Effective June 2018
Supersedes October 2017

## BUSSMANN SERIES

# **NH** Bases





#### **Product description**

Eaton's Bussmann™ series NH Bases have been designed with thermoplastic bodies DIN-Rail and/or screw mounting (size 4 screw mounting only).

This range comes with accessories including phase barriers: IP20 finger safe protection kits (IEC only) and neutral links.

Microswitch also available for remote signaling of fuse link operation.

#### **Standard features**

- Complies with IEC 60269-1 and 2 fuse system A (NH Base), manufacturers type test certificates of compliance available.
- 3-pole integral NH00 Base available with reduced width
- Clip-in phase barriers, terminal shrouds and fuse covers available
- Vibration tested to IEC 60068-2-6 for marine use



**NH Bases** 

#### Catalogue symbol

- 1-pole DIN-Rail and screw mounting: SD(size)-D
- 1-pole screw mounting only: SD(size)-S
- 3-pole DIN-Rail and screw mounting: TD(size)-D
- 3-pole Integral DIN-Rail and screw mounting: TD00-DxI (see catalogue numbers for details)

#### **Technical data**

- · Rated voltage:
  - 690 V a.c. IEC
  - 1000 V a.c. UL for SD1-D only
- Rated current: 160 to 1600 A
- Rated for fuse links with breaking capacity of 120 kA

#### Standard/Approvals

- IEC 60269-1 and 2
- VDE 0636-1 and 2

#### **Packaging**

- 1-pole: 3
- 3-pole and SD4: 1

#### **Technical data**

| Fuse base catalogue numbers                      |                      | SD00-D<br>TD00-D<br>TD00-DI | SD1-D<br>TD1-D | SD2-D<br>TD2-D | SD3-D<br>TD3-D | SD4-S | SD4-S1600 |  |
|--|----------------------|-----------------------------|----------------|----------------|----------------|-------|-----------|--|
| Base   |                      | Glass filled P              | ВТ             |                |                |       |           |  |
| Contacts   |                      | Silver plated               | copper         |                |                |       |           |  |
| Screw, nuts and washers                          |                      | Zinc clear pla              | ted steel      |                |                |       |           |  |
|  | ≤ 35°C               | 1                           | 1              | 1              | 1              | 1     | 1         |  |
| Derating temperature factors for maximum current | 40°C                 | 0.95                        | 0.95           | 0.95           | 0.95           | 0.95  | 0.95      |  |
| maximum current                                  | 50°C                 | 0.85                        | 0.85           | 0.85           | 0.85           | 0.85  | 0.85      |  |
| Maximum power acceptance                         |                      | 12W                         | 32W            | 45W            | 60W            | 110W  | 145W      |  |
| IP20 finger safe protection kits (IEC            | only)                | ✓                           | ✓              | ✓              | ✓              | ×     | ×         |  |
| Terminal screw                                   |                      | M8                          | M10            | M10            | M12            | M16   | M16       |  |
| Maximum tightening torque termina                | l screw              | 10N•m                       | 32N•m          | 32N•m          | 32N•m          | 56N•m | 56N • m   |  |
| F: :   | DIN-Rail             | ✓                           | ✓              | ✓              | ✓              | ×     | ×         |  |
| Fixing   | Screw                | ✓                           | ✓              | ✓              | ✓              | ✓     | ✓         |  |
| With microswitch 16A/250V                        | Fuse operated signal | ✓                           | ✓              | ✓              | ✓              | x     | ×         |  |
| Operating temperature range                      |                      | -20 to 70°C                 |                |                |                |       |           |  |
| Storage temperature range                        |                      | -40 to 80°C                 | -40 to 80°C    |                |                |       |           |  |

