

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 signalings 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 disconnecter FH000**
- For connection of CU/AL conductor of cross-section up to 95 mm².



- For connection of 3 Cu conductors/pole of cross-section 10 mm².



- **Accessory for switch-disconnector FH00**
- For connection of Cu/Al conductor of cross-section up to 95 mm².



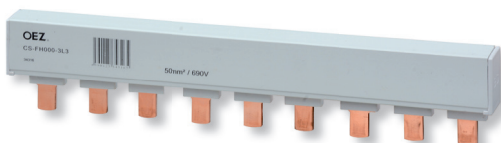
- **Accessory for switch-disconnector FH1, FH2 and FH3**

- For connection of Cu/Al conductor of cross-section up to 150 mm² for FH1 and FH2, up to 300 mm² 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.



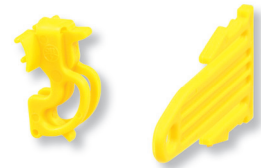
Connecting space covers

- For additional covering of connecting space.



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.

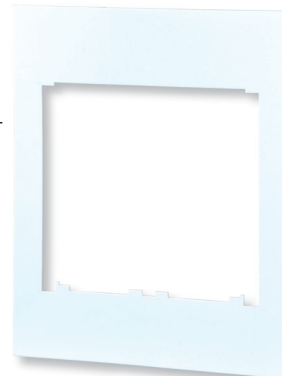


Remote signalling of fuse-link state

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

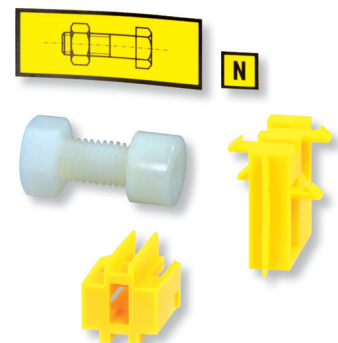
Front shield

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



Assembly kit

- For assembling 2-pole or 4-pole.



FUSE SWITCH-DISCONNECTORS FH1, FH2, FH3



- Fuse switch-disconnectors are intended for fuse-links with blade contacts.
- 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.
- Mounting directly on the panel by means of screws.
- On busbars with spacing 60 mm by means of adapter.
- More switch-disconnectors side-by-side or flat can be installed without limitation of electrical parameters.
- FH1 connection with terminal screws M10/20 Nm for cable lugs max. 34 mm and busbars of width max. 25 mm.
- FH2 connection with terminal screws M10/20 Nm for cable lugs max. 40 mm and busbars of width max. 30 mm.
- FH3 connection with terminal screws M12/28 Nm for cable lugs max. 44 mm and busbars of width max. 40 mm.
- Connecting sets with terminal inbus screws.
- 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]
250	1	FH1-1A/F	OEZ:14362	1.164	1
	3	FH1-3A/F	OEZ:14364	2.786	1
400	1	FH2-1A/F	OEZ:14369	1.280	1
	3	FH2-3A/F	OEZ:14368	2.980	1
630	1	FH3-1A/F	OEZ:14374	1.710	1
	3	FH3-3A/F	OEZ:14373	4.992	1

Fuse switch-disconnectors with remote signalling with cable

- Includes a connector with a 1 m cable.

I_n [A]	Number of poles	Type	Order code	Weight [kg]	Package [pcs]
250	1	FH1-1S/F	OEZ:14363	1.160	1
	3	FH1-3S/F	OEZ:14365	2.800	1
400	1	FH2-1S/F	OEZ:14371	1.292	1
	3	FH2-3S/F	OEZ:14370	2.995	1
630	1	FH3-1S/F	OEZ:14376	1.722	1
	3	FH3-3S/F	OEZ:14375	4.295	1

Fuse switch-disconnectors with remote signalling without cable

- Includes a connector without cable.

I_n [A]	Number of poles	Type	Order code	Weight [kg]	Package [pcs]
250	3	FH1-3SB/F	OEZ:14367	2.750	1
400	3	FH2-3SB/F	OEZ:14372	2.990	1
630	3	FH3-3SB/F	OEZ:14377	5.018	1

Fuse switch-disconnectors with light indication

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

I_n [A]	Number of poles	Type	Order code	Weight [kg]	Package [pcs]
250	3	FH1-3L/F	OEZ:20769	2.700	1
400	3	FH2-3L/F	OEZ:20770	3.332	1
630	3	FH3-3L/F	OEZ:20771	4.455	1

Accessories

Connecting sets	CS-..	page C27
Adapters	OD-...AL60	page C29
Assembly kit	OD-FH123-SS24	page C29
Locking insert	OD-FH123-VU	page C29
Remote signalling of cover position	OD-FH-SK	page C29
Connecting space covers	OD-...KP.	page C29
Front shield	OD-...KR	page C29
Barriers	OD-...Z3	page C29
Spare parts	ND-..	page C30

