NH Catalogue

# Leadership in Circuit Protection

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With 2012 sales of $16.3 billion, Eaton has approximately 103,000 employees around the world and sells products in more than 175 countries.

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# Table of contents

**NH Fuse links technical data** 4 - 11
- Technical data 4 - 6
- NH Fuse links applications 7
- Features of the NH DIN range 8
- Product range overview 9
- Ordering key 9
- Sizing guide 10
- NH Fuse links dimensions - mm 11

**400 Volts range - gG** 12 - 18
- Technical data 12
- Part numbers summary 13
- Size 000 14
- Size 00 15
- Sizes 01 and 1 16
- Sizes 02 and 2 17
- Sizes 03 and 3 18

**500 Volts range - gG** 19 - 31
- Technical data 19
- Part numbers summary 20 - 21
- Size 000 22
- Size 00 23
- Size 0 24
- Size 01 25
- Size 1 26
- Size 02 27
- Size 2 28
- Size 03 29
- Size 3 30
- Size 4 31

**690 Volts range - gG** 32 - 39
- Technical data 32
- Part numbers summary 33
- Size 000 34
- Size 00 35
- Size 1 36
- Size 2 37
- Size 3 38
- Size 4 39

**500 and 690 Volts range - aM** 40 - 46
- Technical data 40
- Part numbers summary 41
- Size 000 42
- Size 00 43
- Size 1 44
- Size 2 45
- Size 3 46

**Accessories** 47 - 63
- NH Fuse bases and accessories 47 - 52
- NH Fuse rails - vertical 53 - 55
- NH Fuse switch disconnectors - vertical 56 - 58
- NH Fuse switch disconnectors - horizontal 59 - 63

**Index** 64 - 65

# NH Fuse links technical data

## Introduction

Bussmann's NH fuse link range uses the latest technology to provide class leading fuse link performance and reliable indication. With a unique patented dual indicator design capable of operating a microswitch for remote fuse indication, Bussmann provides one of the most reliable solutions available.
The range is fully compliant with IEC 60269-1 and 2 standards, with VDE 0636-2 third party approval and complies with the dimensional requirements of DIN 43620 for ease of use.

In order to help select the correct product for an application, Bussmann provides the following application notes.

## Selecting the correct product

Before making a fuse link selection the following information should be known about the system or circuit to be protected.

## Type of application (cable protection/motor protection)

For general applications or cable protection, the standard gG (general purpose) NH fuse link should be considered. For Motor protection applications, the aM (motor protection) NH fuse link should be considered. Motor Protection (aM) fuse links have partial range breaking ability and cannot clear low overload faults. They should only be applied to circuits also protected by a motor protection relay or where only high short-circuit faults could occur.

Please note that misapplication of a fuse link can be problematical, consult Bussmann if there is any doubt over fuse link selection.

## System voltage

Bussmann's NH fuse links are available in three voltage ratings, 400V, 500V and 690V. These are maximum voltage ratings and should not be used where the nominal system voltage could exceed the fuse link's maximum rating.

## Full load current

In accordance with IEC standards, Bussmann's NH fuse links are tested to carry full load current. The rated current of a fuse link should be equal or greater than the operational current of the circuit and equal or smaller than the continuous current carrying capacity of the conductor.
The standard gG (general purpose) NH fuse link with a conventional fusing current of 1.6 times rated current will give assured cable protection against the effects of overcurrents.

## Non-fault overload currents (motor inrush currents etc)

To prevent nuisance operation of the fuse link, the fuse link rating selected for the application should take into account any non-fault overload currents. Please refer to the time-current curves in the catalogue.

## Possible fault conditions and maximum short-circuit current

This information is essential in order to select the fuse link that would provide the best possible protection under all fault conditions. Bussmann's NH fuse links have a maximum breaking capacity of 120kA and should never be used on a system where the maximum short-circuit current exceeds this level. Please refer to the time-current curves in the catalogue.

# NH Fuse links technical data

## Time-current curves

The time-current curve is probably the most useful piece of all fuse link data available. It allows you to determine how quickly the fuse link will operate under fault conditions and which fuse link will not operate under non-fault overload currents.

To use the curve simply plot the prospective Root Mean Square (RMS) fault current along the X axis and draw a line vertically upwards from this point. Where this point intersects the fuse curve line, plot a line across to the Y axis for the relevant rating. The Y axis shows the nominal operating time for the fuse in seconds. Hence, it shows how quickly the fuse link will operate under different fault currents.

The graph can be used to check if a fuse link can withstand an overload condition that is not considered to be a fault such as a direct-on-line (DOL) motor start. For example, if a motor starts and the inrush current is six times the full load current for 10 seconds, the exact point can be plotted onto the time-current curve. Any fuse link line lying to the right of this point will withstand the motor start current (allowing for a +/-10% tolerance on each fuse link curve). If the fuse link curve falls to the left of this point, then the fuse link will not withstand the motor start current and will inadvertently operate when the motor is started.

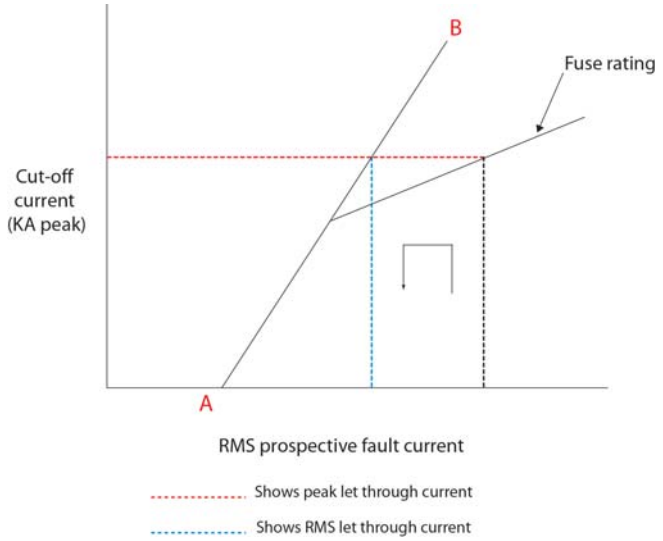
In summary, the rule for time-current curves is that any point on or to the right of a fuse link curve would indicate the fuse link has operated in the given time. Any point to the left of the curve would indicate the fuse link has not operated.

## Cut-off curves

The graph consists of an A-B line running diagonally from bottom left to top right, see drawing below. This is known as the non current-limiting line. Branching from this A-B line you can see each individual fuse link rating line running diagonally left to right.To read the graph, plot the RMS prospective fault current along the X axis. If this point only intersects the A-B line then the prospective fault current is too low to benefit from the current-limiting effect of the fuse link.

However, if this point intersects the relevant fuse link line, plot a line across to the Y axis. This point on the Y axis shows the peak asymmetrical let-through current the fuse link will allow to pass before operating. The peak asymmetrical let-through current is the absolute worst case peak current the fuse link will allow to pass through, taking into account the DC offset seen under short-circuit conditions and low power factor.

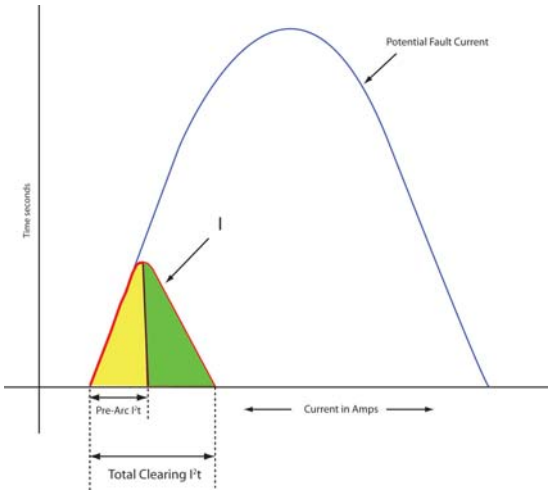
The RMS let-through current is read from the graph using the same procedure above. Instead of plotting the point of intersection with the fuse link current-limiting line over to the Y axis, it should only be plotted as far as the A-B line. At this point, a line can be drawn back down to the X axis to show a RMS symmetrical value of let-through current. This is known as the **“up, over and down method”.**



# NH Fuse links technical data

## $I^2t$ values

$I^2t$ values are measured at the time of testing the fuse link at their rated breaking capacity and voltage. $I^2t$ is effectively the amount of heating energy the fuse link will allow to pass during fault clearing at high short-circuit faults. $I^2t$ values relevant for short-circuit faults cannot be calculated from the time-current or cut-off curves.
The published $I^2t$ figures always show two values, **pre-arcing/total clearing** and are representative of the area under the first half cycle of the fault current.




- **The pre-arcing value** is the area under the first half cycle of fault current showing on the graph in yellow to the point just before an arc occurs within the fuse link. This is due to the element material being vaporised by the very high short-circuit current.

- **The total clearing $I^2t$** is the yellow and green area under the first half cycle from the start of the short-circuit current flow to the point where the fuse link has become an insulator, completely isolating the flow of current.

The diagram here shows a representation of $I^2t$ during a half cycle of fault current.

$I^2t$ values give a good representation of the speed of operation of a fuse link. A small $I^2t$ value would indicate a very fast-acting fuse link whereas a large $I^2t$ value would indicate a fairly slow operating fuse link. In all cases the total clearing $I^2t$ value of the fuse link must be smaller than the $I^2t$ value of the device to be protected in order for the fuse link to provide adequate protection against short-circuit faults. For fuse link discrimination (see definition of discrimination below) in distribution systems, the total clearing $I^2t$ value of the fuse link downstream should be less than the pre-arcing $I^2t$ value of the fuse link upstream. This ensures the smaller fuse link, in the system operates well before the larger upstream fuse link.

## NH discrimination

Bussmann's NH fuse links are easy to use on distribution networks where discrimination between large and small fuse links are required. This can be achieved by applying a discrimination factor of 1 to 1.6 without the need to check the fuse link data. For example, by using a 100A fuse link downstream from the main 160A fuse link, in the event of a fault condition, the smaller 100A fuse link is sure to operate before the 160A fuse link, ensuring discrimination.

## DC applications

Bussmann's NH fuse links can be used on DC applications. In all cases the fuse links can be used at **half of their AC rating** with a time constant of no more than 10mS. The time constant is the rate of rise of fault current and should be as close to a 50Hz AC half cycle as possible.

## Power loss

Every effort is made to ensure the power loss of the fuse link is kept to a minimum. Bussmann provides fuse links with some of the lowest power losses in the industry. Power loss of the fuse link is given off as heat and this should be taken into account when fitting fuse links into unventilated areas. It is preferable that a fuse link has good airflow around the body of the fuse link to ensure cool running and prevent nuisance operation of the fuse link due to thermal stresses.

**Should further information be required please contact Bussmann's application engineers: 00 44 (0) 1509 882 699 or buletechnical@eaton.com**

# NH Fuse links applications

## Solar applications

NH fuse links can be found on a solar distribution network

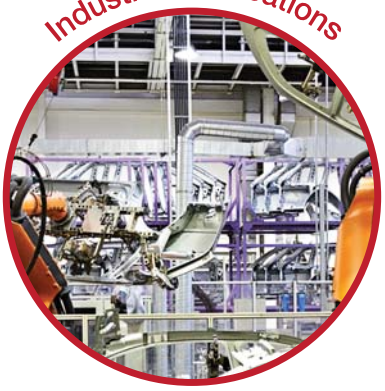
## Wind applications

NH fuse links can be found in a wind turbine


## Utilities applications

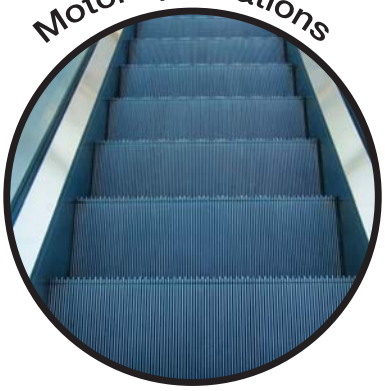
NH fuse links can be found on the low voltage side of substations

## Industrial applications



NH fuse links can be used for protection of cables and distribution circuits

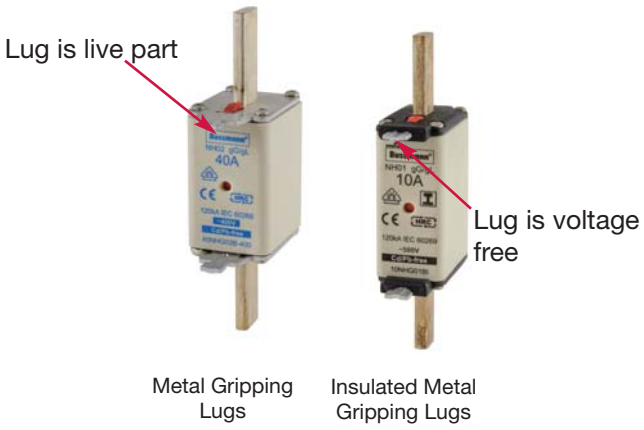
## Motor applications



NH fuse links can be used for industrial motor applications

# NH Dual indicator system from Bussmann

- High breaking capacity
- 400Vac, 500Vac and 690Vac
- Dual indication
- Insulated tag variants option available
- IEC 60269-1 and 2, DIN 43620, VDE 0636-2, CE Mark




# Features of the NH DIN range

## Dual indicator system

Bussmann's patented dual indicator provides clear indication, ensuring extremely reliable local and remote* signalling, decreasing fuse link replacement time and costs.

* with the use of an optional microswitch accessory

## Low power loss

Bussmann's "low watts loss" fuse links reduce overall operating costs and carbon footprint through lower energy consumption and heat transfer to equipment. To find out how much you can save, please contact our technical applications department: buletechnical@eaton.com.

## Globally compliant

Bussmann's NH fuse links are tested and comply with IEC 60269-1 and 2, DIN 43620, VDE, CE, CCC (China), RoHS and can be recycled, ensuring global acceptance.

Cd/Pb-free

## Lead and cadmium free

Bussmann is the world's first true manufacturer of a complete range of Lead and Cadmium free NH fuse links. Negating any legislation concerns regarding the amount of hazardous materials permissible within the fuse links.

HRC

## Recycling

Bussmann is dedicated to produce recyclable products and is a member of an industry recognised recycling scheme. The "HRC" symbol on Bussmann's NH fuse links define the product suitable for recycling, limiting disposal cost.

# Product range overview

| Voltage (Vac) | Class | Size | Amps | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2 | 4 | 6 | 10 | 16 | 20 | 25 | 32 | 35 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 224 | 250 | 300 | 315 | 355 | 400 | 425 | 450 | 500 | 630 | 800 | 1000 | 1250 | Page |
| 400 | gG | 000 | 2 | 4 | 6 | 10 | 16 | 20 | 25 | 32 | 35 | 40 | 50 | 63 | 80 | 100 | | | | | | | | | | | | | | | | | 14 |
| | | 00 | | | | | | | | | | | | | | | 125 | 160 | | | | | | | | | | | | | | | 15 |
| | | 01 | | | | | | | | | 35 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | | | | | | | | | | | | | | | 16 |
| | | 1 | | | | | | | | | | | | | | | | | 200 | 224 | 250 | | | | | | | | | | | | 16 |
| | | 02 | | | | | | | | | 35 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 224 | 250 | | | | | | | | | | | | 17 |
| | | 2 | | | | | | | | | | | | | | | | | | | | | 315 | 355 | 400 | | | | 630 | | | | 17 |
| | | 03 | | | | | | | | | | | | | | | | | | | 250 | | 315 | 355 | 400 | | | | | | | | 18 |
| | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | 500 | 630 | | | | 18 |
| 500 | gG | 000 | 2 | 4 | 6 | 10 | 16 | 20 | 25 | 32 | 35 | 40 | 50 | 63 | 80 | 100 | | | | | | | | | | | | | | | | | 22 |
| | | 00 | | | | | | | | | | | 50 | 63 | 80 | 100 | 125 | 160 | | | | | | | | | | | | | | | 23 |
| | | 0 | | | 6 | 10 | 16 | 20 | 25 | 32 | 35 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | | | | | | | | | | | | | | | 24 |
| | | 01 | | | 6 | 10 | 16 | 20 | 25 | 32 | 35 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | | | | | | | | | | | | | | | 25 |
| | | 1 | | | | | | | | | | | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 224 | 250 | | 315 | 355 | | | | | | | | | 26 |
| | | 02 | | | | | | | | | 35 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 224 | 250 | | | | | | | | | | | | 27 |
| | | 2 | | | | | | | | | | | | | | | | | | | 250 | 300 | 315 | 355 | 400 | 425 | 450 | 500 | | | | | 28 |
| | | 03 | | | | | | | | | | | | | | | | | | | 250 | | 315 | 355 | 400 | | | | | | | | 29 |
| | | 3 | | | | | | | | | | | | | | | | | | | | | 315 | 355 | 400 | 425 | 450 | 500 | 630 | 800 | | | 30 |
| | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | 500 | 630 | 800 | 1000 | 1250 | 31 |
| 690 | gG | 000 | 2 | 4 | 6 | 10 | 16 | 20 | 25 | 32 | 35 | 40 | 50 | 63 | | | | | | | | | | | | | | | | | | | 34 |
| | | 00 | | | | | | | | | | | 50 | 63 | 80 | 100 | 125 | 160 | | | | | | | | | | | | | | | 35 |
| | | 1 | | | | | | | | | | | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 224 | 250 | | | | | | | | | | | | 36 |
| | | 2 | | | | | | | | | | | | | | | | | 200 | 224 | 250 | | 315 | | | | | | | | | | 37 |
| | | 3 | | | | | | | | | | | | | | | | | | | 250 | | 315 | 355 | 400 | 425 | | 500 | | | | | 38 |
| | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | 630 | 800 | | | 39 |
| 500 and 690 | aM | 000 | | | 6 | 10 | 16 | 20 | 25 | 32 | 35 | 40 | 50 | | | | | | | | | | | | | | | | | | | | 42 |
| | | 00 | | | | | | | | | | | | 63 | 80 | 100 | | | | | | | | | | | | | | | | | 43 |
| | | 1 | | | | | | | | | | | 50 | 63 | 80 | 100 | 125 | 160 | | | | | | | | | | | | | | | 44 |
| | | 2 | | | | | | | | | | | | | | | 125 | 160 | 200 | 224 | 250 | | 315 | 355 | | | | | | | | | 45 |
| | | 3 | | | | | | | | | | | | | | | | | | | | | 315 | 355 | 400 | | | 500 | | | | | 46 |

: Part available, for example Size 00 400V is available in 125 and 160A

# Ordering key

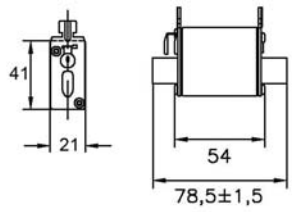
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Current rating | 100 | | | | | |
| NH fuse link | | NH | | | | |
| Utilisation class | | | G | | | |
| Body size | | | | 000 | | |
| Bussmann by Eaton | | | | | B | |
| Insulated metal gripping lugs (optional) | | | | | | I |
| **Complete part number** | **100** | **NH** | **G** | **000** | **B** | **I** |

### Intuitive part number

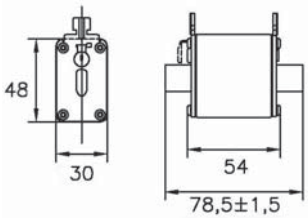
Bussmann logical part numbering system provides simple identification of fuse link current, utilisation class, size and voltage, ensuring easy identification on site reducing replacement time and improving network productivity.

# Sizing guide

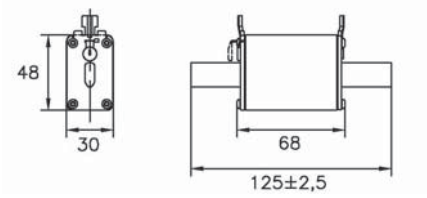
## Size 000



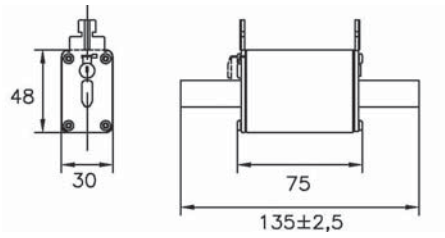

## Size 00



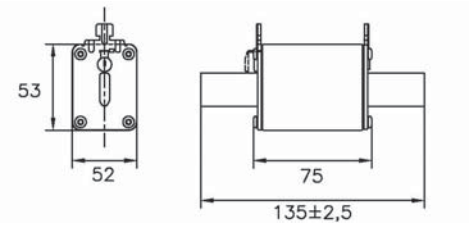

## Size 0



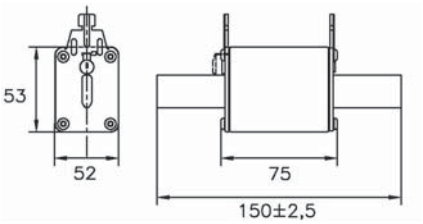

## Size 01



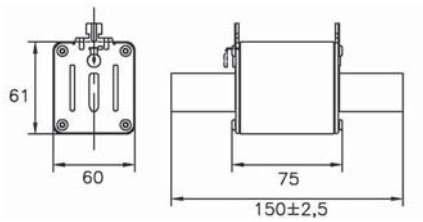

## Size 1



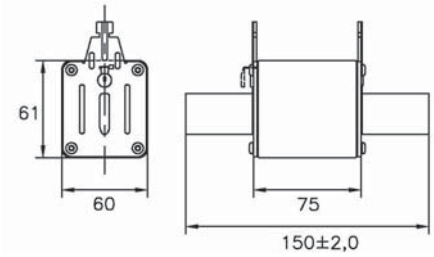

## Size 02




## Size 2




## Size 03

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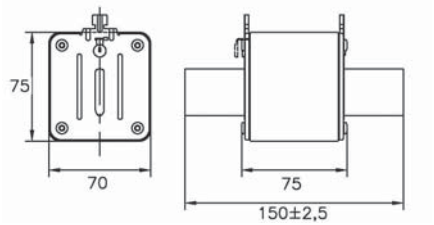
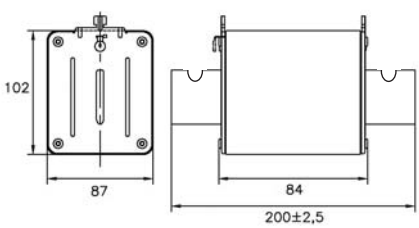
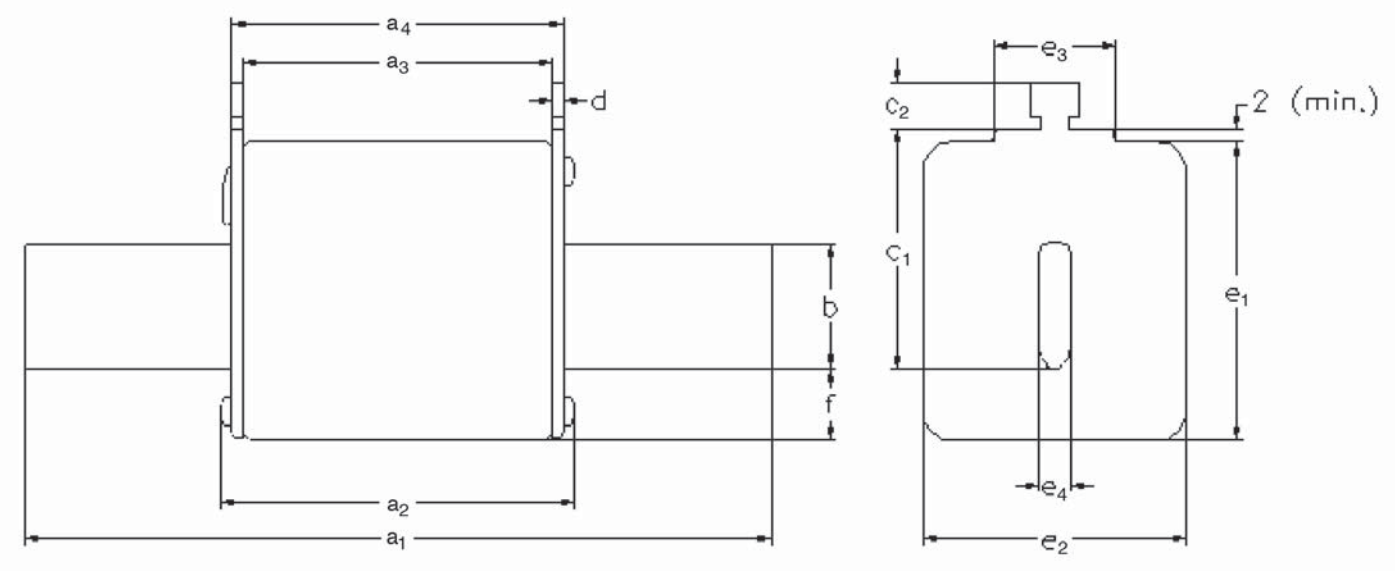



