SUMMARY OF MODELS

Type	**FH000**	**FH00**	**FH1**	**FH2**	**FH3**	**LTL4a**
Rated operating current I_e	160 A	160 A	250 A	400 A	630 A	1 600 A
Rated operating voltage AC/DC U_e	690 V	690 V	690 V	690 V	690 V	690 V
Size	000	00	1	2	3	4a
Fuse-link size	000	000/00	1	2	3	4a
Utilization category at AC 400 V	AC-23B	AC-23B	AC-23B	AC-23B	AC-23B	AC-22B

Accessories						
Remote signallings of cover position	OD-FH-SK					EMV-LTL4a
Connecting sets	CS-FH000-... , N3x10-FH000	CS-FH00-...	CS-FH12-..., CS-FH123-...	CS-FH12-..., CS-FH2-..., CS -FH123-...	CS-FH3-..., CS-FH123-...	-
Interconnecting busbars	CS-FH000-3L.	CS-FH000-3L.	-	-	-	-
Adapters for busbar systems with spacing 60mm	OD-FH000-AL60	OD-FH00-AL60	OD-FH1-AL60	OD-FH2-AL60	OD-FH3-AL60	-
Assembly kits for 2-pole, 4-pole	OD-FH000-SS24	OD-FH00-SS24	OD-FH123-SS24			-
Connecting space covers	OD-FH000-KPA	OD-FH00-KP.	OD-FH1-KP.	OD-FH2-KP.	OD-FH3-KP.	-
Barriers	OD-FH000-Z.	OD-FH00-Z3	OD-FH1-Z3	OD-FH2-Z3	OD-FH3-Z3	-
Locking inserts	OD-FH000-VU	-	OD-FH123-VU			-
Front shields	OD-FH000-KR	OD-FH00-KR	OD-FH1-KR	OD-FH2-KR	OD-FH3-KR	-

SUMMARY OF MODELS

Description

Connecting sets

- **Accessory for disconnector FH000**
- For connection of CU/AL conductor of cross-section up to 95 mm^2.

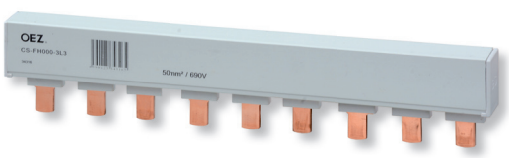
- For connection of 3 Cu conductors/pole of cross-section 10 mm^2.

- **Accessory for switch-disconnector FH00**
- For connection of Cu/Al conductor of cross-section up to 95 mm^2.

- **Accessory for switch-disconnector FH1, FH2 and FH3**
- For connection of Cu/Al conductor of cross--section up to 150 mm^2 for FH1 and FH2, up to 300 mm^2 for FH3.

Interconnecting busbar

- Accessory for switch-disconnector FH000 and FH00.
- For connection from 2 up to 5 pcs. 3-pole switch--disconnectors.



Barrier against accident contact

- To increase the safety of personnel in handling switch--disconnector.

Connecting space covers

- For additional covering of connecting space.

Remote signalling of fuse-link state

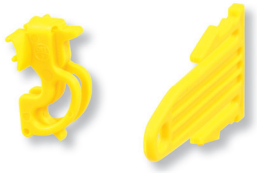
- Enables remote signalling of fuse-link in fuse switch--disconnector.

Front shield

- Additional covering of free space around the fuse switch--disconnector.

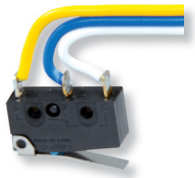
Locking insert

- For locking the switch-disconnector cover.



Remote signalling of cover position

- Indicates closed state.
- Cable length 1 m.

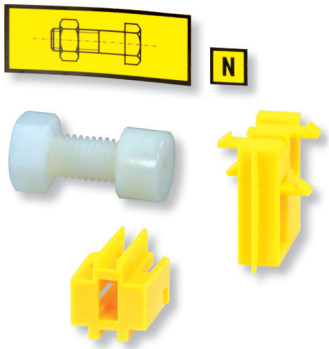


Adapter for busbar system with spacing 60 mm

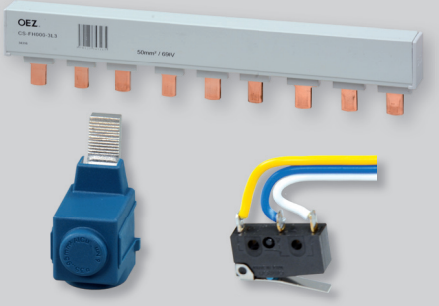
- Busbar spacing 60 mm.
- Busbar thickness 5 ÷ 12 mm.
- Busbar width 12 ÷ 32 mm.
- Cable outlet bottom or top.