#### **NH Bases**

#### 1-pole and 3-pole non integral NH Bases - Catalogue numbers

| Compatible NH<br>Fuse link body<br>size | Poles  | Current<br>(Amps) | DIN-Rail and screw mounting | Screw mounting only | Pack<br>quantity | Compatible fuse links   |
|---|--------|-------------------|-----------------------------|---------------------|------------------|-------------------------|
| 00                                      | 1-pole | 160               | SD00-D                      | SD00-S              | 3                | 400/500/690 V NH gG and |
|   | 3-pole | 160               | TD00-D                      | N/A                 | 1                | aM fuse links           |
| 1                                       | 1-pole | 250               | SD1-D                       | SD1-S               | 3                | _                       |
|   | 3-pole | 250               | TD1-D                       | N/A                 | 1                |                         |
| 2                                       | 1-pole | 400               | SD2-D                       | SD2-S               | 3                |                         |
|   |        | 400               | SD2-DD*                     | N/A                 | 3                |                         |
|   | 3-pole | 400               | TD2-D                       | N/A                 | 1                |                         |
|   |        | 400               | TD2-DD*                     | N/A                 | 1                | _                       |
| 3                                       | 1-pole | 630               | SD3-D*                      | SD3-S               | 3                | _                       |
|   | 3-pole | 630               | TD3-D*                      | N/A                 | 1                | _                       |
| 4                                       | 1-pole | 1250              | N/A                         | SD4-S               | 1                | _                       |
|   |        | 1600              | N/A                         | SD4-S1600           | 1                | _                       |

<sup>\*</sup>Double fuse contact clips

#### 1-pole and 3-pole non integral NH base - Catalogue numbers structure

| Poles                   | Compatible NH Fuse links body size                                     | Mounting type                          |
|-------------------------|--|--|
| <b>SD</b> = Single pole | <b>00</b> = Compatible for NH fuse links body size 00                  | <b>D</b> = DIN-Rail and screw mounting |
| <b>TD</b> = Triple pole | 1 = Compatible for NH fuse links body size 1                           | <b>DD</b> = Double fuse contact clips  |
|                         | ,  | <b>S</b> = Screw mounting only         |
|                         | 2 = Compatible for NH fuse links body size 2                           | S1600 = Screw mounting only, 1600 A    |
|                         | <b>3</b> = Compatible for NH fuse links body size 3                    |  |
|                         | <b>4</b> = Compatible for NH fuse links body size 4 (Single pole only) |  |

For example catalogue number **SD2-D** represents a 1-pole **SD** NH Fuse base, suitable for a NH fuse link body size **2** fuse link, **S** screw mounting only

#### 3-pole Integral NH Base parts - Catalogue numbers

| Catalogue numbers | Line side mounting   | Load side mounting   | Compatible NH Fuse link body size | Poles  | Current<br>(Amps) | Pack<br>quantity | Compatible NH fuse links |
|-------------------|----------------------|----------------------|-----------------------------------|--------|-------------------|------------------|--------------------------|
| TD00-DI           | Screw mounting holes | Screw mounting holes | 00                                | 3-pole | 160               | 1                | 400/500/690 V NH gG and  |
| TD00-DCI          | Clinch nut           | Clinch nut           |                                   |        |                   |                  | aM fuse links            |
| TD00-DPI          | Pressure plate       | Pressure plate       |                                   |        |                   |                  |                          |
| TD00-DBI          | 70 mm fixed box lug  | 70 mm fixed box lug  |                                   |        |                   |                  |                          |
| TD00-DCPI         | Clinch nut           | Pressure plate       |                                   |        |                   |                  |                          |
| TD00-DCBI         | Clinch nut           | 70 mm fixed box lug  |                                   |        |                   |                  |                          |
| TD00-DPBI         | Pressure plate       | 70 mm fixed box lug  | -                                 |        |                   |                  |                          |

#### 3-pole Integral NH Base parts - Catalogue numbers structure

| Poles                   | Compatible NH Fuse links size                         | Line side mounting/ Load side mounting             | Integral NH Base     |
|-------------------------|---|--|----------------------|
| <b>TD</b> = Triple pole | <b>00</b> = Compatible for NH fuse links body size 00 | I = Integral base screw mounting/screw mounting    |                      |
|                         |   | C = Clinch nut/clinch nut                          | ■ = Integral NH Base |
|                         |   | P = Pressure plate/pressure plate                  | -                    |
|                         |   | <b>B</b> = 70 mm fixed box lug/70 mm fixed box lug | -                    |
|                         |   | <b>CP</b> = Clinch nut/pressure plate              | -                    |
|                         |   | CB = Clinch nut/70 mm fixed box lug                | -                    |
|                         |   | <b>PB</b> = Pressure plate/70 mm fixed box lug     | -                    |