## Size 4



# NH Fuse links dimensions - mm




| Size | $a_1$ | $a_2$ (max) | $a_3$ | $a_4$ | b | $c_1$ | $c_2$ | d | $e_1$ (max) | $e_2$ (max) | $e_3$ (max) | $e_4$ | f (max) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 000 | 78.5±1.5 | 54 | 45±1.5 | 49±1.5 | 15 | 35 | 10 | 2±0.5 | 41 | 21 | 16 | 6 | 8 |
| 00 | 78.5±1.5 | 54 | 45±1.5 | 49±1.5 | 15 | 35 | 11 | 2±0.5 | 48 | 30 | 25 | 6 | 15 |
| 0 | 125±2.5 | 68 | $62^{+3}_{-1.5}$ | $68^{+1.5}_{-3}$ | 15 | 35 | 11 | 2.5±0.5 | 48 | 30 | 25 | 6 | 15 |
| 01 | 135±2.5 | 75 | 62±2.5 | 68±2.5 | 15 | 40 | 11 | 2.5±0.5 | 48 | 30 | 25 | 6 | 15 |
| 1 | 135±2.5 | 75 | 62±2.5 | 68±2.5 | 20 | 40 | 11 | 2.5±0.5 | 53 | 52 | 25 | 6 | 15 |
| 02 | 150±2.5 | 75 | 62±2.5 | 68±2.5 | 20 | 48 | 11 | 2.5±0.5 | 53 | 52 | 25 | 6 | 15 |
| 2 | 150±2.5 | 75 | 62±2.5 | 68±2.5 | 25 | 48 | 11 | 2.5±0.5 | 61 | 60 | 25 | 6 | 15 |
| 03 | 150±2.5 | 75 | 62±2.5 | 68±2.5 | 25 | 60 | 11 | 2.5±0.5 | 61 | 60 | 25 | 6 | 15 |
| 3 | 150±2.5 | 75 | 62±2.5 | 68±2.5 | 32 | 60 | 11 | 3±0.5 | 75 | 70 | 25 | 6 | 18 |
| 4* | 200±3 | 84 | 62±2.5 | 90±3 | 50 | 85 | 10 | 3±0.5 | 102 | 87 | 25 | 8 | 30 |

* Size 4 is a single indication fuse lin with slotted end tags

# 400Vac class gG/gL - 2 to 630 amps - sizes 000 to 3


**Description**
A square bodied range of industrial fuse links for a wide variety of applications.

**Part number structure**
(amp)NHG(size)B-400 e.g. 100NHG02B-400

**Class of operation:** gL/gG

**Standards/approvals**
IEC 60269-1 and 2, VDE 0636, DIN 43620 and CE

**Technical data**
- Sizes 000 to 3
- Rated voltage: 400Vac
- Rated current: 2 to 630A
- Rated breaking capacity: 120kA AC
- Rated frequency: 50Hz
- Operating frequency: 45-62Hz

**Optional microswitch**
- BVL50 or 170H0236

**Compatible fuse holders**
- Fuse bases: SD(size)-D, SD(size)-S: 1-pole
  TD(size)-D, TD(size)-DI: 3-pole
- Fuse bases accessories: IP20, shroud and phase barrier kits
- Fuse rails - vertical: BFR Series
- Fuse switch disconnectors vertical: BFD series
- Fuse switch disconnectors horizontal: BFH series

**Environmental:**
- Recyclable
- RoHS compliant
- Lead and cadmium free

**Packaging:** All fuse links are packed in 3's.

**Features:**
- Reliable dual indicator system
- Low temperature rise
- Globally compliant

**Data sheet 720099**

# 400Vac class gG/gL - 2 to 630 amps - sizes 000 to 3

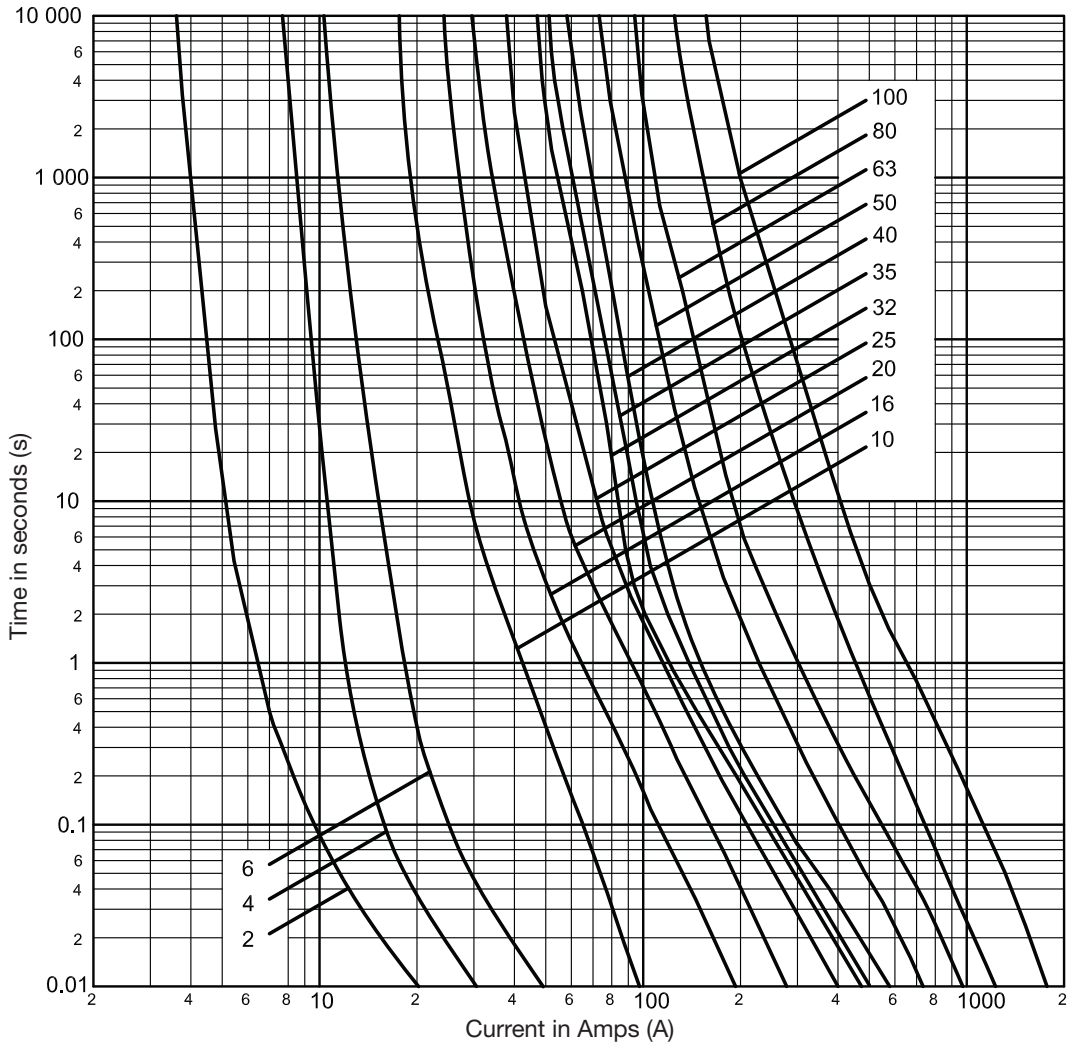
## Part numbers

| Size | Rated current (Amps) | Rated voltage (Vac) | gG/gL Dual indicator | | Pack quantity |
|---|---|---|---|---|---|
| | | | Voltage conducting metal gripping lugs | Insulated metal gripping lugs | |
| 000 | 2 | 400 | 2NHG000B-400 | 2NHG000BI-400 | 3 |
| | 4 | | 4NHG000B-400 | 4NHG000BI-400 | 3 |
| | 6 | | 6NHG000B-400 | 6NHG000BI-400 | 3 |
| | 10 | | 10NHG000B-400 | 10NHG000BI-400 | 3 |
| | 16 | | 16NHG000B-400 | 16NHG000BI-400 | 3 |
| | 20 | | 20NHG000B-400 | 20NHG000BI-400 | 3 |
| | 25 | | 25NHG000B-400 | 25NHG000BI-400 | 3 |
| | 32 | | 32NHG000B-400 | 32NHG000BI-400 | 3 |
| | 35 | | 35NHG000B-400 | 35NHG000BI-400 | 3 |
| | 40 | | 40NHG000B-400 | 40NHG000BI-400 | 3 |
| | 50 | | 50NHG000B-400 | 50NHG000BI-400 | 3 |
| | 63 | | 63NHG000B-400 | 63NHG000BI-400 | 3 |
| | 80 | | 80NHG000B-400 | 80NHG000BI-400 | 3 |
| | 100 | | 100NHG000B-400 | 100NHG000BI-400 | 3 |
| 00 | 125 | 400 | 125NHG00B-400 | 125NHG00BI-400 | 3 |
| | 160 | | 160NHG00B-400 | 160NHG00BI-400 | 3 |
| 01 | 35 | 400 | 35NHG01B-400 | 35NHG01BI-400 | 3 |
| | 40 | | 40NHG01B-400 | 40NHG01BI-400 | 3 |
| | 50 | | 50NHG01B-400 | 50NHG01BI-400 | 3 |
| | 63 | | 63NHG01B-400 | 63NHG01BI-400 | 3 |
| | 80 | | 80NHG01B-400 | 80NHG01BI-400 | 3 |
| | 100 | | 100NHG01B-400 | 100NHG01BI-400 | 3 |
| | 125 | | 125NHG01B-400 | 125NHG01BI-400 | 3 |
| | 160 | | 160NHG01B-400 | 160NHG01BI-400 | 3 |
| 1 | 200 | 400 | 200NHG1B-400 | 200NHG1BI-400 | 3 |
| | 224 | | 224NHG1B-400 | 224NHG1BI-400 | 3 |
| | 250 | | 250NHG1B-400 | 250NHG1BI-400 | 3 |
| 02 | 35 | 400 | 35NHG02B-400 | 35NHG02BI-400 | 3 |
| | 40 | | 40NHG02B-400 | 40NHG02BI-400 | 3 |
| | 50 | | 50NHG02B-400 | 50NHG02BI-400 | 3 |
| | 63 | | 63NHG02B-400 | 63NHG02BI-400 | 3 |
| | 80 | | 80NHG02B-400 | 80NHG02BI-400 | 3 |
| | 100 | | 100NHG02B-400 | 100NHG02BI-400 | 3 |
| | 125 | | 125NHG02B-400 | 125NHG02BI-400 | 3 |
| | 160 | | 160NHG02B-400 | 160NHG02BI-400 | 3 |
| | 200 | | 200NHG02B-400 | 200NHG02BI-400 | 3 |
| | 224 | | 224NHG02B-400 | 224NHG02BI-400 | 3 |
| | 250 | | 250NHG02B-400 | 250NHG02BI-400 | 3 |
| 2 | 315 | 400 | 315NHG2B-400 | 315NHG2BI-400 | 3 |
| | 355 | | 355NHG2B-400 | 355NHG2BI-400 | 3 |
| | 400 | | 400NHG2B-400 | 400NHG2BI-400 | 3 |
| | 630 | | 630NHG2B-400 | - | 3 |
| 03 | 250 | 400 | 250NHG03B-400 | 250NHG03BI-400 | 3 |
| | 315 | | 315NHG03B-400 | 315NHG03BI-400 | 3 |
| | 355 | | 355NHG03B-400 | 355NHG03BI-400 | 3 |
| | 400 | | 400NHG03B-400 | 400NHG03BI-400 | 3 |
| 3 | 500 | 400 | 500NHG3B-400 | 500NHG3BI-400 | 3 |
| | 630 | | 630NHG3B-400 | 630NHG3BI-400 | 3 |



# 400Vac class gG/gL - 2 to 100 amps - size 000

## Time-current characteristics




## Technical data

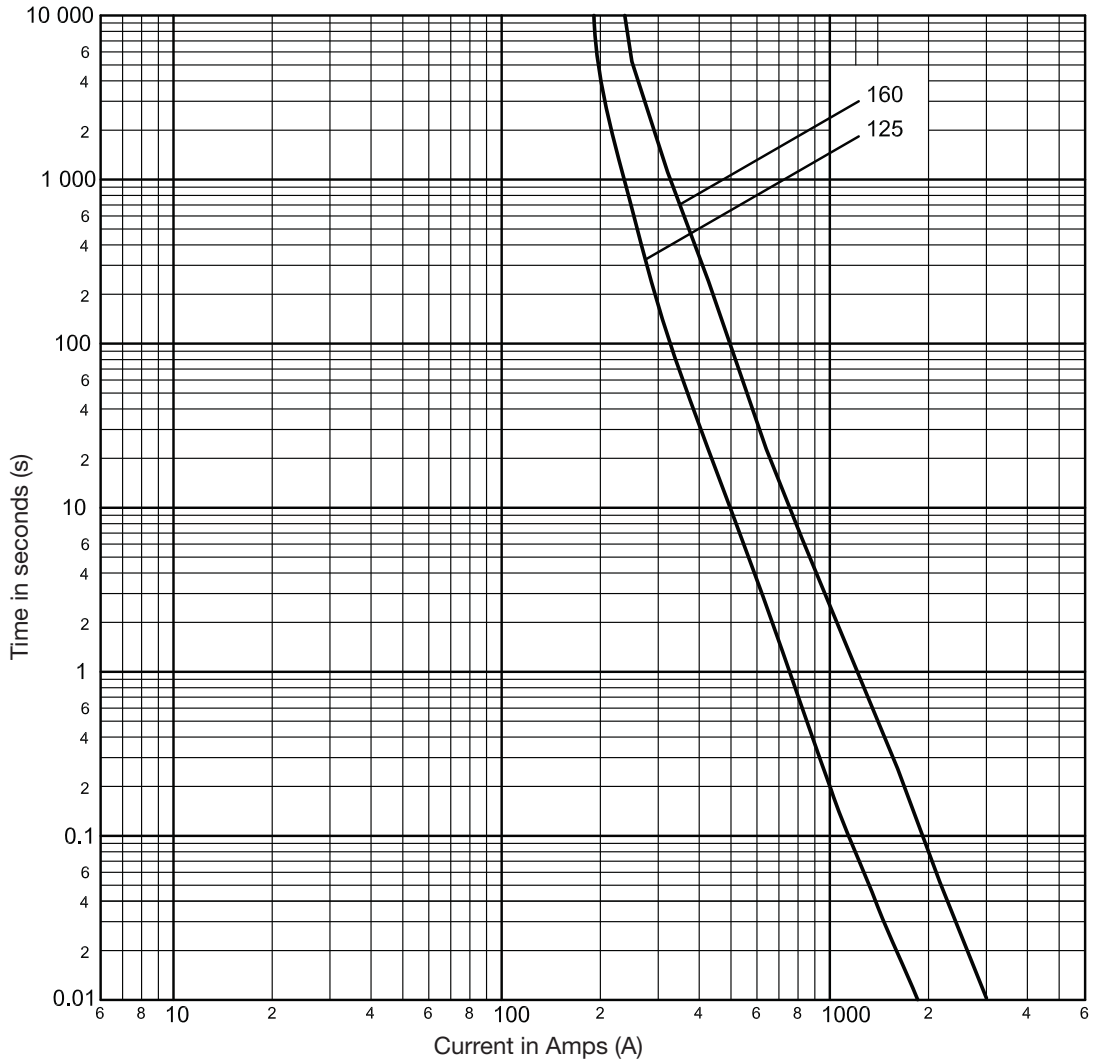
| Part numbers with metal gripping lugs | Part numbers with insulated metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | I²t (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Minimum pre-arcing | *$I_1$ 120kA at 400Vac | | |
| 2NHG000B-400 | 2NHG000BI-400 | 000 | 2 | 400 | 3.5 | 5.5 | 0.8 | 0.133 |
| 4NHG000B-400 | 4NHG000BI-400 | | 4 | | 6 | 10.5 | 1.4 | |
| 6NHG000B-400 | 6NHG000BI-400 | | 6 | | 14 | 19 | 2.2 | |
| 10NHG000B-400 | 10NHG000BI-400 | | 10 | | 60 | 175 | 1.5 | |
| 16NHG000B-400 | 16NHG000BI-400 | | 16 | | 240 | 710 | 2.3 | |
| 20NHG000B-400 | 20NHG000BI-400 | | 20 | | 584 | 1800 | 2.2 | |
| 25NHG000B-400 | 25NHG000BI-400 | | 25 | | 1000 | 2800 | 3.1 | |
| 32NHG000B-400 | 32NHG000BI-400 | | 32 | | 2400 | 9600 | 2.8 | |
| 35NHG000B-400 | 35NHG000BI-400 | | 35 | | 2900 | 11,300 | 2.8 | |
| 40NHG000B-400 | 40NHG000BI-400 | | 40 | | 4000 | 16,400 | 3 | |
| 50NHG000B-400 | 50NHG000BI-400 | | 50 | | 4000 | 12,000 | 3.4 | |
| 63NHG000B-400 | 63NHG000BI-400 | | 63 | | 6000 | 20,400 | 4.5 | |
| 80NHG000B-400 | 80NHG000BI-400 | | 80 | | 9900 | 35,700 | 4.7 | |
| 100NHG000B-400 | 100NHG000BI-400 | | 100 | | 18,100 | 39,800 | 5.2 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

**Data sheet 720099**

# 400Vac class gG/gL - 125 and 160 amps - size 00

## Time-current characteristics



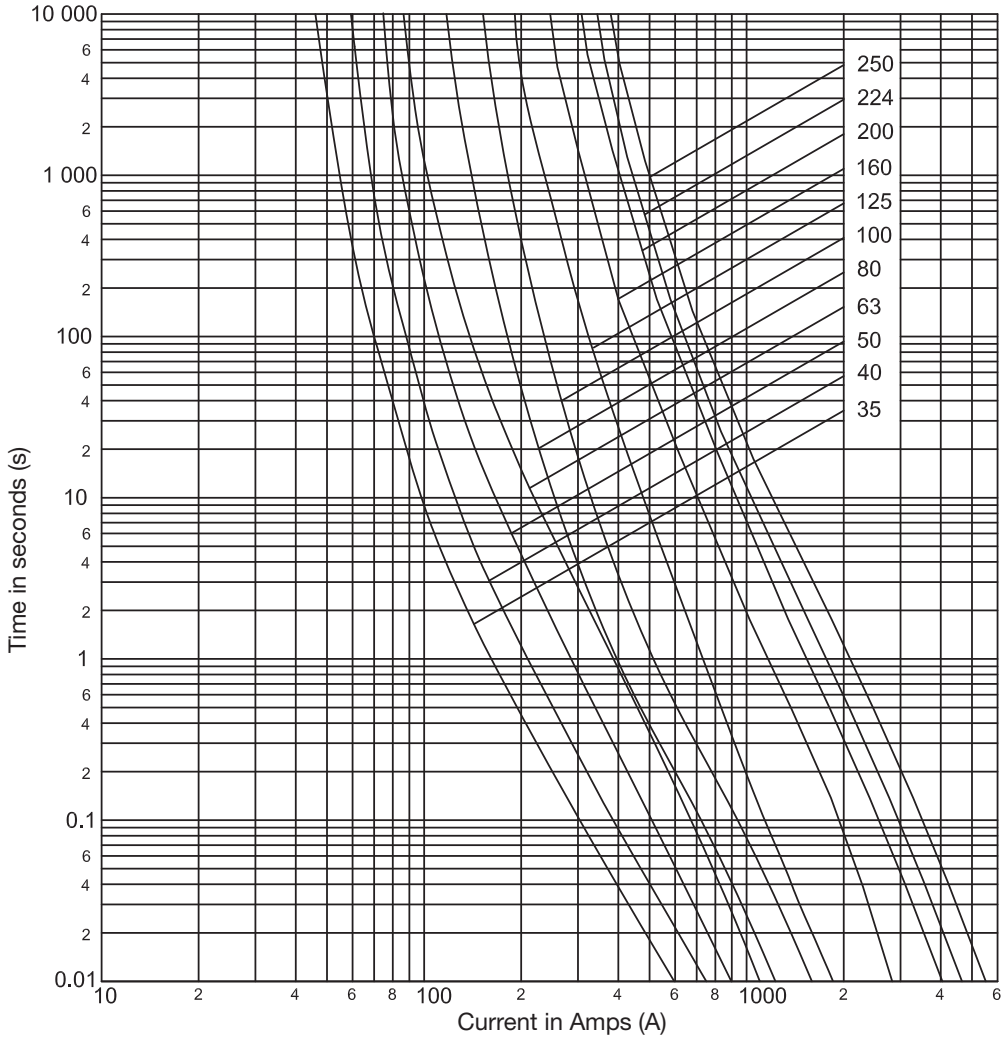

## Technical data

| Part numbers with metal gripping lugs | Part numbers with insulated metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | I²t (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Minimum pre-arcing | *$I_1$ 120kA at 400Vac | | |
| 125NHG00B-400 | 125NHG00BI-400 | 00 | 125 | 400 | 25,000 | 80,000 | 8 | 0.185 |
| 160NHG00B-400 | 160NHG00BI-400 | | 160 | | 60,000 | 126,000 | 7.8 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

