

NH Fuse Bases

SB*-D, SB*-S
Up to 690V / 160 - 1250A
Sizes 00, 0, 1, 2, 3, 4



Description: NH fuse bases with thermoplastic bodies. DIN rail and screw mounting (size 4 screw fix). Range of protection accessories for live parts in order to obtain IP20 protection standard.

Ratings:

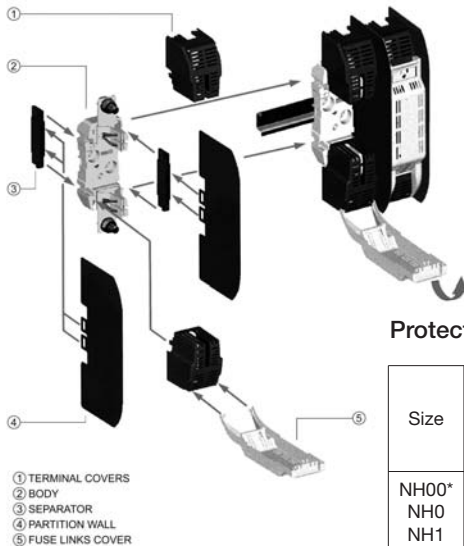
- Voltage: up to 690Vac
- Amps: 2 to 1250A

Applications: Protection of industrial circuits and electrical apparatus

Standards and Approvals: IEC 60269, DIN 43620

Technical Data: see page 43

Dimensions: see page 43 and 44



① TERMINAL COVERS
② BODY
③ SEPARATOR
④ PARTITION WALL
⑤ FUSE LINKS COVER

Part Numbers

| Size | Poles | Current (Amps) | Part Numbers | Unit Packing | Compatible Fuse Link Size |
|------|-------|----------------|-------------------------------|--------------|---------------------------|
| | | | DIN Screw | | |
| 00 | 1 | 160A | SB00-D | 3 | 000 & 00 |
| | 3 | | TB00-D TB00-D-IP20 | | |
| 0 | 1 | 160A | SB0-D | 3 | 0 |
| | 3 | | TB0-D | | |
| 1 | 1 | 250A | SB1-D | 3 | 01 & 1 |
| | 3 | | TB1-D | | |
| 2 | 1 | 400A | SB2-D | 3 | 02 & 2 |
| | 3 | | TB2-D | | |
| 3 | 1 | 630A | SB3-D | 3 | 03 & 3 |
| | 3 | | TB3-D | | |
| 4 | 1 | 1250A | SB4-S (Screw Connection only) | 3 | 4 |

Neutral

| Size | Current (Amps) | Part Ref | Unit Packing |
|------|----------------|----------|--------------|
| NH00 | 160 | SL00 | 3 |
| NH0 | 160 | SL0 | |
| NH1 | 250 | SL1 | |
| NH2 | 400 | SL2 | |
| NH3 | 630 | SL3 | |
| NH4 | 1000 | SL4 | |



Fuse extraction handle

| Size | Part Ref | Unit Packing |
|-------|----------|--------------|
| C00-3 | FEH | 1 |



Protection accessories

| Size | Current (Amps) | Separation Partition ④ | | Fuse Casing ⑤ | | Terminal Cover ① | | Separator ③ | |
|-------|----------------|------------------------|--------------|---------------|--------------|------------------|--------------|-------------|--------------|
| | | Part Ref | Unit Packing | Part Ref | Unit Packing | Part Ref | Unit Packing | Part Ref | Unit Packing |
| NH00* | 160A | SP00* | 2 | FC00* | 3 | CS00* | 6 | BC00* | 2 |
| NH0 | 160A | SP0 | 2 | FC0 | 3 | CS0 | 6 | BC0 | 2 |
| NH1 | 250A | SP1-2 | 2 | FC1-2 | 3 | CS1 | 6 | BC1-2 | 2 |
| NH2 | 400A | SP1-2 | 2 | FC1-2 | 3 | CS2 | 6 | BC1-2 | 2 |
| NH3 | 630A | SP3 | 2 | FC3 | 3 | CS3 | 6 | BC3 | 2 |

* For single pole only

IP Protection Kits

| Part Reference | Description |
|----------------|---|
| TB00-D-IP20 | Complete triple pole fuse base IP20 rated |
| FPK0-3P | IP20 kit for TB0-D fuse base |
| FPK1-3P | IP20 kit for TB1-D fuse base |
| FPK2-3P | IP20 kit for TB2-D fuse base |
| FPK3-3P | IP20 kit for TB3-D fuse base |

Microswitch

| Part Ref | Unit Packing |
|----------|--------------|
| BVL-50 | 1 |



Microswitch suitable for the following NH Fuse links:
 - 400 Volts gG/gL
 - 500 Volts gG/gL and aM
 - 690 Volts gG/gL and aM

400Vac

500Vac

690Vac

aM

Accessories

NH Fuse Bases - Technical Data

| Technical Data | | SB00-D/ TB00-D | SB0-D/ TB0-D | SB1-D/ TB1-D | SB2-D/ TB2-D | SB3-D/ TB3-D | SB4-S |
|------------------------------|-----------------|----------------------------|-----------------|-----------------|-----------------|-----------------|-----------|
| Body | | Polyamide +25%F.V. UL94-V0 | | | | | N/A |
| Contacts | | Silver plated | | | | | |
| Screw, Nuts and Washers | | High quality steel | | | | | |
| Derating Temperature Factors | 20°C | 1 | 1 | 1 | 1 | 1 | 1 |
| | 30°C | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| | 40°C | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| | 50°C | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Maximum Power Dissipation | | 12W | 25W | 32W | 45W | 60W | 90W |
| Degree of Protection | | IP00/IP20 | IP00/IP20 | IP00/IP20 | IP00/IP20 | IP00/IP20 | IP00 |
| Connecting | Screw | M8 | M8 | M10 | M12 | M12 | M16 |
| | Clamp | 2xM6 | | | | | |
| Maximum Tightening Torque | Screw | 10N•m | 10N•m | 32N•m | 32N•m | 32N•m | 56N•m |
| | Clamp | 4N•m | | | | | |
| Fixing | Rail Din | • | • | • | • | • | • |
| | Screw | • | • | • | • | • | • |
| With Microswitch 16A/250V | Presence-Fusion | - | • | • | • | • | • |
| Function Temperature | | -20 -70°C | -20 -70°C | -20 -70°C | -20 -70°C | -20 -70°C | -20 -70°C |
| Storage Temperature | | -40 -80°C | -40 -80°C | -40 -80°C | -40 -80°C | -40 -80°C | -40 -80°C |

