

Vertical fuse disconnects



Vertical fuse disconnects

Vertical fuse disconnects are designed to receive NH fuse links. Hinged fuse-carriers enable opening and closing operation in electric circuits under load conditions. Thereby, the fuse-link or solid link forms the moving contact. Both, single pole and three-pole switching is possible.

Vertical fuse disconnects are used in Transformer stations and cable distribution cabinets of public utilities as well as low voltage switchgear and controlgear assemblies acc. to IEC/EN 61439-1. Their closed design and high breaking capacity make them extremely reliable and powerful fuse-combination units.



Product definition

Vertical fuse disconnects are three-pole fuse-switches for busbar mounting. They combine three single-pole fuse-switches longitudinally arranged in one unit. Each of the feeder terminals is directly connected to one phase of a three-phase busbar system. The outgoing terminals are equipped with terminals for cable conductors.

Applications

Vertical fuse disconnects conform to the requirements of public utilities and industrial companies for power distribution boards in ring main units, transformer substations, cable distribution cabinets as well as main distribution boards. Vertical fuse disconnects having built-in current transformers are essential devices for efficient energy management. With built-in fuse monitoring function they ensure short reaction time even in decentralized power distribution systems.

Product advantages

JEAN MÜLLER vertical fuse disconnects are available in sizes 00 to 3 for both single pole and three-pole switching operation. Product versions with built-in current transformers, feeder units up to 2000A rated current, and a wide range of specially designed products enable efficient and reliable power distribution.

Insulation parts

All insulating parts are made of high mechanical strength polymers are resistant to breaking, self extinguishing and halogen-free. The fuse-base insulator for 185mm busbar systems, which supports the current carrying parts, is made of high stability glass fibre reinforced thermosetting polyester, according to power utility specifications.

Current carrying parts

Silver-plated receiving contacts for DIN fuse-links ensure low power loss, optimum temperature behaviour and high breaking capacity. The tin-plated down leads are available with different types of terminals.

Thanks to the contact covers that provide safety from touch by the back of the hand, the products can be mounted on live busbar systems, provided the local safety rules allow for. The upper parts of vertical fuse disconnects including the fuse carriers can be easily mounted and fixed by means of turn-lock fasteners.

Product versions/Accessories

The products prepared for current transformers can be equipped with specifically designed current transformers inserted in the base insulator. Current transformers are available for primary currents ranging from 50A to 1000A.



SL00-3X3/100/F/HA



SL00-3X3/185/F



SL1G-3X3/3A
SL2G-3X3/3A
SL3-3X3/3A



SL3-3X3/1000HA



SL3-3X6/1250/HA



SL00-3X/100/F/HA



SL00-3X/185/F



SL1G-3X/3A
SL2G-3X/3A
SL3-3X/3A



SL3-3X/1000HA



SL3-3X/910/HA



SL3-3X2/1250/HA

Terminal covers (sold separately) are required for all disconnects (refer to page 35)

Vertical fuse disconnects 3 pole switching in one action

Size	For Fuses	Current Rating (A)	Switch width (mm)	Busbar Centre Spacing (mm)	Part No.
00	DIN 000 & DIN00	160A	50 mm	100 mm	SL00-3X3/100/F/HA
00	DIN 000 & DIN00	160A	50 mm	185 mm	SL00-3X3/185/F
1	DIN 1	250A	100 mm	185 mm	SL1G-3X3/3A
2	DIN 1 & 2	400A	100 mm	185 mm	SL2G-3X3/3A
3	DIN 1, 2 & 3	630A	100 mm	185 mm	SL3-3X3/3A
3	DIN3	910A	100mm	185mm	SL3-3X3/910/HA
	Solid Links	1000A (solid links only)	100 mm	185 mm	SL3-3X3/1000/HA
	DIN 2 & DIN 3 (2)	1250A	200 mm	185 mm	SL3-3X6/1250/HA
3	DIN3	1600A	200mm	185mm	SL3-3X6/2000/HA

Vertical fuse disconnects 3 pole individual pole switching

Size	For Fuses	Current Rating (A)	Switch width (mm)	Busbar Centre Spacing (mm)	Part No.
00	DIN 000 & DIN00	160A	50mm	100mm	SL00-3X/100/F/HA
00	DIN 000 & DIN00	160A	50 mm	185 mm	SL00-3X/185/F
1	DIN 1	250A	100 mm	185 mm	SL1G-3X/3A
2	DIN 1 & 2	400A	100 mm	185 mm	SL2G-3X/3A
3	DIN 1, 2 & 3	630A	100 mm	185 mm	SL3-3X/3A
3	DIN3	910A	100mm	185mm	SL3-3X/910/HA
	Solid Links	1000A (solid links only)	100 mm	185 mm	SL3-3X/1000/HA
	DIN 2 & DIN 3 (2x)	1250A	200mm	185 mm	SL3-3X2/1250/HA
	DIN 2 & DIN 3 (2x)	1600A	200mm	185 mm	SL3-3X2/2000/HA

Vertical fuse buscouplers 3 pole switching in one action

Size	For Fuses	Current Rating (A)	Switch width (mm)	Busbar Centre Spacing (mm)	Part No.
3	Solid Links	1000A (solid links only)	100 mm	185 mm	SLT3-3SL/3X3 /1000

SL00 - refer to technical pages 36 & 37

SL1 & SL2 - refer to technical page 38

SL3 - refer to technical pages 40, 41 & 42

Accessories - refer to pages 34 & 35



REAR VIEW
With CTS Fitted



SL1G-3X3/W/3A
SL2G-3X3/W/3A
SL3-3X3/W/3A



SL3-3X3/1000/W/HA



SL1G-3X/W/3A
SL2G-3X/W/3A
SL3-3X/W/3A



SL3-3X/1000/W/HA

Terminal covers (sold separately) are required for all disconnects (refer to page 35)

Vertical fuse disconnects with CT mount facility - 3 pole switching in one action

Size	For Fuses	Current Rating (A)	Switch width (mm)	Busbar Centre Spacing (mm)	Part No.
2	DIN2	400	100	185	SL2-3X3/W/3A
3	DIN2 & DIN3	630	100	185	SL3-3X3/W/3A
	Solid Links	1000A (Solid links only)	100	185	SL3-3X3/1000/W/HA