FUSE SWITCH-DISCONNECTORS FH1, FH2, FH3

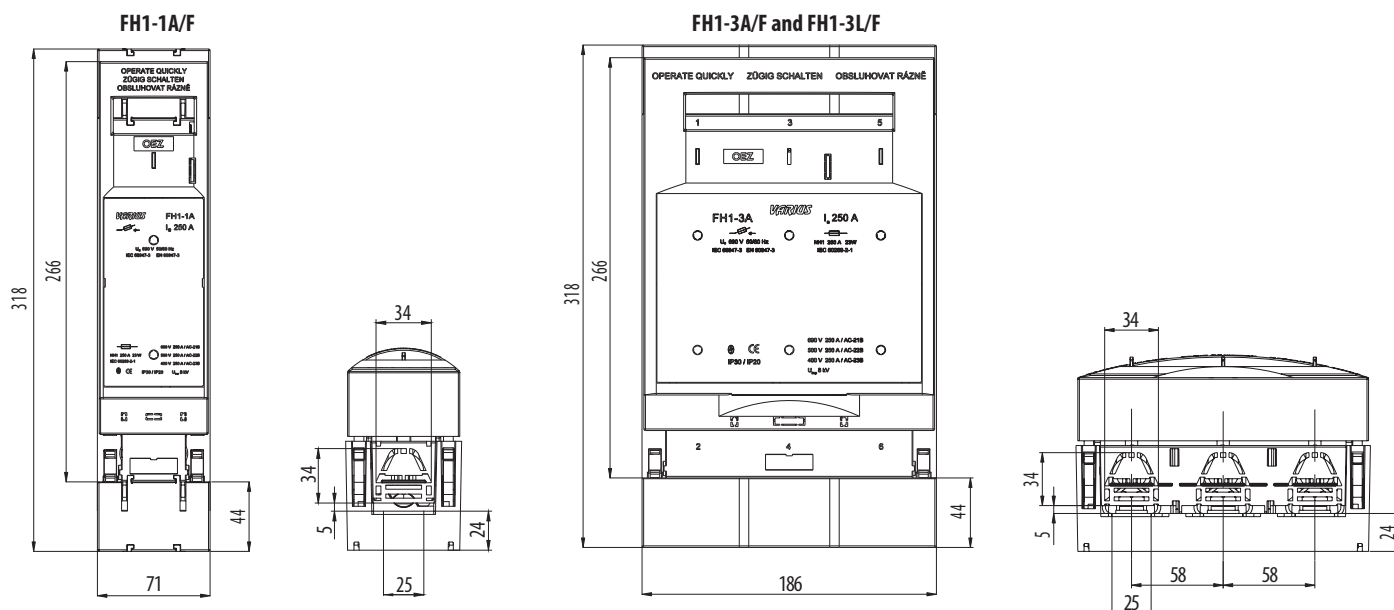
Specifications

Type		FH1	FH2	FH3
Standards		IEC 60947-1 IEC 60947-3 EN 60947-1 EN 60947-3	IEC 60947-1 IEC 60947-3 EN 60947-1 EN 60947-3	IEC 60947-1 IEC 60947-3 EN 60947-1 EN 60947-3
Approval marks		 	 	 
Rated operating current	I_e	250 A	400 A	630 A
Rated operating voltage	U_e	AC/DC 690 V (AC/DC 400 V / FH1-3L/.)	AC/DC 690 V (AC/DC 400 V / FH2-3L/.)	AC/DC 690 V (AC/DC 400 V / FH3-3L/.)
Utilization category ¹⁾	FH.-1./.	AC 400 V AC-23B AC 500 V AC-22B AC 690 V AC-21B DC 250 V DC-21B DC 440V DC-21B / 160 A	AC-23B AC-22B AC-22B DC-21B DC-21B / 250 A	AC-23B AC-22B AC-22B DC-21B DC-21B / 315 A
	FH.-3./.	AC 400 V AC-23B AC 500 V AC-22B AC 690 V AC-22B	AC-23B AC-23B AC-22B	AC-23B AC-23B AC-22B
	two-pole connection	DC 440 V DC-21B	DC-21B	DC-21B
Rated thermal current with fuse-link	I_{th}	250 A	400 A	630 A
Rated thermal current with disconnecting link ZP1 in FH1, ZP2 in FH2, ZP3 in FH3	I_{th}	325 A	520 A	750 A 1 000 A / ZP3/1000
Rated frequency	f_n	40 ÷ 60 Hz	40 ÷ 60 Hz	40 ÷ 60 Hz
Rated insulation voltage	U_i	AC 1 000 V	AC 1 000 V	AC 1 000 V
Rated conditional short-circuit current (RMS)	I_{cc}	AC 400 V 120 kA / 250 A AC 500 V 50 kA / 250 A AC 690 V 25 kA / 250 A	120 kA / 400 A 50 kA / 400 A 25 kA / 400 A	120 kA / 630 A 50 kA / 630 A 25 kA / 630 A
Rated impulse withstand voltage	U_{imp}	12 kV / FH1-.A/. 8 kV / FH1-.S/. 12 kV / FH1-3L/.	12 kV / FH2-.A/. 8 kV / FH2-.S/. 12 kV / FH2-3L/.	12 kV / FH3-.A/. 6 kV / FH3-.S/. 12 kV / FH3-3L/.
Rated short-time withstand current	I_{cw}	1 s 15 kA	15 kA	20 kA
Fuse-link size		1	2	3
Max. power losses of the fuse-link	P_v	23 W	34 W	48 W
Power losses at I_n without fuse-link	P_z	9 W	23 W	49 W
Overvoltage category for AC 690 V		IV	IV	IV
Connection				
Connecting screw		M10	M10	M12
Torque		20 Nm	20 Nm	28 Nm
Remote signalling				
Max. voltage/current	U_{max}/I_{max}	AC 250 V / 5 A DC 250 V / 0.2 A	AC 250 V / 5 A DC 250 V / 0.2 A	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	AC 24 ÷ 400 V DC 24 ÷ 450 V	AC 24 ÷ 400 V DC 24 ÷ 450 V
Fuse-link is blown		red LED is blinking	red LED is blinking	red LED is blinking
Operating conditions				
Electrical endurance	operating cycles	200 at 250 A	200 at 400 A	200 at 630 A
Mechanical endurance	operating cycles	1 400	800	800
Degree of protection from front side, built-in device, cover closed (without measuring holes broken off)		IP30	IP30	IP30
Degree of protection from front side, built-in device, cover opened or removed		IP20	IP20	IP20
Operating ambient temperature		-25 ÷ +55 °C	-25 ÷ +55 °C	-25 ÷ +55 °C
Working position		see page I3	see page I3	see page I3
Max. sea level		2 000 m	2 000 m	2 000 m
Pollution degree		3	3	3
Seismic resistance according to VE ŠKODA		0.25 ÷ 50 Hz / 3 g	0.25 ÷ 50 Hz / 3 g	0.25 ÷ 50 Hz / 3 g