400Vac

500Vac

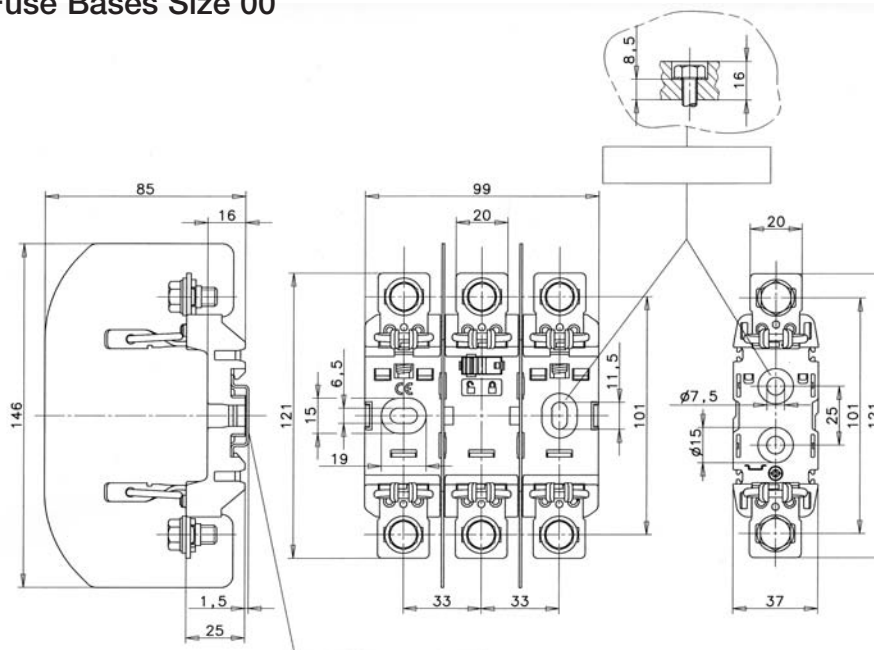
690Vac

aM

Accessories

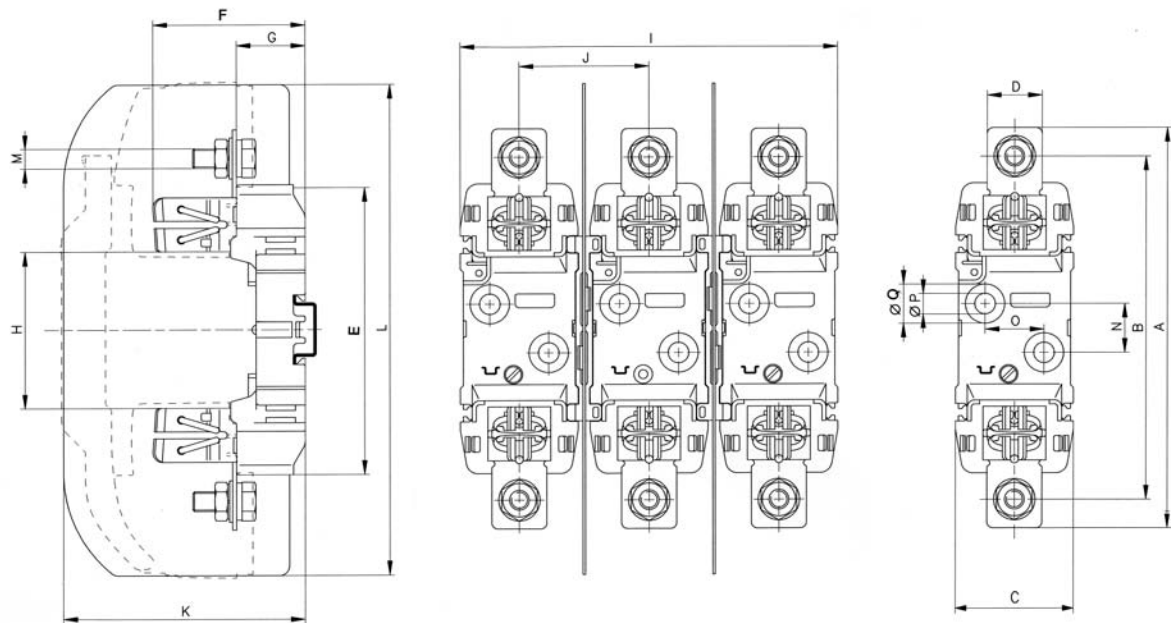
NH Fuse Bases Dimensions (mm)