Vertical fuse disconnects with CT mount facility - 3 pole individual pole switching

Size	For Fuses	Current Rating (A)	Switch width (mm)	Busbar Centre Spacing (mm)	Part No.
2	DIN2	400	100	185	SL2-3X/W/3A
3	DIN2 & DIN3	630	100	185	SL3-3X/W/3A
	Solid Links	1000A (Solid links only)	100	185	SL3-3X/1000/W/HA

Current transformers for above class 1

				Ratio	Part No.
				250:5	WKD51/1/250-5
				400:5	WKD51/1/400-5
				600:5	WKD51/1/600-5
				1000:5	WKD52/1/1000-5

POWER UTILITIES RANGE

Vertical fuse disconnects with 3 pole switching in one action

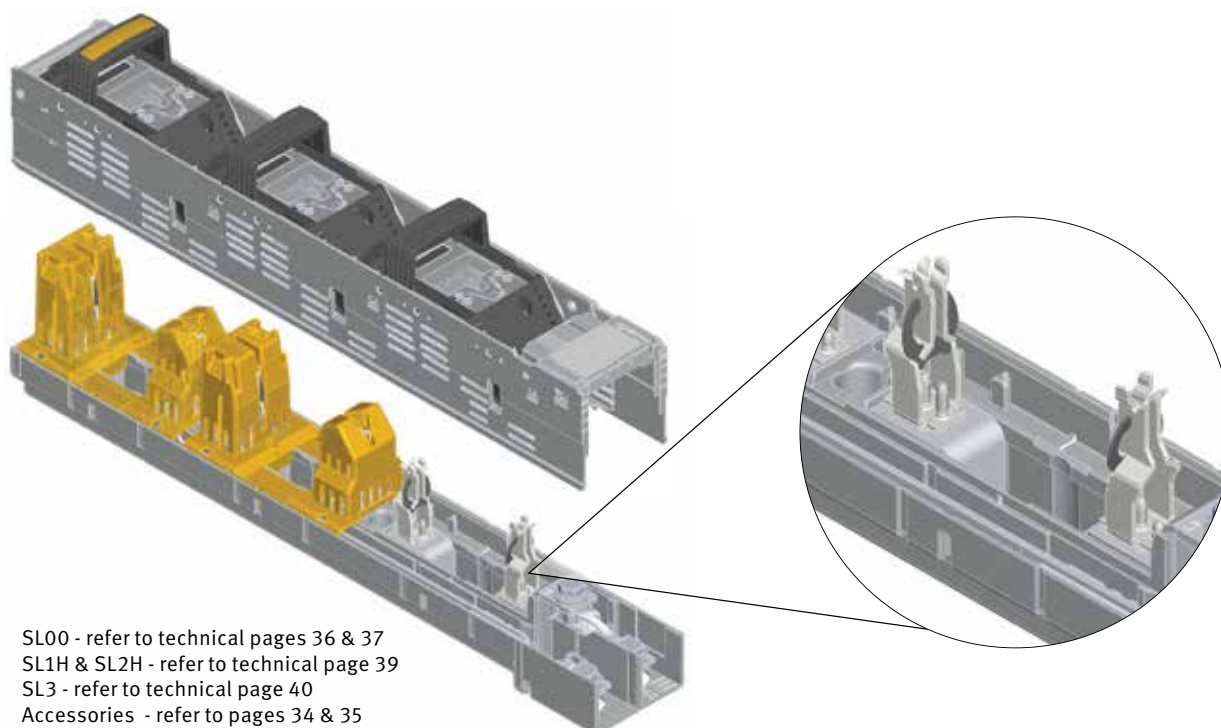
Size	For Fuses	Current Rating (A)	Terminals	Switch width (mm)	Connection Capacity (mm ²)	Part No.
00	DIN000 & 00	160	M8 Bolt	50	max. 95	PU-SL00-3X3/185/F
1	DIN1	250	M10 Bolt	100	max. 150	PU-SL1H-3X3/3A
2	DIN1 & 2	400	M12 Bolt	100	max. 240	PU-SL2H-3X3/3A
3	DIN1, 2 & 3	630	M12 Bolt	100	max. 300	PU-SL3-3X3/3A

Vertical fuse disconnects with 3 pole individual switching action

Size	For Fuses	Current Rating (A)	Terminals	Switch width (mm)	Connection Capacity (mm ²)	Part No.
00	DIN000 & 00	160	M8 Bolt	50	max. 95	PU-SL00-3X/185/F
1	DIN1	250	M10 Bolt	100	max. 150	PU-SL1H-3X/3A
2	DIN1 & 2	400	M12 Bolt	100	max. 240	PU-SL2H-3X/3A
3	DIN1, 2 & 3	630	M12 Bolt	100	max. 300	PU-SL3-3X/3A



PU



SL00 - refer to technical pages 36 & 37
SL1H & SL2H - refer to technical page 39
SL3 - refer to technical page 40
Accessories - refer to pages 34 & 35

Accessories



Description		For Mounting on	Part No.
Prism clamp			
10-70 mm ² Al/Cu		SL00	P0070



Clip terminal			
1,5-70 mm ² Cu		SL00	S00



Direct terminal clamp KM2G..			
50-300 mm ² Al/Cu		SL1-3	KM2G/AF3040



Direct terminal clamp			
70-240 mm ² Al/Cu		SL1-3	K2G/A



Direct terminal clamp			
2 conductors 50-120 mm ² Al/Cu		SL1-3	K2HG/2/AF30

Direct terminal clamp			
2 conductors 120-185 mm ² Al/Cu		SL1-3	KV2HG/2/WF30



Cover for clamp			
For V-type box clamp type KM2G			HRV
For clamp type K2G/A, K2HG/ and KV2HG			HR-K2

Accessories



Description		For Mounting on	Part No.
Terminal cover			
	For SL00-185 + PU-SL00	SL00/185	HA-SL00/185
	For SL123 + PU-SL123	SL1-3	HA-SL123/10
	For SL3-3X/1000 Extended depth+ PU-SL3x	SL3	HA220-SL123/10
	Double width terminal cover	SL3	HA220-SL3x2/10