Assembly kit

- For assembling 2-pole or 4-pole.



FUSE SWITCH-DISCONNECTORS FH000



- Fuse switch-disconnectors are intended for fuse-links with blade contacts size 000.
- Enable safe disconnection not only of rated current, but also overcurrent up to octuple rated current.
- Variability of connecting sets.
- Measuring holes in the cover.
- It is possible to lock the switch-disconnector cover.
- It is equipped with a label for description of the protected circuit.
- Mounted on „U" rail of type TH35 according to EN 60715 or on the panel by means of screws.
- Adapter for busbar system with spacing 60 mm, busbar thickness 5 ÷ 12 mm, busbar width 12 ÷ 32 mm for 3-pole.
- Terminals can be completed with terminal extensions for connection of conductors of cross-section up to 95 mm^2.
- More switch-disconnectors side-by-side or flat can be installed without limitation of electrical parameters.
- Connection Bottom connection is possible without limitation of electric parameters (the device should be marked „ATTENTION, BOTTOM CONNECTION").

Fuse switch-disconnectors

I_n [A]	Number of poles	Type	Order code	Weight [kg]	Package [pcs]
160	1	**FH000-1A/T**	OEZ:11899	0.280	1
	3	**FH000-3A/T**	OEZ:12362	0.620	1

Fuse switch-disconnectors with remote signalling

- Includes a connector with a 1 m cable

I_n [A]	Number of poles	Type	Order code	Weight [kg]	Package [pcs]
160	1	**FH000-1S/T**	OEZ:14000	0.320	1
	3	**FH000-3S/T**	OEZ:11901	0.722	1
	3	**FH000-3SB/T** *	OEZ:13695	0.658	1

* Connector without cable

Fuse switch-disconnectors with light indication

- By means of LED in each pole separately.
- The LED is flashing in case of fuse-link blowing.

I_n [A]	Number of poles	Type	Order code	Weight [kg]	Package [pcs]
160	3	**FH000-3L/T**	OEZ:20766	0.990	1

Accessories

Interconnecting busbars	**CS-FH000-3L.**	page C8
Connecting sets	**CS-FH000-..**	page C8
Adapters for busbar systems	**OD-FH000-AL60**	page C10
Assembly kit	**OD-FH000-SS24**	page C10
Locking insert	**OD-FH000-VU**	page C10
Remote signalling of cover position	**OD-FH-SK**	page C10
Connecting space cover	**OD-FH000-KPA**	page C10
Front shield	**OD-FH000-KR**	page C10
Barriers	**OD-FH000-Z.**	page C10
Spare parts	**ND-FH000-..**	page C11