NH Fuse Bases Size 00



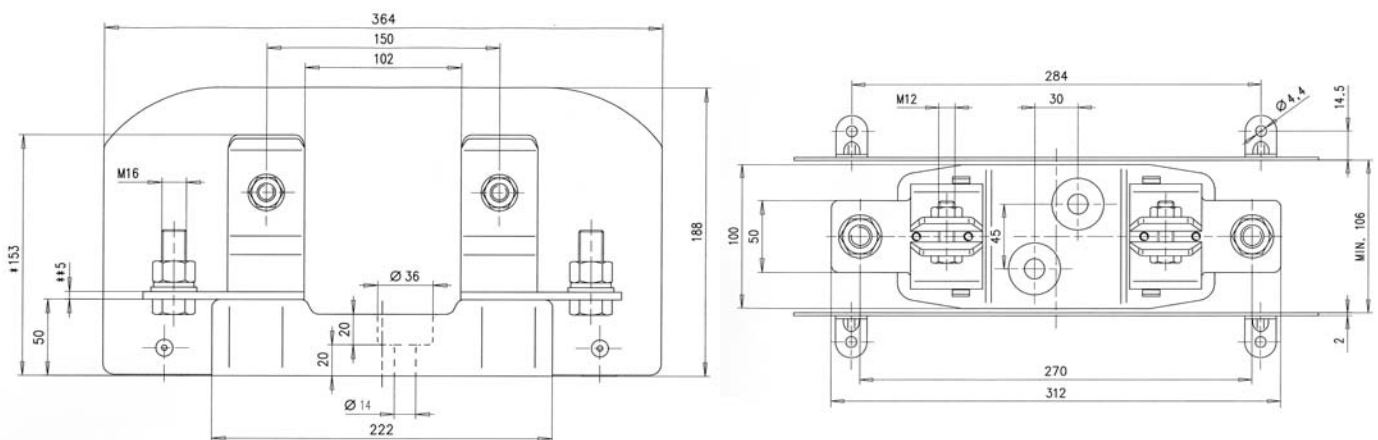
NH Fuse Bases Dimensions (mm)

NH Fuse Bases Sizes 0, 1, 2, 3



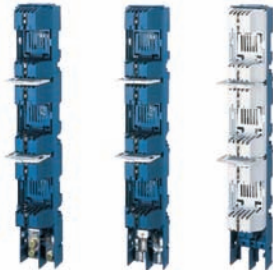
| Size | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q |
|------|-----|-----|----|----|-----|------|----|----|-----|------|------|-----|-----|----|----|------|------|
| NH0 | 170 | 150 | 47 | 24 | 122 | 63 | 63 | 29 | 74 | 48.5 | 91.5 | 185 | MB | 25 | - | 7.5 | 15 |
| NH1 | 200 | 175 | 60 | 28 | 148 | 77.5 | 35 | 80 | 192 | 66 | 123 | 250 | M10 | 25 | 30 | 10.5 | 20.5 |
| NH2 | 225 | 200 | 60 | 32 | 148 | 88 | 35 | 80 | 192 | 66 | 123 | 250 | M12 | 25 | 30 | 10.5 | 20.5 |
| NH3 | 240 | 210 | 60 | 38 | 148 | 97 | 35 | 80 | 224 | 82 | 143 | 270 | M12 | 25 | 30 | 10.5 | 20.5 |

NH Fuse Bases size 4



NH Fuse Rails - Vertical

BFR
690V / 160 - 630A
Sizes 00, 1, 2, 3A



Description: Vertical fuse rails are designed to be used with NH fuse links. Fully protected against accidental contact..

Main features are:

- Contact covers
- Phase barriers
- Label for protected circuit identification
- Busbar mounting option

Ratings:

- Volts: 690Vac
- Amps: 160 to 630A

Applications: Disconnecting cabinets and low voltage distribution switchboards with busbar spacing of 185mm

Standards and Approvals: CE, IEC 60269, EN 354701

Dimensions: see page 46

Technical Data:

| Type | | BL00-3-F-HA | BFR1 | BFR2 | BFR3 |
|------------------------------------|----------|--|--|--|--|
| Rated Current | I_n | 160A | 250A | 400A | 630A |
| Standards | | IEC 60269-1, 2 | IEC 60269-1, 2-1 | IEC 60269-1, 2-1 EN 354701-2-1 | IEC 60269-1, 2-1 EN 354701-2-1 |
| Rated Voltage | U_n | 690Vac | 690Vac | 690Vac | 690Vac |
| Rated Frequency | f | 40-60Hz | 40-60Hz | 40-60Hz | 40-60Hz |
| Rated Insulation Voltage | U_i | 750Vac | 1000Vac | 1000Vac | 1000Vac |
| Fuse Link Size | | 000, 00 | 1 | 2 | 3 |
| Max Rated Current of the Fuse Link | I_n | 160A | 250A | 400A | 630A |
| Thermal Current/Maximum Cable Size | I_{th} | 210A with disconnecting knife SL00/Cross-section | 400A/240mm ² with disconnection knife SL1/Cross-section | 560A/183mm ² with disconnection knife SL2/Cross-section | 800A/2x185mm ² with disconnection knife SL3/Cross-section |
| Degree of Protection | | IP20 | IP20 | IP20 | IP20 |
| Max Power Losses of the Fuse Link | P_y | 12W | 32W | 45W | 60W |
| Permissible Ambient Temperature | | -25°C to 55°C | -25°C to 55°C | -25°C to 55°C | -25°C to 55°C |

Part Numbers

| Size | Rating (Amps) | Part Reference | Leading out Terminals | Compatible Fuse Links Size |
|------|---------------|------------------|--|----------------------------|
| 00 | 160 | BL00-3-F-HA | M8 cable connections | 000 & 00 |
| 1 | 250 | BFR1-3K/LM/C (*) | Pressed-in nuts with M10 screw | 01 & 1 |
| | | BFR1-3K/LW | V-shaped clamps | |
| | | BFR1-3K/LL | Busbar systems 185mm Busbar spacing connects to Busbar with M12 bolts | |
| 2 | 400 | BFR2-3K/LM/C (*) | Pressed-in nuts with M10 screw | 02 & 2 |
| | | BFR2-3K/LW | V-shaped clamps | |
| | | BFR2-3K/LL | Busbar systems 185mm Busbar spacing connects to Busbar with M12 bolts | |
| 3 | 630 | BFR3-3K/LM/C (*) | Pressed-in nuts with M10 screw | 03 & 3 |
| | | BFR3-3K/LW | V-shaped clamps | |
| | | BFR3-3K/LL | Busbar systems 185mm Busbar spacing connects to Busbar with M12 bolts | |

