/3-R-27	10

Switch-Disconnector-Fuse D02 (+D01)

- Incl. shock hazard protection cover with front and bottom plate
- Delivered empty, without screw caps

SG45912



max. 63	400	E18, D02	36	20 x 5/10 30 x 5/10 Double-T	**D02-S/63/3-RS** 284649	Cartridge-ring adapter insert	10

Accessories for D02-Type Slide Fuse-Base and D02-S/63/3-RS

Fuse-links Z-D0./SE...
Cartridge-ring adapter inserts D01 Z-D02-D01/PE...
Cartridge-ring adapter inserts D02 Z-D02/PE... see chapter Accessories Fuse Devices
Screw cap D02 Z-D02/SK
Adapter Spring D01 Z-D02-SIKA/HF

Screw Cap

wa_sg04013



63	400	E18, D02	–	D02-SO...	**Z-D02/SK** 100651	–	20/500

Adapter Spring

- To accommodate D01 fuse-links in Z-D02/SK screw caps

wa_sg02612



16	–	D02-D01	–	–	**Z-D02/SIKA-HF** 263149	–	50/3000

Rated Operational Current Ie (A)	Rated Voltage Ue (V AC)	Size	Width	Utilisation	**Designation** Article No.	Notes	Units per Package

Switch-Disconnector-Fuse D02 (+D01) + C

- Visiual tripping indicator is flashing
- Delivered empty, without cartridge-ring adapter inserts and fuse-links
- Delivered with adapter springs for fuse-links D01 or cylindrical fuse-links 10x38
- Contact position indicator red - green
- Plug-in technique without screw caps
- All-pole and hand independent switching of load
- Version D02-LTS/63/3-R-HK with incorporated auxliliary switch
- Lead-seal- and lockable

3P

SG82311



max. 63 max. 32	400 400	E18, D02 C 10x38	27	12 x 5/10 15 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10 Double-T	**D02-LTS/63/3-R** 114316	Cartridge-ring adapter insert without auxiliary switch	3
					D02-LTS/63/3-R-HK 114318	Cartridge-ring adapter insert with auxiliary switch	3

3P+N

SG82211



max. 63 max. 32	400 400	E18, D02 C 10x38	27	12 x 5/10 15 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10 Double-T	**D02-LTS/63/3N-R** 114317	Cartridge-ring adapter insert without auxiliary switch	3
					D02-LTS/63/3N-R-HK 114319	Cartridge-ring adapter insert with auxiliary switch	3

Accessories for D02-LTS/63..

D0 Fuse-links Z-D0./SE-...
Cartridge-ring adapter inserts D01: Z-D02-D01/PE-...
D02: Z-D02/PE-...
Adapter spring Z-D02-LTS-HF (scope of delivery)

C Fuse-links Z-C10/SE-...
Adapter spring Z-D02-LTS-HF (scope of delivery)

See chapter Accessories Fuse Devices

Adapter Spring

SG81811



- to accommodate D01 fuse-links or cylindrical fuse-links 10x38 in the Switch-disconnector-fuse D02-LTS/63...

16 32	–	D02-D01 C 10x38	–	–	**Z-D02-LTS-HF** 114323	–	12 / 288

Rated Operational Current Ie (A)	Rated Voltage Ue (V AC)	Size	Width	Utilisation	**Designation** Article No.	Notes	Units per Package

Switch-Disconnector-Fuse D02 for Tariff application

- Visiual tripping indicator is flashing
- With fixed cartridge-ring adapter inserts, 3 inserted fuse-links and 2 dummy fuse-links for single-phase application
- Contact position indicator red - green
- Plug-in technique without screw caps
- All-pole and hand independent switching of load
- Lead-seal- and lockable

SG82311



3P

20	400	E18, D02	27	12 x 5/10 15 x 5/10 20 x 5/10	**D02-LTS/20/3-R** 172976		3
25				25 x 5/10 30 x 5/10 Double-T	**D02-LTS/25/3-R** 172973		3
35					**D02-LTS/35/3-R** 172974		3
50					**D02-LTS/50/3-R** 172975		3

Accessories for D02-LTS/../3-R

D0 Fuse-links Z-D0./SE-...

Rated Operational Current Ie (A)	Rated Voltage Ue (V AC)	Size	Width	Utilisation	**Designation** Article No.	Notes	Units per Package
Slide Fuse-Base DII and DIII							
• Incl. shock hazard protection cover with front and bottom plate and marking label • Delivered empty, without fuse carriers							
wa_sg01112							
max. 25	500	E27, D II	45	12 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10 Double-T	**DII-SO/25/3-R** 107965	Gauge ring	10
					DII-SO/25/3-R-PS 110394	Screw-in gauge ring	10
wa_sg01212							
max. 63	690	E33, D III	54	12 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10 Double-T	**DIII-SO/63/3-R** 107966	Gauge ring	10
					DIII-SO/63/3-R-PS 110395	Screw-in gauge ring	10
Cover							
wa_sg01713 Side cover				DII.	**SBS-RS60** 060541	Suitable for DII.-SO/.../3-R	10
Screw caps							
wa_sg04013 25	500	E27, D II	–	DII-SO...	**Z-DII/SK** 112148	–	50/600
63	500	E33, D III	–	DIII-SO...	**Z-DIII/SK** 112149	–	30/360
63	690	E33, D III	–	DIII-SO...	**Z-DIII/SK-690** 118904	–	3

Accessories for DII.-SO...

Fuse-links Z-DII./SE...
Gauge rings Z-DII./PE-...
Screw-in gauge rings Z-DII./PS-... see chapter Accessories Fuse Devices

Rated Operational Current Ie (A)	Max. Fuse-link 500V (A)	690V (A)	Size	Utilisation	Designation Article No.	Notes	Units per Package
NH-Fuse-Switch-Disconnector							
• Incl. shock hazard protection at the top and bottom (except with GST00-160-40-60-AOU, GST00-160-40-60-AOU-F) • Drill-free mounting							
SG45812 							
100	100	–	000	20 x 5/10 30 x 5/10 Double-T	**LTS-100/C00/3-R** 284690	Width 63 mm. Connection at the bottom. Lift terminal 1.5-50mm^2	1
SG45712 							
160	160	100	00	20 x 5/10 25 x 5/10 30 x 5/10 Double-T	**GST00-160-40-60-AOU** 224550	Connection at the top or bottom. Lift Terminal 1.5-50mm^2 No shock hazard	1
For ordering information on shock hazard protection BS-SET-GST00 see “Accessories” protection.							
SG45612 							
160	160	100	00	20 x 5/10 25 x 5/10 30 x 5/10 Double-T	**GST00-160-40-60-AOU-F** 149418	Connection at the top or bottom. Screw M8.	1
For ordering information on shock hazard protection BS-SET-GST00 see “Accessories” protection.							
SG46512 							
250	250	200	1	20 x 5/10 25 x 5/10 30 x 5/10 Double-T	**GST1-AO** 107250	Connection at the top. Screw M10.	1
					GST1-AU 107251	Connection at the bottom. Screw M10.	1
SG46412 							
400	400	315	2	20 x 5/10 25 x 5/10 30 x 5/10 Double-T	**GST2-AO** 107252	Connection at the top. Screw M10.	1
					GST2-AU 107253	Connection at the bottom. Screw M10.	1
SG46212 							
630	630	500	3	20 x 5/10 25 x 5/10 30 x 5/10 Double-T	**GST3-AO** 107254	Connection at the top. Screw M10.	1
					GST3-AU 107255	Connection at the bottom. Screw M10.	1
Accessories for NH-Fuse-Switch-Disconnector							
Shock Hazard Protection Set GST00							
wa_sg02912 							
–	–	–	–	GST00...	**BS-SET-GST00** 107955	1 set includes shock hazard protection at the top and bottom.	1
For NH-fuse-links Z-NH... and solid-links Z-NH-../TR see chapter Accessories Fuse Devices.							

xPole

Switch cover with Fuse Monitoring for NH-Fuse-Switch-Disconnector

- Operating indication 1 green LED
  Error indication 3 red LEDs (F1, F2, F3)
- Error indication via relay contacts (potential-free)
  1 NO + 1 NC contact
  AC15: 24 V / 4 A, 230 V / 3 A
  AC13: 24 V / 1 A, 220 V / 0.5 A
  Terminal capacity: 0.25 - 1.5 mm²

wa_sg01312



Rated Operational Voltage	Size	Utilisation	**Designation** Article No.	Notes	Units per Package
400-690 V / 50-60 Hz	00	GST00...	**GST00-DSI** 107956		1
	1	GST1...	**GST1-DSI** 107957		1
	2	GST2...	**GST2-DSI** 107958		1
	3	GST3...	**GST3-DSI** 107959		1

Terminal Capacity	Utilisation	**Designation** Article No.	Notes	Units per Package
Set of Prism Terminals				
70-150 mm²	GST1...	**PSK1** 038734	One set includes 3 prism terminals	1
120-240 mm²	GST2...	**PSK2** 043480	One set includes 3 prism terminals	1
120-300 mm²	GST3...	**PSK3** 048226	One set includes 3 prism terminals	1
Set of Double-Prism Terminals				
2x(70-95) mm²	GST1...	**PSK12** 041107	One set includes 3 double-prism terminals	1
2x(120-150) mm²	GST2...	**PSK22** 045853	One set includes 3 double-prism terminals	1
2x(120-240) mm²	GST3...	**PSK32** 050599	One set includes 3 double-prism terminals	1
Clamp-Type Terminal				
1.5-70 mm²	GST00	**SK00-GS** 149419		3
25-150 mm² Cu-Band 6 x 16 x 0.8 mm	GST1...	**SK1-GS** 107960		3
25-240 mm² Cu-Band 10 x 16 x 0.8 mm	GST2...	**SK2-GS** 107961		3
25-300 mm² Cu-Band 11 x 21 x 1 mm	GST3...	**SK3-GS** 107962		3

wa_vt00406

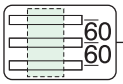


wa_vt00506



wa_vt00306





NH

SG21407

SG21307



SG21207



Rated Operational Voltage	Size	Utilisation	**Designation** Article No.	Notes	Units per Package
Compensation Covers for Cu-front distance 60 mm					
	00	GST00-160-40-60-AOU	**Z-GST00-AB/60** 119009		1
	1	GST1-AO GST1-AU	**Z-GST1-AB/60** 119010		1
	2	GST2-AO GST2-AU	**Z-GST2-AB/60** 118903		1

A part of black plastic cover of NH-fuse-switch-disconnector GST2 has to be broken off (predetermined breaking point) before mounting compensation cover Z-GST2-AB/60.

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Rated Operational Current Ie (A)	Max. Fuse-link 500V (A)	690V (A)	Size	Utilisation	Designation Article No.	Notes	Units per Package
NH-Fuse-Switch-Disconnector							
• Delivered with clamp straps Z-LTS-160-BK at LTS-160/00/3-R • LTS-160/00/3E-R allows to overbuilt busbar supports • Drill-free mounting							
SG45812 							
100	100	–	000	20 x 5/10 30 x 5/10 Double-T	**LTS-100/C00/3-R** 284690	Width 63 mm. Connection at the bottom. Lift terminal 1.5-50mm²	1
SG45512 							
160	160	100	00	12 x 5/10 NEW 15 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10 Double-T	**LTS-160/00/3E-R** 120603	Connection at the top or bottom. Lift terminal 2.5-70mm²	1 / 3
					LTS-160/00/3-R 263122	Connection at the top or bottom. Clamp Straps Terminal 4-70mm² or screw M8	1 / 3
For ordering information on shock hazard protection Z-LTS-00/3-R-AB see “Accessories” protection.							
SG46712 							
250	250	200	1	20 x 5/10 25 x 5/10 30 x 5/10	**LTS-250/1/3-R** 269348	Connection at the top or bottom. Screw M10.	1 / 32
SG46712 							
400	400	315	2	20 x 5/10 25 x 5/10 30 x 5/10	**LTS-400/2/3-R** 284648	Connection at the top or bottom. Screw M10	1 / 20
Accessories for NH-Fuse-Switch-Disconnector							
Shock Hazard Protection Set Z-LTS-00/3-R-AB							
wa_sg03012 							
–	–	–	00	LTS-160/00/3-R	**Z-LTS-00/3-R-AB** 263124	Protection at the top/bottom.	2 / 30
For NH-fuse-links Z-NH... and solid-links Z-NH-../TR see chapter Accessories Fuse Devices.							
Terminal cover Z-LTS-00/3-KA							
wa_sg03112 							
–	–	–	00	LTS-160/00/3-R	**Z-LTS-00/3-KA** 263126	–	4 / 80

xPole

Accessories for NH-Fuse-Switch-Disconnector

Clamp Straps

wa_sg02312



Terminal Capacity	Utilisation	Designation Article No.	Notes	Units per Package
4-70 mm² Cu	LTS-160/00/3-R	**Z-LTS-160-BK** 286812	3 Clamp Straps per device	3 / 180
70-150 mm² Cu/Al 18x10 mm Cu flat	LTS-250/1/3-R	**Z-LTS-250-BK** 286812	3 Clamp Straps per device	3 / 180

V-shaped terminal Z-LTS-..-V

- 70 mm² Sm (sectorial stranded)
- 95 mm² Se (sectorial solid)

wa_sg02412



V-shaped terminal lug size 00	LTS-160/00/3-R	**Z-LTS-00-V-LA** 263130	–	3 / 180
V-shaped terminal size 00		**Z-LTS-00-V-KL** 263128	–	3 / 180
V-cover cap size 00		**Z-LTS-00-V-KLA** 263132	–	3 / 180

- 185 mm² Sm (sectorial stranded)
- 240 mm² Se (sectorial solid)

V-shaped terminal lug	LTS-250/1/3-R LTS-400/2/3-R LTS-630/3/3-R	**Z-LTS-V-LA** 263129	–	3 / 180
V-shaped terminal		**Z-LTS-V-KL** 263127	–	3 / 180
V-cover cap		**Z-LTS-V-KLA** 263131	–	3 / 180

Compensation covers for the heights balancing the NH-fuse-switch-disconnectors

SG47312



70

Cover level to Cu-front distance: 70 mm	LTS-160/00/3(E)-R	**Z-LTS-160-AB/70** 288901	2 per device	1
	LTS-250/1/3-R	**Z-LTS-250-AB/70** 288902	2 per device	2
	LTS-400/2/3-R	**Z-LTS-400-AB/70** 288903	2 per device	2

90

Cover level to Cu-front distance: 90 mm	LTS-160/00/3(E)-R	**Z-LTS-160-AB/90** 288904	2 per device	1
	LTS-250/1/3-R	**Z-LTS-250-AB/90** 288905	2 per device	2
	LTS-400/2/3-R	**Z-LTS-400-AB/90** 288906	2 per device	2
	LTS-630/3/3-R	**Z-LTS-630-AB/90** 288907	2 per device	2

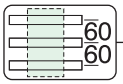
Lateral cover for LTS, LTS-L

SG16005



In connection with the compensation covers they serve as support for the front plate, as well as electric shock protection	LTS-L... LTS...	**Z-LTS-SAB/70-90** 288908	2

xPole



NH

Rated Operational Current Ie (A)	Max. Fuse-link 500V (A)	690V (A)	Size	Utilisation	**Designation** Article No.	Notes	Units per Package
NH-Vertical Fuse-Switch-Disconnector, 3-pole							
• Incl. terminal cover • Mounting: snap mechanism • NH-SLS size 00: with box terminals/screws set for connecting • NH-SLS size 00: 60mm spacing between busbar centers, mounting - snap mechanism							
SG46912 							
Without fuse monitoring							
160	160	160	00	12 x 5/10 15 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10 Double T profile Triple T profile	**NH-SLS-00/160-60** 106211	Connection at the top or bottom	1 / 182
With fuse monitoring							
160	160	–	00	12 x 5/10 15 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10 Double T profile Triple T profile	**NH-SLS-00/160-60-SI** 106216	Connection at the top or bottom	1 / 112
Teminal Cover/Size Compensation for GST.../LTS...							
wa_sg01712 							
For NH-SLS-00/160-60					**Z-NH-SLS-KA** 106223		2

For NH-fuse-links Z-NH/00... and solid-links Z-NH-...TR see chapter Accessories Fuse Devices.

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Rated Operational Current Ie (A)	Max. Fuse-link 500V (A)	690V (A)	Size	Utilisation	**Designation** Article No.	Notes	Units per Package

NH-Vertical Fuse-Switch-Disconnector, 3-pole

- Incl. terminal cover
- Drill-free mounting
- Clamp straps included in the delivery

wa_sg02212



160	160	100	00	20 x 10 25 x 10 30 x 10	**LTS-L/160/00-60-10-R** 289997	Connection at the top or bottom. Clamp strap 4-70mm^2 or screw M8.	1 / 100

Accessories for NH-Vertical Fuse-Switch-Disconnector

Terminal Capacity	Utilisation	**Designation** Article No.	Notes	Units per Package
Compensation covers for combination with NH-fuse-switch-disconnectors LTS				
70				
Cover level to Cu-front distance: 70 mm	LTS-L/160/00-60-10-R	**Z-LTS-L/160-AB/70-SET** 289995	1 set	1
90				
Cover level to Cu-front distance: 90 mm	LTS-L/160/00-60-10-R	**Z-LTS-L/160-AB/90-SET** 289996	1 set	1
Lateral cover for LTS, LTS-L				
In connection with the compensation covers they serve as support for the front plate, as well as electric shock protection	LTS-L... LTS...	**Z-LTS-SAB/70-90** 288908		2
Clamp Straps				
4-70 mm^2 Cu	LTS-L/160/00-60-10-R	**Z-LTS-160-BK** 286812	3 Clamp Straps per device	3 / 180
Screws				
M8 16-70 mm^2 Cu 16-95 mm^2 Al	LTS-L/160/00-60-10-R	**Z-LTS-SC** 263119	3 screws per device	3 / 180

SG16005



wa_sg02312



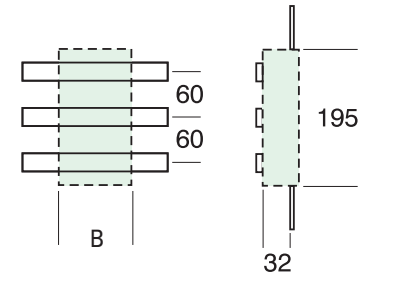
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For NH-fuse-links Z-NH/00... and solid-links Z-NH-...TR see chapter Accessories Fuse Devices.

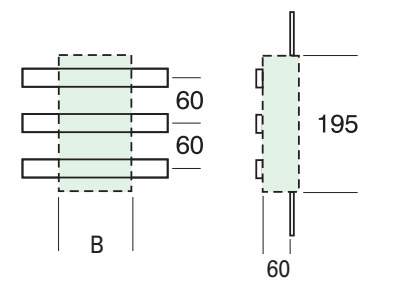
Coordination Tables

- Combinations possible without bending the copper busbar

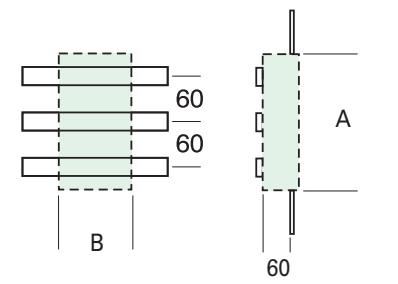




	Device	GST-00-160-40-60-AOU	LTS-100/C00/3-R	D02-S/63/3-RS	D02-LTS/63/3-R(-HK)	D02-SO/63/3-R-27 Z-D02/R/3-..	DII-SO/25/3-R(-PS)	DIII-SO/63/3-R(-PS)
	Accessory	BS-SET-GST00					SBS-RS60	SBS-RS60
Cu	12x5/10				X	X	X	X
	20x5/10	X	X	X	X	X	X	X
	25x5/10	X			X	X	X	X
	30x5/10	X	X	X	X	X	X	X
	Double-T	X	X	X	X	X	X	X
B [mm]		106	63	36	27	27 36-54	45	54



	Device	GST-00-160-40-60-AOU	LTS-100/C00/3-R	D02-LTS/63/3-R(-HK)
	Accessory	BS-SET-GST00		
Cu	12x5/10			X
	20x5/10	X	X	X
	25x5/10	X		X
	30x5/10	X	X	X
	Double-T	X	X	X
B [mm]		106	63	27



	Device	GST2-AO GST2-AU	GST1-AO GST1-AU	GST-00-160-40-60-AOU	LTS-100/C00/3-R	D02-LTS/63/3-R(-HK)
	Accessory	Z-GST2-AB/60	Z-GST1-AB/60	Z-GST00-AB/60 BS-SET-GST00		
Cu	12x5/10					X
	20x5/10	X	X	X	X	X
	25x5/10	X	X	X		X
	30x5/10	X	X	X	X	X
	Double-T	X	X	X	X	X
A [mm]		278	278	195-210	195	195
B [mm]		236	205	115	63	27

xPole

Rated Operational Current Ie (A)	Max. Fuse-link 500V (A)	690V (A)	Size	Utilisation	**Designation** Article No.	Notes	Units per Package

NH-Vertical Fuse-Switch-Disconnector, 3-pole

- Incl. terminal cover
- Screw- or hole less fixing with claw types
- Equipment supplied:
  NH-SLS size 00: with box terminals/screws set for connecting
  NH-SLS sizes 1, 2, 3: without claw types, with screws for connecting
- Busbar mounting:
  NH-SLS size 00: 100 mm spacing between busbar centers/optional with adapters for 185 mm, screw fixing
  NH-SLS sizes 1, 2, 3: 185 mm spacing between busbar centers, screw- or hole less fixing with claw types (bottom 106224, top 106225)

SG46912



NH-SLS-00/160

Without fuse monitoring

160	160	160	00	Z-NH-SLS-00-SAD...	**NH-SLS-00/160** 106210	Connection at the top or bottom	1 / 182
250	250	250	1	30 x 5/10 40 x 5/10 50 x 5/10 60 x 5/10	**NH-SLS-1/250** 106212	Connection at the top or bottom	1 / 41
400	400	400	2	80 x 5/10 100 x 5/10 120 x 5/10 Double T profile	**NH-SLS-2/400** 106213		1 / 41
630	630	630	3	Triple T profile	**NH-SLS-3/630** 106214		1 / 41

wa_sg01912



With fuse monitoring

160	160	–	00	Z-NH-SLS-00-SAD...	**NH-SLS-00/160-SI** 106215	Connection at the top or bottom	1 / 112
250	250	–	1	30 x 5/10 40 x 5/10 50 x 5/10 60 x 5/10	**NH-SLS-1/250-SI** 106217	Connection at the top or bottom	1 / 38
400	400	–	2	80 x 5/10 100 x 5/10 120 x 5/10 Double T profile	**NH-SLS-2/400-SI** 106218		1 / 38
630	630	–	3	Triple T profile	**NH-SLS-3/630-SI** 106219		1 / 38

For NH-fuse-links Z-NH/00... and solid-links Z-NH-...TR see chapter Accessories Fuse Devices.

Accessories for NH-Vertical Fuse-Switch-Disconnector

Terminal Capacity	Utilisation	**Designation** Article No.	Units per Package
Adapters			
Single adapter 100/185	... x 5/10	**Z-NH-SLS-00-SAD** 1 106220	
Double adapter 100/185	... x 5/10	**Z-NH-SLS-00-SADD** 106221	1
Adapter for drill-free mounting			
Single adapter 100/185	... x 10	**Z-NH-SLS-00-SAD-KR** 106222	1
Terminals clamps			
for bottom connection	NH-SLS Size 1, 2, 3	**Z-NH-SLS-KRU** 106224	3
for top connection	NH-SLS Size 1, 2, 3	**Z-NH-SLS-KRO** 106225	3
Terminal cover/Size compensation to NH-SLS size 1, 2, 3			
	NH-SLS-00/160	**Z-NH-SLS-KA** 106223	2
V-Connection terminals	**-240mm² sm / -300 mm² se**		
NH-SLS, Size 1, 2	1x 95-300mm² single sector conductor 1x 70-240mm² several sector conductor 1x 70-240mm² single round conductor 1x 50-185mm² several round conductor	**Z-NH-SLS-1+2-VAK** 106226	3
NH-SLS, Size 3	1x 150-300mm² single sector conductor 1x 120-240mm² several sector conductor 1x 120-300mm² several round conductor	**Z-NH-SLS-3-VAK** 106227	3
Extension for connection of 2 cable lugs			
	Size 1, 2	**Z-NH-SLS-1+2-AE** 1 106239	
	Size 3	**Z-NH-SLS-3-AE** 106240	1
Supports with DIN-rail for terminals, etc. ...			
Bottom part	Size 1, 2, 3	**Z-NH-SLS-1+2+3-GT** 106230	1
Cover	Size 1, 2, 3	**Z-NH-SLS-1+2+3-GTAB** 106231	1

wa_sg06206



Z-NH-SLS-00-SAD

SG00706



wa_sg01712



wa_sg06706



wa_sg06806



wa_sg05813



Z-NH-SLS-1+2+3-GT

wa_sg05713



Z-NH-SLS-1+2+3-GTAB

xPole

Accessories for NH-SLS

Current transformer

NH-SLS-00

- On Z-NH-SLS-00-SAD ... to be fixed with fastening clip Z-NH-SLS-00-BC

NH-SLS size 1, 2, 3

- To be placed in the standard vertical fuse-switch-disconnector - no additional space required
- Terminal clamp mounting is possible just the same
- Use Z-NH-SLS-1+2+3-BC fastening clips to fix the current transformer wires
- Supports for transformer terminals are available
  See accessories for NH-SLS size 1, 2, 3

wa_sg06906



Ratio	Acc.-Class	Rat. apparent power	Type Designation	Article No.	Units per package
150/5 A	1	3 VA	Z-WAS-150/5A-1	106232	3
200/5 A	1	4 VA	Z-WAS-200/5A-1	106233	3
250/5 A	1	4 VA	Z-WAS-250/5A-1	106234	3
300/5 A	1	5 VA	Z-WAS-300/5A-1	106235	3
400/5 A	1	5 VA	Z-WAS-400/5A-1	106236	3
500/5 A	1	5 VA	Z-WAS-500/5A-1	106237	3
600/5 A	1	5 VA	Z-WAS-600/5A-1	106238	3

wa_sg06606



Z-NH-SLS-00-BC

wa_sg07006



Z-NH-SLS-1+2+3-BC

Description	Type Designation	Article No.	Units per package
Fastening clips for current transformer on the busbar adapter of the 185 mm-busbar system (size 00)	Z-NH-SLS-00-BC	106229	3
(Transformer) wires to be fixed at the back of the NH-vertical fuse-switch-disconnector size 1, 2, 3	Z-NH-SLS-1+2+3-BC	106228	100

Rated Operational Current Ie (A)	Max. Fuse-link 500V (A)	690V (A)	Size	Utilisation	**Designation** Article No.	Notes	Units per Package

NH In-line Fuse Switch Disconnectors, 3 poles, FCFSDNH

- Incl. cover for connection area
- Mounting without the need of drilling (Accessories)
- Connection either at the top or at the bottom

Center-to-center distance of 100 mm between the phases - size 00

SG09310



160	160	160	00		**FCFSDNH00BB100** 149430	Connection at the top or at the bottom	1

Center-to-center distance of 100 mm between the phases - size 00 - for installing current transformers

- Equipped with spacer pins for retro-fitting of current transformers if ever the need should araise

160	160	160	00		**FCFSDNH00BB100-CTO** 149431	Connection at the top or at the bottom	1

Center-to-center distance of 185 mm between the phases - size 1 to size 3

SG09410



250	250	250	1		**FCFSDNH1BB185** 149436	Connection at the top or at the bottom	1
400	400	400	2		**FCFSDNH2BB185** 149437		1
630	630	630	3		**FCFSDNH3BB185** 149438		1

Center-to-center distance of 185 mm between the phases - size 1 to size 3 - for installing current transformers

- Equipped with spacer pins for retro-fitting of current transformers if ever the need should araise

250	250	250	1		**FCFSDNH1BB185-CTO** 149439	Connection at the top or at the bottom	1
400	400	400	2		**FCFSDNH2BB185-CTO** 149440		1
630	630	630	3		**FCFSDNH3BB185-CTO** 149441		1

Accessories for NH In-line Fuse Switch Disconnectors

Terminal Capacity	Utilisation	Designation Article No.	Units per Package
Double adapter to adjust the center-to-center distance between the phases from 100 to 185 mm			
SG10010  Adpater for fixing two strips of size 00 on a busbar of 185 mm		**ASNH100BABB100** 149454	1
Adapter clip to adjust the center-to-center distance between the phases from 100 to 185 mm			
SG10910  Clip for fixing one stip of size 00 on a busbar of 185 mm		**ASNH100ACBB100** 149455	1
Busbar Terminal Size 00			
SG10610  For mounting the NH in-line fuse switch disconnector without the need of drilling Size 00 for a busbar thickness of 5 - 10 mm		**ASNH100CT** 149457	15
Compensation Cover			
SG09710  For height adjustment of a size 00 strip to a strip of size 1 to size 3		**ASNH185CP100** 149458	1
Prism Terminal			
SG11110 		**ASPT70** 149456	3
Connection Set			
SG11210  Set for 2 cable lugs suitable for a strip of 185 mm size 1-3		**ASNH185** 149459	1
Cover for connection areas			
SG63212  Cover for connection area, size 1-3		**ASNH185CP123** 170267	1

xPole

SG11010



SG10710



SG09910



Connection Assembly Kit - consisting of 3 different items

- for parallel switching of 2 strips of size 2 or 3

Handle connection	**ASNH185HCK** 149460	10
Busbar kit	**ASNH185RK** 149461	1
Cover for connection area	**ASNH185CP** 149462	1

Accessories for NH In-line Fuse Switch Disconnectors

Current transformer for 100 mm center-to-center distance between the phases

SG00611



Transformation	G Class	Rated Apparent Power	Type Designation	Article No.	Units per package
100/5 A	0,5	1 VA	ASCNH100CT100-5-05	149432	3
150/5 A	0,5	1,5 VA	ASCNH100CT150-5-05	149433	3
100/5 A	1	1,5 VA	ASCNH100CT100-5-1	149434	3
150/5 A	1	2,5 VA	ASCNH100CT150-5-1	149435	3

Current transformer for 185 mm center-to-center distance between the phases

SG00611



Transformation	G Class	Rated Apparent Power	Type Designation	Article No.	Units per package
150/5 A	0,5	1,5 VA	ASCNH185CT150-5-05	149442	3
250/5 A	0,5	2,5 VA	ASCNH185CT250-5-05	149443	3
300/5 A	0,5	2,5 VA	ASCNH185CT300-5-05	149444	3
400/5 A	0,5	2,5 VA	ASCNH185CT400-5-05	149445	3
500/5 A	0,5	2,5 VA	ASCNH185CT400-5-05	149446	3
600/5 A	0,5	2,5 VA	ASCNH185CT600-5-05	149447	3
150/5 A	1	2,5 VA	ASCNH185CT150-5-1	149448	3
250/5 A	1	3,75 VA	ASCNH185CT250-5-1	149449	3
300/5 A	1	3,75 VA	ASCNH185CT300-5-1	149450	3
400/5 A	1	5 VA	ASCNH185CT400-5-1	149451	3
500/5 A	1	5 VA	ASCNH185CT500-5-1	149452	3
600/5 A	1	5 VA	ASCNH185CT600-5-1	149453	3

NH-Vertical Fuse-Switch-Disconnector, 3-pole

- Incl. terminal cover
- Drill-free mounting thanks to terminal clamps
- Scope of delivery LTS-L/160/00: incl. terminal clamps and clamp straps
  LTS-L/160/00/3-L: type with lift terminals 70 mm² and terminal clamps
  LTL-L sizes 1, 2, 3: no terminal clamps included, no clamp straps included
- Busbar mounting
  Size 00: LTS-L/160/00... distance 100 mm, drill-free mounting / optional screw-mounting
  Sizes 1, 2, 3: distance 185 mm, screw-mounting / optional drill-free mounting

wa_sg02212



SG57312



Rated Operational Current Ie (A)	Max. Fuse-link 500V (A)	690V (A)	Size	Utilisation	**Designation** Article No.	Notes	Units per Package
160	160	160	00	Z-LTS-L./00-SAD.	**LTS-L/160/00** 269349	Connection at the top or bottom. Clamp straps 4-70 mm² or screw M8.	1 / 100
					LTS-L/160/00/3-L 120600	Connection at the top or bottom. Lift terminal 2.5-70 mm².	1 / 100
250	250	200	1	screwed 30 x 5/10 40 x 5/10 50 x 5/10 60 x 5/10 80 x 5/10	**LTS-L/250/1** 269350	Connection at the top or bottom. Screw M10.	1 / 33
400	400	315	2		**LTS-L/400/2** 269351	Screw M12.	1 / 33
630	630	500	3	terminal clamps 30 x 5/10 40 x 5/10 50 x 5/10 60 x 5/10 80 x 5/10	**LTS-L/630/3** 269352	Screw M12.	1 / 33

Accessories for NH-Vertical Fuse-Switch-Disconnector

wa_sg01202



Z-LTS-LG/00-SAD

Terminal Capacity	Utilisation	**Designation** Article No.	Notes	Units per Package
Adapters				
Single adapter 100/185	LTS-L/160/00...	**Z-LTS-LG/00-SAD** 263118	Cu...x5/10	1
Double adapter 100/185	LTS-L/160/00...	**Z-LTS-L/160-SADD** 286815	Cu...x5/10	1
Adapter for drill-free mounting				
Single adapter 100/185	LTS-L/160/00...	**Z-LTS-L/160-SAD-KR** 286814	Cu...x5/10	1
Double adapter 100/185	LTS-L/160/00...	**Z-LTS-L/160-SADD-KR** 286816	Cu...x5/10	1

For NH-fuse-links Z-NH/00... and solid-links Z-NH-...TR see chapter Accessories Fuse Devices.

Accessories for NH-Vertical Fuse-Switch-Disconnector

Terminal Capacity	Utilisation	**Designation** Article No.	Notes	Units per Package
Terminals clamps				
SG00706 				
for drill-free mounting	LTS-L/160/00...	**Z-LTS-LG/00-KR** 263153	3 terminal clamps per device	3 / 180
	LTS-L Size 1, 2, 3	**Z-LTS-L-KR** 269353		3 / 90
Terminal cover/Size compensation to LTS-L size 1, 2, 3				
	LTS-L/160/00...	**Z-LTS-L-KA** 286817		2 / 40
Extension for connection of 2 cable lugs				
wa_sg03913 				
Cable lugs 2x240 mm^2	Size 1, 2, 3	**Z-NH-AE** 120601	for phase L3	1
Clamp Straps				
wa_sg02312 				
4-70 mm^2 Cu	LTS-L/160/00	**Z-LTS-160-BK** 286812	3 Clamp Straps per device	3 / 180
Screws				
Wa_sg02702 				
M8 16-70 mm^2 Cu 16-95 mm^2 Al	LTS-L/160/00	**Z-LTS-SC** 263119	3/6 screws per device	3 / 180
For mounting onto adapter Z-LTS-L...-SAD...	LTS-L/160/00...			

NH-Vertical Fuse-Switch-Disconnector, 3-pole

- LTS-L/160/00... drill-free mounting / optional screw-mounting
- LTS-... drill-free mounting onto Z-LTS-...SAD-KR

3P

wa_sg02212



Rated Operational Current Ie (A)	Max. Fuse-link 500V (A)	690V (A)	Size	Utilisation	**Designation** Article No.	Notes	Units per Package
160	160	160	00	12 x 5/10 20 x 5/10 30 x 5/10 Double-T	**LTS-L/160/00** 269349	Connection at the top or bottom. Clamp straps 4-70 mm^2 or screw M8.	1 / 100
					LTS-L/160/00/3-L 120600	Connection at the top or bottom. Lift terminal 2.5-70 mm^2.	1 / 100

SG46812



250	250	200	1	Z-LTS-250-SAD/100-KR	**LTS-250/1/3** 269140	Connection at the top or bottom. Screw M10.	1 / 42

SG46712



400	400	315	2	Z-LTS-400-SAD/100-KR	**LTS-400/2/3** 284647	Connection at the top or bottom. Screw M10.	1 / 25
630	630	500	3	Z-LTS-630-SAD/100-KR	**LTS-630/3/3** 284691	Connection at the top or bottom. Screw M12.	1 /20

Accessories for NH-Fuse-Switch-Disconnector

NEW

Busbar Adapter 3-pole, Z-LTS-...-SAD/100-KR

wa_sg03813



Description	Utilisation	**Designation** Article No.	Notes	Units per Package
Drill-free mounting on busbar system 100 mm 15 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10 40 x 5/10 50 x 5/10 60 x 5/10	LTS-250/1/3	**Z-LTS-250-SAD/100-KR** 120604	Connection at the top or bottom.	1
	LTS-400/2/3	**Z-LTS-400-SAD/100-KR** 120605		1
	LTS-630/3/3	**Z-LTS-630-SAD/100-KR** 120606		1

For NH-fuse-links Z-NH/00... and solid-links Z-NH-...TR see chapter Accessories Fuse Devices.

Accessories for NH-Fuse-Switch-Disconnector

wa_sg02312



Clamp Straps

Description	Utilisation	Designation Article No.	Notes	Units per Package
4-70 mm² Cu	LTS-L/160/00	**Z-LTS-160-BK** 286812	3 Clamp Straps per device	3 / 180
70-150 mm² Cu/Al 18x10 mm Cu flat	LTS-250/1/3	**Z-LTS-250-BK** 286812	3 Clamp Straps per device	3 / 180

wa_sg02412



V-shaped terminal Z-LTS-..-V

- 185 mm² Sm (sectorial stranded)
- 240 mm² Se (sectorial solid)

V-shaped terminal lug	LTS-250/1/3 LTS-400/2/3 LTS-630/3/3	**Z-LTS-V-LA** 263129	–	3 / 180
V-shaped terminal		**Z-LTS-V-KL** 263127	–	3 / 180
V-cover cap		**Z-LTS-V-KLA** 263131	–	3 / 180

Wa_sg02702



Screws

M8 16-70 mm² Cu 16-95 mm² Al	LTS-L/160/00	**Z-LTS-SC** 263119	3 screws per device	3 / 180

SG47312



Compensation covers for the heights balancing the NH-fuse-switch-disconnectors

70

Cover level to Cu-front distance: 70 mm	LTS-L/160/00...	**Z-LTS-L/160-AB/70-SET** 289995	1 set	1
	LTS-250/1/3	**Z-LTS-250-AB/70** 288902	2 per device	2
	LTS-400/2/3	**Z-LTS-400-AB/70** 288903	2 per device	2

90

Cover level to Cu-front distance: 90 mm	LTS-L/160/00...	**Z-LTS-L/160-AB/90-SET** 289996	1 set	1
	LTS-250/1/3	**Z-LTS-250-AB/90** 288905	2 per device	2
	LTS-400/2/3	**Z-LTS-400-AB/90** 288906	2 per device	2
	LTS-630/3/3	**Z-LTS-630-AB/90** 288907	2 per device	2

SG16005



Lateral cover for LTS, LTS-L

In connection with the compensation covers they serve as support for the front plate, as well as electric shock protection	LTS-L... LTS...	**Z-LTS-SAB/70-90** 288908		2

NH-Fuse-Switch-Disconnector

- Shock hazard protection available
- Connection-set for assembling of 2-pole or 4-pole GSTA00-160 available
- Clip-set for mounting of GSTA00 onto two DIN-rails

Rated Operational Current Ie (A)	Max. Fuse-link 500V (A)	690V (A)	Size	Utilisation	**Designation** Article No.	Notes	Units per Package
160	160	100	00	1-pole (2-pole with connection set)	**GSTA00-160-1P** 225000	Connection at the top or bottom. Lift terminal 1.5-70mm²	1
160	160	100	00	3-pole (4-pole with connection set)	**GSTA00-160** 095558	Connection at the top or bottom. Lift terminal 1.5-70mm²	1
160	160	100	00	3-pole	**GSTA00-160-F** 149417	Connection at the top or bottom. Screw M8.	1
250	250	200	1	3-pole	**GSTA1** 017250	Connection at the top or bottom. Screw M10.	1
400	400	315	2	3-pole	**GSTA2** 021996	Connection at the top or bottom. Screw M10.	1
630	630	500	3	3-pole	**GSTA3** 026742	Connection at the top or bottom. Screw M10.	1

SG46112



SG45612



SG45612



SG46512



SG46412



SG46212



Accessories for NH-Fuse-Switch-Disconnector

Shock Hazard Protection 3-pole

wa_sg02112



–	–	–	00	GSTA00-160	**ZBS-GSTA00** 014411	top or bottom	10
–	–	–	1	GSTA1	**ZBS-GSTA1** 082800	top	10
					ZBSU-GSTA1 082804	bottom	10
–	–	–	2	GSTA2	**ZBS-GSTA2** 082801	top	5
					ZBSU-GSTA2 082805	bottom	10
–	–	–	3	GSTA3	**ZBS-GSTA3** 082802	top	1
					ZBSU-GSTA3 082806	bottom	10

Shock Hazard Protection 1-pole

wa_sg02012



–	–	–	00	GSTA00-160-1P	**ZBS-GSTA00-1P** 119006	top or bottom	2

xPole

NH-Fuse-Switch-Disconnector

- Shock hazard protection available
- Solid links integrated in the N-pole

3P+N

Rated Operational Current Ie (A)	Max. Fuse-link 500V (A)	690V (A)	Size	Utilisation	**Designation** Article No.	Notes	Units per Package
wa_sg01612 							
160	160	100	00	3-pole+N	**GSTA00-4P** 119011	Connection at the top or bottom. Lift terminal 1.5-70mm^2	1
wa_sg01512 							
250	250	200	1	3-pole+N	**GSTA1-4P** 119012	Connection at the top or bottom. Screw M10.	1
wa_sg01412 							
630	630	500	3	3-pole+N	**GSTA3-4P** 119013	Connection at the top or bottom. Screw M10.	1

Accessories for NH-Fuse-Switch-Disconnector

Shock Hazard Protection 1-pole

wa_sg02012 							
–	–	–	00	GSTA00-160-1P	**ZBS-GSTA00-1P** 119006	top or bottom	2
–	–	–	1	GSTA1-1P	**ZBS-GSTA1-P** 119007	top or bottom	2
–	–	–	3	GSTA3-1P	**ZBS-GSTA3-1P** 119008	top or bottom	2

Shock Hazard Protection 3-pole

wa_sg02112 							
–	–	–	00	GSTA00-160	**ZBS-GSTA00** 014411	top or bottom	10
–	–	–	1	GSTA1	**ZBS-GSTA1** 082800	top	10
					ZBSU-GSTA1 082804	bottom	10
–	–	–	3	GSTA3	**ZBS-GSTA3** 082802	top	1
					ZBSU-GSTA3 082806	bottom	10

NH-Fuse-Switch-Disconnector

Rated Operational Voltage	Size	Utilisation	**Designation** Article No.	Notes	Units per Package

Switch cover with Fuse Monitoring for NH-Fuse-Switch-Disconnector

- Operating indication 1 green LED
  Error indication 3 red LEDs (F1, F2, F3)
- Error indication via relay contacts (potential-free)
  1 NO + 1 NC contact
  AC15: 24 V / 4 A, 230 V / 3 A
  AC13: 24 V / 1 A, 220 V / 0.5 A
  Terminal capacity: 0.25 - 1.5 mm²

wa_sg01312



400-690 V / 50-60 Hz	00	GSTA00...	**GST00-DSI** 107956		1
	1	GSTA1...	**GST1-DSI** 107957		1
	2	GSTA2...	**GST2-DSI** 107958		1
	3	GSTA3...	**GST3-DSI** 107959		1

Terminal Capacity		Utilisation	**Designation** Article No.	Notes	Units per Package

Set of Prism Terminals

wa_vt00406



70-150 mm²	GSTA1...	**PSK1** 038734	One set includes 3 prism terminals	1
120-240 mm²	GSTA2...	**PSK2** 043480	One set includes 3 prism terminals	1
120-300 mm²	GSTA3...	**PSK3**	One set includes	1

Set of Double-Prism Terminals

wa_vt00506



2x(70-95) mm²	GSTA1...	**PSK12** 041107	One set includes 3 double-prism terminals	1
2x(120-150) mm²	GSTA2...	**PSK22** 045853	One set includes 3 double-prism terminals	1
2x(120-240) mm²	GSTA3...	**PSK32** 050599	One set includes 3 double-prism terminals	1

Clamp-Type Terminal

wa_vt00306



1.5-70 mm²	GSTA00	**SK00-GS** 149419		3
25-150 mm² Cu-Band 6 x 16 x 0.8 mm	GSTA1...	**SK1-GS** 107960		3
25-240 mm² Cu-Band 10 x 16 x 0.8 mm	GSTA2...	**SK2-GS** 107961		3
25-300 mm² Cu-Band 11 x 21 x 1 mm	GSTA3...	**SK3-GS** 107962		3

Connection-set

wa_sg02713



–	00	GSTA00-160-1P	**V-GSTA00-1P** 228173		1

Clip-set

SG10108



–	00	GSTA00-160	**C-GSTA00** 040922	For mounting onto 2 DIN-rails	5

For NH-fuse-links Z-NH/00... and solid-links Z-NH-...TR see chapter Accessories Fuse Devices.

xPole

	Rated Operational Current Ie (A)	Max. Fuse-link 500V (A)	690V (A)	Size	Utilisation		**Designation** Article No.	Notes	Units per Package
	NH-Fuse-Switch-Disconnector								
	• Scope of delivery LTS-160/00/1, LTS-160/00/3 clamp straps Z-LTS-160-BK included as standard connection elements								
SG46012 	160	160	125	00	1-pole		**LTS-1600/00/1** 263120	Connection at the top or bottom. Clamp strap 4-70mm^2 or screw M8.	1 / 14
SG45212 	160	160	125	00	3-pole	NEW	**LTS-160/00/3E** 120602	Connection at the top or bottom. Clamp strap 4-70mm^2 or screw M8.	1 / 6
SG46812 	250	250	200	1	3-pole		**LTS-250/1/3** 269140	Connection at the top or bottom. Screw M10.	1 / 42
SG46712 	400	400	315	2	3-pole		**LTS-400/2/3** 284647	Connection at the top or bottom. Screw M10.	1 / 25
SG57212 	630	630	500	3	3-pole		**LTS-630/3/3** 284691	Connection at the top or bottom. Screw M12.	1 /20
	Accessories for NH-Fuse-Switch-Disconnector								
	Terminal covers Z-LTS-00/.-KA								
Wa_sg01402 	–	–	–	00	LTS-160/00/1		**Z-LTS-00/1-KA** 263125	1-pole	2 / 120
wa_sg03112 	–	–	–	00	LTS-160/00/3 LTS-160/00/3E		**Z-LTS-00/3-KA** 263126	3-pole	4 / 80

For NH-fuse-links Z-NH/00... and solid-links Z-NH-...TR see chapter Accessories Fuse Devices.

