Ferraz Shawmut

NH fuse-rails
NH fuse-switch-disconnectors MULTIBLOC
NH fuse-switch-disconnectors MULTIVERT

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Transportation | Power conversion | Power generation & distribution | Industrial controls | Power quality

CARBONE LORRAINE

Ferraz Shawmut is global leader in fuse-based electrical protection solutions.
Our brand is worldwide renowned for technical expertise, innovative solutions and world-class support.

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NH fuse-rails

touch protected, size NH00
~690V, 160A, width 50mm
for direct mounting on 100 or
185mm busbar system
screw terminal M8
with cable cover mounted

Size	Rated current in A	Suitable for	Catalogue No.	Weight in g/piece	Packaging
NH00	160	100mm system	08175.000000	950	1
NH00	160	185mm system	08185.000000	2000	1

NH fuse-rails

touch protected, size NH1 to 3
~690V
width 100mm
for direct mounting on 185mm
busbar system

Size	Rated current in A	Terminals	Catalogue No.	Weight in g/piece	Packaging
NH1	250	bolt M10	08181.000000	3200	1
NH2	400	bolt M12	08182.000000	3800	1
NH3	630	bolt M12	08183.000000	4400	1

Adaptor

for mounting NH00, 100mm fuse-
rails in the 185mm system.
The adaptors bring the height into
line with 250A, 400A, 630A fuse-rails
in case of combined installation.

Size	Version	Catalogue No.	Weight in g/piece	Packaging
NH00	single for 185mm system	08379.011850	500	1
NH00	double for 185mm system	08379.021850	1120	1

Single adaptor

Size NH00, 185mm
The adaptor brings the height into
line with 250A, 400A, 630A fuse-
rails in case of combined installation.
Only for 185mm

Size	Version	Catalogue No.	Weight in g/piece	Packaging
NH00	single for 185mm system	08379.031850	400	1

Double adaptor

Size NH00, 185mm
The adaptor brings the height into
line with 250A, 400A, 630A fuse-
rails in case of combined installation.
Only for 185mm

Size	Version	Catalogue No.	Weight in g/piece	Packaging
NH00	double for 185mm system	08379.041850	700	1

Side cover

Size NH00

Size	Version	Catalogue No.	Weight in g/piece	Packaging
NH00	Side cover for fuse-rail NH00, 100mm	08175.005000	30	1
NH00	Side cover for fuse-rail NH00, 185mm	08185.005000	30	1

Side cover

Size NH1 to 3

Size	Version	Catalogue No.	Weight in g/piece	Packaging
NH1 to 3	Side cover for fuse-rail	08181.005000	30	1

Cover for gripping lugs

Size	Version	Catalogue No.	Weight in g/piece	Packaging
NH00	Cover for gripping lugs	08185.004000	50	1
NH1 to 3	Cover for gripping lugs	08181.004000	260	1

Cable cover for output cable

Size NH1 to 3
Cable cover for panels with central cover plate, length 190mm

Size	Catalogue No.	Weight in g/piece		Packaging
NH1 to 3	08380.000005	125	1	88

Craw-type clamps

for mounting without drilling
for busbar thickness 5-10mm
1 set = 3 clamps

Size	Catalogue No.	Weight in g/piece		Packaging
NH00	08376.000000	100	1	88
NH1 to 3	08366.000000	30	1	88

Terminal sets

(1 set = 3 pieces)
for modification of the terminal configuration

Size	Version	Catalogue No.	Weight in g/piece	Packaging
NH00	Screw M8 with spring washer	08274.000000	34	1
NH00	NH00 clamp terminal set Cu 4-70mm²	08375.000000	34	1
NH00	NH00 clamp terminal set for Al and Cu 1.5-70mm²	08295.007405	76	1

Label holder

mounted in the center

Size	Catalogue No.	Weight in g/piece	Packaging
NH00	08377.000000	10	1
NH1 to 3	08385.000005	25	1

Label clip

mounted on top

Size	Catalogue No.	Weight in g/piece	Packaging
NH1 to 3	08181.006000	10	1

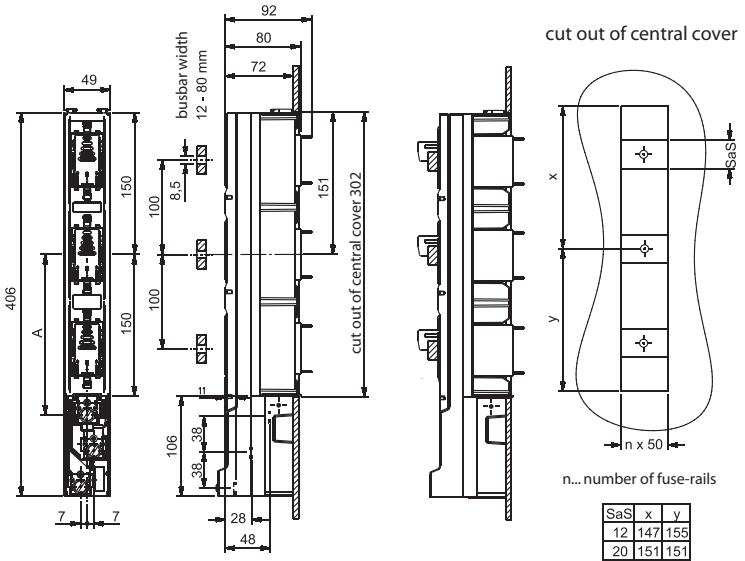
NH fuse-rails with touch protection
Size 00, 160A
08175.000000 and 08185.000000

Technical data according to EN/IEC 60269-2

	Fuse-rail	
	160A 100mm	**160A 185mm**
size	00	00
rated current with NH fuse-links	160A	160A
rated current with solid links	200A	200A
rated voltage	690V AC	690V AC
rated insulation voltage	1000V	1000V
verification of peak withstand current of a fuse base	50kA	50kA
max. permissible power dissipation of NH fuse-links	12W	12W
max. permissible power dissipation of solid links	1,2W	1,2W
cable terminal connection:		
standard terminal	M8	M8
for copper bars with max. width	20mm	20mm
for cable lugs max.	70mm²	70mm²
busbar terminal connection:		
standard terminal	M8	M8
hooked clamps for busbars with thickness	5-10mm²	5-10mm²
ambient air temperature in service (IEC 60 269)	-5 - +35°C	-5 - +35°C
ambient air temperature for storage (IEC 60 269)	-25 - +55°C	-25 - +55°C

NH fuse-rails with touch protection
Size 00, 160A, for direct installation on to 100mm busbar systems
08175.000000

Dimensions in millimetres



SaS	x	y
12	147	155
20	151	151
30	156	146
40	161	141
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.	.	.
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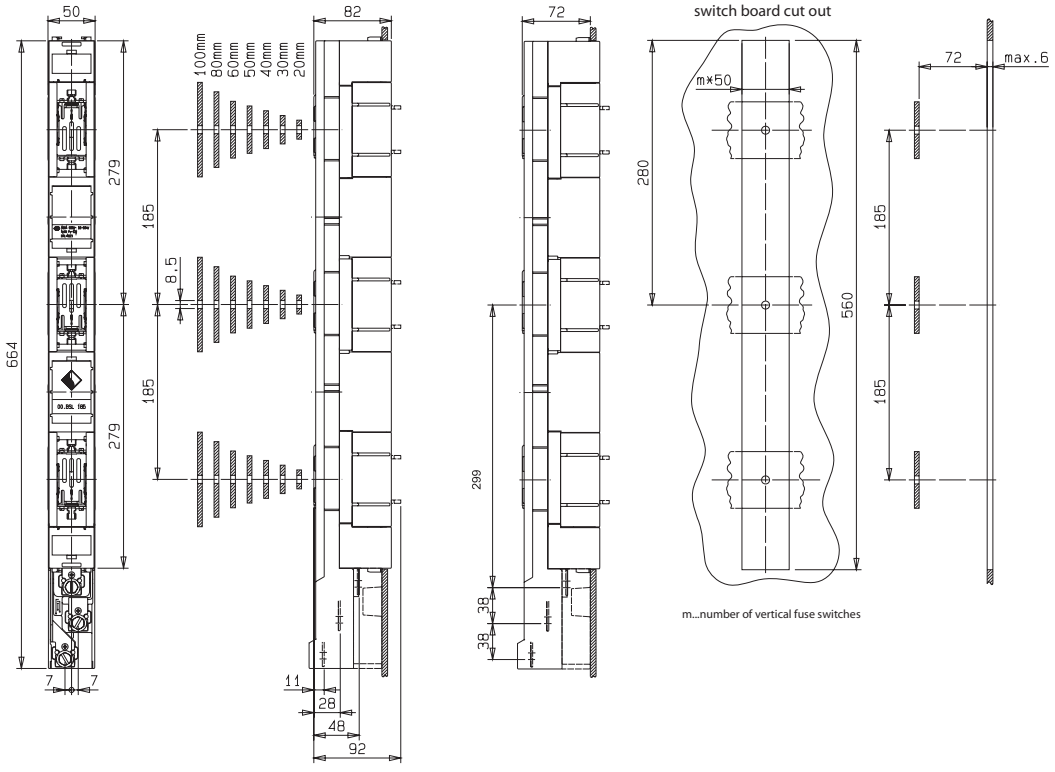
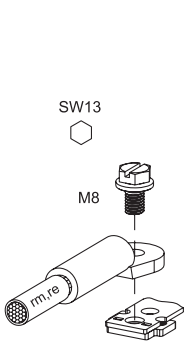
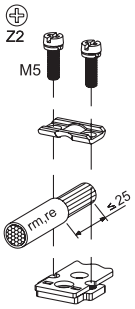
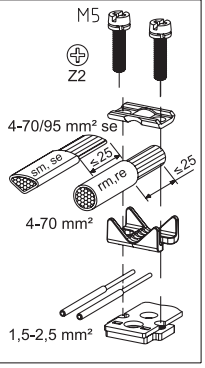
NH fuse-rails with touch protection
Size 00, 160A, for direct installation on to 185mm busbar systems
08185.000000

Dimensions in millimetres



NH fuse-rails with touch protection
Size 00, 160A
08175.000000 and 08185.000000

Cable connection

Cat. No.	08274.000000	08375.00000	08295.007405
type of terminal	screw	clamp strap	Al/Cu clamp
cross section [mm²]	Cu 16-70	Cu 4-70	Cu 1,5-70
	Al 16-95		Al 1,5-70/95 sectoral solid
M [Nm]	15 - 17	3-4	3-4
				

Hooked clamp 08376.000000 (accessory):
Torque M = 5-7Nm

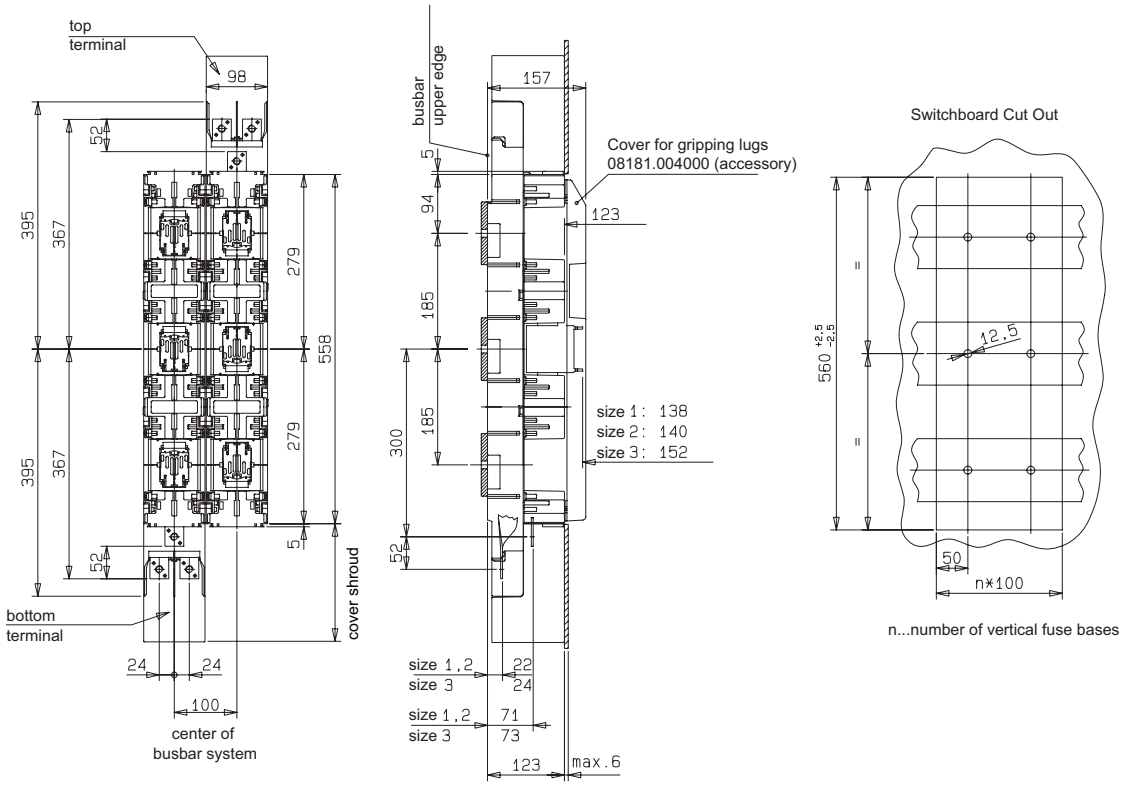
NH fuse-rails with touch protection
Size 1, 250A; size 2, 400A; size 3, 630A
08181.000000, 08182.000000 and 08183.000000

Technical data according to EN/IEC 60269-2

	Fuse-rail		
	250A	**400A**	**630A**
size	1	2	3
rated current with NH fuse-links	250A	400A	630A
rated current with solid links	400A	630A	800A
rated voltage	690V AC	690V AC	690V AC
rated insulation voltage	1000V	1000V	1000V
verification of peak withstand current of a fuse	50kA	50kA	50kA
max. permissible power dissipation of NH fuse-links	23W	34W	48W
max. permissible power dissipation of solid links	3W	8W	20W
cable terminal connections:			
standard terminal	M10	M12	M12
for copper bars with max. width	40mm	40mm	40mm
for cable lugs max.	300mm²	300mm²	300mm²
busbar terminals:			
standard terminal	M12	M12	M12
hooked clamps for busbars with thickness	5-10mm²	5-10mm²	5-10mm²
ambient air temperature in service (IEC 60 269)	-5 - +35°C	-5 - +35°C	-5 - +35°C
ambient air temperature for storage (IEC 60 269)	-25 - +55°C	-25 - +55°C	-25 - +55°C

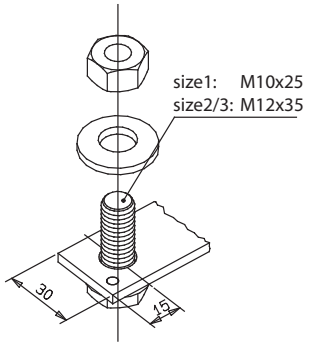
NH fuse-rails with touch protection
Size 1, 250A; size 2, 400A; size 3, 630A for direct installation on to 185mm busbar systems
08181.000000, 08182.000000 und 08183.000000

Dimensions in millimetres



NH fuse-rails with touch protection
Size 1, 250A; size 2, 400A; size 3, 630A for direct installation on to 185mm busbar systems
08181.000000, 08182.000000 und 08183.000000

Cable connection

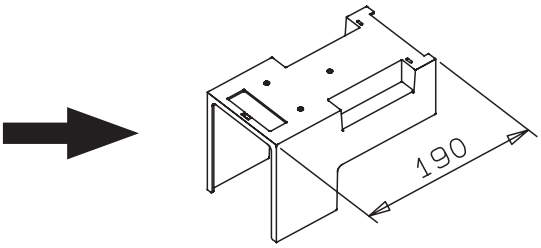
reference	B
type of terminal	bolt
accessory	cable lug max. width 45mm
cross section [mm²]	max. 300
M(an) [Nm]	35 ±3
	

Hooked clamp 08366.000000 (Accessory):
Torque M = 15-20Nm

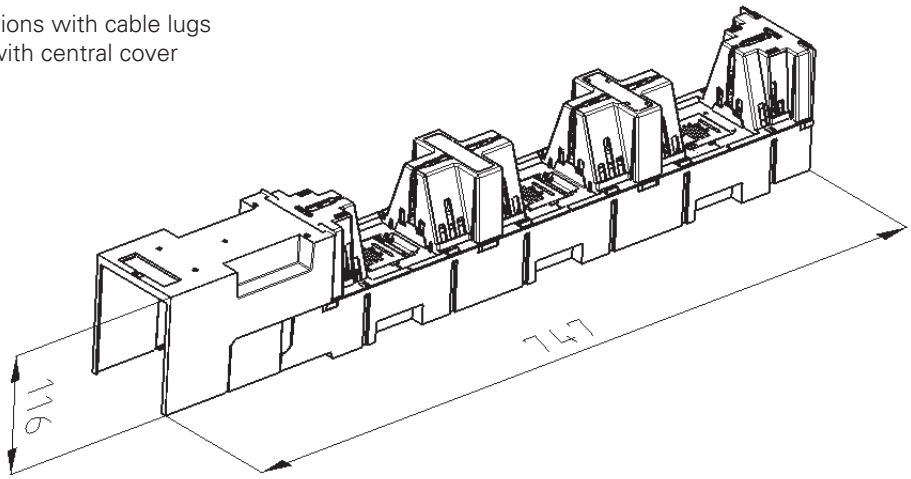
NH fuse-rails with touch protection
Size 1, 250A; size 2, 400A; size 3, 630A, for direct installation on to 185mm busbar systems
08181.000000, 08182.000000 und 08183.000000

Cable cover 08380.000005 (accessory)

- for terminal connections
- with cable lugs
- on switch boards
  with central cover



application:
- for terminal connetions with cable lugs
- on switch boards with central cover



NH fuse-switch-disconnector MULTIBLOC

~690V
for base mounting

Size	Rated current in A	Poles	Terminals	Catalogue No.	Weight in g/piece	Packaging
NH000	100	3	Cage terminal 1,5-50mm²	08236.000000	460	1
NH00	160	1	Screw M8 both sides	08215.000000	288	1
NH00	160	2	Screw M8 both sides	08225.000000	578	1
NH00	160	3	Screw M8 both sides	08235.000000	679	1
NH00	160	3	Clamp 4-70mm²	08235.200000	679	1
NH00	160	3+N	Screw M8 both sides	08245.000000	1800	1
NH1	250	1	Screw M10 both sides	08211.000000	871	1
NH1	250	2	Screw M10 both sides	08221.000000	1742	1
NH1	250	3	Screw M10 both sides	08231.000000	2025	1
NH1	250	3+N	Screw M10 both sides	08241.000000	3810	1
NH2	400	3	Screw M10 both sides	08232.000000	3470	1
NH2	400	3+N	Screw M10 both sides	08242.000000	5150	1
NH3	630	3	Screw M12 both sides	08233.000000	4940	1

In the version 3+N the N-pole is equipped with an integrated neutral link.
The N-pole closes first and opens last.