* with leading-out terminal cover

400Vac

500Vac

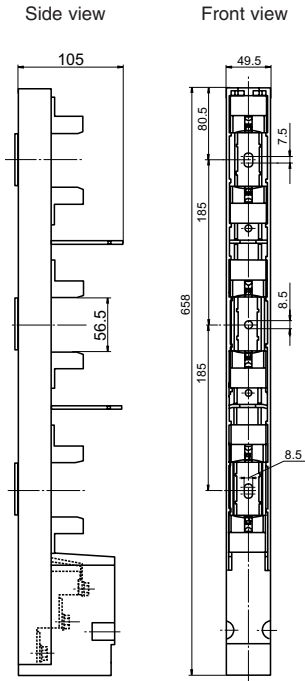
690Vac

aM

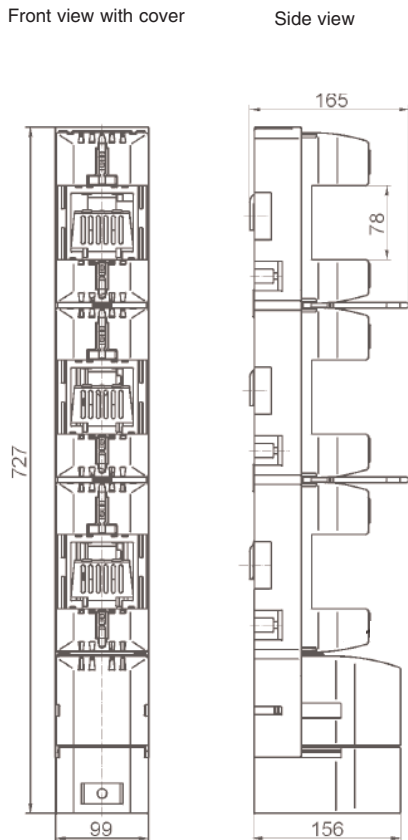
Accessories

NH Fuse Rails - Vertical - Dimensions (mm)

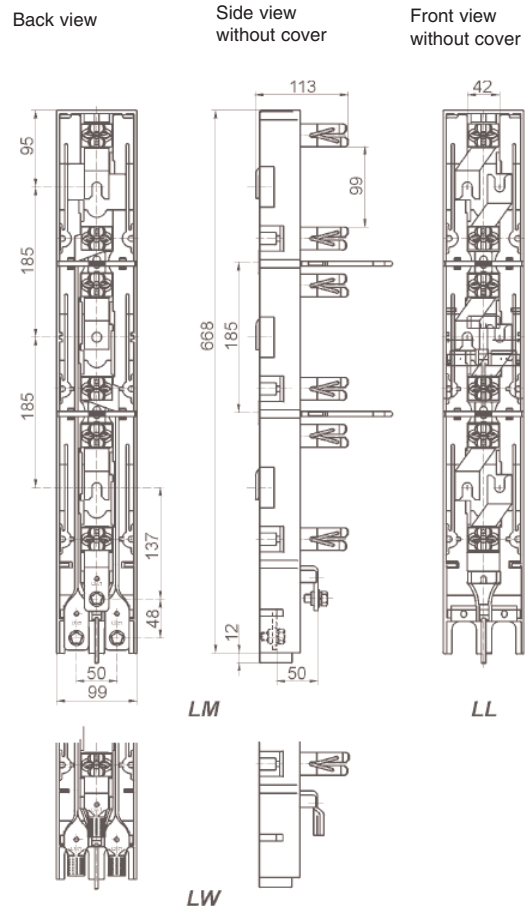
Dimensions for BL00-3-F-HA



Dimensions for BFR1, BFR2 and BFR3



Dimensions for BFR1, BFR2 and BFR3



400Vac

500Vac

690Vac

am

Accessories

NH Fuse Switch Disconnectors - Vertical

BFD
690V / 160 - 630A
Sizes 00, 1, 2, 3A



Description: Vertical fuse switch disconnectors are designed to be used with NH fuse links. Enabling safe connection and disconnection on the load.

Main features are:

- Lockable fuse cover
- Label for circuit identification
- Busbar mounting

Ratings:

- Volts: 690Vac
- Amps: 160 - 630A
- Utilization category: 400Vac - AC23B / 690Vac - AC22B

Applications: Distribution and industrial switchboards with busbar spacing of 185mm.

Standards and Approvals: CE, IEC 60947

Technical Data: see page 48

Dimensions: see page 48

Part Numbers

| Size | Rating (Amps) | Part Reference | | Terminals | Unit Packing | Compatible Fuse Links Size |
|------|---------------|------------------|-------------------|--|--------------|----------------------------|
| | | 1 Pole Switching | 3 Poles Switching | | | |
| 00 | 160A | N/A | BSL00-3x-F | M8 cable connections | 1 | 00 |
| 1 | 250 | BFD1-31/LM | BFD1-33/LM | Pressed-in nuts with M10 screw | 1 | 01 & 1 |
| | | BFD1-31/LW | BFD1-33/LW | V-shaped clamps | 1 | |
| | | BFD1-31/LL | BFD1-33/LL | Switch disconnectors for Busbar systems 185mm Busbar spacing connects to Busbar with M12 bolts | 1 | |
| 2 | 400 | BFD2-31/LM | BFD2-33/LW | Pressed-in nuts with M10 screw | 1 | 02 & 2 |
| | | BFD2-31/LW | BFD2-33/LW | V-shaped clamps | 1 | |
| | | BFD2-31/LL | BFD2-33/LL | Switch disconnectors for Busbar systems 185mm Busbar spacing connects to Busbar with M12 bolts | 1 | |
| 3 | 630 | BFD3-31/LM | BFD3-33/LM | Pressed-in nuts with M12 screw | 1 | 03 & 3 |
| | | BFD3-31/LW | BFD3-33/LW | V-shaped clamps | 1 | |
| | | BFD3-31/LL | BFD3-33/LL | Switch disconnectors for Busbar systems 185mm Busbar spacing connects to Busbar with M12 bolts | 1 | |