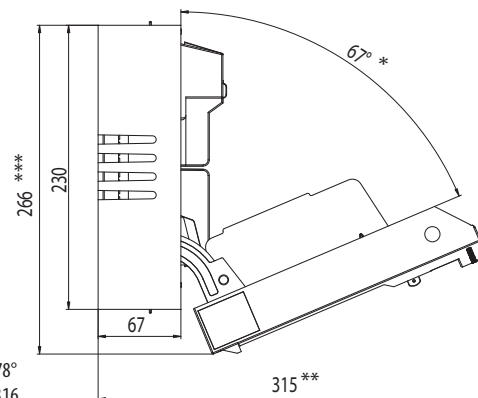
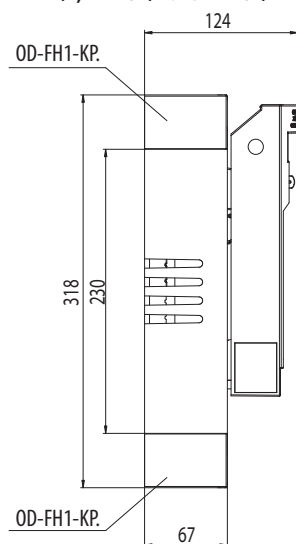
¹⁾ In case of use disconnecting links ZP1 in FH1, ZP2 in FH2 and ZP3 in FH3 switch-disconnector, the utilization category is decreased by one degree