NH fuse-switch-disconnector MULTIBLOC

~690V
for base mounting
Electronic monitoring

Size	Rated current in A	Poles	Terminals	Catalogue No.	Weight in g/piece	Packaging
NH00	160	3	Screw M8 both sides	08235.080000	700	1
NH1	250	3	Screw M10 both sides	08231.080000	2145	1
NH2	400	3	Screw M10 both sides	08232.080000	3590	1

NH fuse-switch-disconnector MULTIBLOC

~690V, direct contact on 5 oder 10mm busbar

Size	Rated current in A	Poles	Terminals for	Catalogue No.	Weight in g/piece	Packaging
for 40mm busbar system						
NH00	160	3	Screw M8, clamp 4-70mm²	08255.000000	924	1
for 60mm busbar system						
NH000	100	3	Cage terminal 1,5-50mm²	08266.000000	570	1
NH00	160	3	Screw M8, clamp 4-70mm²	08265.000000	924	1
NH1	250	3	Screw M10	08261.000000*	2721	1
NH2	400	3	Screw M10	08262.000000*	4500	1

* also suitable for 40mm busbar system
Size 000: Output on bottom
Size 00, 1, 2: Output on top/bottom can be chosen

Cable covers 1-pole

(1 set = 2 pieces)
Can be used also for 2-pole switches, two sets are required per 2-pole switch.
For extension of the cover on top or bottom.
Modular, can be put on each other.

suitable for	Catalogue No.	Weight in g/piece	Packaging
NH00, 1- and 2-pole	08215.004000	18	1
NH1, 1- and 2-pole	08211.004000	81	1

Cable covers 3-pole

(1 set = 2 pieces)
For extension of the cover on top or bottom.
Modular, can be put on each other.

Suitable for	Catalogue No.	Weight in g/piece	Packaging
NH00, 3-pole	08235.004000	18	1
NH1, 3-pole	08231.004000	136	1
NH2, 3-pole	08232.004000	220	1
NH3, 3-pole	08233.004000	320	1

Touch protection for busbar mounting

(1 set = 2 pieces)
Covers the side not in use, but fits on both sides, also fits on cable cover.

Suitable for	Version	Catalogue No.	Weight in g/piece	Packaging
NH00	3-pole	08235.009000	43	1
NH1	3-pole	08231.009000	136	1
NH2	3-pole	08232.009000	130	1

Trim frame

Suitable for	Version	Catalogue No.	Weight in g/piece	Packaging
NH000, 3-pole	single	08236.001000	30	1
NH00, 3-pole	single	08235.001000	20	1
NH00, 3-pole	double	08235.002000	30	1
NH00, 3-pole	double, 1 switch, 1 empty field right	08235.008000	30	1
NH00, 3-pole	triple	08235.003000	30	1
NH1, 3-pole	single	08231.001000	70	1
NH2, 3-pole	single	08232.001000	320	1
NH3, 3-pole	single	08233.001000	1130	1

DIN rail mounting

Suitable for	Version	Catalogue No.	Weight in g/piece	Packaging
NH00, 1-pole	150mm distance	08215.500000	81	1
NH00, 1-pole	125mm distance	08215.700000	65	1
NH00, 3-pole	150mm distance	08231.500000	134	1
NH00, 3-pole	125mm distance	08231.700000	108	1
NH1, 1-pole	150mm distance	08211.500000	134	1
NH1, 1-pole	125mm distance	08211.700000	106	1
NH1, 3-pole	150mm distance	08235.500000	232	1
NH1, 3-pole	125mm distance	08235.700000	185	1

For mounting between two DIN rails, distance of DIN rails 125 or 150mm.

Window lock

(1 set = 3 pieces)
To be inserted into switch cover.
Blocks the opening of the window.

Suitable for	Version	Catalogue No.	Weight in g/piece	Packaging
NH00 to NH2	Window lock	08280.000000	4	1

Sealing set

Turning the knob blocks the switch cover. Knob may be sealed.

Suitable for	Version	Catalogue No.	Weight in g/piece	Packaging
NH00 to NH1	Sealing set	08281.000000	8	1

Terminal sets

(1 set = 3 pieces)
for modification of the terminal configuration

Suitable for	Version	Catalogue No.	Weight in g/piece	Packaging
NH00	Screw M8 with spring washer	08274.000000	34	1
NH00	NH00 clamp terminal set 4-70mm²	08375.000000	34	1
NH00	NH00 clamp terminal set for Al and Cu 4-70mm²	08295.007405	76	1
NH1	NH1 clamp terminal set for Al and Cu 70-150mm²	08276.000000	100	1
NH2	NH2 clamp terminal set for Al and Cu 120-240mm²	08277.000000	251	1
NH3	NH3 clamp terminal set for Al and Cu 150-300mm²	08278.000000	320	1

Switch cover

(For replacement)

Size	Catalogue No.	Weight in g/piece	Packaging
NH00	08235.900000	124	1
NH1	08231.900000	410	1

Microswitch

For montioring of the switch cover position

Suitable for	Catalogue No.	Weight in g/piece	Packaging
Vertical NH00-3, horizontal NH1-3	08378.000000	60	1

MULTIBLOC NH fuse-switch-Disconnector

Overview

The production progamme of MULTIBLOC comprises NH fuse-switch-disconnectors from 100A to 1600A. The design for bottom fitting size 00 and 1 includes single pole, double pole, triple pole and quadruple pole units. Products for direct installation on to busbars are designed for installation in 40mm and 60mm busbar systems.
For the installation of MULTIBLOC NH fuse-switch-disconnectors of different sizes in distribution units with central cover, respective covers are used to obtain a uniform profile in height and length.
MULTIBLOC are designed for NH fuse-links in accordance with IEC/EN 60 269-2 and VDE 0636, size 000, 100A, size 00, 160A; size 1, 250A; size 2, 400A; and size 3, 630A.
This system is a modular system, which allows the installation and combination of individual components.
MULTIBLOC offers the user the possibility of fast and easy installation as well as a high degree of security during installation and maintenance.

Product range

- designed for bottom fitting: single pole, double pole, triple pole and quadruple pole (size 00 and 1)
- NH fuse-switch-disconnectors for direct installation on to triple pole busbar systems (size 000 to 2)
  - · symmetrical switch suitable for bottom / top cable terminal connections
  - · or 40mm and 60mm busbar systems
  - · universally useable for busbars with width of 5mm and 10mm
  - · for horizontal and vertical use (size 00, 1, 2)
  - · switch can still be adjusted after being snapped on to busbars and fixed after adjustment
- touch protection IP20 – IP rating is maintained also when checking voltage at the fuse-links
- parking position of switch operating cover
- modular system of cover
  cover for cable termination area can be extended as required
- cover for touch protection for direct installation on to 60mm busbar systems
- locking and sealing facility – optional for size 00 and 1
- materials used are free of halogen, self extinguishing, marked for classified recycling

locking and sealing devices

easy direct installation by snapping on to the busbars

touch protection IP20 with fuse-links in test mode

Design

Base
The base is touch protected (degree of protection IP20). The main base consists of glass fibre strengthened, thermically high stable, self extinguishing synthetic material free of halogen. There are no metal parts except the current carrying contact system.

Contact system
The contact system is corrosion resistant as well as torsion resistant. The copper contacts are galvanic surface coated. The contact springs are made of stainless steel.

Touch protection
The one- piece or two- piece protective cover consists of additionally strengthened thermically high stable, self extinguishing, thermoplastic material free of halogen. It is snapped into the main base.

Switch operating cover
The switch operating cover consists of glass fibre strengthened self extinguishing, thermoplastic material free of halogen. In the ON position a spring cover plate lock secures the switch operating cover. In order to change the NH fuse-links the switch operating cover can be removed in the OFF position. The switch operating cover is supplied with large windows which enable the label and the indicator of the fuse-link to be clearly seen. These windows can be opened to check the condition of the fuse-links, a touch protection of IP 20 is guaranteed also when checking voltage at the fuse-links. If necessary the window can be secured against unauthorised opening by a locking device (accessory) - (size 00 to 2). The switch operating cover can be parked (parking position). The switch operating cover of MULTIBLOC size 00 and 1 can be sealed (optional) and locked as a protection against unauthorised connection.

Functions

Protection [1)]

- Protection of circuits against overload and short circuit (current limiting)
- Protection of equipment and installations for short circuits up to 120kA against dynamic short circuit effects through current limitation
- Selective isolation of defective circuits up to highest short circuit currents of 120kA
- Protection of equipment (e.g. short circuit protection of circuit breakers, busbar systems and contactors)
- Safe load breaking, even with frequent short circuits, as fuse-links are replaced
- Protection of persons and animals against shock hazards (in TN-systems)

Disconnection

- large visible isolating distance

Short circuits

- dynamic short- circuit withstand with NH fuse-links up to 120kA

Switching

- safe short circuit making with NH fuse-links up to 80kA [2)]
- utilization category (AC 23 B)

Touch protection

- touch protection [3)] IP 10 in open position
- IP 20 in closed position [4)]

Electromagnetic compatibility

- in accordance with EN 60947-3

[1)] with fuse-links inserted
[2)] see technical data
[3)] touch protection only guaranteed when the area of cable termination is also touch protected (e.g. with central cover)
[4)] IP 30 can be reached (e.g. with cover shroud for switch or respective central cover)

Standard service, mounting and transport conditions

MULTIBLOC installation and maintenance. The standard conditions to IEC/EN 60 947-1 and IEC/EN 60947-3 are as follows:

a) Ambient air temperature: must not exceed +40°C and its average over a period of 24 hours does not exceed 35°C. The lower limit of ambient air temperature is –5°C. Ambient air temperature is that existing in the vicinity of the equipment if supplied without enclosure. (Please note - a derating factor must be applied to the maximum load current when the ambient air temperature in the vicinity of the switchgear exceeds 25°C. The cross sectional areas of copper busbars together with all other connected cables or conductors must meet the minimum cross sectional area used in the verification of the temperature rise tests at the rated current measurement of the switchgear. In case of doubt contact Ferraz Shawmut. Follow the specification of the manufacturer of the NH fuse-links installed.)

b) Altitude: up to 2.000m. For equipment to be used at higher altitudes contact Ferraz Shawmut prior to use.

c) Humidity: The relative humidity of the air must not exceed 50% at a maximum temperature of +40°C. Higher relative humidity may be permitted at lower temperatures, e.g. 90% at +20°C. Special measures may be necessary in cases of occasional condensation due to variations in temperature.

d) Pollution degree: The switchgear is rated according pollution degree 3 (conductive pollution occurs, or dry or non conductive pollution occurs which becomes conductive due to condensation).

e) Transport and Storage: Values according a) and b) are valid with the exception, that for transport and storage, but not service, the ambient temperatures can be between –25°C to +55°C.

f) Certification and Test Reports: All equipment of the MULTIBLOC series are tested and approved by third party testing according the above-mentioned standards and with the technical data mentioned. Tests have been made in conditions described by the standard. Other service conditions (e.g. in enclosures, at higher ambient air temperatures, higher power dissipation of fuse-links, etc.) correction factors to the rated values have to be observed. These correction factors can be found in standards IEC 60 269, IEC 60 890 or IEC 60 439.

g) Mounting and Service: Equipment has to be mounted and installed according the mounting, installation and service manuals of Ferraz Shawmut.

h) Fuse-links: The equipment requires the use of NH fuse-links according to IEC 60 269-2 (NH-System). The power dissipation of the fuse-links used must not exceed the power acceptance of the equipment.

MULTIBLOC Transport. The standard conditions to IEC/EN 60 439-1 are as follows:

8.3. Routine tests

8.3.1. Inspection of the assembly including inspection of wiring and, if necessary, electrical operation test

The effectiveness of mechanical actuating elements, interlocks, locks, etc., shall be checked. The conductors and cables shall be checked for proper laying devices for proper mounting. A visual inspection is also necessary to ensure that the prescribed degree of protection, creepage and clearance distances are maintained.
The connections, especially the screwed connections, shall be checked for adequate contact, possibly by random tests.

NH fuse-switch-disconnector MULTIBLOC
Size 000, for base mounting, 3-pole
08236.000000

Technical data according to EN 60947

size			000
number of poles			3
conventional free air thermal current with fuse-links I_{th}			100A
max. allowed power dissipation of NH fuse-links P_n			7,5W
conventional free air thermal current with solid links I_{th}			–
max. allowed power dissipation of solid links P_n			1,2W
utilization-category	rated operational voltage U_e	rated operational current I_e	
AC 21 B	690V	I_e =	100A
AC 21B	400V	I_e =	100A
DC 21 B[1)]	440V	I_e =	100A
rated operational voltage U_e			690V
rated insulation voltage U_i			690V
rated impulse withstand voltage U_{imp}			6kV
rated frequency			50-60Hz
degree of protection			IP20
pollution degree			3
rated duty			uninterrupted duty
rated short-circuit making capacity with solid links I_{cm}			–
rated short-circuit making capacity with fuse-links 400V AC			80kA; I_e = 100A
rated short-time withstand current with solid links I_{cw}			–
power dissipation I_{th} without NH fuse-links I_{th} = 100A			9W
power dissipation I_{th} without solid links			–
cable terminal connections:			
standard terminal			direct 1,5–50mm^2

[1)] all poles in series

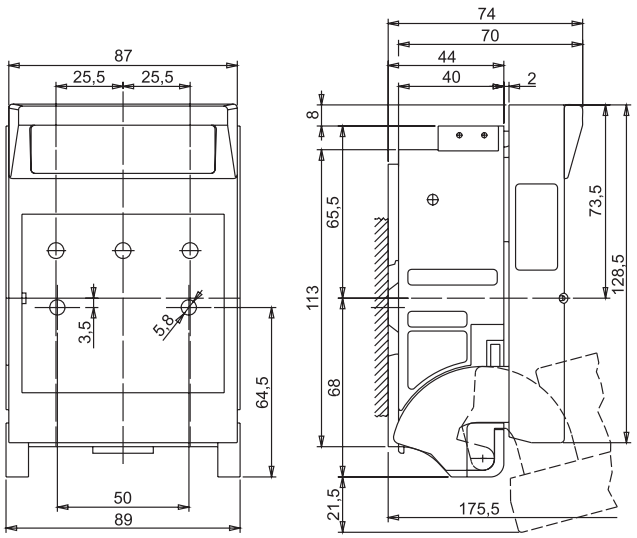
NH fuse-switch-disconnector MULTIBLOC
Size 000, for busbar mounting (60mm system), 3-pole
08266.000000

Technical data according to EN 60947

size			000
number of poles			3
conventional free air thermal current with fuse-links I_{th}			100A
max. allowed power dissipation of NH fuse-links P_n			12W
utilization-category	rated operational voltage U_e	rated operational current I_e	
AC 22 B	690V	I_e =	100A
DC 21 B	440V	I_e =	100A
rated operational voltage U_e			690V
rated insulation voltage U_i			750V
rated impulse withstand voltage U_{imp}			8kV
rated frequency			50-60Hz
degree of protection			IP20
pollution degree			3
rated duty			uninterrupted duty
rated short-circuit making capacity with solid links I_{cm}			
690V / 500V AC			50kA
220V / 440V DC			25kA
electrical endurance (operating cycles)			300
mechanical endurance (operating cycles)			1700
over voltage category			III
standard terminal: lift clamp			1,5-50mm^2
busbar terminals:			
busbar system			60mm
min. busbar dimensions			20 x 5mm^2
max. busbar dimensions			30 x 10mm^2