Terminal extension kit			
	Terminal for 2x300mm ² + PU (3 Pieces)	SL1-3	VS-SL3/1000
	Terminal kit for ganged disconnect 3 x 300mm +PU	SL1-3	VS-SL3x2
	For connection of 4 x 240mm ² Ganged disconnect	SL3	VS-SL3/4x240mm ²
	For connection of 1 x 400mm ²	SL3	VS-SL3/400QMM



Handle connecting kit			
	For ganged disconnect (1x handle Joiner)	SL3	VBS-SL3X6(2)
	Isolator label	SL1,2+3	Isolator-lab
	Joining Kit (3x handles connection link)		VBS-SL3 Kit
	Joining Kit to make SL3-3X2/1250	SL3	VS-SL3/1250VBS/HA



Fuse cover with symbol "Do not switch"			
	Size 00		SZ00-R
	Size 1-3		SZ123-R



Cover holder			
	Set of 4 blocks	SL00-3	AH-SL



Switch Posi Indicator			
	For Vert 3x3 only	SL1,2+3	EV-SL123/3x3/10

TECHNICAL INFORMATION

NH strip-type fuse-switch-disconnectors – Technical data

Type			SL00/100		SL00/185			
Electrical characteristics	According to standard			DIN EN 60947-3				
	For NH fuse-links acc. to DIN VDE 0636-2		Size		000/00		000/00	
	Rated operational voltage		U _e	V	AC690		AC690	
	Rated operational current ¹⁾		I _e	A	160		160	
	Conv. free air thermal current with fuse-links		I _{th}	A	160		160	
	Conv. free air thermal current with solid-links		I _{th}	A	210		210	
	Rated frequency		f	Hz	50-60		50-60	
	Rated insulation voltage		U _i	V	AC800		AC800	
	Total power loss at I _{th} (without fuse-links)		P _v	W	18		23	
	Power loss at 80% I _{th} (without fuse-links) ²⁾		P _v	W	11.5		14.7	
	Rated impulse withstand voltage		U _{imp}	kV	8		8	
	Utilization category		-	-	AC-22B (160A/400V) AC-22B (160A/500V) AC-22B (100A/690V) DC21B (160A/250V)		AC-23B (160A/400V) AC-23B (160A/500V) AC-22B (160A/690V)	
	Rated conditional short-circuit current ³⁾		I _{cc}	kA	80		100kA (690V) 120kA (500V)	
	Max. permis. power loss per fuse-link		P _a	W	12		12	
Cable terminal	Flat terminal	Bolt diameter	-	-	M8		M8	
		Cable lug	-	mm ²	1 x 10-95 (max. 25mm width)		1 x 10-95 (max. 25mm width)	
		Flat bar	-	mm	20 x10		20 x10	
		Tightening torque	M _a	Nm	12-15		12-15	
	Clamp	Clamping cross-section	-	mm ²	S00	○ : 1.5-70 Cu/ □ : 6 x 9 x 0.8	S00	○ : 1.5-70 Cu/ □ : 6 x 9 x 0.8
		Tightening torque	-	Nm		2.6		
		Clamping cross-section	-	mm ²	P00-70	10-70 Al/Cu	P00-70	10-70 Al/Cu
		Tightening torque	-	Nm		2.6		

Annotation: ○ = Round conductor □ = Strip conductor

Type					SL00/100		SL00/185	
Cable terminal	Clamp	Clamping cross-section	-	mm ²	KU00	10-95 Al/Cu ⁵⁾	KU00	10-95 Al/Cu ⁵⁾
		Tightening torque	-	Nm		10		15
		Clamping cross-section	-	mm ²	F70	○ : 1.5-70 Cu/ □ : 6 x 9 x 0.8Cu	KRO	16-95 re/rm 35-150 se/sm
		Tightening torque	-	Nm		2.6		20Nm
		Clamping cross-section	-	mm ²	KM00	16-95 Al/Cu	KM00	16-95 Al/Cu
		Tightening torque	-	Nm		10		10
Degree of protection	Front side, device fitted with clamp and lateral covers	Operating condition	-	-	IP30		IP30	
		Switching element open	-	-	IP10		IP10	
Operating conditions	Ambient temperature ⁴⁾		T _{amb}	°C	-25 to +70			
	Rated operating mode		-	-	Uninterrupted duty			
	Actuation		-	-	Dependent manual operation			
	Mounting position		-	-	Vertical, horizontal			
	Altitude		-	m	Up to 2000			
	Pollution degree		-	-	3			
	Overvoltage category		-	-	III		IV	

- 1) In case of mounting of several units in low voltage switchgear-combinations, please consider rated diversity factors acc. to DIN EN 61439.
- 2) Reference value for replacement of devices acc. to DIN EN 61439-1 clause 10.10.4.2.
- 3) Type tested with NH fuse-links characteristic gG.
- 4) 35°C Normal temperature, above 35°C up to 70°C with reduces operating current.
- 5) No verification of non-deterioration acc. to IEC 60269-2 for Al-conductors.