FUSE SWITCH-DISCONNECTORS FH1, FH2, FH3

Dimensions FH1

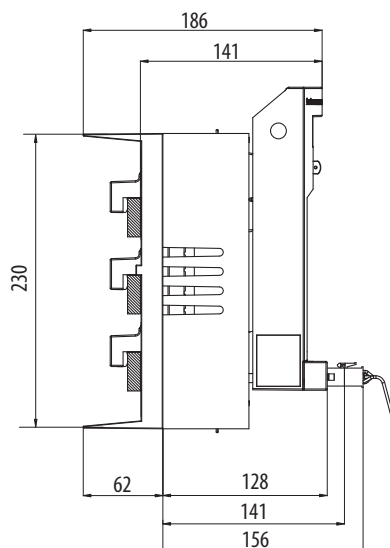


FH1-1A/F, FH1-3A/F and FH1-3L/F

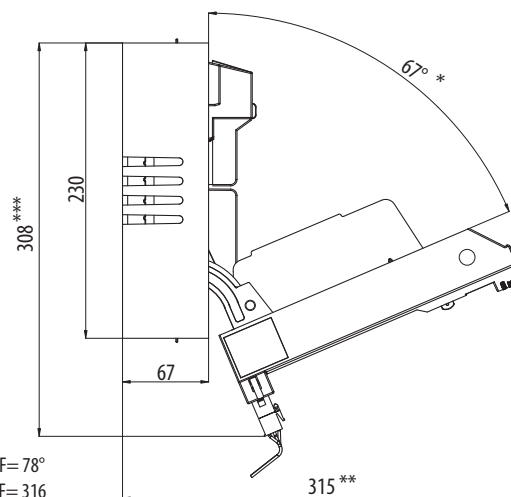


* for FH1-1A/F= 78°
 ** for FH1-1A/F= 316
 *** for FH1-1A/F= 273

FH1-3... + OD-FH1-AL60



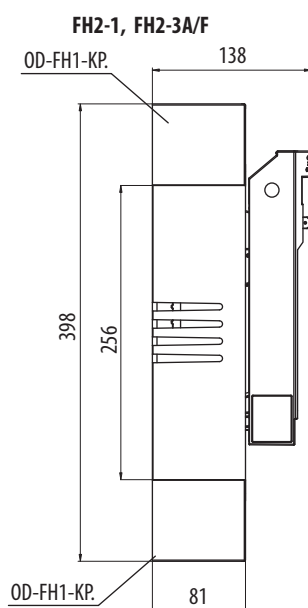
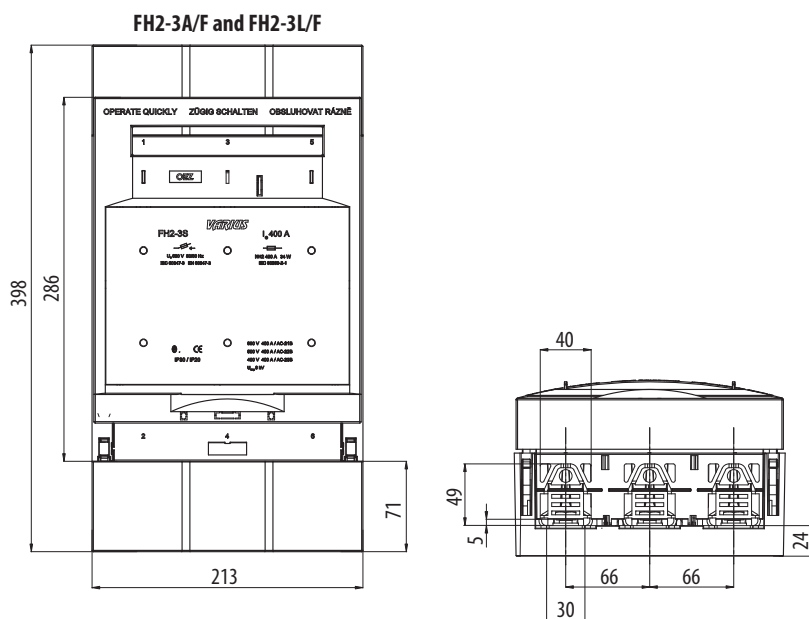
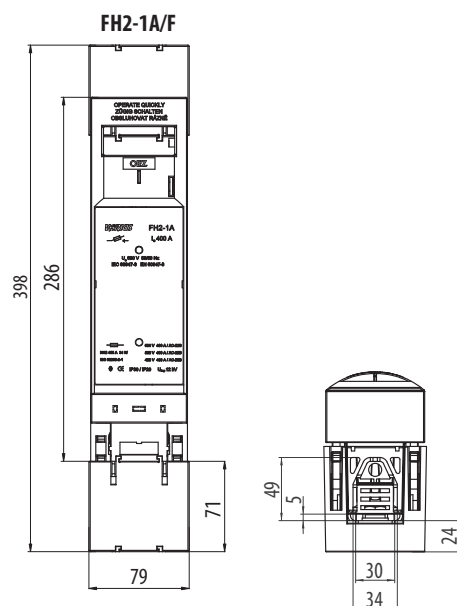
FH1-1S/F and FH1-3S/F



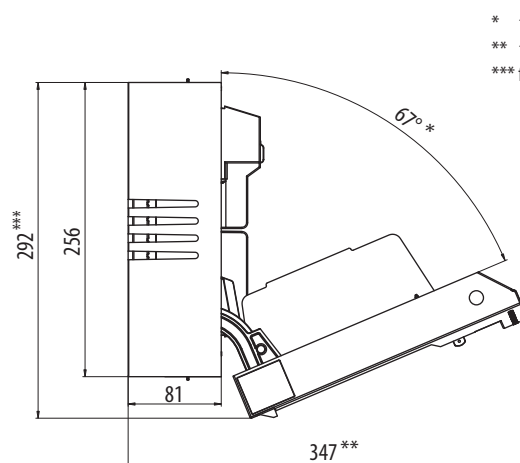
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 ** for FH1-1S/F= 316
 *** for FH1-1S/F= 318

