Effective June 2018 Supersedes October 2017

## BUSSMANN SERIES

# NH Bases





## **Product description**

Eaton's Bussmann<sup>™</sup> 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





### **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-Dxl (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 Pl             | BT             |                |                |              |              |
| Contacts  |                      | Silver plated               | copper         |                |                |              |              |
| Screw, nuts and washers                             |                      | Zinc clear pla              | ted steel      |                |                |              |              |
| Derating temperature factors for<br>maximum current | ≤ 35°C               | 1                           | 1              | 1              | 1              | 1            | 1            |
|   | 40°C                 | 0.95                        | 0.95           | 0.95           | 0.95           | 0.95         | 0.95         |
|   | 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)                | $\checkmark$                | $\checkmark$   | $\checkmark$   | $\checkmark$   | x            | x            |
| Terminal screw                                      |                      | M8                          | M10            | M10            | M12            | M16          | M16          |
| Maximum tightening torque termina                   | al screw             | 10N•m                       | 32N•m          | 32N•m          | 32N•m          | 56N•m        | 56N•m        |
|   | DIN-Rail             | $\checkmark$                | $\checkmark$   | $\checkmark$   | $\checkmark$   | x            | x            |
| Fixing  | Screw                | $\checkmark$                | $\checkmark$   | $\checkmark$   | $\checkmark$   | $\checkmark$ | $\checkmark$ |
| With microswitch 16A/250V                           | Fuse operated signal | $\checkmark$                | $\checkmark$   | $\checkmark$   | $\checkmark$   | ×            | x            |
| Operating temperature range                         |                      | -20 to 70°C                 |                |                |                |              |              |
| Storage temperature range                           |                      | -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                |                         |

\*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 | <b>1</b> = Compatible for NH fuse links body size 1                       | <b>DD</b> = Double fuse contact clips<br><b>S</b> = Screw mounting only |
|                         | <b>2</b> = Compatible for NH fuse links body size 2                       | <b>S1600</b> = 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<br>(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<br>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    |                      |
|                         |   | <b>C</b> = Clinch nut/clinch nut                   | I = Integral NH Base |
|                         |   | <b>P</b> = Pressure plate/pressure plate           | -                    |
|                         |   | <b>B</b> = 70 mm fixed box lug/70 mm fixed box lug | -                    |
|                         |   | <b>CP</b> = Clinch nut/pressure plate              | -                    |
|                         |   | <b>CB</b> = 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

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## **NH Bases**

## Solid links catalogue numbers

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



Accessories

## Fuse extraction handle NH fuse link body size Catalogue numbers Pack quantity NH00-3 160 - 630 FEH 1



Fuse extraction handle

#### Shroud kits

| offiouu kits       |                           |                   |                      |                        |
|--------------------|---------------------------|-------------------|----------------------|------------------------|
| Fuse base<br>range | NH fuse link<br>body size | Current<br>(Amps) | Catalogue<br>numbers | Description            |
| SD00               | NHOO                      | 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

| NH fuse<br>link body<br>size | Current<br>(Amps) | Catalogue<br>numbers | Pack<br>quantity | Description                          |
|------------------------------|-------------------|----------------------|------------------|--------------------------------------|
| NHOO                         | 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 Current

Catalogue Fuse cover Shroud Phase Ganging Integral kit

| body size | (Amps) | numbers     | Fuse cover | Shroud | barrier | 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-IP20IC

TD(size 1 to 3)-IP20

TD00-IP20

Catalogue numbers Pack quantity

1

12

12

TD00-IP20I



BVL50



170H0236

170H0236 170H0238

Microswitch

BVL50

Microswitch suitable for the following NH fuse links:

EATON www.eaton.com

- 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.

Ratings

5 A 250 V a.c.

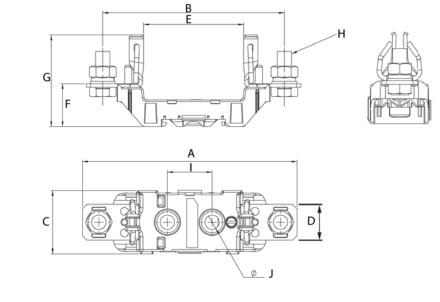
2 A 250 V a.c.