# 400Vac class gG/gL - 35 to 250 amps - sizes 01 & 1

## Time-current characteristics



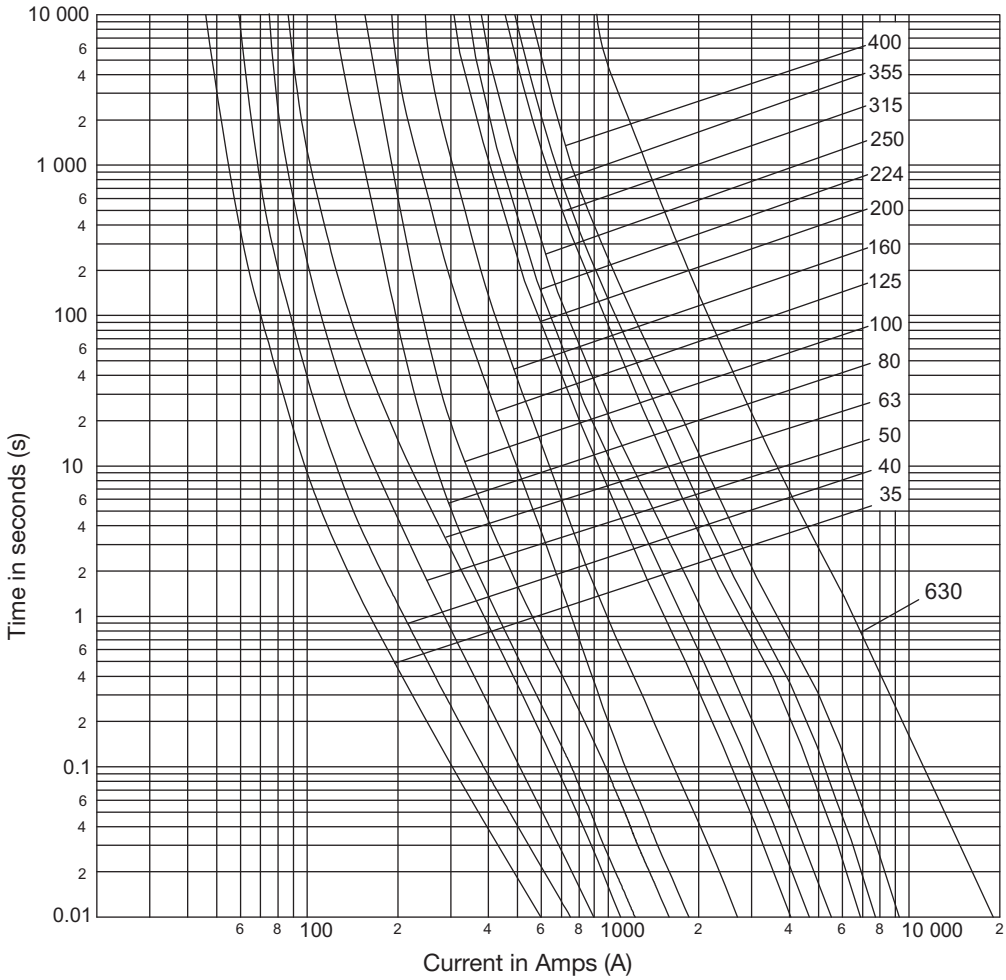

## Technical data

| Part numbers with metal gripping lugs | Part numbers with insulated metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | $I^2t$ (Amps$^2$ Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Minimum pre-arcing | *$I_1$ 120kA at 400Vac | | |
| 35NHG01B-400 | 35NHG01BI-400 | 01 | 35 | 400 | 2400 | 7600 | 4.9 | 0.269 |
| 40NHG01B-400 | 40NHG01BI-400 | | 40 | | 3300 | 10,600 | 5 | |
| 50NHG01B-400 | 50NHG01BI-400 | | 50 | | 4200 | 10,400 | 4.7 | |
| 63NHG01B-400 | 63NHG01BI-400 | | 63 | | 6600 | 16,300 | 5.6 | |
| 80NHG01B-400 | 80NHG01BI-400 | | 80 | | 9600 | 33,600 | 5.6 | |
| 100NHG01B-400 | 100NHG01BI-400 | | 100 | | 16,000 | 56,000 | 6.8 | |
| 125NHG01B-400 | 125NHG01BI-400 | | 125 | | 24,000 | 86,400 | 8.8 | |
| 160NHG01B-400 | 160NHG01BI-400 | | 160 | | 53,000 | 111,300 | 8.9 | |
| 200NHG1B-400 | 200NHG1BI-400 | 1 | 200 | | 89,000 | 232,000 | 12 | 0.387kg |
| 224NHG1B-400 | 224NHG1BI-400 | | 224 | | 119,000 | 322,000 | 12 | |
| 250NHG1B-400 | 250NHG1BI-400 | | 250 | | 171,000 | 479,000 | 14 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

# 400Vac class gG/gL - 35 to 630 amps - sizes 02 & 2

## Time-current characteristics




## Technical data

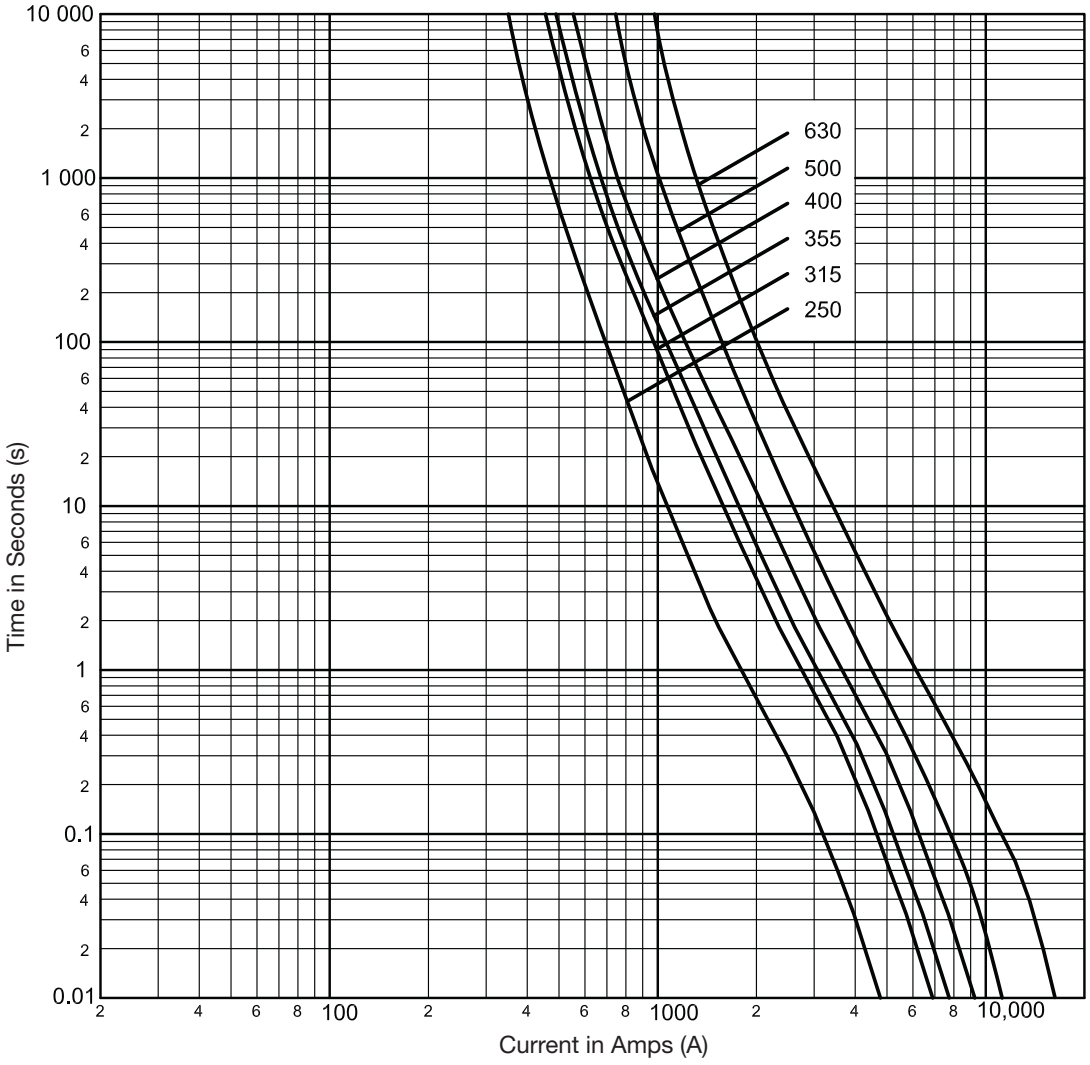
| Part numbers with metal gripping lugs | Part numbers with insulated metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | $I^2t$ (Amps$^2$ Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Minimum pre-arcing | *$I_1$ 120kA at 400Vac | | |
| 35NHG02B-400 | 35NHG02BI-400 | 02 | 35 | 400 | 2400 | 7600 | 4.4 | 0.402 |
| 40NHG02B-400 | 40NHG02BI-400 | | 40 | | 3300 | 10,600 | 5 | |
| 50NHG02B-400 | 50NHG02BI-400 | | 50 | | 4200 | 10,400 | 6.5 | |
| 63NHG02B-400 | 63NHG02BI-400 | | 63 | | 6600 | 16,300 | 5.5 | |
| 80NHG02B-400 | 80NHG02BI-400 | | 80 | | 10,000 | 34,800 | 5.5 | |
| 100NHG02B-400 | 100NHG02BI-400 | | 100 | | 16,000 | 56,000 | 6.6 | |
| 125NHG02B-400 | 125NHG02BI-400 | | 125 | | 24,000 | 86,400 | 8.7 | |
| 160NHG02B-400 | 160NHG02BI-400 | | 160 | | 50,000 | 185,000 | 10 | |
| 200NHG02B-400 | 200NHG02BI-400 | | 200 | | 89,000 | 232,000 | 12 | |
| 224NHG02B-400 | 224NHG02BI-400 | | 224 | | 119,000 | 322,000 | 12 | |
| 250NHG02B-400 | 250NHG02BI-400 | | 250 | | 171,000 | 479,000 | 14 | |
| 315NHG2B-400 | 315NHG2BI-400 | 2 | 315 | | 280,000 | 924,000 | 19 | 0.630kg |
| 355NHG2B-400 | 355NHG2BI-400 | | 355 | | 350,000 | 1,155,000 | 22 | |
| 400NHG2B-400 | 400NHG2BI-400 | | 400 | | 504,000 | 1,673,000 | 24 | |
| 630NHG2B-400 | - | | 630 | | 2,100,000 | 5,775,000 | 44 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

**Data sheet 720099**

# 400Vac class gG/gL - 250 to 630 amps - sizes 03 & 3

## Time-current characteristics




## Technical data

| Part numbers with metal gripping lugs | Part numbers with insulated metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | I²t (Amps² Seconds) | | Watts loss | Net weight per Fuse (Kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Minimum pre-arcing | *$I_1$ 120kA at 400Vac | | |
| 250NHG03B-400 | 250NHG03BI-400 | 03 | 250 | 400 | 115,000 | 379,500 | 18 | 0.634 |
| 315NHG03B-400 | 315NHG03BI-400 | | 315 | | 280,000 | 924,000 | 19 | |
| 355NHG03B-400 | 355NHG03BI-400 | | 355 | | 350,000 | 1,155,000 | 22 | |
| 400NHG03B-400 | 400NHG03BI-400 | | 400 | | 504,000 | 1,663,000 | 24 | |
| 500NHG3B-400 | 500NHG3BI-400 | 3 | 500 | | 686,000 | 2,605,000 | 30 | 1.043 |
| 630NHG3B-400 | 630NHG3BI-400 | | 630 | | 1,590,000 | 6,201,000 | 36 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

# 500Vac class gG/gL - 2 to 1250 amps - sizes 000 to 4


**Description**
A square bodied range of industrial fuse links for a wide variety of applications.

**Part number structure**
(amp)NHG(size)B e.g. 100NHG01B

**Class of operation:** gL/gG

**Standards/approvals**
IEC 60269-1 and 2, VDE 0636, DIN 43620 and CE

**Technical data**
- Sizes 000 to 4
- Rated voltage: 500Vac
- Rated current: 2 to 1250A
- Rated breaking capacity: 120kA AC
- Operating frequency: 45-62Hz

**Optional microswitch**
- BVL50 or 170H0236

**Compatible fuse holders**
- Fuse bases: SD(size)-D, SD(size)-S: 1-pole
  TD(size)-D, TD(size)-DI: 3-pole
- Fuse bases accessories: IP20, shroud and phase barrier kits
- Fuse rails - vertical: BFR series
- Fuse switch disconnectors vertical: BFD series
- Fuse switch disconnectors horizontal: BFH series

**Environmental:**
- Recyclable
- RoHS compliant
- Lead and cadmium free

**Packaging:**
Size 000 to 3: 3 in a pack / Size 4: 1 in a pack

**Features:**
- Reliable dual indicator system (size 4 single indication only)
- Low temperature rise
- Globally compliant

**Data sheet 10164**

# 500Vac class gG/gL - 2 to 1250 amps - sizes 000 to 4

## Part numbers - sizes 000 to 01



| Size | Rated current (Amps) | Rated voltage (Vac) | gG/gL dual indicator | | Pack quantity |
|---|---|---|---|---|---|
| | | | Voltage conducting metal gripping lugs | Insulated metal gripping lugs | |
| 000 | 2 | 500 | 2NHG000B | 2NHG000BI | 3 |
| | 4 | | 4NHG000B | 4NHG000BI | 3 |
| | 6 | | 6NHG000B | 6NHG000BI | 3 |
| | 10 | | 10NHG000B | 10NHG000BI | 3 |
| | 16 | | 16NHG000B | 16NHG000BI | 3 |
| | 20 | | 20NHG000B | 20NHG000BI | 3 |
| | 25 | | 25NHG000B | 25NHG000BI | 3 |
| | 32 | | 32NHG000B | 32NHG000BI | 3 |
| | 35 | | 35NHG000B | 35NHG000BI | 3 |
| | 40 | | 40NHG000B | 40NHG000BI | 3 |
| | 50 | | 50NHG000B | 50NHG000BI | 3 |
| | 63 | | 63NHG000B | 63NHG000BI | 3 |
| | 80 | | 80NHG000B | 80NHG000BI | 3 |
| | 100 | | 100NHG000B | 100NHG000BI | 3 |
| 00 | 50 | 500 | 50NHG00B | 50NHG00BI | 3 |
| | 63 | | 63NHG00B | 63NHG00BI | 3 |
| | 80 | | 80NHG00B | 80NHG00BI | 3 |
| | 100 | | 100NHG00B | 100NHG00BI | 3 |
| | 125 | | 125NHG00B | 125NHG00BI | 3 |
| | 160 | | 160NHG00B | 160NHG00BI | 3 |
| 0 | 6 | 500 | 6NHG0B | 6NHG0BI | 3 |
| | 10 | | 10NHG0B | 10NHG0BI | 3 |
| | 16 | | 16NHG0B | 16NHG0BI | 3 |
| | 20 | | 20NHG0B | 20NHG0BI | 3 |
| | 25 | | 25NHG0B | 25NHG0BI | 3 |
| | 32 | | 32NHG0B | 32NHG0BI | 3 |
| | 35 | | 35NHG0B | 35NHG0BI | 3 |
| | 40 | | 40NHG0B | 40NHG0BI | 3 |
| | 50 | | 50NHG0B | 50NHG0BI | 3 |
| | 63 | | 63NHG0B | 63NHG0BI | 3 |
| | 80 | | 80NHG0B | 80NHG0BI | 3 |
| | 100 | | 100NHG0B | 100NHG0BI | 3 |
| | 125 | | 125NHG0B | 125NHG0BI | 3 |
| | 160 | | 160NHG0B | 160NHG0BI | 3 |
| 01 | 6 | 500 | 6NHG01B | 6NHG01BI | 3 |
| | 10 | | 10NHG01B | 10NHG01BI | 3 |
| | 16 | | 16NHG01B | 16NHG01BI | 3 |
| | 20 | | 20NHG01B | 20NHG01BI | 3 |
| | 25 | | 25NHG01B | 25NHG01BI | 3 |
| | 32 | | 32NHG01B | 32NHG01BI | 3 |
| | 35 | | 35NHG01B | 35NHG01BI | 3 |
| | 40 | | 40NHG01B | 40NHG01BI | 3 |
| | 50 | | 50NHG01B | 50NHG01BI | 3 |
| | 63 | | 63NHG01B | 63NHG01BI | 3 |
| | 80 | | 80NHG01B | 80NHG01BI | 3 |
| | 100 | | 100NHG01B | 100NHG01BI | 3 |
| | 125 | | 125NHG01B | 125NHG01BI | 3 |
| | 160 | | 160NHG01B | 160NHG01BI | 3 |



# 500Vac class gG/gL - 2 to 1250 amps - sizes 000 to 4

## Part numbers - sizes 1 to 4

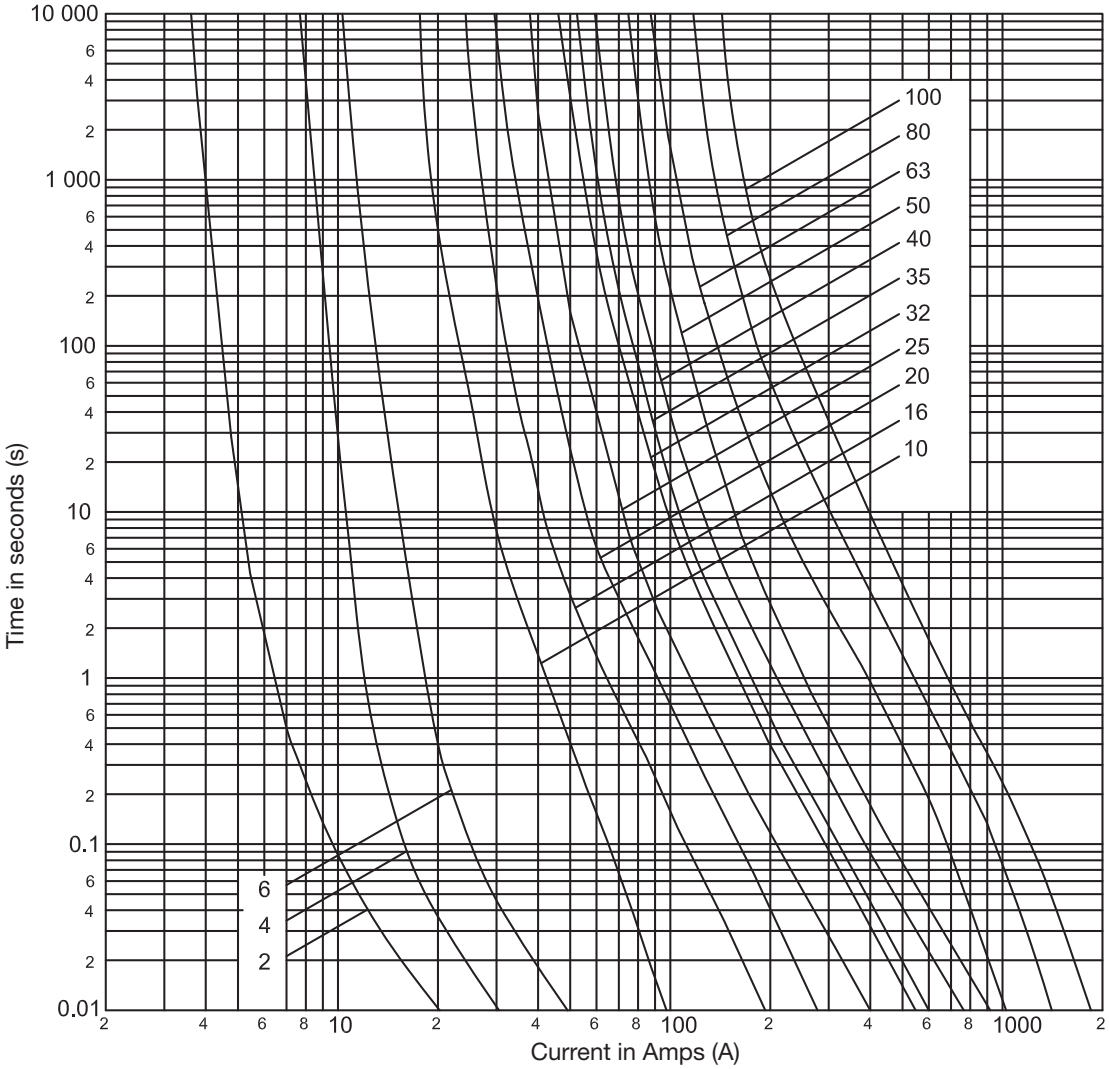
| Size | Rated current (Amps) | Rated voltage (Vac) | gG/gL dual indicator | | Pack quantity |
|---|---|---|---|---|---|
| | | | Voltage conducting metal gripping lugs | Insulated metal gripping lugs | |
| 1 | 50 | 500 | 50NHG1B | 50NHG1BI | 3 |
| | 63 | | 63NHG1B | 63NHG1BI | 3 |
| | 80 | | 80NHG1B | 80NHG1BI | 3 |
| | 100 | | 100NHG1B | 100NHG1BI | 3 |
| | 125 | | 125NHG1B | 125NHG1BI | 3 |
| | 160 | | 160NHG1B | 160NHG1BI | 3 |
| | 200 | | 200NHG1B | 200NHG1BI | 3 |
| | 224 | | 224NHG1B | 224NHG1BI | 3 |
| | 250 | | 250NHG1B | 250NHG1BI | 3 |
| | 315 | 440 | 315NHG1B | 315NHG1BI | 3 |
| | 355 | | 355NHG1B | 355NHG1BI | 3 |
| 02 | 35 | 500 | 35NHG02B | 35NHG02BI | 3 |
| | 40 | | 40NHG02B | 40NHG02BI | 3 |
| | 50 | | 50NHG02B | 50NHG02BI | 3 |
| | 63 | | 63NHG02B | 63NHG02BI | 3 |
| | 80 | | 80NHG02B | 80NHG02BI | 3 |
| | 100 | | 100NHG02B | 100NHG02BI | 3 |
| | 125 | | 125NHG02B | 125NHG02BI | 3 |
| | 160 | | 160NHG02B | 160NHG02BI | 3 |
| | 200 | | 200NHG02B | 200NHG02BI | 3 |
| | 224 | | 224NHG02B | 224NHG02BI | 3 |
| | 250 | | 250NHG02B | 250NHG02BI | 3 |
| 2 | 250 | 500 | 250NHG2B | 250NHG2BI | 3 |
| | 300 | | 300NHG2B | 300NHG2BI | 3 |
| | 315 | | 315NHG2B | 315NHG2BI | 3 |
| | 355 | | 355NHG2B | 355NHG2BI | 3 |
| | 400 | | 400NHG2B | 400NHG2BI | 3 |
| | 425 | | 425NHG2B | 425NHG2BI | 3 |
| | 450 | | 450NHG2B | 450NHG2BI | 3 |
| | 500 | 440 | 500NHG2B | 500NHG2BI | 3 |
| 03 | 250 | 500 | 250NHG03B | 250NHG03BI | 3 |
| | 315 | | 315NHG03B | 315NHG03BI | 3 |
| | 355 | | 355NHG03B | 355NHG03BI | 3 |
| | 400 | | 400NHG03B | 400NHG03BI | 3 |
| 3 | 315 | 500 | 315NHG3B | - | 3 |
| | 355 | | 355NHG3B | - | 3 |
| | 400 | | 400NHG3B | - | 3 |
| | 425 | | 425NHG3B | - | 3 |
| | 500 | | 500NHG3B | - | 3 |
| | 630 | | 630NHG3B | - | 3 |
| | 800 | 440 | 800NHG3B | - | 3 |
| 4* | 500 | 500 | 500NHG4G | - | 1 |
| | 630 | | 630NHG4G | - | 1 |
| | 800 | | 800NHG4G | - | 1 |
| | 1000 | | 1000NHG4G | - | 1 |
| | 1250 | | 1250NHG4G | - | 1 |