FUSE SWITCH-DISCONNECTORS FH1, FH2, FH3

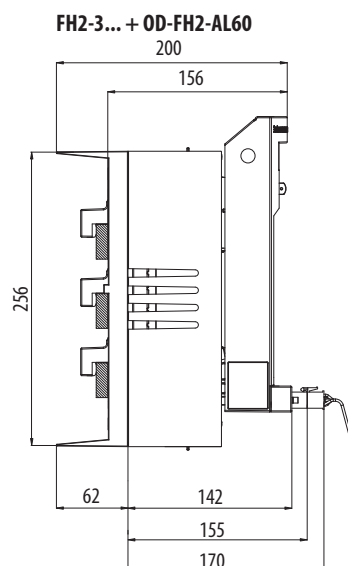
Dimensions FH2



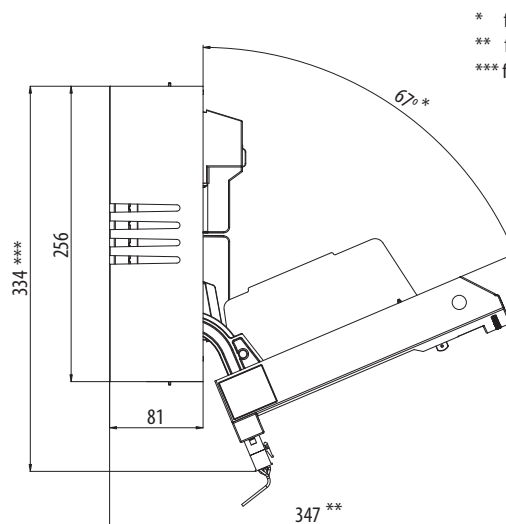
FH2-1A/F and FH2-3L/F



- * for FH2-1A/F= 78°
- ** for FH2-1A/F= 350
- *** for FH2-1A/F=299



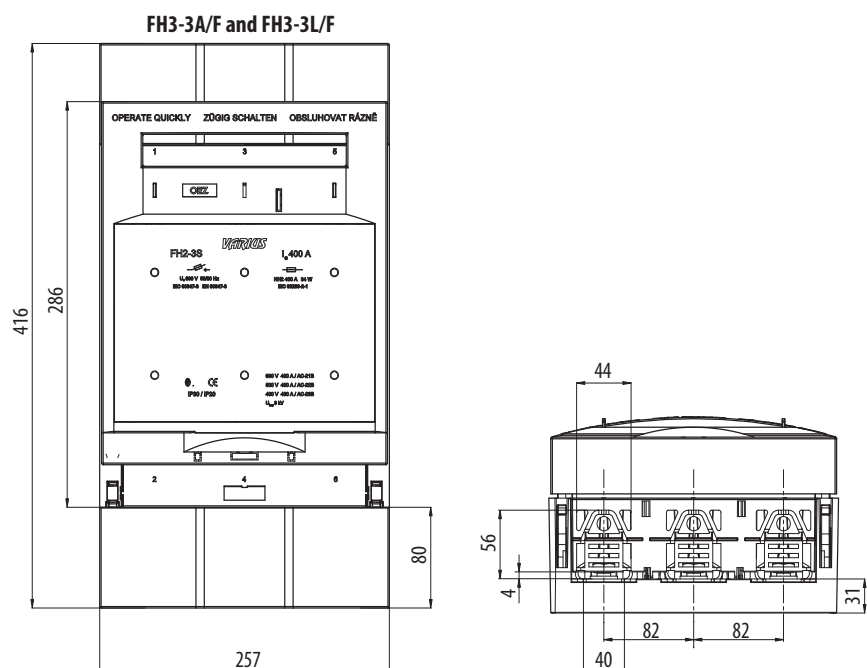
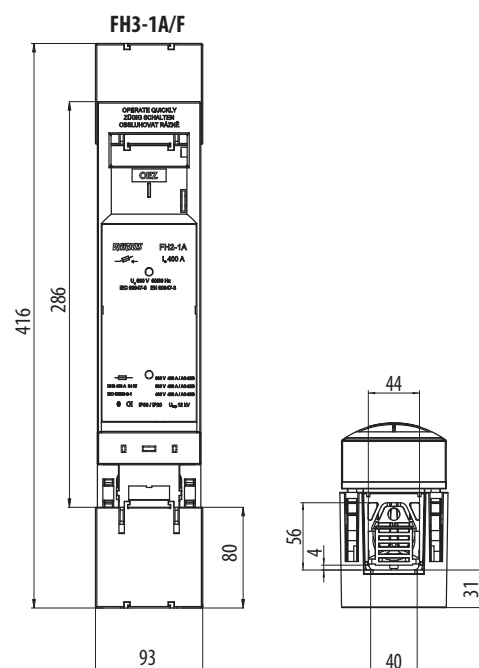
FH2-1S/F and FH2-3S/F



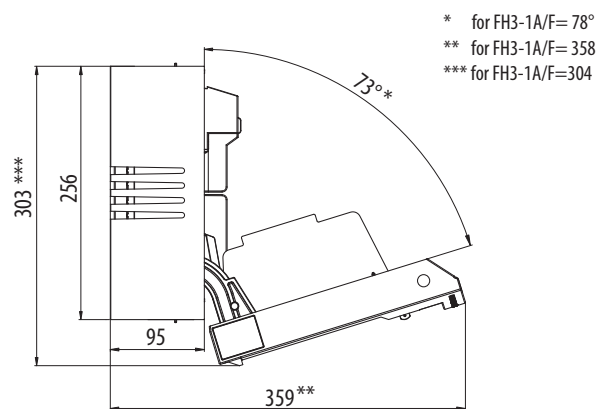
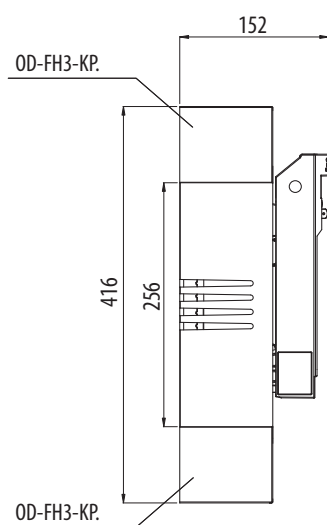
- * for FH2-1S/F= 78°
- ** for FH2-1S/F= 350
- *** for FH2-1S/F=344