Accessories for NH-Fuse-Switch-Disconnector

Terminal Capacity	Utilisation	**Designation** Article No.	Notes	Units per Package
Clamp Straps				
wa_sg02312				
4-70 mm² Cu	LTS-160/00/3E LTS-160/00/3	**Z-LTS-160-BK** 286812	3 Clamp Straps per device	3 / 180
70-150 mm² Cu/Al 18x10 mm Cu flat	LTS-250/1/3	**Z-LTS-250-BK** 286812	3 Clamp Straps per device	3 / 180
V-shaped terminal Z-LTS-..-V				
• 70 mm² Sm (sectorial stranded) • 95 mm² Se (sectorial solid)				
wa_sg02412				
V-shaped terminal lug size 00	LTS-160/00/3	**Z-LTS-00-V-LA** 263130	–	3 / 180
V-shaped terminal size 00		**Z-LTS-00-V-KL** 263128	–	3 / 180
V-cover cap size 00		**Z-LTS-00-V-KLA** 263132	–	3 / 180
• 185 mm² Sm (sectorial stranded) • 240 mm² Se (sectorial solid)				
V-shaped terminal lug	LTS-250/1/3 LTS-400/2/3 LTS-630/3/3	**Z-LTS-V-LA** 263129	–	3 / 180
V-shaped terminal		**Z-LTS-V-KL** 263127	–	3 / 180
V-cover cap		**Z-LTS-V-KLA** 263131	–	3 / 180
Screws				
Wa_sg02702				
M8 16-70 mm² Cu 16-95 mm² Al	LTS-160/00/3E LTS-160/00/3 LTS-160/00/1	**Z-LTS-SC** 263119	3/6 screws per device	3 / 180
Front Frame				
Wa_sg01802				
–	LTS-160/00/3E LTS-160/00/3	**Z-LTS-00/3-R-FR** 263123	–	1 / 200
Busbar				
wa_sg04513				
35 mm² Cu	LTS-160/00/3E LTS-160/00/3	**Z-LTS-00/3-SV** 264929	for 3 devices	4
Extension Terminal				
wa_sg03212				
25-95 mm² Cu	Z-LTS-00/3-SV	**Z-LTS-EK/95** 269522	3 terminals per device	3 / 90

Z-LTS-00/3-SV

xPole

SG81111



SG81911



SG81611



SG81511



wa_sg04013



wa_sg02612



SG19707



Size / Rated current		Type Designation	Article No.	Units per package
Fuse-Links Z-D0./SE, Operating Class gG (gL)				
• In practical plastic box in the color of the visual tripping indicator - to snap on DIN-rail				
D01	2 A	Z-D01/SE-2	288934	12 / 288
D01	4 A	Z-D01/SE-4	288935	12 / 288
D01	6 A	Z-D01/SE-6	288936	12 / 288
D01	10 A	Z-D01/SE-10	288937	12 / 288
NEW D01	13 A	Z-D01/SE-13	288938	12 / 288
D01	16 A	Z-D01/SE-16	288939	12 / 288
D02	20 A	Z-D02/SE-20	288940	12 / 144
D02	25 A	Z-D02/SE-25	288941	12 / 144
NEW D02	32 A	Z-D02/SE-32	288942	12 / 144
D02	35 A	Z-D02/SE-35	288943	12 / 144
NEW D02	40 A	Z-D02/SE-40	288944	12 / 144
D02	50 A	Z-D02/SE-50	288945	12 / 144
D02	63 A	Z-D02/SE-63	288946	12 / 144
Cartridge-Ring Adapter Insert Z-D0./PE				
• In practical plastic box in the color of the visual tripping indicator - to snap on DIN-rail				
D01	2 A	Z-D01/PE-2	288909	12 / 288
D01	4 A	Z-D01/PE-4	288910	12 / 288
D01	6 A	Z-D01/PE-6	288911	12 / 288
D01	10 A, 13 A	Z-D01/PE-10	288912	12 / 288
D02	20 A	Z-D02/PE-20	288913	12 / 288
D02	25 A	Z-D02/PE-25	288914	12 / 288
D02	35 A, 32 A	Z-D02/PE-35	288915	12 / 288
D02	40 A	Z-D02/PE-40	288916	12 / 288
D02	50 A	Z-D02/PE-50	288917	12 / 288
Cartridge-Ring Adapter Insert Z-D02-D01/PE				
• D01 for Fuse-Base D02 and Fuse-Switch-Disconnector D02				
• In practical plastic box in the color of the visual tripping indicator - to snap on DIN-rail				
D02-D01	2 A	Z-D02-D01/PE-2	263112	12 / 288
D02-D01	4 A	Z-D02-D01/PE-4	263113	12 / 288
D02-D01	6 A	Z-D02-D01/PE-6	263150	12 / 288
D02-D01	10 A, 13 A	Z-D02-D01/PE-10	263151	12 / 288
D02-D01	16 A	Z-D02-D01/PE-16	263152	12 / 288
Screw Caps Z-D0./SK				
D01	max. 16 A	Z-D01/SK	100650	20
D02	max. 63 A	Z-D02/SK	100651	20
Adapter Spring Z-D02/SIKA-HF				
• To apply D01-Fuse-links into the Screw cap Z-D02/SK				
D02-D01		Z-D02/SIKA-HF	263149	50 / 3000
Cartridge-Ring Adapter Insert Plier Z-D0-PE-Z				
D01, D02		Z-D0-PE-Z	114324	1 / 10

SG19007



Fuse-Links Z-DII./SE../GG, Operating Class gG (gL)

- Rated voltage 500 V AC / 400 V DC

Size / Rated current		Type Designation	Article No.	Units per package
DII E27	2 A	Z-DII/SE-2A/GG	112125	5 / 500
DII E27	4 A	Z-DII/SE-4A/GG	112126	5 / 500
DII E27	6 A	Z-DII/SE-6A/GG	112127	5 / 500
DII E27	10 A	Z-DII/SE-10A/GG	112128	5 / 500
DII E27	16 A	Z-DII/SE-16A/GG	112129	5 / 500
DII E27	20 A	Z-DII/SE-20A/GG	112130	5 / 500
DII E27	25 A	Z-DII/SE-25A/GG	112131	5 / 500
DIII E33	35 A	Z-DIII/SE-35A/GG	112135	5 / 500
DIII E33	50 A	Z-DIII/SE-50A/GG	112136	5 / 500
DIII E33	63 A	Z-DIII/SE-63A/GG	112137	5 / 500

SG19107



Fuse-Links Z-DII./SE../DZ, Operating Class DZ

- Rated voltage 500 V AC / 400 V DC

DII E27	6 A	Z-DII/SE-6A/DZ	112120	5 / 500
DII E27	10 A	Z-DII/SE-10A/DZ	112121	5 / 500
DII E27	16 A	Z-DII/SE-16A/DZ	112122	5 / 500
DII E27	20 A	Z-DII/SE-20A/DZ	112123	5 / 500
DII E27	25 A	Z-DII/SE-25A/DZ	112124	5 / 500
DIII E33	35 A	Z-DIII/SE-35A/DZ	112132	5 / 500
DIII E33	50 A	Z-DIII/SE-50A/DZ	112133	5 / 500
DIII E33	63 A	Z-DIII/SE-63A/DZ	112134	5 / 500

wa_sg05908



Gauge Ring Z-DII./PE

DII E27	2 A	Z-DII/PE-2A	110396	50
DII E27	4 A	Z-DII/PE-4A	110397	50
DII E27	6 A	Z-DII/PE-6A	110398	50
DII E27	10 A	Z-DII/PE-10A	110399	50
DII E27	16 A	Z-DII/PE-16A	110790	50
DII E27	20 A	Z-DII/PE-20A	110791	50
DIII E33	2 A	Z-DIII/PE-2A	110792	50
DIII E33	4 A	Z-DIII/PE-4A	110793	50
DIII E33	6 A	Z-DIII/PE-6A	110794	50
DIII E33	10 A	Z-DIII/PE-10A	110795	50
DIII E33	16 A	Z-DIII/PE-16A	110796	50
DIII E33	20 A	Z-DIII/PE-20A	110797	50
DIII E33	25 A	Z-DIII/PE-25A	110798	50
DIII E33	35 A	Z-DIII/PE-35A	110799	50
DIII E33	50 A	Z-DIII/PE-50A	110800	50

wa_sg03312



Screw-in Gauge Ring Z-DII./PS

DII E27	2 A	Z-DII/PS-2A	112138	25 / 1500
DII E27	4 A	Z-DII/PS-4A	112139	25 / 1500
DII E27	6 A	Z-DII/PS-6A	112140	25 / 1500
DII E27	10 A	Z-DII/PS-10A	112141	25 / 1500
DII E27	16 A	Z-DII/PS-16A	112142	25 / 1500
DII E27	20 A	Z-DII/PS-20A	112143	25 / 1500
DII E27	25 A	Z-DII/PS-25A	112144	25 / 1500
DIII E33	35 A	Z-DIII/PS-35A	112145	25 / 850
DIII E33	50 A	Z-DIII/PS-50A	112146	25 / 850
DIII E33	63 A	Z-DIII/PS-63A	112147	25 / 850

SG07608



Size / Rated voltage		Type Designation	Article No.	Units per package

Screw Caps Z-DII./SK

DII E27	500 VAC	Z-DII/SK	112148	50 / 600
DIII E33	500 VAC	Z-DIII/SK	112149	30 / 360
DIII E33	690 VAC	Z-DIII/SK-690	118904	3

xPole

SG01010



SG20507



SG20407



Size / Rated current / Rated voltage			Type Designation	Article No.	Units per package
Fuse-Links Z-C. /SE Operating Class gG (gL)					
10x38	1 A	500 V AC	Z-C10/SE-1A/GG	112156	10 / 500
10x38	2 A	500 V AC	Z-C10/SE-2A/GG	112157	10 / 500
10x38	4 A	500 V AC	Z-C10/SE-4A/GG	112158	10 / 500
10x38	6 A	500 V AC	Z-C10/SE-6A/GG	112159	10 / 500
10x38	8 A	500 V AC	Z-C10/SE-8A/GG	112160	10 / 500
10x38	10 A	500 V AC	Z-C10/SE-10A/GG	112161	10 / 500
10x38	12 A	500 V AC	Z-C10/SE-12A/GG	112162	10 / 500
10x38	16 A	500 V AC	Z-C10/SE-16A/GG	112163	10 / 500
10x38	20 A	500 V AC	Z-C10/SE-20A/GG	112164	10 / 500
10x38	25 A	500 V AC	Z-C10/SE-25A/GG	112165	10 / 500
10x38	32 A	400 V AC	Z-C10/SE-32A/GG	112166	10 / 500
14x51	2 A	690 V AC	Z-C14/SE-2A/GG	112167	10 / 200
14x51	4 A	690 V AC	Z-C14/SE-4A/GG	112168	10 / 200
14x51	6 A	690 V AC	Z-C14/SE-6A/GG	112169	10 / 200
14x51	8 A	690 V AC	Z-C14/SE-8A/GG	112170	10 / 200
14x51	10 A	690 V AC	Z-C14/SE-10A/GG	112171	10 / 200
14x51	12 A	690 V AC	Z-C14/SE-12A/GG	112172	10 / 200
14x51	16 A	690 V AC	Z-C14/SE-16A/GG	112173	10 / 200
14x51	20 A	690 V AC	Z-C14/SE-20A/GG	112174	10 / 200
14x51	25 A	690 V AC	Z-C14/SE-25A/GG	112175	10 / 200
14x51	32 A	690 V AC	Z-C14/SE-32A/GG	112176	10 / 200
14x51	40 A	500 V AC	Z-C14/SE-40A/GG	112177	10 / 200
14x51	50 A	500 V AC	Z-C14/SE-50A/GG	112178	10 / 200
22x58	16 A	690 V AC	Z-C22/SE-16A/GG	112179	10 / 480
22x58	20 A	690 V AC	Z-C22/SE-20A/GG	112180	10 / 480
22x58	25 A	690 V AC	Z-C22/SE-25A/GG	112181	10 / 480
22x58	32 A	690 V AC	Z-C22/SE-32A/GG	112182	10 / 480
22x58	40 A	690 V AC	Z-C22/SE-40A/GG	112183	10 / 480
22x58	50 A	500 V AC	Z-C22/SE-50A/GG	112184	10 / 480
22x58	63 A	500 V AC	Z-C22/SE-63A/GG	112185	10 / 480
22x58	80 A	500 V AC	Z-C22/SE-80A/GG	112186	10 / 480
22x58	100 A	500 V AC	Z-C22/SE-100A/GG	112187	10 / 480

SG11008



Size / Rated current / Rated voltage			Type Designation	Article No.	Units per package
Fuse-Links ASFLC10-..A-gPV-SOL Photolvoltaic application					
10x38	2 A	1000 V DC	ASFLC10-2A-gPV-SOL	137279	10 / 500
10x38	4 A	1000 V DC	ASFLC10-4A-gPV-SOL	137280	10 / 500
10x38	6 A	1000 V DC	ASFLC10-6A-gPV-SOL	137281	10 / 500
10x38	8 A	1000 V DC	ASFLC10-8A-gPV-SOL	137282	10 / 500
10x38	10 A	1000 V DC	ASFLC10-10A-gPV-SOL	137283	10 / 500
10x38	12 A	1000 V DC	ASFLC10-12A-gPV-SOL	137284	10 / 500
10x38	16 A	1000 V DC	ASFLC10-16A-gPV-SOL	137285	10 / 500
10x38	20 A	1000 V DC	ASFLC10-20A-gPV-SOL	137286	10 / 500
10x38	25 A	900 V DC	ASFLC10-25A-gPV-SOL	137287	10 / 500

PV-fuse-link selection:

① Maximum DC Operating voltage of the fuse-link must be:
1,2 x V_{oc} of string

② Rated current I_n of the fuse-link must be higher or equal than:
1,5 x I_{sc}

I_{sc} . . . . short circuit current of PV-module

V_{oc} . . . open circuit voltage of string

Solid-Links Z-NH-../TR

wa_sg04413



Size	Type Designation	Article No.	Units per package
00	Z-NH-00/TR	263114	3 / 180
1	Z-NH-1/TR	263115	6 / 60
2	Z-NH-2/TR	263116	6 / 60
3	Z-NH-3/TR	263117	3 / 30

NH-Fuse-Links, 500 V AC, Z-NH

- operating class gG (gL)

wa_sg03412



Size	Rated Current	Type Designation	Article No.	Units per package
00	10 A	Z-NH-00/10	289998	3
00	16 A	Z-NH-00/16	289999	3
00	20 A	Z-NH-00/20	290000	3
00	25 A	Z-NH-00/25	290001	3
00	35 A	Z-NH-00/35	290002	3
00	40 A	Z-NH-00/40	290003	3
00	50 A	Z-NH-00/50	290004	3
00	63 A	Z-NH-00/63	290005	3
00	80 A	Z-NH-00/80	290006	3
00	100 A	Z-NH-00/100	290007	3
00	125 A	Z-NH-00/125	290008	3
00	160 A	Z-NH-00/160	290009	3
1	50 A	Z-NH-1/50	290010	3
1	63 A	Z-NH-1/63	290011	3
1	80 A	Z-NH-1/80	290012	3
1	100 A	Z-NH-1/100	290013	3
1	125 A	Z-NH-1/125	290014	3
1	160 A	Z-NH-1/160	290015	3
1	200 A	Z-NH-1/200	290016	3
1	250 A	Z-NH-1/250	290017	3
2	100 A	Z-NH-2/100	290018	3
2	125 A	Z-NH-2/125	290019	3
2	160 A	Z-NH-2/160	290020	3
2	200 A	Z-NH-2/200	290021	3
2	250 A	Z-NH-2/250	290022	3
2	315 A	Z-NH-2/315	290023	3
2	400 A	Z-NH-2/400	290024	3
3	250 A	Z-NH-3/250	290025	3
3	315 A	Z-NH-3/315	290026	3
3	400 A	Z-NH-3/400	290027	3
3	500 A	Z-NH-3/500	290028	3
3	630 A	Z-NH-3/630	290029	3

Fuse-Base FCFBD02DI-.

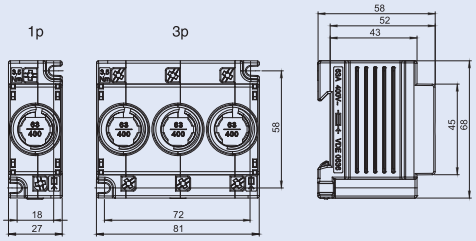
- According to DIN VDE 0636-301
- For Fuse-links size D02 and D01
- Casn be sealed with leads
- Silicone-, halogen- and phosphorfree
- Cartridge-ring adapter inserts ASGRD02-.A required for current coding
- Low-loss stainless steel terminal (anti-magnetic)

Technical Data

Electrical	
Number of poles	1P, 3P
Rated voltage	400 VAC, 250 VDC
Rated current	
D01	16 A
D02	63 A
Conditional short-circuit current	
tested wit inserts	50 kA (AC)
Operating class gG (gL)	8 kA (DC)

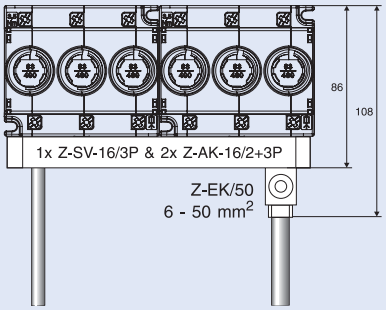
Mechanical		
Frame size	45 mm	
Device height	68 mm	
Device width	27 mm per pole	
Weight	1P	3P
	74 g	213 g
Electrical thread D02	E18	
Mounting		
Quick fastening on DIN rail 35 mm	acc. to IEC/EN 60715	
Screw fastening on mounting plate	screw ≤4 mm, head ≤7 mm	
Upper and lower terminals	lift terminal	
Terminal capacity	1.5-35 mm²	
Tightening torque		
of terminal screws	3.5 Nm	
Comparative tracking index	CTI 600	
Flame class acc. to UL94	V0	

Dimensions (mm)

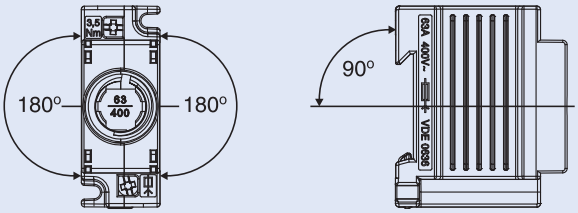


Busbar Examples

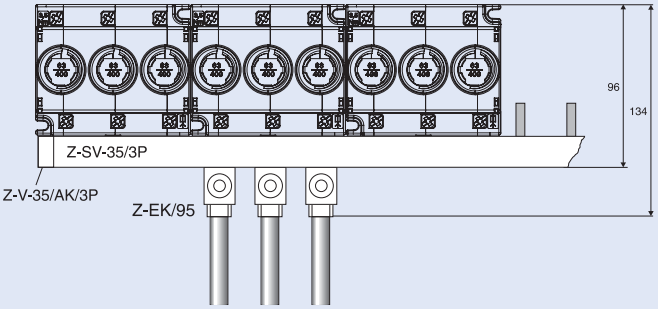
3-phases **16 mm²**



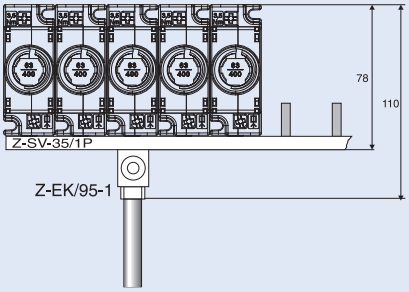
Mounting position



3-phases **35 mm²**



1-phase **35 mm²**



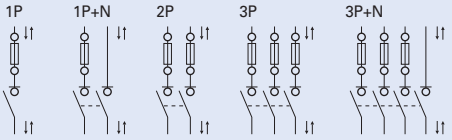
Terminal capacity Z-EK/95, Z-EK/95-1:
25-95 mm² rigid/stranded
16-70 mm² flexible with wire end ferrules

xPole

Switch-Disconnector-Fuse Z-SLS/D01

- Design according to IEC/EN 60947-3
- Mechanical current coding by means of integrated, adjustable coding ring
- Plug-in technology without screw caps
- Visual tripping indicator is flashing
- Suitable for the following fuse-links
  D01: 2, 4, 6, 10, 16 A

Connection diagram

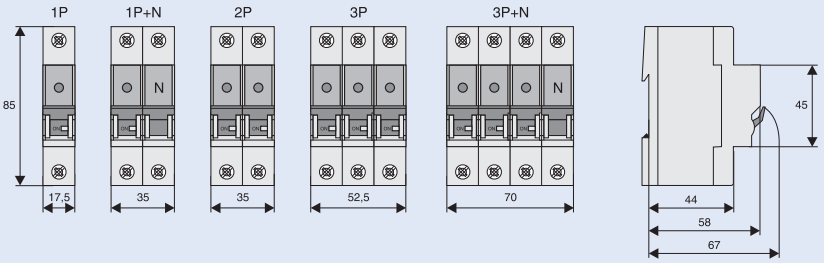


Technical Data

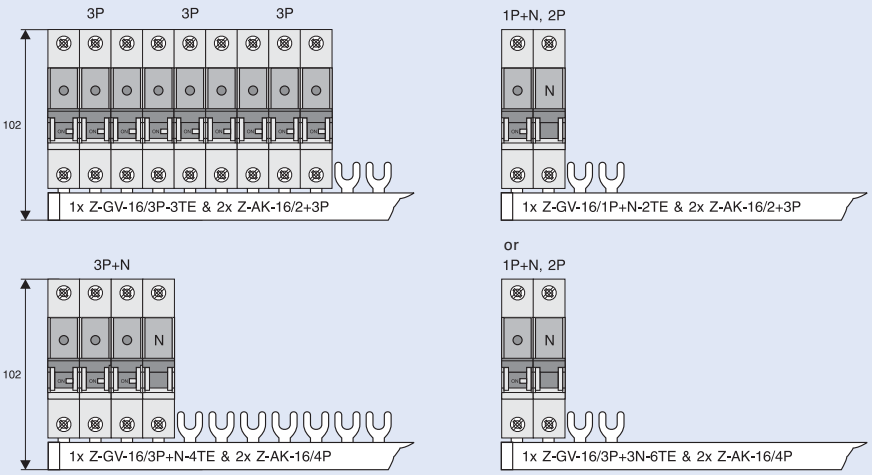
Electrical	
Number of poles	1P, 1P+N, 2P, 3P, 3P+N
Rated operational voltage U_e	
AC	400 V
DC	1P to 60V / 2P to 110V
Rated operational current I_e	16 A
Rated uninterrupted current I_u	16 A
Rated short-circuit making capacity I_{cm}	50 kAr.m.s
Utilization category	AC 22 B, DC 21 B
Overvoltage category	IV
Rated impulse withstand voltage U_{imp}	6 kV
Power loss per current path	0.64 W at I_e
Power loss per current path with fuse-link	2.24 W at I_e

Mechanical	
Frame size	45 mm
Device height	86 mm
Device width	17.5 mm per pole (1MU)
Weight	1P 1P+N 2P 3P 3P+N 90g 170g 180g 270g 350g
Mounting	quick fastening on DIN rail IEC/EN 60715
Degree of protection	IP20
Upper and lower terminals	lift terminals
Terminal capacity	1.5-25 mm²
Tightening torque of terminal screws	max. 2.5 Nm
Temperature range	-25 to +60°C
Flame class	V0, glow-wire tested 960°C
Pollution degree	3
Comparative tracking index	CTI 600

Dimensions (mm)



Busbar Connection Examples

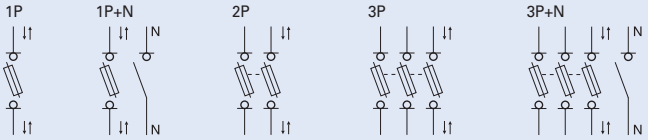


xPole

Fuse-Switch-Disconnector Z-SLS/NEOZ, Standard

- Design according to IEC/EN 60947-3
- Mechanical current coding
- Plug-in technology without screw caps
- Suitable for the following fuse-links
  D01: 1, 2, 4, 6, 10, 16 A
  D02: 20, 25, 35, 50, 63 A
- Can be sealed with leads

Connection diagram

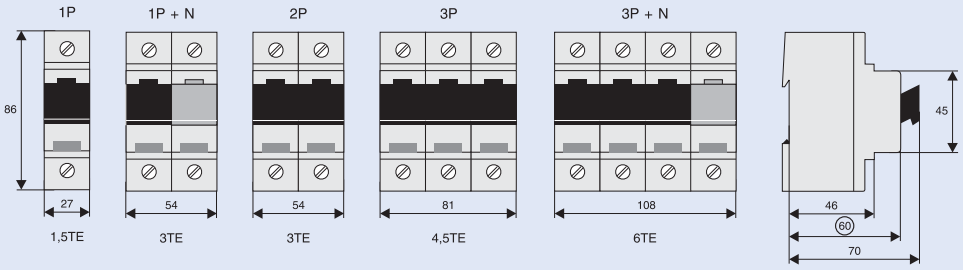


Technical Data

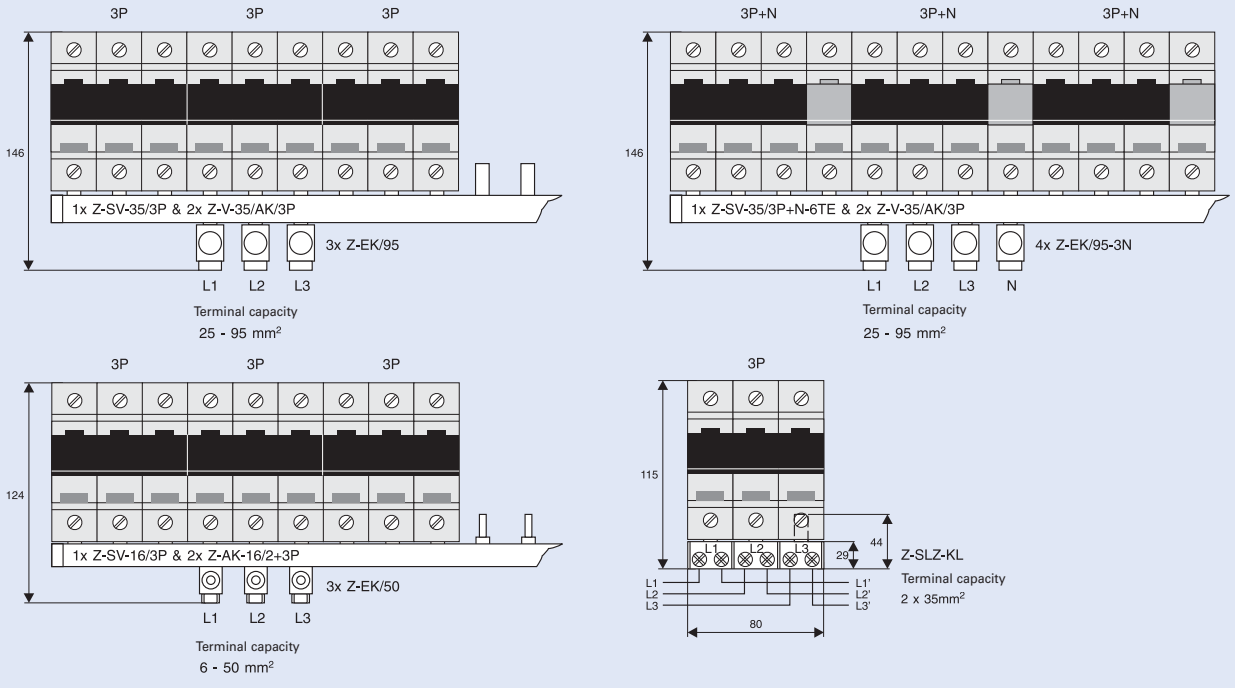
Electrical	
Number of poles	1P, 1P+N, 2P, 3P, 3P+N
Rated operational voltage U_e	
AC	400 V
DC	1P to 110V / 2P to 220V
Rated operational current I_e	63 A
Rated uninterrupted current I_u	63 A
Rated short-circuit making capacity I_{cm}	50 kAr.m.s
Utilization category	AC 22 B, DC 21 B
Overvoltage category	IV
Rated impulse withstand voltage U_{imp}	6 kV
Power loss per current path	0.5 W at I_e
Power loss per current path with fuse-link	7.5 W at I_e

Mechanical	
Frame size	45 mm
Device height	86 mm
Device width	27 mm per pole (1.5MU)
Weight	1P 1P+N 2P 3P 3P+N 113g 225g 224g 450g 472g
Mounting	quick fastening on DIN rail IEC/EN 60715
Degree of protection	IP20
Upper and lower terminals	lift terminals
Terminal capacity	1.5-35 mm²
Tightening torque of terminal screws	max. 4.5 Nm
Temperature range	-25 to +60°C
Flame class	V0, glow-wire tested 960°C
Pollution degree	3
Comparative tracking index	CTI 600

Dimensions (mm)



Busbar Connection Examples



Fuse-Switch-Disconnector Z-SLS/CEK, Complete with Captive Current Code

- Design according to IEC/EN 60947-3
- Can be used as main fuse downstream of the meter according to the Technical Connection Rules of the Austrian Power Supply Companies ("TAEV")
- Current coding by the manufacturer
- Plug-in technology without screw caps
- Suitable for the following fuse-links
  D01: 10, 16 A
  D02: 25, 35, 40, 50, 63 A
- Can be sealed with leads

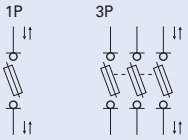
Type Z-SLS/CEK

- No visual tripping indicator

Type Z-SLS/CEK..-SP

- Visual tripping indicator
- Equipped with neutral lead through terminal
- Integrated switch-locking

Connection diagrams

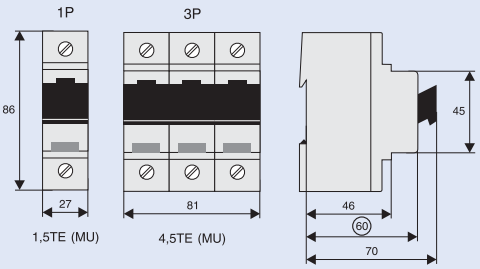


Technical Data

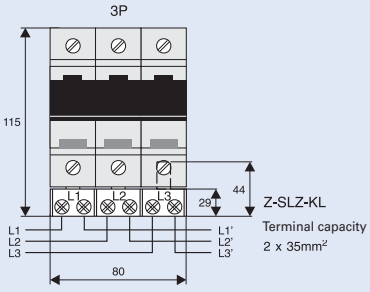
Electrical	
Number of poles	1P, 3P
Rated operational voltage U_e	
AC	400 V
Rated uninterrupted current I_u	
1P	10, 16, 25 A
3P	16, 25, 35, 40, 50, 63 A
Rated short-circuit making capacity I_{cm}	50 kAr.m.s
Utilization category	AC 22 B
Overvoltage category	IV
Rated impulse withstand voltage U_{imp}	6 kV
Power loss per current path	0.5 W at I_e
Power loss per current path with fuse-link	7.5 W at I_e

Mechanical	
Frame size	45 mm
Device height	86 mm
Device width	27mm per pole (1.5MU)
Weight	147 g / 441 g
Mounting	quick fastening on DIN rail IEC/EN 60715
Degree of protection	IP20
Upper and lower terminals	lift terminals
Terminal capacity	1.5-35 mm^2
Tightening torque of terminal screws	max. 4.5 Nm
Temperature range	-25 to +60°C
Flame class	V0, glow-wire tested 960°C
Pollution degree	3
Comparative tracking index	CTI 600

Dimensions (mm)



Busbar Connection Example



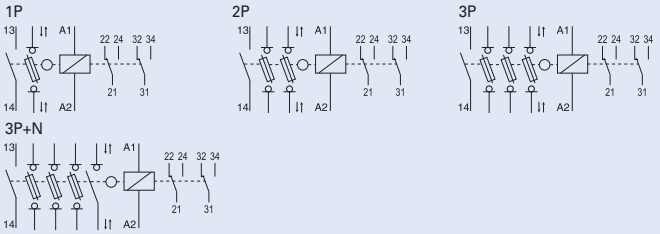
xPole

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Powering Business Worldwide

Fuse-Switch-Disconnector Z-SLK/NEOZ, with Fuse Monitoring

- Design according to IEC/EN 60947-3
- Fuse monitoring by relay contact
- Mechanical current coding
- Plug-in technology without screw caps
- Suitable for the following fuse-links
  D01: 1, 2, 4, 6, 10, 16 A
  D02: 20, 25, 35, 50, 63 A
- Can be sealed with leads
- Other AC/DC voltages requires special types

Connection diagram



Technical Data

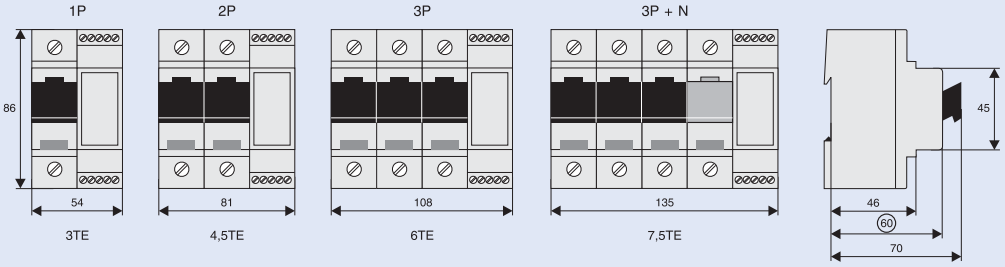
Electrical	
Number of poles	1P, 1P+N, 2P, 3P, 3P+N
Rated operational voltage U_e	
AC: 1P	60-230 V AC
2P, 3P, 3P+N	60-400 V AC
DC: 1P	60-110 V DC
2P	60-220 V DC
Rated operational current I_e	63 A
Rated uninterrupted current I_u	63 A
Rated short-circuit making capacity I_{cm}	50 kAr.m.s
1 NO	5A/250V
Utilization category	AC 22 B, DC 21 B
Overvoltage category	IV
Rated impulse withstand voltage U_{imp}	6 kV
Power loss per current path	0.5 W at I_e
Power loss per current path with fuse-link	7.5 W at I_e

Relay Component - Electrical	
Operational voltage range	24-240 V AC/DC
Operational voltage tolerance	±10%
Power consumption	5 VA
Frequency	50-60 Hz
Function display	
Line voltage	1 LED
Trouble	1 LED
Duty	100%
Responding delay	approx. 100 ms
Reset time	approx. 100 ms
Relay contacts	2 CO, 5A/250V
Auxiliary switch	
Rated impulse withstand voltage	4 kV
Overvoltage category	III

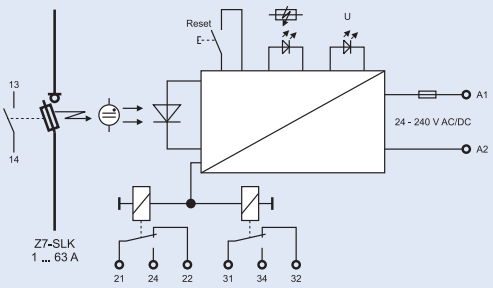
Mechanical				
Frame size	45 mm			
Device height	86 mm			
Device width	27mm/pole (1.5MU) + 27mm			
Weight	1P	2P	3P	3P+N
	224g	345g	450g	590g
Mounting	quick fastening on DIN rail IEC/EN 60715			
Degree of protection	IP20			
Upper and lower terminals	lift terminals			
Terminal capacity	1.5-35 mm²			
Tightening torque of terminal screws	max. 4.5 Nm			
Temperature range	-25 to +60°C			
Flame class	V0, glow-wire tested 960°C			
Pollution degree	3			
Comparative tracking index	CTI 600			

Relay Component - Mechanical	
Upper and lower terminals	lift terminals
Terminal capacity	
rigid	0.14-4 mm²
flexible	0.14-2.5 mm²
Tightening torque of terminal screws	0.5-0.7 Nm

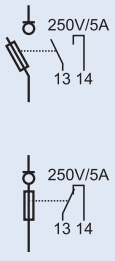
Dimensions (mm)



Block Diagram

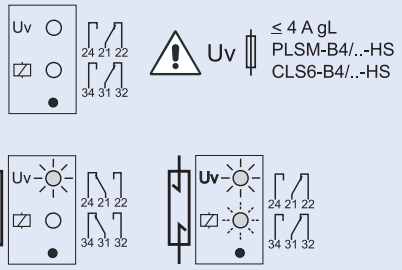


Function - Switch position



Relay - Fuse Monitoring

Uv . . . Supply voltage relay



xPole

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Fuse-link Sets complete Z-SLS/B, Z-SLS/E

- Fuse-links with flashing function (Z-SLS/B) in case of disconnection
- Fuse-links without flashing function (Z-SLS/E) upon enquiry, not on stock
- Supplied as a set with 3 fuse-links and 3 gauge-pieces in plastic box of different colours which can be mounted onto DIN rail.
- Dimensions of plastic box:

Frame size	45 mm
Depth	75 mm
Width	54 mm

Connection diagram



Technical Data

Electrical

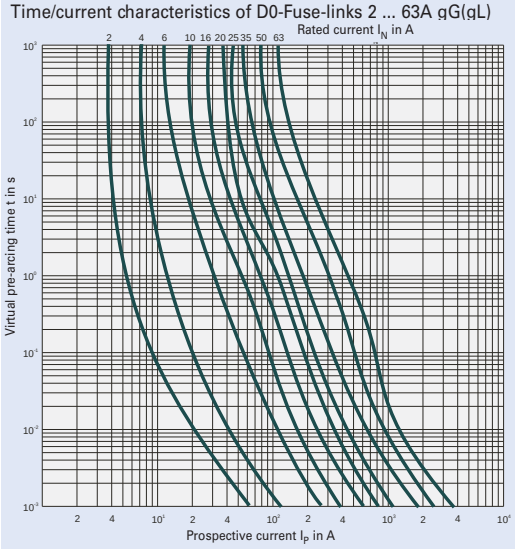
Operating class	gG (gL)		
Rated voltage	Z-SLS/B/24	Z-SLS/B	Z-SLS/E
AC	24 - 60 V	60 - 400 V	400 V
DC	24 - 60 V		220 V
Test voltage	5 kV		

Mechanical

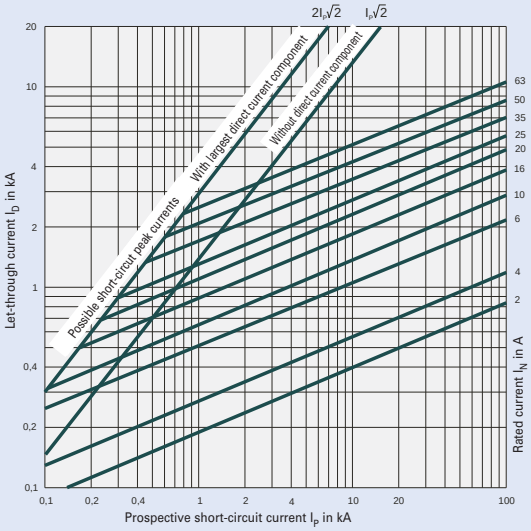
Size	
D01	1, 2, 4, 6, 10, 13, 16 A
D02	20, 25, 32, 35, 40, 50, 63 A

Characteristics

Time/current characteristics of D0-Fuse-links 2 ... 63A gG(gL)



Let-through characteristics of D0-Fuse-links 2 ... 63A gG(gL)



Solid-link Set Z-SLS/TR-SET

- Supplied as a set with 3 solid-links inserts and 3 gauge-pieces in plastic box which can be mounted onto DIN rail.
- Dimensions of plastic box:

Frame size	45 mm
Depth	75 mm
Width	54 mm

Connection diagram



Technical Data

Electrical

Rated voltage	400 V AC
Rated uninterrupted current I_u	63 A
Test voltage	5 kV

Mechanical

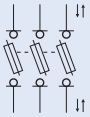
Size D02	63 A

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Fuse-Switch-Disconnector with visual tripping indicator Z-SLS/CB - Current coding by means of cartridge-ring adapter inserts

- Design according to IEC/EN 60947-3
- Current coding by means of cartridge-ring adapter inserts
- Visual tripping indicator is flashing
- Suitable for the following fuse-links
  D01: 2, 4, 6, 10, 16 A with cartridge-ring adapter insert Z-D02-D01/PE-..
  and adapter spring Z-SLS/CB-HF
  D02: 20, 25, 35, 50, 63 A
- Can be sealed with leads

Connection diagram

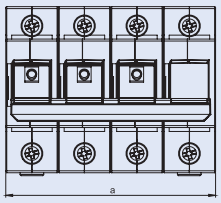


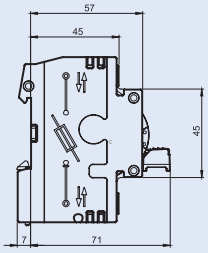
Technical Data

Electrical	
Number of poles	1P, 1+N, 2P, 3P, 3+N
Rated operational voltage U_e	
AC	400 V
DC	1P to 110V / 2P to 220V
Rated operational current I_e	63 A
Rated uninterrupted current I_u	63 A
Rated short-circuit making capacity I_{cm}	50 kAr.m.s
Utilization category	AC 22 B
Overvoltage category	IV
Rated impulse withstand voltage U_{imp}	6 kV
Power loss per current path	0.5 W at I_e
Power loss per current path with fuse-link	7.5 W at I_e

Mechanical	
Frame size	45 mm
Device height	86 mm
Device width	27 mm per pole (1.5MU)
weight	1P 1+N 2P 3P 3+N 120g 230g 230g 350g 448g
Mounting	quick fastening on DIN rail IEC/EN 60715
Degree of protection	IP20
Upper and lower terminals	lift terminals
Terminal capacity	1.5-35 mm²
Tightening torque of terminal screws	max. 4.5 Nm
Temperature range	-25 to +60°C
Flame class	V0, glow-wire tested 960°C
Pollution degree	3
Comparative tracking index	CTI 600

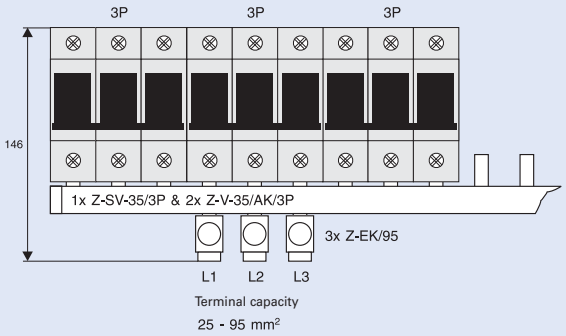
Dimensions (mm)

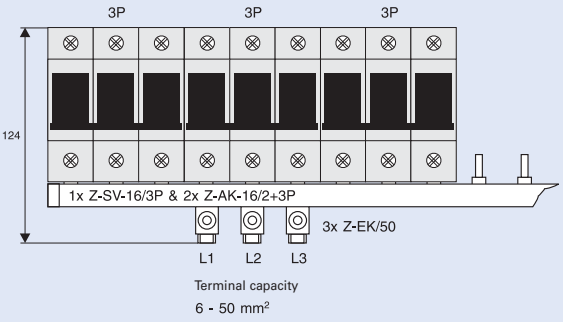


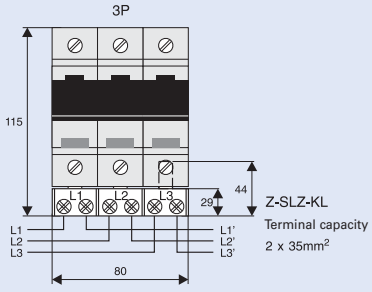


Poles	Dimension a [mm]
1P	27
1+N	54
2P	54
2+N	81
3P	81
4P	108

Busbar Connection Examples





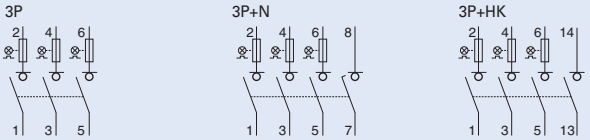


Powering Business Worldwide

Switch-Disconnector-Fuse D02-LTS - Current coding by means of cartridge-ring adapter inserts

- Design according to IEC/EN 60947-3
- Current coding by means of cartridge-ring adapter inserts
- Visual tripping indicator is flashing
- Suitable for fuse-links with operating classes gG (gL), aM
  D01: 2, 4, 6, 10, 13, 16 A with cartridge-ring adapter insert Z-D02-D01/PE-..
  and adapter spring Z-D02-LTS-HF
  D02: 20, 25, 32, 35, 50, 63 A
  Cylindrical 10x38 up to 32 A with adapter spring Z-D02-LTS-HF
- Can be sealed with leads

Connection diagram

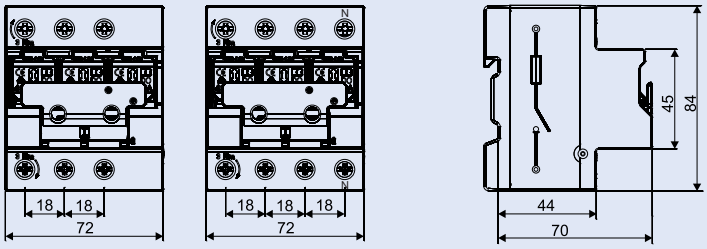


Technical Data

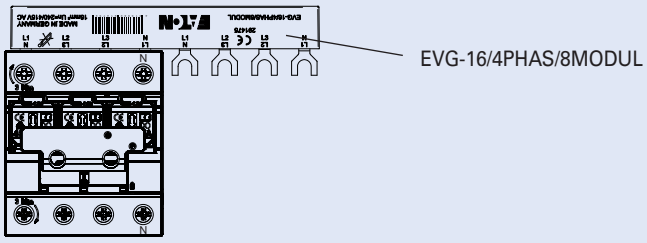
Electrical	
Number of poles	3P, 3P+N, 3P+HK
Rated operational voltage U_e	400 V AC
Rated operational voltage range	48-400 V AC
Rated operational current I_e	63 A
Rated uninterrupted current I_u	63 A
Rated short-circuit making capacity	50 $kA_{r.m.s}$
Utilization category	AC 22 B
Overvoltage category	IV
Rated impulse withstand voltage U_{imp}	6 kV
Power loss per current path	1.8 W at I_e
Power loss per current path with fuse-link	7.3 W at I_e
Max. permissible power loss of fuse-links	5.5 W
Auxiliary switch	
1 NO	5 A / 250 V AC
Max. thermal back-up protection	2 A gL

Mechanical			
Frame size	45 mm		
Device height	84 mm		
Device width	18 mm per pole (1MU)		
Weight	3P	3P+N	3P+HK
	340 g	380 g	380 g
Mounting	quick fastening on DIN rail IEC/EN 60715		
Degree of protection	IP20		
Upper and lower terminals	lift terminals		
Terminal capacity	1.5-25 mm^2		
Tightening torque of terminal screws	max. 3 Nm		
Temperature range	-25 to +60°C		
Flame class	V0, glow-wire tested 960°C		
Pollution degree	3		
Comparative tracking index	CTI 600		

Dimensions (mm)



Busbar Connection Example 3P, 3P+N

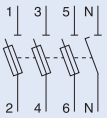


Fuse-Disconnector for Industrial Applications Z-SH.