NH strip-type fuse-switch-disconnectors – Technical data

Type					SL1		SL2			
Electrical characteristics	According to standard				DIN EN 60947-3					
	For NH fuse-links acc. to DIN VDE 0636-2			Size		1		2		
	Rated operational voltage			U _e	V	AC690		AC690		
	Rated operational current ¹⁾			I _e	A	250		400		
	Conv. free air thermal current with fuse-links			I _{th}	A	250		400		
	Conv. free air thermal current with solid-links			I _{th}	A	400		630		
	Rated frequency			-	Hz	50-60		50-60		
	Rated insulation voltage			U _i	V	AC1000		AC1000		
	Total power loss at I _{th} (without fuse-links)			P _v	W	23		54		
	Power loss at 80% I _{th} (without fuse-links) ²⁾			P _v	W	14.7		34.6		
	Rated impulse withstand voltage			U _{imp}	kV	12		12		
	Utilization category			-	-	AC-23B (250A/400V) AC-22B (250A/500V) AC-21B (250A/690V) Nur / Only 3x3: DC21B (250A/440V)		AC-23B (400A/400V) AC-22B (400A/500V) AC-21B (400A/690V) Nur / Only 3x3: DC21B (400A/440V)		
	Rated conditional short-circuit current ³⁾			I _{cc}	kA	120				
	Max. permis. power loss per fuse-link			P _a	W	32		45		
Cable terminal	Flat terminal	Bolt diameter	-	-	M10		M12			
		Cable lug	-	mm ²	1 x 25-185		1 x 25-300			
		Flat bar	-	mm	30 x10		30 x10			
		Tightening torque	M _a	Nm	30-35		35-40			
	Clamp	Clamping cross-section	-	mm ²	KM2G-F	25-240	KM2G-F	25-240		
			-	mm ²	RM300	25-300	RM300	25-300		
		Tightening torque	-	-	-	32	-	32		
			-	Nm	RM300: 25-70	12	RM300: 25-70	12		
Degree of protection	Front side, device fitted with clamp and lateral covers	Operating condition	-	-	IP30		IP30			
		Switching element open	-	-	IP10		IP10			
Operating conditions	Ambient temperature ⁴⁾			T _{amb}	°C	-25 to +70				
	Rated operating mode			-	-	Uninterrupted duty				
	Actuation			-	-	Dependent manual operation				
	Mounting position			-	-	Vertical, horizontal				
	Altitude			-	m	Up to 2000				
	Pollution degree			-	-	3				
	Overvoltage category			-	-	IV				

1) In case of mounting of several units in low voltage switchgear-combinations, please consider rated diversity factors acc. to DIN EN 61439.

2) Reference value for replacement of devices acc. to DIN EN 61439-1 clause 10.10.4.2.

3) Type tested with NH fuse-links characteristic gG.

4) 35°C Normal temperature, above 35°C up to 70°C with reduces operating current.

Type		SL1H			SL2H				
Electrical characteristics	According to standard				DIN EN 60947-3				
	For NH fuse-links acc. to DIN VDE 0636-2		Size		1		2		
	Rated operational voltage		U _e	V	AC690		AC690		
	Rated operational current ¹⁾		I _e	A	250		400		
	Conv. free air thermal current with fuse-links		I _{th}	A	250		400		
	Conv. free air thermal current with solid-links		I _{th}	A	400		400		
	Rated frequency		-	Hz	50-60		50-60		
	Rated insulation voltage		U _i	V	AC1000		AC1000		
	Total power loss at I _{th} (without fuse-links)		P _v	W	29		73		
	Power loss at 80% I _{th} (without fuse-links) ²⁾		P _v	W	18.6		46.7		
	Rated impulse withstand voltage		U _{imp}	kV	12		12		
	Utilization category		-	-	AC-23B (250A/400V) AC-22B (250A/500V) AC-21B (250A/690V)		AC-23B (400A/400V) AC-22B (400A/500V) AC-21B (400A/690V)		
	Rated conditional short-circuit current ³⁾		I _{cc}	kA	80				
	Max. permis. power loss per fuse-link		P _a	W	23		34		
Cable terminal	Flat terminal	Bolt diameter	-	-	M10		M12		
		Cable lug	-	mm ²	1 x 25-185		1 x 25-300		
		Flat bar	-	mm	30 x10		30 x10		
		Tightening torque	M _a	Nm	30-35		35-40		
	Clamp	Clamping cross-section	-	mm ²	KM2G-F	25-240	KM2G-F	25-240	
				mm ²	RM300	25-300	RM300	25-300	
		Tightening torque	-	Nm	-	32	-	32	
RM300: 25-70	12				RM300: 25-70	12			
Degree of protection	Front side, device fitted with clamp and lateral covers	Operating condition	-	-	IP30		IP30		
		Switching element open	-	-	IP10		IP10		
Operating conditions	Ambient temperature ⁴⁾		T _{amb}	°C	-25 to +70				
	Rated operating mode		-	-	Uninterrupted duty				
	Actuation		-	-	Dependent manual operation				
	Mounting position		-	-	Vertical, horizontal				
	Altitude		-	m	Up to 2000				
	Pollution degree		-	-	3				
	Overvoltage category		-	-	IV				

1) In case of mounting of several units in low voltage switchgear-combinations, please consider rated diversity factors acc. to DIN EN 61439.

2) Reference value for replacement of devices acc. to DIN EN 61439-1 clause 10.10.4.2.

3) Type tested with NH fuse-links characteristic gG.

4) 35°C Normal temperature, above 35°C up to 70°C with reduces operating current.

NH strip-type fuse-switch-disconnectors – Technical data

Type					SL3		SL3/910A		
Electrical characteristics	According to standard				DIN EN 60947-3				
	For NH fuse-links acc. to DIN VDE 0636-2		Size		3		3		
	Rated operational voltage		U _e	V	AC690		AC400		
	Rated operational current ¹⁾		I _e	A	630		910		
	Conv. free air thermal current with fuse-links		I _{th}	A	630		910		
	Conv. free air thermal current with solid-links		I _{th}	A	800		1250		
	Rated frequency		-	Hz	50-60		50-60		
	Rated insulation voltage		U _i	V	AC1000		AC690		
	Total power loss at I _{th} (without fuse-links)		P _v	W	115		155		
	Power loss at 80% I _{th} (without fuse-links) ²⁾		P _v	W	73.6		99.2		
	Rated impulse withstand voltage		U _{imp}	kV	12		8		
	Utilization category		-	-	AC-23B (630A/400V) AC-22B (630A/500V) AC-21B (630A/690V) Nur / Only 3x3: DC21B (500A/440V)		AC-22B (1250A/400V) AC-22B (910A/400V)		
	Rated conditional short-circuit current		I _{cc}	kA	120 ³⁾		80		
	Rated short-time withstand current		I _{cw}	kA	10/15kA/1s ⁴⁾		10/15kA/1s ⁴⁾		
	Max. permis. power loss per fuse-link		P _a	W	48		61		
Cable terminal	Flat terminal	Bolt diameter	-	-	M12		2 x M12		
		Cable lug	-	mm ²	1 x 25-300	Width max. 43mm	2 x 300, 3 x 185		
		Flat bar	-	mm	30 x10		80 x10		
		Tightening torque	M _a	Nm	35-40		35-40		
	Clamp	Clamping cross-section	-	mm ²	KM2G	25-150/ 185-300	-	-	
			-	mm ²	KM2G-F	25-240	-	-	
			-	mm ²	RM300	25-300	-	-	
		Tightening torque	-		-	32	-	32	
				Nm	RM300: 25-70	12	RM300: 25-70	12	
Degree of protection	Front side, device fitted with clamp and lateral covers	Operating condition	-	-	IP30		IP30		
		Switching element open	-	-	IP10		IP10		
Operating conditions	Ambient temperature ⁵⁾		T _{amb}	°C	-25 to +70				
	Rated operating mode		-	-	Uninterrupted duty				
	Rated operating mode		-	-	Dependent manual operation				
	Mounting position		-	-	Vertical, horizontal				
	Altitude		-	m	Up to 2000				
	Pollution degree		-	-	3				
	Overvoltage category		-	-	IV				