FUSE SWITCH-DISCONNECTORS FH1, FH2, FH3

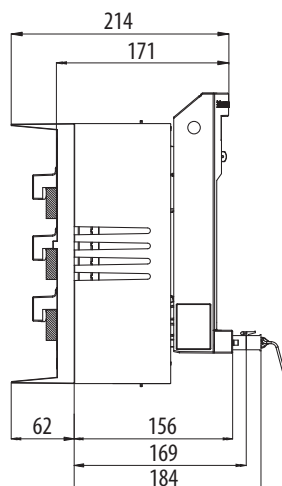
Dimensions FH3



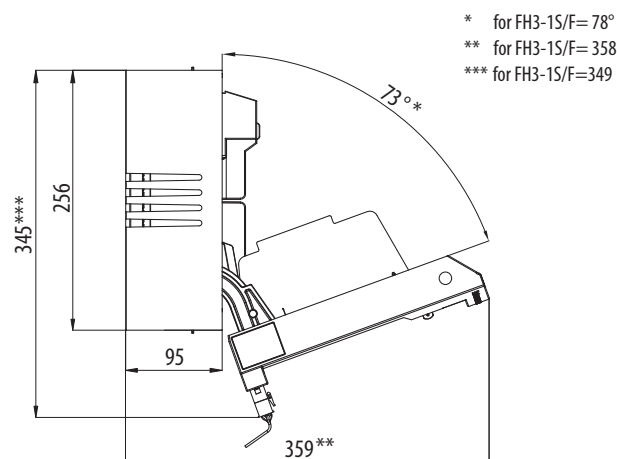
FH3-1A/F, FH3-3A/F and FH3-3L/F



FH3-3... + OD-FH3-AL60



FH3-1S/F and FH3-3S/F

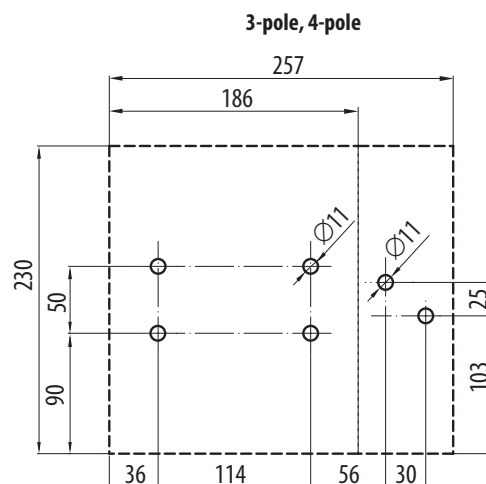
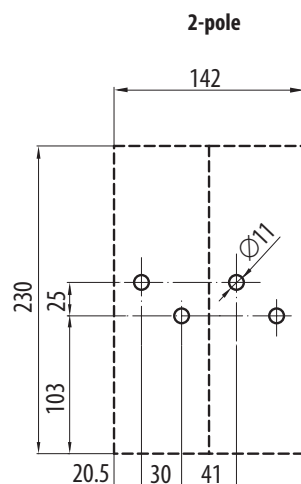
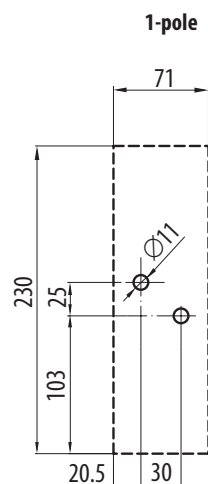


FUSE SWITCH-DISCONNECTORS FH1, FH2, FH3

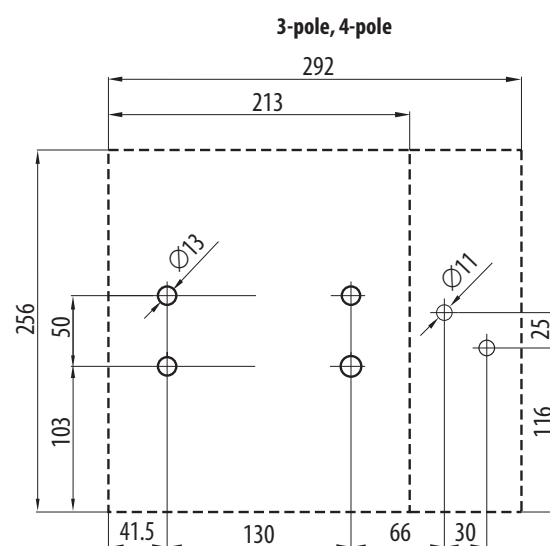
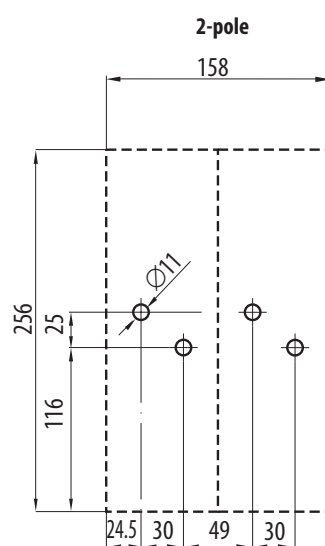
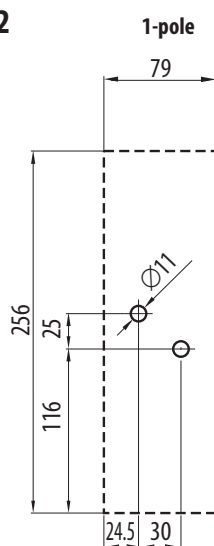
Dimensions

Clearance and drilling diagrams

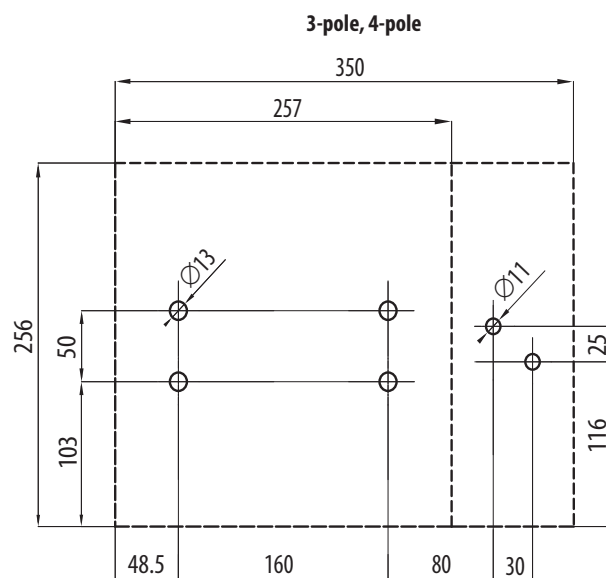
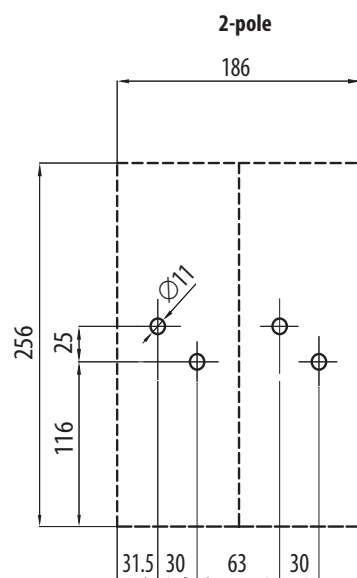
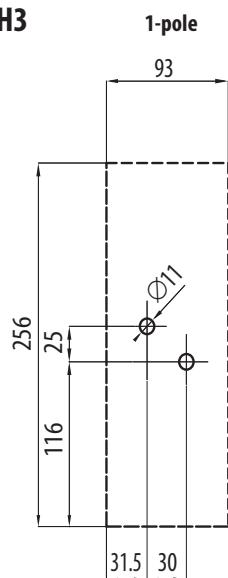
FH1



FH2



FH3



FUSE SWITCH-DISCONNECTORS FH1, FH2, FH3

Diagram

FH1-1..
FH2-1..
FH3-1..