FUSE SWITCH-DISCONNECTORS FH000

Specifications

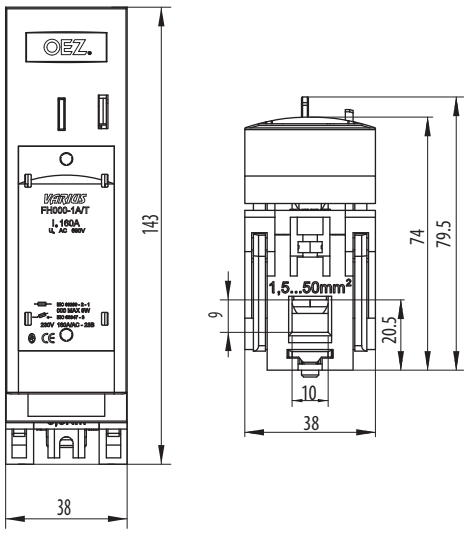
Type				FH000
Standards				IEC 60947-1 IEC 60947-3 EN 60947-1 EN 60947-3
Approval marks				
Rated operating current		I_e		160 A
Rated operating voltage		U_e		AC/DC 690 V (AC/DC 400 V / FH000-3L/.)
Utilization category [1]	FH000-1./.		AC 230 V	AC-23B
			DC 250 V	DC-22B
	FH000-3./.		AC 400 V	AC-23B
			AC 500 V	AC-22B
			AC 690 V	AC-21B / 100 A
		two-pole connection	DC 250 V	DC-22B
Rated thermal current with fuse-link		I_{th}		160 A
Rated thermal current with disconnecting link ZP000		I_{th}		240 A
Rated frequency		f_n		40 ÷ 60 Hz
Rated insulation voltage		U_i		AC 800 V
Rated conditional short-circuit current (RMS)		I_{cc}	AC 400 V / 160 A	120 kA
			AC 500 V / 100 A	120 kA
			AC 500 V / 160 A	50 kA
			AC 690 V / 100 A	80 kA
Rated impulse withstand voltage		U_{imp}		8 kV
Rated short-time withstand current		I_{cw}	1 s	3 kA
Fuse-link size				000
Max. power losses of the fuse-link		P_v		9 W
Power losses at I_n without fuse		P_z		7 W
Overvoltage category for AC 690 V				III
Connection				
Connection cross-section				Cu / 1.5 ÷ 50 mm^2
Torque				3 ÷ 3.5 Nm
Remote signalling				
Max. voltage/current		U_{max}/I_{max}		AC 250 V / 5 A
				DC 250 V / 0,2 A
Light indication				
Rated voltage		U_n		AC 24 ÷ 400 V
				DC 24 ÷ 450 V
Fuse-link is blown				red LED is blinking
Operating conditions				
Electrical endurance		operating cycles		300 at 100 A
				200 at 160 A
Mechanical endurance		operating cycles		2 000
Degree of protection from front side, built-in device, cover closed (without measuring holes broken off)				IP30
Degree of protection from front side, built-in device, cover opened or removed				IP20
Operating ambient temperature				-25 ÷ +55 °C
Working position				see page I3
Max. sea level				2 000 m
Pollution degree				3
Seismic resistance according to VE ŠKODA				0.25 ÷ 50 Hz / 3 g

[1] In case of use disconnecting links ZP000 in the switch-disconnector, the utilization category is decreased by one degree.