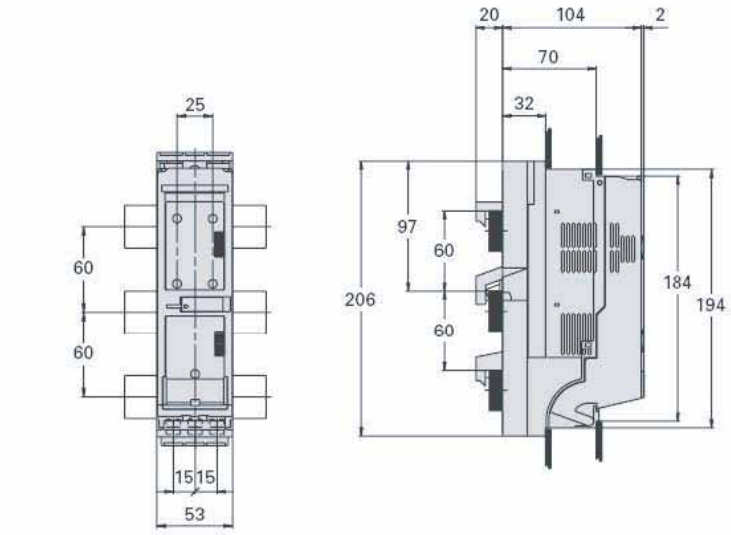
NH fuse-switch-disconnector MULTIBLOC
Size 000, for base mounting, 3-pole
08236.000000

Dimensions in millimetres



NH fuse-switch-disconnector MULTIBLOC
Size 000, for busbar mounting (60mm system), 3-pole
08266.000000

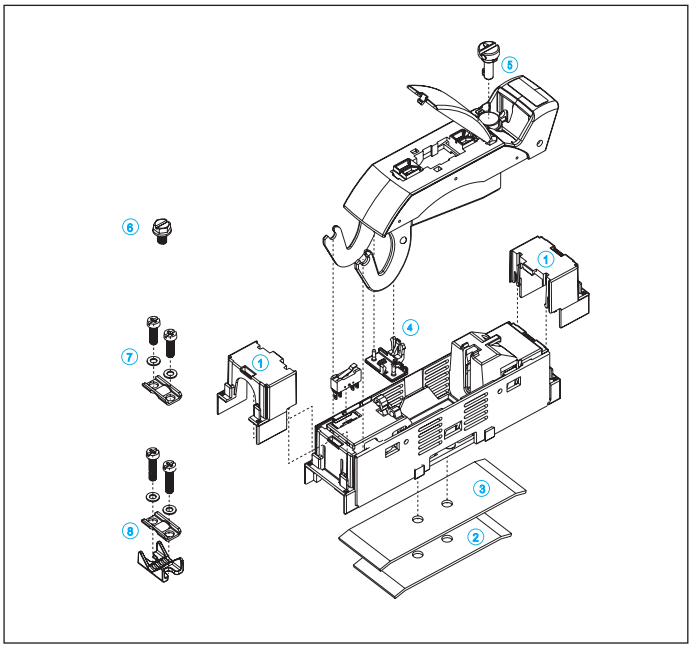
Dimensions in millimetres



NH fuse-switch-disconnector MULTIBLOC Size 00, for base mounting, 1-pole 08215.000000

Constitution and accessories

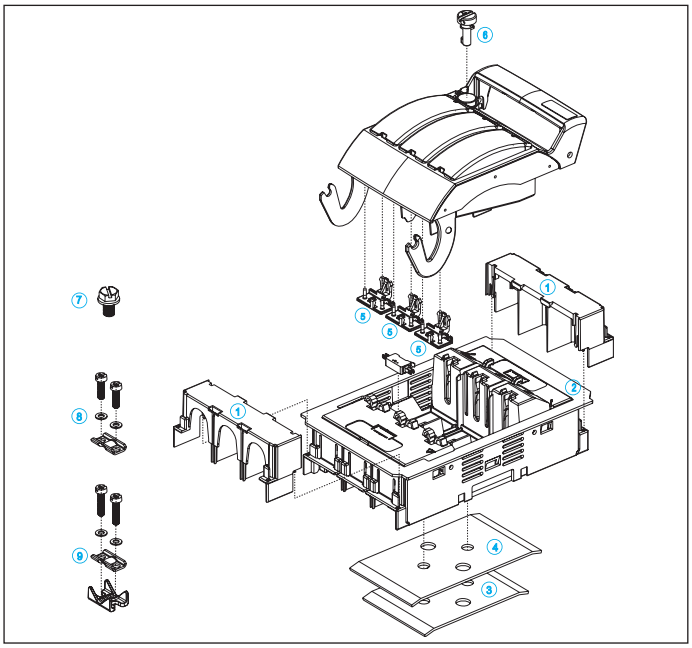
No.	description	standard	accessory	Catalogue No.
	Fuse-switch-disconnector NH00 160A 1-pole	•		08215.000000
1	cover for cable terminal connection single pole		•	08215.004000
2	device for mounting on 125mm DIN rails		•	08215.700000
3	device for mounting on 150mm DIN rails		•	08215.500000
4	locking device for window (e.g. against unauthorized connection)		•	08280.000000
5	cover sealing device		•	08281.000000
6	M8 terminal screw		•	08274.000000
7	clamp strap Cu 4-70mm²		•	08375.000000
8	Al/Cu clamp 1,5-70mm² round stranded, 95mm² sectoral solid		•	08295.007405



NH fuse-switch-disconnector MULTIBLOC Size 00, for base mounting, 3-pole 08235.000000 and 08235.2000000

Constitution and accessories

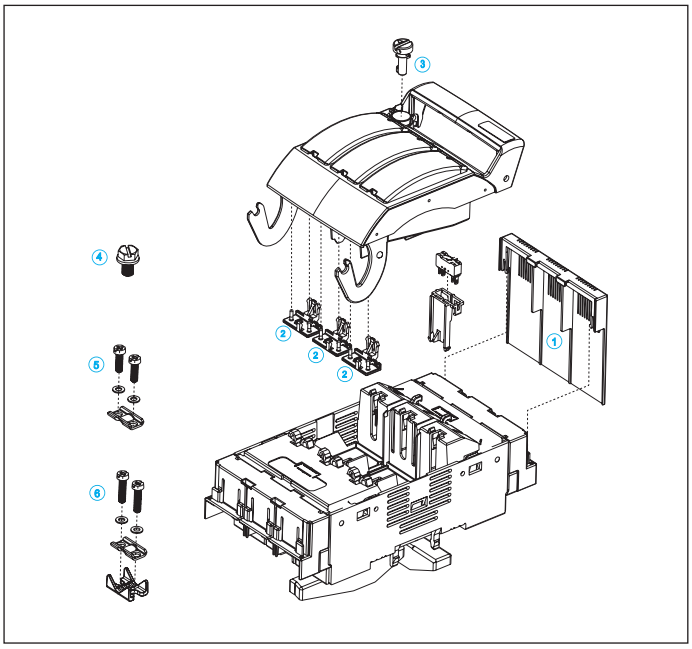
No.	description	standard	accessory	Catalogue No.
	Fuse-switch-disconnector NH00 160A 3-pole	•		08235.000000
1	cover for cable terminal connection triple pole		•	08235.004000
2	cover shield for installation in distribution units		•	08235.001000
3	device for mounting on 125mm DIN rails		•	08231.700000
4	device for mounting on 150mm DIN rails		•	08231.500000
5	locking device for window (e.g. against unauthorized connection)		•	08280.000000
6	sealing device		•	08281.000000
7	M8 screw		•	08274.000000
8	clamp strap Cu 4-70mm²		•	08375.000000
9	Al/Cu clamp 1,5-70mm² round stranded, 95mm² sectoral solid		•	08295.007405



NH fuse-switch-disconnector MULTIBLOC Size 00, for busbar mounting, 3-pole 08255.000000 und 08265.000000

Constitution and accessories

No	description	standard	accessory	Catalogue No.
	Fuse-switch-disconnector NH00 160A 3-pole for 40mm busbars	•		08255.000000
	Fuse-switch-disconnector NH00 160A 3-pole for 60mm busbars	•		08265.000000
1	busbar protection		•	08235.009000
2	locking device for window (e.g. against unauthorized connection)		•	08280.000000
3	cover sealing device		•	08281.000000
4	M8 terminal screw		•	08274.000000
5	clamp strap Cu 4-70mm²		•	08275.000000
6	Al/Cu clamp 1,5-70mm² round stranded, 95mm² sectoral solid		•	08295.007405



NH fuse-switch-disconnector MULTIBLOC
Size 00, for base mounting, 1-pole
08215.000000

Technical data according to EN 60947

size			00
number of poles/phases			1
conventional free air thermal current with fuse-links I_{th}			160A
max. allowed power dissipation of NH fuse-links P_n			12W
conventional free air thermal current with solid links I_{th}			200A
max. allowed power dissipation of solid links P_n			1,2W
utilization-category	rated operational voltage U_e	rated operational current I_e	
AC 23 B	400V	I_e =	160A
AC 22 B	500V	I_e =	160A
AC 21 B	690V	I_e =	125A
DC 22 B	220V	I_e =	160A
rated operational voltage U_e			690V
rated insulation voltage U_i			1000V
rated impulse withstand voltage U_{imp}			8kV
rated frequency			50-60Hz
degree of protection			IP20
pollution degree			3
rated duty			uninterrupted duty
rated short-circuit making capacity with solid links[1)] I_{cm}			6,2kAsw
rated short-circuit making capacity with fuse-links			
400V AC			80kA; I_e = 100A
500V AC			80kA; I_e = 100A
690V AC			50kA; I_e = 125A
rated short-time withstand current with solid links I_{cw}			4kA/1s
power dissipation by I_{th} without NH fuse-links I_{th} = 160A			2,3W
power dissipation by I_{th} without solid links I_{th} = 200A			3,3W
cable terminal connection:			
standard terminal			M8
for cable lugs			max. 2 x 70mm^2
for copper busbars with max. width			20mm

[1)] size 00

NH fuse-switch-disconnector MULTIBLOC
Size 00, for base mounting, 3-pole
08235.000000 und 08235.200000

Technical data according to EN 60947

size			00
number of poles/phases			3
conventional free air thermal current with fuse-links I_{th}			160A
max. allowed power dissipation of NH fuse-links P_n			12W
conventional free air thermal current with solid links I_{th}			200A
max. allowed power dissipation of solid links P_n			1,2W
utilization-category	rated operational voltage U_e	rated operational current I_e	
AC 23 B	400V	I_e =	160A
AC 22 B	500V	I_e =	160A
AC 21 B	690V	I_e =	125A
DC 22 B[1)]	440V	I_e =	160A
rated operational voltage U_e			690V
rated insulation voltage U_i			1000V
rated impulse withstand voltage U_{imp}			8kV
rated frequency			50-60Hz
degree of protection			IP20
pollution degree			3
rated duty			uninterrupted duty
rated short-circuit making capacity with solid links[2)] I_{cm}			6,2kAsw
rated short-circuit making capacity with fuse-links			
400V AC			80kA; I_e = 160A
500V AC			80kA; I_e = 160A
690V AC			50kA; I_e = 125A
rated short-time withstand current with solid links I_{cw}			4kA/1s
power dissipation I_{th} without NH fuse-links I_{th} = 160A			7W
power dissipation I_{th} without solid links I_{th} = 200A			10W
cable terminal connection:			
standard terminal			M8
for cable lugs			max. 2 x 70mm²
for copper busbars with max. width			20mm

[1)] all poles in series

[2)] size 00

NH fuse-switch-disconnector MULTIBLOC
Size 00, for busbar mounting, 3-pole
08255.000000 und 08265.000000

Technical data according to EN 60947

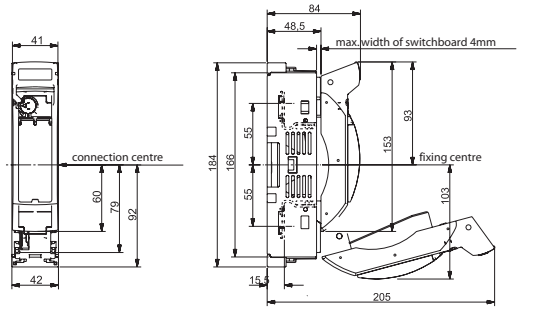
size			00
number of poles/phases			3
conventional free air thermal current with fuse-links I_{th}			160A
max. allowed power dissipation of NH fuse-links P_n			12W
conventional free air thermal current with solid links I_{th}			200A
max. allowed power dissipation of solid links P_n			1,2W
utilization-category	rated operational voltage U_e	rated operational current I_e	
AC 23 B	400V	I_e =	160A
AC 22 B	500V	I_e =	160A
AC 21 B	690V	I_e =	125A
DC 22 B[1)]	440V	I_e =	160A
rated operational voltage U_e			690V
rated insulation voltage U_i			1000V
rated impulse withstand voltage U_{imp}			8kV
rated frequency			50-60Hz
degree of protection			IP20
pollution degree			3
rated duty			uninterrupted duty
rated short-circuit making capacity with solid links[2)] I_{cm}			6,2kAsw
rated short-circuit making capacity with fuse-links			
400V AC			80kA; I_e = 160A
500V AC			80kA; I_e = 160A
690V AC			50kA; I_e = 125A
rated short-time withstand current with solid links I_{cw}			4kA/1s
power dissipation by I_{th} without NH fuse-links I_{th} = 160A			10W
power dissipation by I_{th} without solid links I_{th} = 200A			16W
cable terminal connection:			
standard terminal			M8
for cable lugs			max. 2 x 70mm²
for copper busbars with max. width			20mm
busbar terminal:			
busbar system			60mm
min. cross-section			12 x 5mm²
max. cross-section			30 x 10mm²
busbar system			40mm
min. cross-section			12 x 5mm²
max. cross-section			12 x 10mm²

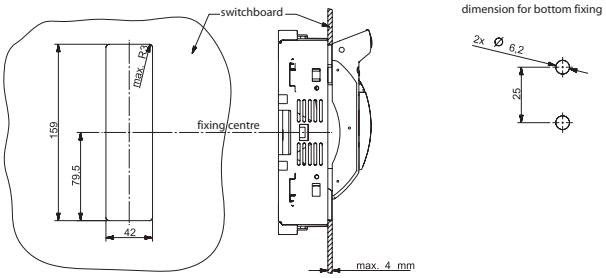
[1)] all poles in series

[2)] size 00

NH fuse-switch-disconnector MULTIBLOC
Size 00, for base mounting, 1-pole
08215.000000

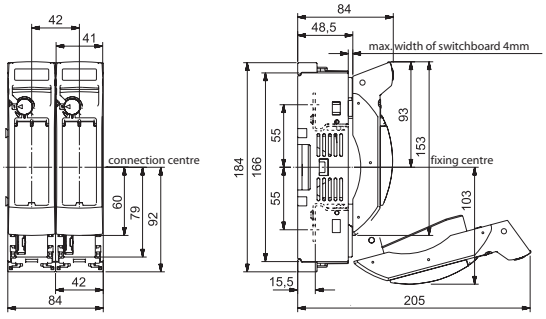
Dimensions in millimetres

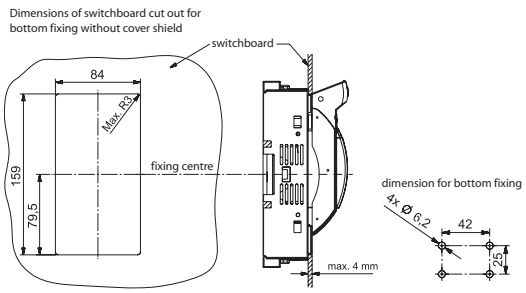




NH fuse-switch-disconnector MULTIBLOC
Size 00, for base mounting, 2-pole
08225.000000

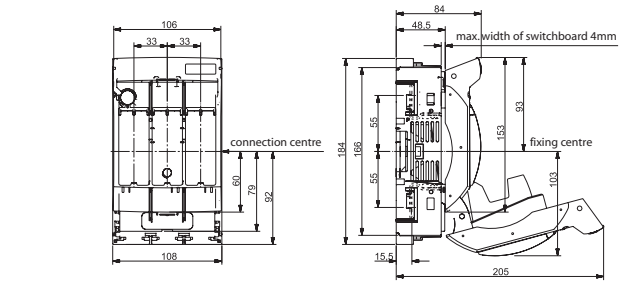
Dimensions in millimetres

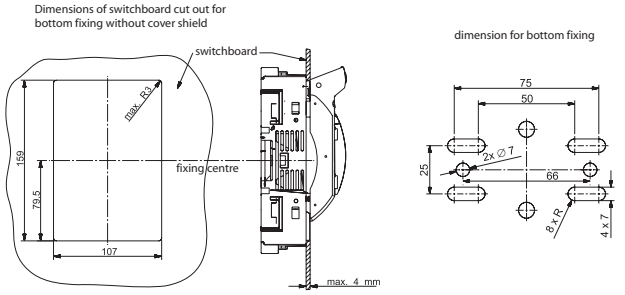




NH fuse-switch-disconnector MULTIBLOC
Size 00, for base mounting, 3-pole
08235.000000