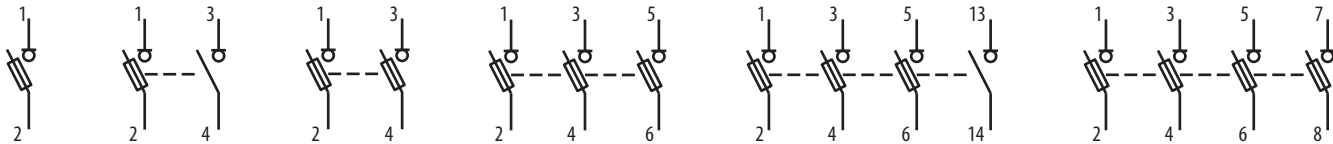
2x FH1-1..
2x FH2-1..
2x FH3-1..

2x FH1-1..
2x FH2-1..
2x FH3-1..

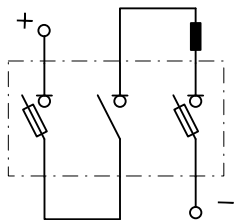
FH1-3..
FH2-3..
FH3-3..

FH1-1.. + FH1-3..
FH2-1.. + FH2-3..
FH3-1.. + FH3-3..

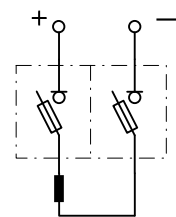
FH1-1.. + FH1-3..
FH2-1.. + FH2-3..
FH3-1.. + FH3-3..



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

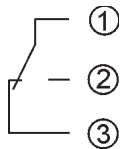


1-pole connection of two 1-pole fuse switch-disconnectors
for DC applications, see Utilization category



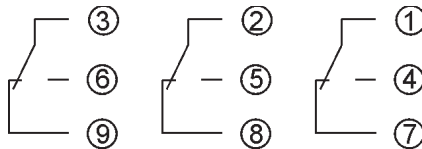
Remote signalling of fuse state
in 1-pole fuse switch-disconnector

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



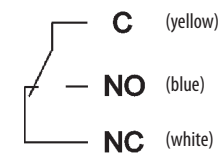
Remote signalling of fuse state
in 3-pole fuse switch-disconnector

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 FH1, FH2, FH3



For FH1, FH2

Connecting sets up to 16 mm²

- Torque 4,5 Nm.

Type	Order code	Description	Cross-section of conductor	Weight [kg]	Package [pcs]
CS-FH12-1SM	OEZ:15814	clip terminal, 1 pcs	Cu 6 ÷ 16 mm ²	0.066	1
CS-FH12-3SM	OEZ:15815	clip terminal, 3 pcs	Cu 6 ÷ 16 mm ²	0.200	1

Connecting sets up to 150 mm²

- Torque 4,5 Nm.

Type	Order code	Description	Cross-section of conductor	Weight [kg]	Package [pcs]
CS-FH12-1S	OEZ:15591	clip terminal, 1 pcs	Cu 25 ÷ 150 mm ²	0.073	1
CS-FH12-3S	OEZ:18226	clip terminal, 3 pcs	Cu 25 ÷ 150 mm ²	0.220	1
CS-FH12-1P1	OEZ:15592	prismatic clamp, 1 pcs	Cu/Al 70 ÷ 150 mm ²	0.133	1
CS-FH12-3P1	OEZ:18227	prismatic clamp, 3 pcs	Cu/Al 70 ÷ 150 mm ²	0.400	1

Double prismatic looping sets

- Torque 4,5 Nm.

Type	Order code	Description	Cross-section of conductor	Weight [kg]	Package [pcs]
CS-FH12-1P2	OEZ:15593	1 pcs	Cu/Al 2x (70 ÷ 95) mm ²	0.193	1
CS-FH12-3P2	OEZ:18228	3 pcs	Cu/Al 2x (70 ÷ 95) mm ²	0.580	1

For FH2

Connecting sets up to 240 mm²

- Torque 10 Nm.

Type	Order code	Description	Cross-section of conductor	Weight [kg]	Package [pcs]
CS-FH2-1S	OEZ:15595	clip terminal, 1 pcs	Cu 25 ÷ 240 mm ²	0.080	1
CS-FH2-3S	OEZ:15811	clip terminal, 3 pcs	Cu 25 ÷ 240 mm ²	0.240	1
CS-FH2-1P1	OEZ:15595	prismatic clamp, 1 pcs	Cu/Al 16 ÷ 240 mm ²	0.140	1
CS-FH2-3P1	OEZ:15811	prismatic clamp, 3 pcs	Cu/Al 16 ÷ 240 mm ²	0.420	1

Double prismatic looping sets

- Torque 4,5 Nm.

Type	Order code	Description	Cross-section of conductor	Weight [kg]	Package [pcs]
CS-FH2-1P2	OEZ:15597	1 pcs	Cu/Al 2x (120 ÷ 150) mm ²	0.193	1
CS-FH2-3P2	OEZ:15813	3 pcs	Cu/Al 2x (120 ÷ 150) mm ²	0.580	1

ACCESSORIES FOR FH1, FH2, FH3



For FH3

Connecting sets up to 300 mm²

- Torque 10 Nm.