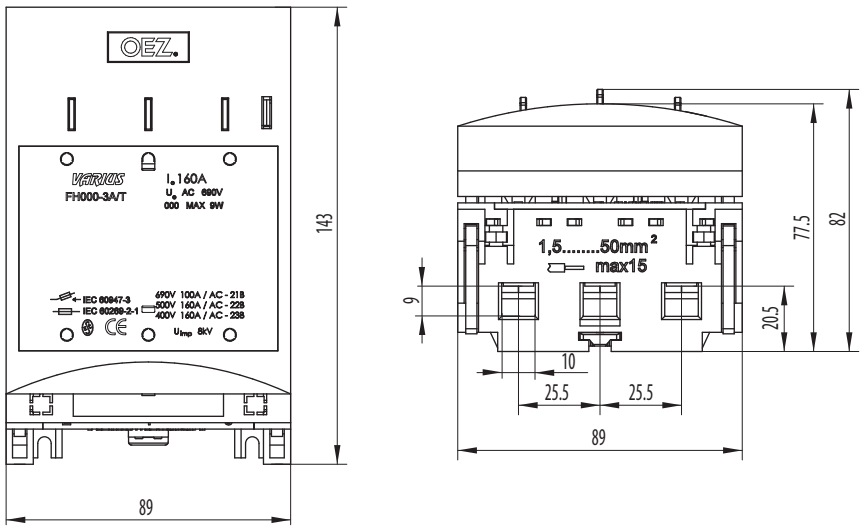
FUSE SWITCH-DISCONNECTORS FH000

Dimensions

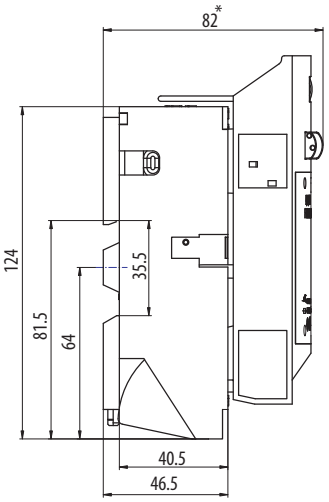
FH000-1A/T



FH000-3A/T and FH000-3L/T

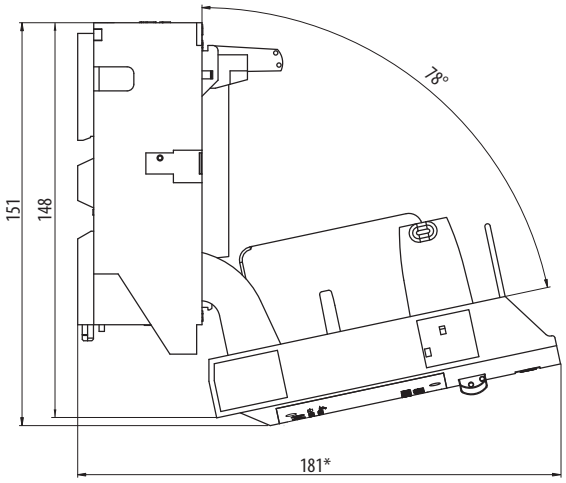


FH000-1A/T, FH000-3A/T and FH000-3L/T



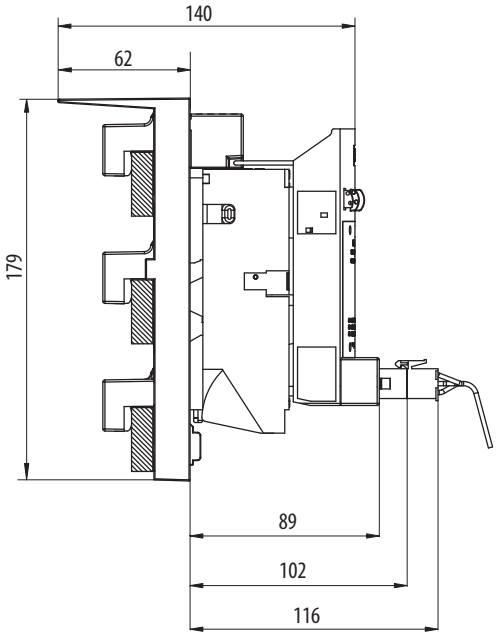
* pro FH000-1A/T=80

FH000-3A/T, FH000-1A/T and FH000-3L/T

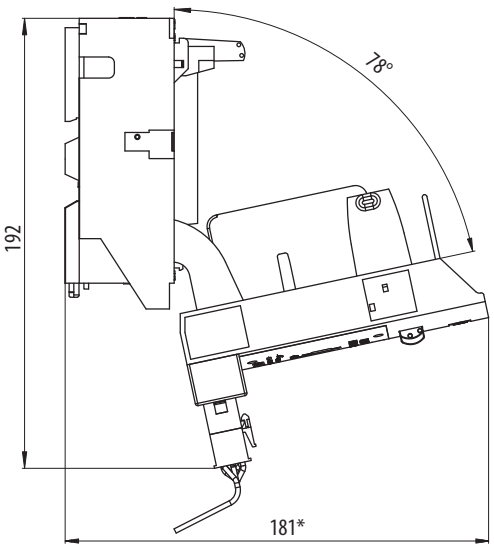


* pro FH000-1A/T = 180

FH000-3... + OD-FH000-AL60



FH000-3S/T and FH000-1S/T



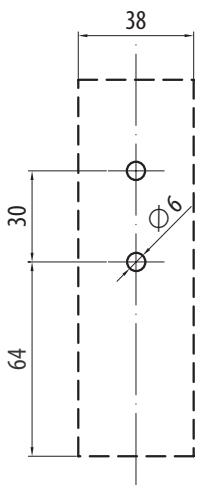
* pro FH000-1S/T=180

FUSE SWITCH-DISCONNECTORS FH000

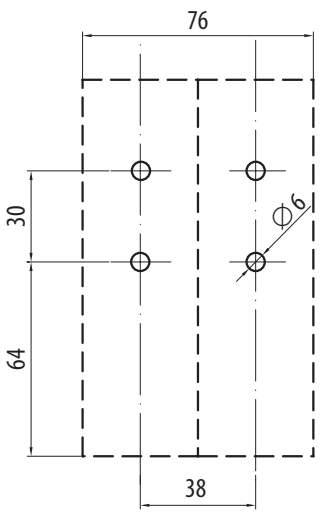
Dimensions

Clearance and drilling diagrams

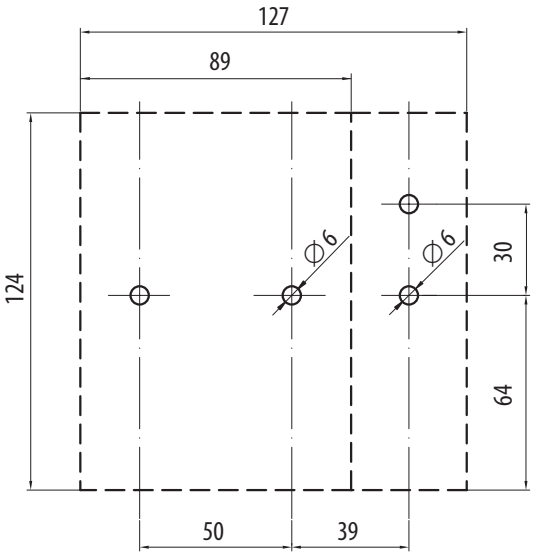
1-pole



2-pole



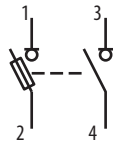
3-pole, 4-pole



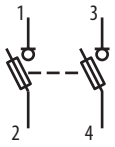
Diagram

FH000-1..

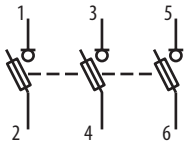
2x FH000-1..



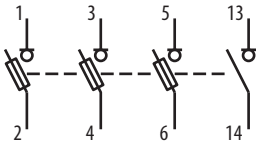
2x FH000-1..



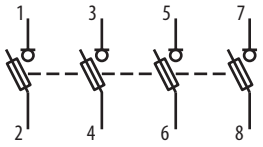
FH000-3..



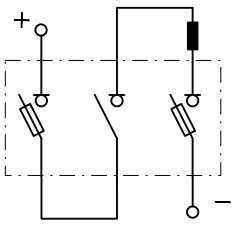
FH000-1.. + FH000-3..



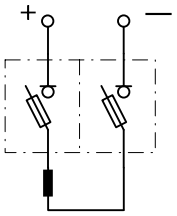
FH000-1.. + FH000-3..



2-pole connection of 3-pole fuse switch-disconnector for DC application, see Utilization category

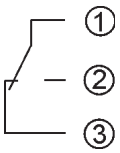