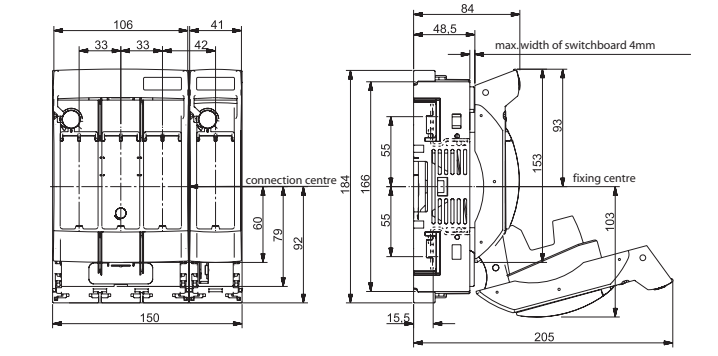
Dimensions in millimetres

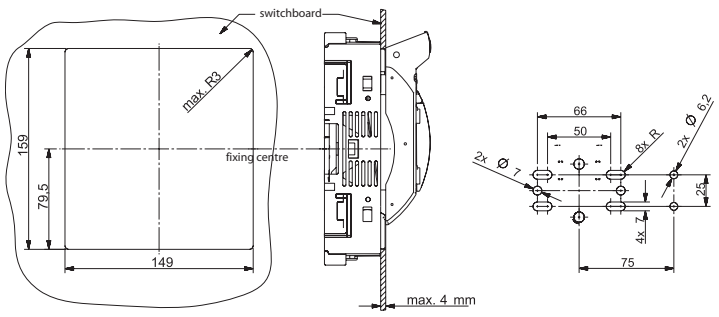




NH fuse-switch-disconnector MULTIBLOC
Size 00, for base mounting, 3+N
08245.000000

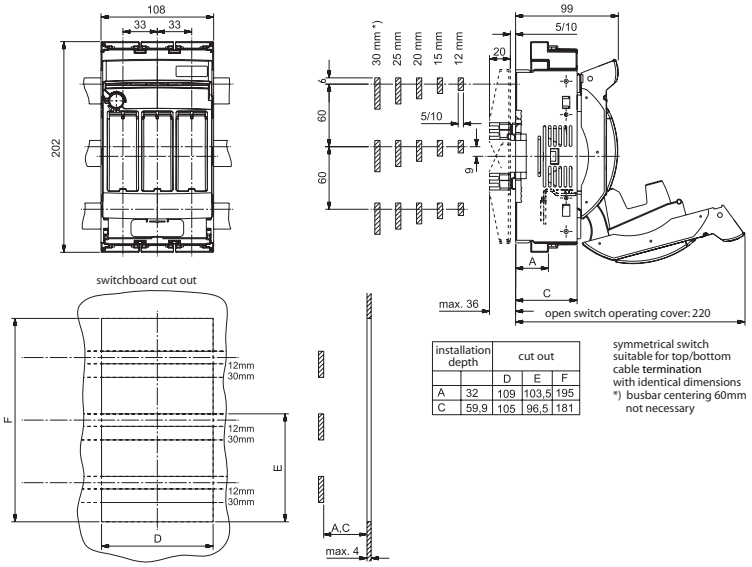
Dimensions in millimetres





NH fuse-switch-disconnector MULTIBLOC
Size 00, for busbar mounting (60 mm system), 3-pole
08265.000000

Dimensions in millimetres

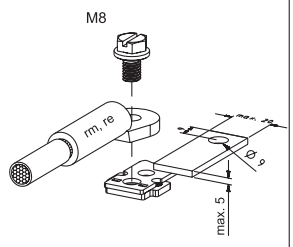
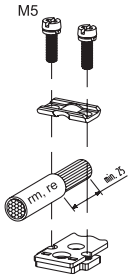
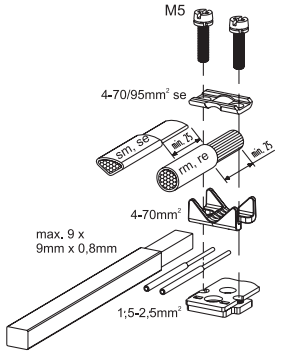


installation depth		cut out		
		D	E	F
A	32	109	103,5	195
C	59,9	105	96,5	181

symmetrical switch
suitable for top/bottom
cable termination
with identical dimensions
*) busbar centering 60mm
not necessary

NH fuse-switch-disconnector MULTIBLOC
Size 00, accessories
08245.000000

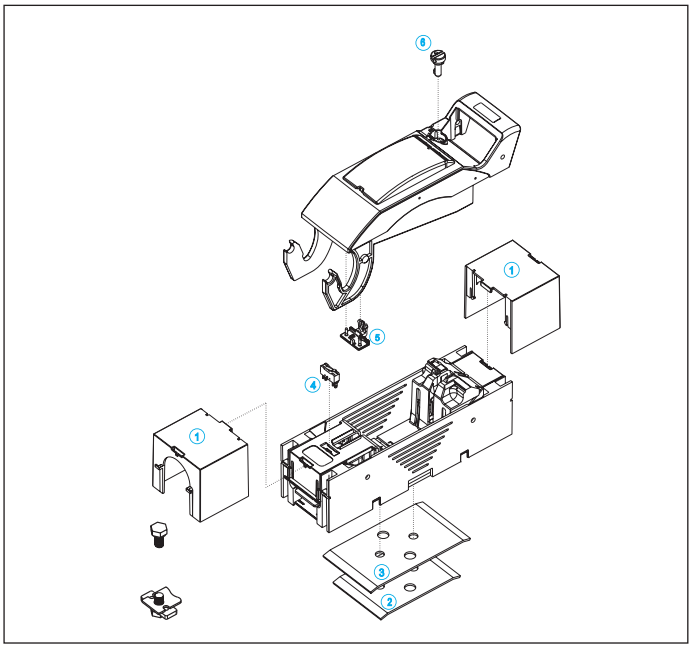
Cable connection

Cat. No.	08274.000000	08375.000000	08295.007405
term	Screw	clamp strap	Al/Cu clamp
cross section	Cu 16-70	Cu 4-50	Cu 1,5-70
(mm²)	Al 16-95	Al —	Al 1,5-70/95 se
M(an) (Nm)	15-17	3-4	3-4
			

NH fuse-switch-disconnector MULTIBLOC
Size 1, for base mounting, 1-pole
08211.000000

Constitution and accessories

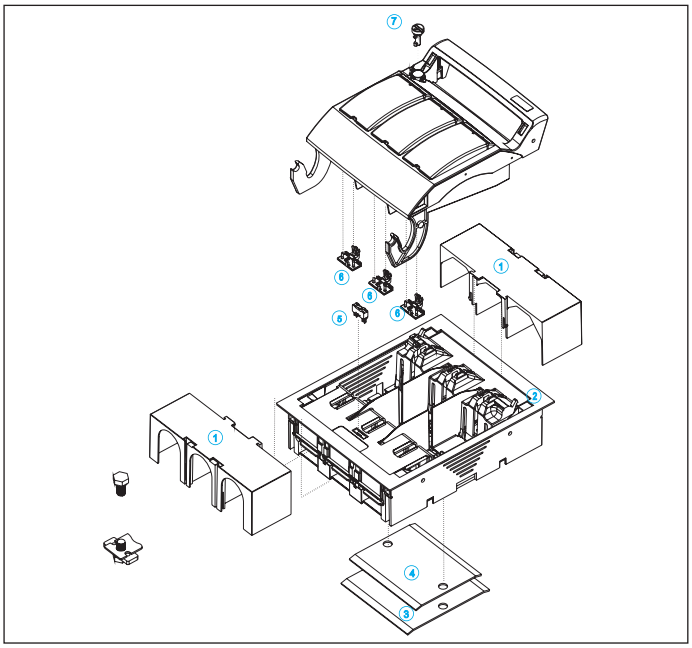
No.	description	standard	accessory	Catalogue No.
	Fuse-switch-disconnector NH1 250A 1-pole	•		08211.000000
1	cover for cable terminal connection, single pole		•	08231.004000
2	device for mounting on to 125mm DIN rails		•	08211.700000
3	device for mounting on to 150mm DIN rails		•	08211.500000
4	indicating switch for switch door position		•	08378.000000
5	locking device for window (e.g. against unauthorized connection)		•	08280.000000



NH fuse-switch-disconnector MULTIBLOC
Size 1, for base mounting, 3-pole
08231.000000

Constitution and accessories

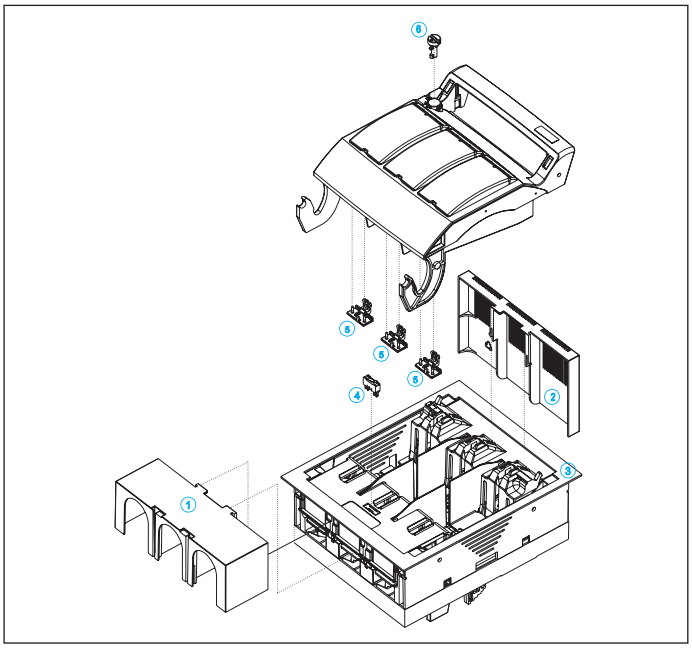
No.	description	standard	accessory	Catalogue No.
	Fuse-switch-disconnector NH1 250A 3-pole	•		08231.000000
1	cover for cable terminal connection, triple pole		•	08211.004000
2	cover shield for installation in distribution units 260 x 210mm		•	08231.001000
3	device for mounting on to 125mm DIN rails		•	08235.700000
4	device for mounting on to 150mm DIN rails		•	08235.500000
5	indicating switch for switch door position		•	08378.000000
6	locking device for window (e.g. against unauthorized connection)		•	08280.000000
7	cover sealing device		•	08281.000000



NH fuse-switch-disconnector MULTIBLOC
Size 1, for busbar mounting
(40mm and 60mm system), 3-pole
08261.000000

Constitution and accessories

No.	description	standard	accessory	Catalogue No.
	Fuse-switch-disconnector NH00 160A 3-pole	•		08261.000000
1	cover for cable terminal connection, triple pole		•	08211.004000
2	busbar touch protection		•	08231.009000
3	cover shield for installation in distribution units 260 x 210mm		•	08231.001000
4	indicating switch for switch door position		•	08378.000000
5	locking device for window (e.g. against unauthorized connection)		•	08280.000000
6	cover sealing device		•	08281.000000



NH fuse-switch-disconnector MULTIBLOC
Size 1, for base mounting, 1-pole
08211.000000

Technical data according to EN 60947

size			1
number of poles/phases			1
conventional free air thermal current with fuse-links I_{th}			250A
max. allowed power dissipation of NH fuse-links P_n			23W
conventional free air thermal current with solid links I_{th}			400A
max. allowed power dissipation of solid links P_n			2,6W
utilization-category	rated operational voltage U_e	rated operational current I_e	
AC 23 B	400V	I_e =	250A
AC 22 B	500V	I_e =	250A
AC 21 B	690V	I_e =	200A
DC 22 B	220V	I_e =	250A
rated operational voltage U_e			690V
rated insulation voltage U_i			1000V
rated impulse withstand voltage U_{imp}			12kV
rated frequency			50-60Hz
degree of protection			IP20
pollution degree			3
rated duty			uninterrupted duty
rated short-circuit making capacity with solid links[1)] I_{cm}			8,2kAsw
rated short-circuit making capacity with NH fuse-links			
400V AC			80kA; I_e = 250A
500V AC			80kA; I_e = 250A
690V AC			80kA; I_e = 200A
rated short-time withstand current with solid links I_{cw}			8kA/1s
power dissipation by I_{th} without NH fuse-links I_{th} = 250A			3,5W
power dissipation by I_{th} without solid links I_{th} = 400A			8W
cable terminal connection:			
standard terminal			M10
for cable lugs			2 x 150mm²Cu; 2 x 185mm²Al
for copper busbars with max. width			18mm

[1)] size 1

NH fuse-disconnector MULTIBLOC
Size 1, for base mounting, 3-pole
08231.000000

Technical data according to EN 60947

size			1
number of poles/phases			3
conventional free air thermal current with fuse-links I_{th}			250A
max. allowed power dissipation of NH fuse-links P_n			23W
conventional free air thermal current with solid links I_{th}			400A
max. allowed power dissipation of solid links P_n			2,6W
utilization-category	rated operational voltage U_e	rated operational current I_e	
AC 23 B	400V	I_e =	250A
AC 22 B	500V	I_e =	250A
AC 21 B	690V	I_e =	200A
DC 21 B[1)]	440V	I_e =	250A
rated operational voltage U_e			690V
rated insulation voltage U_i			1000V
rated impulse withstand voltage U_{imp}			12kV
rated frequency			50-60Hz
degree of protection			IP20
pollution degree			3
rated duty			uninterrupted duty
rated short-circuit making capacity with solid links[2)] I_{cm}			8,2kAsw
rated short-circuit making capacity with fuse-links			
400V AC			80kA; I_e = 250A
500V AC			50kA; I_e = 250A
690V AC			50kA; I_e = 200A
rated short-time withstand current with solid links I_{cw}			8kA/1s
power dissipation by I_{th} without NH fuse-links I_{th} = 250A			10W
power dissipation by I_{th} without solid links I_{th} = 400A			24W
cable terminal connection:			
standard terminal			M10
for cable lugs			2 x 150mm²Cu; 2 x 185mm²Al
for copper busbars with max. width			18mm

[1)] all poles in series

[2)] size 1

NH fuse-switch-disconnector MULTIBLOC
Size 1, for busbar mounting (40mm and 60mm system), 3-pole
08261.000000

Technical data according to EN 60947

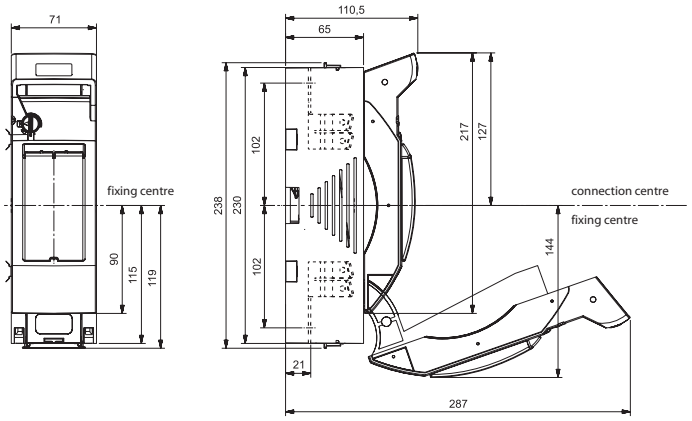
size			1
number of poles/phases			3
conventional free air thermal current with fuse-links I_{th}			250A
max. allowed power dissipation of NH fuse-links P_n			23W
conventional free air thermal current with solid links I_{th}			400A
max. allowed power dissipation of solid links P_n			2,6W
utilization-category	rated operational voltage U_e	rated operational current I_e	
AC 23 B	400V	I_e =	250A
AC 22 B	500V	I_e =	250A
AC 21 B	690V	I_e =	200A
DC 21 B[1)]	440V	I_e =	250A
rated operational voltage U_e			690V
rated insulation voltage U_i			1000V
rated impulse withstand voltage U_{imp}			12kV
rated frequency			50-60Hz
degree of protection			IP20
pollution degree			3
rated duty			uninterrupted duty
rated short-circuit making capacity with solid links[2)] I_{cm}			8,2kAsw
rated short-circuit making capacity with fuse-links			
400V AC			80kA; I_e = 250A
500V AC			50kA; I_e = 250A
690V AC			50kA; I_e = 200A
rated short-time withstand current with solid links I_{cw}			8kA/1s
power dissipation by I_{th} without NH fuse-links I_{th} = 250A			28W
cable terminal connection:			
standard terminal			M10
for cable lugs			2 x 150mm²Cu; 2 x 185mm²Al
for copper busbars with max. width			18mm
busbar terminals:			
busbar system			60mm
min. cross-section			12 x 5mm²
max. cross-section			30 x 10mm²
busbar system			40mm
min. cross-section			12 x 5mm²
max. cross-section			12 x 10mm²

[1)] all poles in series

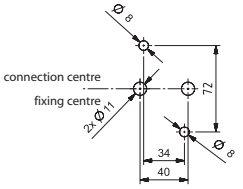
[2)] size 1

NH fuse-switch-disconnector MULTIBLOC
Size 1, for base mounting, 1-pole
08211.000000