2 A 250 V a.c.



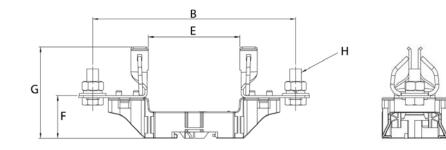
## **NH Bases**

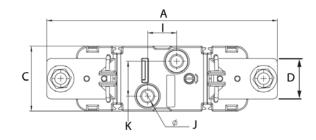
## Dimensions (mm) 1-pole, size 00



| NH fuse link bo | ody    |     |     |      |    |    |    |    |       |    |   |
|-----------------|--------|-----|-----|------|----|----|----|----|-------|----|---|
| size            | Pole   | A   | В   | С    | D  | E  | F  | G  | Н     |    | J |
| NH00            | 1-pole | 120 | 102 | 35.5 | 20 | 56 | 24 | 51 | M8x20 | 25 | 8 |

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



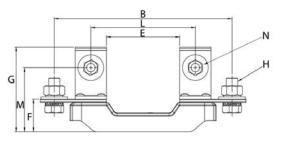


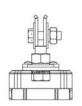
| size | Poles/Type         | А   | В   | С  | D  | Е  | F    | G  | Н      | Ι  | J  | К  |
|------|--------------------|-----|-----|----|----|----|------|----|--------|----|----|----|
| NH1  | 1-pole             | 199 | 175 | 56 | 35 | 79 | 37   | 78 | M10x25 | 25 | 10 | 30 |
| NH2  | 1 pole             | 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 |

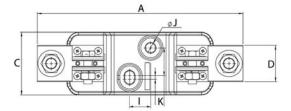


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## Dimensions (mm) 1-pole, size 4

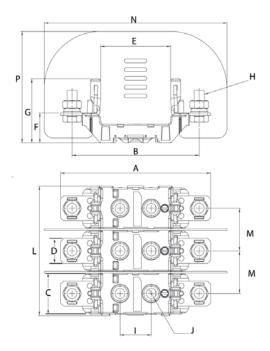






| NH fuse link<br>body size | Poles/Type   | А   | В   | С  | D  | F   | F  | G   | н      | I  | J  | К  | I   | М  | N      |
|---------------------------|--------------|-----|-----|----|----|-----|----|-----|--------|----|----|----|-----|----|--------|
| NH4                       | 1-pole 1250A | 295 | 255 | 90 | 52 | 105 | 47 | 122 | M16x40 | 30 | 14 | 40 | 150 | 92 | M12x40 |
|                           | 1-pole 1600A | 295 | 255 | 90 | 60 | 105 | 50 | 125 | M16x40 | 30 | 14 | 40 | 150 | 92 | M12x40 |

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

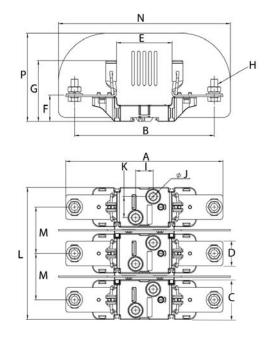


| NH fuse link |            |     |     |      |    |    |    |    |       |    |   |   |       |    |     |    |
|--------------|------------|-----|-----|------|----|----|----|----|-------|----|---|---|-------|----|-----|----|
| body size    | Poles/Type | А   | В   | С    | D  | E  | F  | G  | Н     | Ι  | J | Κ | L     | Μ  | Ν   | Р  |
| NHOO         | 3-pole     | 120 | 102 | 35.5 | 20 | 56 | 24 | 51 | M8x20 | 25 | 8 | - | 103.5 | 34 | 146 | 89 |



## **NH Bases**

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

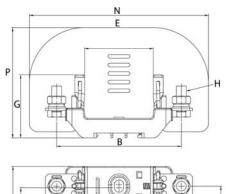


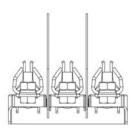
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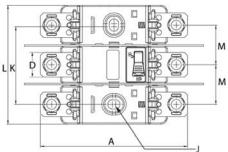
#### NH Fuse link

| body size | Poles/Type         | А   | В   | С  | D  | Е  | F    | G  | Н      | Ι  | J  | К  | L   | Μ    | Ν   | 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



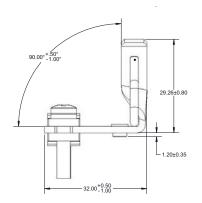


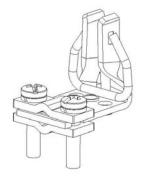


| NH fuse link |                 |     |     |   |    |    |    |    |       |     |        |      |    |      |     |    |
|--------------|-----------------|-----|-----|---|----|----|----|----|-------|-----|--------|------|----|------|-----|----|
| body size    | Poles/Type      | А   | В   | С | D  | E  | F  | G  | Н     |     | J      | Κ    | L  | Μ    | Ν   | Р  |
| NHOO         | 3-pole Integral | 120 | 102 | - | 20 | 56 | 24 | 51 | M8x20 | 0 - | 7.5x10 | 63.5 | 97 | 32.3 | 146 | 90 |

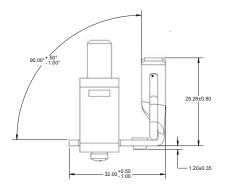


## Fixings dimensions (mm) for integral 3-pole NH Base



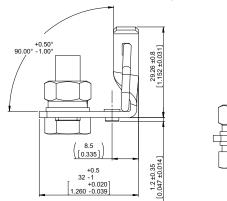


Pressure plate





Box lug

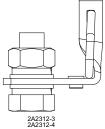


Clinch nut

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**NH Bases** 