1-pole connection of two 1-pole fuse switch-disconnectors for DC applications, see Utilization category



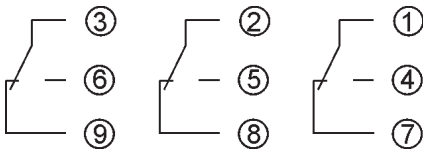
Remote signalling of fuse state in 1-pole fuse switch-disconnector

State of contacts with not blown fuse:
contacts 1 – 3 closed



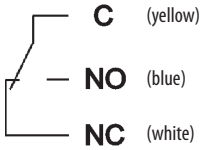
Remote signalling of fuse state in 3-pole fuse switch-disconnector

State of contacts with not blown fuse:
contacts 1 – 7, 2 – 8, 3 - 9 closed

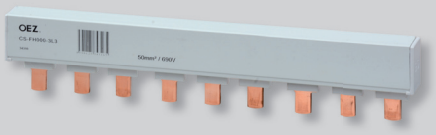


Remote signalling of cover position of 1-pole and 3-pole switch-disconnectors

State of contacts with open cover:
contacts C – NC closed



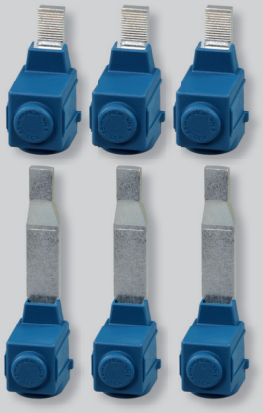
ACCESSORIES FOR FH000



Interconnecting busbars

- For connection from 2 up to 5 pcs. 3-pole switch-disconnectors.
- Cross-section of busbar 50 mm^2.
- Spacing of outlets 25 mm.
- The busbar is made covered.
- It can be combined with the adapter with kick-up or long terminal.

Number of poles	Number of outlets	Type	Order code	Weight [kg]	Package [pcs]
2	2x3	**CS-FH000-3L2**	OEZ:34315	0.56	5
3	3x3	**CS-FH000-3L3**	OEZ:34316	0.98	5
4	4x3	**CS-FH000-3L4**	OEZ:34317	1.39	5
5	5x3	**CS-FH000-3L5**	OEZ:34318	1.81	5



Terminal extensions up to 95 mm^2

- For connection of Cu/Al conductor of cross-section 35 ÷ 95 mm^2.
- Possibility of connection of two stranded conductors up to 25 mm^2.