Dimensions in millimetres

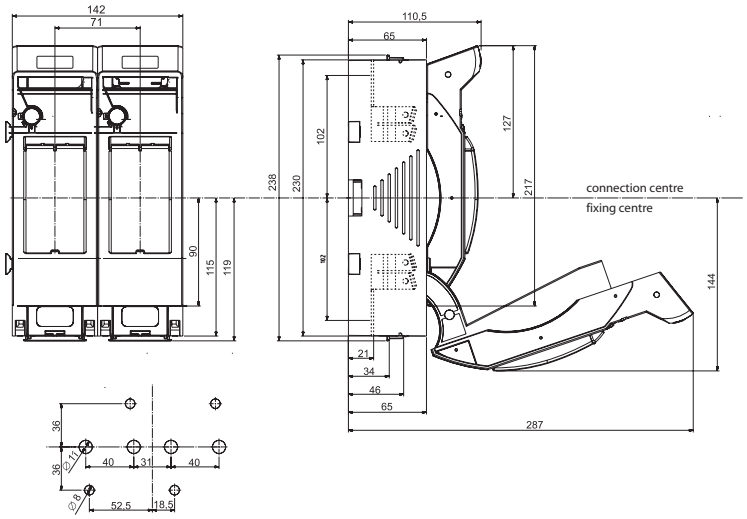


dimension for bottom fixing



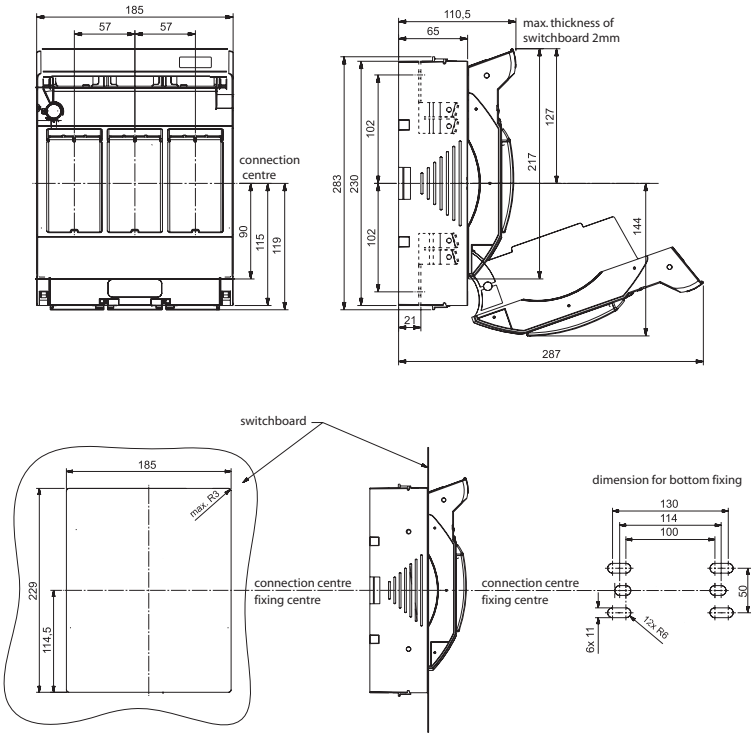
NH fuse-switch-disconnector MULTIBLOC
Size 1, for base mounting, 2-pole
08221.000000

Dimensions in millimetres



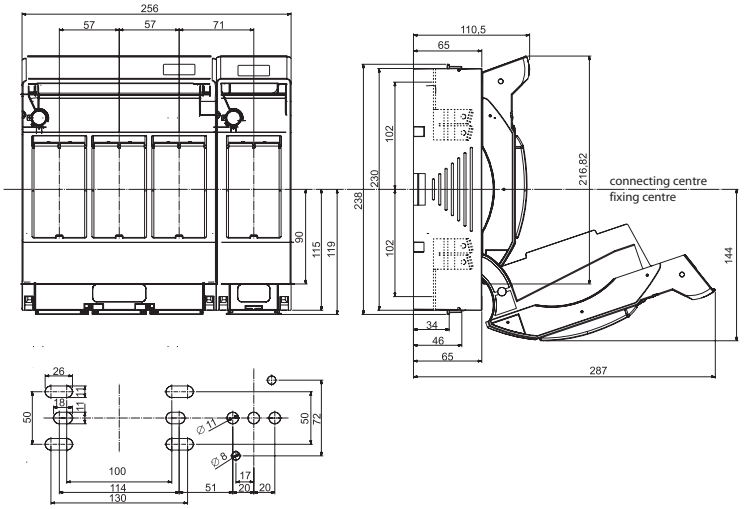
NH fuse-switch-disconnector MULTIBLOC
Size 1, for base mounting, 3-pole
08231.000000

Dimensions in millimetres



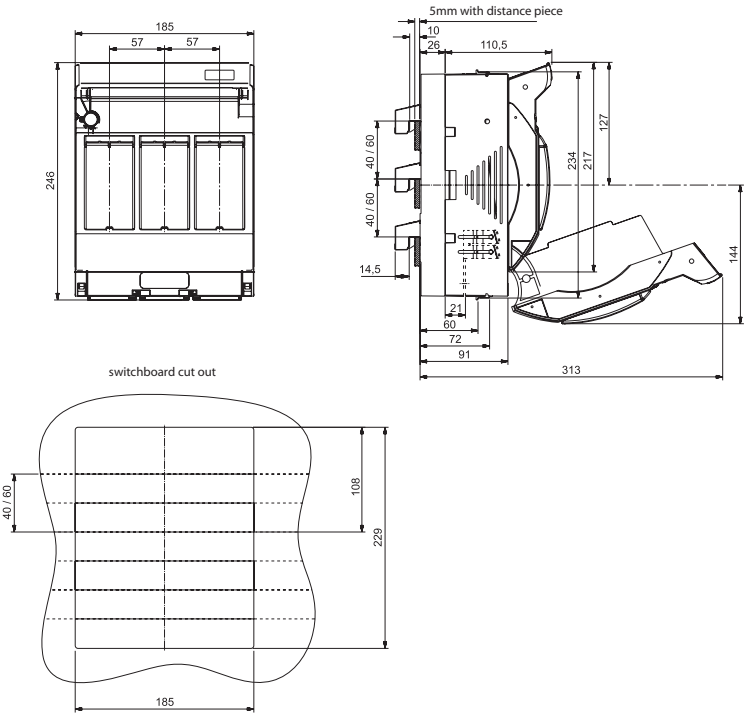
NH fuse-switch-disconnector MULTIBLOC
Size 1, for base mounting, 3+N
08241.000000

Dimensions in millimetres



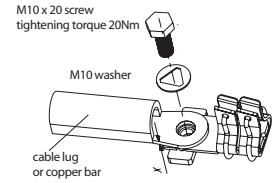
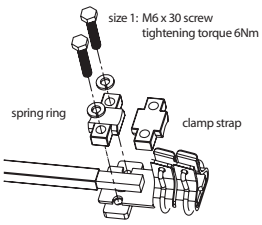
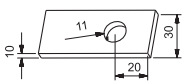
NH fuse-switch-disconnector MULTIBLOC
Size 1, for busbar mounting (40mm and 60mm system), 3-pole
08261.000000

Dimensions in millimetres



NH fuse-switch-disconnector MULTIBLOC
Size 1, accessories

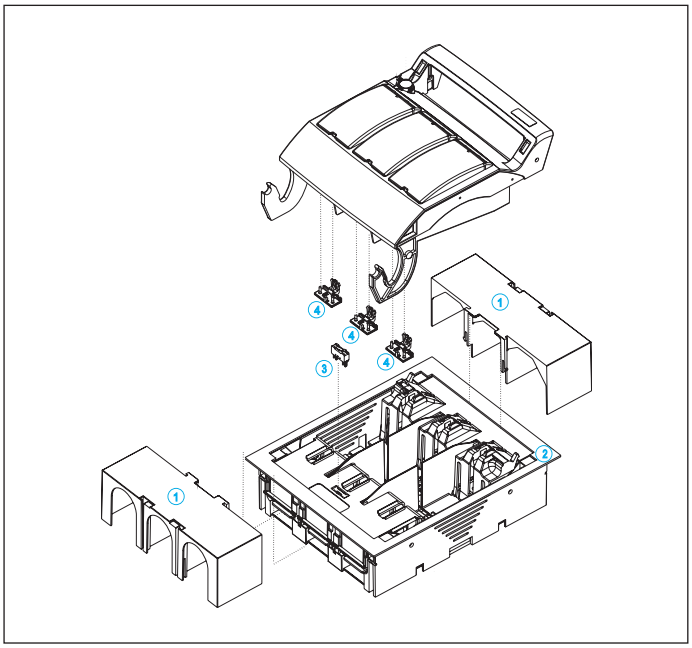
Cable connection

terminal connection: screw (standard)	with clamp terminal set 08276.000000 (accessory)
 size 1: for values x smaller than 2,5mm use washer in addition	
size 1: for cable lugs in accordance with DIN 46234 max. 150 mm² DIN 46235 max. 150 mm² DIN 46329 max. 185 mm² for copper bars 	size 1: for round stranded conductors 70-150mm² for bars or laminated copper 18 x 7-18

NH fuse-switch-disconnector MULTIBLOC Size 2, for base mounting, 3-pole 08232.000000

Constitution and accessories

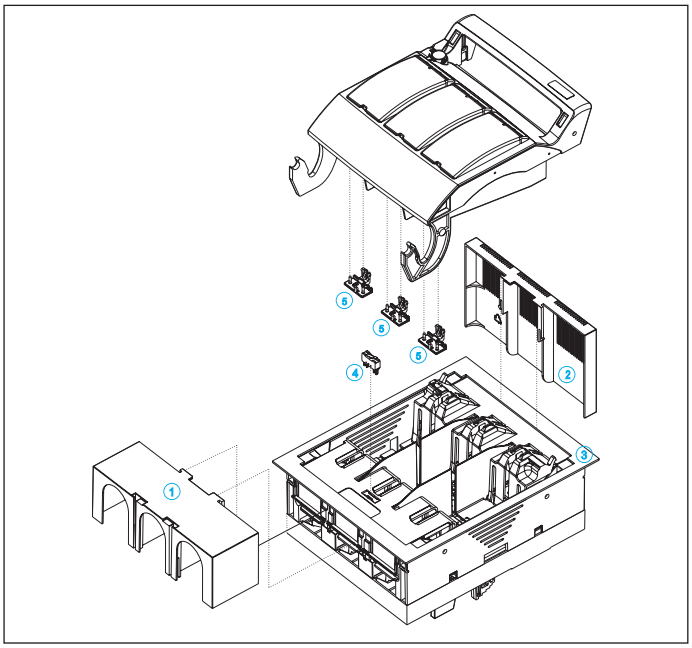
No.	description	standard	accessory	Catalogue No.
	Fuse-switch-disconnector NH2 400A 3-pole	•		08232.000000
1	cover for cable terminal connection, triple pole		•	08232.004000
2	cover shield for installation in distribution units for one switch 230 x 300mm		•	08232.001000
3	indicating switch for switch door position		•	08378.000000
4	locking device for window (e.g. against unauthorized connection)		•	08280.000000



NH fuse-switch-disconnector MULTIBLOC Size 2, for busbar mounting (40mm and 60mm system), 3-pole 08262.000000

Constitution and accessories

No.	description	standard	accessory	Catalogue No.
	Fuse-switch-disconnector NH2 400A 3-pole	•		08262.000000
1	cover for cable terminal connection, triple pole		•	08232.004000
2	busbar touch protection		•	08232.009000
3	cover shield for installation in distribution units for one switch 230 x 300mm		•	08232.001000
4	indicating switch for switch door position		•	08378.000000
5	locking device for window (e.g. against unauthorized connection)		•	08280.000000



NH fuse-switch-disconnector MULTIBLOC
Size 2, for base mounting, 3-pole
08232.000000

Technical data according to EN 60947

size			2
number of poles/phases			3
conventional free air thermal current with fuse-links I_{th}			400A
max. allowed power dissipation of NH fuse-links P_n			34W
conventional free air thermal current with solid links I_{th}			630A
max. allowed power dissipation of solid links P_n			9W
utilization-category	rated operational voltage U_e	rated operational current I_e	
AC 23 B	400V	I_e =	400A
AC 22 B	500V	I_e =	400A
AC 21 B	690V	I_e =	315A
DC 21 B[1)]	440V	I_e =	400A
rated operational voltage U_e			690V
rated insulation voltage U_i			1000V
rated impulse withstand voltage U_{imp}			12kV
rated frequency			50-60Hz
degree of protection			IP20
pollution degree			3
rated duty			uninterrupted duty
rated short-circuit making capacity with solid links[2)] I_{cm}			10,6kAsw
rated short-circuit making capacity with fuse-links			
400V AC			80kA; I_e = 400A
500V AC			80kA; I_e = 400A
690V AC			80kA; I_e = 315A
rated short-time withstand current with solid links I_{cw}			13kA/1s
power dissipation I_{th} without NH fuse-links I_{th} = 400A			20W
power dissipation I_{th} without solid links I_{th} = 630A			50W
cable terminal connection:			
standard terminal			M10
for cable lugs			2 x 185mm²Cu; 2 x 240mm²Al
for copper busbars with max. width			35mm
busbar terminal:			
standard terminal			–

[1)] all poles in series

[2)] size 2

NH fuse-switch-disconnector MULTIBLOC
Size 2, for busbar mounting (40mm and 60mm system), 3-pole
08262.000000

Technical data according to EN 60947

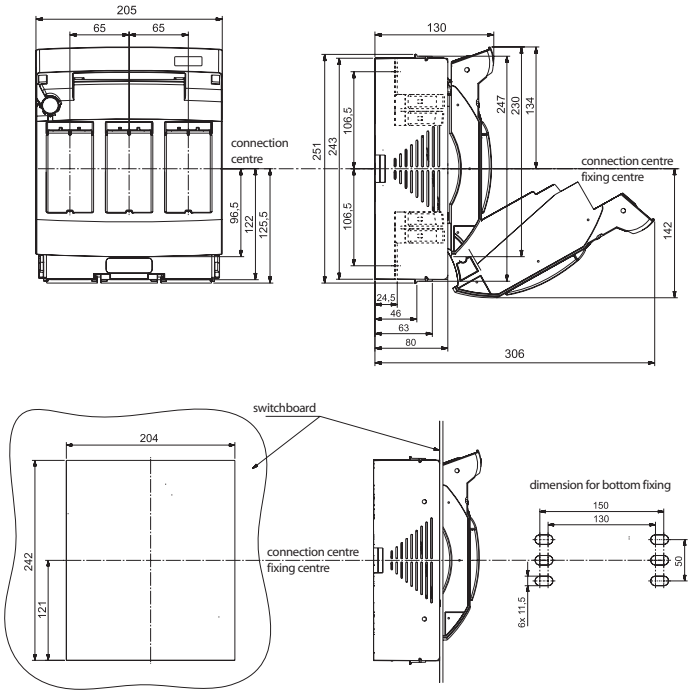
size			2
number of poles/phases			3
conventional free air thermal current with fuse-links I_{th}			400A
max. allowed power dissipation of NH fuse-links P_n			34W
conventional free air thermal current with solid links I_{th}			530A
max. allowed power dissipation of solid links P_n			9W
utilization-category	rated operational voltage U_e	rated operational current I_e	
AC 23 B	400V	I_e =	400A
AC 22 B	500V	I_e =	400A
AC 21 B	690V	I_e =	315A
DC 21 B[1)]	440V	I_e =	400A
rated operational voltage U_e			690V
rated insulation voltage U_i			1000V
rated impulse withstand voltage U_{imp}			12kV
rated frequency			50-60Hz
degree of protection			IP20
pollution degree			3
rated duty			uninterrupted duty
rated short-circuit making capacity with solid links[2)] I_{cm}			10,6kAsw
rated short-circuit making capacity with fuse-links			
400V AC			80kA; I_e = 400A
500V AC			80kA; I_e = 400A
690V AC			80kA; I_e = 315A
rated short-time withstand current with solid links I_{cw}			13kA/1s
power dissipation I_{th} without NH fuse-links = 250A			53W
cable terminal connection:			
standard terminal			M10
for cable lugs			2 x 185mm²Cu; 2 x 240mm²Al
for copper busbars with max. width			35mm
busbar terminal:			
busbar system			60mm
min. cross-section			12 x 5mm²
max. cross-section			12 x 10mm²
busbar system			40mm
min. cross-section			12 x 5mm²
max. cross-section			12 x 10mm²

[1)] all poles in series

[2)] size 2

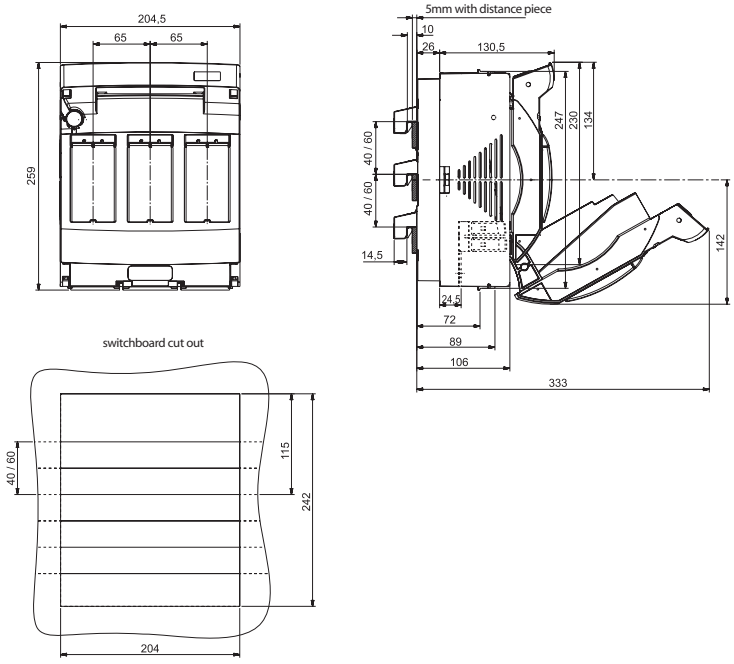
NH fuse-switch-disconnector MULTIBLOC
Size 2, for base mounting, 3-pole
08232.000000

Dimensions in millimetres



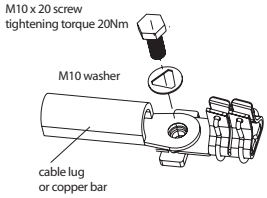
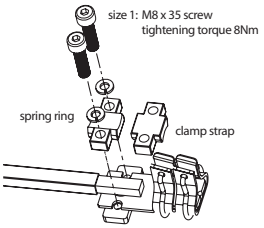
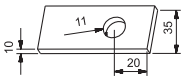
NH fuse-switch-disconnector MULTIBLOC
Size 1, for busbar mounting (40mm and 60mm system), 3-pole
08262.000000