* Size 4 NH is a single indication fuse with slotted end tags

# 500Vac class gG/gL - 2 to 100 amps - size 000

## Time-current characteristics




## Technical data

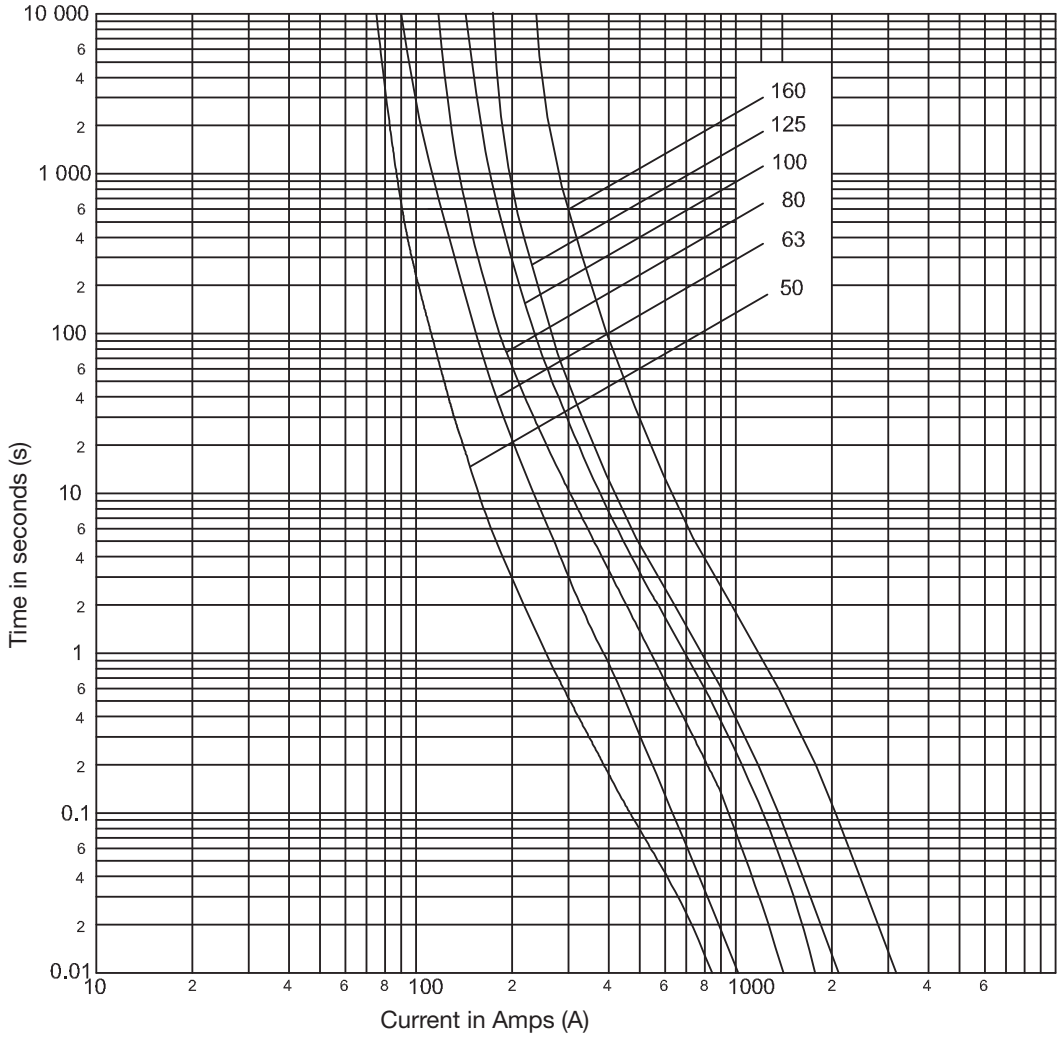
| Part numbers with metal gripping lugs | Part numbers with insulated metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | $I^2t$ (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Minimum pre-arcing | *$I_1$ 120kA at 500Vac | | |
| 2NHG000B | 2NHG000BI | 000 | 2 | 500 | 3.5 | 6 | 3.9 | 0.13 |
| 4NHG000B | 4NHG000BI | | 4 | | 6 | 12 | 1.8 | |
| 6NHG000B | 6NHG000BI | | 6 | | 14 | 21 | 2 | |
| 10NHG000B | 10NHG000BI | | 10 | | 58 | 290 | 1.5 | |
| 16NHG000B | 16NHG000BI | | 16 | | 234 | 1200 | 2.3 | |
| 20NHG000B | 20NHG000BI | | 20 | | 490 | 2500 | 2.2 | |
| 25NHG000B | 25NHG000BI | | 25 | | 920 | 4600 | 3.1 | |
| 32NHG000B | 32NHG000BI | | 32 | | 1800 | 9000 | 3.4 | |
| 35NHG000B | 35NHG000BI | | 35 | | 2400 | 11,800 | 3.7 | |
| 40NHG000B | 40NHG000BI | | 40 | | 3300 | 16,500 | 4 | |
| 50NHG000B | 50NHG000BI | | 50 | | 5900 | 29,500 | 4.9 | |
| 63NHG000B | 63NHG000BI | | 63 | | 6300 | 24,900 | 4.6 | |
| 80NHG000B | 80NHG000BI | | 80 | | 9800 | 38,900 | 6.3 | |
| 100NHG000B | 100NHG000BI | | 100 | | 18,100 | 72,300 | 7.4 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

**Data sheet 10164**

# 500Vac class gG/gL - 50 to 160 amps - size 00

## Time-current characteristics




## Technical data

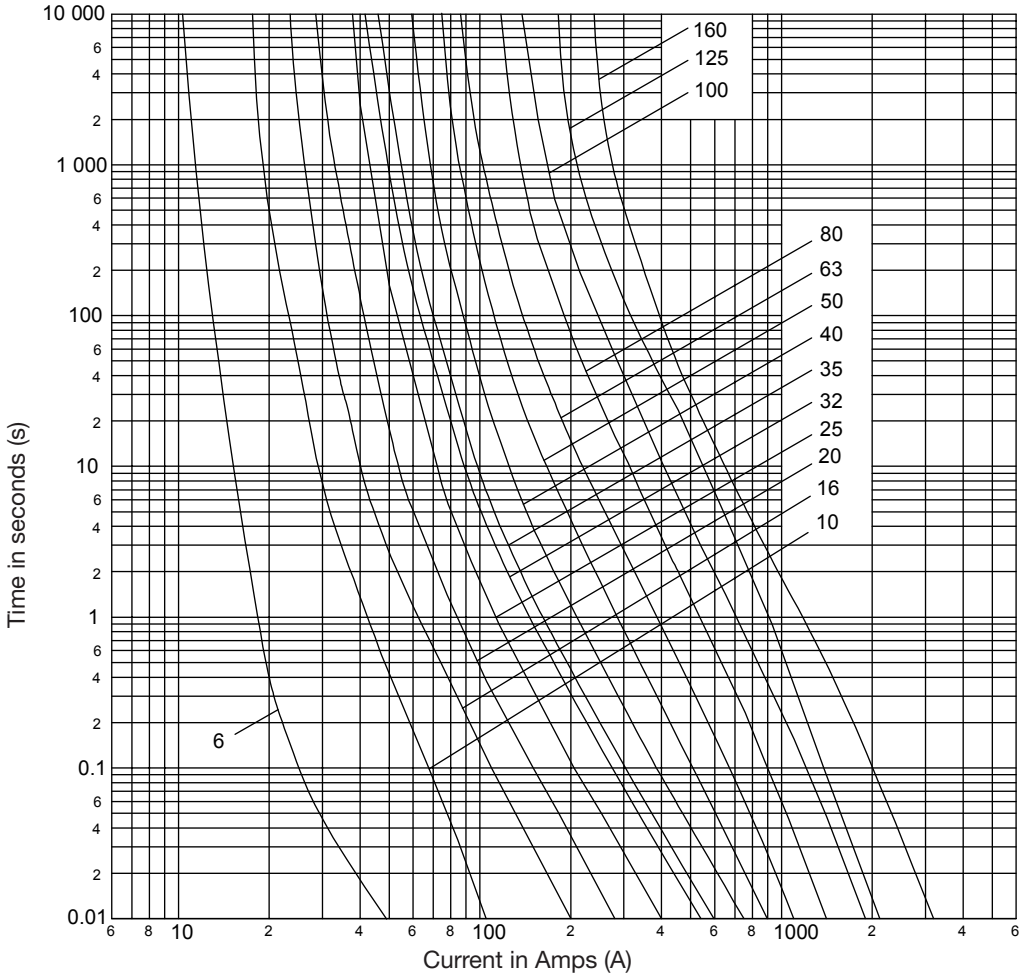
| Part numbers with metal gripping lugs | Part numbers with insulated metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | $I^2t$ (Amps$^2$ Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Minimum pre-arcing | *$I_1$ 120kA at 500Vac | | |
| 50NHG00B | 50NHG00BI | 00 | 50 | 500 | 5800 | 21,500 | 5 | 0.190 |
| 63NHG00B | 63NHG00BI | | 63 | | 5800 | 25,000 | 5 | |
| 80NHG00B | 80NHG00BI | | 80 | | 11,000 | 35,000 | 7 | |
| 100NHG00B | 100NHG00BI | | 100 | | 19,000 | 60,000 | 7.5 | |
| 125NHG00B | 125NHG00BI | | 125 | | 25,000 | 125,000 | 10 | |
| 160NHG00B | 160NHG00BI | | 160 | | 64,000 | 310,000 | 10 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

Data sheet 10164

# 500Vac class gG/gL - 6 to 160 amps - size 0

## Time-current characteristics




## Technical data

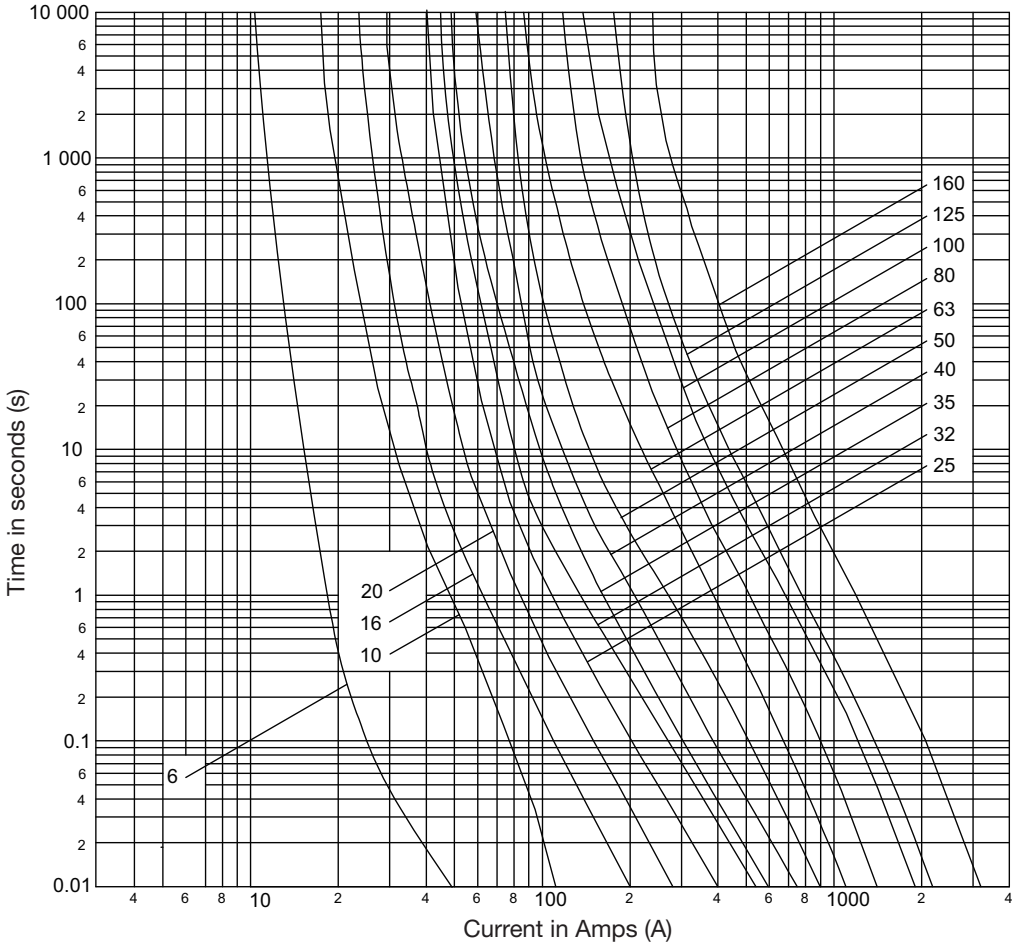
| Part numbers with metal gripping lugs | Part numbers with insulated metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | $I^2t$ (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Minimum pre-arcing | *$I_1$ 120kA at 500Vac | | |
| 6NHG0B | 6NHG0BI | 0 | 6 | 500 | 14 | 21 | 2 | 0.26 |
| 10NHG0B | 10NHG0BI | | 10 | | 58 | 290 | 2 | |
| 16NHG0B | 16NHG0BI | | 16 | | 240 | 1200 | 3 | |
| 20NHG0B | 20NHG0BI | | 20 | | 490 | 2500 | 3.5 | |
| 25NHG0B | 25NHG0BI | | 25 | | 1200 | 5600 | 3.2 | |
| 32NHG0B | 32NHG0BI | | 32 | | 1800 | 9000 | 4.8 | |
| 35NHG0B | 35NHG0BI | | 35 | | 2400 | 11,800 | 4.7 | |
| 40NHG0B | 40NHG0BI | | 40 | | 3300 | 16,500 | 5 | |
| 50NHG0B | 50NHG0BI | | 50 | | 5600 | 27,800 | 6.3 | |
| 63NHG0B | 63NHG0BI | | 63 | | 6600 | 26,100 | 5.6 | |
| 80NHG0B | 80NHG0BI | | 80 | | 9800 | 38,900 | 7.1 | |
| 100NHG0B | 100NHG0BI | | 100 | | 20,600 | 82,300 | 7.5 | |
| 125NHG0B | 125NHG0BI | | 125 | | 25,000 | 125,000 | 11.8 | |
| 160NHG0B | 160NHG0BI | | 160 | | 62,000 | 310,000 | 12.3 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

Data sheet 10164

# 500Vac class gG/gL - 6 to 160 amps - size 01

## Time-current characteristics




## Technical data

| Part numbers with metal gripping lugs | Part numbers with insulated metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | $I^2t$ (Amps$^2$ Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Minimum pre-arcing | *$I_1$ 120kA at 500Vac | | |
| 6NHG01B | 6NHG01BI | 01 | 6 | 500 | 14 | 21 | 2 | 0.27 |
| 10NHG01B | 10NHG01BI | | 10 | | 58 | 290 | 2 | |
| 16NHG01B | 16NHG01BI | | 16 | | 240 | 1200 | 3 | |
| 20NHG01B | 20NHG01BI | | 20 | | 490 | 2500 | 3.4 | |
| 25NHG01B | 25NHG01BI | | 25 | | 1200 | 5600 | 5 | |
| 32NHG01B | 32NHG01BI | | 32 | | 1800 | 9000 | 4.8 | |
| 35NHG01B | 35NHG01BI | | 35 | | 2400 | 11,800 | 4.6 | |
| 40NHG01B | 40NHG01BI | | 40 | | 3300 | 16,500 | 5 | |
| 50NHG01B | 50NHG01BI | | 50 | | 5600 | 27,800 | 6.3 | |
| 63NHG01B | 63NHG01BI | | 63 | | 6600 | 26,100 | 5.6 | |
| 80NHG01B | 80NHG01BI | | 80 | | 9800 | 38,900 | 7.1 | |
| 100NHG01B | 100NHG01BI | | 100 | | 20,600 | 82,300 | 7.7 | |
| 125NHG01B | 125NHG01BI | | 125 | | 25,000 | 125,000 | 11.8 | |
| 160NHG01B | 160NHG01BI | | 160 | | 62,000 | 310,000 | 12.3 | |

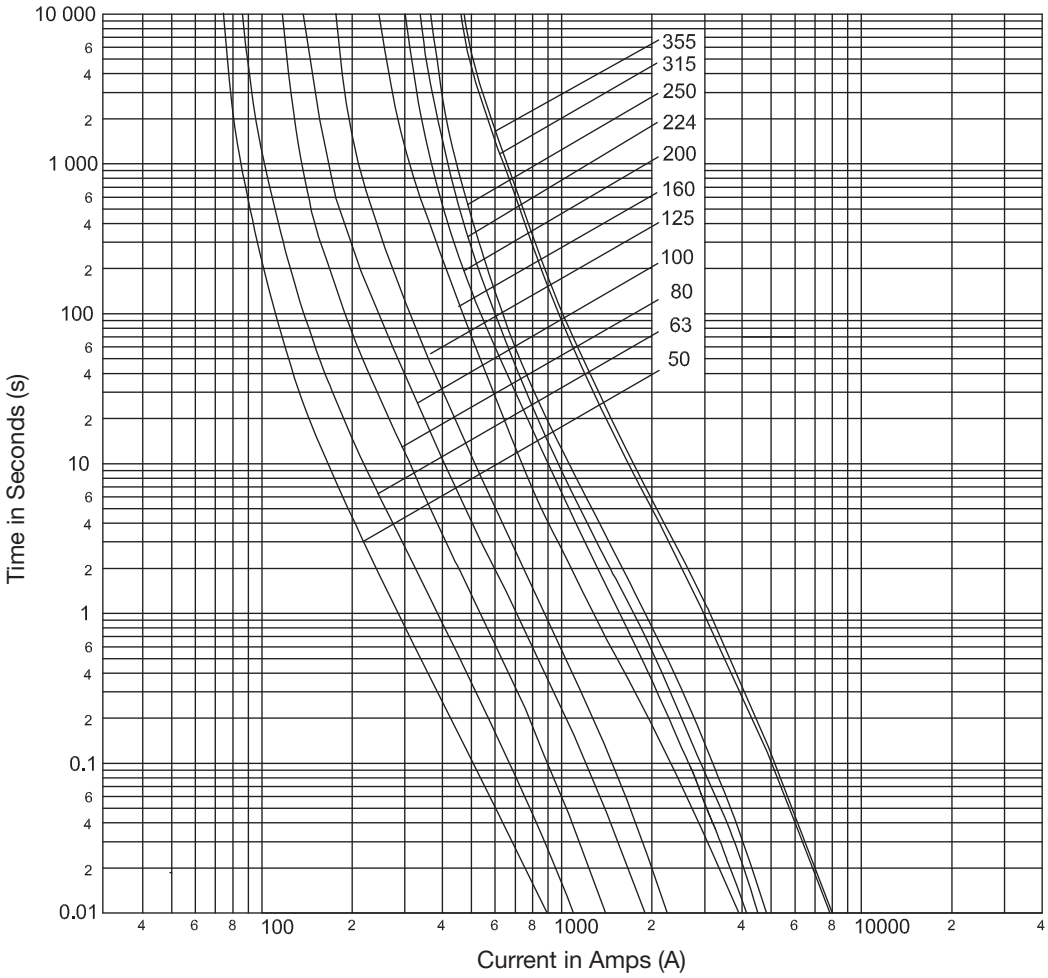
* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

Data sheet 10164

# 500Vac class gG/gL - 50 to 355 amps - size 1



## Time-current characteristics




## Technical Data

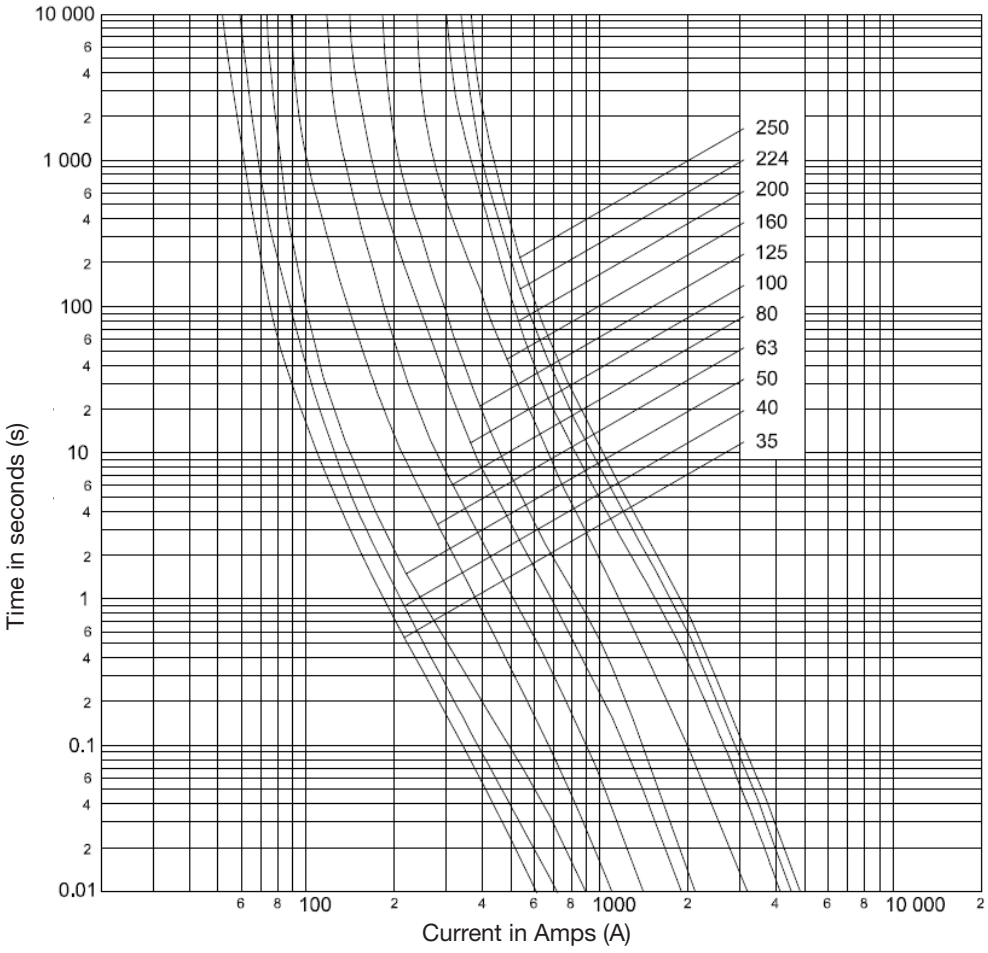
| Part numbers with metal gripping lugs | Part numbers with insulated metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | I²t (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Minimum pre-arcing | *$I_1$ 120kA at 500Vac | | |
| 50NHG1B | 50NHG1BI | 1 | 50 | 500 | 6350 | 18,000 | 6.4 | 0.39 |
| 63NHG1B | 63NHG1BI | | 63 | | 6800 | 23,000 | 5.6 | |
| 80NHG1B | 80NHG1BI | | 80 | | 10,500 | 31,200 | 7.7 | |
| 100NHG1B | 100NHG1BI | | 100 | | 22,000 | 68,200 | 8.2 | |
| 125NHG1B | 125NHG1BI | | 125 | | 29,000 | 82,000 | 13 | |
| 160NHG1B | 160NHG1BI | | 160 | | 62,000 | 310,000 | 12.3 | |
| 200NHG1B | 200NHG1BI | | 200 | | 97,000 | 368,600 | 15 | |
| 224NHG1B | 224NHG1BI | | 224 | | 124,000 | 471,200 | 18 | |
| 250NHG1B | 250NHG1BI | | 250 | | 151,300 | 574,900 | 19 | |
| 315NHG1B | 315NHG1BI | | 315 | 440 | 320,000 | 750,000 | 22 | |
| 355NHG1B | 355NHG1BI | | 355 | | 320,000 | 750,000 | 32 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

Data sheet 10164

# 500Vac class gG/gL - 35 to 250 amps - size 02

## Time-current characteristics




## Technical data

| Part numbers with metal gripping lugs | Part numbers with insulated metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | $I^2t$ (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Minimum pre-arcing | *$I_1$ 120kA @ 500Vac | | |
| 35NHG02B | 35NHG02BI | 02 | 35 | 500 | 2400 | 11,800 | 4.7 | 0.402 |
| 40NHG02B | 40NHG02BI | | 40 | | 3300 | 16,500 | 5 | |
| 50NHG02B | 50NHG02BI | | 50 | | 5600 | 27,800 | 6.4 | |
| 63NHG02B | 63NHG02BI | | 63 | | 6600 | 26,100 | 5.5 | |
| 80NHG02B | 80NHG02BI | | 80 | | 9800 | 38,900 | 7.3 | |
| 100NHG02B | 100NHG02BI | | 100 | | 20,600 | 82,300 | 7.5 | |
| 125NHG02B | 125NHG02BI | | 125 | | 25,000 | 100,000 | 12 | |
| 160NHG02B | 160NHG02BI | | 160 | | 62,000 | 248,000 | 12 | |
| 200NHG02B | 200NHG02BI | | 200 | | 96,900 | 367,900 | 15 | |
| 224NHG02B | 224NHG02BI | | 224 | | 124,000 | 471,200 | 18 | |
| 250NHG02B | 250NHG02BI | | 250 | | 151,300 | 574,900 | 19 | |