Type	Order code	Description	Weight [kg]	Package [pcs]
CS-FH000-1NP95	OEZ:13378	with straight terminal	0.070	1
CS-FH000-3NP95	OEZ:13740	with straight terminal package contains set of 3 pcs	0.176	1
CS-FH000-3NV95	OEZ:13742	with kick-up terminal package contains set of 3 pcs	0.184	1
CS-FH000-3ND95	OEZ:15589	with long terminal package contains set of 3 pcs	0.184	1

Terminal extension 3x 10 mm^2

- For connection of 3 Cu conductors/pole of cross-section 10 mm^2.

Type	Order code	Description	Weight [kg]	Package [pcs]
N3x10-FH000	OEZ:14127	package contains set of 3 pcs	0.035	1

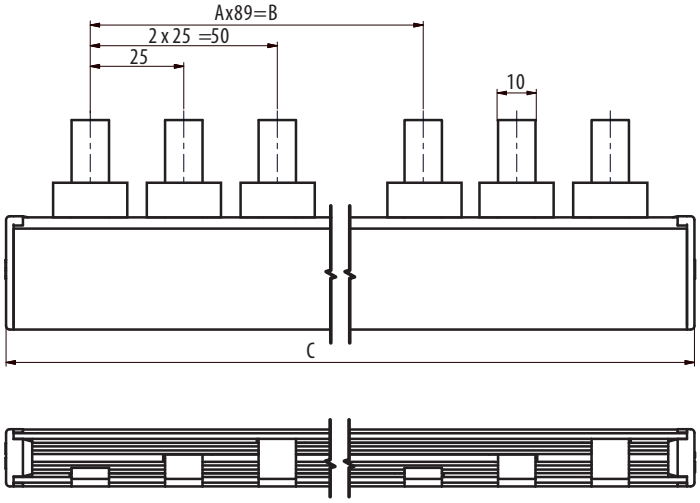
ACCESSORIES FOR FH000

Specifications

Type		CS-FH000-3L.
Rated operating voltage	U_e	AC/DC 690 V
Loading current		160 A
Max. busbar current 160 A		CS-FH000-3L4, CS-FH000-3L5
Max. busbar current 250 A		CS-FH000-3L2, CS-FH000-3L3
Cross-section of busbar		50 mm^2
Power supply by a conductor in terminal extension with long terminal, connection cross-section max. Cu/Al		95 mm^2
Recommended value of max current can not be exceeded in no place of interconnecting busbar		

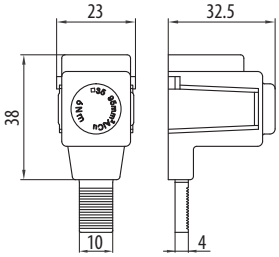
Dimensions

CS-FH000-3L.

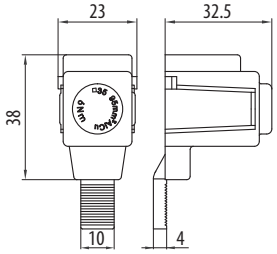


Type	Dimensions		
	A [number]	B [mm]	C [mm]
CS-FH000-3L2	1	89	180
CS-FH000-3L3	2	178	270
CS-FH000-3L4	3	267	360
CS-FH000-3L5	4	356	450

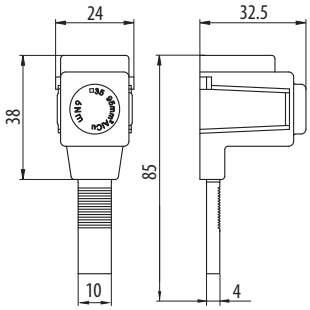
CS-FH000-...NP95



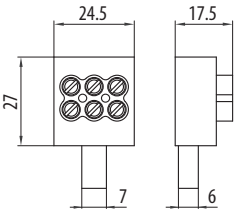
CS-FH000-3NV95



CS-FH000-3ND95

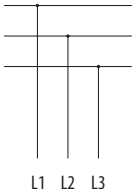


N3x10-FH000



Diagram

CS-FH000-3L.