1) In case of mounting of several units in low voltage switchgear-combinations, please consider rated diversity factors acc. to DIN EN 61439.

2) Reference value for replacement of devices acc. to DIN EN 61439-1 clause 10.10.4.2.

3) Type tested at AC420V with NH fuse-links 630A/500V characteristic gG, at AC725V with NH fuse-links 500A/690V characteristic gG.

4) 1-pole/3-pole switchable.

5) 35°C Normal temperature, above 35°C up to 70°C with reduces operating current.

Type			SL3/1000-TM		SL3/1250	
Electrical characteristics	According to standard			DIN EN 60947-3		
	For NH fuse-links acc. to DIN VDE 0636-2		Size		3	3
	Rated operational voltage		U _e	V	AC690	AC690
	Rated operational current ¹⁾		I _e	A	1000	1250
	Conv. free air thermal current with fuse-links		I _{th}	A	630	1250
	Conv. free air thermal current with solid-links		I _{th}	A	1000	1600
	Rated frequency		-	Hz	50-60	50-60
	Rated insulation voltage		U _i	V	AC1000	AC1000
	Total power loss at I _{th} (without fuse-links)		P _v	W	275	215
	Power loss at 80% I _{th} (without fuse-links) ²⁾		P _v	W	176	138
	Rated impulse withstand voltage		U _{imp}	kV	12	12
	Utilization category		-	-	AC-22B (1000A/400V) AC-22B (800A/500V) AC-21B (630A/690V)	AC-22B (1250A/400V) AC-22B (1250A/500V) AC-21B (1250A/690V)
	Rated conditional short-circuit current		I _{cc}	kA	120 ³⁾	80
	Rated short-time withstand current		I _{cw}	kA	10/15/25/1s ⁴⁾	20/25/46/1s ⁴⁾
	Max. permis. power loss per fuse-link		P _a	W	51	48
Cable terminal	Flat terminal	Bolt diameter	-	-	2 x M12	3 x M12
		Cable lug	-	mm ²	2 x 300, 3 x 120	3 x 300, 4 x 185
		Flat bar	-	mm	80 x10	-
		Tightening torque	M _a	Nm	35-40	35-40
Degree of protection	Front side, device fitted with clamp and lateral covers	Operating condition	-	-	IP30	IP30
		Switching element open	-	-	IP10	IP10
Operating conditions	Ambient temperature ⁵⁾		T _{amb}	°C	-25 to +70	
	Rated operating mode		-	-	Uninterrupted duty	
	Rated operating mode		-	-	Dependent manual operation	
	Mounting position		-	-	Vertical, horizontal	
	Altitude		-	m	Up to 2000	
	Pollution degree		-	-	3	
	Overvoltage category		-	-	IV	

1) In case of mounting of several units in low voltage switchgear-combinations, please consider rated diversity factors acc. to DIN EN 61439.

2) Reference value for replacement of devices acc. to DIN EN 61439-1 clause 10.10.4.2.

3) Type tested at AC420V with NH fuse-links 630A/500V characteristic gG, at AC725V with NH fuse-links 500A/690V characteristic gG.

4) 1-pole/3-pole switchable/with additional interlock.

5) 35°C Normal temperature, above 35°C up to 70°C with reduces operating current.

NH strip-type fuse-switch-disconnectors – Technical data

Type		SL3/1600-TM			SL3/2000-TM	
Electrical characteristics	According to standard				DIN EN 60947-3	
	For NH fuse-links acc. to DIN VDE 0636-2		Size		3	3
	Rated operational voltage		U _e	V	AC690	AC400
	Rated operational current ¹⁾		I _e	A	1600	2000
	Conv. free air thermal current with fuse-links		I _{th}	A	1250	gG 1600/gTr 1444
	Conv. free air thermal current with solid-links		I _{th}	A	1600	2000
	Rated frequency		-	Hz	50-60	50-60
	Rated insulation voltage		U _i	V	AC1000	AC690
	Total power loss at I _{th} (without fuse-links)		P _v	W	350	375
	Power loss at 80% I _{th} (without fuse-links) ²⁾		P _v	W	224	240
	Rated impulse withstand voltage		U _{imp}	kV	12	8
	Utilization category		-	-	AC-22B (1600A/400V) AC-22B (1600A/500V) AC-21B (1250A/690V)	AC-22B (2000A/400V)
	Rated conditional short-circuit current ³⁾		I _{cc}	kA	80	50
	Rated short-time withstand current		I _{cw}	kA	20/25/46/1s ⁴⁾	20/25/46/1s ⁴⁾
	Max. permis. power loss per fuse-link		P _a	W	48	51
Cable terminal	Flat terminal	Bolt diameter	-	-	3 x M12	4 x M12
		Cable lug	-	mm ²	3 x 300, 4 x 185	4 x 300
		Flat bar	-	mm	-	-
		Tightening torque	M _a	Nm	35-40	35-40
Degree of protection	Front side, device fitted with clamp and lateral covers	Operating condition	-	-	IP30	IP30
		Switching element open	-	-	IP10	IP10
Operating conditions	Ambient temperature ⁵⁾		T _{amb}	°C	-25 to +70	
	Rated operating mode		-	-	Uninterrupted duty	
	Rated operating mode		-	-	Dependent manual operation	
	Mounting position		-	-	Vertical, horizontal	
	Altitude		-	m	Up to 2000	
	Pollution degree		-	-	3	
	Overvoltage category		-	-	IV	

1) In case of mounting of several units in low voltage switchgear-combinations, please consider rated diversity factors acc. to EN 61439-1.