400Vac

500Vac

690Vac

aM

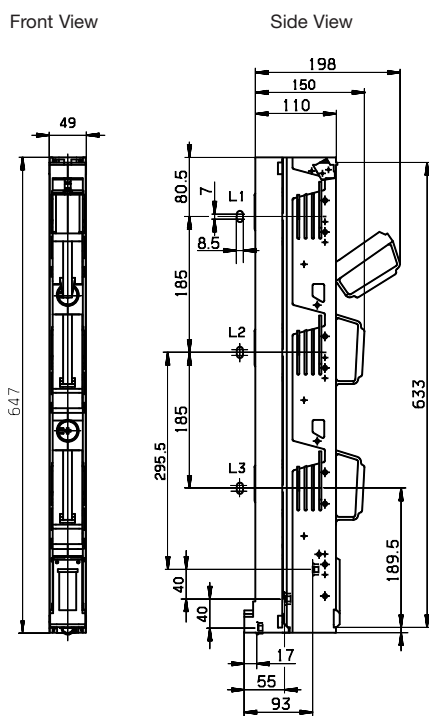
Accessories

NH Fuse Switch Disconnectors - Vertical - Technical Data

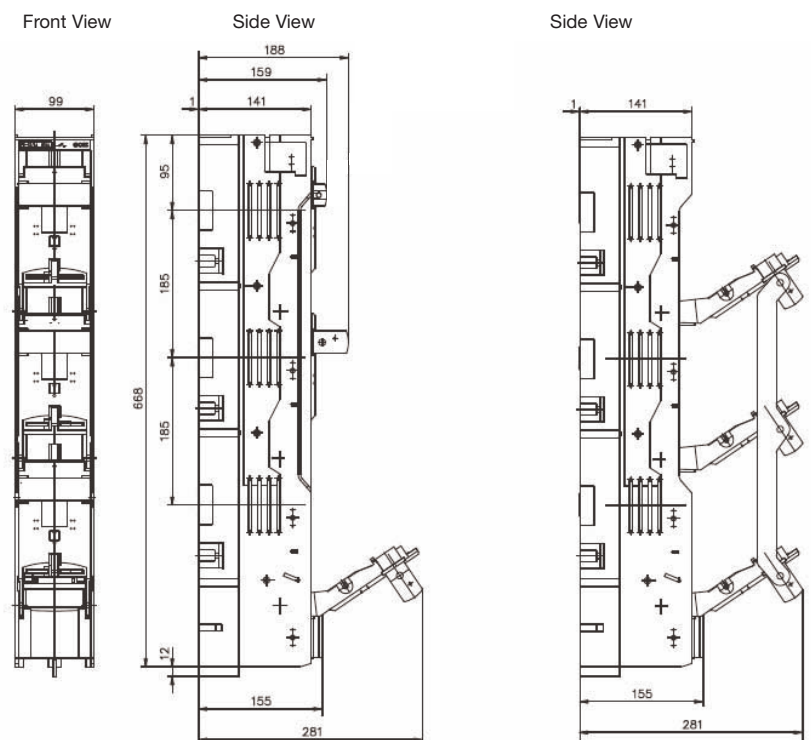
| Type | | BSL00-3x-F | BFD1 | BFD2 | BFD3 |
|---|----------|------------------------------------|-----------------------------------|---|--|
| Rated Current | I_n | 160A | 250A | 400A | 630A |
| Rated Voltage | U_n | 750Vac | 690Vac | 690Vac | 690Vac |
| Standards | | IEC 60947-1-3, EN 60947-1-3 | IEC 60947-1-3, EN 60947-1-3 | IEC 60947-1-3, EN 60947-1-3 | IEC 60947-1-3, EN 60947-1-3 |
| Utilisation Category | U_n | AC20B at 400Vac | AC23B at 400Vac/AC22B at 690Vac | AC23B at 400Vac/AC22B at 690Vac | AC23B at 400Vac/AC22B at 690Vac |
| Thermal Current with Fuse Links | I_{th} | 160A | 250A | 400A | 630A |
| Thermal Current with Fuse Links (with disconnecting knife) | I_{th} | 160A with disconnecting knife SL00 | 400A with disconnecting knife SL1 | 560A with disconnecting knife SL2 | 800A with disconnecting knife SL3 |
| Rated Frequency | f | 40-60Hz | 40-60Hz | 40-60Hz | 40-60Hz |
| Rated Insulation Voltage | I_{kn} | 750Vac | 1000Vac | 1000Vac | 1000Vac |
| Conditional Short-Circuit Current with Fuse Links PN (RMS) | | 50kA | 120kA | 120kA - up to 250A 80kA - up to 400A | 120kA - up to 250A 80kA - up to 400A 50kA - up to 630A |
| Impulse Withstand Voltage | U_{im} | 6kV | 8kV | 8kV | 8kV |
| Fuse Link Size | | 000, 00 | 1 | 2 | 3 |
| Max Rated Current of the Fuse Link | I_n | 160A | 250A | 400A | 630A |
| Max Power Loss of the Fuse Link | | 12W | 23W | 34W | 48W |
| Power Losses at I_n without Fuse Link | I_n | 20W | 18W | 39W | 90W |
| Electrical Durability | P_v | 200 | 200 | 200 | 200 |
| Mechanical Durability | P_v | 1400 | 1400 | 800 | 800 |
| Degree of Protection from Front Side, Built in Device, Cover Closed | | IP20 | IP20 | IP20 | IP20 |
| Degree of Protection from Front Side, Built-in Device, Cover Opened | | IP20 | IP20 | IP20 | IP20 |
| Permissible Ambient Temperature | | -25°C to 55°C | -25°C to 55°C | -25°C to 55°C | -25°C to 55°C |
| Altitude Above Sea Level | | max 2000m | max 2000m | max 2000m | max 2000m |
| Overvoltage Category for 690Vac | | III | III | III | III |
| Seismic Resistance acc to VDE SKODA | | 1.5g/8 to 50Hz | 1.5g/8 to 50Hz | 1.5g/8 to 50Hz | 1.5g/8 to 50Hz |