Dimensions in millimetres



NH fuse-switch-disconnector MULTIBLOC
Size 2, accessories

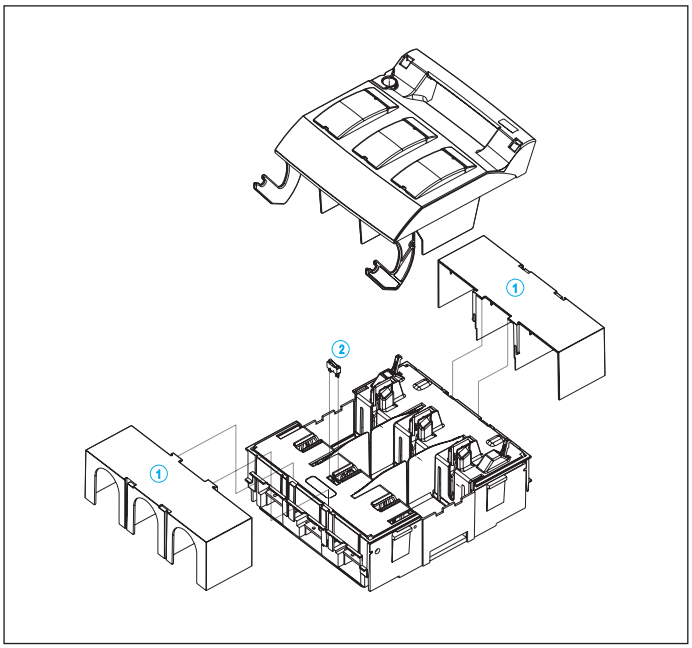
Cable connection

terminal connection: screw (standard)	with clamp terminal set 08277.000000 (accessory)
	
size 2: for cable lugs in accordance with DIN 46234 max. 240 mm² DIN 46235 max. 185 mm² DIN 46329 max. 240 mm² for copper bars 	size 2: for round stranded conductors 120-240mm² for bars or laminated copper 21x 3-14

NH fuse-switch-disconnector MULTIBLOC
Size 3, for base mounting, 3-pole
08233.000000

Constitution and accessories

No.	description	standard	accessory	Catalogue No.
	Fuse-switch-disconnector NH3 630A 3-pole	•		08233.000000
1	cover for cable terminal connection, triple pole		•	08233.004000
2	indicating switch for switch door position		•	08378.000000



NH fuse-switch-disconnector MULTIBLOC
Size 3, for base mounting, 3-pole
08233.000000

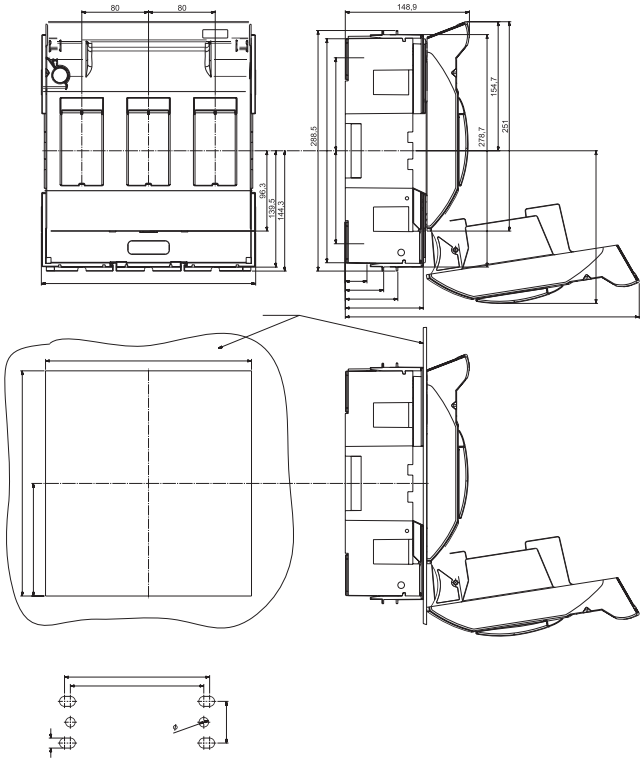
Technical data according to EN 60947

size			3
number of poles/phases			3
conventional free air thermal current with fuse-links I_{th}			630A
max. allowed power dissipation of NH fuse-links P_n			48W
conventional free air thermal current with solid links I_{th}			780A
max. allowed power dissipation of solid links P_n			17,5W
utilization-category	rated operational voltage U_e	rated operational current I_e	
AC 23 B	400V	I_e =	630A
AC 22 B	500V	I_e =	630A
AC 21 B	690V	I_e =	500A
rated operational voltage U_e			690V
rated insulation voltage U_i			1000V
rated impulse withstand voltage U_{imp}			12kV
rated frequency			50-60Hz
degree of protection			IP20
pollution degree			3
rated duty			uninterrupted duty
rated short-circuit making capacity with solid links[1)] I_{cm}			18,6kAsw
rated short-circuit making capacity with fuse-links			
400V AC			80kA; I_e = 630A
500V AC			80kA; I_e = 630A
690V AC			50kA; I_e = 500A
rated short-time withstand current with solid links I_{cw}			18kA/1s
power dissipation by I_{th} without NH fuse-links			40W
power dissipation by I_{th} without solid links			150W
cable terminal connection:			
standard terminal			M12
for cable lugs			2 x 240mm²Cu; 2 x 300mm²Al
for copper busbars with max. width			40mm

[1)] size 3

NH fuse-switch-disconnector MULTIBLOC
Size 3, for base mounting, 3-pole
08233.000000

Dimensions in millimetres



MULTIVERT

NH fuse-switch-disconnector
Size NH00,~690V, 160A
width 50mm
with cable cover included
output on top or bottom can be chosen, mounting without drilling for busbar system **60mm**
thikness of bars 10mm
width 20-30mm
3-pole switching

Size	Rated current in A	Terminals	Catalogue No.	Weight in g/piece	Packaging
NH00	160	Screw M8	08389.000600	1120	1

MULTIVERT

NH fuse-switch-disconnector
Size NH00,~690V, 160A
width 50mm
with cable cover included
output on top or bottom can be chosen, mounting with screws, mounting without drilling possible with claw-type clamp 08376.000000 (accessory).
for busbar system **100mm**
3-pole switching

Size	Rated current in A	Terminals	Catalogue No.	Weight in g/piece	Packaging
NH00	160	Screw M8	08389.001000	1120	1
with integrated cabling for connection of the Electronic System Monitor					
NH00	160	Screw M8	08389.081000	1470	1

MULTIVERT

NH fuse-switch-disconnector
Size NH00,~690V, 160A
width 50mm
with cable cover included
output on top or bottom can be chosen, mounting with screws, mounting without drilling possible with claw-type clamp 08376.000000 (accessory).
for busbar system **185mm**
1-pole switching

Size	Rated current in A	Terminals	Catalogue No.	Weight in g/piece	Packaging
NH00	160	Screw M8	08389.001850	1900	1

MULTIVERT

NH fuse-switch-disconnector
Size NH1 to NH3
~690V
width 100mm
output on top or bottom can be chosen, mounting with screws, mounting without drilling possible with claw-type clamp 08366.000000 (accessory).
for busbar system **185mm**

Size	Rated current in A	Terminals	Catalogue No.	Weight in g/piece	Packaging
1-pole switching					
NH1	250	Bolt M10	08391.000000	4520	1
NH2	400	Bolt M12	08392.000000	4600	1
NH3	630	Bolt M12	08393.000000	5430	1
3-pole switching					
NH1	250	Bolt M10	08395.000000	4670	1
NH2	400	Bolt M12	08396.000000	4760	1
NH3	630	Bolt M12	08397.000000	5590	1
3-pole switching, with integrated cabling for connection of the Electronic System Monitor					
NH1	250	Bolt M10	08395.080000	5100	1
NH2	400	Bolt M12	08396.080000	5200	1
NH3	630	Bolt M12	08397.080000	6100	1

Adaptor for MULTIVERT

for mounting NH00 100mm switches in the 185mm system. The adaptors bring the height into line with MULTIVERT 250A, 400A, 630A in case of combined installation.
For alignment with the length of the 185mm system additional covers 08374.000000 (accessory) are required.

Size	Version	Catalogue No.	Weight in g/piece	Packaging
NH00	single for 185mm system	08379.011850	500	1
NH00	double for185mm system	08379.021850	1120	1

Single adaptor for MULTIVERT

Size NH00,185mm
The adaptors bring the height into line with MULTIVERT 250A, 400A, 630A in case of combined installation.
Only for 185mm.

Size	Version	Catalogue No.	Weight in g/piece	Packaging
NH00	single for 185mm system	08379.031850	400	1

Double adaptor for MULTIVERT

Size NH00,185mm
The adaptors bring the height into line with MULTIVERT 250A, 400A, 630A in case of combined installation.
Only for 185mm.

Size	Version	Catalogue No.	Weight in g/piece	Packaging
NH00	double for 185mm system	08379.041850	700	1

Cover for MULTIVERT NH00, 100mm

for alignment with length of the 185mm system
Only needed, when an adaptor is used (1set = 2 covers, 1 cover for top, 1 cover for bottom).

Size	Catalogue No.	Weight in g/piece	Packaging
NH00	08374.000000	100	1

Cover for adaptation of MULTIVERT Size NH00, 185mm

to MULTIVERT sizes NH1, NH2, NH3.
(Only needed when output on top)
(1 set = 2 covers, 1 cover for top, 1 cover for bottom)

Size	Catalogue No.	Weight in g/piece	Packaging
NH00	08373.100000	10	1

Cable cover

Sizes NH1 to NH3
The cable cover for output on bottom is integrated in the switches.
An extension cover 08381.000000 (accessory) can be added.
For output on top cable covers 08380.000000 or 08380.000005 are required.

Size	Version	Catalogue No.	Weight in g/piece	Packaging
NH1 bis 3	Cable cover, top, for panels with central cover, lenght 190mm	08380.000005	125	1
NH1 bis 3	Cable cover, top, low version, for panels with central cover, height reduced by 16mm, lenght 145mm	08380.000000	170	1
NH1 bis 3	Extension cover, bottom (70mm long)	08381.000000	120	1

Support angle for the support of a central cover plate

1 set = 4 angles
The angles are fixed on the side of the switch and support the central cover plate.

Size	Catalogue No.	Weight in g/piece	Packaging
NH00 to 3	08382.000005	5	1

Cover profile

length 605mm
Screwed on the side of the switch to support the central cover plate

Size	Catalogue No.	Weight in g/piece	Packaging
NH1 to 3	08382.000000	150	1

Residual field

for 185mm systems
For mounting into central cover plate.
Legth 630mm

Size	Version	Catalogue No.	Weight in g/piece	Packaging
NH00	50mm	08372.000500	500	1
NH1 to 3	100mm	08372.001000	600	1

Craw-type clamps

for mounting without drilling
for busbar thickness 5-10mm
1 set = 3 clamps

Size	Catalogue No.	Weight in g/piece	Packaging
NH00	08376.000000	100	1
NH1 to 3	08366.000000	30	1

Terminal sets

(1 set = 3 pieces)
for modification of the terminal configuration

verwendbar für	Ausführung	Catalogue No.	Weight in g/piece	Packaging
NH00	Screw M8 with spring washer	08274.000000	34	1
NH00	NH00 clamp terminal set Cu 4-70mm²	08375.000000	34	1
NH00	NH00 clamp terminal set for Al and Cu 1,5-70mm²	08295.007405	76	1

Microswitch

for monitoring of the switch cover position

verwendbar für	Catalogue No.	Weight in g/piece	Packaging
Vertical NH00-3, horizontal NH1-3	08378.000000	60	1

Electronic System Monitor

for fuse monitoring
for phase monitoring
mounted on top of switch

Size	Catalogue No.	Weight in g/piece	Packaging
NH00	08386.100000	350	1
NH1 to 3	08386.200000	400	1

Label holder

Size	Catalogue No.	Weight in g/piece	Packaging
NH00	08377.000000	10	1
NH1 to 3	08385.000005	25	1

Multivert Vertical NH Fuse-Switch-Disconnectors

Overview

MULTIVERT vertical NH fuse-switch-disconnectors meet all the functions of NH fuse-switch-disconnectors. MULTIVERT are designed for direct installation on to busbar systems in triple pole arrangement.

Positions for installation:
- Vertical (standard)
- Horizontal (for vertical busbar systems)

Product range
- Vertical NH fuse-switch-disconnectors 160A to 630A
- Direct installation on to 60mm, 100mm und 185mm bus bar systems
- 1-pole or 3-pole switching

MULTIVERT NH fuse-switch-disconnectors are designed for NH fuse-links according to IEC/EN 60 269-2 und VDE 0636: size 00, 160A; size 1, 250A; size 2, 400A; and size 3, 630A.
The system is a modular system that allows the installation of individual components. MULTIVERT offers the user the possibility of fast and easy installation as well as a high degree of protection during installation and maintenance.

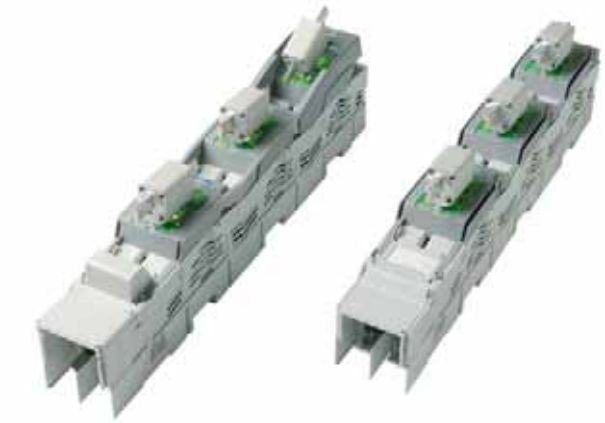
All products of the MULTIVERT series are developed and designed to the latest standards and regulations. MULTIVERT NH fuse-switch-disconnectors are tested and certified to IEC/EN 60947-3 (VDE 0660 Teil 107).

Applications:
- Feeder pillars
- Transformer substations
- Switch boards for industrial applications
- Residential and industrial distribution units
- Cable distribution cabinets

Product advantages
- Versions for 1-pole and for 3-pole switching

- Suitable for top/bottom cable connection (chosen during installation)
- Direct installation on to 60mm, 100mm and 185mm busbar systems without disassembly of equipment
- Installation on to live busbars
- Installation without drilling via hooked clamps is possible

- Horizontal or vertical installation possible
- Materials used are free of halogen, self extinguishing, marked for classified recycling
- Touch protection IP30 with central cover
- Park position with visible disconnection



- Combined handle for version with 1-pole switching with reduced installation depth of 158mm with handle in closed position


- Direct installation of ESM Electronic System Monitor for fuse monitoring. Integration of cabling and all instrument leads contained in the base.

padlocking and sealing device for switch operation cover

voltage test

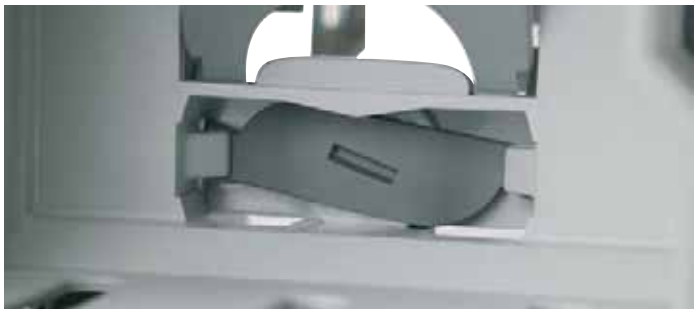
supplementary exterior installation of indicating switch for switch door positor 08378.000000 (acessory)

integrated shroud for bottom cable termination with large labelling area


busbar cover closes automatically when switch operating cover with inserted fuse-link is closed

support angle for installation of central cover 08382.000005

interlocking of connection between main base and touch protection



Cover shrouds for cable termination MULTIVERT 250A, 400A, 630A

Standard design:
Integrated shroud for bottom cable termination

Extension shroud
for bottom cable termination
(accessory)

08381.000000
(accessory)

Shrouds
for top cable termination
(accessory)

08380.000000
(accessory)

08380.000005
(accessory)

Cable connection MULTVERT 160A

screws (standard)

clamp straps 08375.000000 (accessory)

Al/Cu clamp 08375.007405 (accessory)

Cable connection MULTIVERT 250A, 400A, 630A with bolt M8 or M10

Design

The base is touch protected (degree of protection IP 20). The main base consists of glass fibre strengthened, thermically high stable, self extinguishing synthetic material (thermosetting plastic[1]) free of halogen. There are no metal parts except the current carrying contact system.

Contact system
The contact system is corrosion resistant as well as torsion resistant. The copper contacts are galvanic surface coated. The contact springs are made of stainless steel.

Touch protection
The one-piece protective cover consists of extra strengthened, thermically high stable, self extinguishing thermosetting plastics free of halogen. The cover is interlocked to the main base and does not have to be removed for installation purposes.