- Design according to IEC/EN 60947-3
- Version
  without visual tripping indicator Z-SH
  with visual tripping indicator Z-SHL
- Can be sealed with leads
- Supplied without fuse-links

Connection diagram

Z-SH/3N

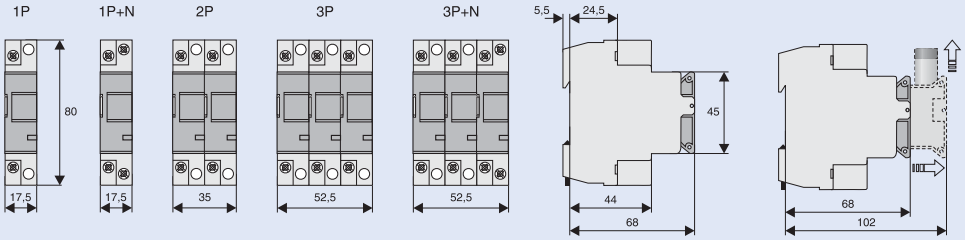


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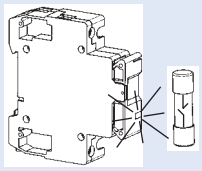
Electrical	
Number of poles	1P, 1P+N, 2P, 3P, 3P+N
Rated voltage	
1P, 1P+N	230 V AC
2P, 3P, 3P+N	400 V AC
Rated operational current I_e	32 A
Conditional short-circuit current	10 $kA_{r.m.s}$
Utilization category	AC 20 B
Rated impulse withstand voltage U_{imp}	4 kV
Fuse-links	10, 16, 20, 25 and 32 A
Operating class	gG(gL)/aM
Max. Power loss per current path	3.2 W

Mechanical		
Frame size	45 mm	
Device height	80 mm	
Device width	acc. to dimensioned drawing	
Weight	Z-SH	Z-SHL
1P	74g	76g
1P+N	84g	86g
2P	156g	158g
3P	234g	236g
4P	244g	246g
Mounting	quick fastening on DIN rail IEC/EN 60715	
Degree of protection (built-in)	IP20 (IP40)	
Upper and lower terminals	lift terminals	
Terminal capacity	1.5-10 mm^2	
Tightening torque of terminal screws	max. 2 Nm	
Dimensions of fuse-link	10.3 x 38 mm	

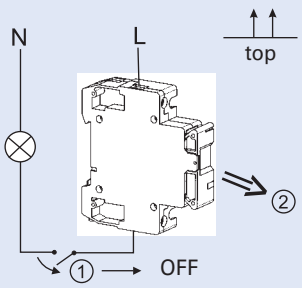
Dimensions (mm)

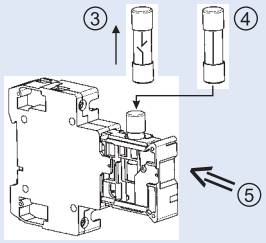


Visual Tripping Indicator



Attention





Do not switch the fuse-disconnector under load

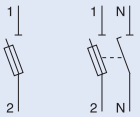
xPole

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Fuse-Disconnector for Household Applications Z-SI.

- Design according to IEC/EN 60947-3
- Version
  without visual tripping indicator Z-SI
  with visual tripping indicator Z-SIL
- Can be sealed with leads
- The open fuse drawer can be secured against re-switch-on by means of a padlock
- Supplied without fuse-links

Connection diagram

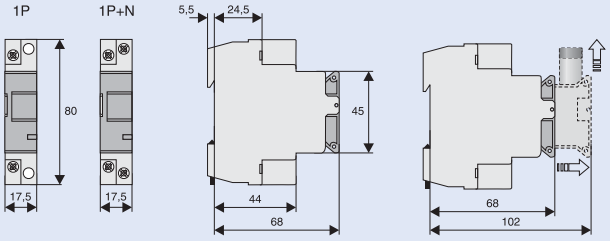


Technical Data

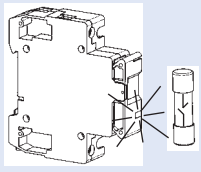
Electrical	
Number of poles	1P, 1P+N
Rated voltage	230 V AC
Rated operational current I_e	32 A
Conditional short-circuit current	10 $kA_{r.m.s}$
Utilization category	AC 20 B
Rated impulse withstand voltage U_{imp}	4 kV
Fuse-links	10, 16, 20, 25 and 32 A
Operating class	gG (gL)/aM
Max. Power loss	3.2 W

Mechanical		
Frame size	45 mm	
Device height	80 mm	
Device width	17.5 mm	
Weight	Z-SI	Z-SIL
1P	74g	76g
1P+N	84g	86g
Mounting	quick fastening on DIN rail IEC/EN 60715	
Degree of protection (built-in)	IP20 (IP40)	
Upper and lower terminals	lift terminals	
Terminal capacity	1.5-10 mm^2	
Tightening torque of terminal screws	max. 2 Nm	
Dimensions of fuse-link		
Rated current (A)	(mm)	
10	8.5 x 23	
16	10.3 x 25.8	
20	8.5 x 31.5	
25	10.3 x 31.5	
32	10.3 x 38	

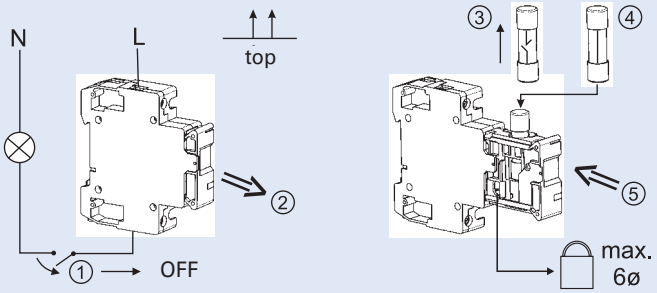
Dimensions (mm)



Visual Tripping Indicator



Attention



Do not switch the fuse-disconnector under load

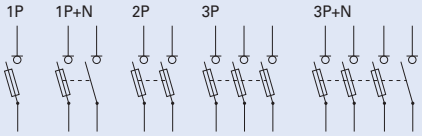
xPole

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Fuse-Switch-Disconnector C10-SLS, VLC

- Design according to IEC/EN 60947-3
- Types /L with visual tripping indicator (flashing)
- Suitable for cylindrical fuse-links with operating classes gG, aM
  - 10x38 C10-SLS
  - 14x51 VLC14
  - 22x58 VLC22
- Can be sealed with leads
- Supplied without fuse-links

Connection diagram

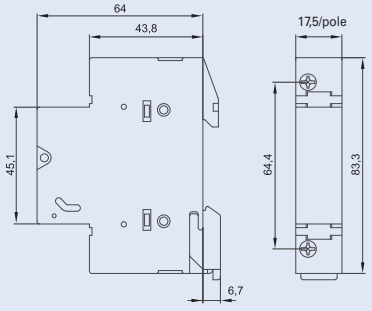


Technical Data

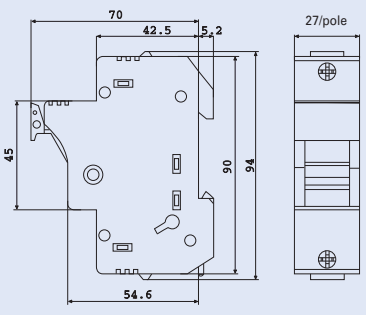
	C10-SLS	VLC14	VLC22
Electrical			
Number of poles	1P, 1P+N, 2P, 3P, 3P+N	1P, 1P+N, 2P, 3P, 3P+N	1P, 1P+N, 2P, 3P, 3P+N
Rated operational voltage U_e			
1P	690 V, 50 Hz	690 V, 50 Hz	690 V, 50 Hz
1P+N	400 V, 50 Hz	690 V, 50 Hz	690 V, 50 Hz
2P, 3P, 3P+N	690 V, 50 Hz	690 V, 50 Hz	690 V, 50 Hz
Rated operational current I_e	32 A	50 A	100 A
Rated conditional short-circuit current	100 kA (at 400 V)	100 kA	100 kA
Rated short-time withstand current I_{cw}	300 A	600 A	1200 A
Utilization category	AC 22 B	AC 22 B	AC 21 B
Rated insulation voltage U_i	690 V	690 V	690 V
Overvoltage category	II	IV	IV
Rated impulse withstand voltage U_{imp}	4 kV	8 kV	8 kV
Power loss per current path without fuse-link	0.9 W	1 W	3.1 W
Maximum permissible power loss of fuse-links			
gG	3 W	5 W	9.5 W
aM	1.2 W	3 W	7 W
Mechanical			
Frame size	45 mm	45 mm	45 mm
Device height	83.3 mm	94 mm	121 mm
Device width	17.5 mm per pole	27 mm per pole	36 mm per pole
Weight			
1P	58 g	100 g	160 g
1P+N	70 g	222 g	355 g
2P	120 g	201 g	310 g
3P	180 g	308 g	480 g
3P+N	195 g	437 g	680 g
Mounting	Quick fastening on DIN rail IEC/EN 60715		
Degree of protection	IP20	IP20	IP20
Terminals above and below	lift terminals	lift terminals	lift terminals
Terminal capacity	0.5 - 10 mm^2	1.5 - 35mm^2	4 - 50 mm^2
	AWG 20-8	AWG 16-2	–
Tightening torque of terminal screws	≤ 1,2 Nm	2.5 - 3 Nm	2.5 - 3 Nm
Ambient temperature range	-25 to +40°C	-25 to +40°C	-25 to +40°C
Flame class	glow wire tested 960°C	glow wire tested 960°C	glow wire tested 960°C
Pollution degree	2	1	1
Comparative tracking index	CTI 450	CTI 400	CTI 400

Dimensions (mm)

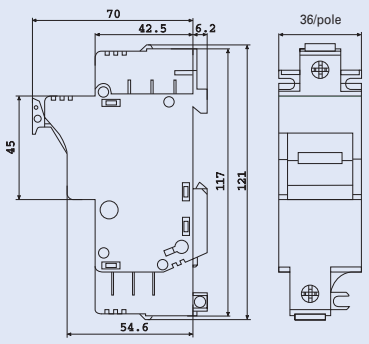
C10-SLS



VLC 14



VLC 22

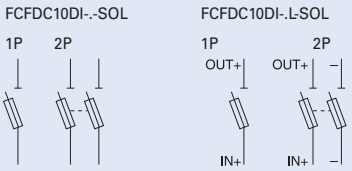


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Fuse-Disconnector FCFDC10DI-..-SOL

- Design according to
  IEC 60947-1 Ed. 4.0, EN 60947-1:1999+A1:2000+A2:2001
  IEC 60947-3 Ed. 2.1, EN 60947-3:1999+A1:2001
- Types L with visual tripping indicator
- Suitable for cylindrical fuse-links photovoltaic application
  10x38 according to IEC 60269, UL284-4
- Can be sealed with leads
- Supplied without fuse-links

Connection diagram



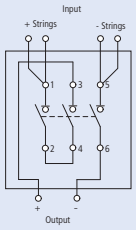
Technical Data

Electrical	
Number of poles	1P, 2P
Rated voltage U_e	1000 V DC
Rated current I_e	25 A
Rated conditional short-circuit current	10 kA
Utilization category	DC 20 B
Rated insulation voltage U_i	1000 V DC
Overvoltage category	III
Rated impulse withstand voltage U_{imp}	6 kV
Power loss per current path without fuse-link	0.9 W
Maximum permissible power loss of fuse-links	3 W

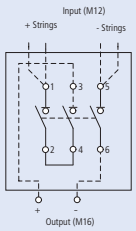
Mechanical	
Frame size	45 mm
Device height	83.3 mm
Device width	17.5 mm per pole
Weight	
1P	58 g
2P	70 g
Mounting	Quick fastening on DIN rail IEC/EN 60715
Degree of protection	IP20
Terminals above and below	lift terminals
Terminal capacity	0.5 - 10 mm² AWG 20-8
Tightening torque of terminal screws	1.2 Nm
Ambient temperature range	-25 to +40°C
Flame class	glow wire tested 960°C
Pollution degree	2
Comparative tracking index	CTI 450

Connection diagram

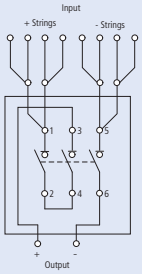
SOL20/2MC3
SOL20/2MC4
SOL30/2MC3
SOL30/2MC4



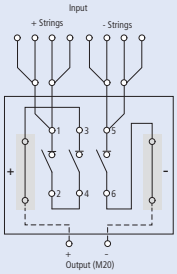
SOL20/2MV
SOL30/2MV



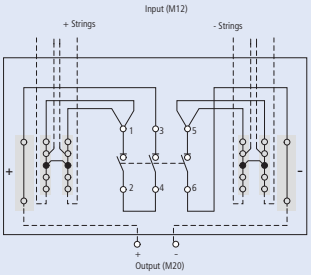
SOL20/4MC3
SOL20/4MC4
SOL30/4MC3
SOL30/4MC4



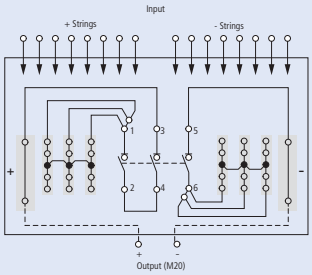
SOL60/4MC3
SOL60/4MC4



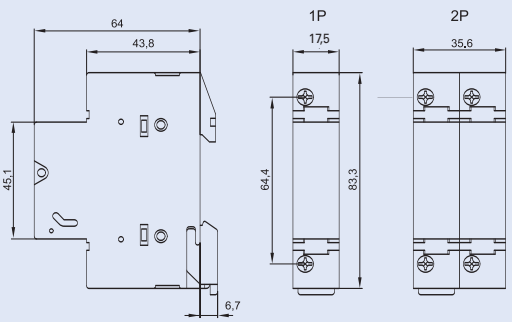
SOL60/4MV



SOL60/8MC3
SOL60/8MC4



Dimensions (mm)



Powering Business Worldwide

Slide Fuse-Base D02 (+D01); D02-SO/63/3-R27, Z-D02/R/3

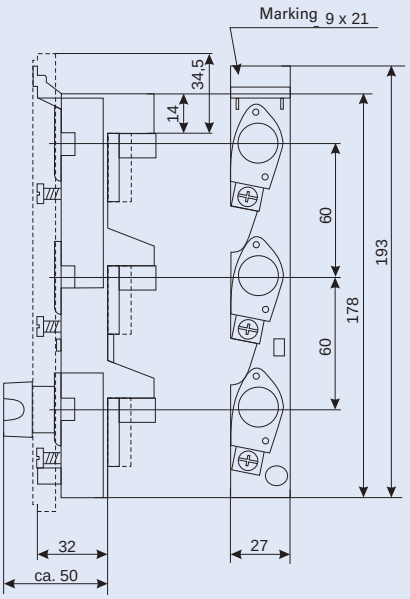
- Design according to IEC/EN 60269-1, VDE 0636 part 301
- Vertical and horizontal mounting possible
- Delivered empty and without screw caps
- For 60 mm - busbar system, 5 or 10 mm thick
- Rail detent for 12, 15, 20, 25, 30mm wide busbars
- Does not contain halogens, phosphorus or silicon
- Recyclable
- Marking area on the base and cover
- For fuse-links DIN 49522 D02 20...63A 400VAC / 250VDC
- For cartridge-ring adapter inserts DIN 49523
- Cartridge-ring adapter inserts Z-D02-D01-PE-.. for D01 fuse-links 1...16 A available

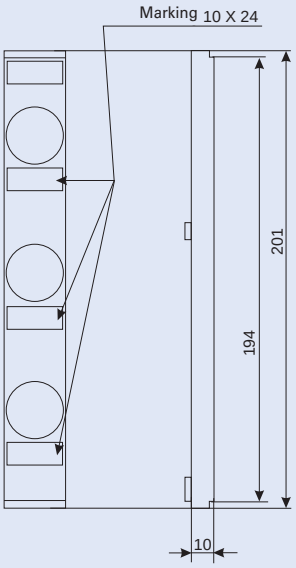
Technical Data

Electrical	
Number of poles	3
Rated operational voltage U_e	400 V AC
Rated frequency	40-60 Hz
Rated operational current I_e	63 A
Conv. thermal current with fuse-links I_{th}	63 A
Rated duty	uninterrupted duty
Rated conditional short-circuit current	50 $kA_{r.m.s.}$
Overvoltage category	IV
Rated impulse withstand voltage U_{imp}	6 kV
Power loss per current path	0.5 W
Power loss of base without fuse-links	1.5 W
Max. permissible power loss of fuse-links	5.5 W

Mechanical	
Device height	201 mm
Device width	27 / 36 / 54 mm
Weight	163 g / 184 g / 205 g
Mounting onto busbars, without drilling or screwing	12x5/10, 15x5/10, 20x5/10, 25x5/10, 30x5/10
Degree of protection while operating	IP20
Terminals	Lift terminals
Terminal capacity	1.5-35 mm^2
Tightening torque of terminal screws	3-4 Nm
Electrical thread type	E18
Ambient temperature range	-25°C bis +55°C
Pollution degree	3
Flame class according UL94	V0
Comparative tracking index	CTI 600
Climatic resistance: moist heat	constant acc. to IEC 60068-2-78 cyclical acc. to IEC 60068-2-30

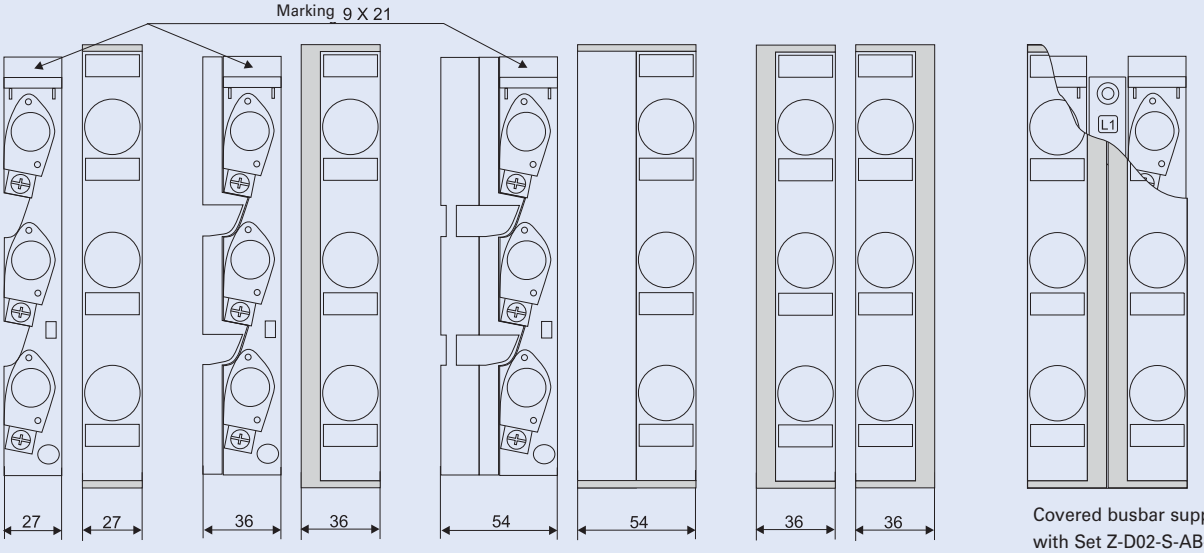
Dimensions (mm)





Front plate support

Z-D02/R/3 Z-D02/R/3-36 Z-D02/R/3-54 Z-D02-S-AB-SET



Covered busbar support with Set Z-D02-S-AB-SET

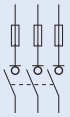
xPole

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Switch-Disconnector-Fuse D02 (+D01), D02-S/63/3-RS

- Design according to IEC/EN 60947-3
- For 60 mm busbar system, busbar thickness 5 or 10 mm
- Rail detent for busbars, 20 and 30 mm wide
- Delivered empty and without screw caps
- Current coding by means of cartridge-ring adapter inserts
- Suitable for the following fuse-links
  D01: 2, 4, 6, 10, 16 A with cartridge-ring adapter insert Z-D02-D01/PE-..
  and adapter spring Z-D02/SIKA-HF
  D02: 20, 25, 35, 50, 63 A
- Can be sealed with leads

Connection diagram

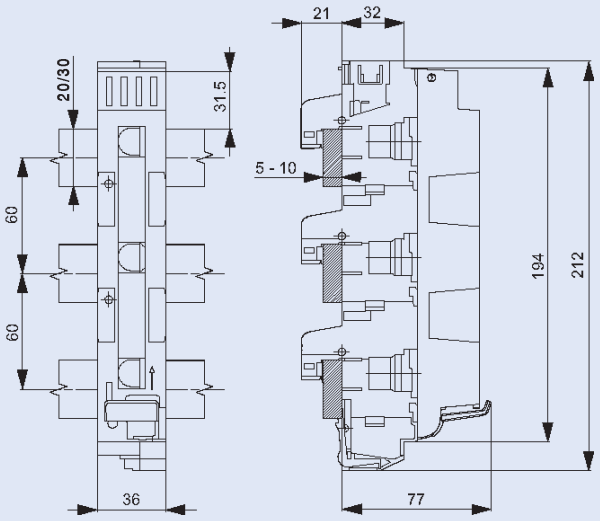


Technical Data

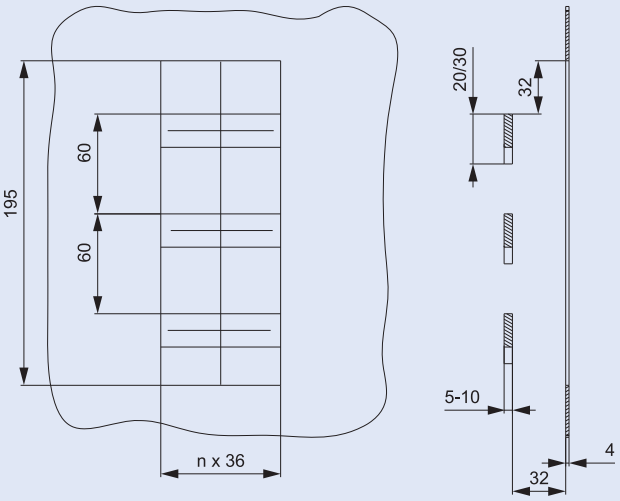
Electrical	
Number of poles	3P
Rated operational voltage U_e AC	400 V / 40-60 Hz
Rated operational current I_e	63 A
Conventional thermal current with fuse-links I_{th}	63 A
Rated duty	Uninterrupted duty
Rated conditional short-circuit current	50 $kA_{r.m.s}$
Utilization category	AC 23 B
Overvoltage category	III
Rated impulse withstand voltage U_{imp}	8 kV
Power loss per current path	2 W at I_e
Power loss per current path with fuse-link	7.5 W at I_e
Max. permissible power loss of fuse-links	5.5 W

Mechanical	
Device height	212 mm
Device width	36 mm
Weight	260 g
Mounting	with a distance between busbars of 60 mm
Degree of protection (in use)	IP30
Terminals	lift terminals
Terminal capacity	1.5-25 mm^2 Cu
Tightening torque of terminal screws	max. 2,6 Nm
Electrical thread	E18
Temperature range	-25 to +55°C
Pollution degree	3

Dimensions (mm)



Cut-out for front plate



EATON
Powering Business Worldwide

Slide Switch-Disconnector-Fuse, D02-LTS/../3.-R..

- Design according to IEC/EN 60947-3
- Vertical and horizontal mounting possible
- Can be sealed with leads, lockable

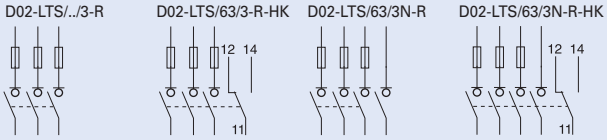
D02-LTS/63/3.-R..

- Supplied empty
- Current coding by means of cartridge-ring adapter inserts
- Suitable for fuse-links
  D01: 2, 4, 6, 10, 13, 16 A with cartridge-ring adapter inserts
  Z-D02-D01/PE-.. and adapter spring Z-D02-LTS-HF
  D02: 20, 25, 32, 35, 40, 50, 63 A with cartridge-ring adapter inserts
  Z-D02/PE-..
  Cylindrical 10x38: 1 - 32 A with adapter spring Z-D02-LTS-HF

D02-LTS/../3-R

- With fixed cartridge-ring adapter inserts, 3 inserted fuse-links and 2 dummy fuse-links for single-phase application
- Suitable for fuse-links D02: 20, 25, 35, 50 A

Connection diagram



Technical Data

Electrical	
Number of poles	3P/3P+N
Rated operational voltage U_e AC	400 V / 40-60 Hz
Rated operational current I_e	63 A
Rated uninterrupted current I_u	63 A
Rated duty	Uninterupted duty
Rated conditional short-circuit current	50 $kA_{r.m.s.}$
Utilization category	AC 23 B
Overvoltage category	IV
Rated insulation voltage U_i	500 V
Rated impulse withstand voltage U_{imp}	6 kV
Power loss per current path	1.5 W at I_e
Power loss per current path with fuse-link	7 W at I_e
Max. permissible power loss of fuse-links	5.5 W

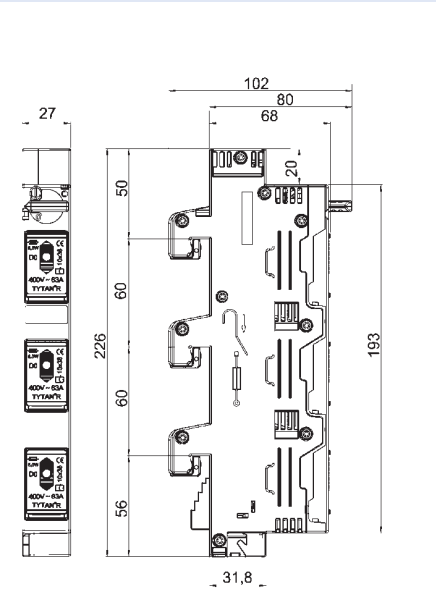
Mechanical	
Device height 3P/3P+N	226/262 mm
Device width	27 mm
Weight	
3P/3P+N	361/411 g
D02-LTS/../3-R	402 g
Mounting onto busbars, without drilling or screwing	12x5/10 mm 15x5/10 mm 20x5/10 mm 25x5/10 mm 30x5/10 mm
Degree of protection while operating (built-in)	IP20/IP40
Terminals	Lift terminals
Terminal capacity	1.5-35 mm^2 Cu
Tightening torque of terminal screws	max. 3 Nm
Temperature range	-25 to +55°C
Pollution degree	3

Auxiliary switch electrical	
1 CO	5 A / 250 V AC
Max. thermal back-up protection	2 A gL

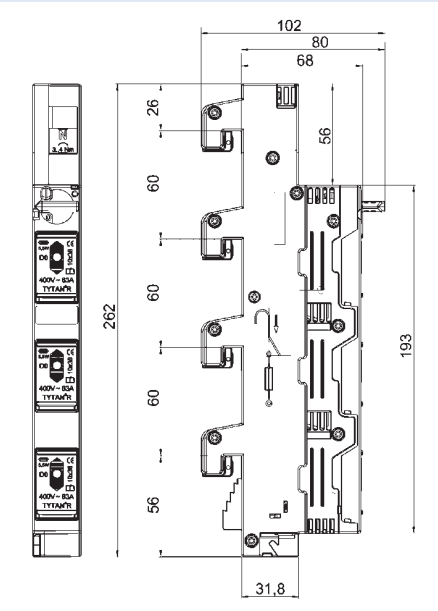
Connection	
Femal push-on connector	2.8 x 0.5 mm

Dimensions (mm)

3P



3P+N



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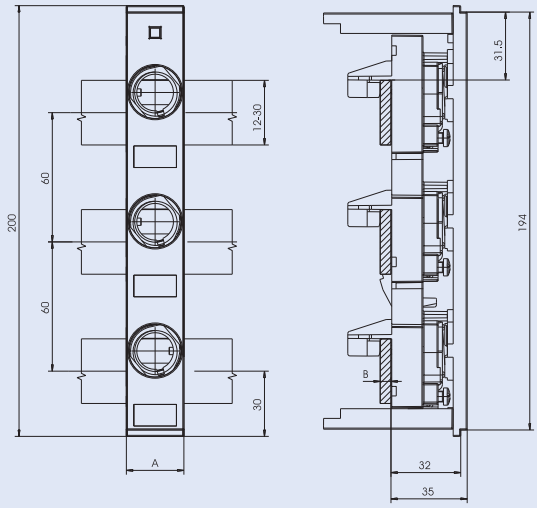
Slide Fuse-Base DII and DIII, DII.-SO/

- Design according to IEC/EN 60269-1, VDE 0636 Part 301
- Vertical and horizontal mounting possible
- Delivered empty, without screw caps

Technical Data

	DII-SO/25/3-R(-PS)	DIII-SO/63/3-R(-PS)
Electrical		
Number of poles	3	3
Rated operational voltage U_e	500 V AC	690 V AC
Rated frequency	40-60 Hz	40-60 Hz
Rated operational current I_e	25 A	63 A
Conv. thermal current with fuse-links I_{th}	25 A	63 A
Rated duty	uninterrupted duty	uninterrupted duty
Rated conditional short-circuit current	50 $kA_{r.m.s.}$	50 $kA_{r.m.s.}$
Overvoltage category	III	III
Rated impulse withstand voltage U_{imp}	4 kV	4 kV
Power loss per current path	0.4 W	3.34 W
Power loss of base without fuse-links	1.2 W	10 W
Max. permissible power loss of fuse-links	4 W	7 W
Mechanical		
Device height	200 mm	200 mm
Device width	45 mm	54 mm
Weight	140 g	150 g
Mounting onto busbars, without drilling or screwing	12x5/10	12x5/10
	20x5/10	20x5/10
	25x5/10	25x5/10
	30x5/10	30x5/10
Degree of protection while operating	IP20	IP20
Terminals	Lift terminals	Lift terminals
Terminal capacity	1.5-25 mm^2	1.5-25 mm^2
Tightening torque of terminal screws	2.6 Nm	2.6 Nm
Electrical thread type	E27	E33
Ambient temperature range	-25 to +55°C *)	-25 to +55°C *)
*) (35°C normal temperature, at 55°C with reduced operational current)		
Pollution degree	3	3
Climatic resistance: moist heat	constant acc. to IEC 60068-2-78, cyclical acc. to IEC 60068-2-30	

Dimensions (mm)

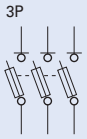


Type	A
DII-SO/25/3-R(-PS)	45
DIII-SO/63/3-R(-PS)	54

NH-Fuse-Switch-Disconnector LTS-100/C00/3-R, GST00-160-40-60-AOU..

- Mounting height max. 2000 m
- Break-proof, flexible connection chamber
- Fully insulated, shock hazard protected in acc. with IEC/EN 60947 or BGV A3
- The base body is made of glass fibre reinforced, high-temperature resistant, self-extinguishing and halogen-free plastic
- The contact system consists of separately spring-loaded silver-plated copper contacts
- The switch cover is made of glass fibre reinforced, self-extinguishing, silicone and chlorine-free thermoplast
- The switch cover features large viewing windows allowing to read the labelling and to see the flat indicator of the NH-fuse-links
- The viewing windows provide test holes
- Vertical and horizontal mounting position is possible
- Delivery without NH-fuse-links

Connection diagram



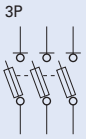
			LTS-100/C00/3-R	GST00-...-AOU	GST00-...-AOU-F
Electrical					
Technical data according to			IEC/EN 60947-3		
Rated operational voltage	Ue	V AC	500	500 / 690	500 / 690
Rated operational voltage	Ue	V DC	220	220 / 440	220 / 440
Rated operational current	Ie	A	100	160 / 100	160 / 100
Rated frequency		Hz	40 - 60	40 - 60	40 - 60
Rated conditional short-circuit current AC		kAr.m.s.	50	50	50
Rated conditional short-circuit current DC		kAr.m.s.	25	25	25
Utilization category AC 22 B					
Rated making capacity		A	300	480 / 300	480 / 300
Rated breaking capacity		A	300	480 / 300	480 / 300
Utilization category DC 21 B					
Rated making capacity		A	400	150	150
Rated breaking capacity		A	400	150	150
Service life electrical - operating cycles			300	300	300
Service life mechanical - operating cycles			1700	1700	1700
Power loss with Ith AC, without NH-SE		W	11.5	6.9 / 2.7	6.9 / 2.7
Power loss with Ith DC, without NH-SE		W	7.7	4.6 / 1.8	4.6 / 1.8
Rated insulation voltage	Ui	V AC	500	750	750
Overvoltage category			III	III	III
Rated impulse withstand voltage	U_{imp}	kV	8	8	8
Max. Fuse-link					
Size			NH000	NH00	NH00
Max. rated current gL/gG		A	100	160	160
Max. permissible power loss of NH-SE	Pv	W	7.5	12	12
Mechanical					
Busbar mounting		mm	20x5/10 30x5/10	20x5/10 25x5/10 30x5/10	20x5/10 25x5/10 30x5/10
Tightening torque		Nm	–	4	4
Ambient temperature range		°C	-25 to +55	-25 to +55	-25 to +55
Degree of protection (open front cover)			IP20 (IP10)	IP20 (IP10)	IP20 (IP10)
Pollution degree			3	3	3
Weight		kg	0.57	0.93	0.93
Climatic resistance: moist heat			constant according to IEC 60068-2-78, cyclical according to IEC 60068-2-30		
Cross sections of connections					
Flat connection (F)					F[1)]
Screw					M8
Cable lug		mm^2			1 x 10-95
Flat busbar		mm			20 x 10
Tightening torque		Nm			12 - 15
Clamp-type terminal (S) / Lift terminal (K)			K[1)]	K[1)]	S
Stranded Cu		mm^2	1.5 - 50	1,5 - 70	10 - 95
Cu-Band, No. of layers	x width x thickness	mm	6 x 9 x 0.8	6 x 9 x 0.8	6 x 9 x 0.8
Tightening torque		Nm	2.6	2.6	2.6
Prism terminal					
Stranded Al/Cu		mm^2			10 - 70
Tightening torque		Nm			2.6
Double-prism terminal					
Stranded Al/Cu		mm^2			
Tightening torque		Nm			

[1)] Standard-connection in the delivery condition

NH-Fuse-Switch-Disconnector GST...

- Mounting height max. 2000 m
- Break-proof, flexible connection chamber
- Fully insulated, shock hazard protected in acc. with IEC/EN 60947 or BGV A3
- The base body is made of glass fibre reinforced, high-temperature resistant, self-extinguishing and halogen-free plastic
- The contact system consists of separately spring-loaded silver-plated copper contacts
- The switch cover is made of glass fibre reinforced, self-extinguishing, silicone and chlorine-free thermoplast
- The switch cover features large viewing windows allowing to read the labelling and to see the flat indicator of the NH-fuse-links
- The viewing windows provide test holes
- Vertical and horizontal mounting position is possible
- Delivery without NH-fuse-links

Connection diagram



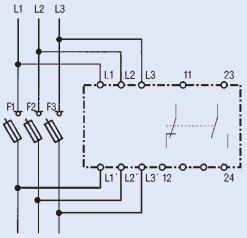
			GST1..	GST2..	GST3..
Electrical					
Technical data according to			IEC/EN 60947-3		
Rated operational voltage	Ue	V AC	500 / 690	500 / 690	500 / 690
Rated operational voltage	Ue	V DC	220 / 440	220 / 440	220 / 440
Rated operational current	Ie	A	250 / 200	400 / 315	630 / 500
Rated frequency		Hz	40 - 60	40 - 60	40 - 60
Rated conditional short-circuit current AC		kAr.m.s.	50	50	50
Rated conditional short-circuit current DC		kAr.m.s.	25	25	25
Utilization category AC 22 B					
Rated making capacity		A	750 / 600	1200 / 945	1890 / 1500
Rated breaking capacity		A	750 / 600	1200 / 945	1890 / 1500
Utilization category DC 21 B					
Rated making capacity		A	300	475	750
Rated breaking capacity		A	300	475	750
Service life electrical - operating cycles			200	200	200
Service life mechanical - operating cycles			1400	800	800
Power loss with Ith AC, without NH-SE		W	12.9 / 8.3	27 / 16.7	52 / 32.8
Power loss with Ith DC, without NH-SE		W	8.6 / 5.5	18 / 11.2	34.7 / 21.8
Rated insulation voltage	Ui	V AC	750	750	750
Overvoltage category			III	III	III
Rated impulse withstand voltage	U_{imp}	kV	8	8	8
Max. Fuse-link					
Size			NH1	NH2	NH3
Max. rated current gL/gG		A	250	400	630
Max. permissible power loss of NH-SE	Pv	W	23	34	48
Mechanical					
Busbar mounting		mm	20x5/10 30x5/10	20x5/10 30x5/10	20x5/10 30x5/10
Tightening torque		Nm	6	6	6
Ambient temperature range		°C	-25 to +55	-25 to +55	-25 to +55
Degree of protection (open front cover)			IP20 (IP10)	IP20 (IP10)	IP20 (IP10)
Pollution degree			3	3	3
Weight		kg	4.4	5.3	6.6
Climatic resistance: moist heat			constant according to IEC 60068-2-78, cyclical according to IEC 60068-2-30		
Cross sections of connections					
Flat connection (F)			F[1)]	F[1)]	F[1)]
Screw			M10	M10	M10
Cable lug		mm^2	1 x 25-150	1 x 25-240	1 x 25-300
Flat busbar		mm	30 x 10	30 x 10	30 x 10
Tightening torque		Nm	30 - 35	30 - 35	30 - 35
Clamp-type terminal (S) / Lift terminal (K)			S	S	S
Stranded Cu		mm^2	25 - 150	25 - 240	25 - 300
Cu-Band, No. of layers		mm	6 x 16 x 0.8	10 x 16 x 0.8	11 x 21 x 1
	x width x thickness				
Tightening torque		Nm	9.5	23	23
Prism terminal					
Stranded Al/Cu		mm^2	70 - 150	120 - 240	120 - 300
Tightening torque		Nm	4.5	11	11
Double-prism terminal					
Stranded Al/Cu		mm^2	2x70-95	2x120-150	2x120-240
Tightening torque		Nm	4.5	11	11

[1)] Standard-connection in the delivery condition

Switch Cover with Fuse Monitoring for NH-Fuse-Switch-Disconnector GST...