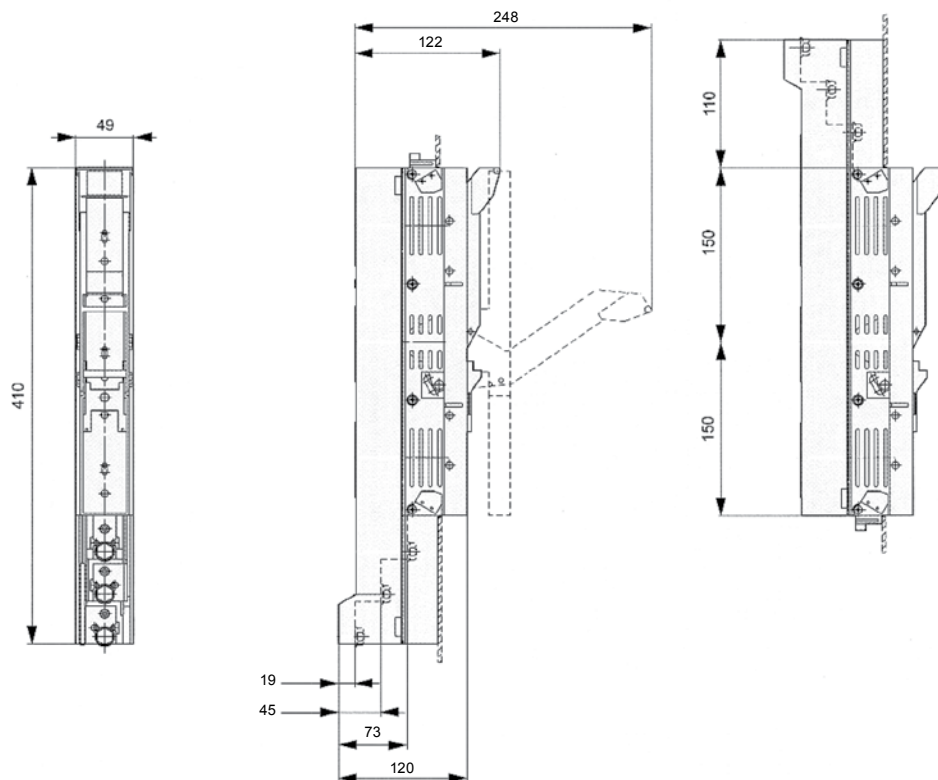
2) Reference value for replacement of devices acc. to DIN EN 61439-1 clause 10.10.4.2.

3) Type tested with NH fuse-links characteristic gG.

4) 1-pole/3-pole switchable/with additional interlock.

5) 35°C Normal temperature, above 35°C up to 70°C with reduces operating current.

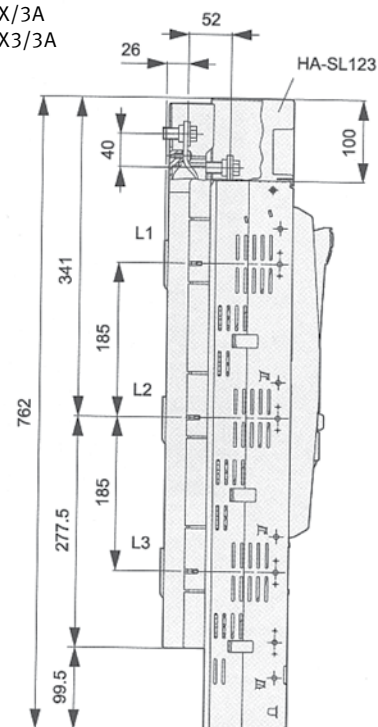
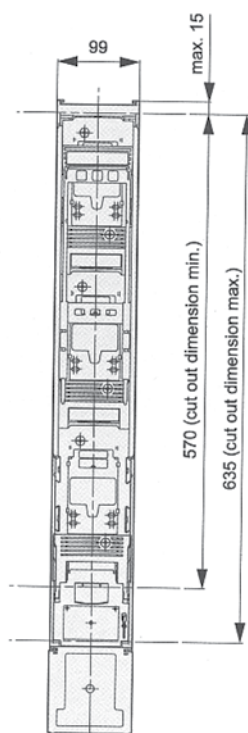
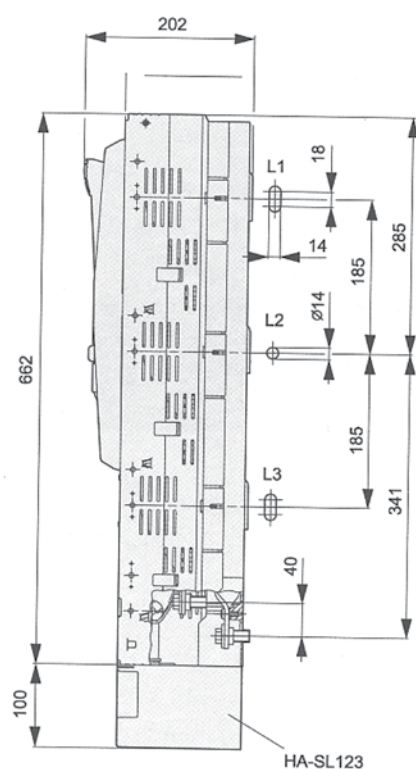
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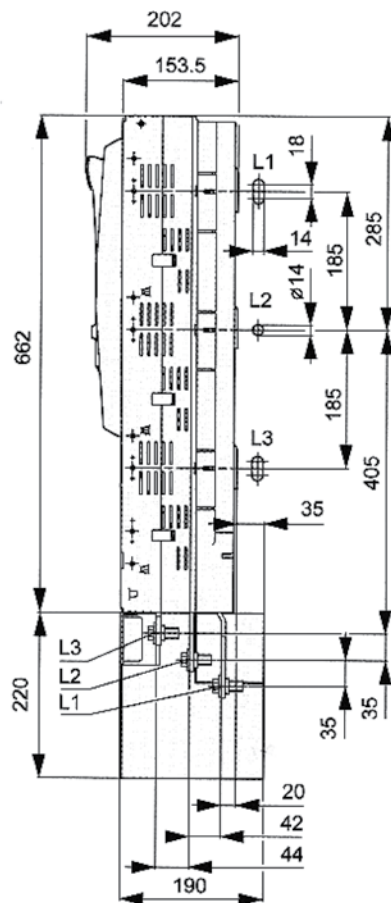
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SL2G-3X3/3A
SL2G-3X/3A
SL2G-3X3/3A
SL3-3X/3A
SL3-3X3/3A