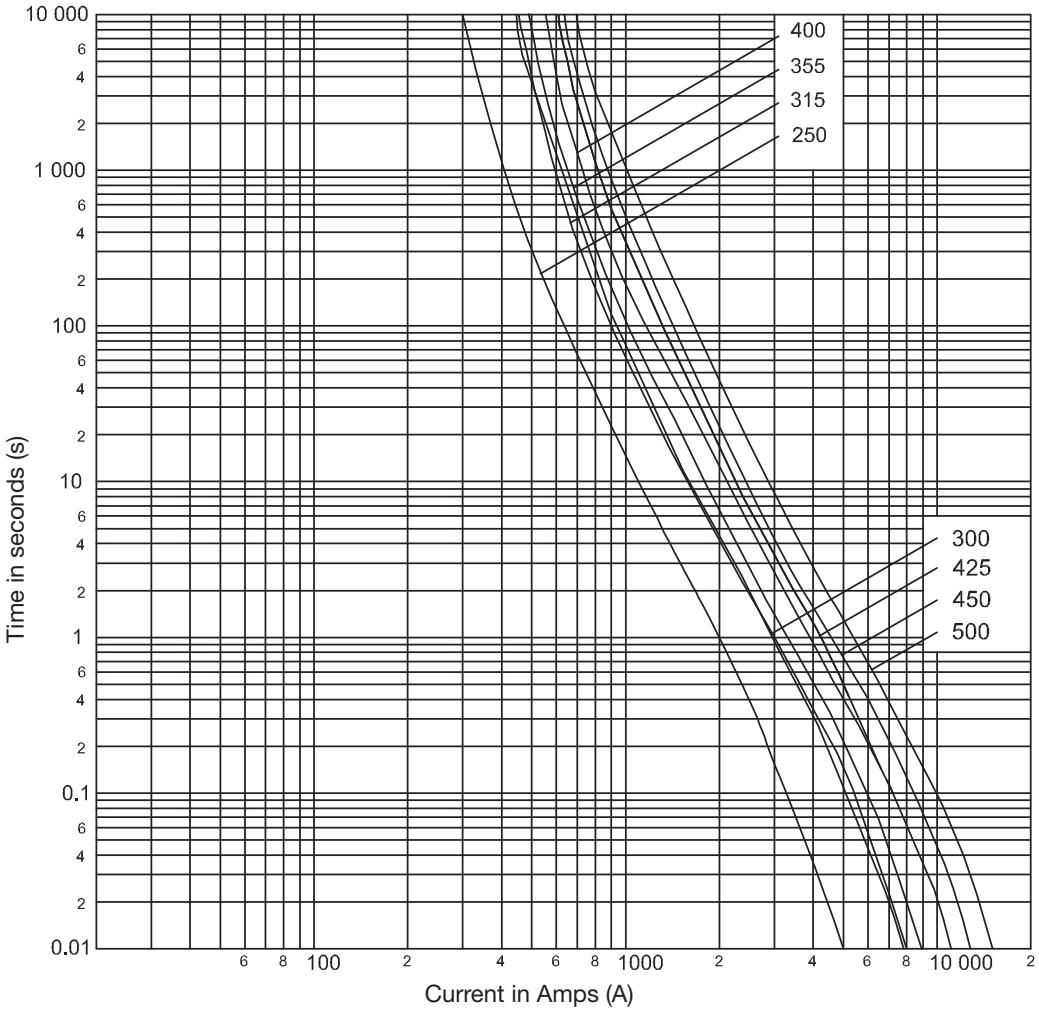
* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

Data sheet 10164

# 500Vac class gG/gL - 250 to 500 amps - size 2



## Time-current characteristics



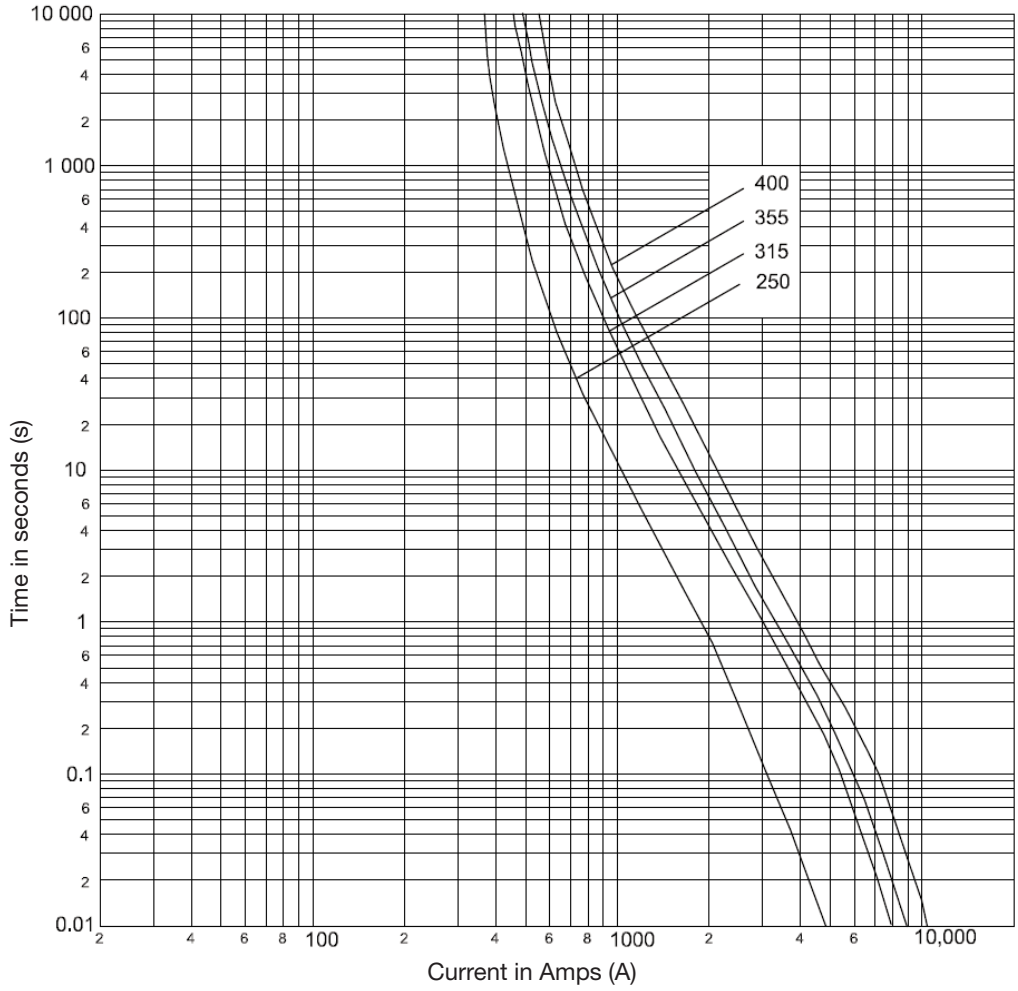

## Technical data

| Part numbers with metal gripping lugs | Part numbers with insulated metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | I²t (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Minimum pre-arcing | *$I_1$ 120kA at 500Vac | | |
| 250NHG2B | 250NHG2BI | 2 | 250 | 500 | 170,000 | 437,000 | 23 | 0.63 |
| 300NHG2B | 300NHG1BI | | 300 | | 320,000 | 840,000 | 20 | |
| 315NHG2B | 315NHG2BI | | 315 | | 361,700 | 1,446,500 | 21 | |
| 355NHG2B | 355NHG2BI | | 355 | | 446,500 | 1,785,800 | 27 | |
| 400NHG2B | 400NHG2BI | | 400 | | 642,900 | 2,571,500 | 30 | |
| 425NHG2B | 425NHG2BI | | 425 | | 720,000 | 1,862,000 | 31 | |
| 450NHG2B | 450NHG2BI | | 450 | | 870,000 | 2,275,000 | 31 | |
| 500NHG2B | 500NHG2BI | | 500 | 440 | 1,200,000 | 2,720,000 | 37 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

# 500Vac class gG/gL - 250 to 400 amps - size 03

## Time-current characteristics




## Technical data

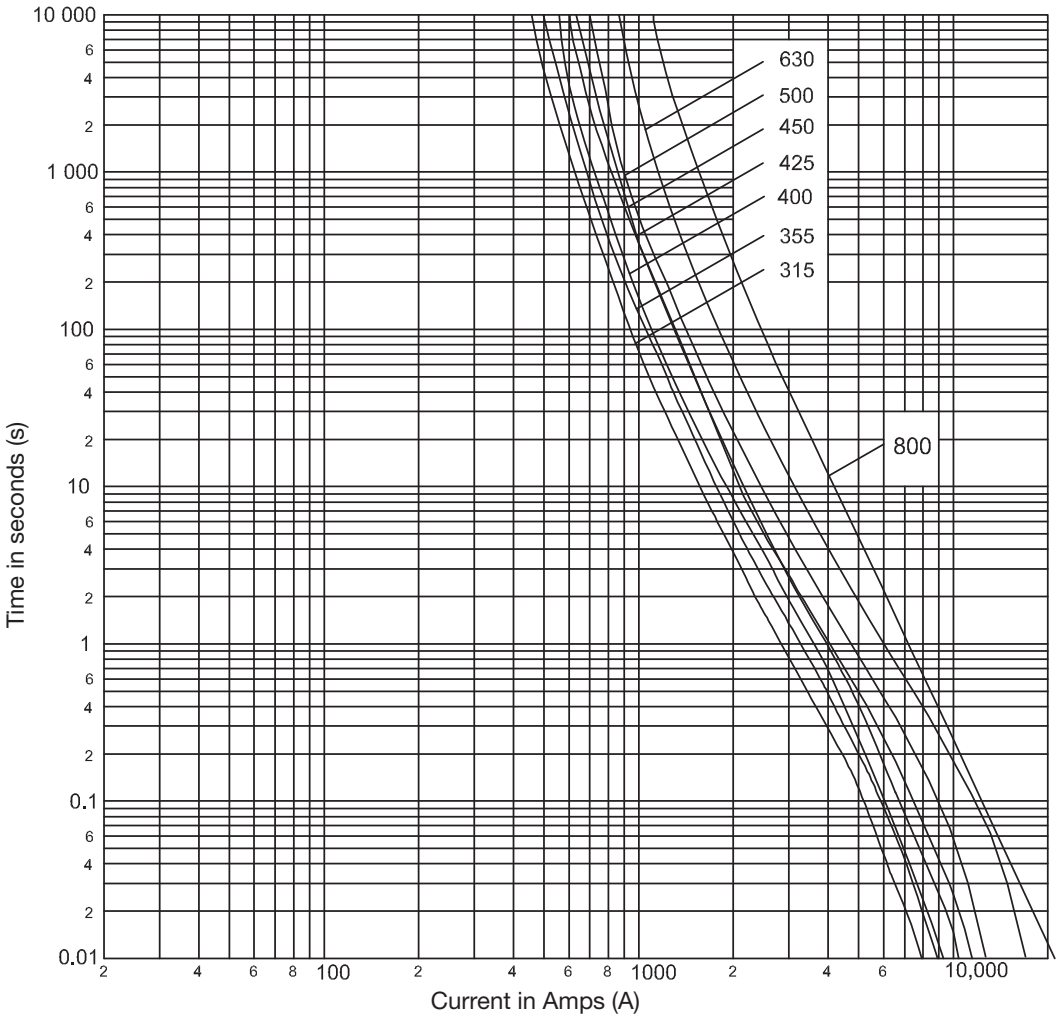
| Part numbers with metal gripping lugs | Part numbers with insulated metal gripping lugs | Fuse link size | Rated current (Amp) | Rated voltage (Vac) | $I^2t$ (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Minimum pre-arcing | *$I_1$ 120kA at 500Vac | | |
| 250NHG03B | 250NHG03BI | 03 | 250 | 500 | 160,800 | 642,900 | 20 | 0.64 |
| 315NHG03B | 315NHG03BI | | 315 | | 361,700 | 1,446,500 | 21 | |
| 355NHG03B | 355NHG03BI | | 355 | | 446,500 | 1,785,800 | 27 | |
| 400NHG03B | 400NHG03BI | | 400 | | 642,900 | 2,571,500 | 30 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

# 500Vac class gG/gL - 315 to 800 amps - size 3



## Time-current characteristics



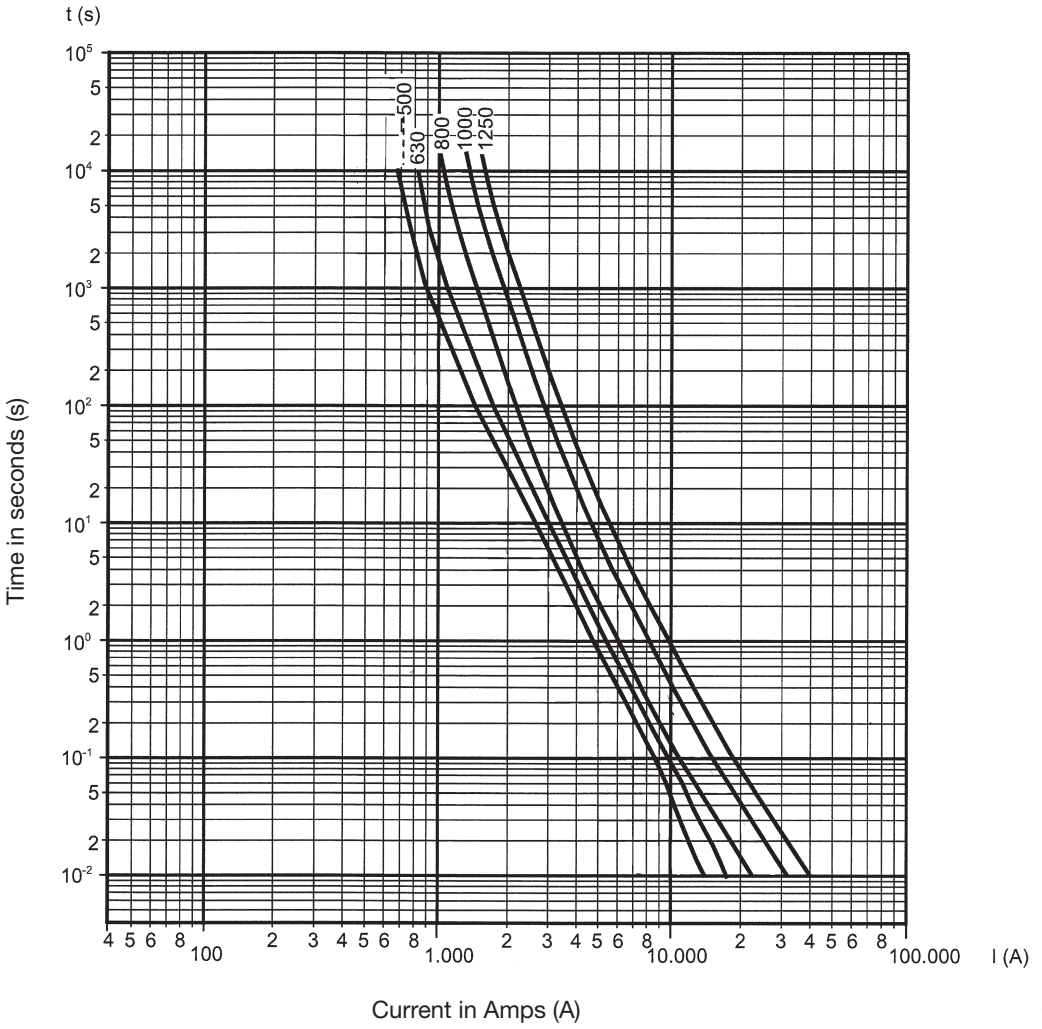

## Technical data

| Part numbers with metal gripping lugs | Fuse link size | Rated current (Amp) | Rated voltage (Vac) | $I^2t$ (Amps$^2$ Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|
| | | | | Minimum pre-arcing | *$I_1$ 120kA at 500Vac | | |
| 315NHG3B | 3 | 315 | 500 | 375,000 | 970,000 | 22 | 1.05 |
| 355NHG3B | | 355 | | 400,000 | 1,110,000 | 25 | |
| 400NHG3B | | 400 | | 642,900 | 2,571,500 | 30 | |
| 425NHG3B | | 425 | | 570,000 | 1,934,000 | 30 | |
| 450NHG3B | | 450 | | 670,000 | 2,260,000 | 33 | |
| 500NHG3B | | 500 | | 886,000 | 3,898,400 | 37 | |
| 630NHG3B | | 630 | | 1,590,000 | 6,996,000 | 47 | |
| 800NHG3B | | 800 | 440 | 2,420,000 | 5,420,000 | 59 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

# 500Vac class gG/gL - 500 to 1250 amps - size 4*

## Time-current characteristics




## Technical data

| Part numbers with metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | I²t (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|
| | | | | Minimum pre-arcing | **$I_1$ 120kA at 500Vac | | |
| 500NHG4G | 4 | 500 | 500 | 800,000 | 3,850,000 | 37 | 2.2 |
| 630NHG4G | | 630 | | 880,000 | 4,100,000 | 47 | |
| 800NHG4G | | 800 | | 1,500,000 | 6,480,000 | 68 | |
| 1000NHG4G | | 1000 | | 4,800,000 | 13,000,000 | 80 | |
| 1250NHG4G | | 1250 | | 7,000,000 | 18,000,000 | 108 | |

* Size 4 NH is a single indication fuse with slotted end tags

** $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

Data sheet 10164

# 690Vac class gG/gL - 2 to 800 amps - sizes 000 to 4

**Description**
A square bodied range of industrial fuse links for a wide variety of applications.

**Part number structure**
(amp)NHG(size)B-690 e.g. 2NHG000B-690

**Class of operation:** gL/gG

**Standards/approvals**
IEC 60269-1 and 2, DIN 43620 Part 1 and 3

**Technical data**
- Sizes 000 to 4
- Rated voltage: 690Vac
- Rated current: 2 to 800A
- Rated breaking capacity: 120kA
- Operating frequency: 45-62Hz

**Optional microswitch**
- BVL50 or 170H0236

**Compatible fuse holders**
- Fuse bases: SD(size)-D, SD(size)-S: 1-pole
  TD(size)-D, TD(size)-DI: 3-pole
- Fuse bases accessories: IP20, shroud and phase barrier kits
- Fuse rails - vertical: BFR
- Fuse switch disconnectors vertical: BFD
- Fuse switch disconnectors horizontal: BFH

**Environmental:**
- Recyclable
- RoHS compliant
- Lead and cadmium free for sizes 000 to 4 (2 to 1250A)

**Packaging:** All fuse links are packed in 3's.

**Features:**
- Reliable dual indicator system (size 4 single indication only)
- Low temperature rise
- Globally compliant
- UL on limited ratings

**Data sheet 720109**

# 690Vac class gG/gL - 2 to 800 amps - sizes 000 to 4

## Part numbers - sizes 000 to 4

| Size | Rated current (Amps) | Rated voltage (Vac) | gG/gL dual indicator<br>Voltage conducting metal gripping lugs | Pack quantity |
|---|---|---|---|---|
| 000 | 2 | 690 | 2NHG000B-690 | 3 |
| | 4 | | 4NHG000B-690 | 3 |
| | 6 | | 6NHG000B-690 | 3 |
| | 10 | | 10NHG000B-690 | 3 |
| | 16 | | 16NHG000B-690 | 3 |
| | 20 | | 20NHG000B-690 | 3 |
| | 25 | | 25NHG000B-690 | 3 |
| | 32 | | 32NHG000B-690 | 3 |
| | 35 | | 35NHG000B-690 | 3 |
| | 40 | | 40NHG000B-690 | 3 |
| | 50 | | 50NHG000B-690 | 3 |
| | 63 | | 63NHG000B-690 | 3 |
| 00 | 50 | 690 | 50NHG00B-690 | 3 |
| | 63 | | 63NHG00B-690 | 3 |
| | 80 | | 80NHG00B-690 | 3 |
| | 100 | | 100NHG00B-690 | 3 |
| | 125 | | 125NHG00B-690 | 3 |
| | 160 | 660 | 160NHG00B-690 | 3 |
| 1 | 50 | 690 | 50NHG1B-690 | 3 |
| | 63 | | 63NHG1B-690 | 3 |
| | 80 | | 80NHG1B-690 | 3 |
| | 100 | | 100NHG1B-690 | 3 |
| | 125 | | 125NHG1B-690 | 3 |
| | 160 | | 160NHG1B-690 | 3 |
| | 200 | | 200NHG1B-690 | 3 |
| | 224 | | 224NHG1B-690 | 3 |
| | 250 | | 250NHG1B-690 | 3 |
| 2 | 200 | 690 | 200NHG2B-690 | 3 |
| | 224 | | 224NHG2B-690 | 3 |
| | 250 | | 250NHG2B-690 | 3 |
| | 315 | | 315NHG2B-690 | 3 |
| 3 | 250 | 690 | 250NHG3B-690 | 3 |
| | 315 | | 315NHG3B-690 | 3 |
| | 355 | | 355NHG3B-690 | 3 |
| | 400 | | 400NHG3B-690 | 3 |
| | 425 | | 425NHG3B-690 | 3 |
| | 500 | | 500NHG3B-690 | 3 |
| 4* | 630 | 690 | 630NHG4B-690 | 3 |
| | 800 | | 800NHG4B-690 | 3 |

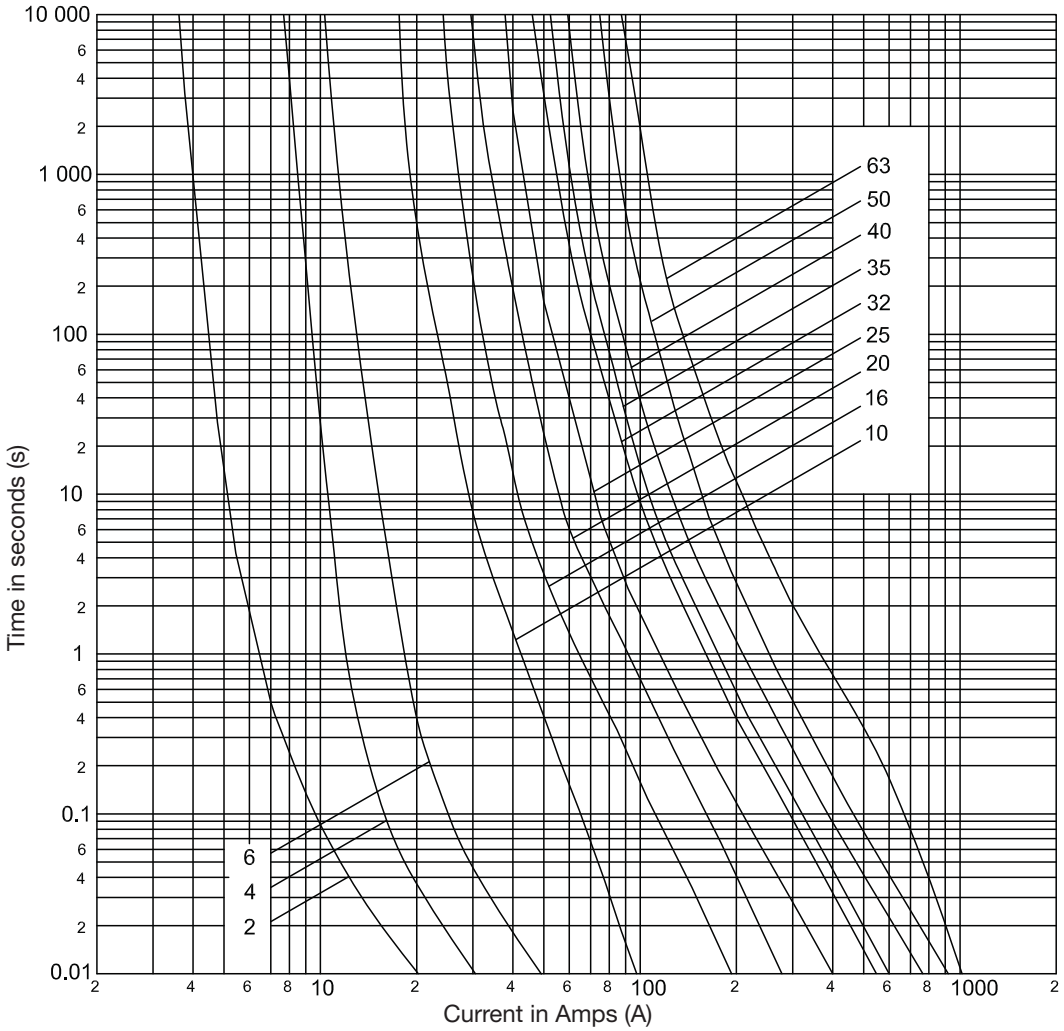
*Size 4 is a fuse link with single indication fuse link with slotted end tags