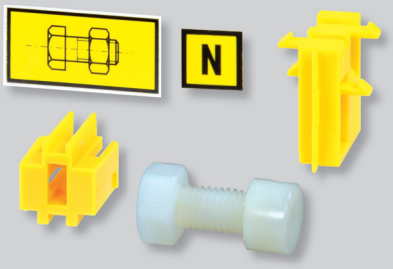


ACCESSORIES FOR FH000

Adapter for busbar system

- Busbar spacing 60 mm.
- Busbar thickness 5 ÷ 12 mm.
- Busbar width 12 ÷ 32 mm.
- Mounting width 89 mm.
- Cable outlet bottom or top.

Type	Order code	Weight [kg]	Package [pcs]
OD-FH000-AL60	OEZ:18643	0.525	1



Assembly kit

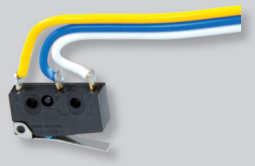
- For assembling 2-pole or 4-pole.
- 2-pole unit is assembled by means of two FH000-1...
- 4-pole unit is assembled by means of one FH000-1... and one FH000-3...FH000-3...

Type	Order code	Weight [kg]	Package [pcs]
OD-FH000-SS24	OEZ:14136	0.008	1

Locking insert

- For locking the switch-disconnector cover.
- Max. diameter of the padlock suspension loop is 4.5 mm
- The padlock is not included in the delivery.

Type	Order code	Weight [kg]	Package [pcs]
OD-FH000-VU	OEZ:38427	0.006	1

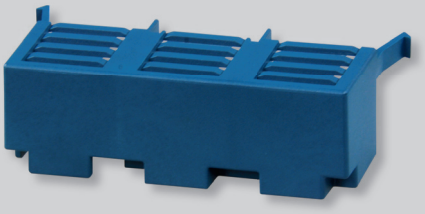


Remote signalling of cover position

- Indicates closed state.
- Cable length 1 m.
- Possibility of mounting up to 2 microswitches per one switch-disconnector.

Type	Order code	Weight [kg]	Package [pcs]
OD-FH-SK	OEZ:12929	0.031	1

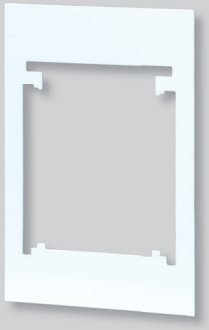
Technical information see page C7



Connecting space cover for adapter

- Identical for both upper and lower space.
- For additional covering of connecting space.

Type	Order code	Weight [kg]	Package [pcs]
OD-FH000-KPA	OEZ:18652	0.038	1



Front shield

- Additional covering of free space around the fuse switch-disconnector.

Type	Order code	Weight [kg]	Package [pcs]
OD-FH000-KR	OEZ:12928	0.018	1

Barriers against accident contact

- Increase the safety of personnel in handling fuse-links.

Type	Order code	Description	Weight [kg]	Package [pcs]
OD-FH000-Z1	OEZ:15185	pro FH000-1..	0.006	1
OD-FH000-Z3	OEZ:15186	pro FH000-3..	0.008	1

ACCESSORIES FOR FH000

Spare parts

Description	Type	Order code	Weight [kg]	Package [pcs]
Cover without signalling of fuse state, 1-pole, size 000	**ND-FH000-V1**	OEZ:33720	0.075	1
Cover without signalling of fuse state, 3-pole, size 000	**ND-FH000-V3**	OEZ:33719	0.182	1
Cover with signalling of fuse state, 1-pole, includes a cable with connector	**ND-FH000-VS1**	OEZ:14135	0.112	1
Cover with signalling of fuse state, 3-pole, includes a cable with connector	**ND-FH000-VS3**	OEZ:14134	0.280	1
Cover with light indication of fuse state, 3-pole	**ND-FH000-VL3**	OEZ:33509	0.320	1
Connector for 1-pole switch-disconnector with remote signalling of fuse state, without cable, with 3 pins	**ND-FH-SZ10**	OEZ:33519	0.028	1
Connector for 1-pole switch-disconnector with remote signalling of fuse state, with 3-core cable	**ND-FH-SZ13**	OEZ:33520	0.045	1
Connector for 3-pole switch-disconnector with remote signalling of fuse state, without cable, with 9 pins	**ND-FH-SZ30**	OEZ:33521	0.038	1
Connector for 3-pole switch-disconnector with remote signalling of fuse state, with 9-core cable	**ND-FH-SZ39**	OEZ:33522	0.055	1