- Operation indication
  In working order –> 1 green LED
  Fuse blown –> 3 red LEDs L1, L2, L3
- Working current principle
- VDE-requirements regarding touch voltage (> 1000 Ohm/V) are complied with.
  To release, turn off the upstream main switch!
- Not applicable for single phase application

Connection diagram



Technical data

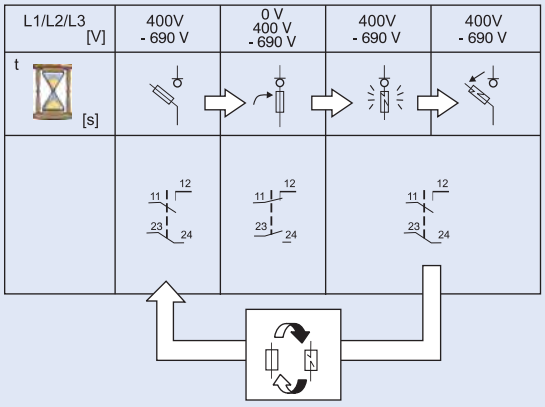
Electrical

Technical data according to	IEC/EN 60255, VDE 0435 Part 303
Rated voltage U_e	3 x 400 V AC - 690 V AC
Voltage range	0,9 ... 1,1xU_e
Rated frequency	50-60 Hz
Consumption	1.5 VA (L2/L3)
Rated insulation voltage U_i	690 V
Overvoltage category	III
Rated impulse withstand voltage U_{imp}	6 kV
Relay contacts	1 NC, 1 NO
Technical data according to	EN 60204, EN 50178, VDE 0106
Rated voltage	250 V AC
Rated current I_{th}	8 A DC
Max. making current	15 A
Utilization category	AC 15 DC13
Rated operational voltage U_e	230VAC 24VAC 24VDC 220VDC
Rated operational current I_e	1 A 4 A 1 A 0,5 A
Minimum switching load	5 V AC/DC, 300 mW, 5 mA
Max. switching capacity	
AC 1	2000 VA
250 V AC 15	400 VA
250 V AC 3	300 W
Endurance electrical comp.	80 x 10^3 operating cycles AC 1
Maximum back-up fuse	4 A gL/gG / PLSM-B4...-HS

Mechanical

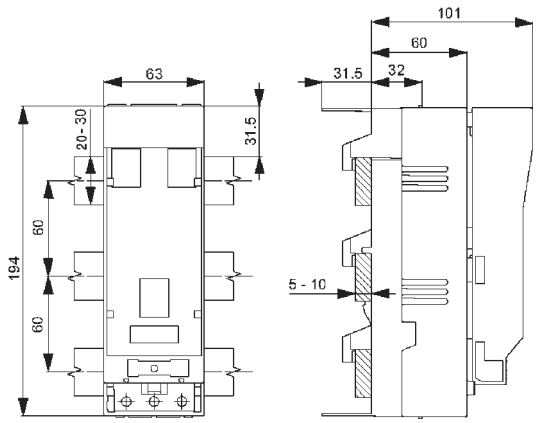
Terminals	Lift terminals
Terminal capacity stranded	0.25 - 1.5 mm^2
Tightening torque of terminal screws	0.5 - 0.6 Nm
Endurance mechanical comp.	> 10 x 10^6 operating cycles
Response/Release time	< 500 ms
Depree of protection	IP20
Temperature range	-10 to +55°C
Pollution degree	3

Functional diagram

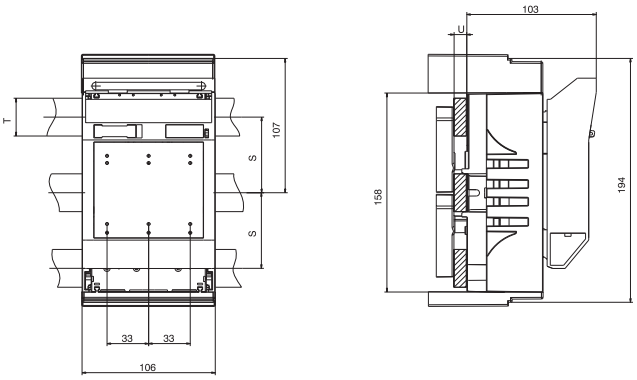


Dimensions

LTS-100/C00/3-R

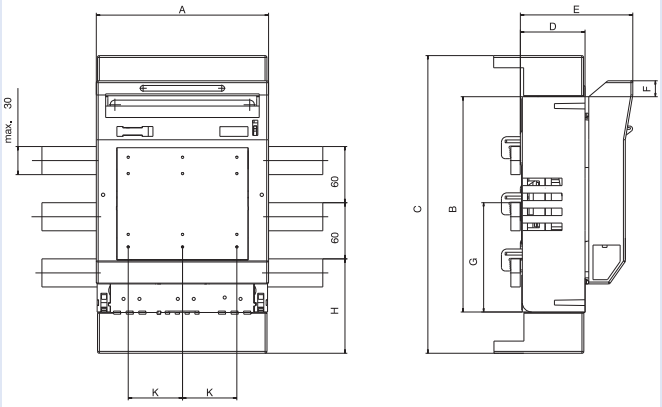


GST00-160-40-60-AOU



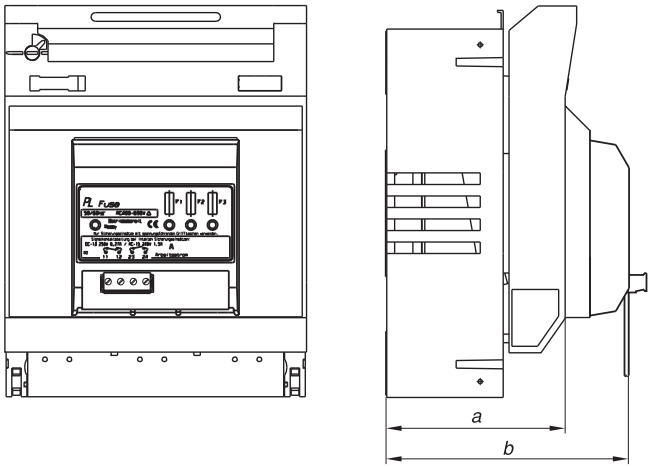
Type	S	T	U
GST00-160-40-60-AOU(-F)	40	12	5-10
	50	20	5-15
	60	20-30	5-10

GST-.-AO / GST-.-AU



Type	A	B	C	D	E	F	G	H	K
GST1-A.	184	230	322	70	121	16,5	115	104	58
GST2-A.	210	256	408	83	135	16,5	128	145	66
GST3-A.	254	270	434	98	149	9	135	156	82

GST...-DSI



Type	Size	a	b
GST00...	NH00	90	123
GST1...	NH1	120	151
GST2...	NH2	135	166
GST3...	NH3	145	176

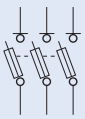
xPole

NH-Fuse-Switch-Disconnector LTS, 3-pole, xPole

- Supplied without NH-fuse-links
- Symmetrical device - top or bottom connection is possible
- Modular cable cover system for cable lugs or terminals can be expanded as required
- Standard LTS-160/00/3E-R and LTS-250/1/3-R are equipped with locks which can be sealed with leads
- The switch cover features large viewing windows permitting to see the marking and the flat indicator of the NH-fuse-links.
- The windows of LTS-160/00/3-R, LTS-250/1/3-R and LTS-400/2/3-R are hinged and permit testing of the fuse-links - without affecting touch protection IP20
- The switch cover can be removed in the OFF position
- Parking position of switch cover is possible
- The base body consists of a glass-fibre reinforced high-temperature-resistant, non-flammable, self-extinguishing and halogen-free plastic
- The single-part contact system is corrosion- and torsion-proof. The copper contacts are nickel-plated, and the contact springs are made of stainless steel
- The protective cover consists of a glass-fibre re-enforced, high-temperature-resistant, self-extinguishing and halogen-free plastic

Connection diagram

3P

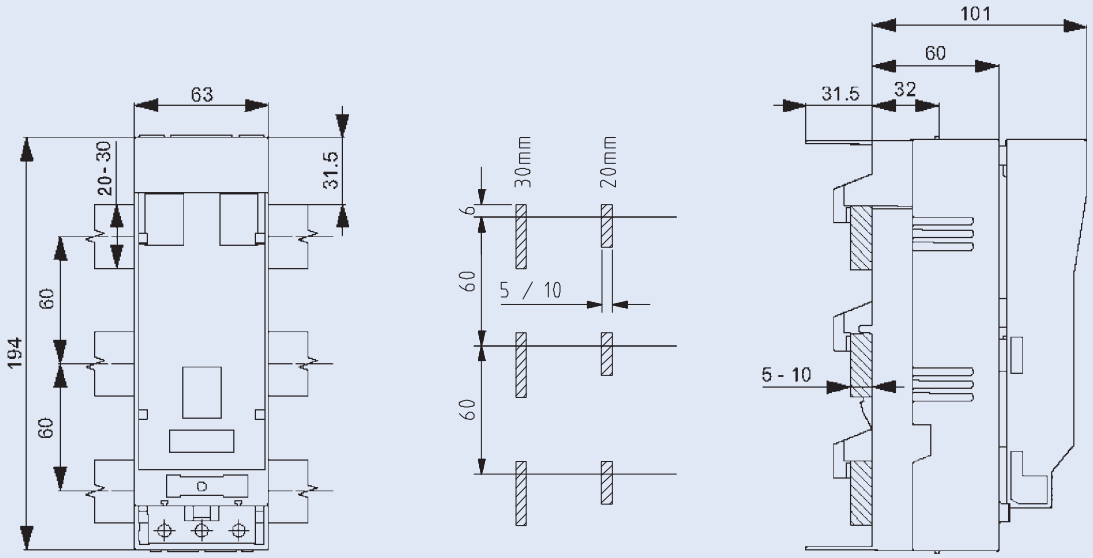


Technical Data

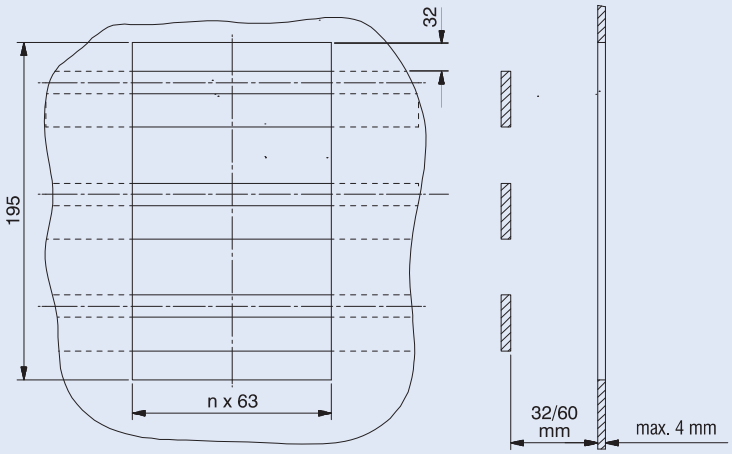
	LTS-100/C00/3-R	LTS-160/00/3E-R	LTS-160/00/3-R	LTS-250/1/3-R	LTS-400/2/3-R
Electrical					
Technical data according to	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947
Size	C00	00	00	1	2
Number of poles/phases	3	3	3	3	3
Conventional free air thermal current with NH-fuse-links I_{th}	100 A	160 A	160 A	250 A	400 A
Max. permitted nominal power loss of NH-fuse-links	7.5 W	12 W	12 W	23 W	34 W
Conventional free air thermal current with solid-links I_{th}	160 A	200 A	200 A	400 A	530 A
Max. permitted nominal power loss of solid-links	–	1.2 W	1.2 W	2.6 W	9 W
Utilization category AC 23 B					
Rated operational voltage U_e	–	400 V AC	400 V AC	400 V AC	400 V AC
Rated operational current I_e	–	160 A	160 A	250 A	400 A
Rated short-circuit making capacity	–	80 kA	80 kA	80 kA	80 kA
Utilization category AC 22 B					
Rated operational voltage U_e	500 V AC	500 V AC	500 V AC	500 V AC	500 V AC
Rated operational current I_e	100 A	160 A	160 A	250 A	400 A
Rated short-circuit making capacity	50 kA	80 kA	80 kA	50 kA	80 kA
Utilization category AC 21 B					
Rated operational voltage U_e	–	690 V AC	690 V AC	690 V AC	690 V AC
Rated operational current I_e	–	125 A	125 A	200 A	315 A
Rated short-circuit making capacity	–	50 kA	50 kA	50 kA	80 kA
Rated insulation voltage U_i	750 V	1000 V	1000 V	1000 V	1000 V
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	12 kV	12 kV
Rated frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Rated duty	uninterrupted duty	uninterrupted duty	uninterrupted duty	uninterrupted duty	uninterrupted duty
Rated short-circuit making capacity I_{cm} with solid-links	–	6.2 kA_{sw}	6.2 kA_{sw}	8.2 kA_{sw}	10.6 kA_{sw}
Rated short-time withstand current I_{cw} with solid-links	–	4 kA/1s	4 kA/1s	8 kA/1s	13 kA/1s
Power loss without NH-fuse-links	–	10W at 160A	10W at 160A	28W at 250A	53W at 400A
Power loss without solid-links	–	16W at 200A	16W at 200A	–	–
Mechanical					
Standard connection	Lift terminal	Lift terminal	Clamp strap	M10	M10
For cable lugs	1.5-50mm² Cu	2.5-70mm² Cu	M8 max. 2x70mm² CU 2x95mm² Al	2x150mm² Cu 2x185mm² Al	2x240mm² Cu 2x240mm² Al
For busbar max. width	–	-	20 mm	30 mm	35 mm
For busbar system with distance (mm)	60	60	60 / 40	60 / 40	60 / 40
For busbars					
max. width x thickness (mm)	30x10	30x10 / 12x10	30x10 / 12x10	30x10 / 12x10	30x10 / 12x10
min. width x thickness (mm)	20x5	12x5	12x5	12x5	12x5
Ambient temperature range	-5°C to +40°C	-5°C to +40°C	-5°C to +40°C	-5°C to +40°C	-5°C to +40°C
Degree of protection	IP 20	IP 30	IP 20	IP 20	IP 20
Pollution degree	3	3	3	3	3

Dimensions (mm)

LTS-100/C00/3-R



Cut-out for front plate

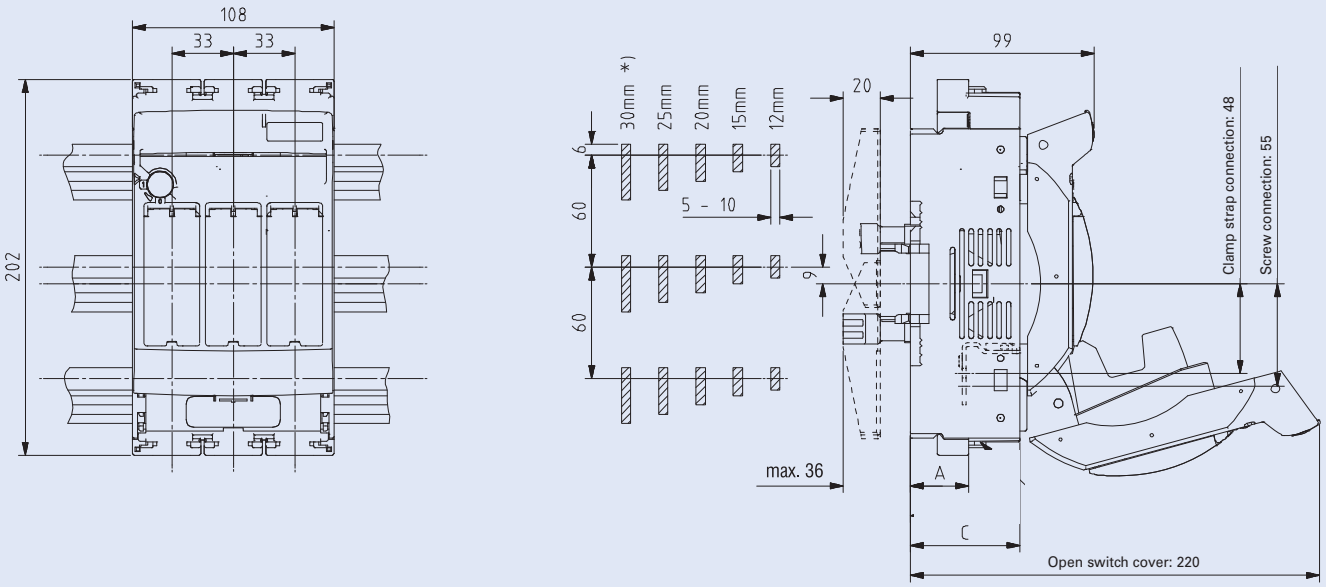


Cable Terminal Connections LTS-100/00/3-R

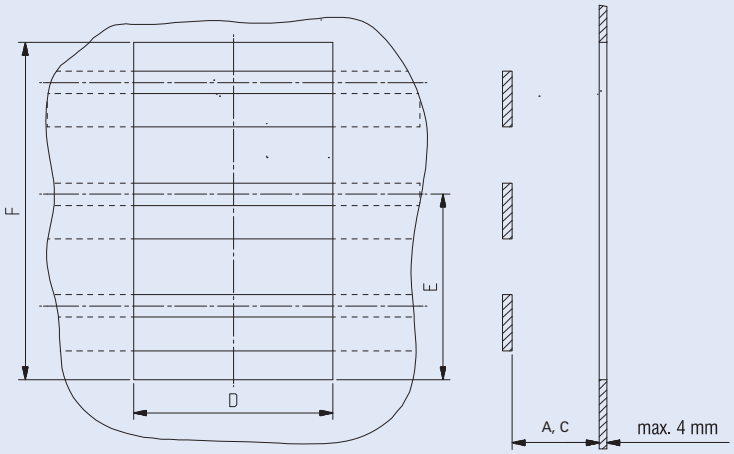
Lift terminal:
Cross section Cu 1.5-50 mm²
Band 6 x 9 x 0,8
Tightening torque 2.6 Nm

Dimensions (mm)

LTS-160/00/3-R



Cut-out for front plate

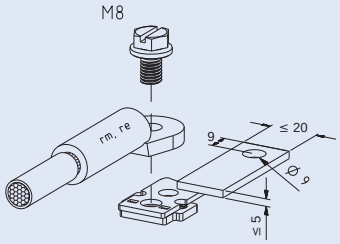


Depth		Cut-out dimensions		
		D	E	F
A	32	109	97,5	195
C	59,5	105	90,5	181

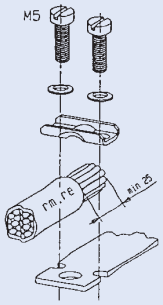
Dimensions valid for cable terminal top/bottom symetrical.
*) Busbar-centering not neccessary

Cable Terminal Connections LTS-160/00/3-R

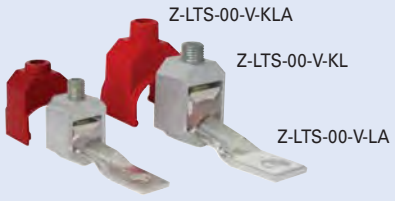
Screw M8:
Cross section Cu 16-70, Al 16-95 mm²
Tightening torque 15-17 Nm



Clamp strap Z-LTS-160-BK:
Cross section Cu 4-70 mm²
Tightening torque 3-4 Nm



Accessories: V-shaped terminal
Cross section: 50-95 mm² se
35-70 mm² sm
10-50 mm² rm
Tightening torque 12 Nm

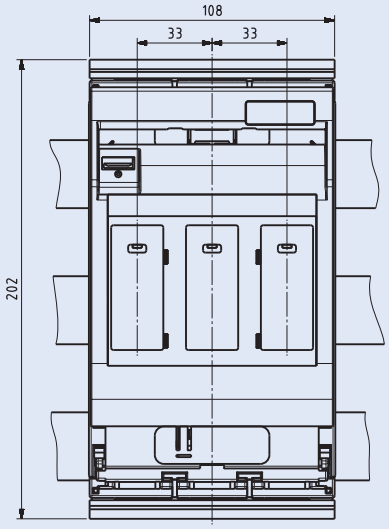


WA-SG01502

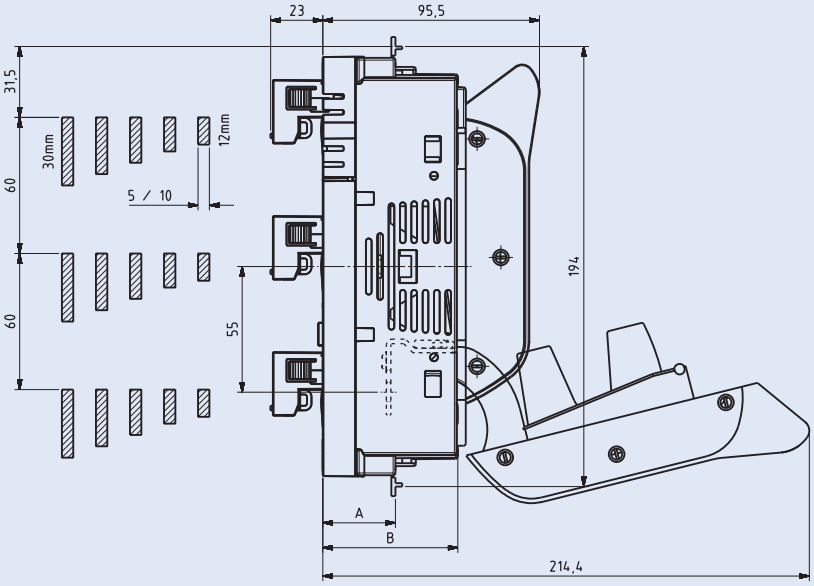
Dimensions (mm)

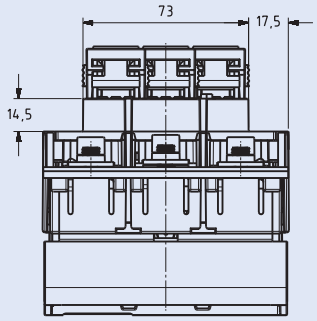
LTS-160/00/3E-R

Busbar support can be overbuilt

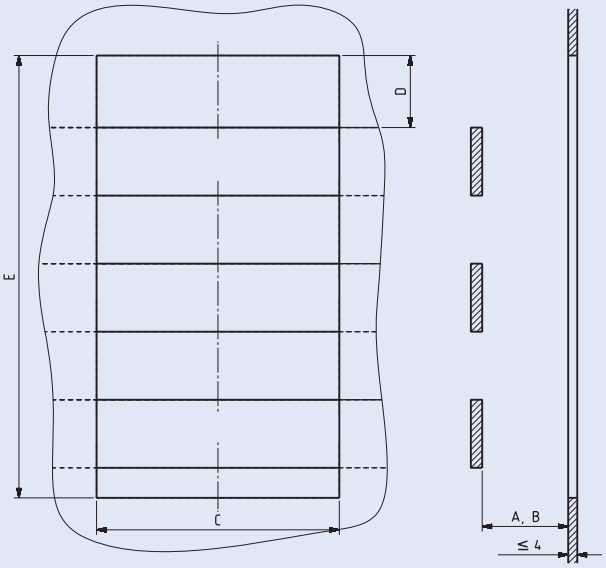


Dimensions valid for cable terminal top/bottom symetrical.





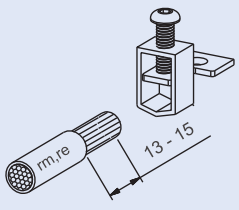
Cut-out for front plate



Depth		Cut-out dimensions		
		C	D	E
A	32	109	31.5	195
B	60	107	13.5	159

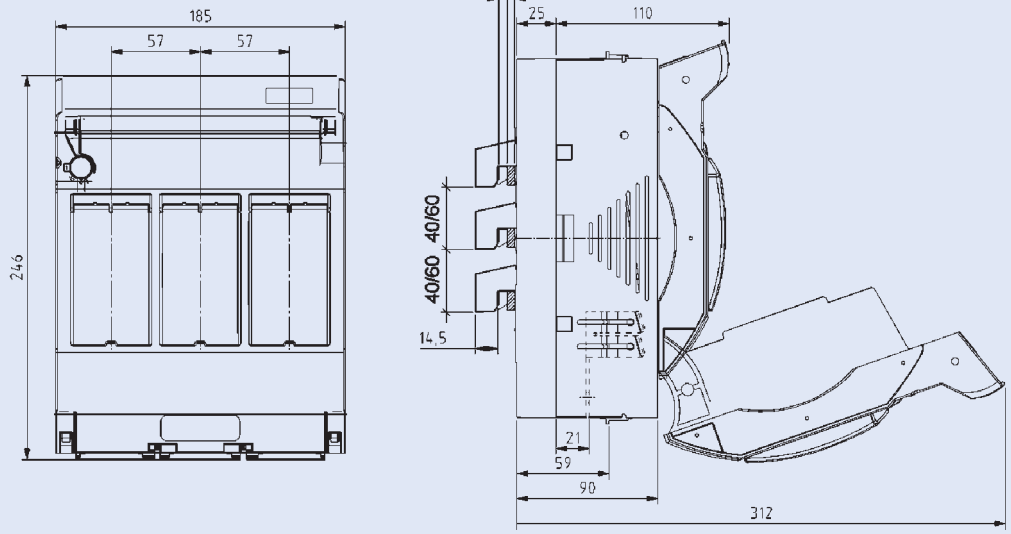
Cable Terminal Connections LTS-160/00/3E-R

Cross section Cu 2.5-70 mm²
Tightening torque 6 Nm

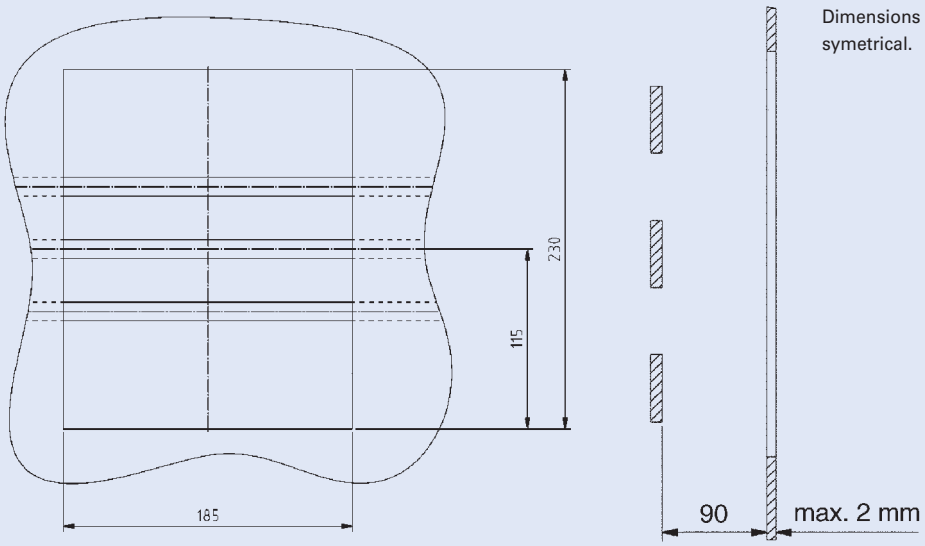


Dimensions (mm)

LTS-250/1/3-R



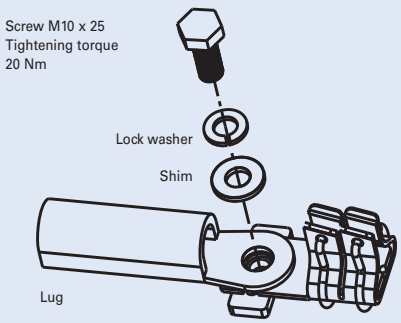
Cut-out for front plate



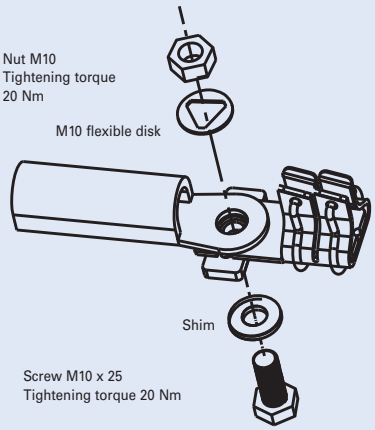
Dimensions valid for cable terminal top/bottom symetrical.

Cable Terminal Connections LTS-250/1/3-R

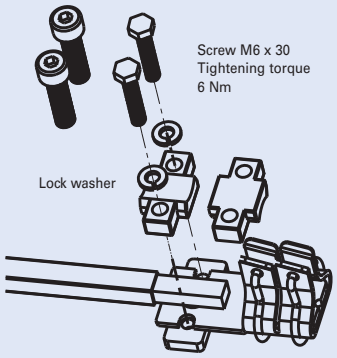
Screw connection



Bolt connection



Accessories: Clamp strap Z-LTS-250-BK

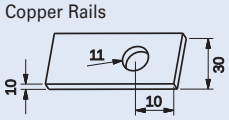


Suitable : for round conductor 70-150 mm² rm
for rails or laminated copper 18 x 7-18

Screw- and bolt connection

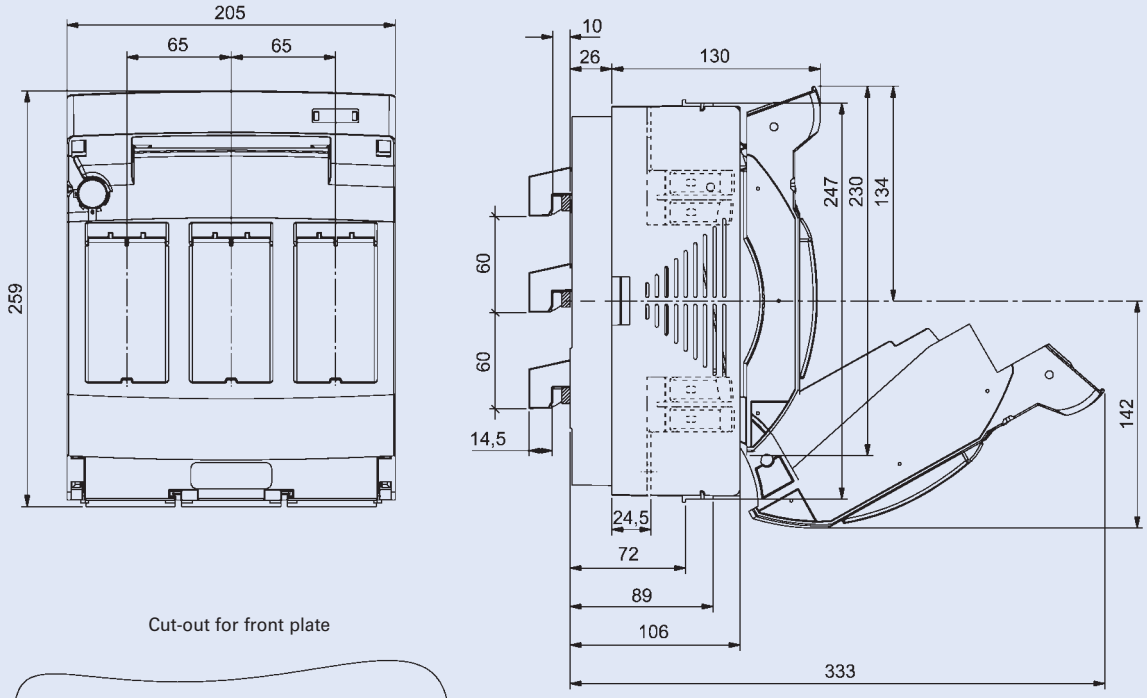
Suitable for lugs according to:
DIN 46235 max. 10-150 mm²
DIN 46234 max. 10-150 mm²
DIN 46329 max. 10-185 mm²

Copper Rails

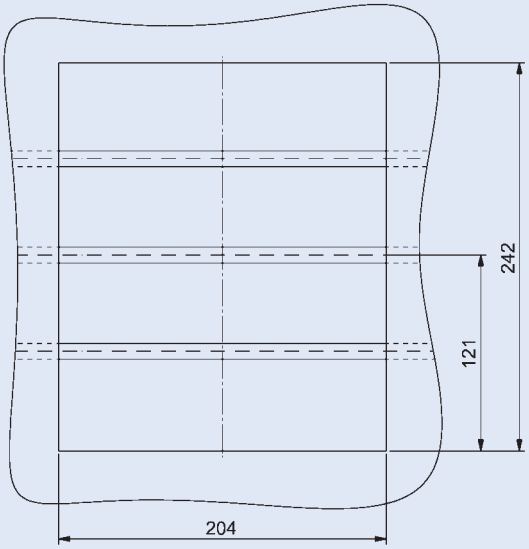


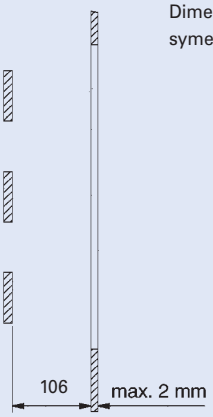
Dimensions (mm)

LTS-400/2/3-R



Cut-out for front plate

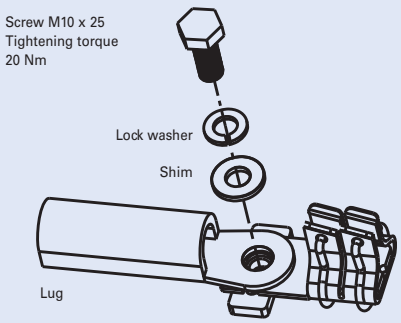




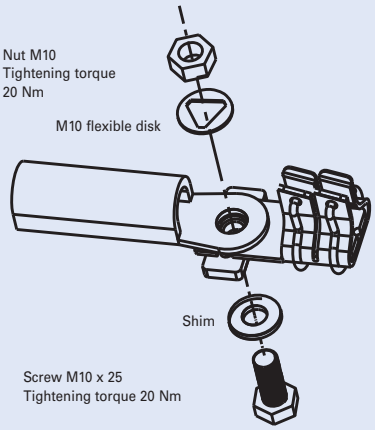
Dimensions valid for cable terminal top/bottom symetrical.

Cable Terminal Connections LTS-400/2/3-R

Screw connection



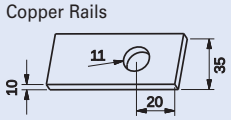
Bolt connection



Screw- and bolt connection

Suitable for lugs according to:
DIN 46235 max. 10-185 mm²
DIN 46234 max. 10-240 mm²
DIN 46329 max. 10-240 mm²

Copper Rails

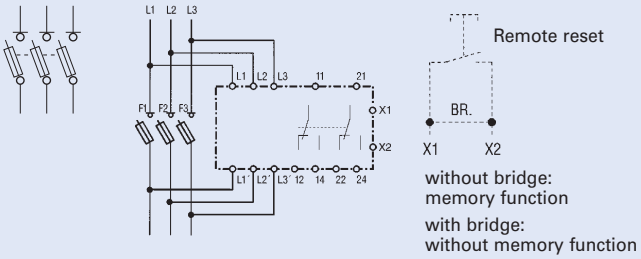


xPole

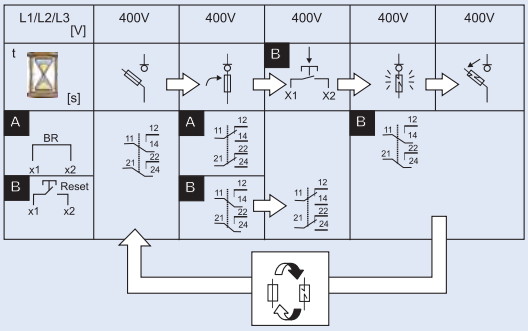
NH-Vertical Fuse-Switch-Disconnector NH-SLS, 3-pole

- Supplied without NH-fuse-links
- Can be installed both in a vertical and horizontal position
- Symmetrical device - top or bottom connection is possible
- Break-proof, flexible connection chamber
- Fully insulated, shock hazard protected in accordance with IEC/EN 60947 or BGV A3
- The base body is made of glass fibre reinforced, high-temperature resistant, self-extinguishing and halogen-free plastic
- The contact system consists of separately spring-loaded silver-plated copper contacts
- The switch cover is made of glass fibre reinforced, self-extinguishing, silicone and chlorine-free thermoplast
- The switch cover features large viewing windows allowing to read the labelling and to see the flat indicator of the NH-fuse-links
- The viewing windows provide self-closing test holes
- The switch cover can be deposited ("park position")

Connection diagram



Functional diagram



Electronic Fuse Monitoring

- Operation indication
  Fuse in working order –> 1 green LED
  Fuse blown, cover open –> 1 red LED
- Working current principle, alternatively with memory function/remote reset
- Internal resistance of the measuring paths within the MOhm-range, VDE-requirements regarding touch voltage (> 1000 Ohm/V) are complied with. To release, turn off the upstream main switch!
- When using feeder bars the lines connected to the fuse monitoring system must be changed as follows: L1<>L1', L2<>L2', L3<>L3'

Technical Data

	NH-SLS-00/160-60(-SI)
Electrical	
Technical data according to	IEC/EN 60947-3
Size	00
Number of poles/phases	3
Conventional free air thermal current I_{th} with NH-fuse-links	160 A
Max. permissible power loss of NH-fuse-links	12 W
Utilization category AC 23 B	
Rated operational voltage U_e	400 V AC
Rated operational current I_e	160 A
Rated conditional short-circuit current with fuse-links	50 kA
Utilization categories AC 22 B, AC 21 B	
Rated operational voltage U_e	690 V AC (400 V AC)
Rated operational current I_e	160 A
Rated conditional short-circuit current with fuse-links	50 kA
Rated insulation voltage U_i	1000 V (400 V)
Overvoltage category	III
Rated impulse withstand voltage U_{imp}	8 kV (4 kV)
Rated frequency	50-60 Hz
Rated duty	uninterrupted duty *
Power loss without NH-fuse-links	20 W at 160A
Mechanical	
Mounting onto busbar system without drilling or screwing	
	12x5/10 mm
	20x5/10 mm
	25x5/10 mm
	30x5/10 mm
Standard connection - screw	M8
Cable lugs - Cu-conductor according to rated currents as detailed in IEC/EN 60947-1	1 x 70 mm²
Flat busbars	20x8 mm
Tightening torque	12 Nm
Standard connection - clamp strap	2 x M5
Stranded Cu	1.5 x 70 mm²
Copper band: No. of layers x width x height	9 x 9 x 0.8 mm
Flat busbars	12x10 mm
Tightening torque	3 Nm
Ambient temperature range	-5°C to +40°C
Degree of protection	IP30
Pollution degree	3

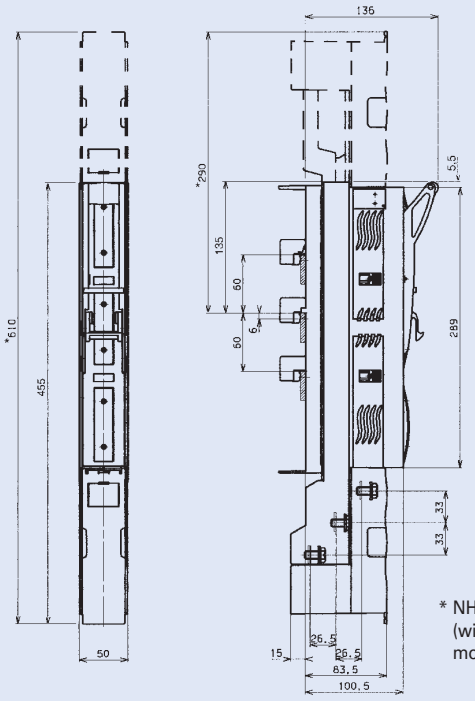
	Electronic Fuse Monitoring
Electrical	
Technical data according to	IEC/EN 60255, VDE 0435 Part 303
Rated voltage U_e	3 x 400 V AC
Voltage range	0,8 ... 1,1xU_e
Rated frequency	50-60 Hz
Consumption	2 VA (L2/L3)
Rated insulation voltage U_i	400 V
Overvoltage category	III
Rated impulse withstand voltage U_{imp}	4 kV
Relay contacts	2 CO
Technical data according to	EN 60947-5-1
Rated voltage	250 V AC
Rated current I_{th}	4 A
Utilization category	AC 15
Rated operational voltage U_e	230 V AC
Rated operational current I_e	1 A
Endurance electrical comp.	1.5 x 10^5 operating cycles
Maximum back-up fuse	4 A gL/gG / PLSM-B4...-HS
Mechanical	
Terminals	Lift terminals
Terminal capacity	
solid	2 x 2.5 mm²
stranded	2 x 1.5 mm²
Tightening torque of terminal screws	0.8 Nm
Endurance mechanical comp.	> 10^8 operating cycles
Response/Release time	< 500 ms

* In case of uninterrupted duty of several devices placed side by side, please take account of the rated load factor detailed in VDE 0660 Part 500 / EN 60439-1, Table 1.
For sizes 00/1-3 the distance to grounded elements must be at least 50/100 mm at the top and 25/50 mm at the side.

Dimensions (mm)

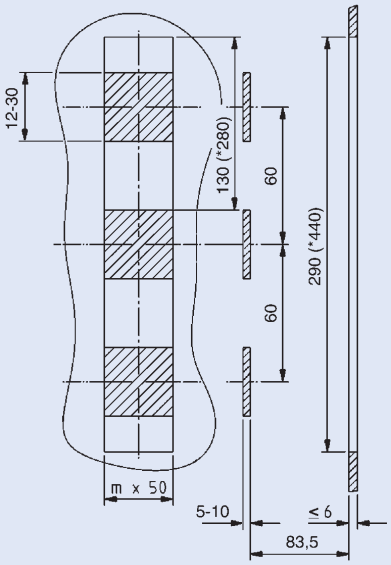
NH-SLS-00/160-60(-SI)

Drill-free mounting with terminal clamps - tightening torque 8 Nm



* NH-SLS-00/160-60-SI (with electronic fuse monitoring)

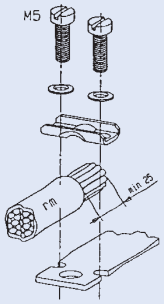
Cut-out for front plate



m . . . . . Number of vertical fuse-switch-disconnectors

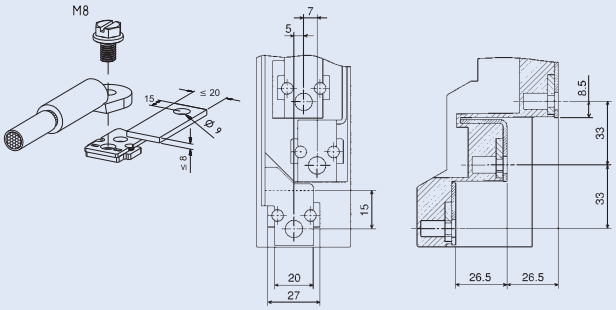
Connections NH-SLS-00/160...