**Please consult us should you wish to order 500Volts size 4 buletechnical@eaton.com or 00 44 (0) 1509 882 699**

# 690Vac class gG/gL - 2 to 63 amps - size 000

## Time-current characteristics




## Technical data

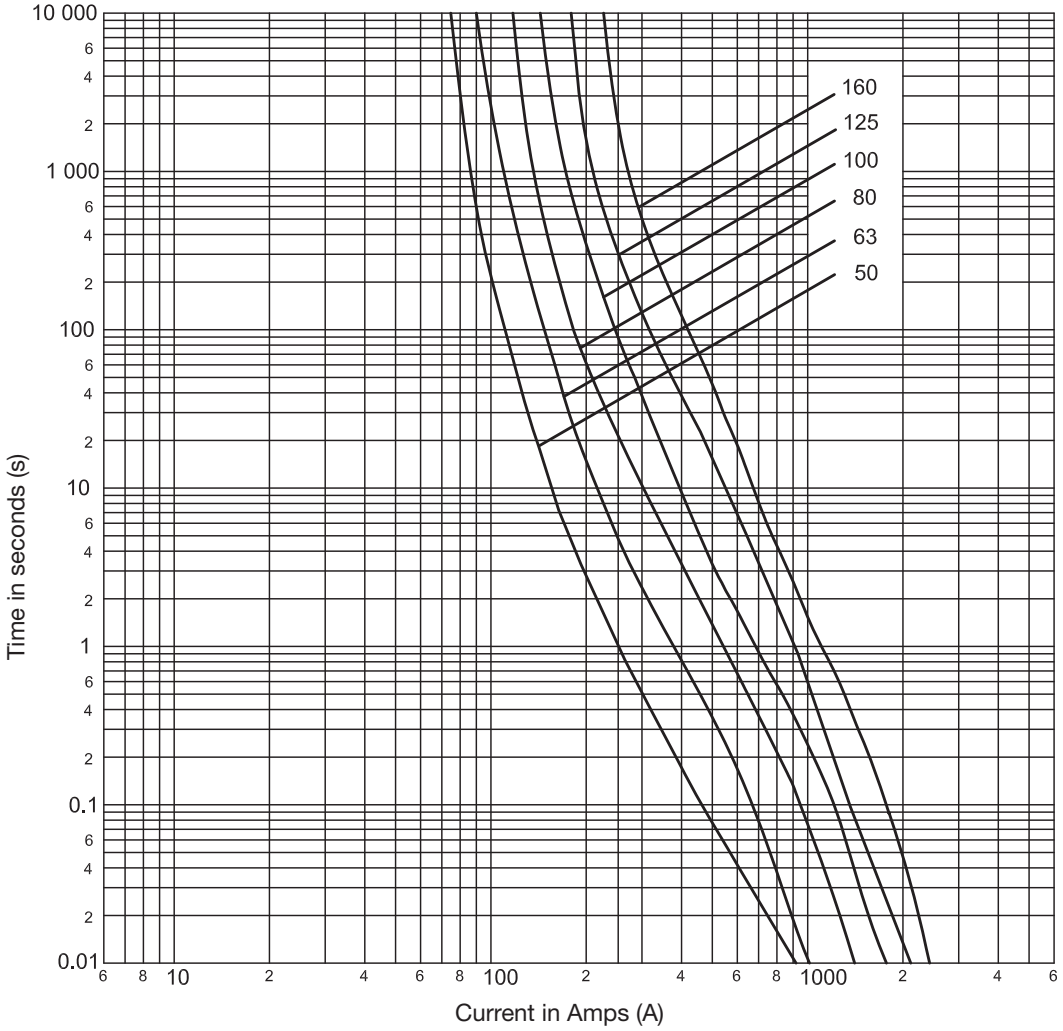
| Part numbers with metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | I²t (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|
| | | | | Minimum pre-arcing | *$I_1$ 120kA at 690Vac | | |
| 2NHG000B-690 | 000 | 2 | 690 | 3.5 | 8 | 4 | 0.118 |
| 4NHG000B-690 | | 4 | | 6 | 16 | 2 | |
| 6NHG000B-690 | | 6 | | 14 | 25 | 2 | |
| 10NHG000B-690 | | 10 | | 60 | 400 | 1.5 | |
| 16NHG000B-690 | | 16 | | 240 | 1200 | 2.5 | |
| 20NHG000B-690 | | 20 | | 500 | 2500 | 2.5 | |
| 25NHG000B-690 | | 25 | | 920 | 4400 | 3.5 | |
| 32NHG000B-690 | | 32 | | 1800 | 9600 | 3.5 | |
| 35NHG000B-690 | | 35 | | 2800 | 15,000 | 4 | |
| 40NHG000B-690 | | 40 | | 3300 | 15,000 | 4 | |
| 50NHG000B-690 | | 50 | | 6100 | 26,500 | 5.5 | |
| 63NHG000B-690 | | 63 | | 6500 | 30,500 | 5.5 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

Data sheet 720109

# 690Vac class gG/gL - 50 to 160 amps - size 00

## Time-current characteristics



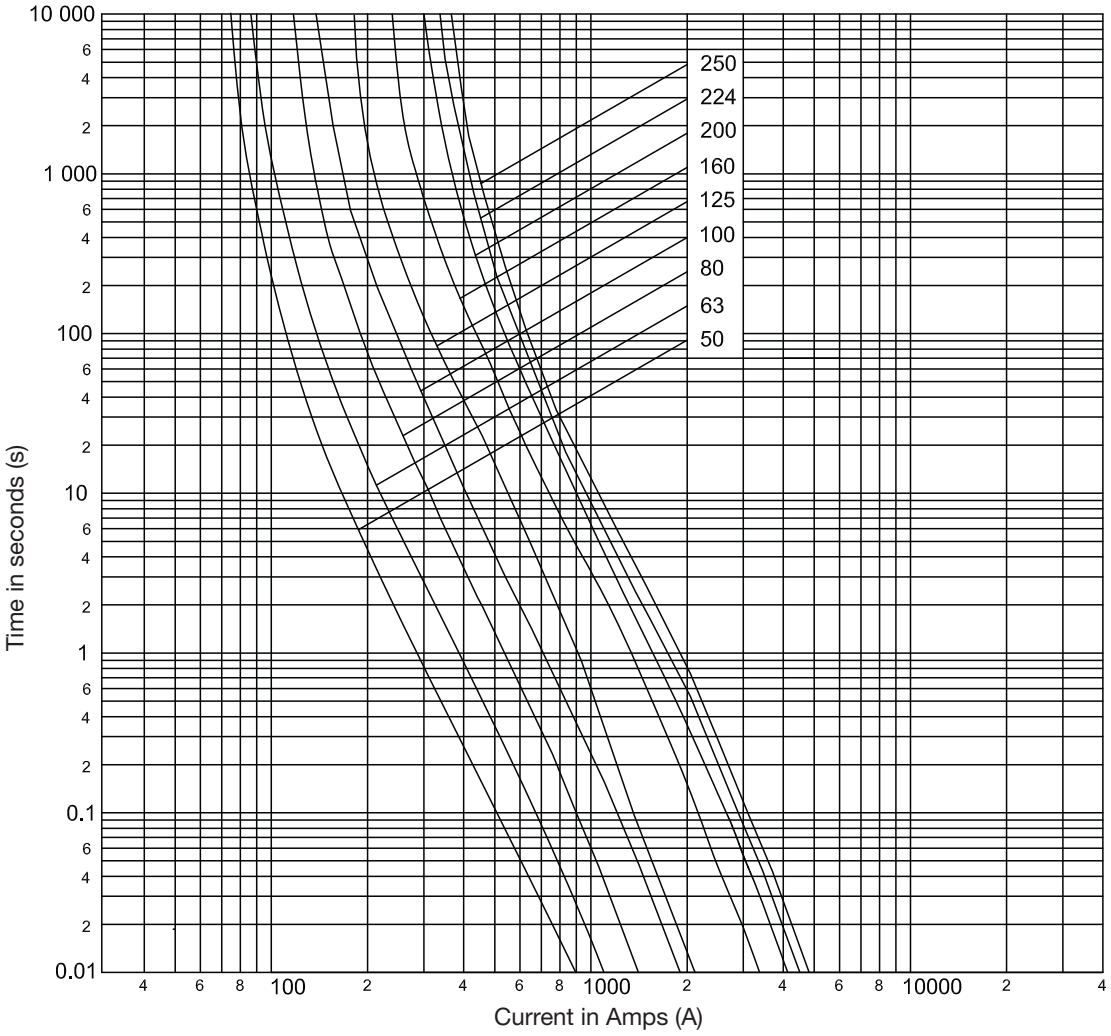

## Technical data

| Part numbers with metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | I²t (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|
| | | | | Minimum pre-arcing | *$I_1$ 120kA at 690Vac | | |
| 50NHG00B-690 | 00 | 50 | 690 | 5800 | 35,000 | 5 | 0.182 |
| 63NHG00B-690 | | 63 | | 5800 | 43,000 | 5 | |
| 80NHG00B-690 | | 80 | | 11,000 | 54,500 | 7 | |
| 100NHG00B-690 | | 100 | | 19,000 | 92,000 | 7.5 | |
| 125NHG00B-690 | | 125 | | 27,500 | 105,000 | 9.5 | |
| 160NHG00B-690 | | 160 | 660 | 40,500 | 135,000* | 13 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

# 690Vac class gG/gL - 50 to 250 amps - size 1

## Time-current characteristics




## Technical data

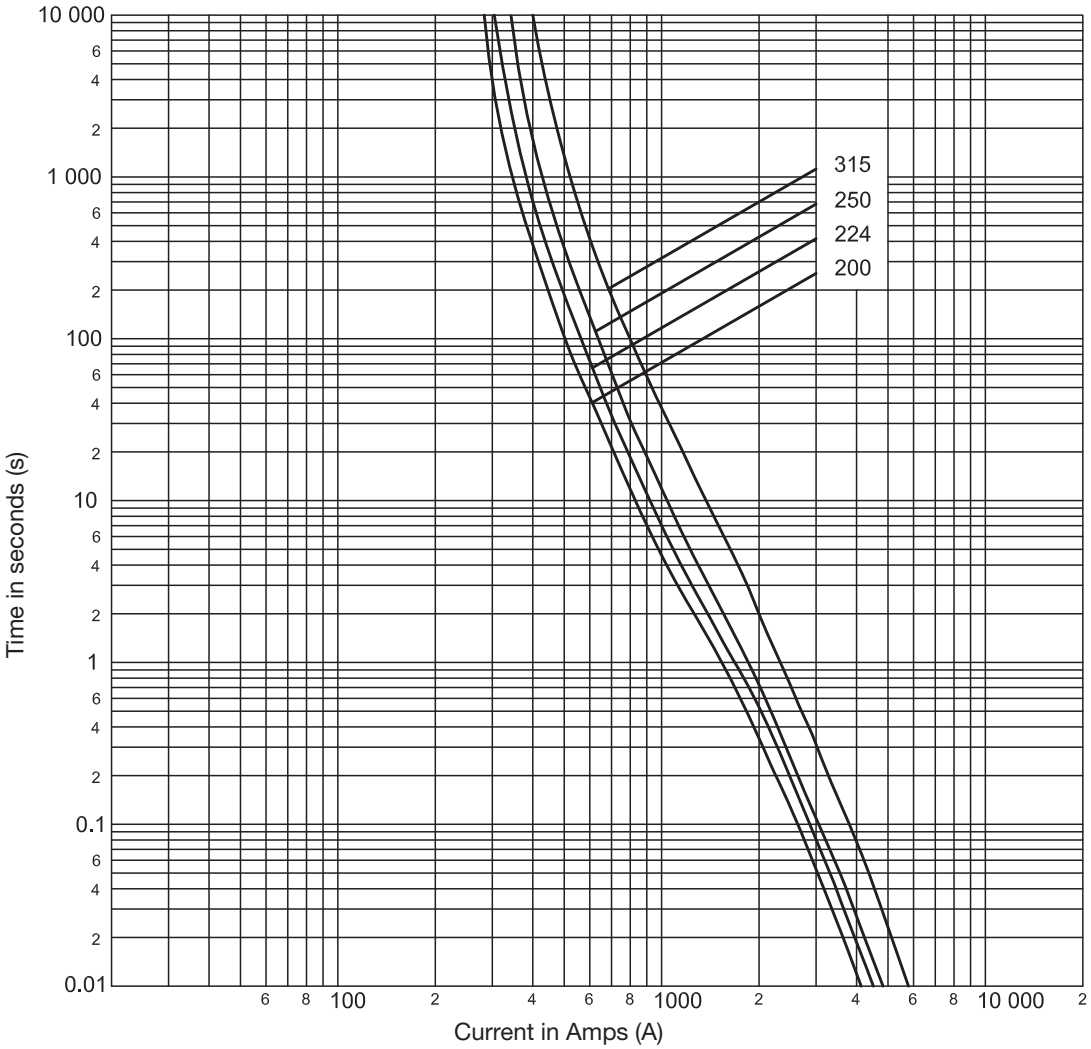
| Part numbers with metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | I²t (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|
| | | | | Minimum pre-arcing | *$I_1$ 120kA at 690Vac | | |
| 50NHG1B-690 | 1 | 50 | 690 | 6350 | 26,500 | 6.4 | 0.38 |
| 63NHG1B-690 | | 63 | | 6800 | 36,000 | 5.6 | |
| 80NHG1B-690 | | 80 | | 10,500 | 47,500 | 7.7 | |
| 100NHG1B-690 | | 100 | | 22,000 | 105,000 | 8.2 | |
| 125NHG1B-690 | | 125 | | 29,000 | 120,000 | 13 | |
| 160NHG1B-690 | | 160 | | 71,000 | 240,000 | 13 | |
| 200NHG1B-690 | | 200 | | 105,000 | 350,000 | 17 | |
| 224NHG1B-690 | | 224 | | 120,000 | 430,000 | 19 | |
| 250NHG1B-690 | | 250 | | 150,000 | 520,000 | 22 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

Data sheet 720109

# 690Vac class gG/gL - 200 to 315 amps - size 2

## Time-current characteristics




## Technical data

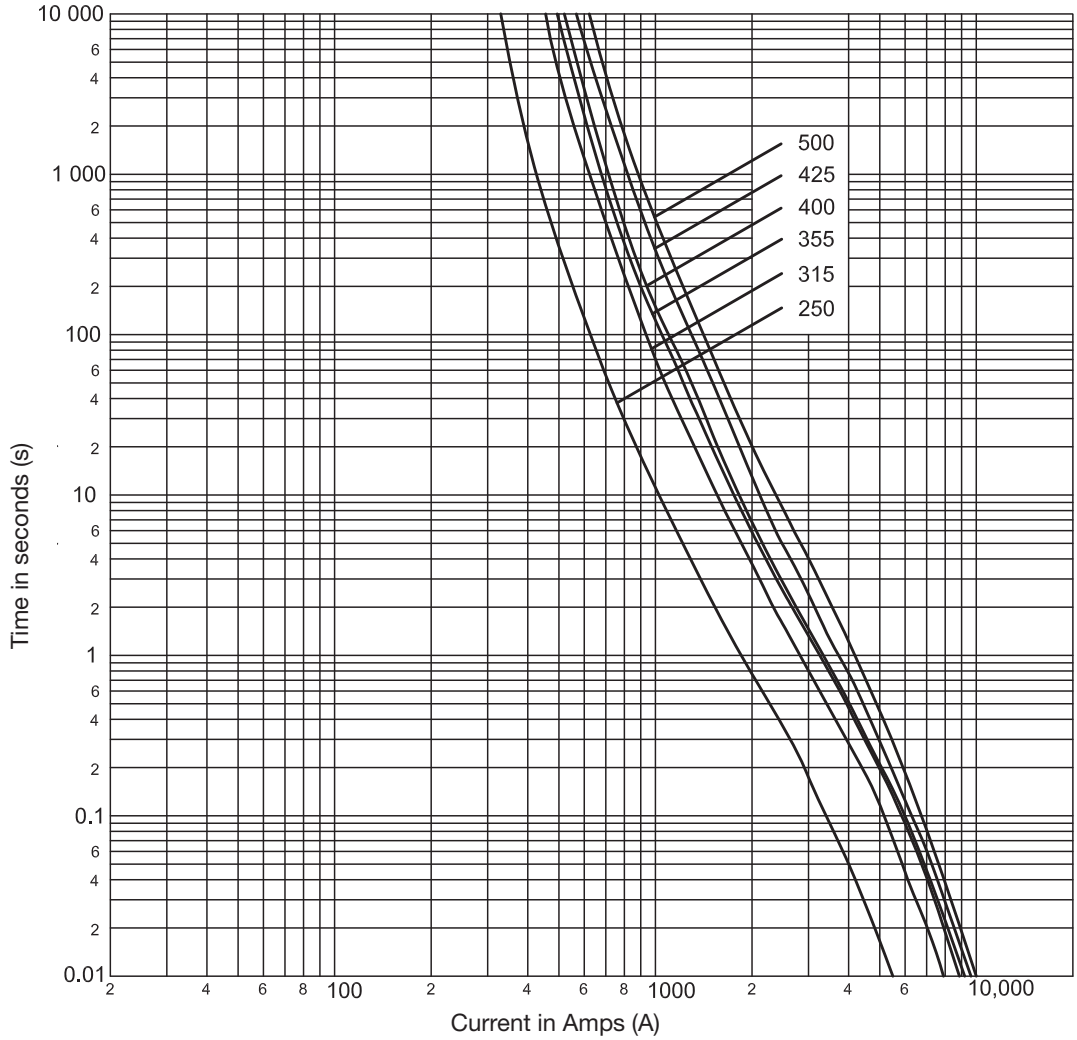
| Part numbers with metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | $I^2t$ (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|
| | | | | Minimum pre-arcing | *$I_1$ 120kA at 690Vac | | |
| 200NHG2B-690 | 2 | 200 | 690 | 99,000 | 385,000 | 18 | 0.62 |
| 224NHG2B-690 | | 224 | | 130,000 | 485,000 | 20 | |
| 250NHG2B-690 | | 250 | | 170,000 | 625,000 | 23 | |
| 315NHG2B-690 | | 315 | | 295,000 | 760,000 | 32 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

Data sheet 720109

# 690Vac class gG/gL - 250 to 500 amps - size 3

## Time-current characteristics



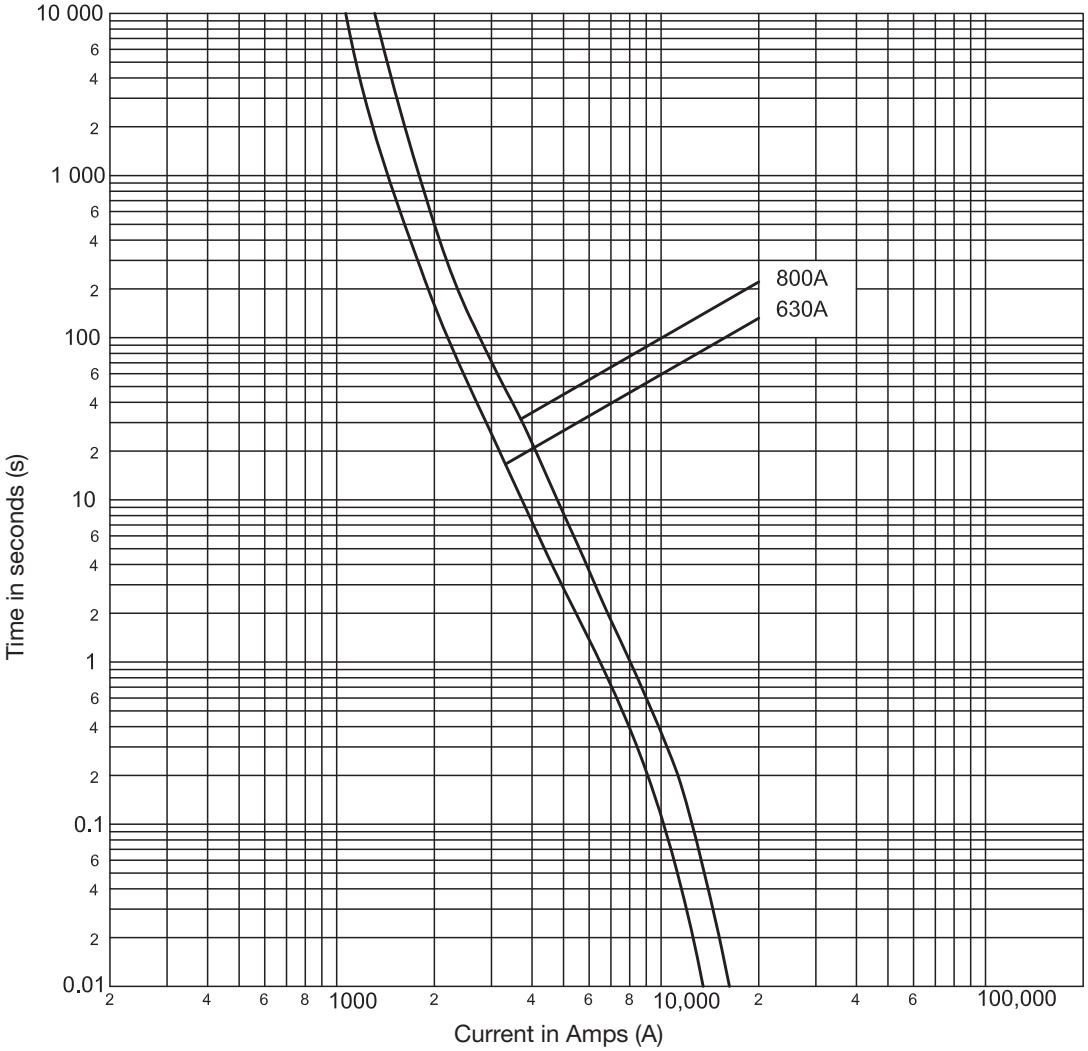

## Technical data

| Part numbers with metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | $I^2t$ (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|
| | | | | Minimum pre-arcing | *$I_1$ 120kA at 690Vac | | |
| 250NHG3B-690 | 3 | 250 | 690 | 160,000 | 715,000 | 21 | 0.38 |
| 315NHG3B-690 | | 315 | | 375,000 | 1,400,000 | 22 | |
| 355NHG3B-690 | | 355 | | 400,000 | 1,650,000 | 25 | |
| 400NHG3B-690 | | 400 | | 475,000 | 1,600,000 | 37 | |
| 425NHG3B-690 | | 425 | | 630,000 | 1,700,000 | 35 | |
| 500NHG3B-690 | | 500 | | 856,000 | 2,480,000 | 43 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

# 690Vac class gG/gL - 630 and 800 amps - size 4*

## Time-current characteristics




## Technical data

| Part numbers with metal gripping lugs | Fuse link size | Rated current (Amps) | Rated voltage (Vac) | $I^2t$ (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|
| | | | | Minimum pre-arcing | **$I_1$ 120kA at 690Vac | | |
| 630NHG4B-690 | 4 | 630 | 690 | 1,730,000 | 6,550,000 | 44 | 2.5 |
| 800NHG4B-690 | | 800 | | 3,330,000 | 11,000,000 | 61 | |

*Single indication fuse link with slotted end tags

** $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

**Please consult us should you wish to order 500Volts size 4 buletechnical@eaton.com or 00 44 (0) 1509 882 699**

# 500 and 690Vac class aM - 6 to 500 amps - sizes 000 to 3


**Description**
A range of class aM square bodied industrial fuse links for a wide variety of motor protection applications.