SL1G-3X/W/3A
SL2G-3X3/W/3A
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SL3-3X/W/3A
SL3-3X3/W/3A

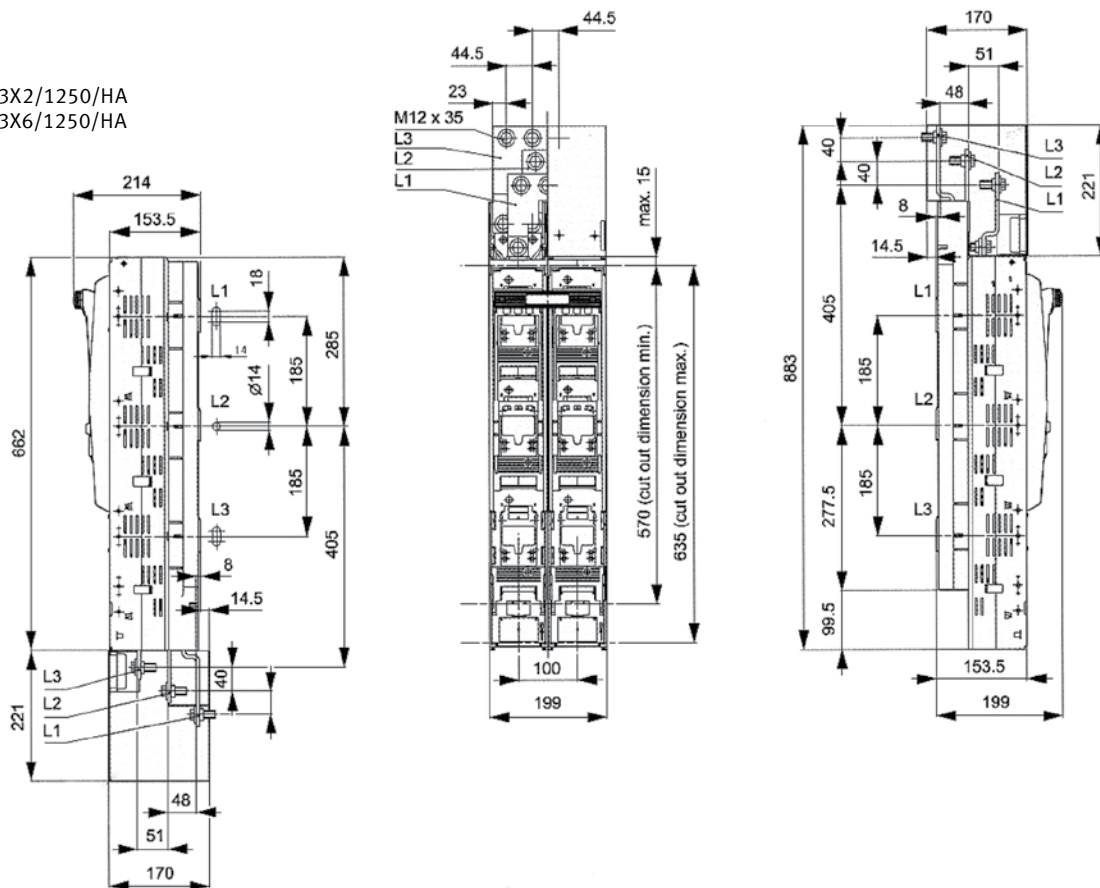
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PU-SL3H-3X/3A
PU-SL3H-3X3/3A



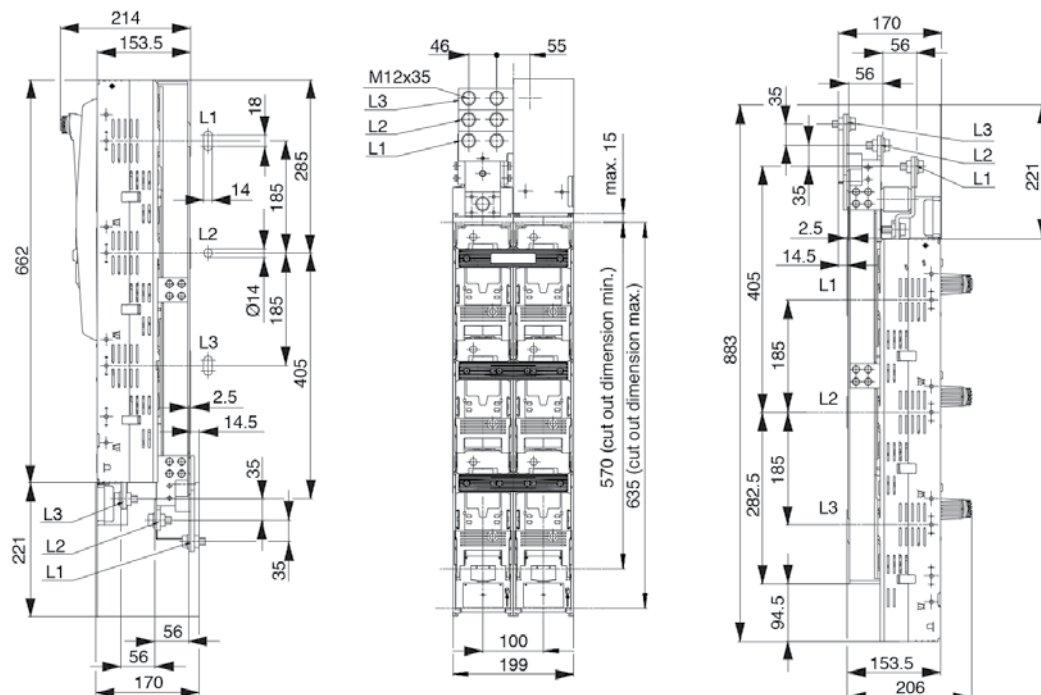
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SL3-3X3/1000/W/HA