For example catalogue number **TD00-CPI** represents a 3-pole **TD** NH Fuse base, suitable for a NH fuse link body size **00**, with **C** clinch nut load side mounting and **P** pressure plate load side mounting, **I** integral base

#### Solid links catalogue numbers

| NH fuse link body size | Current (Amps) | Catalogue<br>numbers | Pack quantity |
|------------------------|----------------|----------------------|---------------|
| NH00                   | 160            | SDL-00               | 3             |
| NH1                    | 250            | SDL-1                | 3             |
| NH2                    | 400            | SDL-2                | 3             |
| NH3                    | 630            | SDL-3                | 3             |



#### **Accessories**

| extraction |  |
|------------|--|
|            |  |

| NH fuse link body size | Current (Amps) | Catalogue<br>numbers | Pack quantity |
|------------------------|----------------|----------------------|---------------|
| NH00-3                 | 160 - 630      | FEH                  | 1             |



Fuse extraction handle

#### Shroud kits

| Fuse base range | NH fuse link<br>body size | Current<br>(Amps) | Catalogue<br>numbers | Description            |
|-----------------|---------------------------|-------------------|----------------------|------------------------|
| SD00            | NH00                      | 160               | SD00-SK              |                        |
| SD1             | NH1                       | 250               | SD12-SK              | Kit includes 2 shrouds |
| SD2             | NH2                       | 400               | SD12-SK              | and 1 fuse cover       |
| SD3             | NH3                       | 630               | SD3-SK               | _                      |



Shroud kit

#### Phase barrier kit

| T Hase barrie                | /I KIL            |                      |                  |                                      |
|------------------------------|-------------------|----------------------|------------------|--------------------------------------|
| NH fuse<br>link body<br>size | Current<br>(Amps) | Catalogue<br>numbers | Pack<br>quantity | Description                          |
| NH00                         | 160               | SD00-PB              | 1                | 2-Phase barriers                     |
| NH1                          | 250               | SD12-PB              | 1                | 2-Phase barriers and 2 ganging links |
| NH2                          | 400               | SD12-PB              | 1                | _                                    |
| NH3                          | 630               | SD3-PB               | 1                | _                                    |



Phase barrier



Ganging link

#### Accessories

#### IP Protection Kits











| NH fuse link<br>body size | Current<br>(Amps) | Catalogue<br>numbers | Fuse cover | Shroud | Phase<br>barrier | Ganging<br>link | Integral kit | Description  |
|---------------------------|-------------------|----------------------|------------|--------|------------------|-----------------|--------------|--|
| NH00                      | 160               | TD00-IP20            | 3          | 6      | 2                |                 |              | Triple pole protection kit for TD00-D with shrouds, fuse covers and phase barriers                     |
|                           |                   | TD00-IP20I           |            |        |                  |                 | 1            | Integral triple pole protection kit for TD00-DI with molded shrouds and phase barriers                 |
|                           |                   | TD00-IP20IC          | 3          |        |                  |                 | 1            | Integral triple pole protection kit for TD00-DI with fuse covers and molded shrouds and phase barriers |
| NH1                       | 250               | TD1-IP20             | 3          | 6      | 2                | 2               |              | Triple pole protection kit with terminal shrouds, fuse cover   |
| NH2                       | 400               | TD2-IP20             | _          |        |                  |                 |              | phase barriers and ganging links   |
| NH3                       | 630               | TD3-IP20             | _          |        |                  |                 |              |  |









TD00-IP20

TD00-IP20I

TD00-IP20IC

TD(size 1 to 3)-IP20

#### Microswitch

| Catalogue numbers | Pack quantity | Ratings        |
|-------------------|---------------|----------------|
| BVL50             | 1             | 5 A 250 V a.c. |
| 170H0236          | 12            | 2 A 250 V a.c. |
| 170H0238          | 12            | 2 A 250 V a.c. |