**Part number structure**
500Volts: (amp)NHM(size)B
690Volts: (amp)NHM(size)B-690

**Class of operation:** aM

**Standards/approvals**
IEC 60269-1 and 2,, DIN 43620 Part 1 and 3

**Technical data**
- Sizes 000 to 3
- Rated voltage: 500 and 690Vac
- Rated current: 6 to 500A
- Rated breaking capacity: 120kA
- Operating frequency: 45-62Hz

**Optional microswitch**
- BVL50 or 170H0236

**Compatible fuse holders**
- Fuse bases: SD(size)-D, SD(size)-S: 1-pole
  TD(size)-D, TD(size)-DI: 3-pole
- Fuse bases accessories: IP20, shroud and phase barrier kits
- Fuse rails - vertical: BFR series
- Fuse switch disconnectors vertical: BFD series
- Fuse switch disconnectors horizontal: BFH series

**Environmental:**
- Recyclable
- RoHS compliant
- Lead and cadmium free

**Packaging:** All fuse links are packed in 3's.

**Features:**
- Reliable dual indicator system (except size 2, 315 and 355A which are single indication)
- Low watts loss
- Metal gripping lugs

**Data sheet 10165**

# 500 and 690Vac class aM - 6 to 500 amps - sizes 000 to 3

## Part numbers - sizes 000 to 3

| Size | Rated current (Amps) | 500Vac class aM | 690Vac class aM | Pack quantity |
|---|---|---|---|---|
| | | Voltage conducting metal gripping lugs | Voltage conducting metal gripping lugs | |
| 000 | 6 | 6NHM000B | 6NHM000B-690 | 3 |
| | 10 | 10NHM000B | 10NHM000B-690 | 3 |
| | 16 | 16NHM000B | 16NHM000B-690 | 3 |
| | 20 | 20NHM000B | 20NHM000B-690 | 3 |
| | 25 | 25NHM000B | 25NHM000B-690 | 3 |
| | 32 | 32NHM000B | 32NHM000B-690 | 3 |
| | 35 | 35NHM000B | 35NHM000B-690 | 3 |
| | 40 | 40NHM000B | 40NHM000B-690 | 3 |
| | 50 | 50NHM000B | 50NHM000B-690 | 3 |
| 00 | 63 | 63NHM00B | 63NHM00B-690 | 3 |
| | 80 | 80NHM00B | 80NHM00B-690 | 3 |
| | 100 | 100NHM00B | 100NHM00B-690 | 3 |
| 1 | 50 | 50NHM1B | 50NHM1B-690 | 3 |
| | 63 | 63NHM1B | 63NHM1B-690 | 3 |
| | 80 | 80NHM1B | 80NHM1B-690 | 3 |
| | 100 | 100NHM1B | 100NHM1B-690 | 3 |
| | 125 | 125NHM1B | 125NHM1B-690 | 3 |
| | 160 | 160NHM1B | 160NHM1B-690 | 3 |
| 2 | 125 | 125NHM2B | 125NHM2B-690 | 3 |
| | 160 | 160NHM2B | 160NHM2B-690 | 3 |
| | 200 | 200NHM2B | 200NHM2B-690 | 3 |
| | 224 | 224NHM2B | 224NHM2B-690 | 3 |
| | 250 | 250NHM2B | 250NHM2B-690 | 3 |
| | 315* | 315NHM2B* | 315NHM2B-690* | 3 |
| | 355* | 355NHM2B* | 355NHM2B-690* | 3 |
| 3 | 315 | 315NHM3B | 315NHM3B-690 | 3 |
| | 355 | 355NHM3B | 355NHM3B-690 | 3 |
| | 400 | 400NHM3B | 400NHM3B-690 | 3 |
| | 500 | 500NHM3B | 500NHM3B-690 | 3 |

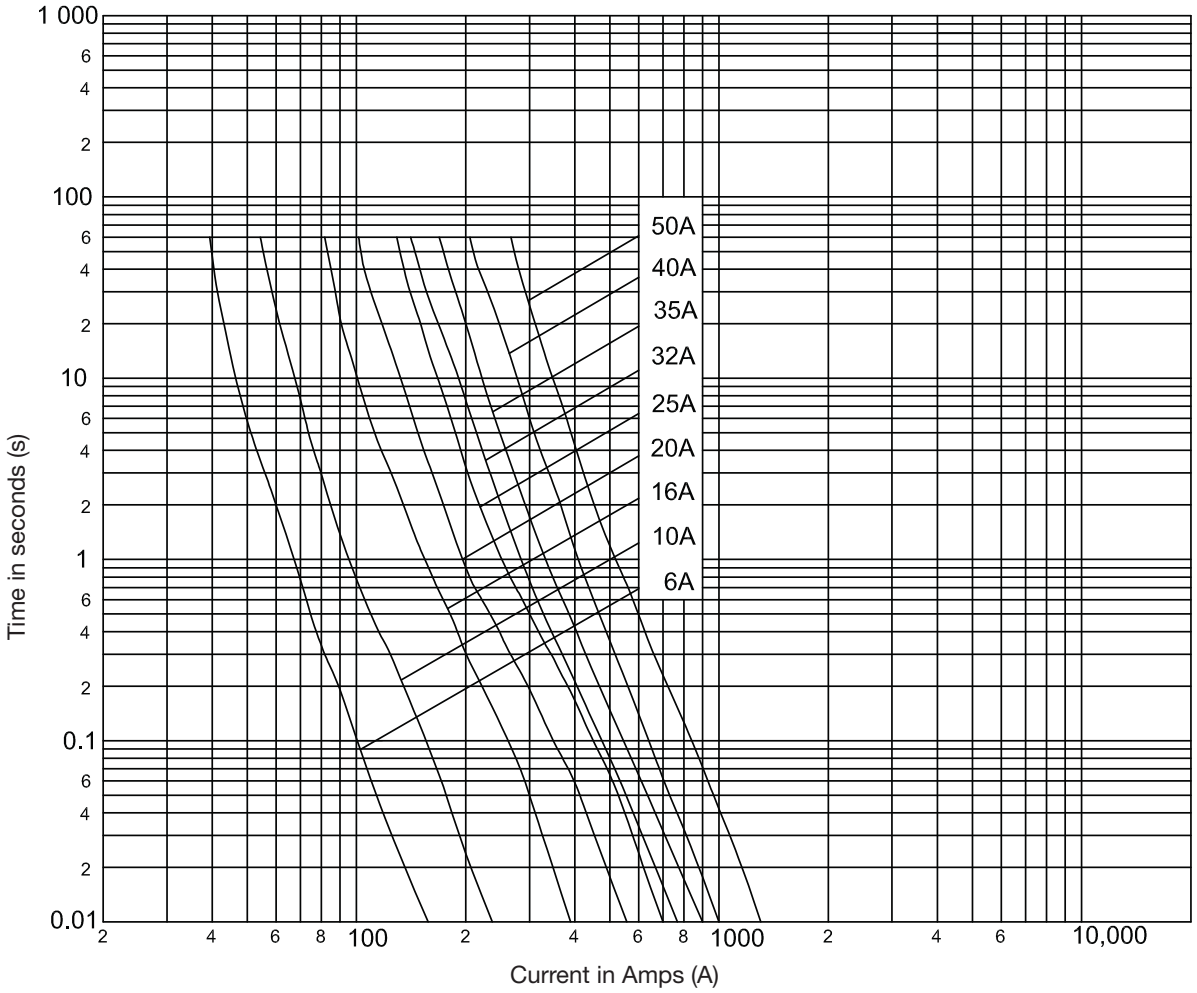

aM

* Single indication

Data sheet 10165

# 500 and 690Vac class aM - 6 to 50 amps - size 000

## Time-current characteristics




## Technical data

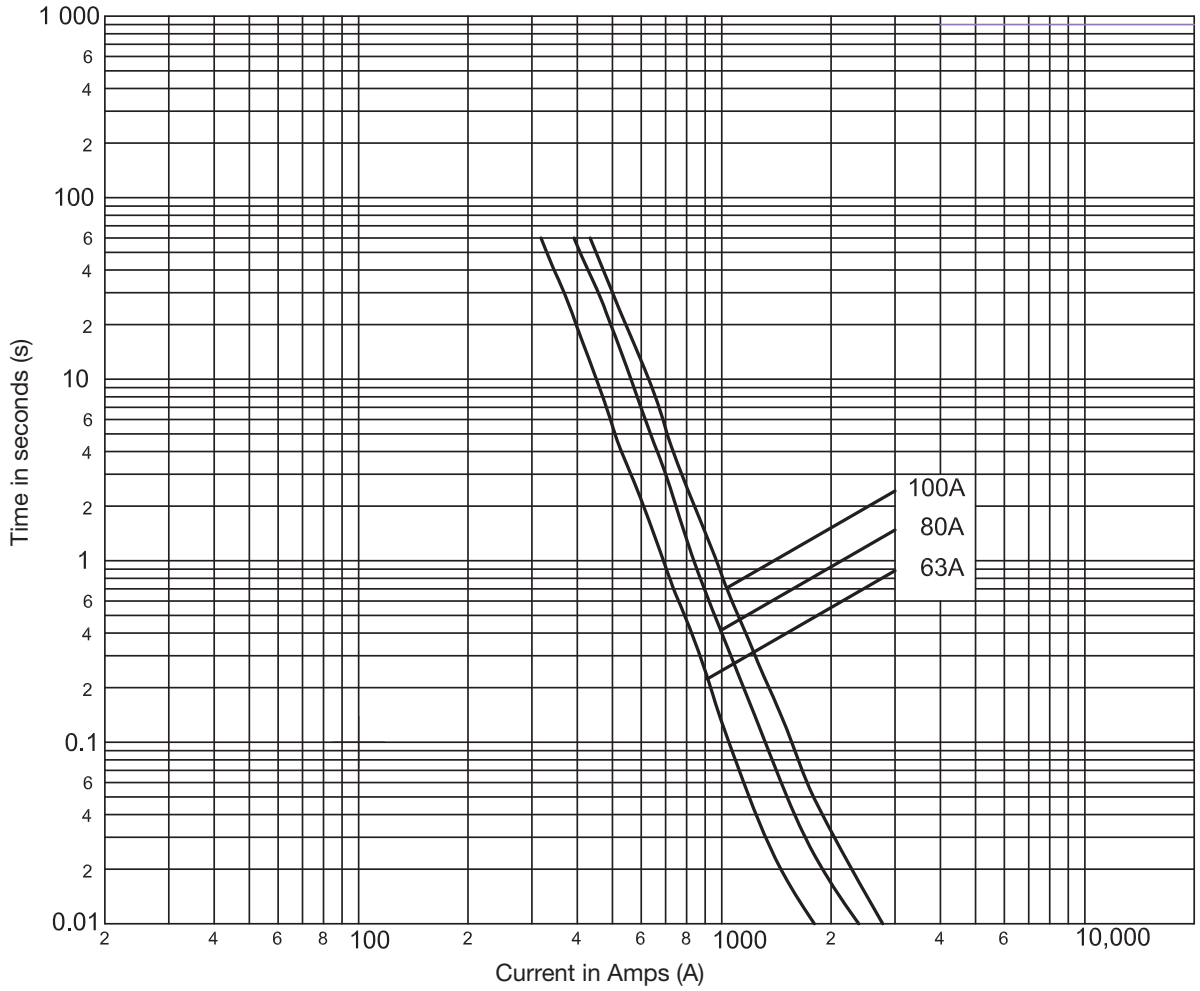
| 500Vac | 690Vac | Fuse link size | Rated current (Amps) | $I^2t$ (Amps$^2$ Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|
| Part numbers with metal gripping lugs | Part numbers with metal gripping lugs | | | Minimum pre-arcing | *$I_1$ 120kA at 690Vac | | |
| 6NHM000B | 6NHM000B-690 | 000 | 6 | 48 | 650 | 0.3 | 0.118 |
| 10NHM000B | 10NHM000B-690 | | 10 | 200 | 1800 | 0.5 | |
| 16NHM000B | 16NHM000B-690 | | 16 | 500 | 4400 | 0.8 | |
| 20NHM000B | 20NHM000B-690 | | 20 | 1450 | 7250 | 0.9 | |
| 25NHM000B | 25NHM000B-690 | | 25 | 3500 | 13,500 | 1.1 | |
| 32NHM000B | 32NHM000B-690 | | 32 | 2200 | 7500 | 2.1 | |
| 35NHM000B | 35NHM000B-690 | | 35 | 3000 | 12,000 | 2.1 | |
| 40NHM000B | 40NHM000B-690 | | 40 | 4700 | 14,500 | 2.3 | |
| 50NHM000B | 50NHM000B-690 | | 50 | 11,000 | 27,000 | 2.7 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

Data sheet 10165

# 500 and 690Vac class aM - 63 to 100 amps - size 00

## Time-current characteristics




## Technical data

| 500Vac | 690Vac | Fuse link size | Rated current (Amps) | I²t (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|
| Part numbers with metal gripping lugs | Part numbers with metal gripping lugs | | | Minimum pre-arcing | *$I_1$ 120kA at 690Vac | | |
| 63NHM00B | 63NHM00B-690 | 00 | 63 | 16,000 | 52,000 | 3.1 | 0.186 |
| 80NHM00B | 80NHM00B-690 | | 80 | 24,000 | 69,500 | 4.3 | |
| 100NHM00B | 100NHM00B-690 | | 100 | 35,000 | 110,000 | 5.5 | |

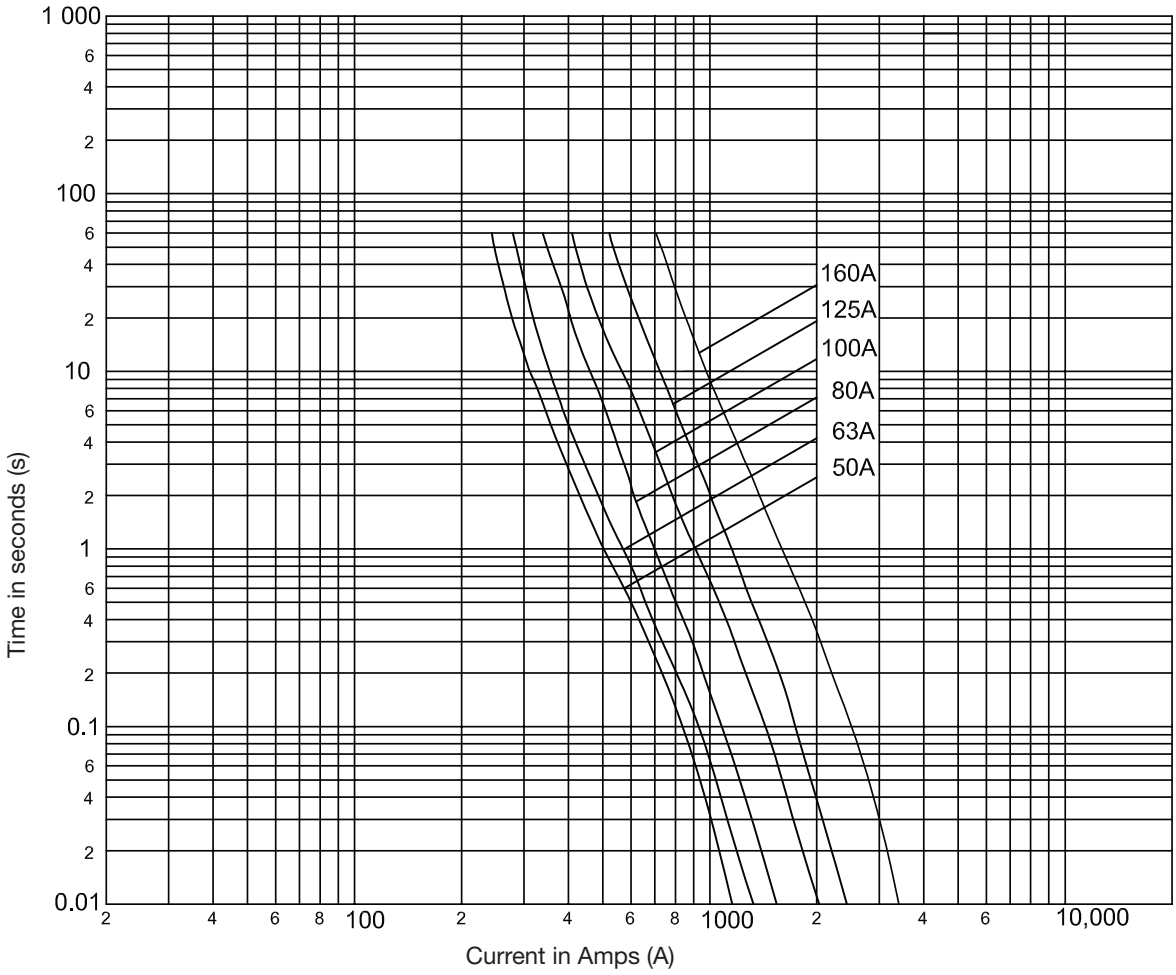
* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

aM

Data sheet 10165

# 500 and 690Vac class aM - 50 to 160 amps - size 1

## Time-current characteristics




## Technical data

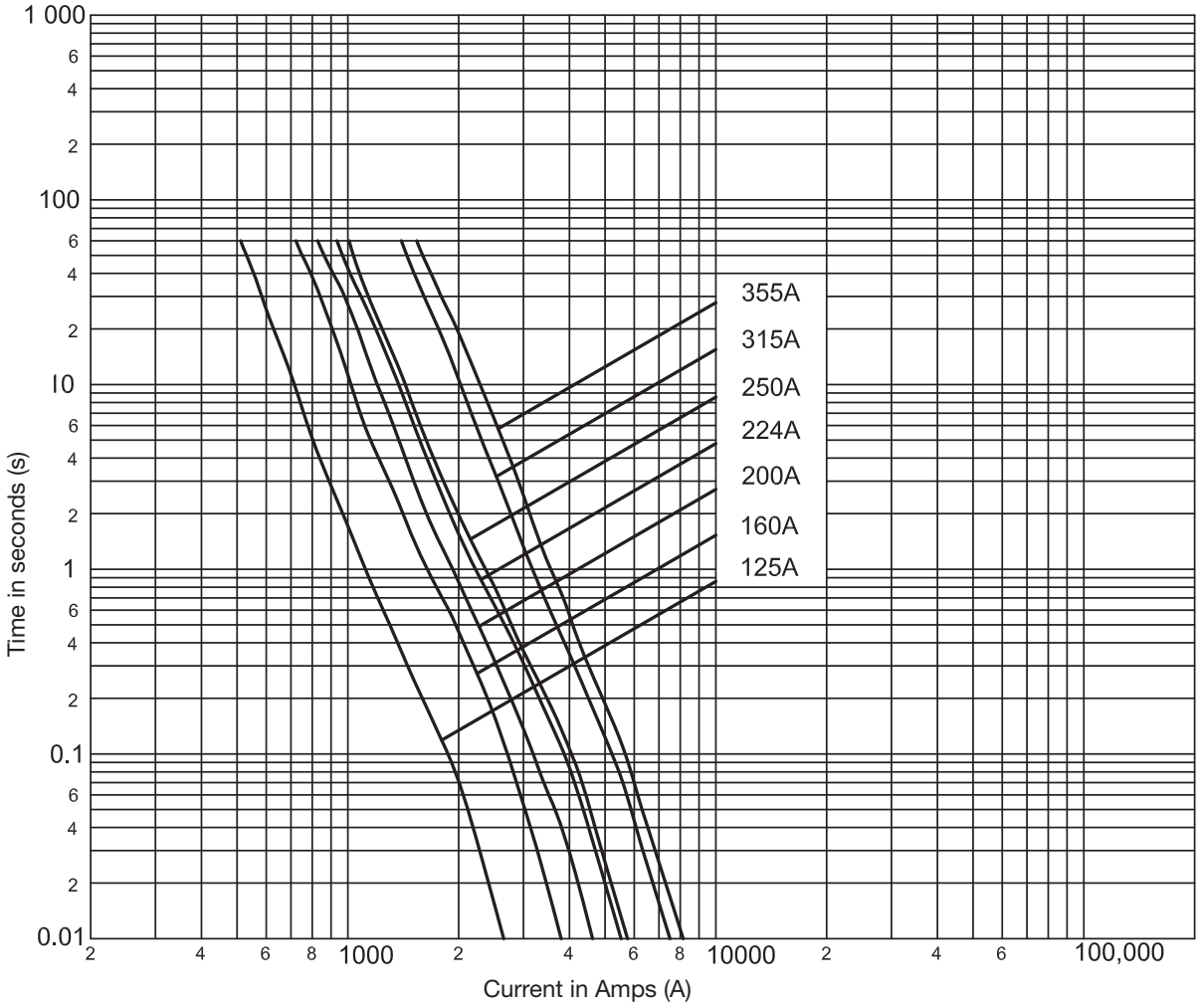
| 500Vac | 690Vac | Fuse link size | Rated current (Amps) | I²t (Amps² Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|
| Part numbers with metal gripping lugs | Part numbers with metal gripping lugs | | | Minimum pre-arcing | *$I_1$ 120kA at 690Vac | | |
| 50NHM1B | 50NHM1B-690 | 1 | 50 | 10,000 | 39,500 | 3 | 0.38 |
| 63NHM1B | 63NHM1B-690 | | 63 | 12,500 | 49,500 | 4.4 | |
| 80NHM1B | 80NHM1B-690 | | 80 | 19,500 | 77,500 | 5.6 | |
| 100NHM1B | 100NHM1B-690 | | 100 | 33,000 | 105,000 | 6.7 | |
| 125NHM1B | 125NHM1B-690 | | 125 | 49,500 | 170,000 | 8.8 | |
| 160NHM1B | 160NHM1B-690 | | 160 | 110,000 | 315,000 | 10.6 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

aM

# 500 and 690Vac class aM - 125 to 355 amps - size 2

## Time-current characteristics




## Technical data

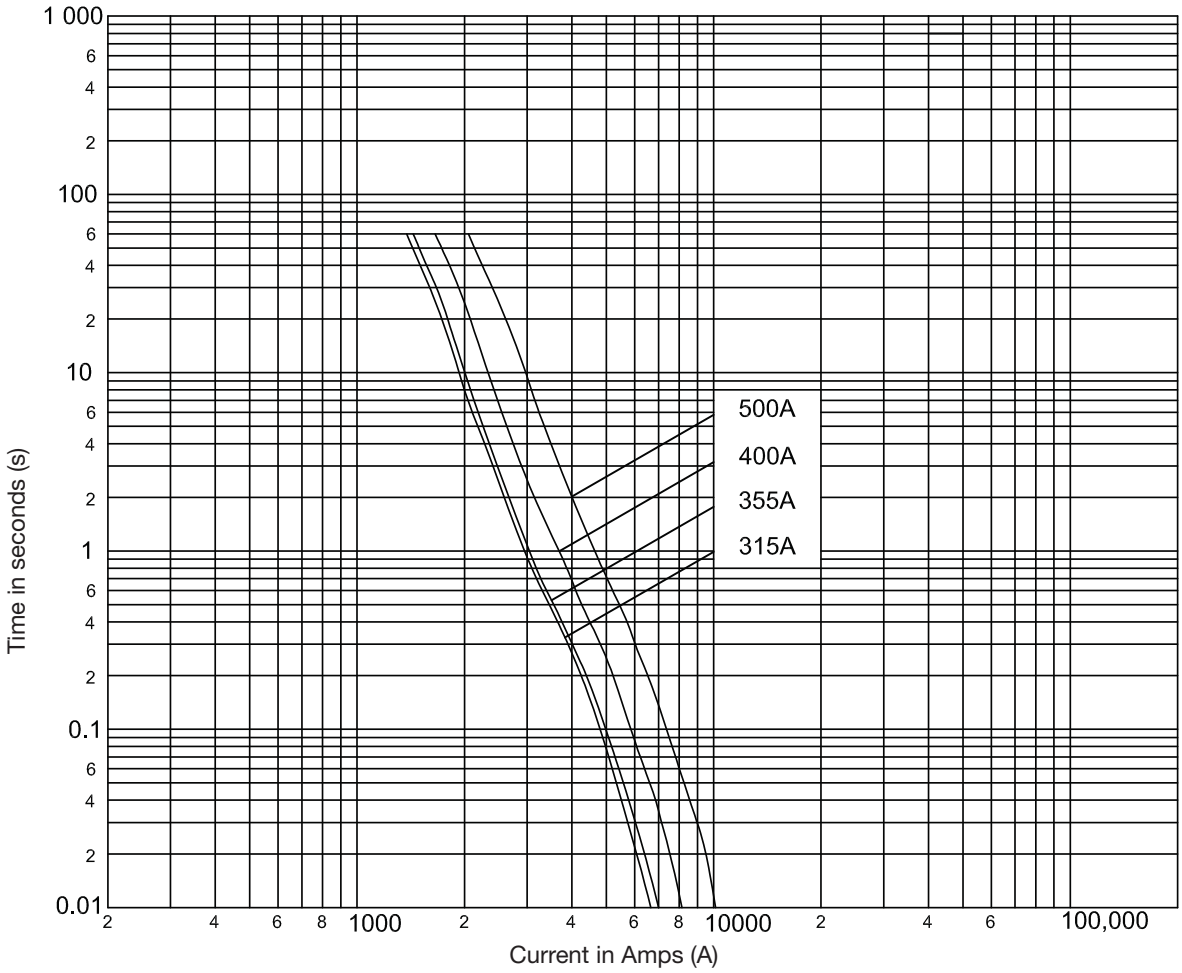
| 500Vac | 690Vac | Fuse link size | Rated current (Amps) | $I^2t$ (Amps$^2$ Seconds) | | Watts loss | Net Weight per Fuse (Kg) |
|---|---|---|---|---|---|---|---|
| Part numbers with metal gripping lugs | Part numbers with metal gripping lugs | | | Minimum pre-arcing | **$I_1$ 120kA at 690Vac | | |
| 125NHM2B | 125NHM2B-690 | 2 | 125 | 56,500 | 215,000 | 9.7 | 0.615 |
| 160NHM2B | 160NHM2B-690 | | 160 | 120,000 | 510,000 | 11 | |
| 200NHM2B | 200NHM2B-690 | | 200 | 175,000 | 730,000 | 14 | |
| 224NHM2B | 224NHM2B-690 | | 224 | 255,000 | 1,050,000 | 15 | |
| 250NHM2B | 250NHM2B-690 | | 250 | 300,000 | 1,280,000 | 17 | |
| 315NHM2B* | 315NHM2B-690* | | 315 | 510,000 | 1,150,000 | 23 | |
| 355NHM2B* | 355NHM2B-690* | | 355 | 570,000 | 1,300,000 | 28 | |