NH Fuse Switch Disconnectors - Vertical - Dimensions (mm)

Dimensions for BSL00-3x-F



Dimensions for BFD1, BFD2 and BFD3



NH Fuse Switch Disconnectors - Horizontal

BFH
690V / 160 - 1600A
Sizes 000, 00, 1, 2, 3, 4A



Description: Horizontal switch disconnectors are designed to be used with NH fuse links. Enabling safe connection and disconnection on load.

Main features are:

- Lockable fuse cover
- Label for protected circuit identification
- Panel mounting with screws (size 000 can be DIN railed mounted). Busbar mounting with screws.

Ratings:

- Volts: 690Vac / 250Vdc (sizes 1,2,3)
 400Vdc (size 000)
- Amps: 160 -1600A
- Utilisation category: 400Vac - AC23B
 500Vac - AC22B
 690Vac - AC21B
 250Vdc - DC21B (sizes 1,2,3)
 250Vdc - DC22B (sizes 000,00)

Applications: Industrial control panels, motor control panels

Standards and Approvals: CE, IEC 60947

Technical Data: see page 50

Dimensions: see page 51 to 53

Part Numbers

| Size | Rating (A) | Catalogue Number | | Terminals | Unit Packing | Compatible Fuse Links Size |
|------|------------|------------------|-------------|---|--------------|----------------------------|
| | | 1- Pole | 3-Pole | | | |
| 000 | 160 | BFH000-1A/T | BFH000-3A/T | Terminal clips for 1.5 to 50mm ² cable | 1 | 000 |
| 00 | 160 | BFH00-1A/F | BFH00-3A/F | Terminal screw M8 | 1 | 00 |
| 1 | 250 | BFH1-1A/F | BFH1-3A/F | Terminal screws M10 | 1 | 01 & 1 |
| 2 | 400 | BFH2-1A/F | BFH2-3A/F | Terminal screws M10 | 1 | 02 & 2 |
| 3 | 630 | BFH3-1A/F | BFH3-3A/F | Terminal screws M12 | 1 | 03 & 3 |
| 4 | 1600 | LBS4/1 | LBS4/3 | Terminal screws 2xM12 | 1 | 4 |

400Vac

500Vac

690Vac

aM

Accessories

NH Fuse Switch Disconnectors- Horizontal - Technical Data

| Type | | BFH000/BF00 | BFH1 | BFH2 | BFH3 |
|--|-----------|---|--|--|--|
| Rated Voltage | U_n | 690Vac | 690Vac/250Vdc | 690Vac/250Vdc | 690Vac/250Vdc |
| Rated Current | I_n | 160A | 250A | 400A | 630A |
| Utilisation Category | | AC20B at 400Vac AC22B at 500Vac AC21B at 690Vac DC22B at 250Vdc DC20B at 440Vdc | AC23B at 400Vac AC22B at 500Vac AC21B at 690Vac AC22B at 690Vac/200A DC21B at 250Vdc | AC23B at 500Vac for BFH2-3 AC23B at 400Vac for BFH2-1 AC22B at 690Vac DC21B at 250Vdc | AC23B at 500Vac for BFH3/F AC23B at 400Vac for BFH3-1/F AC22B at 690Vac DC21B at 250Vdc |
| Thermal Current with Fuse links | I_{th} | 160A | 250A | 400A | 630A |
| Thermal Current with Fuse Links with Disconnecting Knife | | | 325A with disconnecting knife SL1 | 520A with disconnecting knife SL2 | 750A with disconnecting knife SL3 |
| Rated Frequency | f | 40-60Hz | 40-60Hz | 40-60Hz | 40-60Hz |
| Rated Insulation Voltage | U_i | 800Vac | 1000Vac | 1000Vac | 1000Vac |
| Conditional Short Circuit Current (RMS) | I_{kn} | 120kA for 400Vac/160A 120kA for 500Vac/100A 80kA for 690Vac/100A | 120kA for 400Vac/250A 50kA for 500Vac/250A min 25kA for 690Vac/250A | 120kA for 400Vac/250A 50kA for 500Vac/250A min 25kA for 690Vac/250A | 120kA for 400Vac/630A 50kA for 500Vac/630A min 25kA for 690Vac/630A |
| Impulse Withstand Voltage | U_{imp} | 8kV for BFH000-AV | 12kV for BFH1-A/F | 12kV for BFH2-A/F | 12kV for BFH3-A/F |
| Fuse Link Size | | 0 | 1 | 2 | 3 |
| Max Power Losses of the Fuse Link | P_V | 9W | 23W | 34W | 48W |
| Power Losses at I_n Without Fuse Link | P_V | 7W | 9W | 23W | 49W |
| Electrical Durability (operating cycle) | | 300 at 100A 200 at 160A | 200 at 250A | 200 at 400A | 200 at 630A |
| Mechanical Durability (operating cycle) | | 2000 | 1400 | 800 | 800 |
| Degree of Protection from Front Side, Built-In Device, Cover Closed (measuring holes filled) | | IP30 | IP30 | IP30 | IP30 |
| Degree of Protection from Front Side, Built-In Device, Cover Opened | | IP20 | IP20 | IP20 | IP20 |
| Permissible Ambient Temperature | | -25°C to 55°C | -25°C to 55°C | -25°C to 55°C | -25°C to 55°C |
| Altitude Above Sea Level | | max 2000m | max 2000m | max 2000m | max 2000m |
| Pollution Degree | | 3 | 3 | 3 | 3 |
| Overvoltage Category for 690Vac | | III | IV | IV | IV |
| Seismic Resistance | | 0.25 to 50Hz/3g | 0.25 to 50Hz/3g | 0.25 to 50Hz/3g | 0.25 to 50Hz/3g |
| Torque of Outlets Terminals | | 3 to 3.5Nm | | | |
| Standards | | IEC 60947-1, 3 IEC 60947-1,3 | IEC 60947-1,3 IEC 60947-1,3 | IEC 60947-1,3 IEC 60947-1,3 | IEC 60947-1,3 IEC 60947-1,3 |