Clamp Straps:
Cross section rm, f+AE 1.5-70 mm²; la. Cu 12 x 1-10 mm
Tightening torque 3 Nm



rm . . . . . round stranded
f+AE . . . . flexible + wire end ferrules
la. Cu . . . laminated flexible copper busbar

Screw M8:
Tightening torque 12 Nm



xPole

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NH-Vertical Fuse-Switch-Disconnector LTS-L, 3-pole

- Supplied without NH-fuse-links
- Vertical and horizontal position of installation is possible
- Symmetrical device - top or bottom connection is possible
- Break-proof, flexible connection chamber
- Fully insulated, finger and hand touch-safe according to IEC/EN 60947 and BGV A3
- Laterally offset ventilation slots in order to avoid flash-over to adjoining vertical switching devices
- The base body consists of a glass-fibre reinforced high-temperature resistant self-extinguishing and halogen-free plastic
- The single-part contact system is corrosion- and torsion-proof. The copper contacts are nickel-plated
- The switch cover consists of a glass-fibre re-enforced, self-extinguishing and halogen-free plastic
- The switch cover features large viewing windows permitting to see the marking and the flat indicator of the NH-fuse-links.
- The sliding viewing windows feature test holes
- The switch cover can be deposited ("park position")

Connection diagram

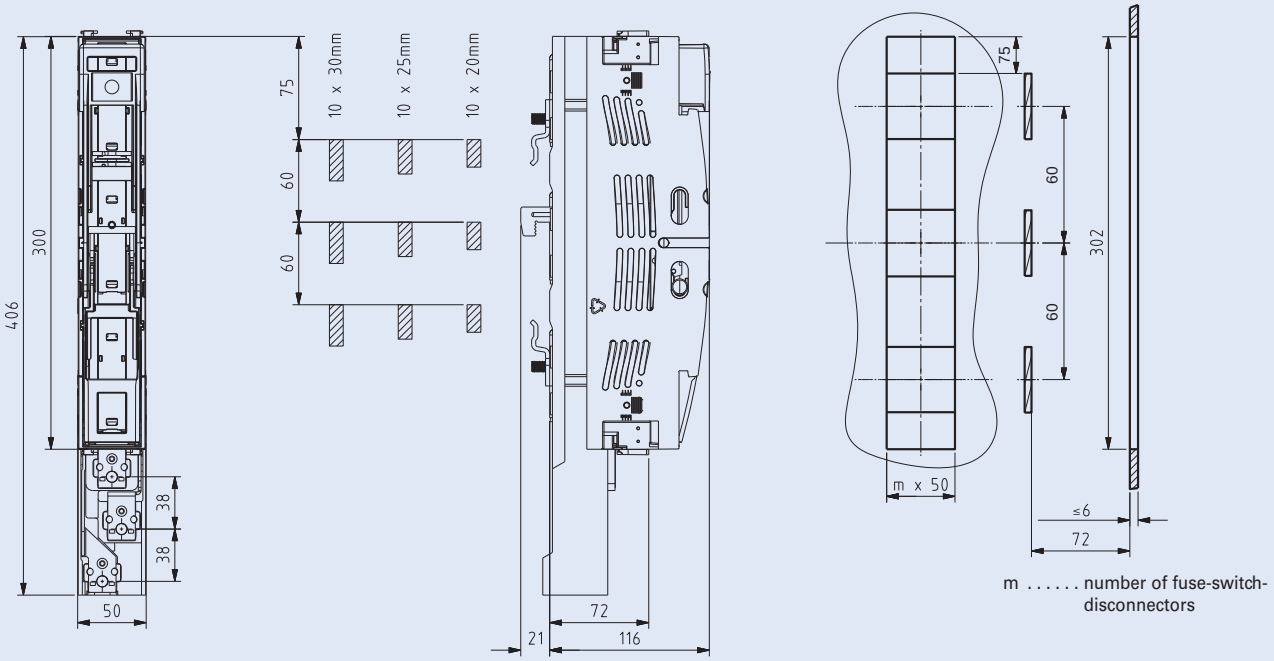


Technical Data

	LTS-L/160/00-60-10-R
Electrical	
Technical data according to	IEC/EN 60947
Size	00
Number of poles/phases	3
Conventional free air thermal current	
with NH-fuse-links I_{th}	160 A
Max. permissible power loss	
of NH-fuse-links	12 W
Conventional free air thermal current	
with solid-links I_{th}	250 A
Max. permissible power loss	
of solid-links	1.2 W
Utilization category AC 23 B	
Rated operational voltage U_e	400 V AC
Rated operational current I_e	160 A
Rated short-circuit making capacity	
with fuse-links	80 kA
Utilization category AC 22 B	
Rated operational voltage U_e	500 V AC
Rated operational current I_e	160 A
Rated short-circuit making capacity	
with fuse-links	80 kA
Utilization category AC 21 B	
Rated operational voltage U_e	690 V AC
Rated operational current I_e	100 A
Rated short-circuit making capacity	
with fuse-links	10 kA
Rated insulation voltage U_i	1000 V
Rated impulse withstand voltage U_{imp}	8 kV
Rated frequency	50-60 Hz
Rated duty	uninterrupted duty
Rated short-circuit making capacity I_{cm}	
with solid-links	4.5 kA_{sw}
Rated short-time withstand current I_{cw}	
with solid-links	4.5 kA/1s
Power loss without NH-fuse-links	20 W at 160A
Power loss without solid-links	49 W at 200A
Mechanical	
Mounting onto busbar system	
Hooked clamps for busbar thickness	10 mm
Screws	–
Standard connection	Clamp Straps 70mm^2
For cable lugs	M8 max. 1x70mm^2
For busbar max. width	20 mm
Ambient temperature range	-5°C to +40°C
Degree of protection	IP 2Lx
Pollution degree	3

Dimensions (mm)

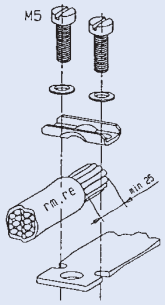
LTS-L/160/00



m ..... number of fuse-switch-disconnectors

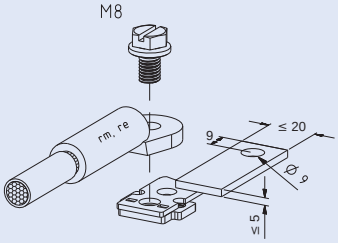
Cable Terminal Connections LTS-L/160/00

Clamp strap Z-LTS-160-BK:
Cross section Cu 4-70 mm²
Tightening torque 3-4 Nm



re ..... round solid
rm ..... round stranded
se ..... sectorial solid
sm ..... sectorial stranded

Accessories: Screw M8
Cross section Cu 16-70, Al 16-95 mm²
Tightening torque 15-17 Nm



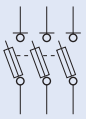
xPole

NH-Vertical Fuse-Switch-Disconnector NH-SLS, 3-pole

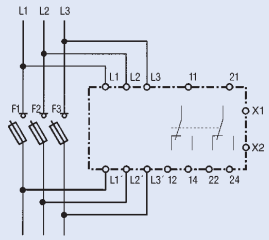
- Supplied without NH-fuse-links
- Can be installed both in a vertical and horizontal position
- Symmetrical device - top or bottom connection is possible
- Break-proof, flexible connection chamber
- Fully insulated, finger and hand touch-save in accordance with IEC/EN 60947 or BGV A3
- The base body is made of glass fibre-reinforced, high-temperature resistant, self-extinguishing and halogen-free plastic
- The contact system consists of separately spring-loaded silver-plated copper contacts
- The switch cover is made of glass fibre-reinforced, self-extinguishing, silicone and chlorine-free thermoplast
- The switch cover features large viewing windows allowing to read the labelling and to see the flat indicator of the NH-fuse-links
- The viewing windows provide self-closing test holes
- The switch cover can be deposited (“park position”)

Connection diagram

NH-SLS



NH-SLS-...-SI



Technical Data

	NH-SLS-00/160(-SI)	NH-SLS-1/250(-SI)	NH-SLS-2/400(-SI)	NH-SLS-3/630(-SI)
Electrical				
Technical data according to	IEC/EN 60947-3	IEC/EN 60947-3	IEC/EN 60947-3	IEC/EN 60947-3
Size	00	1	2	3
Number of poles/phases	3	3	3	3
Conventional free air thermal current I_{th} with NH-fuse-links	160 A	250 A	400 A	630 A
Max. permissible power loss of NH-fuse-links	12 W	23 W	34 W	48 W
Utilization category AC 23 B				
Rated operational voltage U_e	400 V AC	500 (400) V AC	500 (400) V AC	500 (400) V AC
Rated operational current I_e	160 A	250 A	400 A	630 A
Rated conditional short-circuit current with fuse-links	50 kA	100 kA	100 kA	100 kA
Utilization categories AC 22 B, AC 21 B				
Rated operational voltage U_e	690 (–) V AC	690 (–) V AC	690 (–) V AC	690 (–) V AC
Rated operational current I_e	160 (–) A	250 (–) A	400 (–) A	630 (–) A
Rated conditional short-circuit current with fuse-links	50 kA	100 kA	100 kA	100 kA
Rated insulation voltage U_i	1000 V	1000 V	1000 V	1000 V
Overvoltage category	III	III	III	III
Rated impulse withstand voltage U_{imp}	8 (4) kV	12 (4) kV	12 (4) kV	12 (4) kV
Rated frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Rated duty	uninterrupted duty *	uninterrupted duty *	uninterrupted duty *	uninterrupted duty *
Power loss without NH-fuse-links	20 W at 160A	30 W at 250A	67 W at 400A	116 W at 630A
Mechanical				
Mounting onto busbar system				
Terminal clamps for busbar thickness	10 mm	10 mm	10 mm	10 mm
Screws for busbar thickness	5-10 mm M8	5-10 mm M12	5-10 mm M12	5-10 mm M12
Standard connection - screw	M8	M10	M10	M12
Cable lugs - Cu-conductor according to rated currents as detailed in IEC/EN 60947-1	1 x 70 mm^2	120 mm^2	240 mm^2	2 x 185 mm^2
Busbars of a max. width of	20 mm	30 mm	30 mm	30 mm
Ambient temperature range	-5°C to +40°C	-5°C to +40°C	-5°C to +40°C	-5°C to +40°C
Degree of protection	IP30	IP30	IP30	IP30
Pollution degree	3	3	3	3

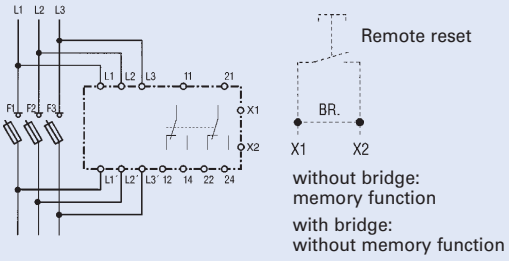
* In case of uninterrupted duty of several devices placed side by side, please take account of the rated load factor detailed in VDE 0660 Part 500 / EN 60439-1, Table 1.
For sizes 00/1-3 the distance to grounded elements must be at least 50/100 mm at the top and 25/50 mm at the side.

NH-Vertical Fuse-Switch-Disconnector NH-SLS-...-SI, 3-pole

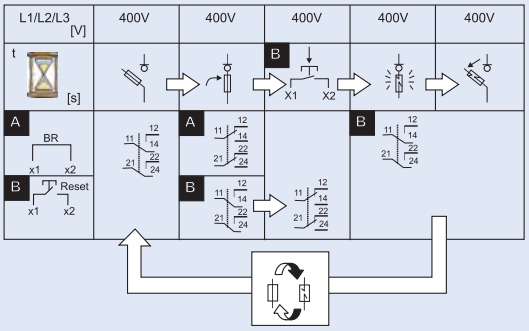
Electronic Fuse Monitoring

- Operation indication
  Fuse in working order –> 1 green LED
  Fuse blown, cover open –> 1 red LED
- Working current principle, alternatively with memory function/remote reset
- Internal resistance of the measuring paths within the MOhm-range, VDE-requirements regarding touch voltage (> 1000 Ohm/V) are complied with.
  To release, turn off the upstream main switch!
- When using feeder bars the lines connected to the fuse monitoring system must be changed as follows: L1<>L1', L2<>L2', L3<>L3'

Connection diagram



Functional diagram



Technical Data

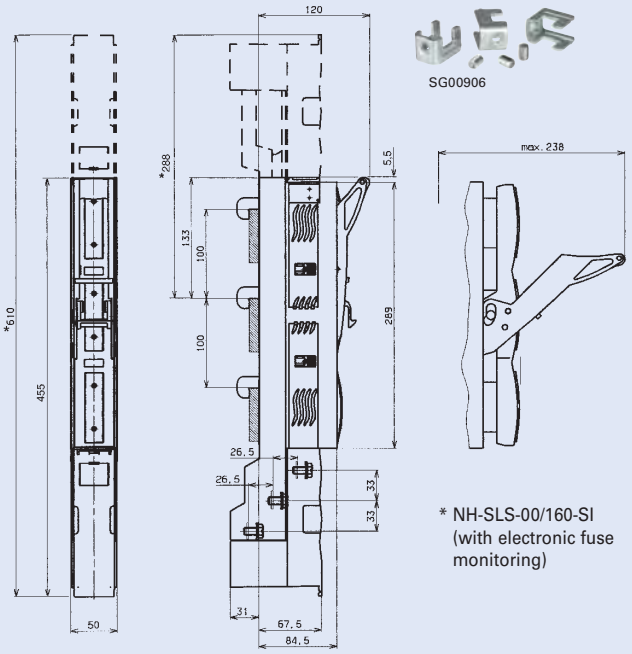
Electrical	
Technical data according to	IEC/EN 60255, VDE 0435 Part 303
Rated voltage U_e	3 x 400 V AC
Voltage range	0,8 ... 1,1xU_e
Rated frequency	50-60 Hz
Consumption	2 VA (L2/L3)
Rated insulation voltage U_i	400 V
Overvoltage category	III
Rated impulse withstand voltage U_{imp}	4 kV
Relay contacts	2 CO
Technical data according to	EN 60947-5-1
Rated voltage	250 V AC
Rated current I_{th}	4 A
Utilization category	AC 15
Rated operational voltage U_e	230 V AC
Rated operational current I_e	1 A
Endurance electrical comp.	1.5 x 10^5 operating cycles
Maximum back-up fuse	4 A gL/gG / PLSM-B4...-HS

Mechanical	
Terminals	Lift terminals
Terminal capacity	
solid	2 x 2.5 mm^2
stranded	2 x 1.5 mm^2
Tightening torque of terminal screws	0.8 Nm
Endurance mechanical comp.	> 10^8 operating cycles
Response/Release time	< 500 ms

Dimensions (mm)

NH-SLS-00/160(-SI)

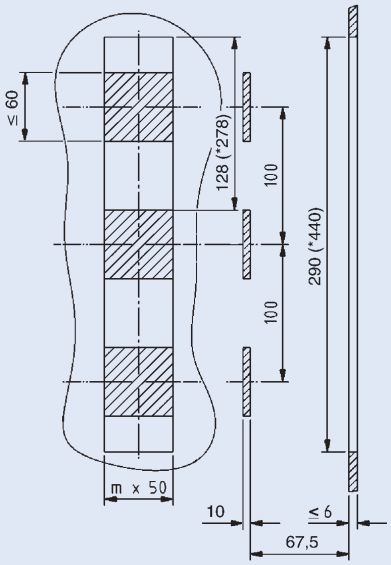
Drill-free mounting with terminal clamps - tightening torque 8 Nm



SG00906

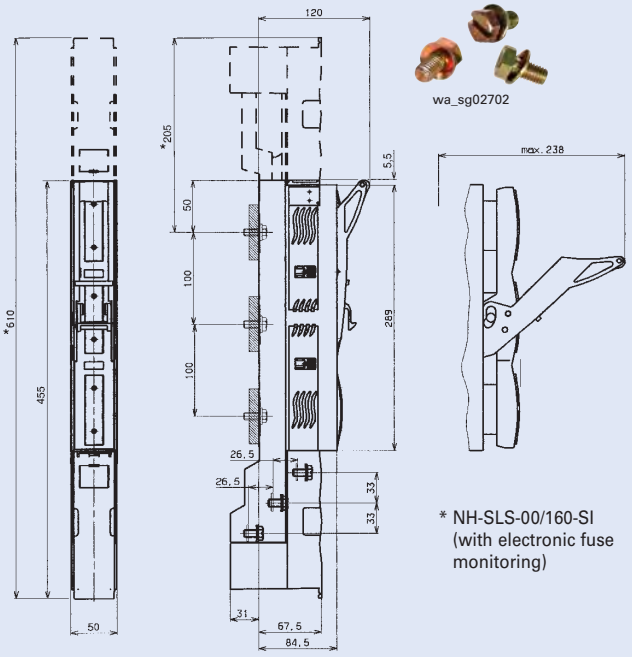
* NH-SLS-00/160-SI (with electronic fuse monitoring)

Cut-out for front plate



m . . . . . Number of vertical fuse-switch-disconnectors

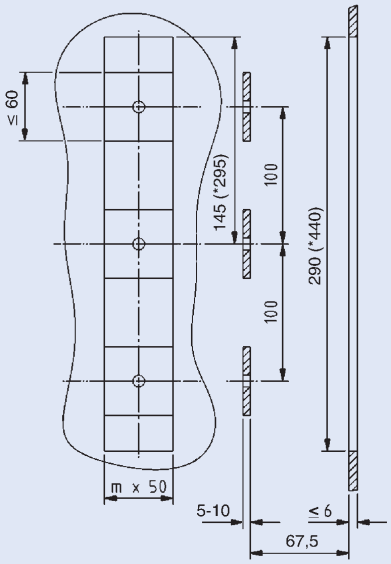
Mounting with screws M8 - Cu with drilled holes - tightening torque 12-14 Nm



wa_sg02702

* NH-SLS-00/160-SI (with electronic fuse monitoring)

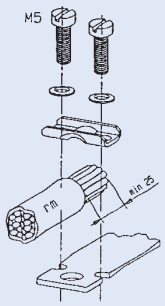
Cut-out for front plate



m . . . . . Number of vertical fuse-switch-disconnectors

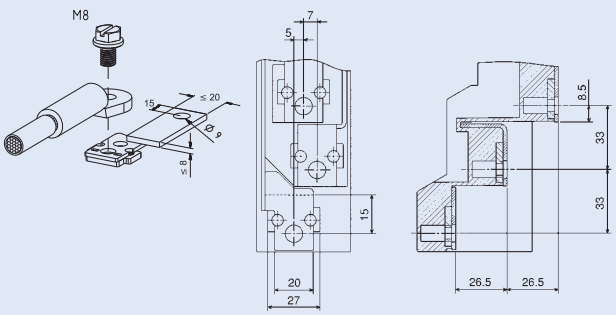
Connections NH-SLS-00/160...

Clamp Straps:
Cross section rm, f+AE 1.5-70 mm^2; la. Cu 12 x 1-10 mm
Tightening torque 3 Nm



rm . . . . . round stranded
f+AE . . . . flexible + wire end ferrules
la. Cu . . . laminated flexible copper busbar

Screw M8:
Tightening torque 12 Nm

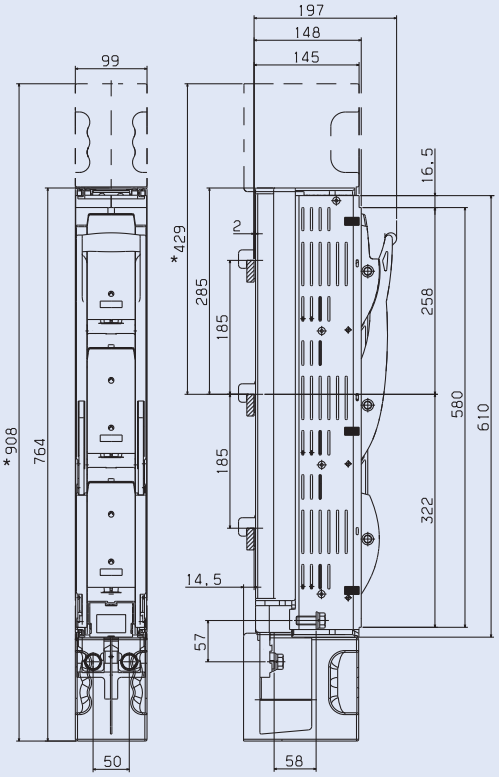


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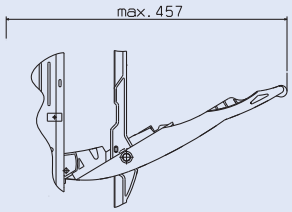
Dimensions (mm)

NH-SLS-1/250(-SI), NH-SLS-2/400(-SI), NH-SLS-3/630(-SI)

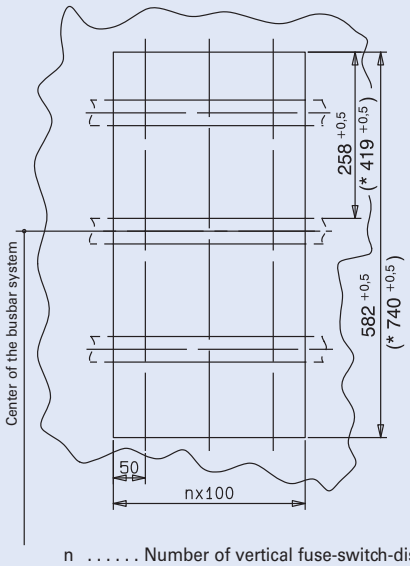
Drill-free mounting with terminal clamps - tightening torque 30 Nm



* NH-SLS-...-SI
(with electronic fuse monitoring)



Cut-out for front plate



n ..... Number of vertical fuse-switch-dis-connectors

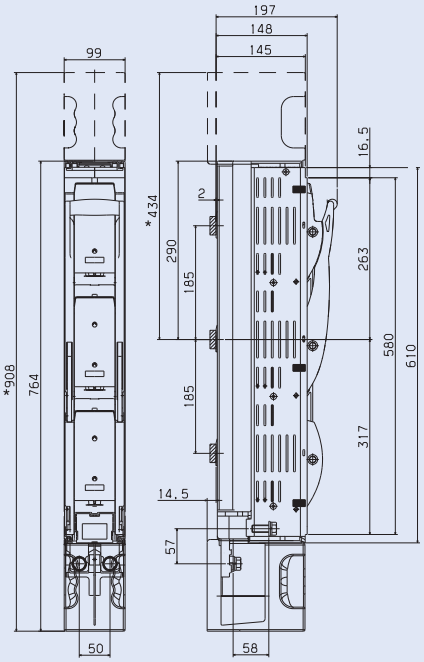
Accessory: terminal clamps Z-NH-SLS-KRU

SG00706

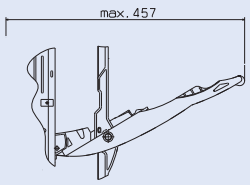
For drill-free mounting onto the busbar system



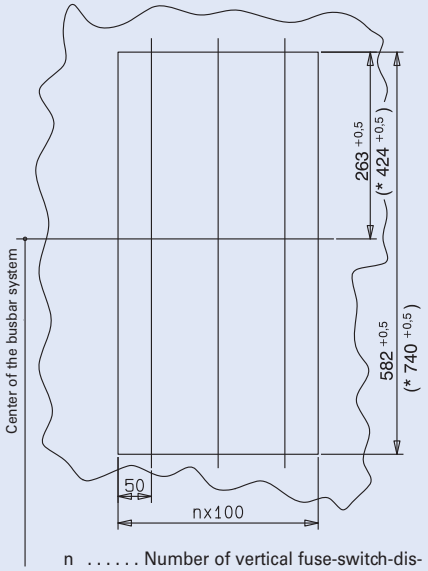
Mounting with screws M12 - Cu with drilled holes - tightening torque Size 1: 35-40 Nm
Size 2: 35-40 Nm
Size 3: 40-45 Nm



* NH-SLS-...-SI
(with electronic fuse monitoring)



Cut-out for front plate

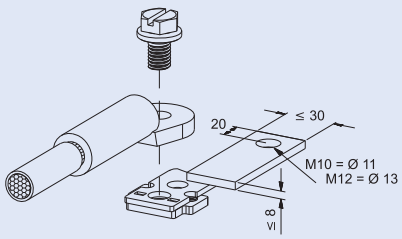


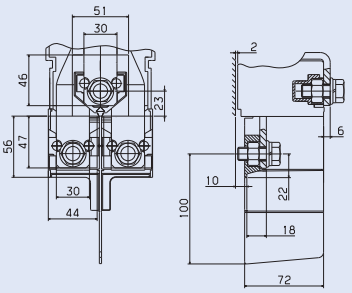
n ..... Number of vertical fuse-switch-dis-connectors

Connections NH-SLS

Screw:

Tightening torque Size 1: M10 30-35 Nm
Size 2: M10 30-35 Nm
Size 3: M12 35-40 Nm

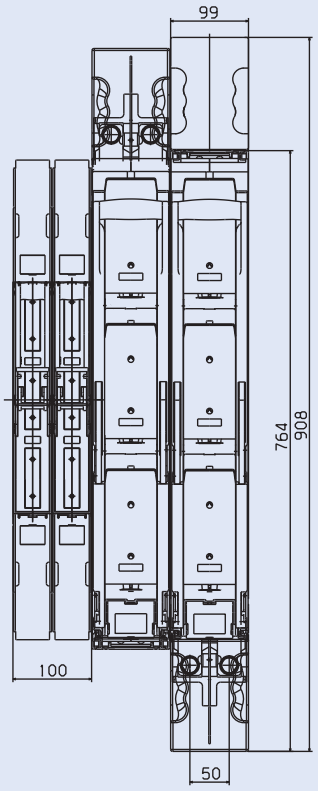


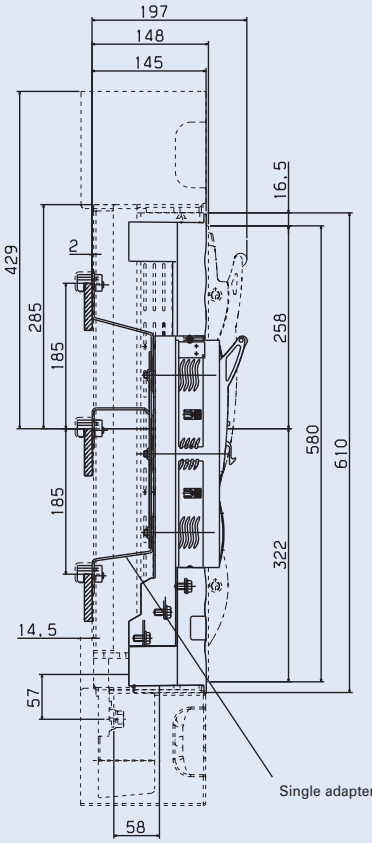


Dimensions (mm)

Combination of NH-SLS-00/160(-SI) and NH-SLS-1/250(-SI), NH-SLS-2/400(-SI), NH-SLS-3/630(-SI)

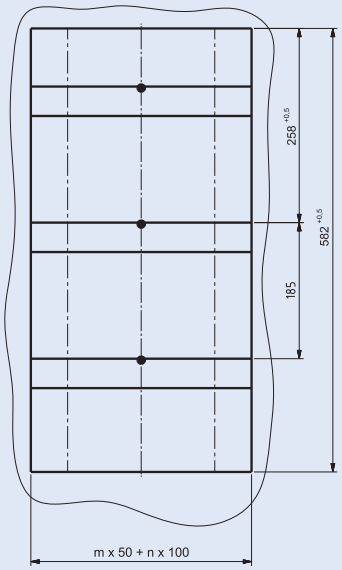
Drill-free mounting with terminal clamps





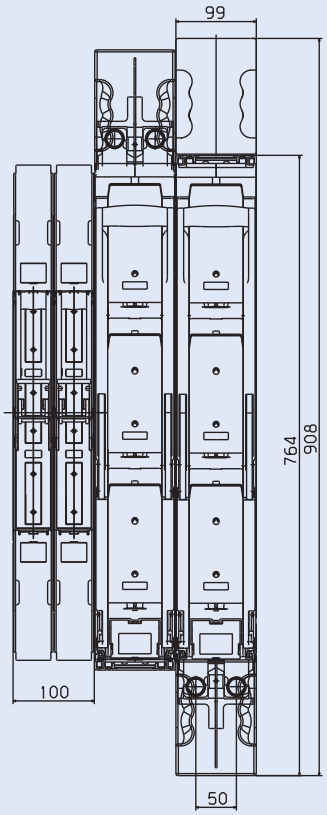
Single adapter Z-NH-SLS-00-SAD-KR

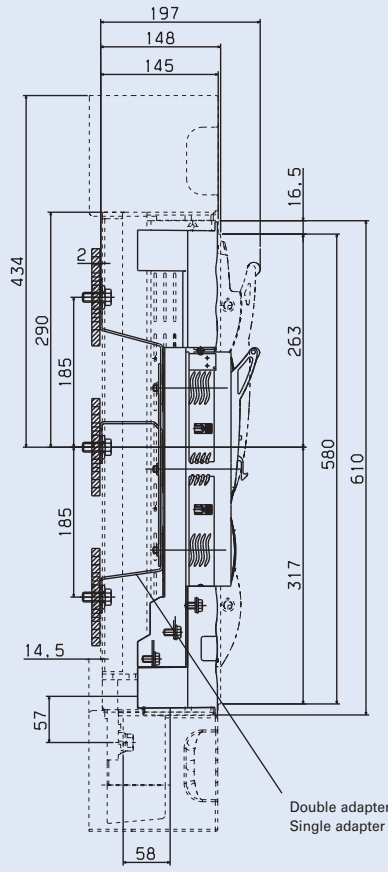
Cut-out for front plate
(without electronic fuse monitoring)



m .... Number of single adapters
n ..... Number of vertical fuse-switch-disconnectors NH-SLS
size 1-3 and of double adapters

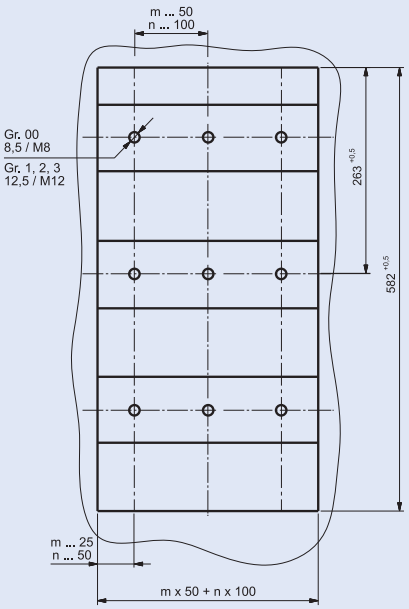
Screw-mounting - Cu with drilled holes





Double adapter Z-NH-SLS-00-SADD
Single adapter Z-NH-SLS-00-SAD

Cut-out for front plate
(without electronic fuse monitoring)



m .... Number of single adapters
n ..... Number of vertical fuse-switch-disconnectors NH-SLS
size 1-3 and of double adapters

xPole

NH In-line Fuse Switch Disconnectors, 3 poles, FCFSDNH00BB100...

- Center-to-center distance of 100 mm between the phases
- Size 00

Technical Data

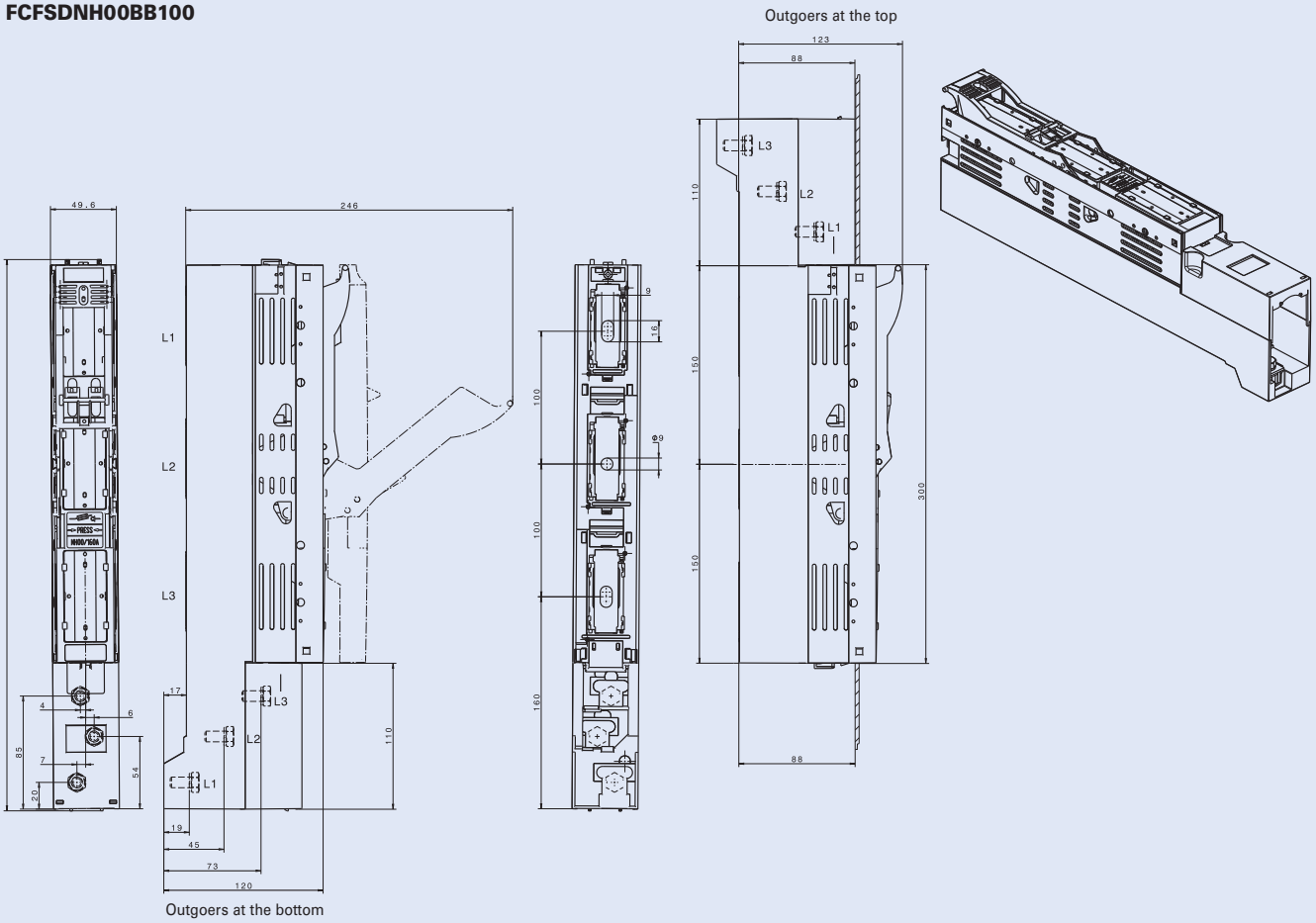
		FCFSDNH00BB100(-CTO)
Electrical		
For LV HRC fuse-links acc. to DIN VDE 0636-2	Size	000/00
Rated operational voltage U_e	V AC	690
Rated operational current I_e 1)	A	160
Conv. free air thermal current I_{th} with fuse-links 1)	A	160
Conv. free air thermal current I_{th} with solid-links 1)	A	210
Rated frequency	Hz	40 - 60
Rated insulation voltage U_i	V AC	800
Total power loss at I_{th} (without fuse-links) P_v	W	18
Rated impuls withstand voltage U_{imp}	kV	8
Utilization category (AC-22B)		
400 V	A	160
500 V	A	160
690 V	A	100
Rated conditional short-circuit current 2)	kA	80
Rated short-time withstand current I_{cw}	ka	–
Max. permissible power loss P_a per fuse-link	W	12
Mechanical		
Flat terminal		
Bolt diameter		M8
Cable lug (DIN 46235)	mm^2	1 x 10-95 (max. 25 mm width)
Flat bar	mm	20 x 10
Tightening torque M_a	Nm	12 - 15
Clamp		
Clamping cross-section	mm^2	round 1,5 - 70 Cu / flat 6 x 9 x 0,8
Tightening torque M_a	Nm	2,6
Degree of protection, front side, device fitted		
Operating condition		IP30
Switching element open		IP10
Ambient temperature T_{amb} 3)	°C	-25 up to +55
Rated operating mode		uninterrupted duty
Actuation		dependent manual operation
Mounting position		vertical, horizontal
Altitude	m	up to 2000
Pollution degree		3
Overvoltage category		III

1) In case of mounting of several units in low voltage switchgear-combinations , please consider rated diversity factors acc. to EN 60439-1.
2) Type tested with LV-HRC-fuse-links characteristic gG.
3) 35°C Normal temperature, at 55°C with reduced operating current.

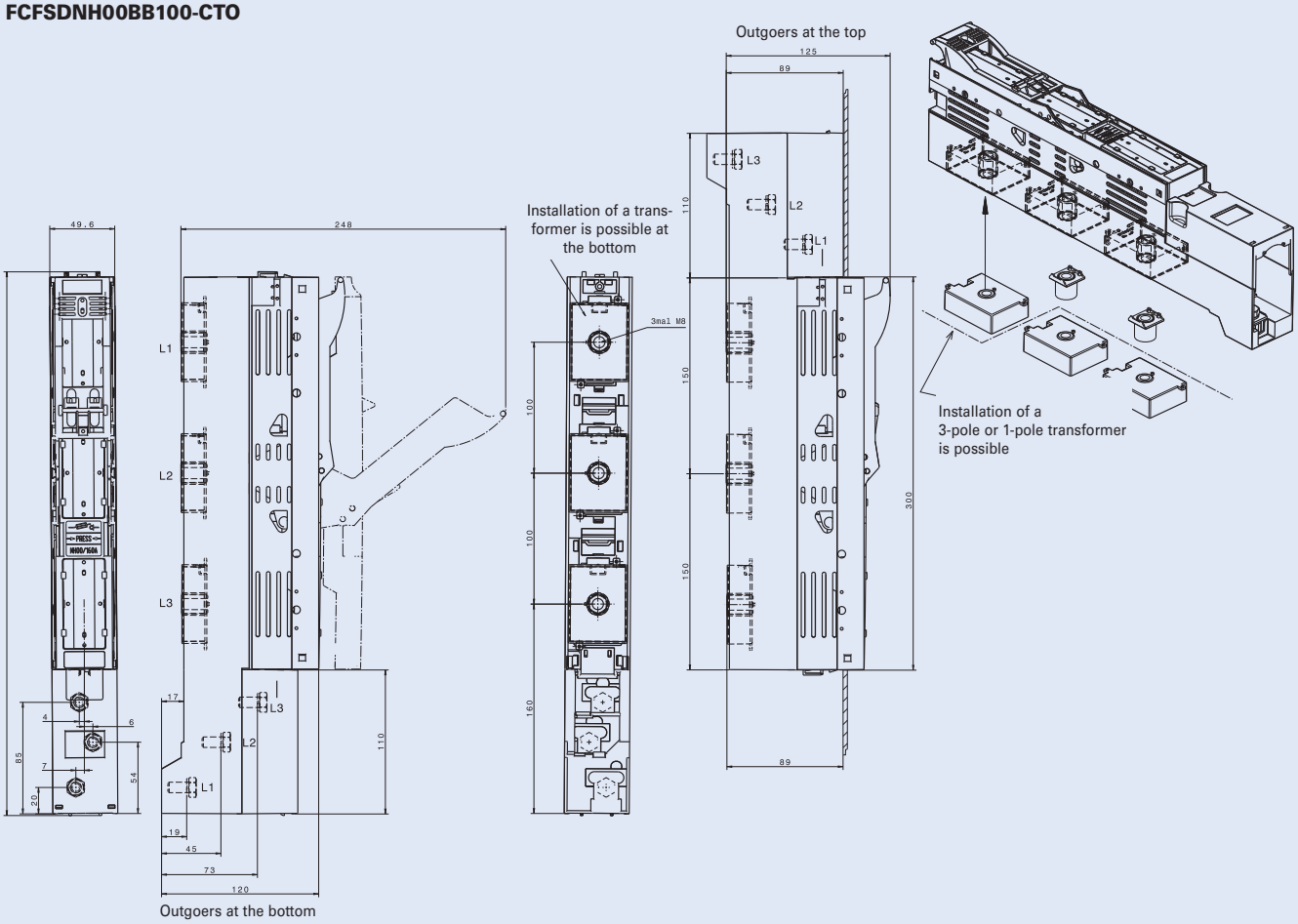
Dimensions (mm)

NH In-line Fuse Switch Disconnectors, 3 poles, center-to-center distance of 100 mm between the phases, size 00

FCFSDNH00BB100



FCFSDNH00BB100-CTO



Powering Business Worldwide

NH In-line Fuse Switch Disconnectors, 3 poles, FCFSDNH.BB185...

- Center-to-center distance of 185 mm between the phases
- Sizes 1, 2, 3

Technical Data

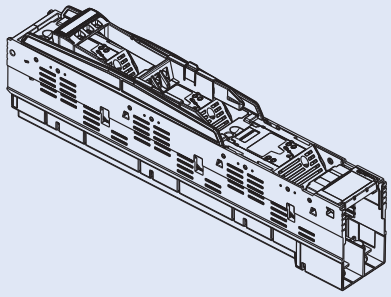
		FCFSDNH1BB185(-CTO)	FCFSDNH2BB185(-CTO)	FCFSDNH3BB185(-CTO)
Electrical				
For LV HRC fuse-links acc. to DIN VDE 0636-2	Size	1	2	3
Rated operational voltage U_e	V AC	690	690	690
Rated operational current I_e [1]	A	250	400	630
Conv. free air thermal current I_{th} with fuse-links [1]	A	250	400	630
Conv. free air thermal current I_{th} with solid-links [1]	A	400	630	800
Rated frequency	Hz	40 - 60	40 - 60	40 - 60
Rated insulation voltage U_i	V AC	1000	1000	1000
Total power loss at I_{th} (without fuse-links) P_v	W	23	54	115
Rated impuls withstand voltage U_{imp}	kV	12	12	12
Utilization category				
400 V	A	250 (AC-23B)	400 (AC-23B)	630 (AC-22B)
500 V	A	250 (AC-22B)	400 (AC-22B)	630 (AC-22B)
690 V	A	250 (AC-22B)	400 (AC-22B)	630 (AC-21B)
Rated conditional short-circuit current [2]	kA	110	110	110 [2a]
Rated short-time withstand current I_{cw}	ka	14,5	14,5	14,5
Max. permissible power loss P_a per fuse-link	W	32	45	48
Mechanical				
Flat terminal				
Bolt diameter		M10	M12	M12
Cable lug (DIN 46235)	mm^2	1 x 25-150	1 x 25-240	1 x 25-300 (max 43mm width)
Flat bar	mm	30 x 10	30 x 10	30 x 10
Tightening torque M_a	Nm	30 - 35	35 - 40	35 - 40
Degree of protection, front side, device fitted				
Operating condition		IP30	IP30	IP30
Switching element open		IP10	IP10	IP10
Ambient temperature T_{amb} [3]	°C	-25 up to +55	-25 up to +55	-25 up to +55
Rated operating mode		uninterrupted duty	uninterrupted duty	uninterrupted duty
Actuation		dependent manual operation	dependent manual operation	dependent manual operation
Mounting position		vertical, horizontal	vertical, horizontal	vertical, horizontal
Altitude	m	up to 2000	up to 2000	up to 2000
Pollution degree		3	3	3
Overvoltage category		IV	IV	IV

1) In case of mounting of several units in low voltage switchgear-combinations , please consider rated diversity factors acc. to EN 60439-1.
2) Type tested at AC 725 V with LV-HRC-fuse-links characteristic gG.
3) 35°C Normal temperature, at 55°C with reduced operating current.