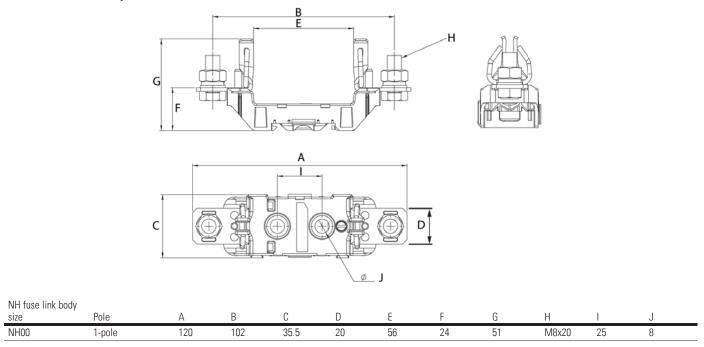


Microswitch suitable for the following NH fuse links:

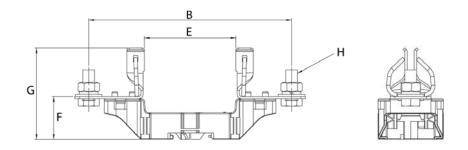
- 400 Volts gG/gL
- 500 Volts gG/gL and aM
- 690 Volts gG/gL and aM.

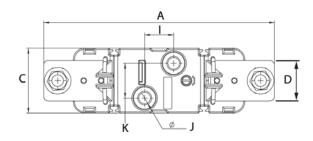
Note: Microswitches fit onto the fuse gripping lugs and are applicable to all Bussmann series NH fuses.

#### Dimensions (mm) 1-pole, size 00



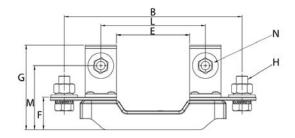
#### Dimensions (mm) 1-pole, sizes 1, 2 and 3



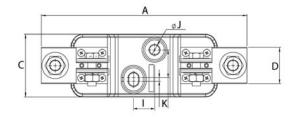


| Fuse body    | /                  |     |     |    |    |    |      |    |        |    |    |    |  |
|--------------|--------------------|-----|-----|----|----|----|------|----|--------|----|----|----|--|
| size         | Poles/Type         | А   | В   | С  | D  | Е  | F    | G  | Н      | I  | J  | K  |  |
| NH1          | 1-pole             | 199 | 175 | 56 | 35 | 79 | 37   | 78 | M10x25 | 25 | 10 | 30 |  |
| NH1<br>NH2 - | 1 pole             | 224 | 199 | 56 | 35 | 79 | 37.5 | 86 | M10x25 | 25 | 10 | 30 |  |
|              | 1-pole double clip | 223 | 199 | 56 | 35 | 82 | 37   | 79 | M10x25 | 25 | 10 | 30 |  |
| NH3          | 1-pole             | 239 | 209 | 56 | 36 | 82 | 37.5 | 88 | M12x30 | 25 | 10 | 30 |  |

### Dimensions (mm) 1-pole, size 4

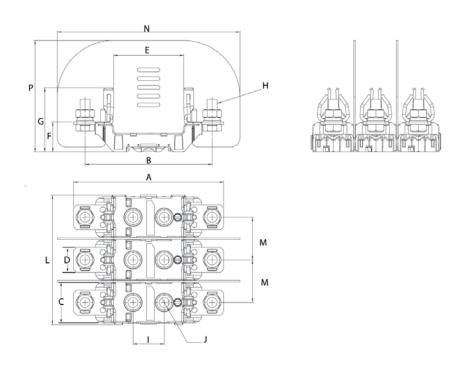






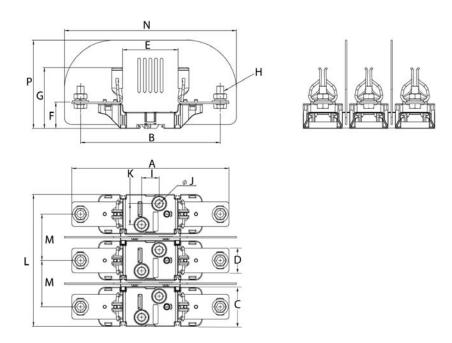
| NH fuse link | <            |     |     |    |    |     |    |     |        |    |    |    |     |    |        |
|--------------|--------------|-----|-----|----|----|-----|----|-----|--------|----|----|----|-----|----|--------|
| body size    | Poles/Type   | Α   | В   | С  | D  | Е   | F  | G   | Н      | 1  | J  | K  | L   | M  | N      |
| NILIA        | 1-pole 1250A | 295 | 255 | 90 | 52 | 105 | 47 | 122 | M16x40 | 30 | 14 | 40 | 150 | 92 | M12x40 |
| NH4          | 1-pole 1600A | 295 | 255 | 90 | 60 | 105 | 50 | 125 | M16x40 | 30 | 14 | 40 | 150 | 92 | M12x40 |