Switch operating cover
The switch operating cover consists of extra strengthened, self extinguishing thermosetting plastics free of halogen. The single pole switching operating cover of MULTIVERT 250A, 400A and 630A is equipped with a combined handle which allows a reduced installation depth of 158mm in closed position. The switch operating cover has large windows, which enables the label and the indicator of the inserted NH fuse-link to be clearly seen. The slidable windows have testing holes to check voltage or the switching condition of the fuse-links. During measurement and after withdrawing the test leads the degree of protection is IP30 with central cover. The switch operating cover of MULTIVERT 250A, 400A and 630A can be sealed and locked in closed position. Park position for switch operating cover is possible for MULTIVERT units with single pole switching 250A, 400A and 630A as well as triple pole switching 160A. For all MULTIVERT units 250A, 400A and 630A NH fuse-links are snapped on to the windows of the switch operating cover for park position. All MULTIVERT can be padlocked and sealed in closed position.

[1] Main base of Multivert 160A, single pole switching: thermoplastic

Functions

Protection [1]
- Protection of circuits against overload and short circuit (current limiting)
- Protection of equipment and installations for short circuits up to 120kA against dynamic short circuit effects through current limitation
- Selective isolation of defective circuits up to highest short circuit currents of 120kA
- Protection of equipment (e.g. short circuit protection of circuit breakers, busbar systems and contactors))
- Safe load breaking, even with frequent short circuits, as fuse-links are replaced
- Protection of persons and animals against shock hazards (in TN-systems)

Disconnection
- large visible isolating distance

Short circuits
- dynamic short- circuit withstand with NH fuse-links up to 120kA

Switching
- safe short circuit making with NH fuse-links up to 80kA[2]
- utilization category (AC 23 B)

Touch protection
- touch protection IP 20 for complete fuse-switch-disconnector
- IP 30 with central cover

Electromagnetic compatibility
- in accordance with EN 60947-3

[1] with fuse-links inserted
[2] see technical data

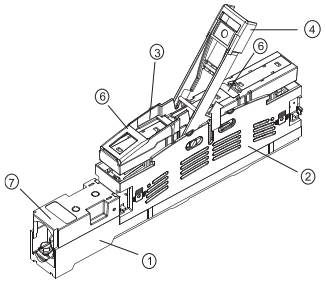
Standard service, mounting and transport conditions (see MULTIBLOC page 15)

NH vertical fuse-switch-disconnector MULTIVERT
Size 00, 160A
08389.000600, 08389.001000 und 08389.001850

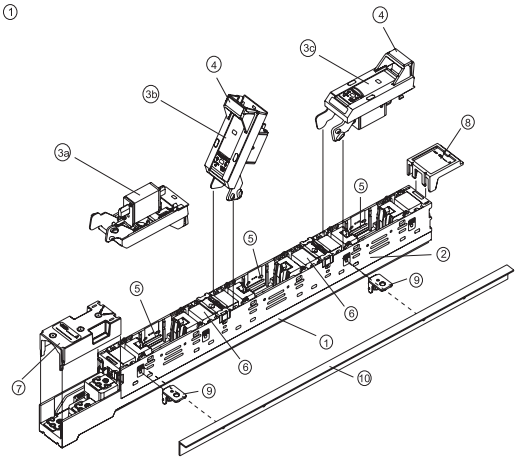
Constitution and accessories

No.	description	standard	accessory	Catalogue No.
1	main base	•		
2	protection cover	•		
3	switch operating cover	•		
3a	park pasition - MULTIVERT 160A, 3x single pole switching	•		
3b	open - MULTIVERT 160A, 3x single pole switching	•		
3c	closed - MULTIVERT 160A, 3x single pole switching	•		
4	handle	•		
5	busbar fixing access/protectiv door	•		
6	labelling area/label	•		
7	cover shroud	•		
8	label holder		•	08377.000000
9	support angle		•	08382.000005
10	cover shield for support of the central cover, length 605mm, for MULTIVERT 160A 08389.001850		•	08382.000000

MULTIVERT 160A/100mm 1x triple pole switching



MULTIVERT 160A/185mm
3x single pole switching



NH vertical fuse-switch-disconnector MULTIVERT
Size 00, 160A
08389.000600, 08389.001000 und 08389.001850

Technical data according to EN 60947

			MULTIVERT 160A	
			1 x triple pole switching	3 x single pole switching
size			00	00
number of poles/phases			3	3
conventional free air thermal current with NH fuse-links I_{th}			160A	160A
max. allowed power dissipation of NH fuse-links P_n			12W	12W
conventional free air thermal current with solid links I_{th}			250A	200A
max. allowed power dissipation of solid links P_n			1,2W	1,2W
utilization-category	rated operational voltage U_e	rated operational current I_e		
AC 23 B	400V	I_e =	160A	–
AC 22 B	500V	I_e =	160A	–
AC 21 B	690V	I_e =	100A	–
AC 22 B	400V	I_e =	–	160A
AC 20 B	690V	I_e =	–	160A
rated operational voltage U_e			690V AC	690V AC
rated insulation voltage U_i			1000V	1000V
rated impulse withstand voltage U_{imp}			8kV	4kV
rated frequency			50-60Hz	50-60Hz
degree of protection			IP30	IP20
pollution degree			3	3
rated duty			uninterrupted duty	uninterrupted duty
rated short-circuit making capacity with solid links[1] I_{cm}			4,5kA	6,3kA
rated short-circuit making capacity with fuse-links				
400V AC			80kA	50kA
500V AC			80kA	50kA
690V AC			50kA	–
rated short-time withstand current with solid links[1] I_{cw}			4,5kAsw/1s	4,2kAsw/1s
power dissipation by I_{th} without NH fuse-links			20W	[2]
power dissipation by I_{th} without solid links[3]			49W	[2]
cable terminal connection:				
standard terminal			M8	M8
for copper busbars with max. width			20mm	20mm
for cable lugs max.			70mm²	70mm²
busbar terminal connection:				
standard terminal			M8	M8
hooked clamps for busbars with thickness			5-10mm	5-10mm
busbar system			60, 100, 185mm	185mm

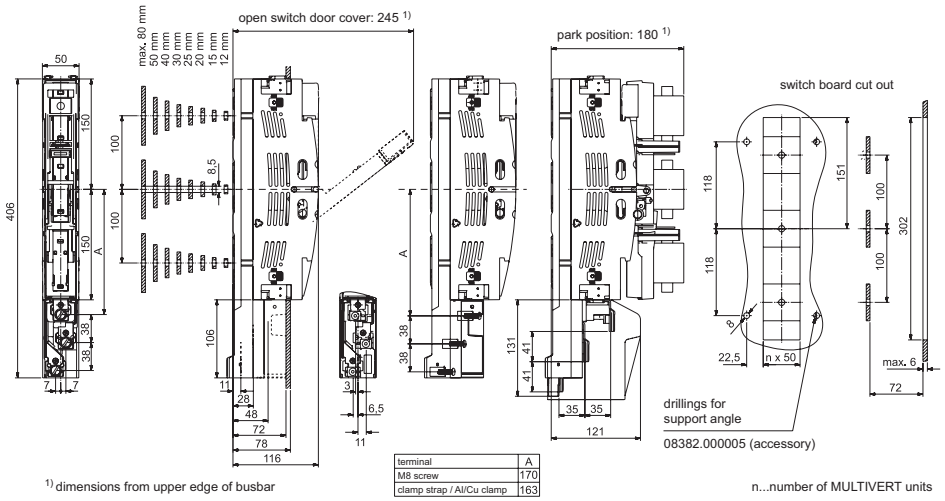
[1] size 00

[2] on request

[3] I_{th} = 250A for MULTIVERT triple pole switching
I_{th} = 250A for MULTIVERT single pole switching

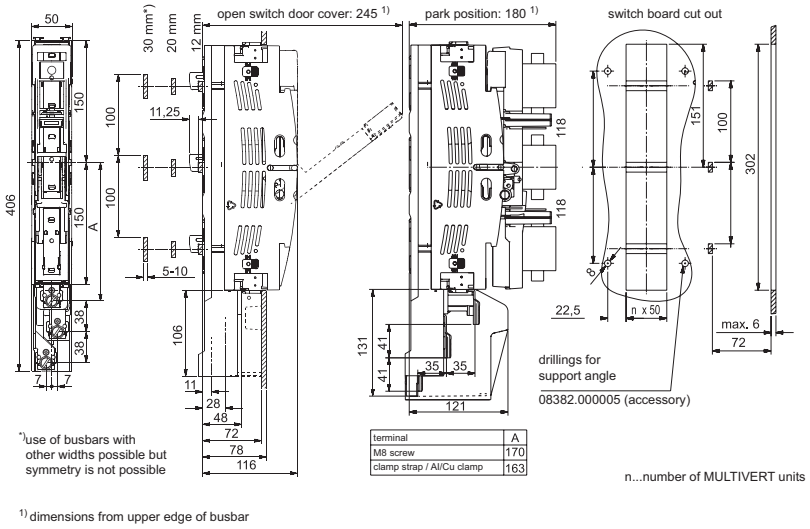
NH vertical fuse-switch-disconnector MULTIVERT
Size 00, 160A, direct installation with screws on to 100mm busbar systems
08389.001000

Dimensions in millimetres



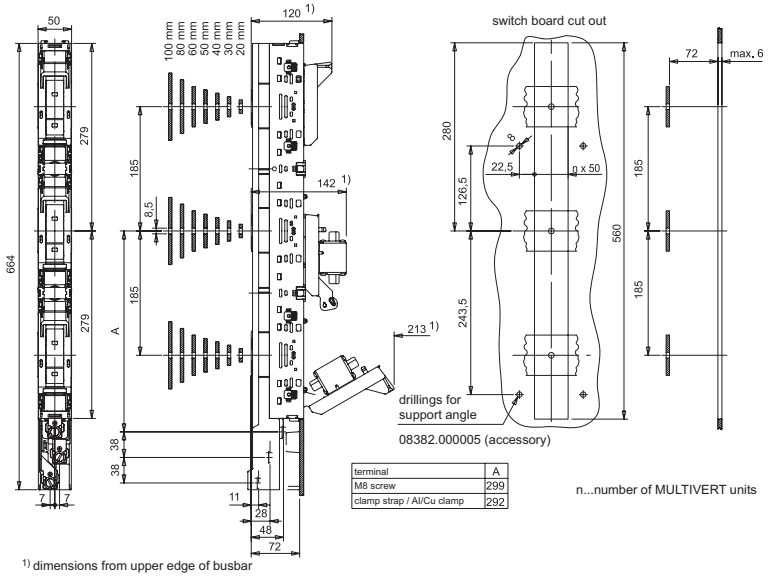
NH vertical fuse-switch-disconnector MULTIVERT
Size 00, 160A, direct installation without drilling with hooked clamps on to 100mm busbar systems
08389.001000

Dimensions in millimetres



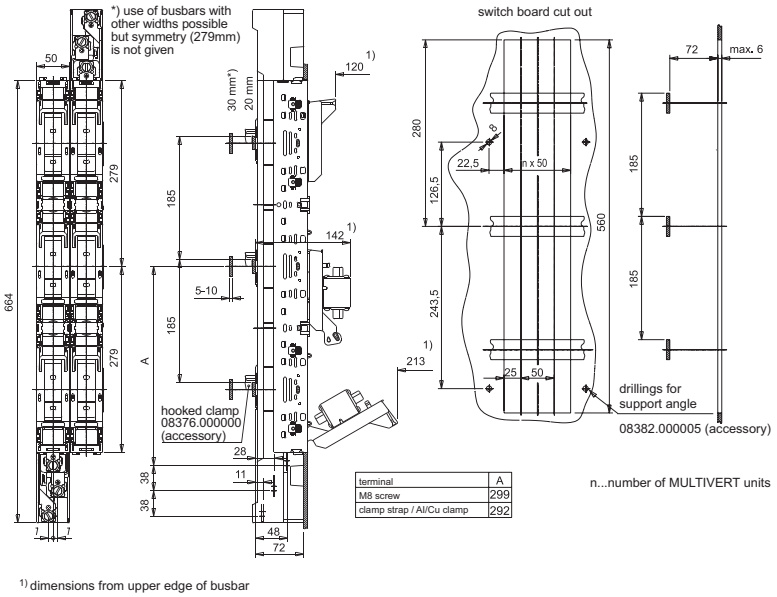
NH vertical fuse-switch-disconnector MULTIVERT
Size 00, 160A, direct installation with screws on to 185mm busbar systems
08389.001850

Dimensions in millimetres



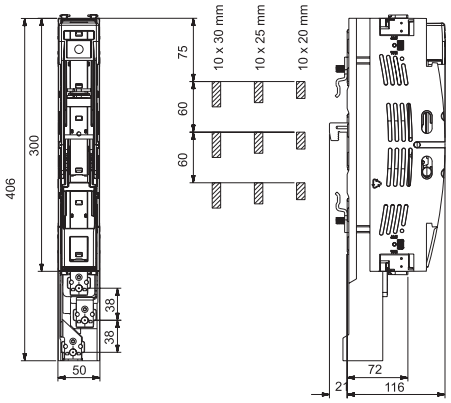
NH vertical fuse-switch-disconnector MULTIVERT
Size 00, 160A, direct installation without drilling with hooked clamps (accessory 08376.000000) on to 185mm busbar systems
08389.001850

Dimensions in millimetres



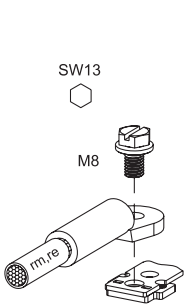
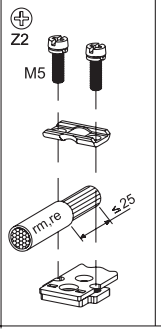
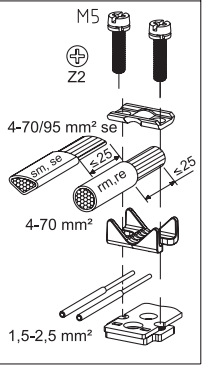
NH vertical fuse-switch-disconnector MULTIVERT
Size 00, 160A, direct installation without drilling on to 60mm busbar systems
08389.000600

Dimensions in millimetres



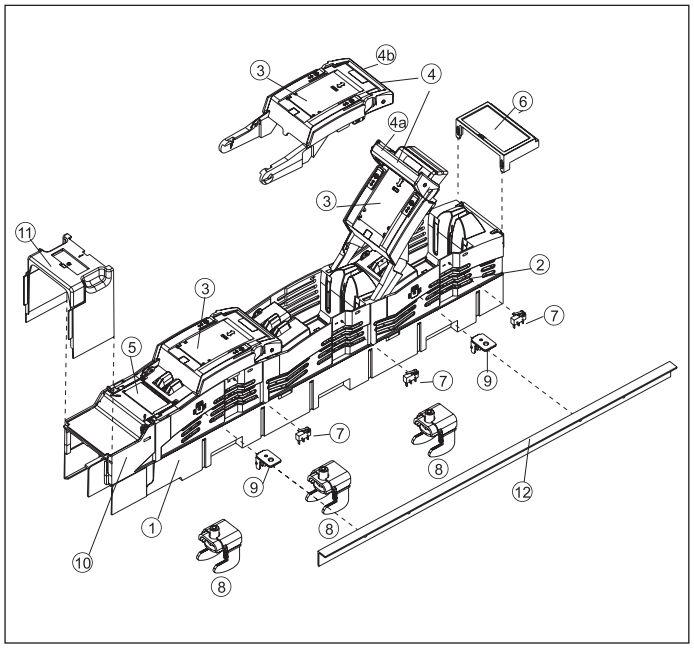
NH vertical fuse-switch-disconnector MULTIVERT
Size 00, 160A, Accessories

Cable connection

Cat. No.	08274.000000	08375.00000	08295.007405
type of terminal	screw	clamp strap	Al/Cu clamp
cross section [mm²]	Cu 16-70	Cu 4-70	Cu 1,5-70
	Al 16-95		Al 1,5-70/95 sectoral solid
M [Nm]	15 - 17	3-4	3-4
			

Hooked clamp 08376.000000 (accessory):
Torque M = 5 -7Nm

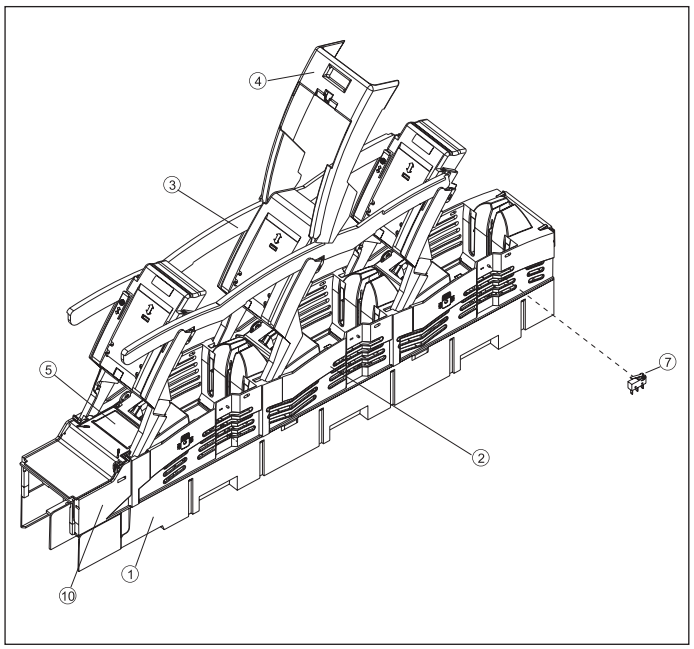
NH vertical fuse-switch-disconnector MULTIVERT, 1-pole switching
Size 1, 250A; size 2, 400A; size 3, 630A;
08391.000000, 08392.000000, 08393.000000