SL3-3X2/1250/HA
SL3-3X6/1250/HA

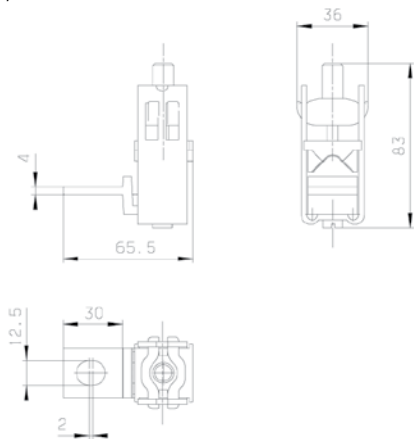


SL3-3X2/2000/HA
SL3-3X6/2000/HA

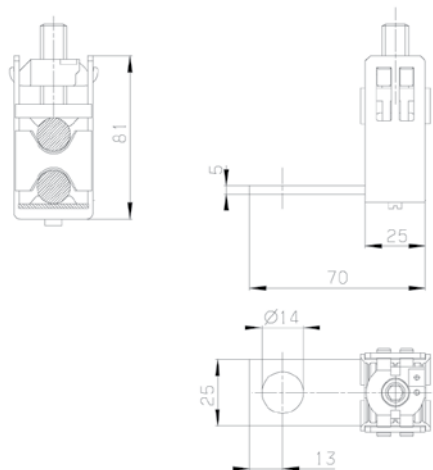


Vertical disconnect accessories

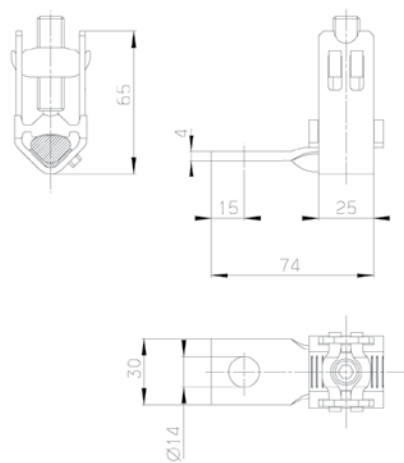
Terminals with connecting lugs K2G/A



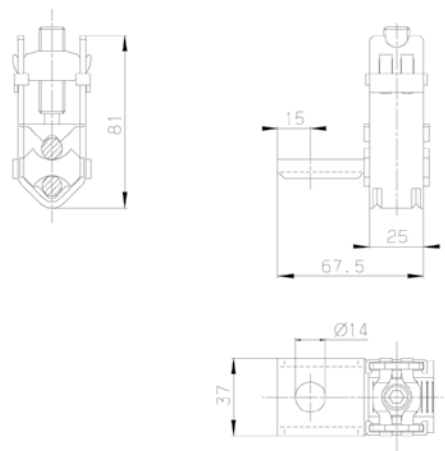
K2HG/2/AF30



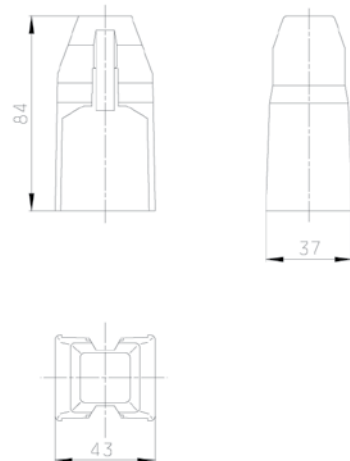
KM2G/AF3040



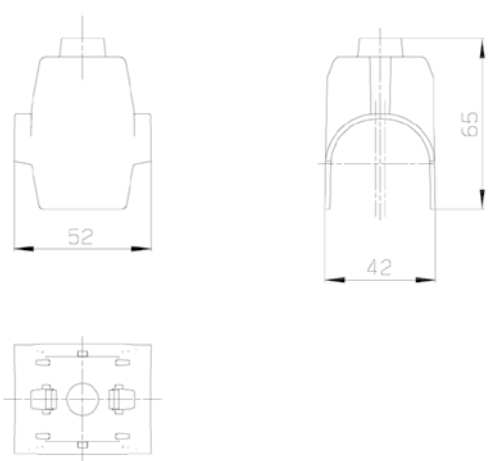
KV2HG/2/AF30



Covers for terminals with connecting lugs HR

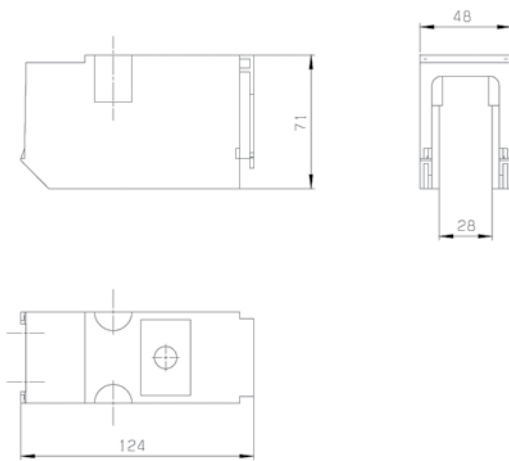


HRV

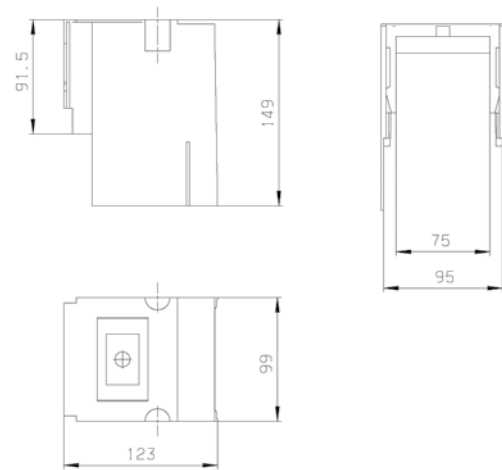


Terminal covers

HA-SL00/185



HA-SL123/10



HA220-SL123/10