400Vac

500Vac

690Vac

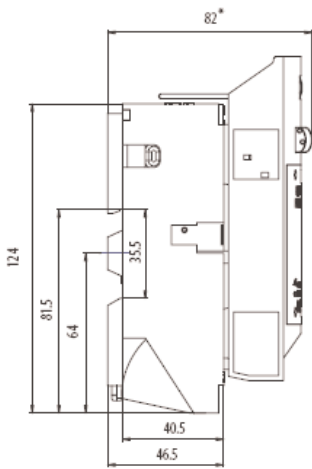
aM

Accessories

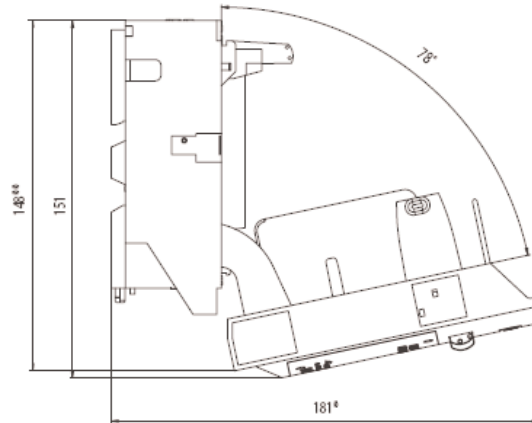
NH Fuse Switch Disconnectors - Horizontal - Dimensions (mm)

Size 000

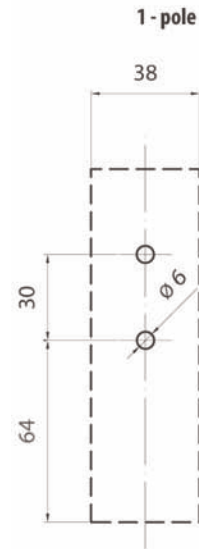
BHF000-1A/T & BFH000-3A/T
side view



BHF000- 1A/T & BFH000-3A/T
in open position

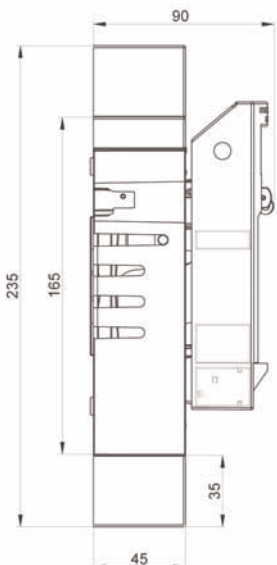


Clearance and drilling plans for
BHF000-1A/T (1 pole), for BHF000-3A/T
(3 poles) multiply the width by 3

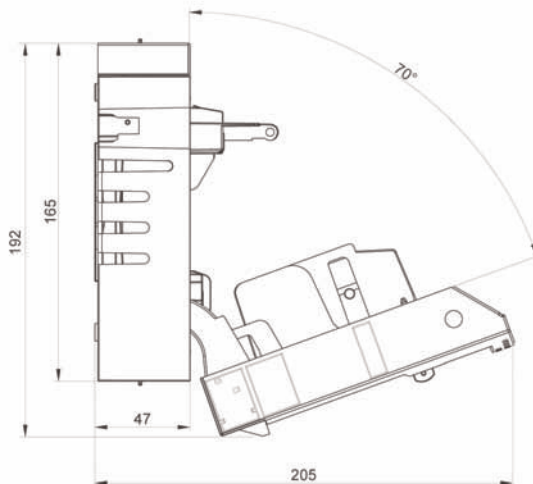


Size 00

BFH00-1A/F and BFH00-3A/F
side view



BFH00-1A/F and BFH00-3A/F
in open position



Clearance and drilling plans for
BHF00-1A/F (1 pole), for BHF00-3A/F
(3 poles) multiply the width by 3