#### Dimensions (mm) 3-pole, size 00



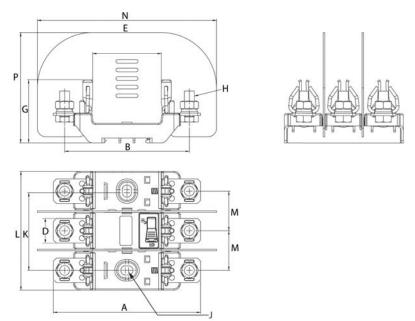
| NH fuse link<br>body size | Poles/Type | А   | В   | С    | D  | Е  | F  | G  | Н     | I  | J | K | L     | М  | N   | Р  |
|---------------------------|------------|-----|-----|------|----|----|----|----|-------|----|---|---|-------|----|-----|----|
| NH00                      | 3-pole     | 120 | 102 | 35.5 | 20 | 56 | 24 | 51 | M8x20 | 25 | 8 | - | 103.5 | 34 | 146 | 89 |

#### Dimensions (mm) 3-pole, sizes 1, 2 and 3



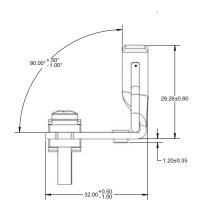
| NH Fuse link | (                  |     |     |    |    |    |      |    |        |    |    |    |     |      |     |       |
|--------------|--------------------|-----|-----|----|----|----|------|----|--------|----|----|----|-----|------|-----|-------|
| body size    | Poles/Type         | Α   | В   | С  | D  | Е  | F    | G  | Н      | -  | J  | K  | L   | М    | N   | Р     |
| NH1          | 3-pole             | 199 | 175 | 56 | 35 | 79 | 37   | 78 | M10x25 | 25 | 10 | 30 | 188 | 66   | 245 | 125.5 |
| NH2          | 3-pole             | 224 | 199 | 56 | 35 | 79 | 37.5 | 86 | M10x25 | 25 | 10 | 30 | 188 | 66   | 245 | 125.5 |
|              | 3-pole double clip | 223 | 199 | 56 | 35 | 82 | 37   | 79 | M10x25 | 25 | 10 | 30 | 188 | 66   | 245 | 125.5 |
| NH3          | 3-pole             | 239 | 209 | 56 | 36 | 82 | 37.5 | 88 | M12x30 | 25 | 10 | 30 | 221 | 82.5 | 260 | 137.5 |

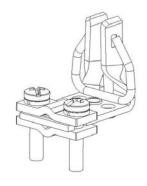
### Dimensions (mm) integral 3-pole, size 00



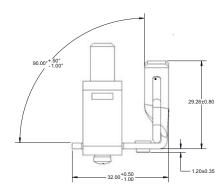
| NH fuse link | (               |     |     |   |    |    |    |    |       |     |        |      |    |      |     |    |
|--------------|-----------------|-----|-----|---|----|----|----|----|-------|-----|--------|------|----|------|-----|----|
| body size    | Poles/Type      | Α   | В   | С | D  | Е  | F  | G  | Н     | -   | J      | K    | L  | M    | N   | Р  |
| NH00         | 3-pole Integral | 120 | 102 | - | 20 | 56 | 24 | 51 | M8x20 | ) - | 7.5x10 | 63.5 | 97 | 32.3 | 146 | 90 |

#### Fixings dimensions (mm) for integral 3-pole NH Base



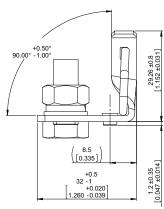


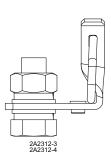
Pressure plate





Box lug





Clinch nut

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