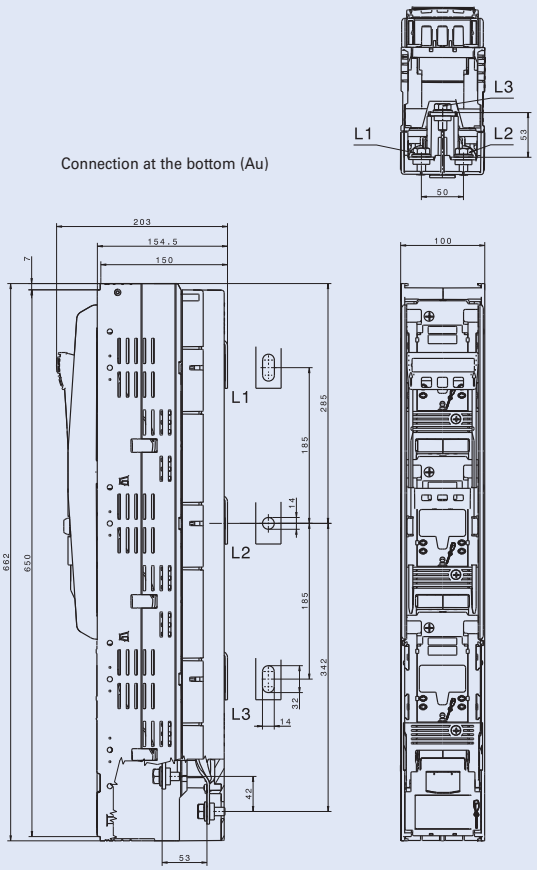
Dimensions (mm)

NH In-line Fuse Switch Disconnectors, 3 poles, center-to-center distance of 185 mm between the phases, size 1 - size 3

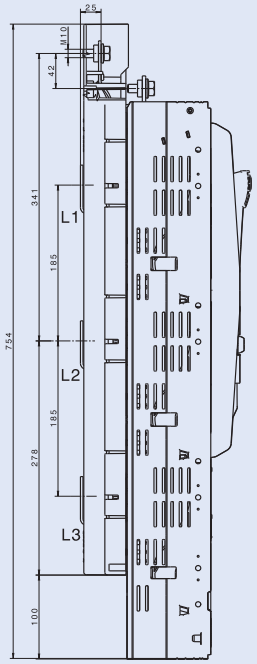
FCFSDNH1BB185



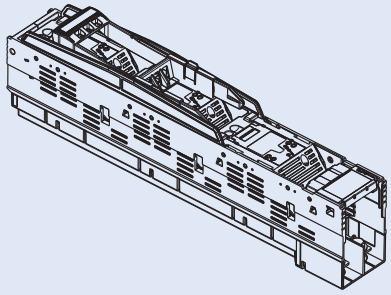
Connection at the bottom (Au)



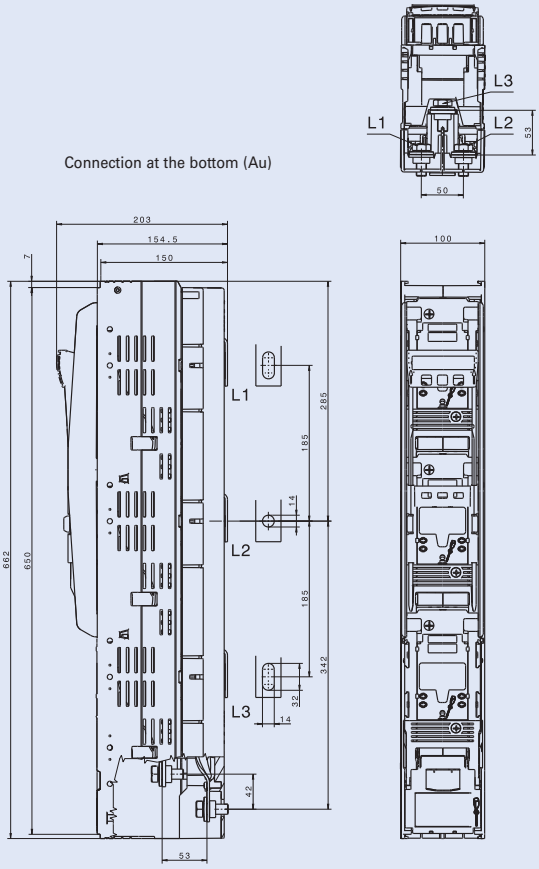
Connection at the top (Ao)



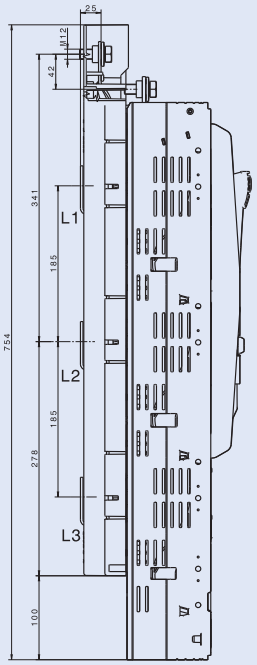
FCFSDNH2BB185, FCFSDNH3BB185



Connection at the bottom (Au)



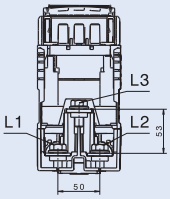
Connection at the top (Ao)

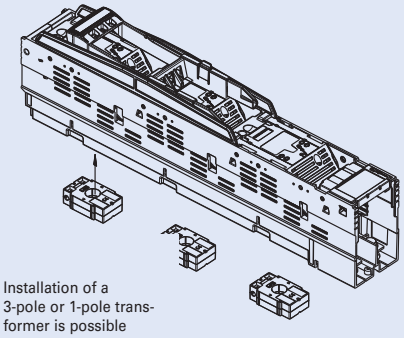


xPole

NH In-line Fuse Switch Disconnectors, 3 poles, center-to-center distance of 185 mm between the phases , size 1 - size 3, for installating transformers

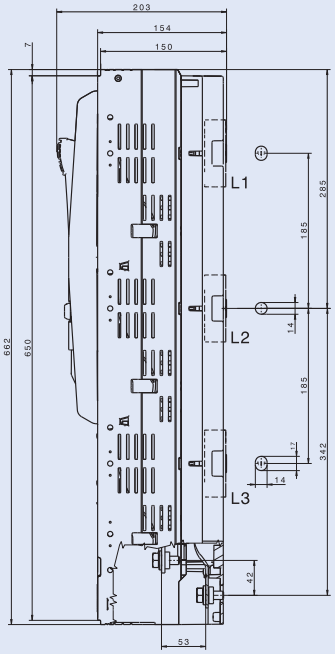
FCFSDNH1BB185-CTO

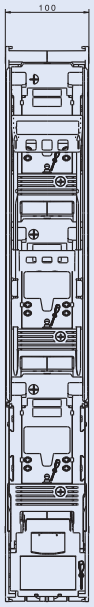




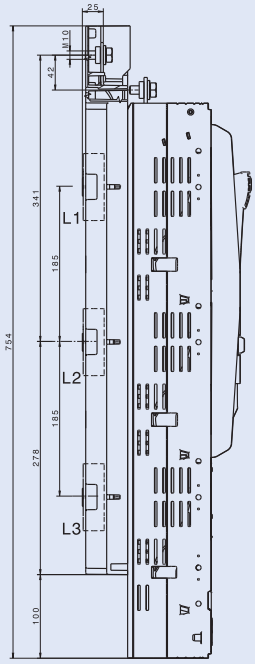
Installation of a 3-pole or 1-pole transformer is possible

Connection at the bottom (Au)

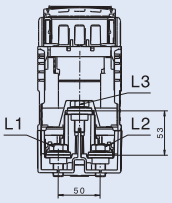


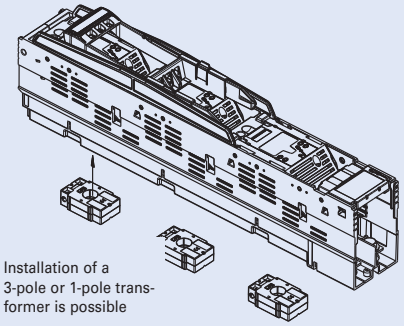


Connection at the top (Ao)



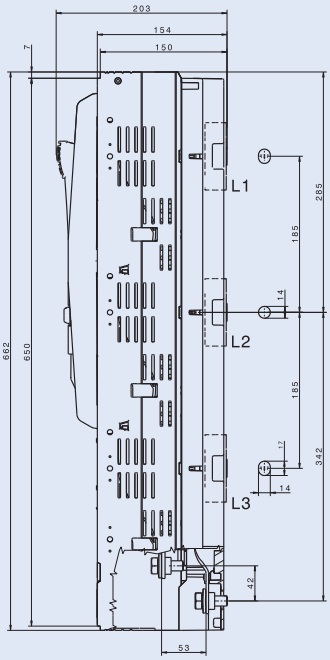
FCFSDNH2BB185-CTO, FCFSDNH3BB185-CTO

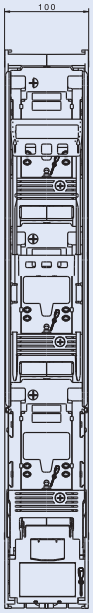




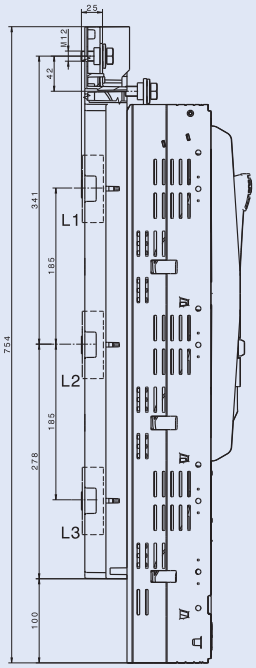
Installation of a 3-pole or 1-pole transformer is possible

Connection at the bottom (Au)





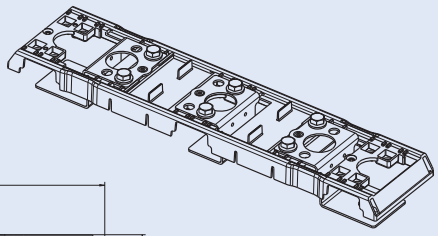
Connection at the top (Ao)

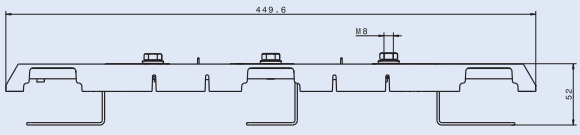


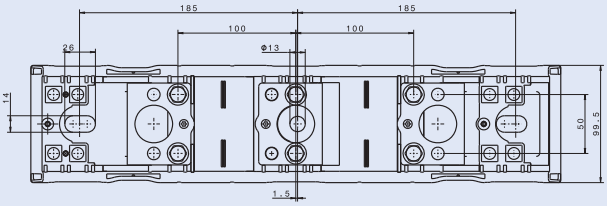
Dimensions (mm) - Accessories

Double Adapter

ASNH100BABB100

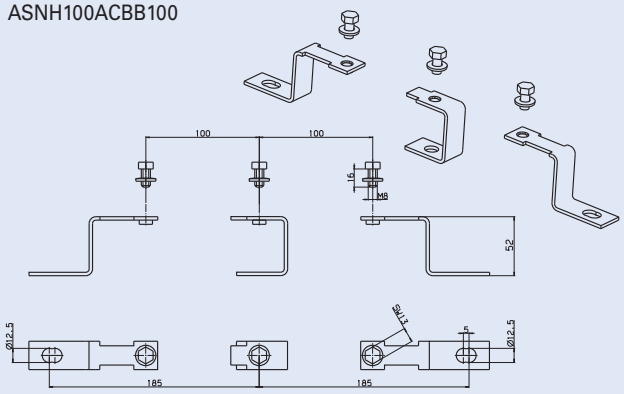






Adapter Clips

ASNH100ACBB100



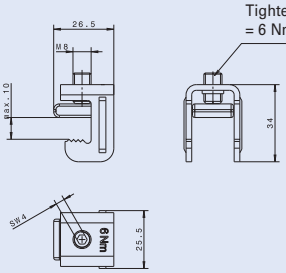
Busbar Terminal Size 00

ASNH100CT



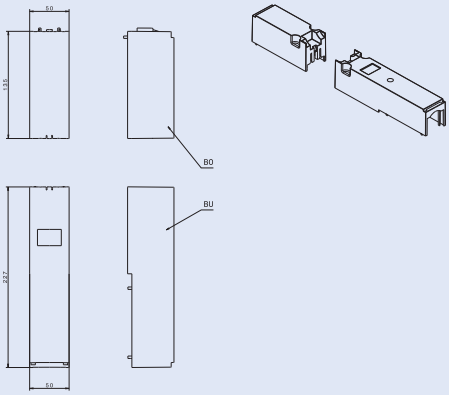
For mounting without the need of drilling, for a busbar thickness of 5-10 mm

Tightening torque = 6 Nm



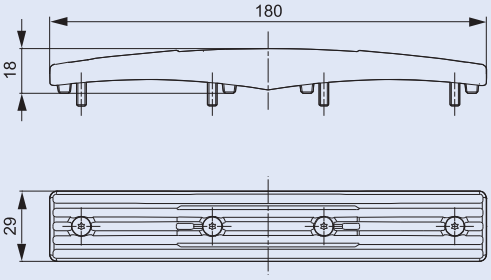
Compensation Cover

ASNH185CP100



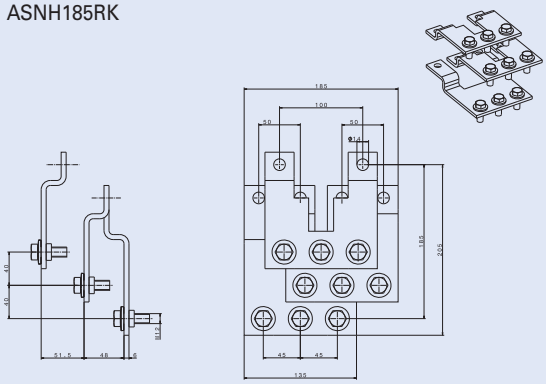
Handle Connection

ASNH185HCK



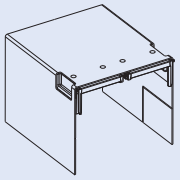
Busbar Kit

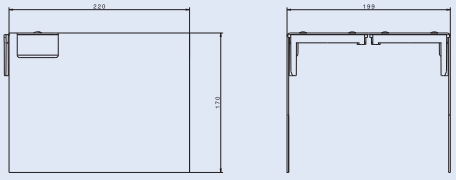
ASNH185RK



Cover for Connection Area

ASNH185CP

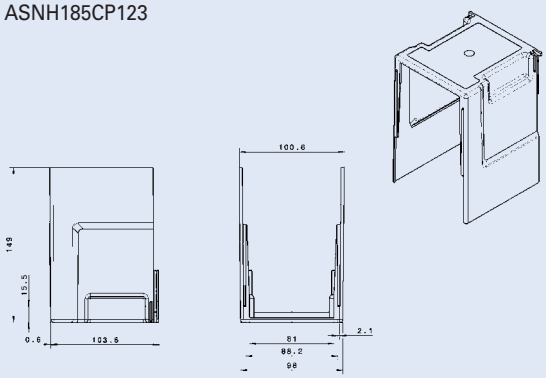


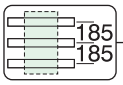


xPole

Cover for Connection Area

ASNH185CP123





NH

NH-Vertical Fuse-Switch-Disconnector LTS-L, 3-pole

- Supplied without NH-fuse-links
- Vertical and horizontal position of installation is possible
- Top or bottom connection is possible
- Break-proof, flexible connection chamber
- Fully insulated, finger and hand touch-safe according to IEC/EN 60947 and BGV A3
- Laterally offset ventilation slots in order to avoid flash-over to adjoining vertical switching devices
- The base body consists of a glass-fibre reinforced high-temperature resistant self-extinguishing and halogen-free plastic
- The single-part contact system is corrosion- and torsion-proof. The copper contacts are nickel-plated
- The switch cover consists of a glass-fibre re-enforced, self-extinguishing and halogen-free plastic
- The switch cover features large viewing windows permitting to see the marking and the flat indicator of the NH-fuse-links.
- The sliding viewing windows feature test holes
- The switch cover can be deposited ("park position")

Connection diagram



Technical Data

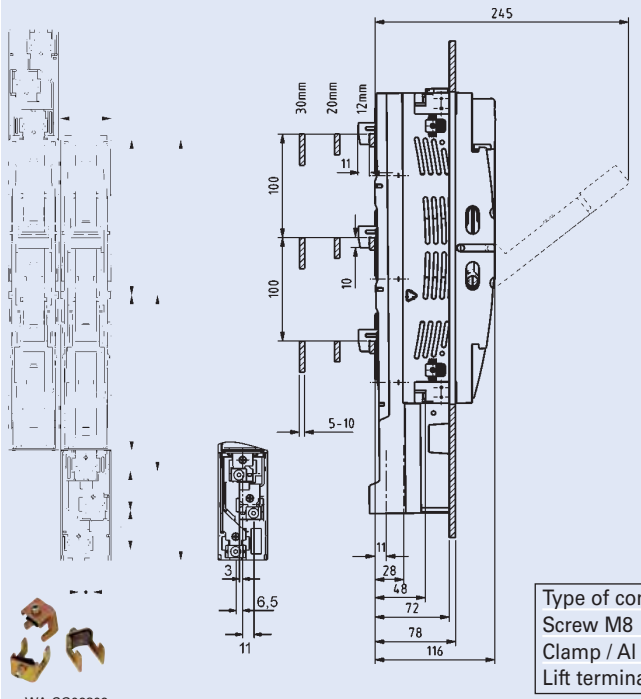
	LTS-L/160/00(/3-L)	LTS-L/250/1	LTS-L/400/2	LTS-L/630/3
Electrical				
Technical data according to	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947
Size	00	1	2	3
Number of poles/phases	3	3	3	3
Conventional free air thermal current with NH-fuse-links I_{th}	160 A	250 A	400 A	630 A
Max. permissible power loss of NH-fuse-links	12 W	23 W	34 W	48 W
Conventional free air thermal current with solid-links I_{th}	250 A	400 A	630 A	1000 A
Max. permissible power loss of solid-links	1.2 W	2.6 W	9 W	17.5 W
Utilization category AC 23 B				
Rated operational voltage U_e	400 V AC	500 V AC	400 V AC	400 V AC
Rated operational current I_e	160 A	250 A	400 A	630 A
Rated short-circuit making capacity with fuse-links	80 kA	120 kA	120 kA	80 kA
Utilization category AC 22 B				
Rated operational voltage U_e	500 V AC	690 V AC	500 V AC	500 V AC
Rated operational current I_e	160 A	250 A	400 A	630 A
Rated short-circuit making capacity with fuse-links	80 kA	120 kA	120 kA	80 kA
Utilization category AC 21 B				
Rated operational voltage U_e	690 V AC	690 V AC	690 V AC	690 V AC
Rated operational current I_e	100 A	250 A	400 A	630 A
Rated short-circuit making capacity with fuse-links	10 kA	120 kA	120 kA	80 kA
Rated insulation voltage U_i	1000 V	1000 V	1000 V	1000 V
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Rated frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Rated duty	uninterrupted duty	uninterrupted duty	uninterrupted duty	uninterrupted duty
Rated short-circuit making capacity I_{cm} with solid-links	4.5 kA_{sw}	16 kA_{sw}	16 kA_{sw}	16 kA_{sw}
Rated short-time withstand current I_{cw} with solid-links	4.5 kA/1s	8 kA/1s	8 kA/1s	12,6 kA/1s
Power loss without NH-fuse-links	20 W at 160A	24 W at 250A	46 W at 400A	92 W at 630A
Power loss without solid-links	49 W at 200A	65 W at 400A	126 W at 630A	161 W at 1000A
Mechanical				
Mounting onto busbar system				
Hooked clamps for busbar thickness	5-10 mm	5-10 mm	5-10 mm	5-10 mm
Screws	M8 (–)	M12	M12	M12
Standard connection	Terminal 70mm^2	M10	M12	M12
For cable lugs	M8 max. 1x70mm^2	max. 300mm^2	max. 300mm^2	max. 300mm^2
For busbar max. width	20 mm	40 mm	40 mm	40 mm
Ambient temperature range	-5°C to +40°C	-5°C to +40°C	-5°C to +40°C	-5°C to +40°C
Degree of protection	IP 2Lx	IP 2Lx	IP 2Lx	IP 2Lx
Pollution degree	3	3	3	3

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Dimensions (mm)

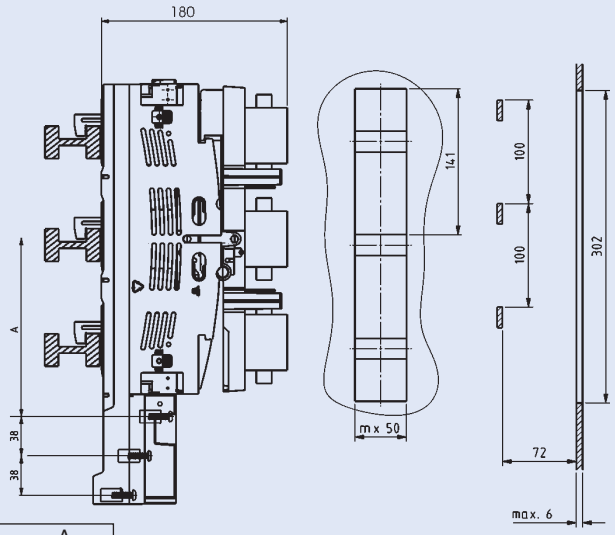
LTS-L/160/00

Drill-free mounting with hooked clamps Z-LTS-LG/00-KR



WA-SG02802

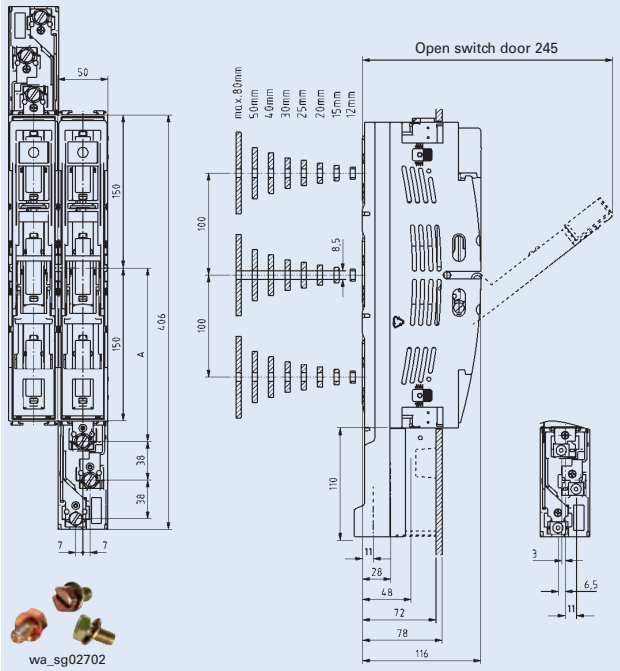
Switch cover deposit and cut-out for front plate



Type of connection	A
Screw M8	170
Clamp / Al / Cu terminal	163
Lift terminal	172

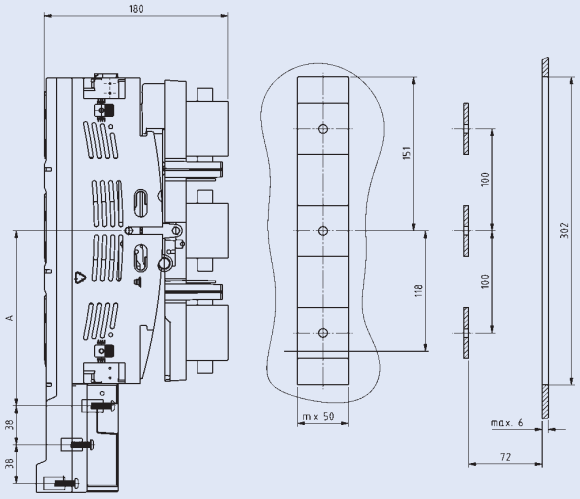
m ..... number of fuse-switch-disconnectors

Screw Mounting - Cu drilled



wa_sg02702

Switch cover deposit and cut-out for front plate

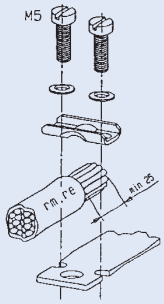


Type of connection	A
Screw M8	170
Clamp / A70 terminal	163
Lift terminal	172

m ..... number of fuse-switch-disconnectors

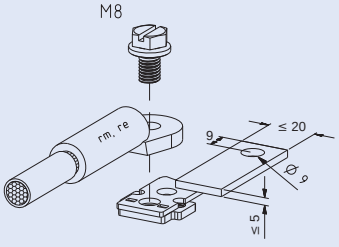
Cable Terminal Connections LTS-L/160/00

Clamp strap Z-LTS-160-BK:
Cross section Cu 4-70 mm²
Tightening torque 3-4 Nm



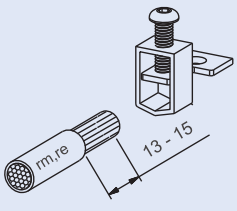
re ..... round solid
rm ..... round stranded
se ..... sectorial solid
sm ..... sectorial stranded

Accessories: Screw M8
Cross section Cu 16-70, Al 16-95 mm²
Tightening torque 15-17 Nm



Cable Terminal Connections LTS-L/160/00/3-L

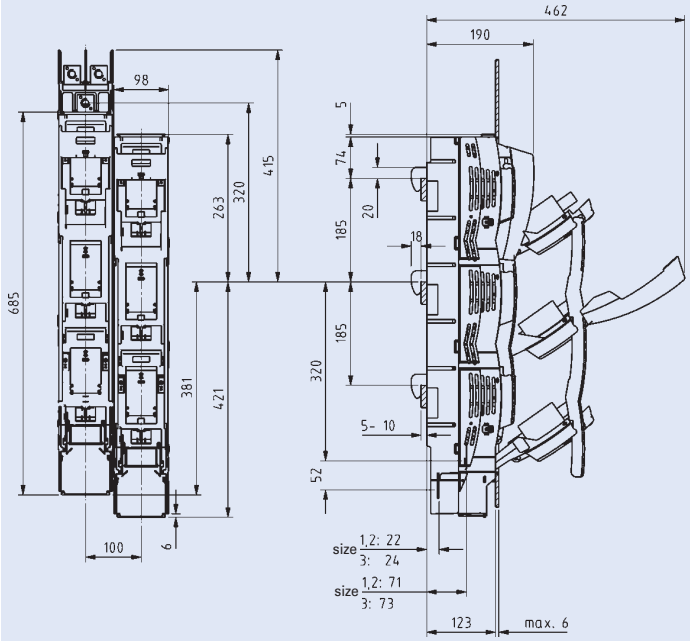
Cross section Cu 2.5-70 mm²
Tightening torque 6 Nm

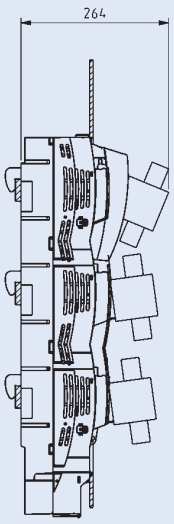


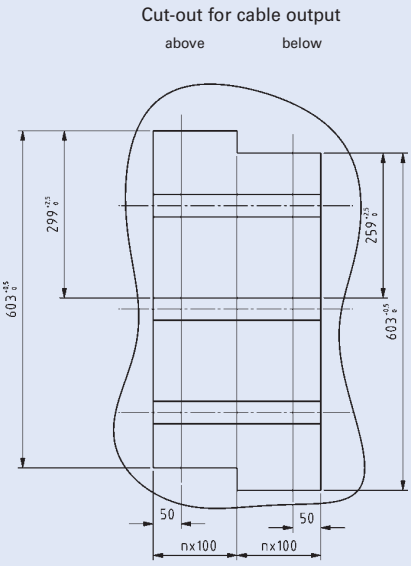
Dimensions (mm)

LTS-L/250/1, LTS-L/400/2, LTS-L/630/3

Drill-free mounting with hooked clamps







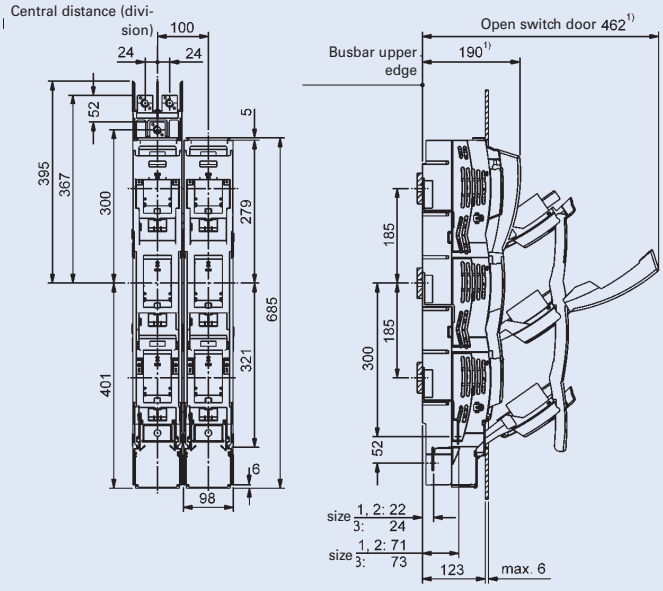
n . . . . . number of vertical fuse-switch-disconnectors

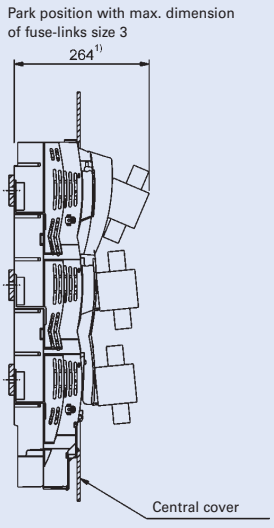
Accessories: Hooked Clamps Z-LTS-L-KR

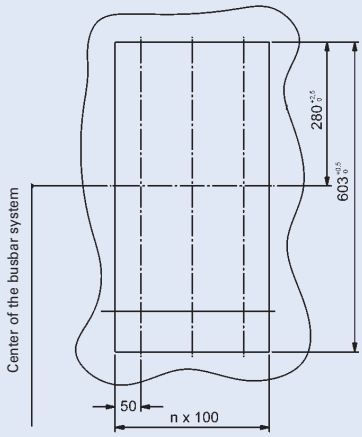
For direct mounting without drilling onto bus bar system.



Screw Mounting - Cu drilled





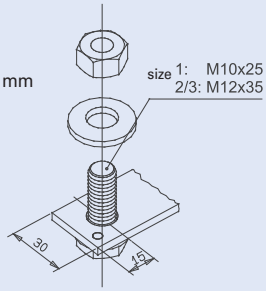


1) Dimensions to busbar upper edge

n . . . . . number of vertical fuse-switch-disconnectors

Cable Terminal Connections LTS-L/250/1, LTS-L/400/2, LTS-L/630/3

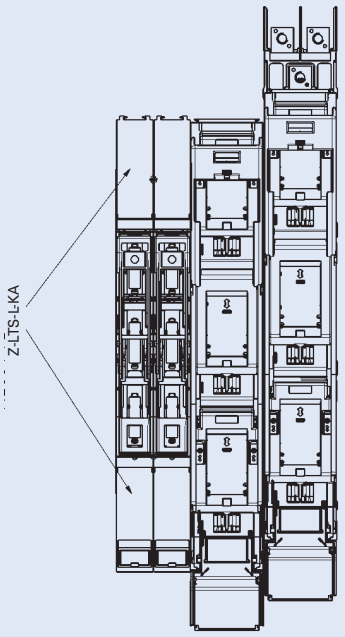
Bolt connection:
Cross section max. 300 mm²
Tightening torque 35±3 Nm
Accessories: Cable lug max. width 45 mm

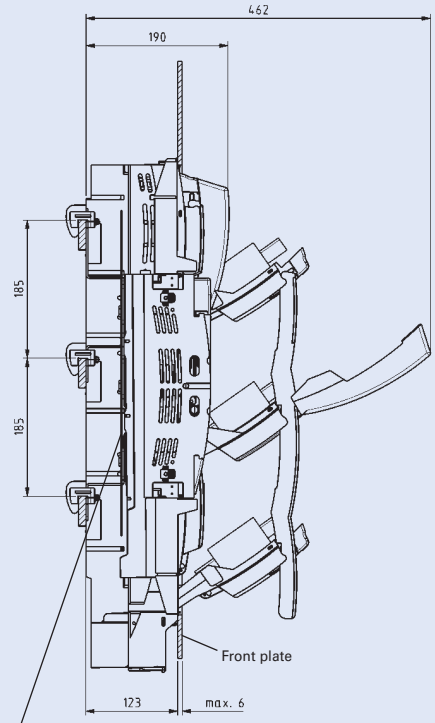


Dimensions (mm)

Kombination LTS-L/160/00 and LTS-L/250/1, LTS-L/400/2, LTS-L/630/3

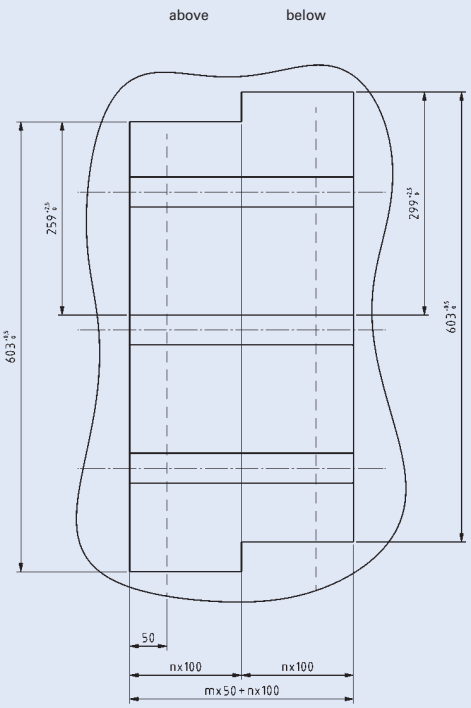
Drill-free mounting with hooked clamps





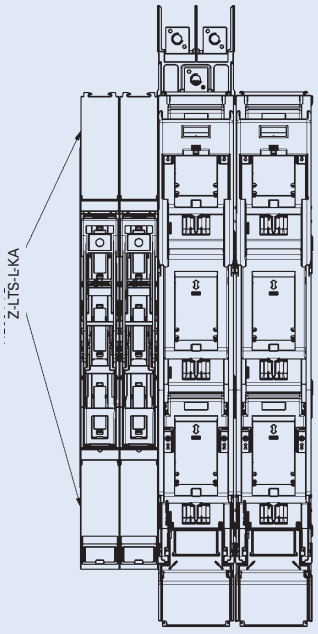
Z-LTS-L/160-SADD-KR . . . Double Adapter
Z-LTS-L/160-SAD-KR . . . . Single Adapter

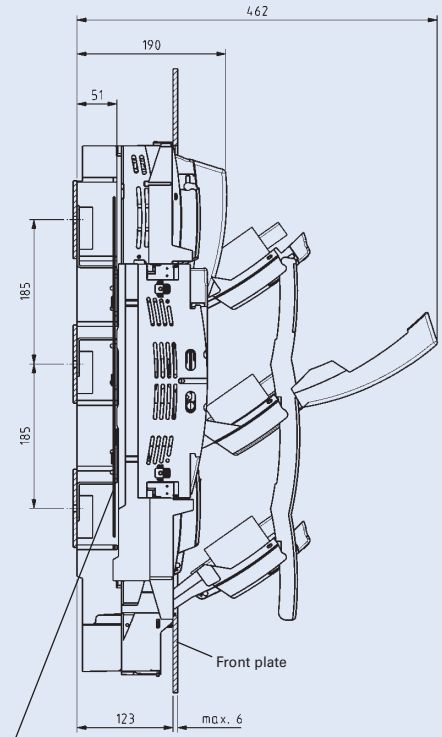
Cut-out for front plate



m . . . . . number of Single Adapter (LTS-L/160/00)
n . . . . . number of vertical fuse-switch-disconnectors
LTS-L/250/1 to LTS-L/630/3 and Double Adapter

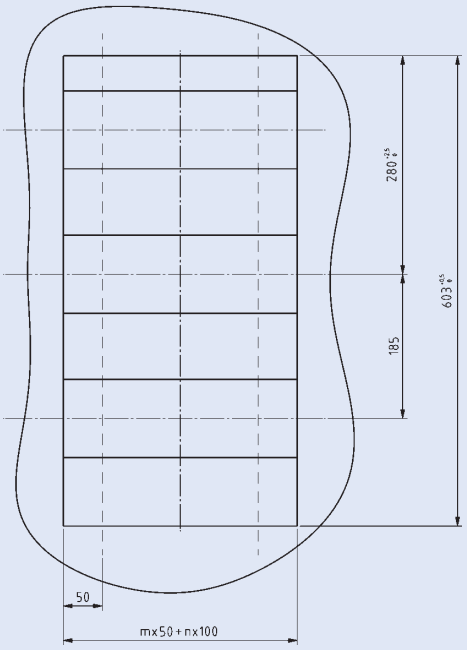
Screw Mounting - Cu drilled





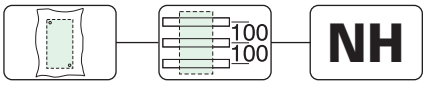
Z-LTS-L/160-SADD . . . . . Double Adapter
Z-LTS-LG/00-SAD . . . . . Single Adapter

Cut-out for front plate



m . . . . . number of Single Adapter (LTS-L/160/00)
n . . . . . number of vertical fuse-switch-disconnectors
LTS-L/250/1 to LTS-L/630/3 and Double Adapter

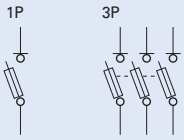
xPole



NH-Fuse-Switch-Disconnector LTS, 1- and 3-pole, xPole

- Supplied without NH-fuse-links
- Symmetrical device - top or bottom connection is possible
- Modular cable cover system for cable lugs or terminals can be expanded as required
- Standard LTS-160/00/3E and LTS-250/1/3 are equipped with locks which can be sealed with leads
- The switch cover features large viewing windows permitting to see the marking and the flat indicator of the NH-fuse-links.
- The windows of LTS-160/00/3, LTS-250/1/3, LTS-400/2/3 and LTS-630/3/3 are hinged and permit testing of the fuse-links - without affecting touch protection IP20
- The switch cover can be removed in the OFF position
- Parking position of switch cover is possible
- The base body consists of a glass-fibre reinforced high-temperature-resistant, non-flammable, self-extinguishing and halogen-free plastic
- The single-part contact system is corrosion- and torsion-proof. The copper contacts are nickel-plated, and the contact springs are made of stainless steel
- The protective cover consists of a glass-fibre re-enforced, high-temperature-resistant, self-extinguishing and halogen-free plastic

Connection diagrams



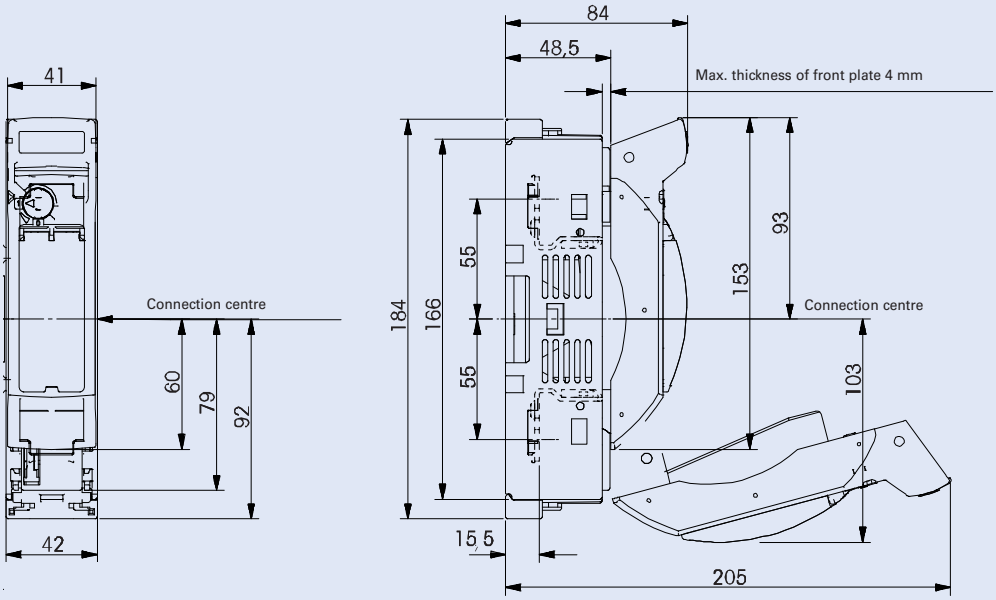
Technical Data

	LTS-160/00/1	LTS-160/00/3(E)	LTS-250/1/3	LTS-400/2/3	LTS-630/3/3
Electrical					
Technical data according to	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947
Size	00	00	1	2	3
Number of poles/phases	1	3	3	3	3
Conventional free air thermal current with NH-fuse-links I_{th}	160 A	160 A	250 A	400 A	630 A
Max. permissible power loss of NH-fuse-links	12 W	12 W	23 W	34 W	48 W
Conventional free air thermal current with solid-links I_{th}	200 A	200 A	400 A	630 A	780 A
Max. permissible power loss of solid-links	1.2 W	1.2 W	2.6 W	9 W	17.5 W
Utilization category AC 23 B					
Rated operational voltage U_e	400 V AC	400 V AC	400 V AC	400 V AC	400 V AC
Rated operational current I_e	160 A	160 A	250 A	400 A	630 A
Rated short-circuit making capacity with fuse-links	80 kA	80 kA	80 kA	80 kA	80 kA
Utilization category AC 22 B					
Rated operational voltage U_e	500 V AC	500 V AC	500 V AC	500 V AC	500 V AC
Rated operational current I_e	160 A	160 A	250 A	400 A	630 A
Rated short-circuit making capacity with fuse-links	80 kA	80 kA	50 kA	80 kA	80 kA
Utilization category AC 21 B					
Rated operational voltage U_e	690 V AC	690 V AC	690 V AC	690 V AC	690 V AC
Rated operational current I_e	125 A	125 A	200 A	315 A	500 A
Rated short-circuit making capacity with fuse-links	50 kA	50 kA	50 kA	80 kA	50 kA
Rated insulation voltage U_i	1000 V	1000 V	1000 V	1000 V	1000 V
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	12 kV	12 kV	12 kV
Rated frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Rated duty	uninterrupted duty	uninterrupted duty	uninterrupted duty	uninterrupted duty	uninterrupted duty
Rated short-circuit making capacity I_{cm} with solid-links	6.2 kA_{sw}	6.2 kA_{sw}	8.2 kA_{sw}	10.6 kA_{sw}	18.6 kA_{sw}
Rated short-time withstand current I_{cw} with solid-links	4 kA/1s	4 kA/1s	8 kA/1s	13 kA/1s	13 kA/1s
Power loss without NH-fuse-links	2.3W at 160A	7W at 160A	10W at 250A	20W at 400A	40W at 630A
Power loss without solid-links	3.3W at 200A	10W at 200A	24W at 400A	50W at 630A	150W at 1000A
Mechanical					
Standard connection	Clamp strap	Clamp strap	M10	M10	M12
For cable lugs	M8 max. 2x70mm² 2x95mm² Al	M8 max. 2x70mm² Cu 2x95mm² Al	2x150mm² Cu 2x185mm² Al	2x240mm² Cu 2x240mm² Al	2x240mm² Cu 2x300mm² Al
For busbar max. width	20 mm	20 mm	30 mm	35 mm	45 mm
Ambient temperature range	-5°C to +40°C	-5°C to +40°C	-5°C to +40°C	-5°C to +40°C	-5°C to +40°C
Degree of protection	IP 20	IP 20	IP 20	IP 20	IP 20
Pollution degree	3	3	3	3	3

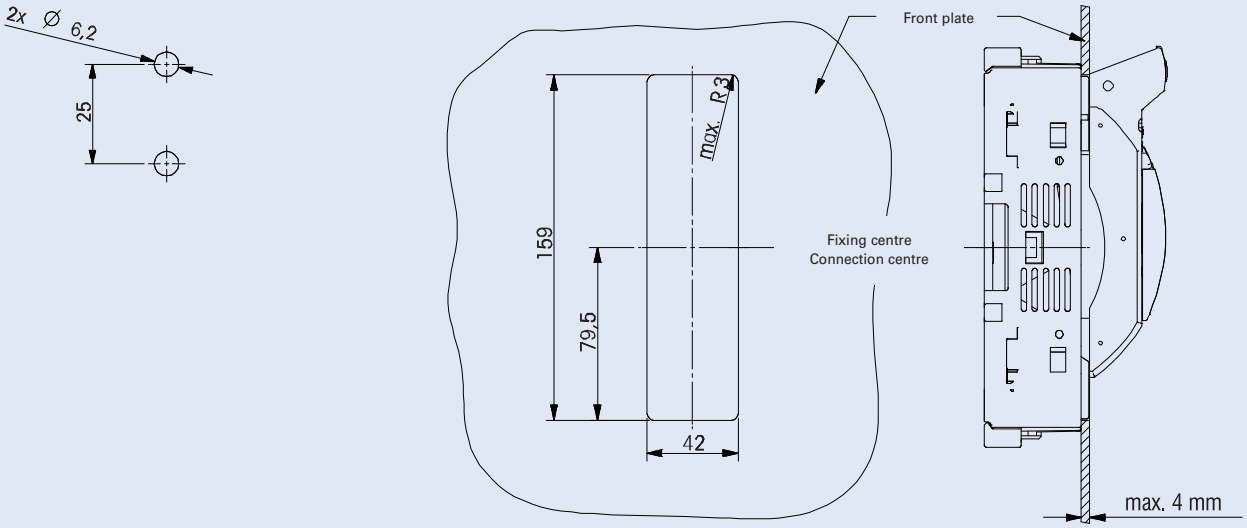
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Dimensions (mm)

LTS-160/00/1

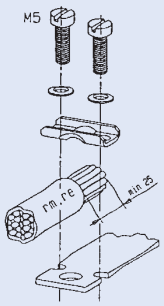


Dimensions for bottom fixing and front plate cut-out for bottom fixing without cover shield



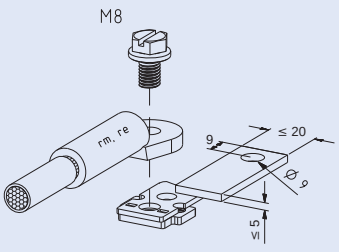
Cable Terminal Connections LTS-160/00/1

Clamp strap Z-LTS-160-BK:
Cross section Cu 4-70 mm²
Tightening torque 3-4 Nm

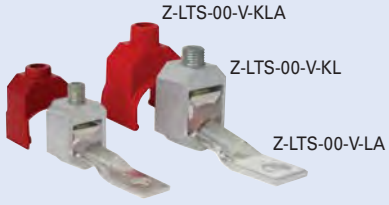


re . . . . . round solid
rm . . . . . round stranded
se . . . . . sectorial solid
sm . . . . . sectorial stranded

Accessories: Screw M8
Cross section Cu 16-70, Al 16-95 mm²
Tightening torque 15-17 Nm