Constitution and accessories

No.	description	standard	accessory	Catalogue No.
1	main base	•		
2	protection cover (removable)	•		
3	switch operating cover	•		
4	combination handle	•		
4a	combined handle in open position (switching position)	•		
4b	combined handle in closed position (installation depth 158mm)	•		
5	labelling area/label	•		
6	label holder		•	08385.000005
7	indicating switch for switch door position		•	08378.000000
8	hooked clamps for installation on to busbars without drilling		•	80366.000000
9	support angle for installation of center cover		•	08382.000005
10	integrated cover shroud for cable termination	•		
11	extension shroud for bottom cable termination		•	08381.000000
12	cover shield for support of central cover, length 605mm		•	08382.000000

NH vertical fuse-switch-disconnector MULTIVERT, 3-pole switching
Size 1, 250A; size 2, 400A; size 3, 630A
08395.000000, 08396.000000, 08397.000000



Constitution and accessories

No.	description	standard	accessory	Catalogue No.
1	main base	•		
2	protection cover (removable)	•		
3	switch operating cover triple pole	•		
4	handle	•		
5	labelling area/label	•		
6[1)]	label holder		•	08385.000005
7	indicating switch for switch door position		•	08378.000000
8[1)]	hooked clamps for installation on to busbars without drilling		•	08366.000000
9[1)]	support angle for installation of center cover		•	08382.000005
10	integrated cover shroud	•		
11[1)]	extension shroud for bottom cable termination		•	08381.000000
12[1)]	cover shield for support of central cover, length 605mm		•	08382.000000

[1)] accessory is shown in the drawing for the 1-pole switching version

NH vertical fuse-switch-disconnector MULTIVERT, 1-pole or 3-pole switching
Size 1, 250A; size 2, 400A; size 3, 630A
08391.000000, 08392.000000, 08393.000000, 08395.000000, 08396.000000, 08397.000000

Technical data according to EN 60947

			MULTIVERT		
			250A	**400A**	**630A**
size			1	2	3
number of poles/phases			3	3	3
conventional free air thermal current with fuse-links I_{th}			250A	400A	630A
max. allowed power dissipation of NH fuse-links P_n			23W	34W	43W
conventional free air thermal current with solid links I_{th}			400A	630A	800A
max. allowed power dissipation of solid links P_n			2,6W	9W	17,5W
utilization-category	rated operational voltage U_e	rated operational current I_e			
AC 23 B	500V	I_e =	250A	–	–
AC 23 B	400V	I_e =	250A	400A	630A
AC 22 B	690V	I_e =	250A	–	–
AC 22 B	500V	I_e =	–	400A	630A
AC 21 B	690V	I_e =	–	400A	630A
rated operational voltage U_e			690V AC	690V AC	690V AC
rated insulation voltage U_i			1000V	1000V	1000V
rated impulse withstand voltage U_{imp}			8kV	8kV	8kV
rated frequency			50-60Hz	50-60Hz	50-60Hz
degree of protection (with central cover)			IP30	IP30	IP30
pollution degree			3	3	3
rated duty			uninterrupted duty	uninterrupted duty	uninterrupted duty
rated short-circuit making capacity with solid links I_{cm}			16kAsw	16kAsw	16kAsw
rated short-circuit making capacity with fuse-links					
400V AC			120kA/250A	120kA/400A	80kA/630A
500V AC			120kA/250A	120kA/400A	80kA/630A
690V AC			120kA/250A	120kA/315A	80kA/500A
690V AC			–	100kA/400A	
rated short-time withstand current with solid links I_{cw}			8kA/1s	8kA/1s	12,6kA/1s
power dissipation by I_{th} without NH fuse-links			24W	46W	92W
power dissipation by I_{th} without solid links [1]			65W	126W	161W
cable termination:					
bolt/insert nut			M10	M12	M12
for copper bars with max. width			40mm	40mm	40mm
for cable lugs max.			300mm²	300mm²	300mm²
busbar termination:					
standard termination (screws)			M12	M12	M12
hooked clamps[2] for busbars with a width			5-10mm	5-10mm	5-10mm

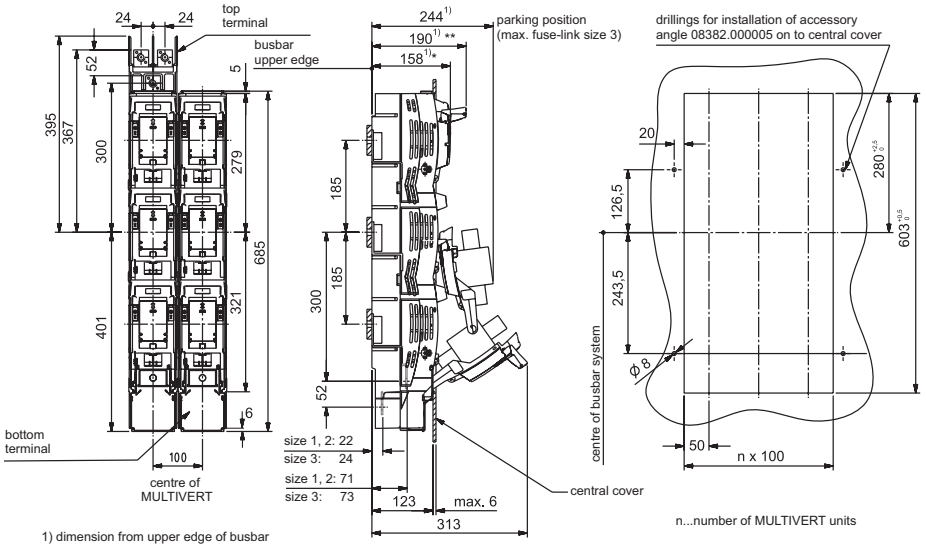
[1] I_{th} of solid links: MULTIVERT 250A, size 1 = 400A, MULTIVERT 400A, size 2 = 630A, MULTIVERT 630A, size 3 = 800A

[2] hooked clamps 08366.000000 (accessory)

NH vertical fuse-switch-disconnector MULTIVERT, 1-pole switching
Size 1, 250A; size 2, 400A; size 3, 630A
08391.000000, 08392.000000, 08393.000000

Direct installation with screws on to 185mm busbar systems

Dimensions in millimetres



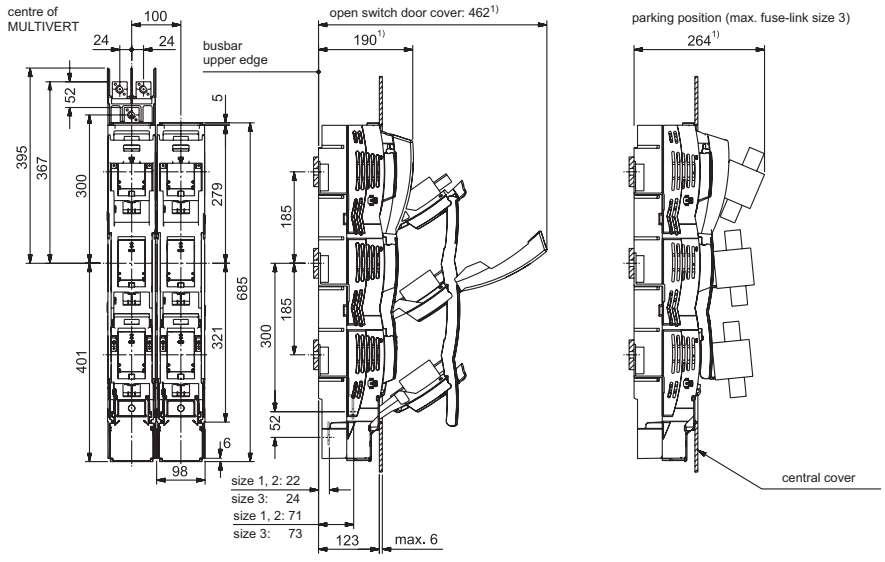
1) dimension from upper edge of busbar

* 158mm handle in closed position (folded) = total installation depth of MULTIVERT
** 190mm handle in open position (fixed) = switching position

NH vertical fuse-switch-disconnector MULTIVERT, 3-pole switching
Size 1, 250A; size 2, 400A; size 3, 630A
08395.000000, 08396.000000, 08397.000000

Direct installation with screws on to 185mm busbar systems

Dimensions in millimetres

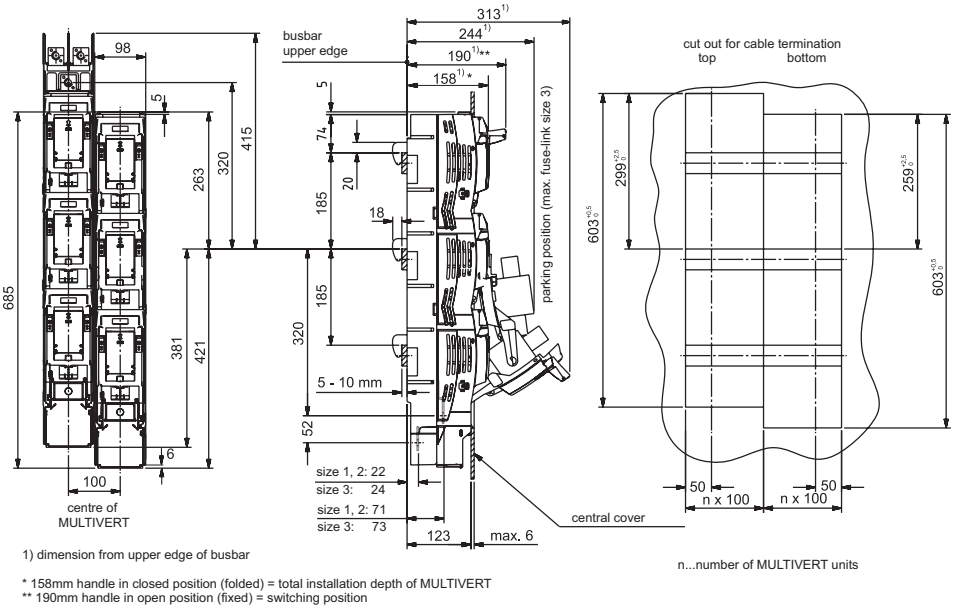


1) dimensions from upper edge of busbar

NH vertical fuse-switch-disconnector MULTIVERT, 1-pole switching
Size 1, 250A; size 2, 400A; size 3, 630A
08391.000000, 08392.000000, 08393.000000

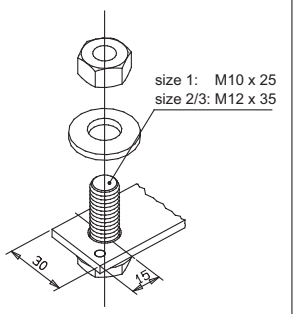
Direct installation without drilling with hooked clamps (accessory 08366.000000) on to 185mm busbar systems

Dimensions in millimetres



NH vertical fuse-switch-disconnector MULTIVERT, 1-pole or 3-pole switching
Size 1, 250A; size 2, 400A; size 3, 630A
08391.000000, 08392.000000, 08393.000000, 08395.000000, 08396.000000, 08397.000000

Cable connection

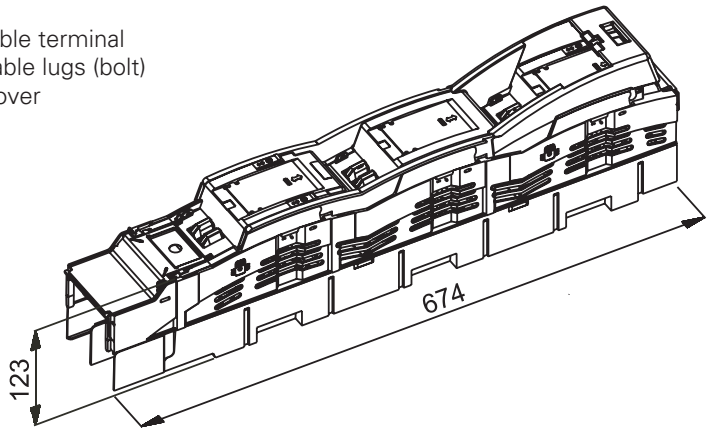
reference	B
type of terminal	bolt
accessory	cable lug max. width 45mm
cross section [mm²]	max. 300
M [Nm]	35 ±3
	

Hooked clamp 08366.000000 (accessory):
Torque M = 15-20Nm

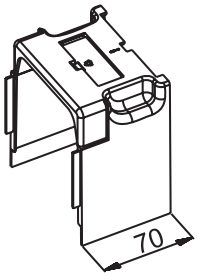
NH vertical fuse-switch-disconnector MULTIVERT, 1-pole or 3-pole switching
Size 1, 250A; size 2, 400A; size 3, 630A
08391.000000, 08392.000000, 08393.00000, 08395.000000, 08396.00000, 08397.000000

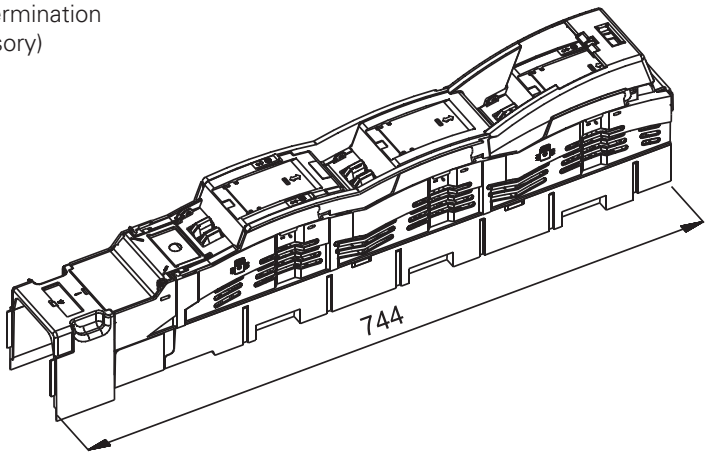
Cable cover for cable connection on bottom

standard design:
integrated shroud for bottom cable terminal
for terminal connections with cable lugs (bolt)
on switch boards with central cover



Extension shroud for bottom cable termination
Catalogue No. 08381.000000 (accessory)

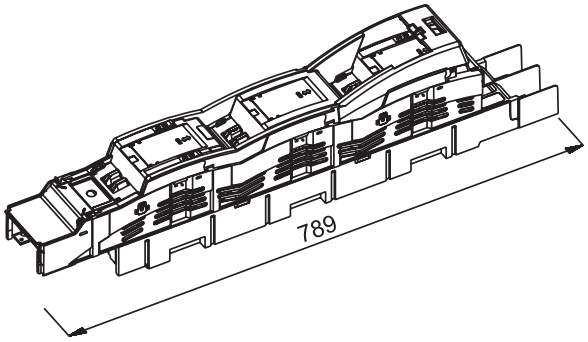




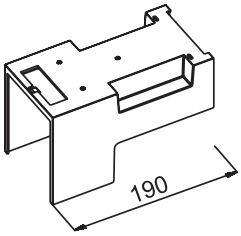
NH vertical fuse-switch-disconnector MULTIVERT, 1-pole or 3-pole switching
Size 1, 250A; size 2, 400A; size 3, 630A
08391.000000, 08392.000000, 08393.000000, 08395.000000, 08396.000000, 08397.000000

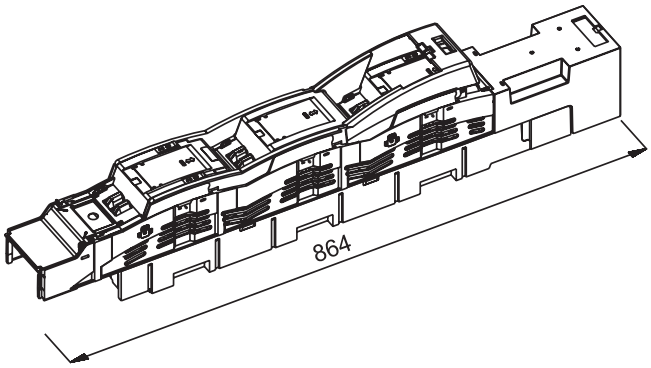
Cable cover for cable connection on top

without shroud for cable termination

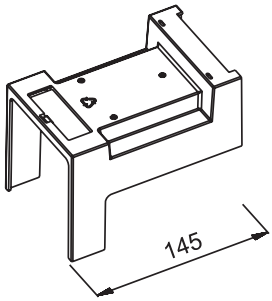


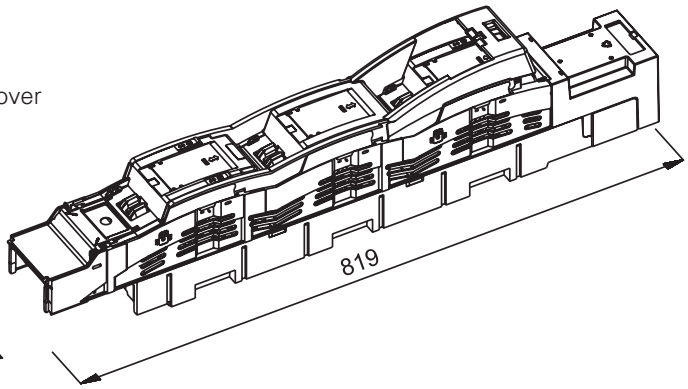
shroud for top cable termination
Catalogue No. 08380.000005 (accessory)
for terminal connections with cable lugs (bolt)
on switch boards with central cover





shroud for top cable termination
Catalogue No. 08380.000000 (accessory)
for terminal connections with cable lugs
for installation in distribution units with central cover





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