Type	Order code	Description	Cross-section of conductor	Weight [kg]	Package [pcs]
CS-FH3-1P1	OEZ:15800	clip terminal, 1 pcs	Cu/Al 120 ÷ 300 mm ²	0.145	1
CS-FH3-3P1	OEZ:14384	clip terminal, 3 pcs	Cu/Al 120 ÷ 300 mm ²	0.435	1

Double prismatic looping sets

- Torque 10 Nm.

Type	Order code	Description	Cross-section of conductor	Weight [kg]	Package [pcs]
CS-FH3-1P2	OEZ:15801	1 pcs	Cu/Al 2x (120 ÷ 240) mm ²	0.205	1
CS-FH3-3P2	OEZ:14385	3 pcs	Cu/Al 2x (120 ÷ 240) mm ²	0.615	1

For FH1, FH2 and FH3

Terminals for rear connection

- Torque 20 Nm.

Type	Order code	Description	Weight [kg]	Package [pcs]
CS-FH123-1Z	OEZ:15594	1 pcs	0.173	1
CS-FH123-3Z	OEZ:18229	3 pcs	0.520	1

ACCESSORIES FOR FH1, FH2, FH3



Adapters for busbar systems

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

Type	Order code	Accessory for	Weight [kg]	Package [pcs]
OD-FH1-AL60	OEZ:17270	FH1-3..	1.169	1
OD-FH2-AL60	OEZ:14382	FH2-3..	1.350	1
OD-FH3-AL60	OEZ:19557	FH3-3..	1.600	1

Assembly kit

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

Type	Order code	Accessory for	Weight [kg]	Package [pcs]
OD-FH123-SS24	OEZ:17266	FH1, 2, 3	0.060	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	Accessory for	Weight [kg]	Package [pcs]
OD-FH123-VU	OEZ:18230	FH1, 2, 3	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	Accessory for	Weight [kg]	Package [pcs]
OD-FH-SK	OEZ:12929	FH1, 2, 3	0.031	1

Technical information see page C26

Connecting space covers for adapter

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

Type	Order code	Accessory for	Weight [kg]	Package [pcs]
OD-FH1-KP1	OEZ:17269	FH1-1..	0.038	1
OD-FH1-KP3	OEZ:17268	FH1-3..	0.145	1
OD-FH2-KP1	OEZ:14381	FH2-1..	0.150	1
OD-FH2-KP3	OEZ:14380	FH2-3..	0.158	1
OD-FH3-KP1	OEZ:14388	FH3-1..	0.075	1
OD-FH3-KP3	OEZ:14387	FH3-3..	0.210	1

Front shields

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

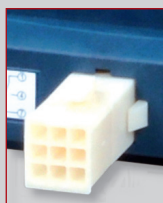
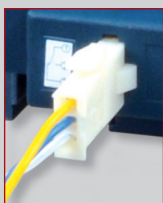
Type	Order code	Accessory for	Weight [kg]	Package [pcs]
OD-FH1-KR	OEZ:17267	FH1-3..	0.036	1
OD-FH2-KR	OEZ:14379	FH2-3..	0.036	1
OD-FH3-KR	OEZ:14386	FH3-3..	0.036	1

Barriers against accident contact

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

Type	Order code	Accessory for	Weight [kg]	Package [pcs]
OD-FH1-Z3	OEZ:17271	FH1-3..	0.045	1
OD-FH2-Z3	OEZ:14383	FH2-3..	0.045	1
OD-FH3-Z3	OEZ:14390	FH3-3..	0.045	1

ACCESSORIES FOR FH1, FH2, FH3



Spare parts

For FH1

Description	Type	Order code	Weight [kg]	Package [pcs]
Cover without signalling of fuse state, 1-pole, size 1	ND-FH1-V1	OEZ:33724	0.260	1
Cover without signalling of fuse state, 3-pole, size 1	ND-FH1-V3	OEZ:33723	0.614	1
Cover with signalling of fuse state, 1-pole, includes a cable with connector	ND-FH1-VS1	OEZ:18682	0.276	1
Cover with signalling of fuse state, 3-pole, includes a cable with connector	ND-FH1-VS3	OEZ:18683	0.649	1
Cover with light indication of fuse state, 3-pole	ND-FH1-VL3	OEZ:33511	0.690	1

For FH2

Description	Type	Order code	Weight [kg]	Package [pcs]
Cover without signalling of fuse state, 1-pole, size 2	ND-FH2-V1	OEZ:33726	0.291	1
Cover without signalling of fuse state, 3-pole, size 2	ND-FH2-V3	OEZ:33725	0.729	1
Cover with signalling of fuse state, 1-pole, includes a cable with connector	ND-FH2-VS1	OEZ:18684	0.307	1
Cover with signalling of fuse state, 3-pole, includes a cable with connector	ND-FH2-VS3	OEZ:18685	0.764	1
Cover with light indication of fuse state, 3-pole	ND-FH2-VL3	OEZ:33512	0.805	1

For FH3

Description	Type	Order code	Weight [kg]	Package [pcs]
Cover without signalling of fuse state, 1-pole, size 2	ND-FH3-V1	OEZ:33728	0.342	1
Cover without signalling of fuse state, 3-pole, size 2	ND-FH3-V3	OEZ:33727	1.180	1
Cover with signalling of fuse state, 1-pole, includes a cable with connector	ND-FH3-VS1	OEZ:18686	0.358	1
Cover with signalling of fuse state, 3-pole, includes a cable with connector	ND-FH3-VS3	OEZ:18687	0.967	1
Cover with light indication of fuse state, 3-pole	ND-FH3-VL3	OEZ:33513	1.008	1

For FH1, FH2, FH3

Description	Type	Order code	Weight [kg]	Package [pcs]
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