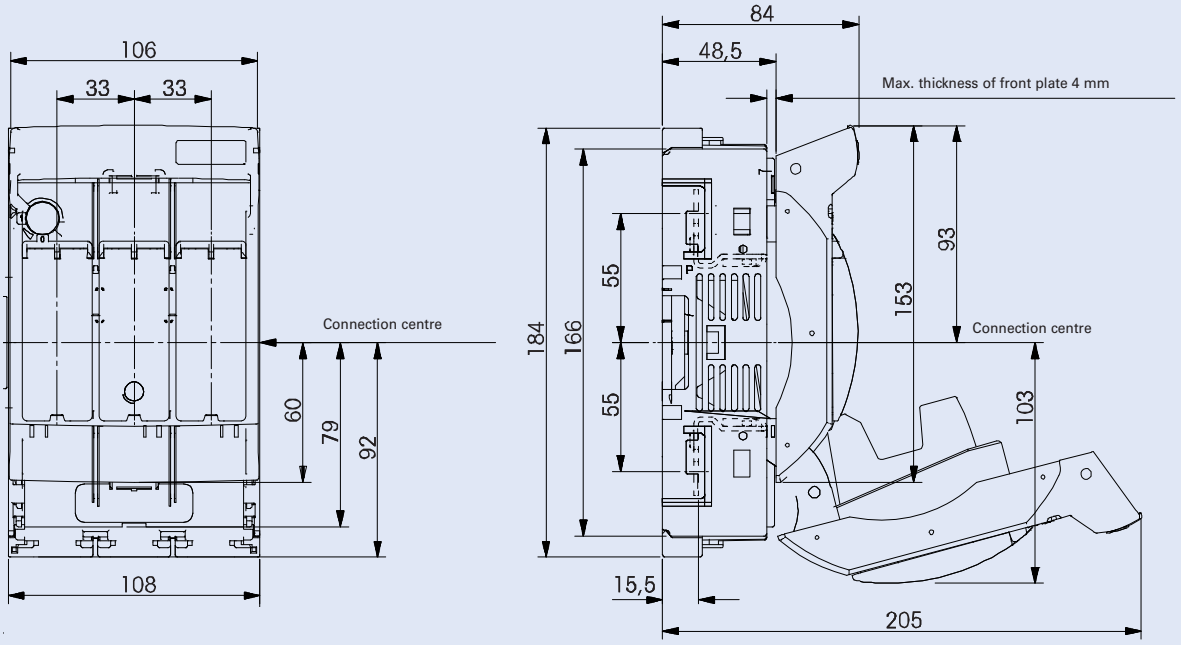
Accessories: V-shaped terminal
Cross section: 50-95 mm² se
35-70 mm² sm
10-50 mm² rm
Tightening torque 12 Nm



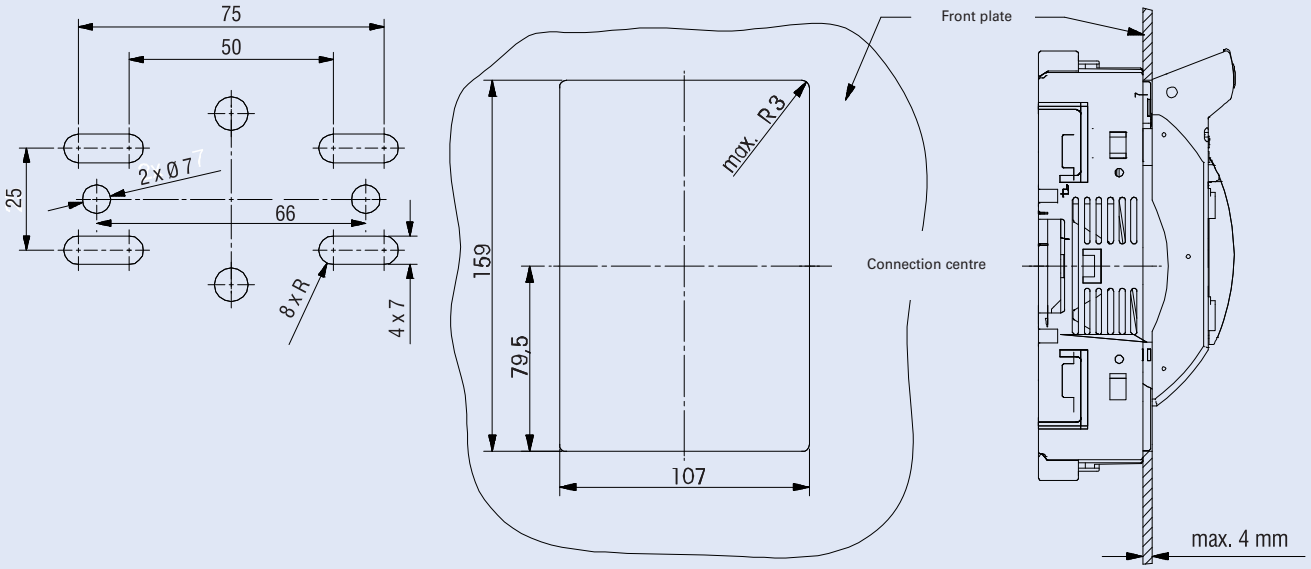
WA-SG01502

Dimensions (mm)

LTS-160/00/3

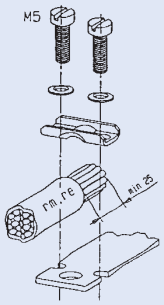


Dimensions for bottom fixing and front plate cut-out for bottom fixing without cover shield



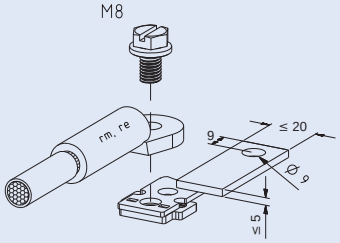
Cable Terminal Connections LTS-160/00/3

Clamp strap Z-LTS-160-BK:
Cross section Cu 4-70 mm²
Tightening torque 3-4 Nm

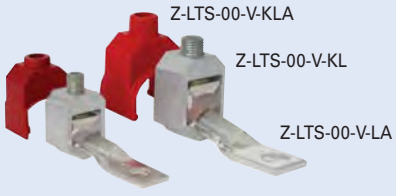


re . . . . . round solid
rm . . . . . round stranded
se . . . . . sectorial solid
sm . . . . . sectorial stranded

Accessories: Screw M8
Cross section Cu 16-70, Al 16-95 mm²
Tightening torque 15-17 Nm



Accessories: V-shaped terminal
Cross section: 50-95 mm² se
35-70 mm² sm
10-50 mm² rm
Tightening torque 12 Nm

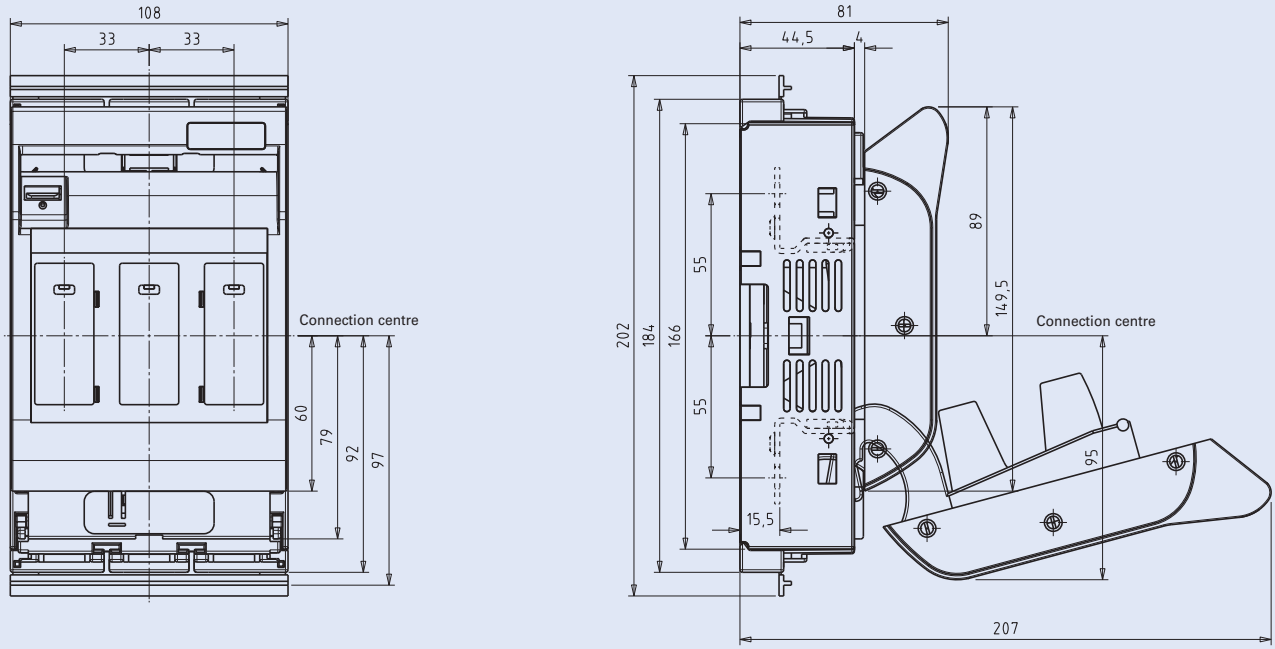


WA-SG01502

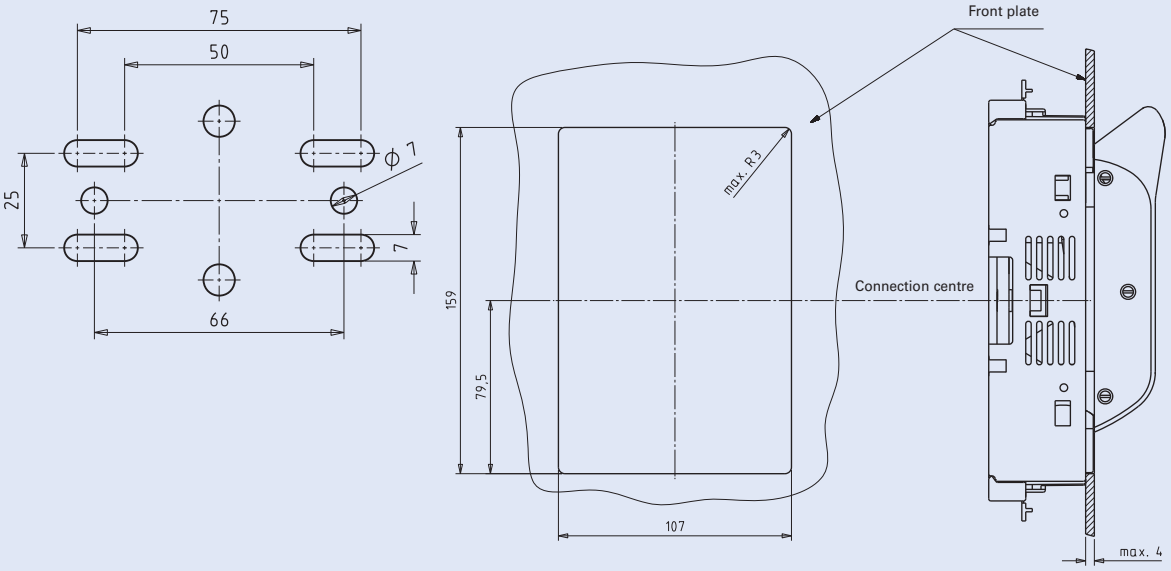
Dimensions (mm)

LTS-160/00/3

Symmetric switch, same dimensions for cable connection at the top or bottom

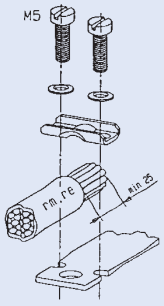


Dimensions for bottom fixing and front plate cut-out for bottom fixing without cover shield



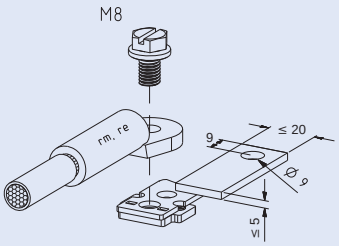
Cable Terminal Connections LTS-160/00/3

Clamp strap Z-LTS-160-BK:
Cross section Cu 4-70 mm²
Tightening torque 3-4 Nm

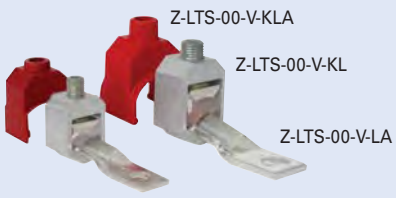


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rm . . . . . round stranded
se . . . . . sectorial solid
sm . . . . . sectorial stranded

Accessories: Screw M8
Cross section Cu 16-70, Al 16-95 mm²
Tightening torque 15-17 Nm



Accessories: V-shaped terminal
Cross section: 50-95 mm² se
35-70 mm² sm
10-50 mm² rm
Tightening torque 12 Nm

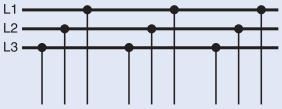


WA-SG01502

Busbar Block 35mm² Z-LTS-00/3-SV for LTS-160/00/3(E)

- Delivered with end caps.
- Extension terminal Z-LTS-EK/95 available

Connection diagram

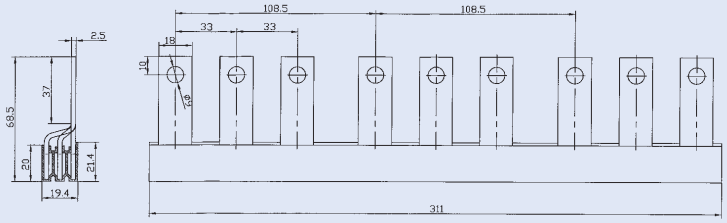


Technical Data

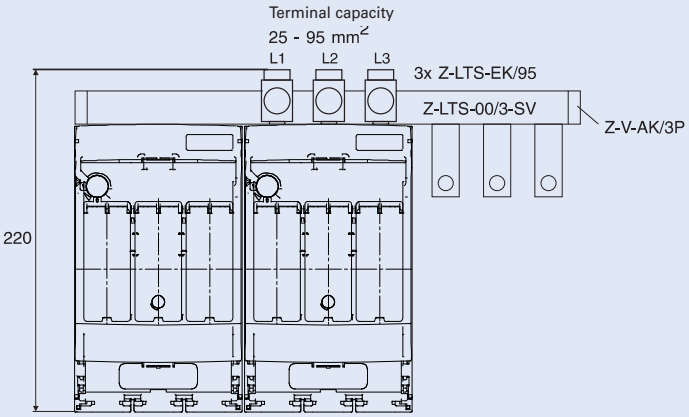
Electrical	
Rated voltage	690/400 V, 50 Hz
Rated current	
Feeding from the side	110 A
Feeding in the middle	220 A
Rated conditional short-circuit current with back-up fuse 250 A gG(gL)	100 $kA_{r.m.s}$

Mechanical	
Busbar cross section	35 mm^2 Cu
Step distance	33 mm / 108.5 mm
Weight	446 g

Dimensions (mm)



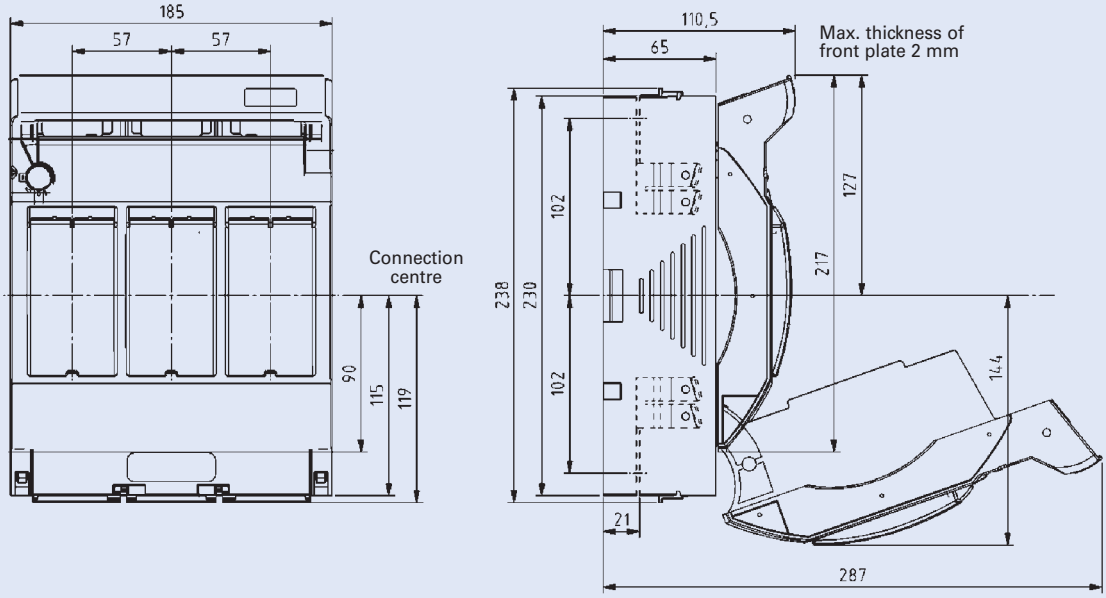
Example



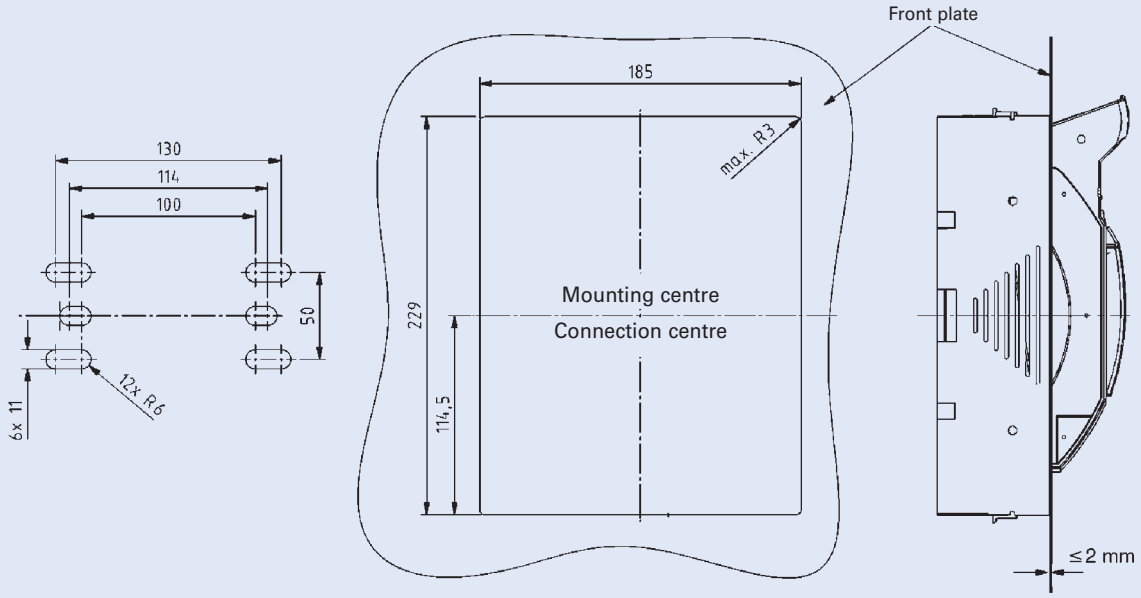


Dimensions (mm)

LTS-250/1/3

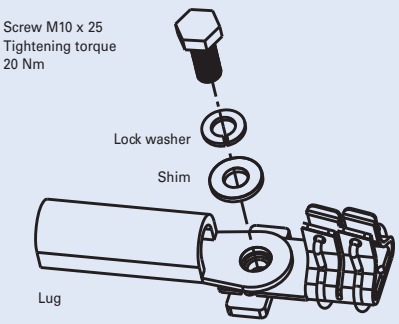


Dimensions for bottom fixing and front plate cut-out for bottom fixing without cover shield

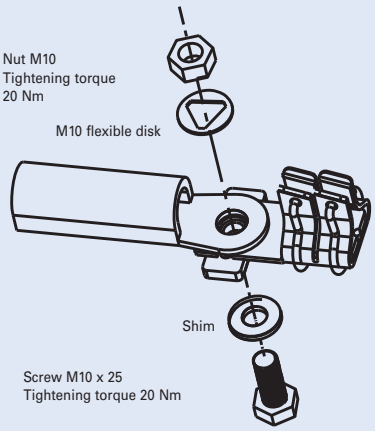


Cable Terminal Connections LTS-250/1/3

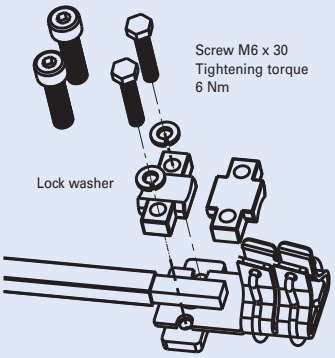
Screw connection



Bolt connection



Accessories: Clamp strap Z-LTS-250-BK

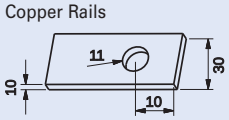


Suitable : for round conductor 70-150 mm² rm
for rails or laminated copper 18 x 7-18

Screw- and bolt connection

Suitable for lugs according to:
DIN 46235 max. 10-150 mm²
DIN 46234 max. 10-150 mm²
DIN 46329 max. 10-185 mm²

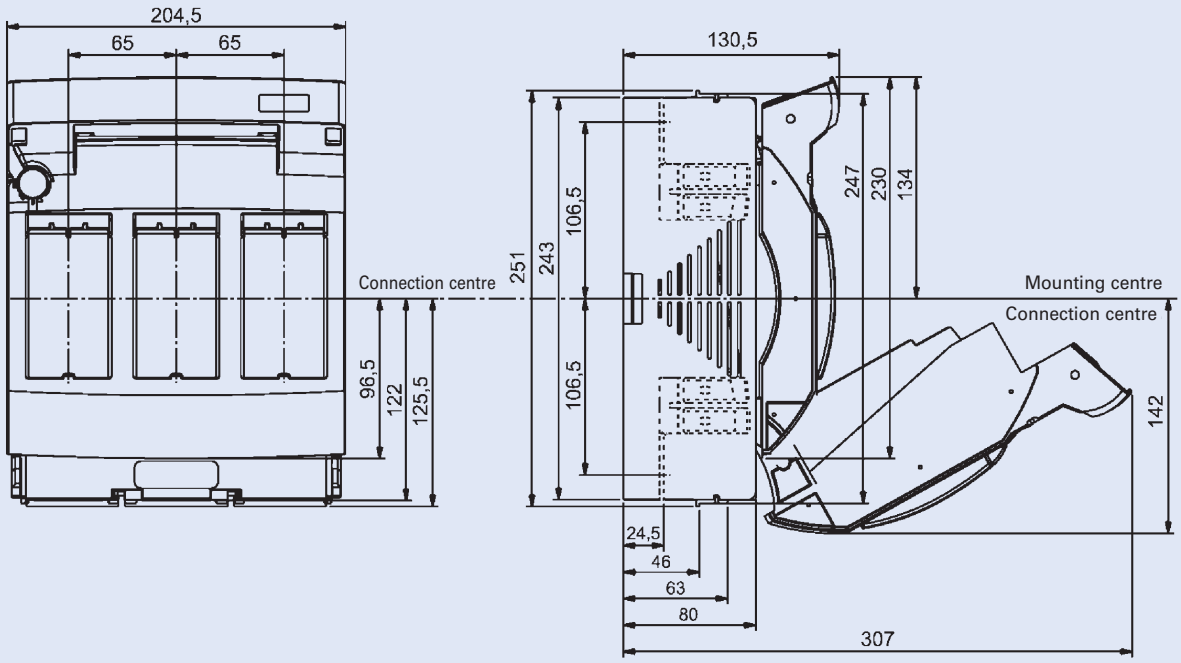
Copper Rails



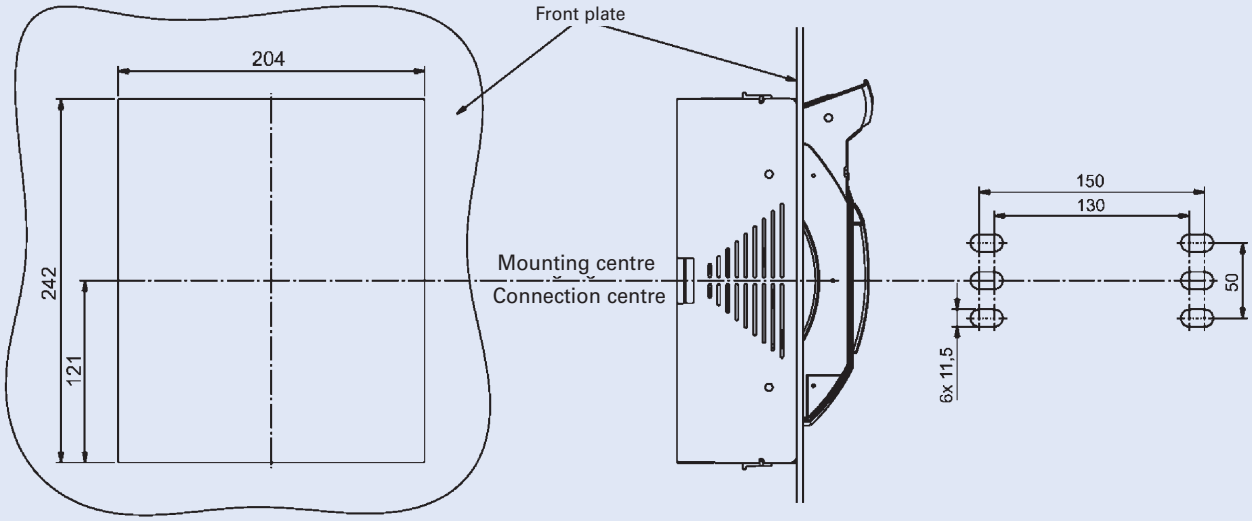
xPole

Dimensions (mm)

LTS-400/2/3

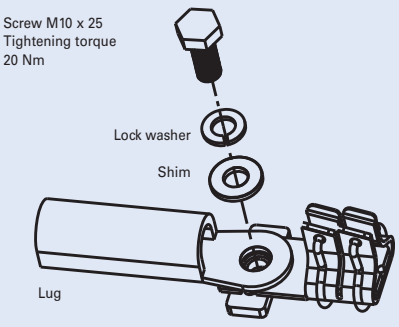


Dimensions for bottom fixing and front plate cut-out for bottom fixing without cover shield

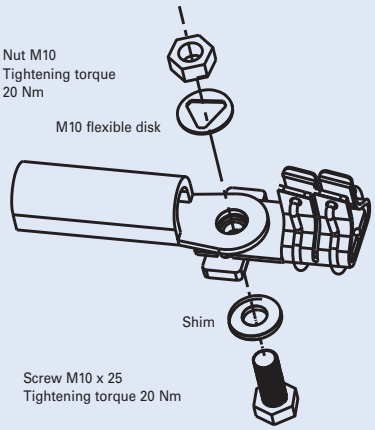


Cable Terminal Connections LTS-400/2/3

Screw connection



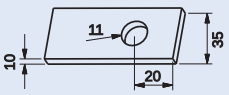
Bolt connection



Screw- and bolt connection

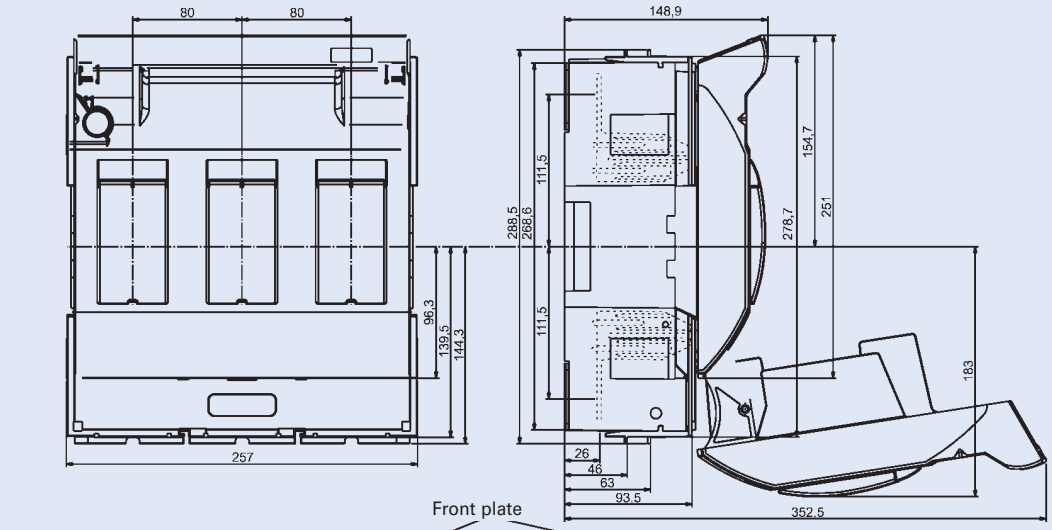
Suitable for lugs according to:
DIN 46235 max. 10-185 mm²
DIN 46234 max. 10-240 mm²
DIN 46329 max. 10-240 mm²

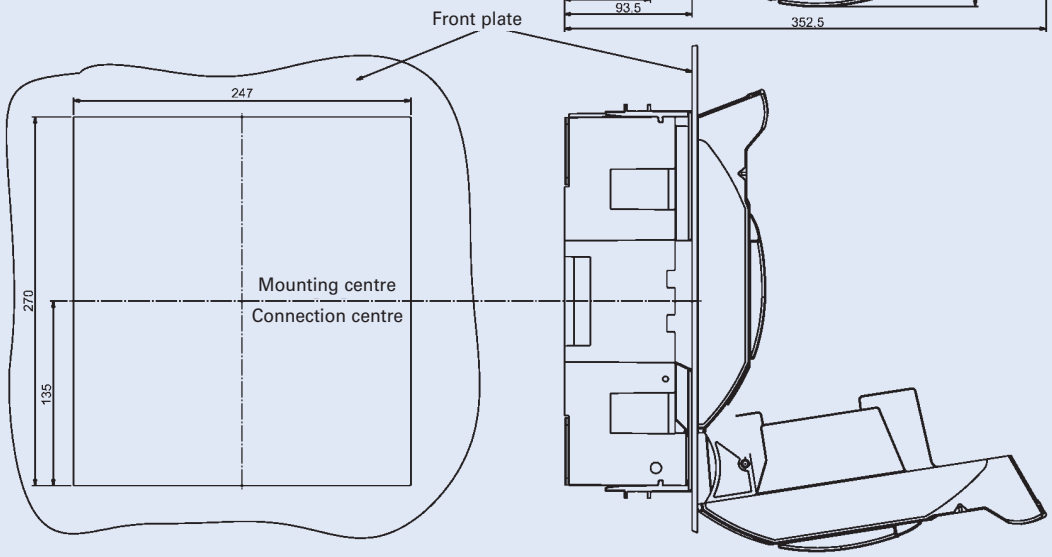
Copper Rails

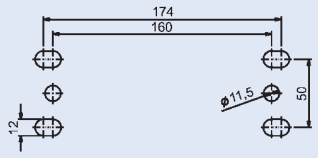


Dimensions (mm)

LTS-630/3/3



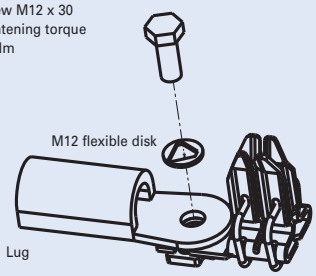




Cable Terminal Connections LTS-630/3/3

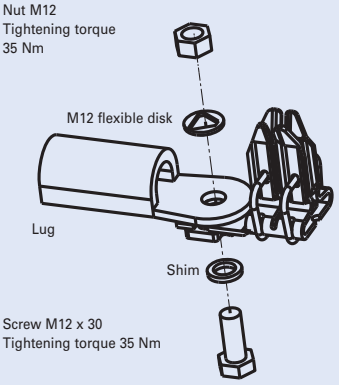
Screw connection

Screw M12 x 30
Tightening torque
35 Nm



Bolt connection

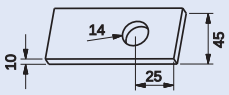
Nut M12
Tightening torque
35 Nm



Screw- and bolt connection

Suitable for lugs according to:
DIN 46235 max. 10-240 mm²
DIN 46234 max. 10-240 mm²
DIN 46329 max. 10-300 mm²

Copper Rails

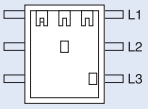


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Busbar Adapter Z-LTS-...-SAD/100-KR, 3-pole

- For the drill-free mounting of LTS fuse-switch-disconnectors on busbar systems with a distance between busbars of 100 mm
- Mounting requires little time and space
- Connection on top or bottom possible

Connection diagram

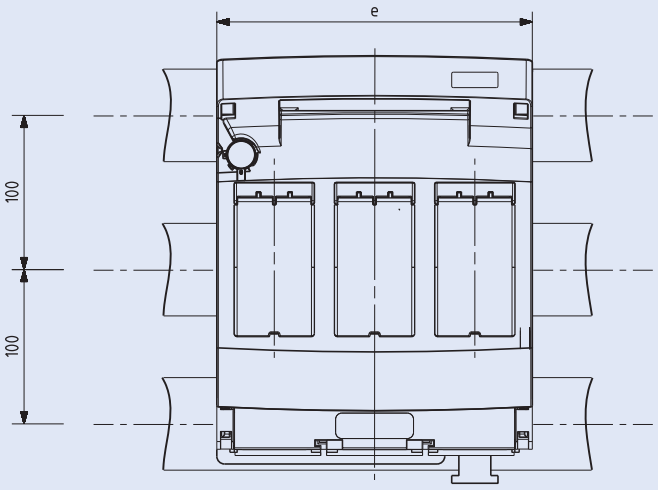


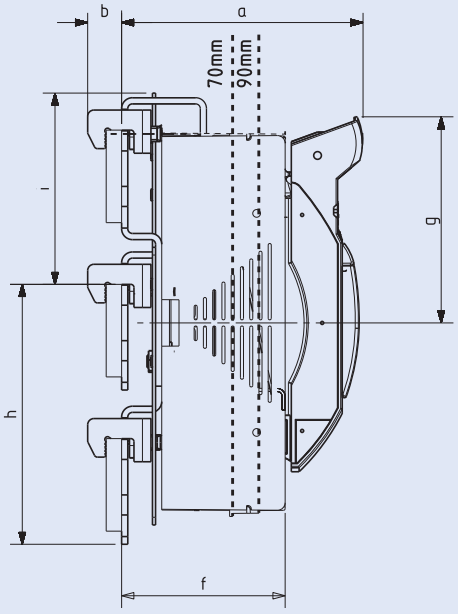
Technical Data

Adapter	Size	Distance between Busbars	Mounting	Max. Busbar Cross Section
Z-LTS-250-SAD/100-KR	1	100 mm	Hex screw M10 15 Nm	60 x 10 mm
Z-LTS-400-SAD/100-KR	2	100 mm	Hex screw M10 15 Nm	60 x 10 mm
Z-LTS-630-SAD/100-KR	3	100 mm	Hex screw M10 15 Nm	60 x 10 mm

Dimensions (mm)

Symmetrical adapter, same dimensions for cable connection on top or bottom



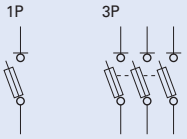


Adapter	Size	NH-Fuse-Switch-Disconnector	a	b	e	f	g	h	i
Z-LTS-250-SAD/100-KR	1	LTS-250/1/3	137	22	185	91	127	168,5	121
Z-LTS-400-SAD/100-KR	2	LTS-400/2/3	157	22	204,5	106	134	168,5	124
Z-LTS-630-SAD/100-KR	3	LTS-630/3/3	174,5	22	256	122	155	168,5	124

NH-Fuse-Switch-Disconnector GSTA

- Mounting height max. 2000 m
- Direction of power infeed: any
- Break-proof, flexible connection chamber
- Fully insulated, shock hazard protected in acc. with IEC/EN 60947 or BGV A3
- The base body is made of glass fibre reinforced, high-temperature resistant, self-extinguishing and halogen-free plastic
- The contact system consists of separately spring-loaded silver-plated copper contacts
- The switch cover is made of glass fibre reinforced, self-extinguishing, silicone and chlorine-free thermoplast
- The switch cover features large viewing windows allowing to read the labelling and to see the flat indicator of the NH-fuse-links
- The viewing windows provide test holes
- Vertical and horizontal mounting position is possible
- Delivery without NH-fuse-links

Connection diagram



			GSTA00-160..	GST00-160-F	GSTA1..	GSTA2..	GSTA3..
Electrical							
Technical data according to			IEC/EN 60947-3				
Rated operational voltage	Ue	V AC	500 / 690	500 / 690	500 / 690	500 / 690	500 / 690
Rated operational voltage	Ue	V DC	220 / 440	220 / 440	220 / 440	220 / 440	220 / 440
Rated operational current	Ie	A	160 / 100	160 / 100	250 / 200	400 / 315	630 / 500
Rated frequency		Hz	40 - 60	40 - 60	40 - 60	40 - 60	40 - 60
Rated conditional short-circuit current AC		$kA_{r.m.s.}$	50	50	50	50	50
Rated conditional short-circuit current DC		$kA_{r.m.s.}$	25	25	25	25	25
Utilization category AC 22 B							
Rated making capacity		A	480 / 300	480 / 300	750 / 600	1200 / 945	1890 / 1500
Rated breaking capacity		A	480 / 300	480 / 300	750 / 600	1200 / 945	1890 / 1500
Utilization category DC 21 B							
Rated making capacity		A	150	150	300	475	750
Rated breaking capacity		A	150	150	300	475	750
Service life electrical - operating cycles			300	300	200	200	200
Service life mechanical - operating cycles			1700	1700	1400	800	800
Power loss with Ith AC, without NH-SE		W	6.9 / 2.7	6.9 / 2.7	12.9 / 8.3	27 / 16.7	52 / 32.8
Power loss with Ith DC, without NH-SE		W	4.6 / 1.8	4.6 / 1.8	8.6 / 5.5	18 / 11.2	34.7 / 21.8
Rated insulation voltage	Ui	V AC	750	750	750	750	750
Overvoltage category			III	III	III	III	III
Rated impulse withstand voltage	U_{imp}	kV	8	8	8	8	8
Max. Fuse-link							
Size			NH00	NH00	NH1	NH2	NH3
Max. rated current gL/gG		A	160	160	250	400	630
Max. permissible power loss of NH-SE	Pv	W	12	12	23	34	48
Mechanical							
Ambient temperature range		°C	-25 to +55	-25 to +55	-25 to +55	-25 to +55	-25 to +55
Degree of protection (open front cover)			IP20 (IP10)	IP20 (IP10)	IP20 (IP10)	IP20 (IP10)	IP20 (IP10)
Pollution degree			3	3	3	3	3
Weight		kg	0.72	0.72	2.5	3.3	4.6
Climatic resistance: moist heat			constant according to IEC 60068-2-78, cyclical according to IEC 60068-2-30				
Cross sections of connections							
Flat connection (F)				F[1)]	F[1)]	F[1)]	F[1)]
Screw				M8	M10	M10	M10
Cable lug		mm^2		1 x 10-95	1 x 25-150	1 x 25-240	1 x 25-300
Flat busbar		mm		20 x 10	30 x 10	30 x 10	30 x 10
Tightening torque		Nm		12 - 15	30 - 35	30 - 35	30 - 35
Clamp-type terminal (S) / Lift terminal (K)			K[1)]	S	S	S	S
Stranded Cu		mm^2	1,5 - 70	10 - 95	25 - 150	25 - 240	25 - 300
Cu-Band, No. of layers		mm x width x thickness	6 x 9 x 0.8	6 x 9 x 0.8	6 x 16 x 0.8	10 x 16 x 0.8	11 x 21 x 1
Tightening torque		Nm	2.6	2.6	9.5	23	23
Prism terminal							
Stranded Al/Cu		mm^2		10 - 70	70 - 150	120 - 240	120 - 300
Tightening torque		Nm		2.6	4.5	11	11
Double-prism terminal							
Stranded Al/Cu		mm^2			2x70-95	2x120-150	2x120-240
Tightening torque		Nm			4.5	11	11

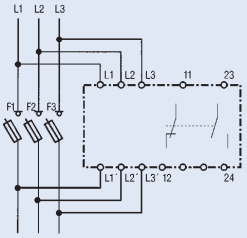
[1)] Standard-connection in the delivery condition

xPole

Switch Cover with Fuse Monitoring for NH-Fuse-Switch-Disconnector GST...