400Vac

500Vac

690Vac

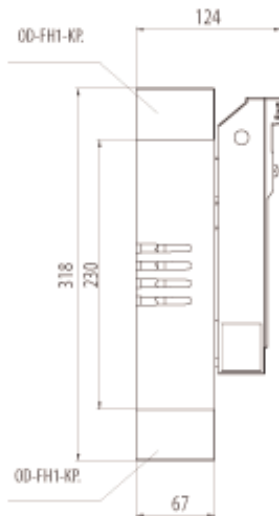
aM

Accessories

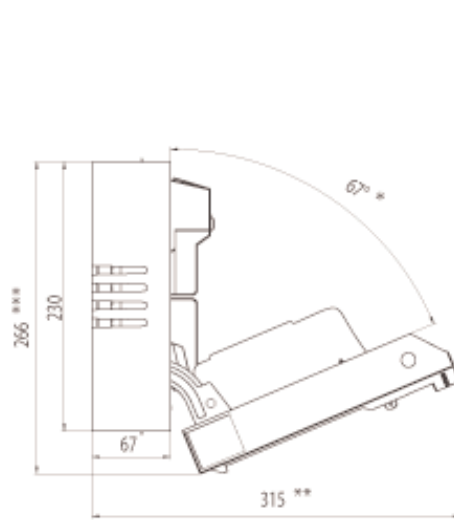
NH Fuse Switch Disconnectors - Horizontal - Dimensions (mm)

Size 1

BH1-1A/F and BH1-3A/F
side view

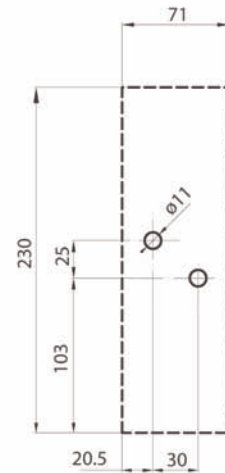


BH1-1A/F and BH1-3A/F
in open position



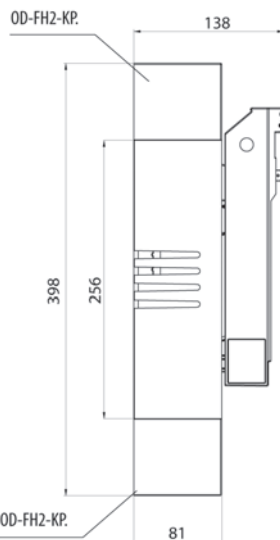
Clearance and drilling plans for
BHF1-1A/F (1 pole), for BHF1-3A/F
(3 poles) multiply the width by 3

1 - pole

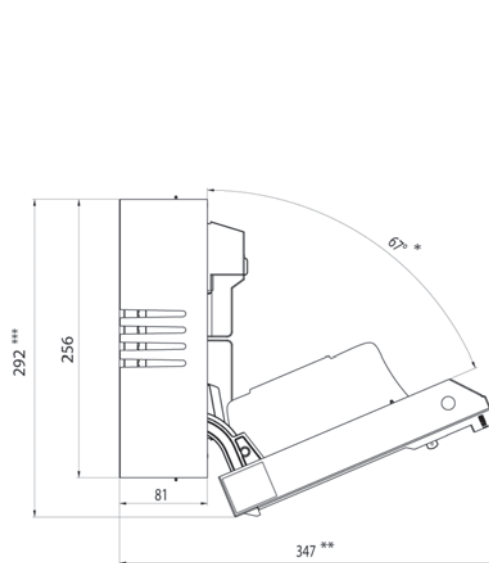


Size 2

BFH2-1A/ and BFH2-3A/F
side view

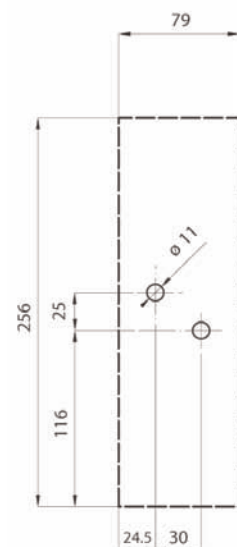


BFH2-1A/F and BFH2-3A/F
in open position



Clearance and drilling plans for
BHF2-1A/F (1 pole), for BHF2-3A/F
(3 poles) multiply the width by 3

1 - pole



400Vac

500Vac

690Vac

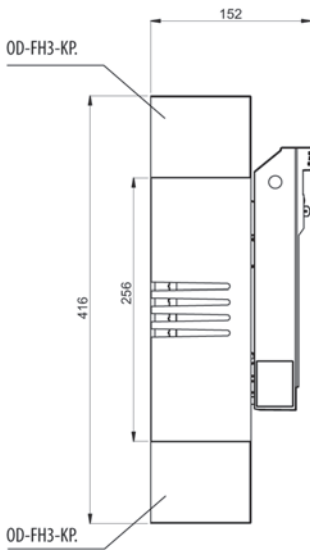
aM

Accessories

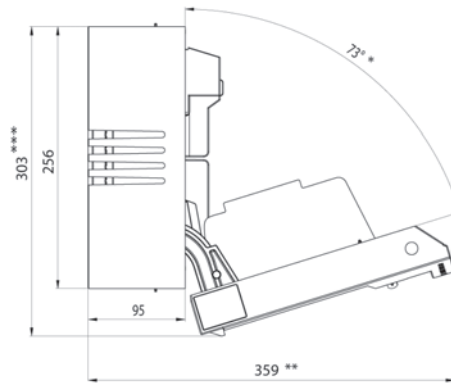
NH Fuse Switch Disconnectors - Horizontal - Dimensions (mm)

Size 3

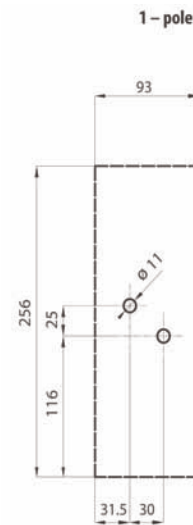
BH3-1A/F and BH3-3A/T
side view



BH3-1A/F and BH3-3A/T
in open position



Clearance and drilling plans for
BHF3-1A/F (1 pole), for BHF3-3A/F
(3 poles) multiply the width by 3



400Vac

500Vac

690Vac

aM

Accessories