- Operation indication
  In working order –> 1 green LED
  Fuse blown –> 3 red LEDs L1, L2, L3
- Working current principle
- VDE-requirements regarding touch voltage (> 1000 Ohm/V) are complied with.
  To release, turn off the upstream main switch!
- Not applicable for single phase application

Connection diagram



Technical data

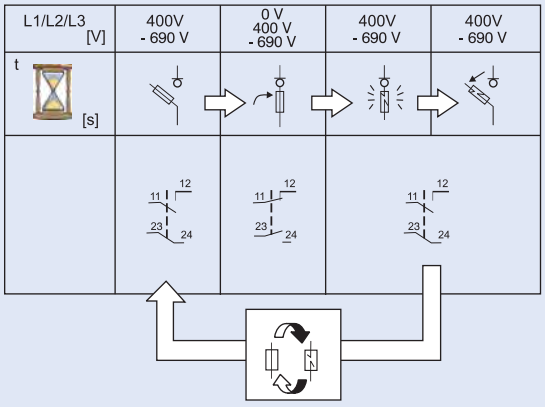
Electrical

Technical data according to	IEC/EN 60255, VDE 0435 Part 303
Rated voltage U_e	3 x 400 V AC - 690 V AC
Voltage range	0,9 ... 1,1xU_e
Rated frequency	50-60 Hz
Consumption	1.5 VA (L2/L3)
Rated insulation voltage U_i	690 V
Overvoltage category	III
Rated impulse withstand voltage U_{imp}	6 kV
Relay contacts	1 NC, 1 NO
Technical data according to	EN 60204, EN 50178, VDE 0106
Rated voltage	250 V AC
Rated current I_{th}	8 A DC
Max. making current	15 A
Utilization category	AC 15 DC13
Rated operational voltage U_e	230VAC 24VAC 24VDC 220VDC
Rated operational current I_e	1 A 4 A 1 A 0,5 A
Minimum switching load	5 V AC/DC, 300 mW, 5 mA
Max. switching capacity	
AC 1	2000 VA
250 V AC 15	400 VA
250 V AC 3	300 W
Endurance electrical comp.	80 x 10^3 operating cycles AC 1
Maximum back-up fuse	4 A gL/gG / PLSM-B4...-HS

Mechanical

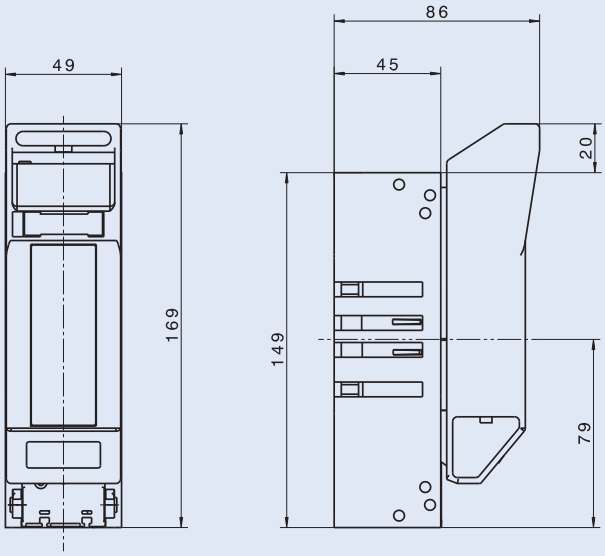
Terminals	Lift terminals
Terminal capacity stranded	0.25 - 1.5 mm^2
Tightening torque of terminal screws	0.5 - 0.6 Nm
Endurance mechanical comp.	> 10 x 10^6 operating cycles
Response/Release time	< 500 ms
Depree of protection	IP20
Temperature range	-10 to +55°C
Pollution degree	3

Functional diagram

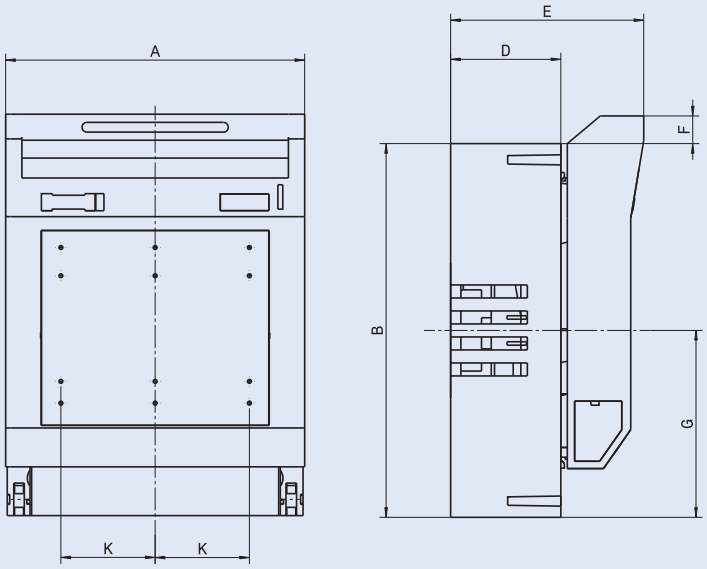


Dimensions (mm)

1-pole
GSTA00-160-1P

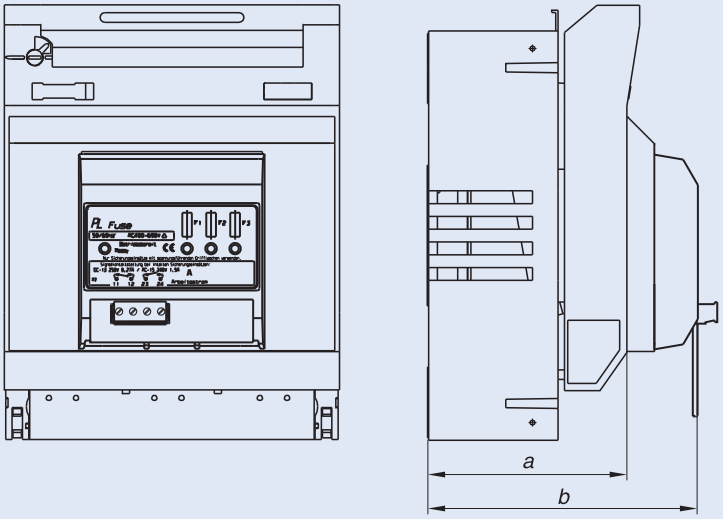


3-pole
GSTA00-160(-F), GSTA1, GSTA2, GSTA3



Type	A	B	D	E	F	G	K
GSTA00-160(-F)	105,5	149	45	86	20	79	33
GSTA1	184	230	68	119	16,5	115	58
GSTA2	210	256	81	133	16,5	128	66
GSTA3	254	270	96	147	9	135	82

GST...-DSI

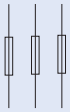


Type	Size	a	b
GST00...	NH00	90	123
GST1...	NH1	120	151
GST2...	NH2	135	166
GST3...	NH3	145	176

Fuse-Links Z-D0./SE

- According to DIN VDE 0636, DIN 49522
- For fuse-switch-disconnectors Z-SLS, -SLK
- For fuse-bases D0.-SO and Z-D02/R/3

Connection diagram



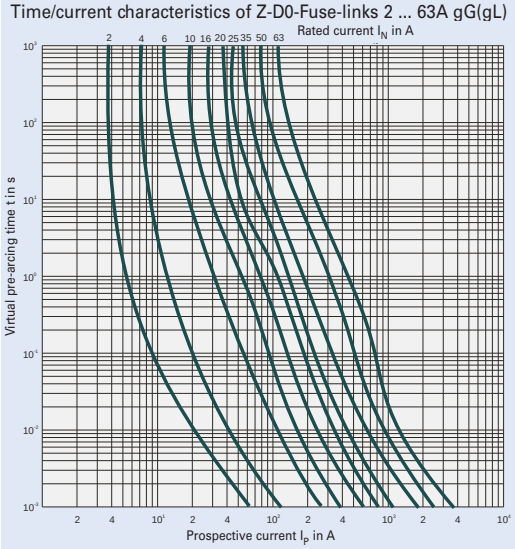
Technical Data

Electrical	
Operating class	gG (gL)
Rated voltage	
AC	400 V
DC	220 V
Rated frequency	45-65 Hz
Rated insulation voltage U_i	2500 V
Rated short-circuit breaking capacity	50kA (AC), 8kA (DC)

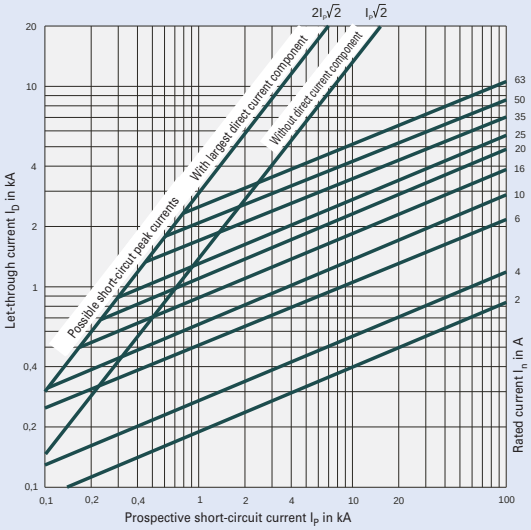
Mechanical	
Size	
D01	1, 2, 4, 6, 10, 13, 16 A
D02	20, 25, 32, 35, 40, 50, 63 A

Characteristics Z-D0./SE

Time/current characteristics of Z-D0-Fuse-links 2 ... 63A gG(gL)



Let-through characteristics of Z-D0-Fuse-links 2 ... 63A gG(gL)



Cartridge Ring Adapter Insert Z-D0./PE, Z-D02-D01/PE

- According to DIN 49523
- Used for current coding of D0.-SO, Z-D02/R/3, Z-SLS/CB

Technical Data

Electrical	
Rated current	
D01	2 - 10 A
D02	20 - 50 A
D02-D01	2 - 16 A

Screw Caps Z-D0./SK

- Used for D0.-SO, Z-D02/R/3
- Adapter spring Z-D02/SIKA-HF for application of D01 fuse-links into the screw cap Z-D02/SK available

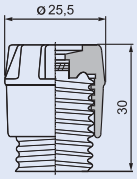
Technical Data

Electrical	
Rated current	
D01	max. 16 A
D02	max. 63 A

Mechanical	
Electrical thread	
D01	E14
D02	E18

Practical Hint

A complete and functioning D-fuse system consists of base + fuse-link + cartridge-ring adapter insert + screw cap.
The cartridge-ring adapter insert is not required for the highest rated current of each size (D01...16A and D02...63A).



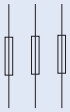
xPole

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Fuse-Links Z-DII./SE

- According to DIN EN 60269-1 (VDE 0636 Part 10), DIN EN 60269-3 (VDE 0636 Part 30), DIN VDE 0636-301, CEE 16, IEC/EN 60269-1, IEC/EN 60269-3
- For fuse-bases DII-SO..., DIII-SO...

Connection diagram



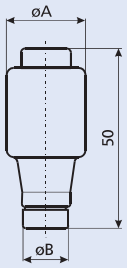
Technical Data

Electrical

Operating class	gG (gL), DZ
Rated voltage U_n	
AC	500 V
DC	400 V
Rated frequency	45-65 Hz
Insulating class	C-VDE0110
Rated short-circuit breaking capacity at	1.1 x U_n
AC	50 kA / cos φ = 0.2
DC	8 kA / τ = 15 ms

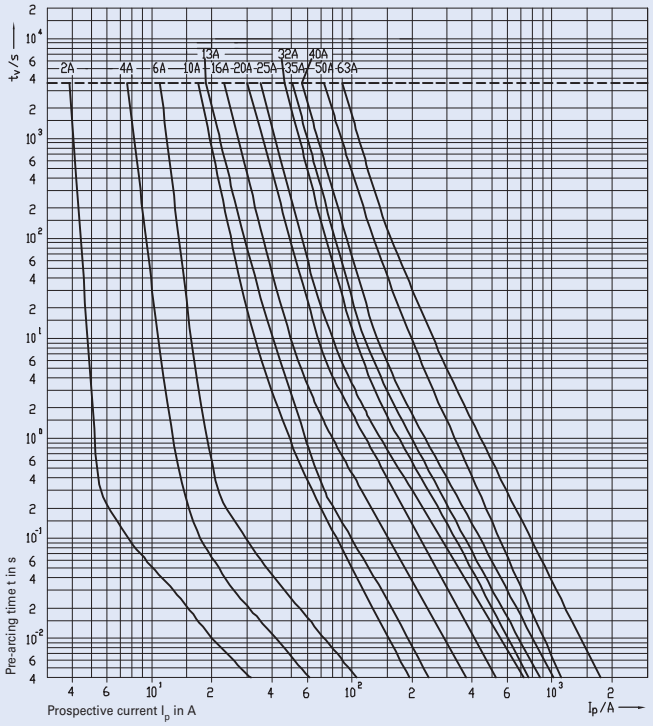
Dimensions (mm)

I_n (A)	ØA	ØB
DII for fuse-base E27		
2	21,5	6
4	21,5	6
6	21,5	6
10	21,5	8
16	21,5	10
20	21,5	12
25	21,5	14
DIII for fuse-base E33		
35	27	16
50	27	18
63	27	20

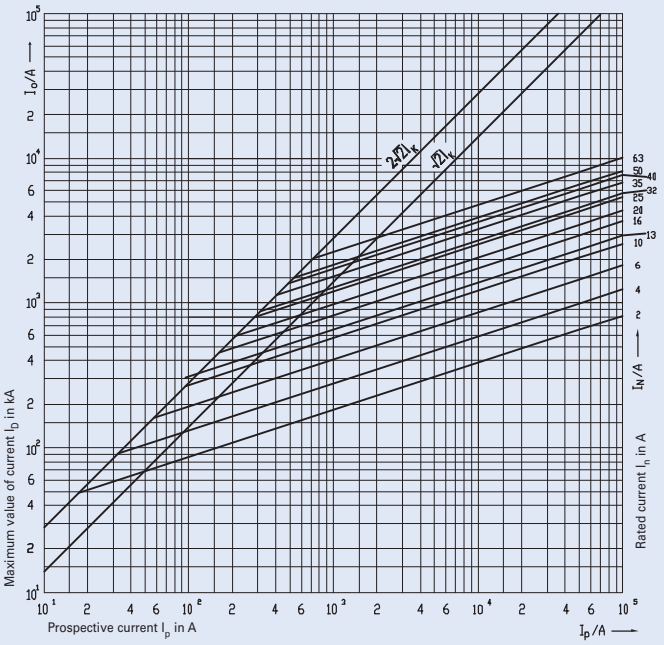


Characteristics Z-DII./SE

Time/current characteristics of Z-DII-Fuse-links 2 ... 63A gG(gL)



Let-through current characteristics of Z-DII-Fuse-links 2 ... 63A gG(gL)

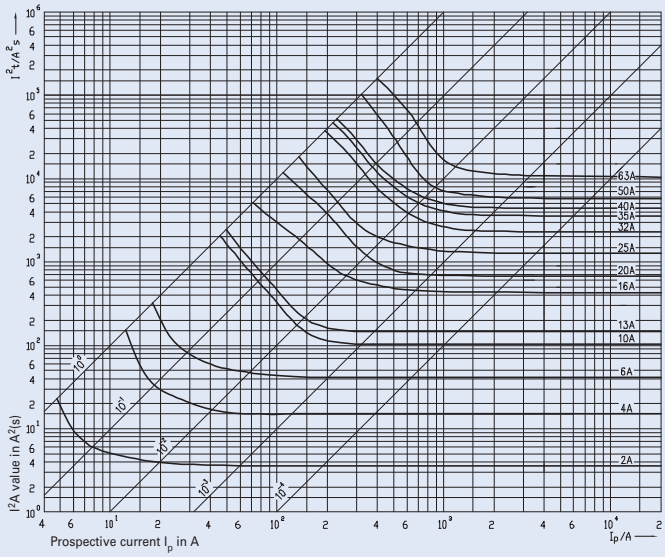


xPole

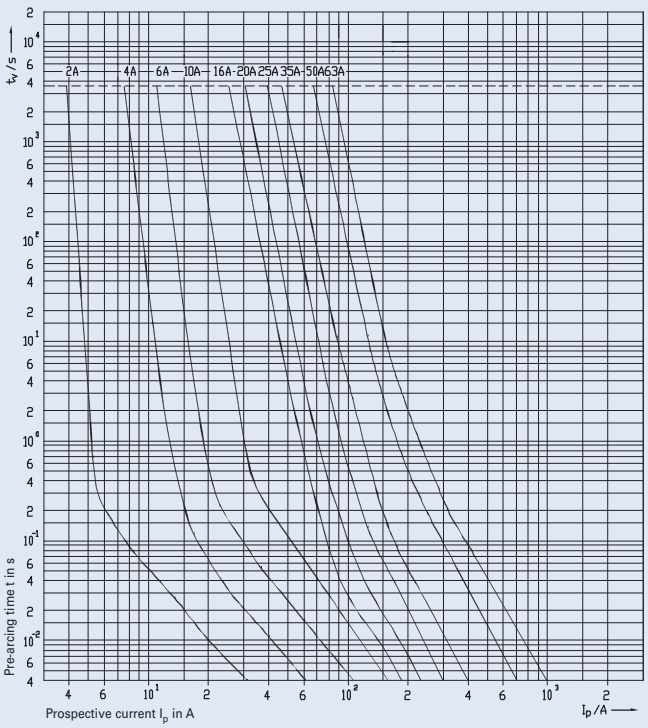
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Characteristics Z-DII./SE

Melting energy characteristics I^2t/A of Z-DII-Fuse-links 2 ... 63A gG(gL)



Time/current characteristics of Z-DII-Fuse-links 2 ... 63A DZ



xPole

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Gauge Ring Z-DII./PE

- Used for current coding of DII.-SO/...

Technical Data

Electrical

Rated current	
DII	2 - 20 A
DIII	2 - 50 A

Screw-in Gauge Ring Z-DII./PS

- Used for current coding of DII.-SO/...-PS

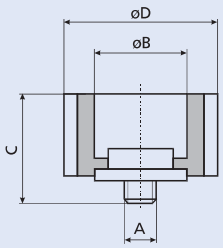
Technical Data

Electrical

Rated current	
DII	2 - 25 A
DIII	35 - 63 A

Dimensions (mm)

I_n (A)	A	B	C	D
DII for fuse-base E27				
2	3/16″	6.5	17	24
4	3/16″	6.5	17	24
6	3/16″	6.5	17	24
10	3/16″	8.5	17	24
16	3/16″	10.5	17	24
20	3/16″	12.5	17	24
25	3/16″	14.5	17	24
DIII for fuse-base E33				
35	3/16″	16.5	17	24
50	3/16″	18.5	17	24
63	3/16″	20.5	17	24



Screw Caps Z-DII./SK

- Used for DII.-SO

Technical Data

Electrical

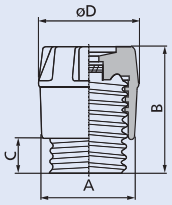
Rated current	
DII	max. 25 A
DIII	max. 63 A
Rated voltage	
Z-DII/SK	500 V AC / 400 V DC
Z-DIII/SK	500 V AC / 400 V DC
Z-DIII/SK-690	690 V AC

Mechanical

Electrical thread	
DII	E27
DIII	E33

Dimensions (mm)

I_n (A)	A	B	C	D
Z-DII/SK	34	44	12	35
Z-DIII/SK	43	44	12	43
Z-DIII/SK-690	43	65	12	43



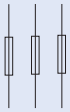
Practical Hint

A complete and functioning D-fuse system consists of
– base for screw-in gauge ring + fuse-link + screw-in gauge ring + screw cap
– base for gauge ring + fuse-link + gauge ring + screw cap
The gauge ring is not required for the highest rated current of each size (DII ... 25 A and DIII ... 63 A).

Fuse-Links Z-C../SE

- According to IEC 60269-1 and IEC 60269-2-1
- For fuse-switch-disconnectors C10-SLS, VLC, C10-CCI
- Operating classes gG (gL) and aM available

Connection diagram



Technical Data

Electrical	**Z-C10/SE 10x38**	**Z-C14/SE 14x51**	**Z-C22/SE 22x58**
Operating class	gG (gL)	gG (gL)	gG (gL)
Rated voltage U_n	1 - 25 A / 500 V AC 32 A / 400 V AC	2 - 32 A / 690 V AC 40 - 50 A / 500 V AC	16 - 40 A / 690 V AC 50 - 100 A / 500 V AC
Operating class	aM	aM	aM
Rated voltage U_n	1 - 16 A / 500 V AC 20 - 32 A / 400 V AC	2 - 25 A / 690 V AC 32 - 50 A / 500 V AC	16 - 50 A / 690 V AC 80 - 100 A / 500 V AC
Rated frequency	50 Hz	50 Hz	50 Hz
Rated short-circuit breaking capacity	100 kA	100 kA	100 kA

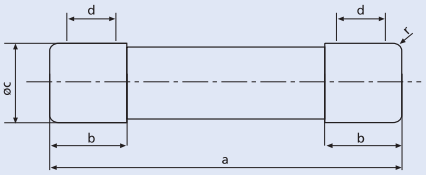
Max. Power dissipation

Operating class gG - Power dissipations 400 V / 500 V / 690 V

	max. **3 W** acc. IEC 60269-2	max. **5 W** acc. IEC 60269-2	max. **9,5 W** acc. IEC 60269-2
Rated current I_n	**10x38**	**14x51**	**22x58**
1	0,55		
2	0,90	1,45	
4	1,45	1,60	
6	1,55	1,95	
8	1,05	1,40	
10	1,10	1,45	
12	1,55	1,95	
16	2,85	3,00	3,05
20	2,80	3,15	3,40
25	2,95	4,10	4,40
32	3,00	4,80	5,10
40		4,75	7,20
50		4,95	7,60
63			8,00
80			8,20
100			9,40

Dimensions (mm)

Type	Size	a	$b_{max.}$	c	$d_{min.}$	r
Z-C10	10x38	38.0±0.6	10.5	10.3±0.1	6	1.5±0.5
Z-C14	14x51	51.0+0.6/-1	13.8	14.3±0.1	7.5	2±0.5
Z-C22	22x58	58.0+1/-2	16.2	22.2±0.1	11	2±0.5

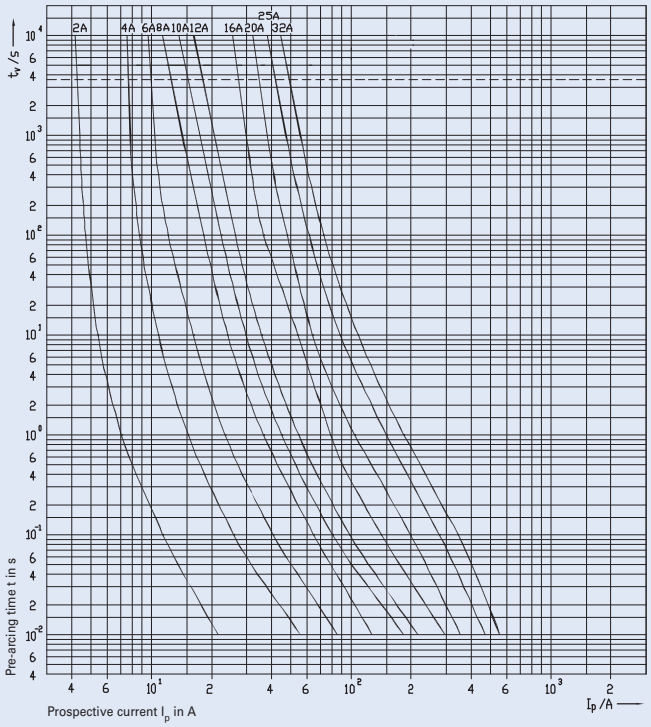


xPole

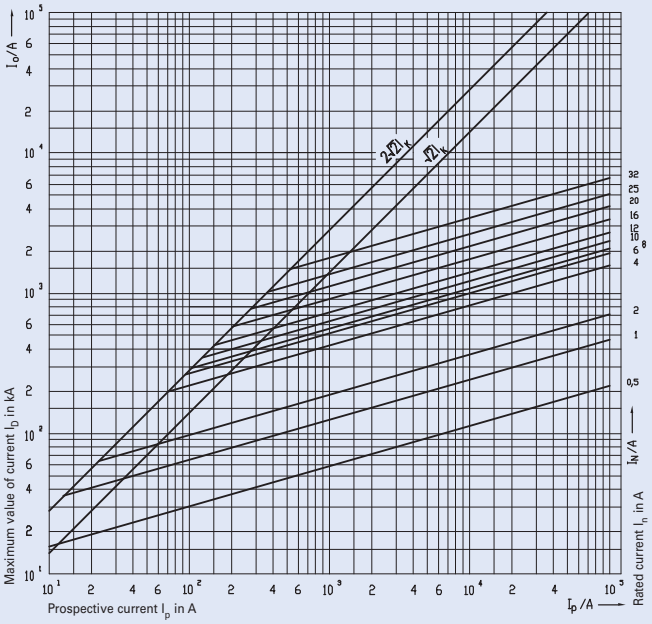
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Characteristics Z-C10/SE, Operating class gG, 10x38

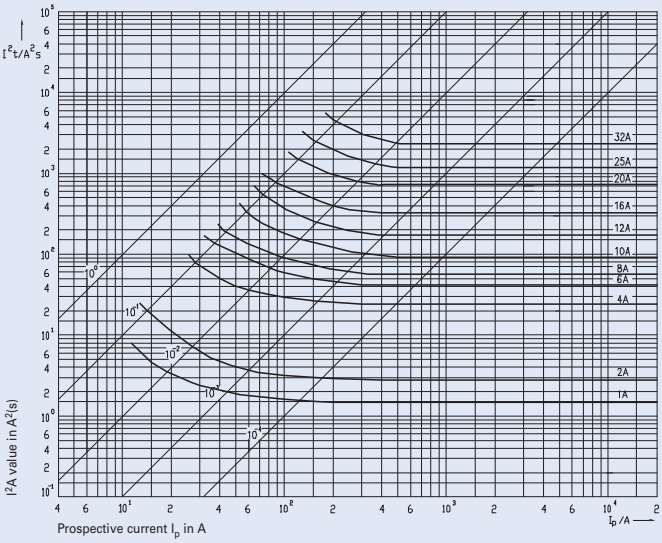
Time/current characteristics of Z-C10-Fuse-links 2 ... 32A gG(gL)



Let-through current characteristics of Z-C10-Fuse-links 2 ... 32A gG(gL)



Melting energy characteristics I^2t/A of Z-C10-Fuse-links 1 ... 32A gG(gL)

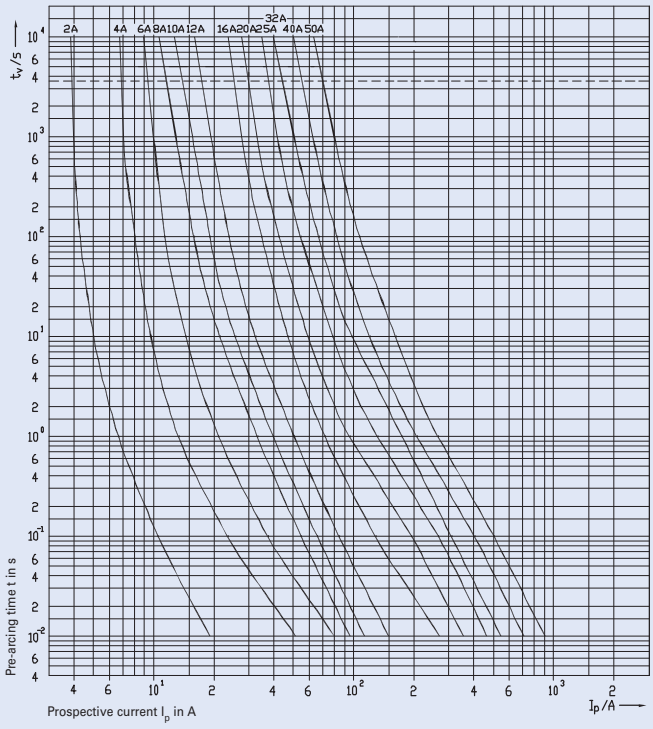


xPole

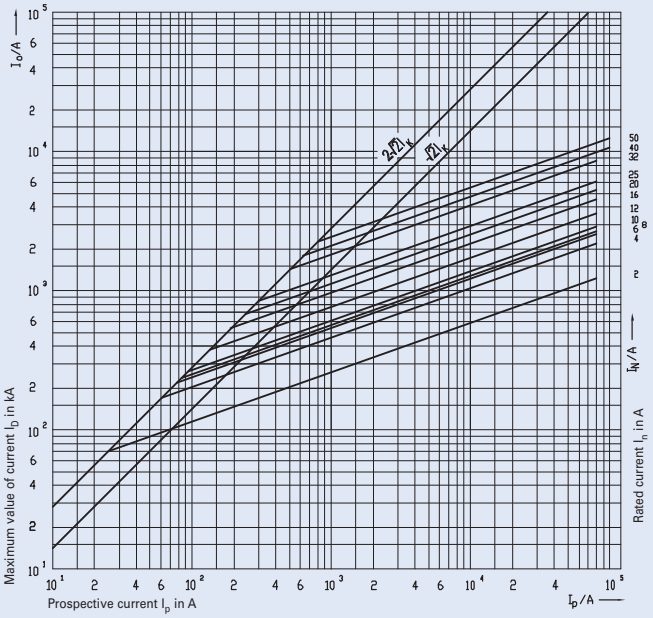
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Characteristics Z-C14/SE, Operating class gG, 14x51

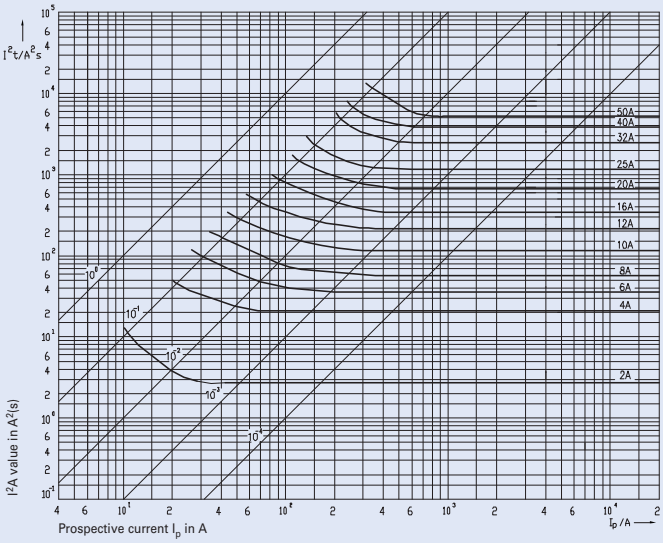
Time/current characteristics of Z-C14-Fuse-links 2 ... 50A gG(gL)



Let-through current characteristics of Z-C14-Fuse-links 2 ... 50A gG(gL)



Melting energy characteristics I^2t/A of Z-C14-Fuse-links 2 ... 50A gG(gL)

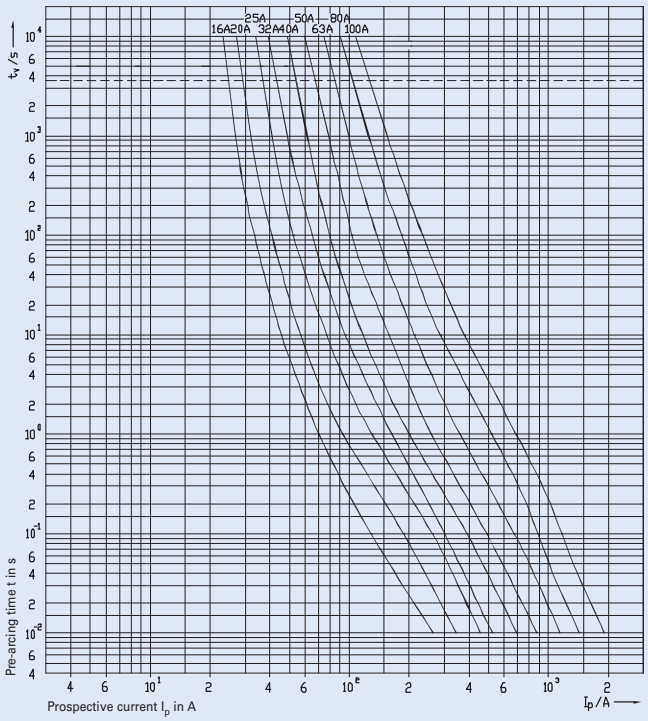


xPole

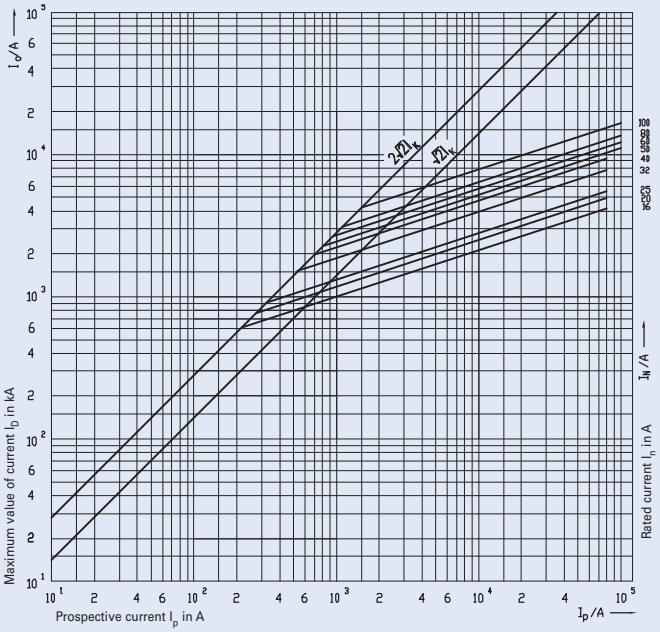
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Characteristics Z-C22/SE, Operating class gG, 14x51

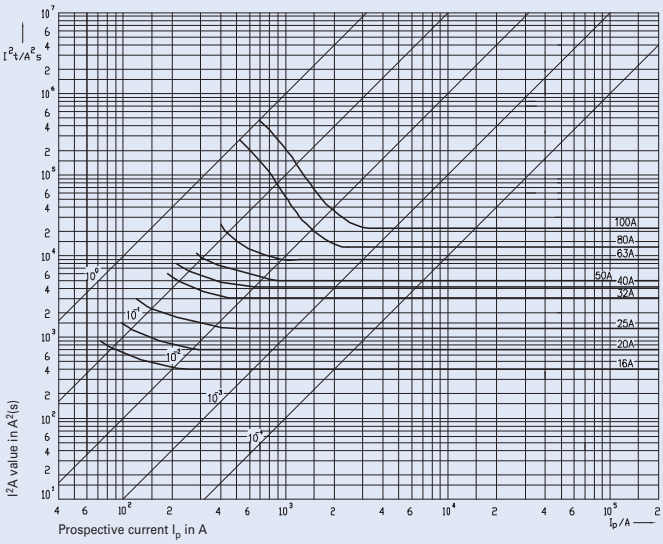
Time/current characteristics of Z-C22-Fuse-links 16 ... 100A gG(gL)



Let-through current characteristics of Z-C22-Fuse-links 16 ... 100A gG(gL)



Melting energy characteristics I^2t/A of Z-C22-Fuse-links 16 ... 100A gG(gL)



xPole

Fuse-Links ASFLC10-..A-gPV-SOL Photovoltaic application

- According to IEC 60269-1 and IEC 60269-4
- For fuse-switch-disconnectors FCFDC10DI

Connection diagram



Technical Data

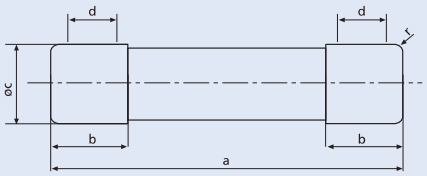
Electrical	**ASFLC10-..A-gPV-SOL 10x38**
Rated voltage U_n	6 - 20 A / 1000 V DC 25 A / 900 V DC
Rated frequency	–
Rated short-circuit breaking capacity	30 kA
τ = L/R	2 ms

Max.Power dissipation

Rated current I_n [A]	Pre-arcing Joule integral L/R = 2 ms [A^2s]	Operating Joule integral L/R = 2 ms [A^2s]	Power dissipation at 0.7 x I_n [W]	Power dissipation at I_n P_d [W]	Weight P_d [g]
2	1.3	3.5	1.47	1.00	10
4	3.3	28	0.52	1.25	10
6	5.5	45	0.73	1.65	10
8	8	62	0.93	1.9	10
10	11	88	1.06	2.3	10
12	23	180	1.03	1.9	10
16	35	270	1.00	2.5	10
20	50	430	1.18	3.25	10
25	75	620	1.25	3.45	10

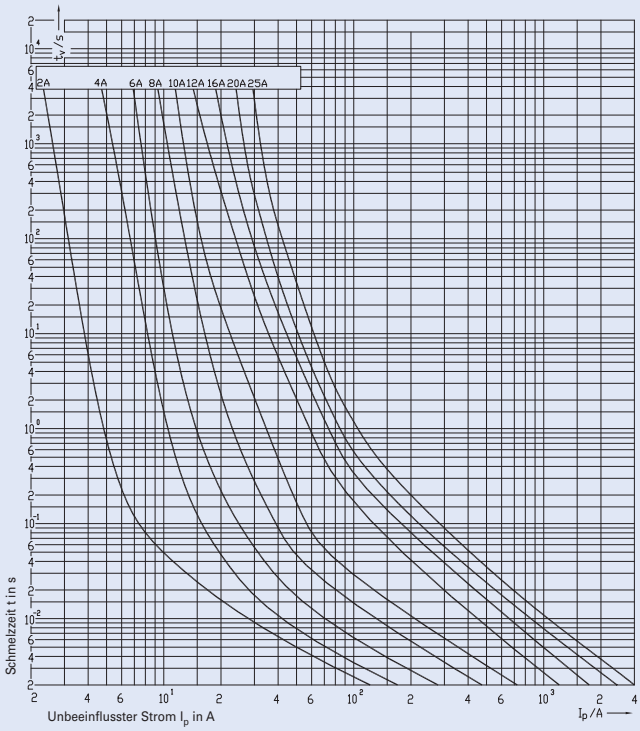
Dimensions (mm)

Type	Size	a	$b_{max.}$	c	$d_{min.}$	r
ASFLC10	10x38	38.0±0.6	10.5	10.3±0.1	6	1.5±0.5



Characteristics ASFLC10-..A-gPV-SOL, Photolvoltaic application

Time/current characteristics of ASFLC10-..A-gPV-SOL Fuse-links 2 ... 25A

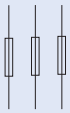


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NH-Fuse-Links Z-NH

- Design according to ÖVE-SN 40, IEC 60269, VDE 0636, SEV 1066
- Dimensions according to Austrian standard ÖNORM E-6020, DIN 43.620
- NH-fuse-links of operating class gG/gL are used for line protection. They reliably disconnect overcurrent and short-circuit current above the permitted levels up to the nominal breaking current.
- gG/gL NH-fuse-links also protect electrical systems and equipment against the electrodynamic effects of high short-circuit currents.
- Insulating bodies of steatite/corderite
- Full contact blade of silver-plated copper
- Double blow-out indicator (flat indicator and centre indicator), live grips
- Corrosion-proof
- NH-fuse-links have a selectivity of 1:1.6 (ratio of the series-connected nominal currents), permitting optimum utilization and protection of line cross-sections.
- Strict current limitation permits reduced mechanical dimensions of electrical systems
- High breaking capacity of 120 kA

Connection diagram

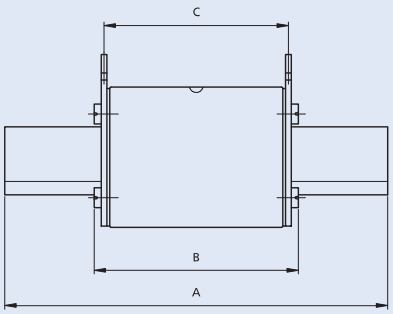


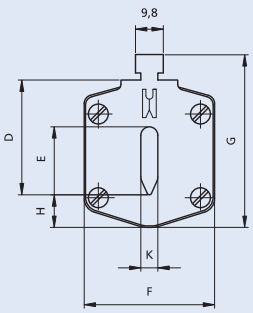
Technical Data

	Z-NH-00/	Z-NH-1/	Z-NH-2/	Z-NH-3/
Electrical				
Nominal voltage				
AC	500 V AC	500 V AC	500 V AC	500 V AC
DC	230 V DC	440 V DC	440 V DC	440 V DC
Nominal current	25-160 A	50-250 A	100-400 A	250-630 A
Rated frequency	45-62 Hz	45-62 Hz	45-62 Hz	45-62 Hz
Nominal breaking capacity				
AC	120 kA	120 kA	120 kA	120 kA
DC	25 kA	25 kA	25 kA	25 kA
Max. Power loss				
I_n = 10 A	1.1 W	-	-	-
16 A	1.6 W	-	-	-
20 A	1.7 W	-	-	-
25 A	1.9 W	-	-	-
35 A	3.0 W	-	-	-
40 A	3.5 W	-	-	-
50 A	4.6 W	5.4 W	-	-
63 A	5.4 W	6.3 W	-	-
80 A	5.1 W	7.2 W	-	-
100 A	6.9 W	8.6 W	8.8 W	-
125 A	10.3 W	11.9 W	12.1 W	-
160 A	11.0 W	13.9 W	14.0 W	-
200 A	-	15.2 W	15.2 W	-
250 A	-	21.8 W	21.8 W	19.4 W
315 A	-	-	23.7 W	23.7 W
400 A	-	-	30.5 W	30.5 W
500 A	-	-	-	42.0 W
630 A	-	-	-	47.0 W

Dimensions (mm)

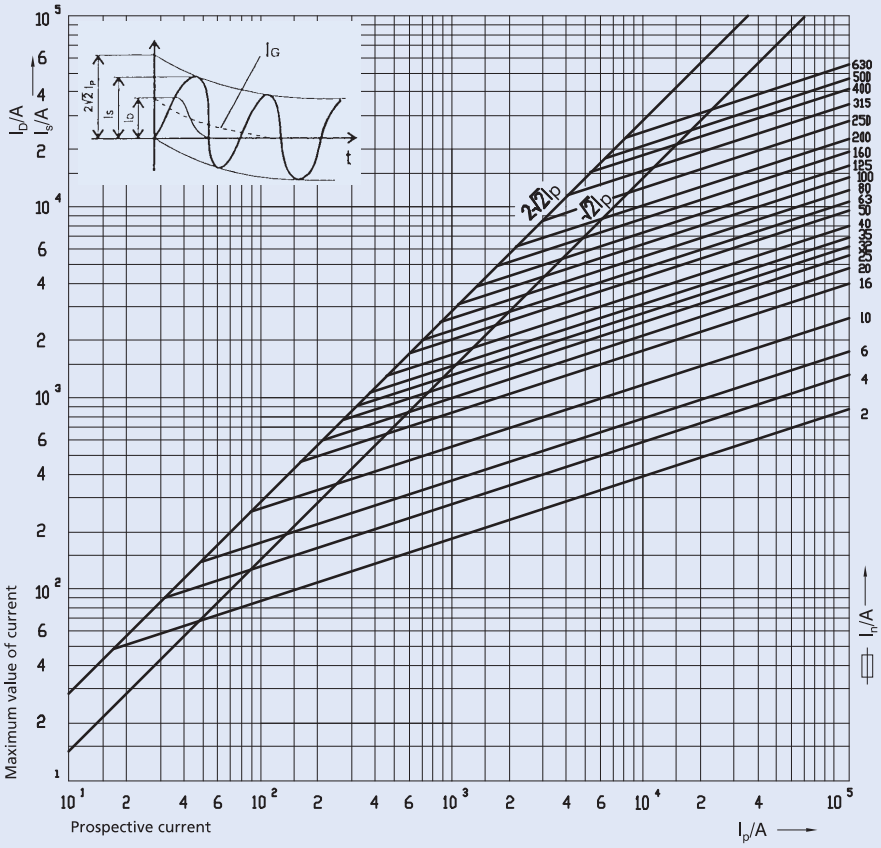
Type		Size	A	B	C	D	E	F	G	H	K
Z-NH-00/	up to 100 A	000	79	53	47	35	15	21	52	7.5	6
	125 - 160 A	00	79	53	47	35	15	28	56	12	6
Z-NH-1/	up to 160 A	1C	135	68	65	40	15	28	61	12	6
	200 - 250 A	1	135	72	65	40	20	46	65	14	6
Z-NH-2/	up to 250 A	2C	150	72	65	48	20	46	73	14	6
	315 - 400 A	2	150	72	65	48	26	54	73	14	6
Z-NH-3/	up to 400 A	3C	150	72	65	60	26	54	84	14	6
	500 - 630 A	3	150	72	65	60	33	65	84	14	6



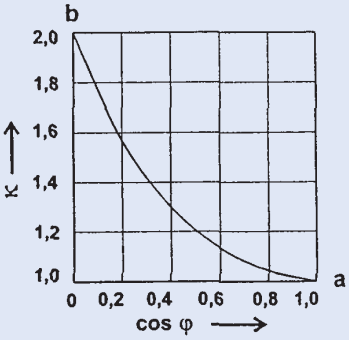


Let-through Current Characteristic, Current Limitation Diagram

The characteristic shows the limited let-through current values (peak values) depending on the prospective short-circuit current (r. m. s.) under unfavourable connection conditions and depending on the respective nominal current.



Correction Factor for DC Component



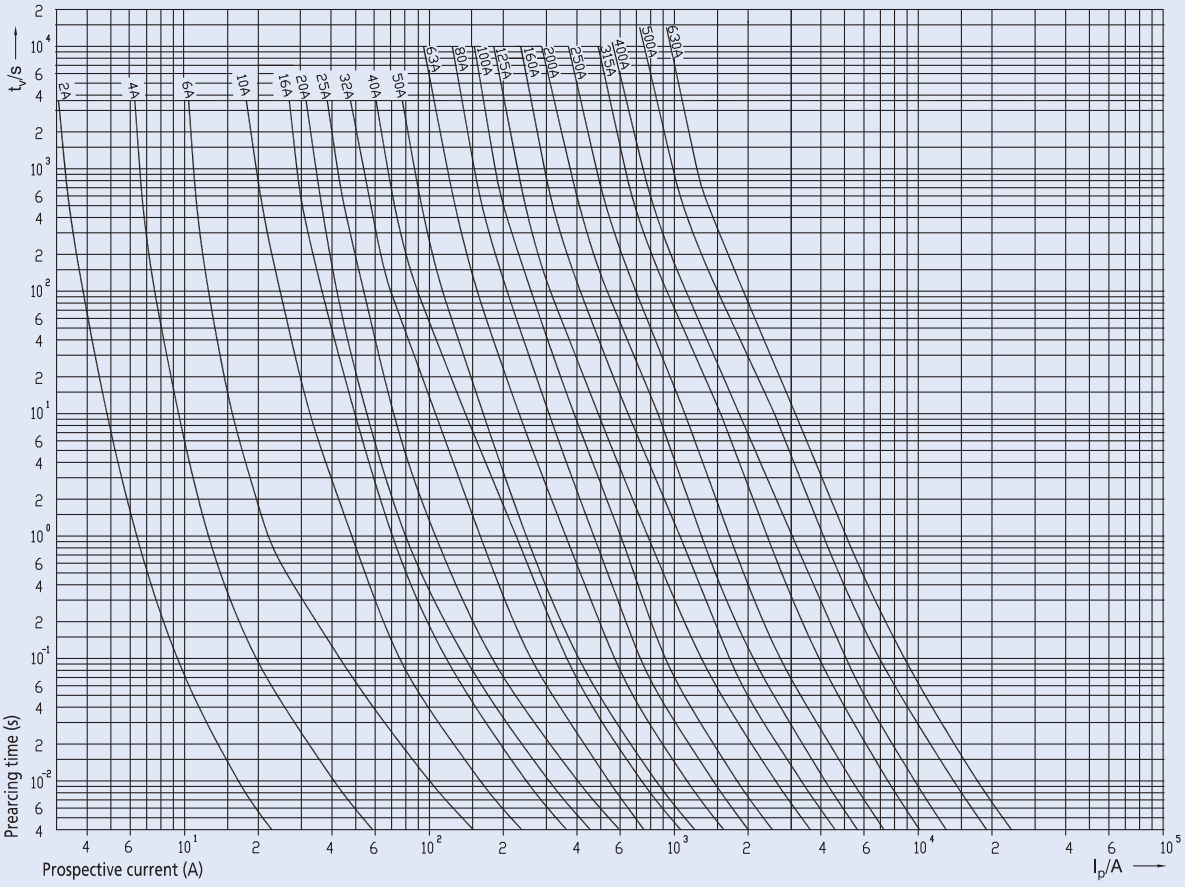
a Surge short-circuit current without DC component (κ = 1)
b Surge short-circuit current with maximum DC component (κ = 2)

I_D let-through current
I_G declining DC component
I_p prospective short-circuit current
I_s surge short-circuit current = $Ip \cdot \kappa \cdot \sqrt{2}$
κ κ=2 for cosφ=0, κ=1 for cosφ=1

Time-Current Characteristics

For NH-fuse-links 2 - 630 A operating class gL/gG

The time-current characteristics are valid at an ambient temperature of 20±5°C C and for the cable (line) cross-sections assigned in the regulations for test arrangements.



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