* Single indication

** $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

# 500 and 690Vac class aM - 315 to 500 amps - size 3

## Time-current characteristics




## Technical data

| 500Vac | 690Vac | Fuse link size | Rated current (Amps) | $I^2t$ (Amps$^2$ Seconds) | | Watts loss | Net weight per fuse (Kg) |
|---|---|---|---|---|---|---|---|
| Part numbers with metal gripping lugs | Part numbers with metal gripping lugs | | | Minimum pre-arcing | *$I_1$ 120kA at 690Vac | | |
| 315NHM3B | 315NHM3B-690 | 3 | 315 | 480,000 | 1,600,000 | 20 | 1.05 |
| 355NHM3B | 355NHM3B-690 | | 355 | 500,000 | 1,300,000 | 27 | |
| 400NHM3B | 400NHM3B-690 | | 400 | 680,000 | 2,000,000 | 28 | |
| 500NHM3B | 500NHM3B-690 | | 500 | 1,050,000 | 2,800,000 | 36 | |

* $I_1$ is the maximum breaking capacity test at rated voltage according to IEC 60269-1 and 2 requirements

# NH Fuse bases and accessories - SD and TD series

**Description**
NH fuse bases with thermoplastic bodies, DIN rail and/or screw mounting (size 4 screw mounting only). Range of accessories including phase barriers, IP20 finger-safe protection kits and neutral links available.
Microswitch also available for remote signaling of fuse link operation.

**Part number structure**
SD(size)-D, SD(size)-S: 1-pole
TD(size)-D, TD(size)-DI: 3-pole

**Standards/approvals**
IEC 60269-1 and 2, VDE 0636-1 and 2

**Technical data**
- Rated voltage: 690Vac
- Rated current: 160 to 1600A
- Rated for fuse links with breaking capacity: 120kA

**Compatible fuse links**
- NH 400, 500 and 690V NH gG and aM fuse links

**Packaging:**
- 1-pole: 3, SD4 and 3-pole: 1
- Packaging 100% recyclable

**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.

## Fuse base part numbers

| Size | Poles | Current (Amps) | Part numbers | | Unit packing | Compatible fuse links size |
|---|---|---|---|---|---|---|
| | | | DIN-Rail and screw mounting | Screw mounting only | | |
| 00 | 1-pole | 160 | SD00-D | SD00-S | 3 | 400/500/690V NH gG and aM fuse links |
| | 3-pole | 160 | TD00-D | N/A | 1 | |
| | | 160 | TD00-DI* | N/A | 1 | |
| 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 | |

* 3-pole integral base moulding.
** Double fuse contact clips.

Data sheet 10163

# NH Fuse bases and accessories - SD and TD series

## Technical data

| Fuse base part numbers | | SD00-D TD00-D TD00-DI | SD1-D TD1-D | SD2-D TD2-D | SD3-D TD3-D | SD4-S | SD4-S1600 |
|---|---|---|---|---|---|---|---|
| Base | | Glass filled PBT | | | | | |
| Contacts | | Silver plated copper | | | | | |
| Screw, nuts and washers | | Zinc clear plated steel | | | | | |
| Derating temperature factors for 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 |
| Degree of protection with covers fitted | | IP20 | IP20 | IP20 | IP20 | - | - |
| Terminal screw | | M8 | M10 | M10 | M12 | M16 | M16 |
| Maximum tightening torque terminal screw | | 10N•m | 32N•m | 32N•m | 32N•m | 56N•m | 56N•m |
| Fixing | DIN-Rail | ✓ | ✓ | ✓ | ✓ | x | x |
| | Screw | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| With microswitch 16A/250V | Fuse operated signal | ✓ | ✓ | ✓ | ✓ | x | x |
| Operating temperature range | | -20 to 70°C | | | | | |
| Storage temperature range | | -40 to 80°C | | | | | |

## Solid links part numbers

| Size | Current (Amps) | Part number | Unit packing |
|---|---|---|---|
| NH00 | 160 | SDL-00 | 3 |
| NH1 | 250 | SDL-1 | 3 |
| NH2 | 400 | SDL-2 | 3 |
| NH3 | 630 | SDL-3 | 3 |



## Accessories

### Fuse extraction handle

| Size | Current (Amps) | Part number | Unit packing |
|---|---|---|---|
| NH00-3 | 160 - 630 | FEH | 1 |

### Shroud kits

| Fuse fase series | Fuse size | Current (Amps) | Part number | Description |
|---|---|---|---|---|
| SD1 | NH1 | 250 | SD12-SK | Kit includes 2 shrouds and 1 fuse cover |
| SD2 | NH2 | 400 | SD12-SK | |
| SD3 | NH3 | 630 | SD3-SK | |

Shroud kit

# NH Fuse bases and accessories - SD and TD series

## Accessories

### Phase barrier kits

| Size | Current (Amps) | Phase barrier kit | | Description |
|---|---|---|---|---|
| | | Part number | Unit packing | |
| 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

### IP protection kits

| Size | Current (Amps) | Part number | Fuse cover | Shroud | Phase barrier | Ganging 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 phase barriers and ganging links |
| NH2 | 400 | TD2-IP20 | | | | | | |
| NH3 | 630 | TD3-IP20 | | | | | | |

TD00-IP20

TD00-IP20I

TD00-IP20IC

TD(size 1 to 3)-IP20

### Microswitch

| Part number | Unit packing | Ratings |
|---|---|---|
| BVL50 | 1 | 6A 250Vac |
| 170H0236 | 12 | 2A 250Vac |
| 170H0238 | 12 | 2A 250Vac |



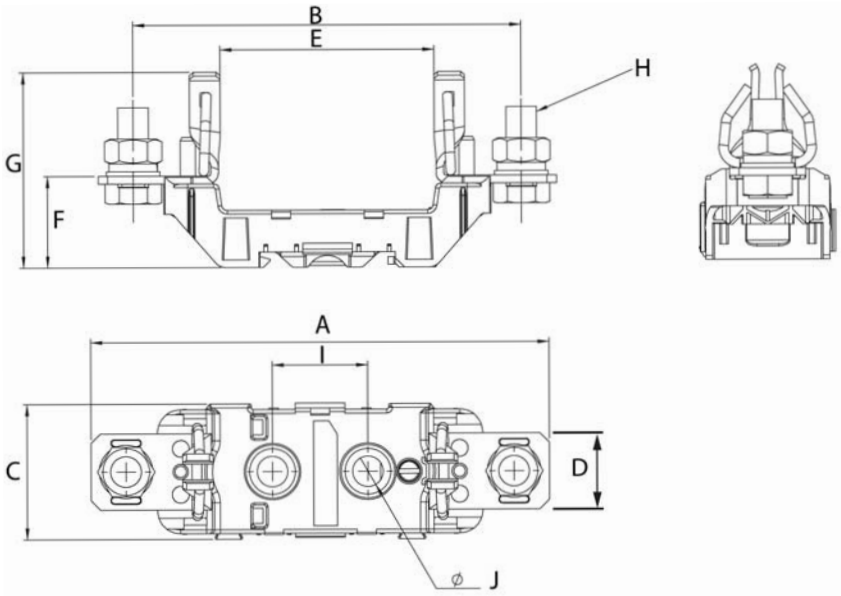
Microswitch suitable for the following NH fuse links:
- 400 Volts gG/gL
- 500 Volts gG/gL and aM
- 690 Volts gG/gL and aM

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

Data sheet 10163

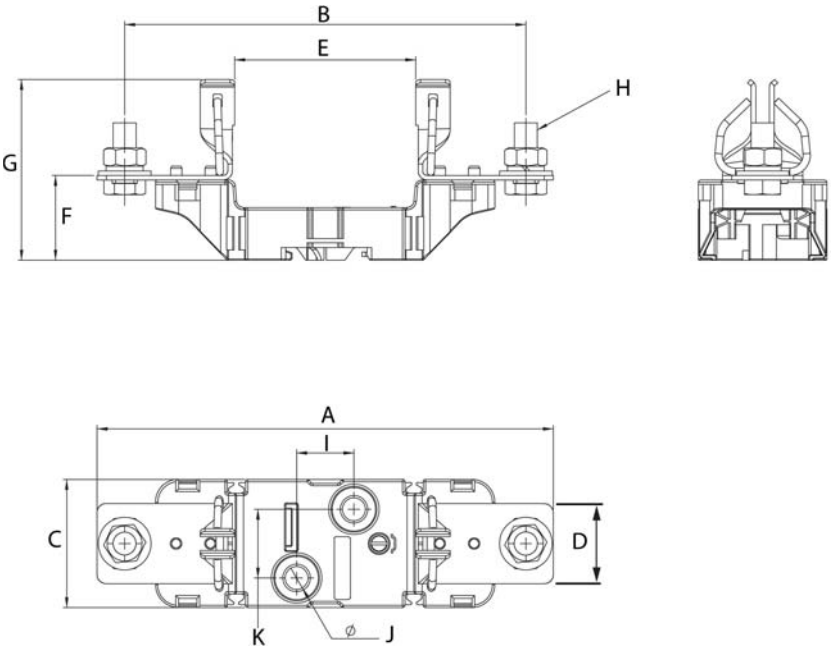
# NH Fuse bases and accessories - SD and TD series

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




| Size | Pole | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NH00 | 1-pole | 120 | 102 | 35.5 | 20 | 56 | 24 | 51 | M8x20 | 25 | 8 |

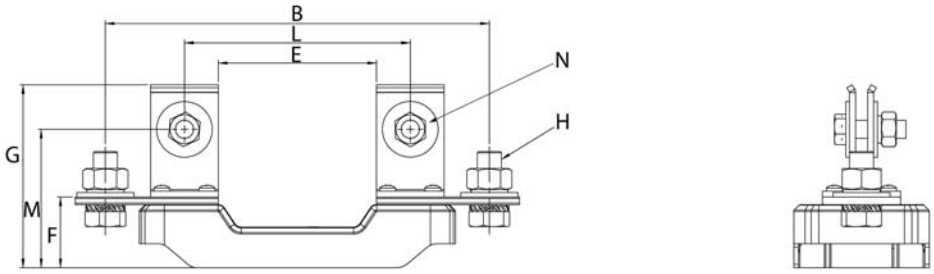
## Dimensions (mm) 1-pole, sizes 1, 2 and 3

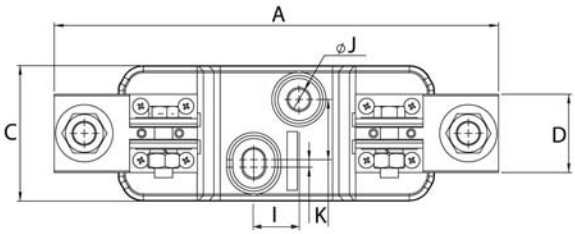



| Size | Poles/Type | A | B | C | D | E | F | G | H | I | J | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NH1 | 1-pole | 199 | 175 | 56 | 35 | 79 | 37 | 78 | M10x25 | 25 | 10 | 30 |
| NH2 | 1 pole | 224 | 199 | 56 | 35 | 79 | 37.5 | 86 | M10x25 | 25 | 10 | 30 |
| | 1-pole double clip | 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 |

# NH Fuse bases and accessories - SD and TD series

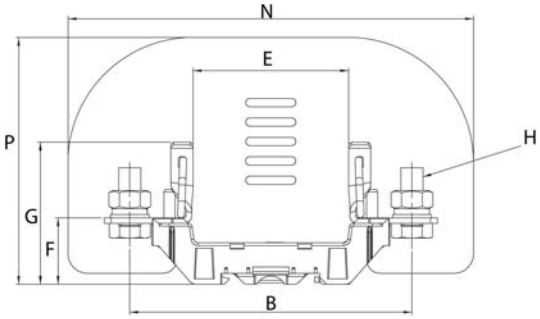
## Dimensions (mm) 1-pole, size 4

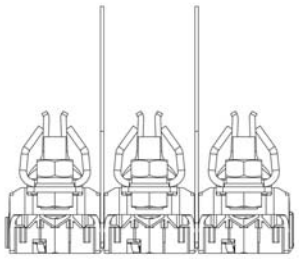


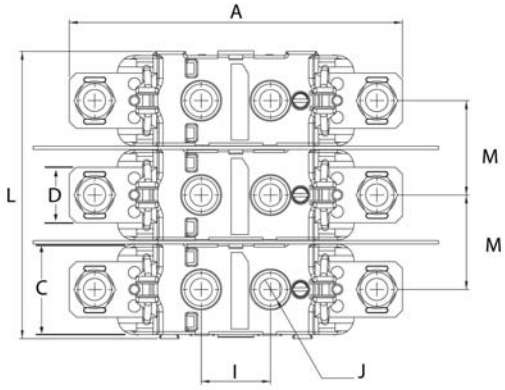




| Size | Poles/Type | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NH4 | 1-pole 1250A | 295 | 255 | 90 | 52 | 105 | 47 | 122 | M16x40 | 30 | 14 | 40 | 150 | 92 | M12x40 |
| | 1-pole 1600A | 295 | 255 | 90 | 60 | 105 | 50 | 125 | M16x40 | 30 | 14 | 40 | 150 | 92 | M12x40 |

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



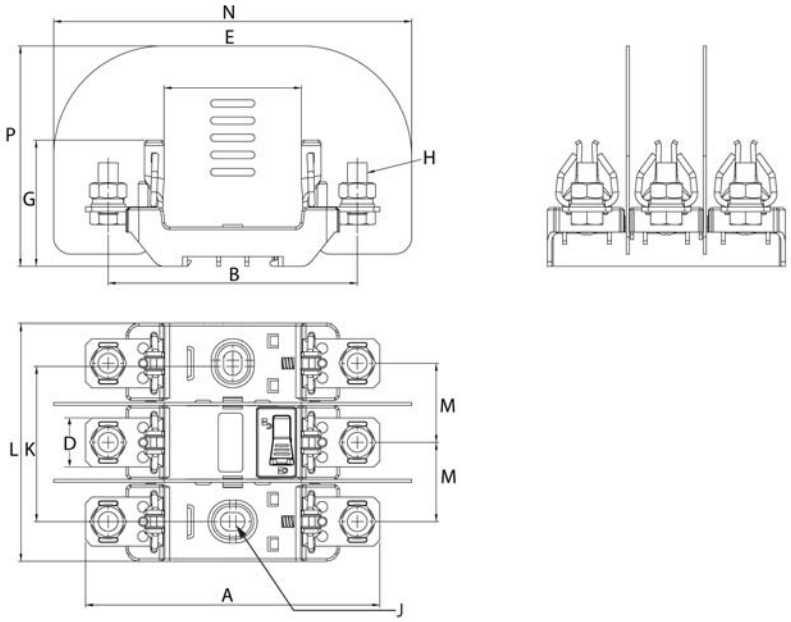






| Size | Poles/Type | A | B | C | D | E | F | G | H | I | J | K | L | M | N | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NH00 | 3-pole | 120 | 102 | 35.5 | 20 | 56 | 24 | 51 | M8x20 | 25 | 8 | - | 103.5 | 34 | 146 | 89 |

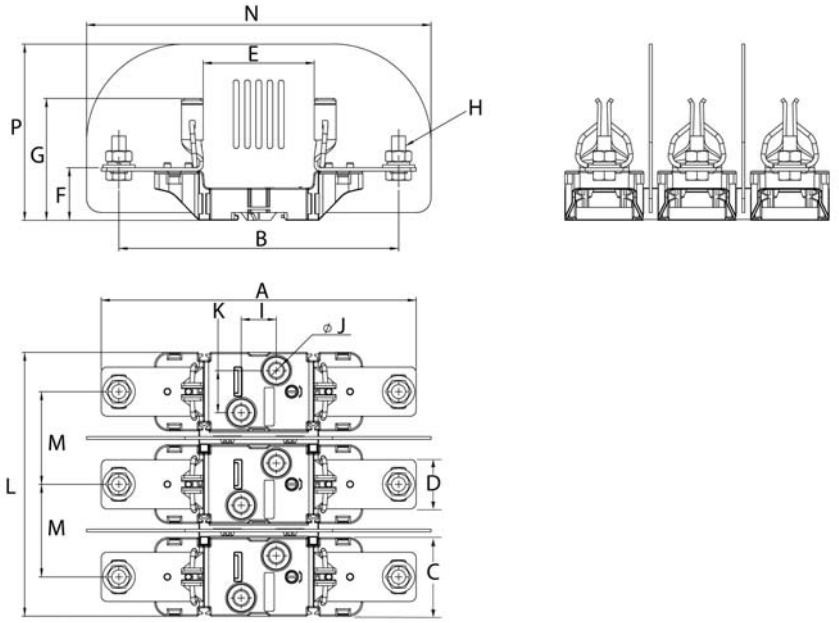
# NH Fuse bases and accessories - SD and TD series

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



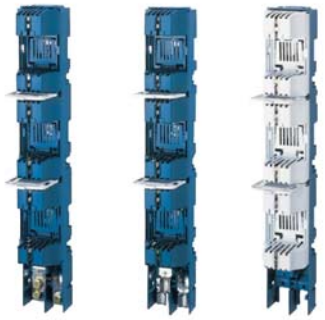

| Size | Poles/Type | A | B | C | D | E | F | G | H | I | J | K | L | M | N | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NH00 | 3-pole Integral | 120 | 102 | - | 20 | 56 | 24 | 51 | M8x20 | - | 7.5x10 | 63.5 | 97 | 32.3 | 146 | 90 |

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




| Size | Poles/Type | A | B | C | D | E | F | G | H | I | J | K | L | M | N | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |

# NH Fuse rails - vertical - BFR series



**Description**
NH fuse rails to be used with NH fuse links. Fully protected against accidental contact.

**Part number structure**
BFR00-3D-FC - Size 00 M8 cable connections
BFR(size)-3K-LM-C: Pressed-in nuts with M10 screw
BFR(size)-3K-LW: V-shaped clamps
BFR(size)-3K-LL: For use on Busbar systems with 185mm spacing. Connects to Busbar with M12 Bolts

**Standards/approvals**
IEC 60269-1 and 2, and CE

**Technical data**
- Rated voltage: 690Vac
- Rated current: 160 to 630A

**Compatible fuse links**
- NH 400, 500 and 690V NH gG and aM fuse links

**Packaging:**
- 1 per carton

**Features:**
- Contact covers.
- Phase barriers.
- Label for protected circuit identification.
- Busbar mounting option.

## Part numbers

| Size | Current (Amps) | Part number | Leading out terminals | Unit packing | Compatible fuse links size |
|---|---|---|---|---|---|
| 00 | 160 | BFR00-3D-FC | M8 cable connections | 1 | 000 and 00 |
| 1 | 250 | BFR1-3K-LM-C* | Pressed-in nuts with M10 screws | 1 | 01 and 1 |
| | | BFR1-3K-LW | V-shaped terminals for 5845 clamps** | | |
| | | BFR1-3K-LL | For use on Busbar system with 185mm spacing. Connects to Busbar with M12 Bolts | | |
| 2 | 400 | BFR2-3K-LM-C* | Pressed-in nuts with M10 screws | 1 | 02 and 2 |
| | | BFR2-3K-LW | V-shaped terminals for 5845 clamps** | | |
| | | BFR2-3K-LL | For use on Busbar system with 185mm spacing. Connects to Busbar with M12 Bolts | | |
| 3 | 630 | BFR3-3K-LM-C* | Pressed-in nuts with M10 screws | 1 | 03 and 3 |
| | | BFR3-3K-LW | V-shaped terminals for 5845 clamps** | | |
| | | BFR3-3K-LL | For use on Busbar system with 185mm spacing. Connects to Busbar with M12 Bolts | | |

* With leading-out terminal cover

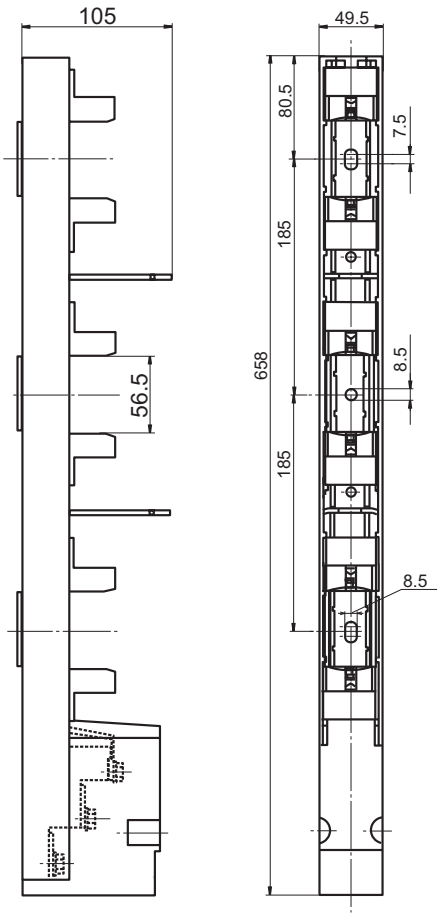
** The clamps must be ordered separately

# NH Fuse rails - vertical - BFR series

## Technical data

| Type | | BFR00 | BFR1 | BFR2 | BFR3 |
|---|---|---|---|---|---|
| Rated current | $I_n$ | 160A | 250A | 400A | 630A |
| Standards | | IEC 60269-1 and 2 | IEC 60269-1 and 2-1 | IEC 60269-1 and 2-1<br>EN 354701-2-1 | IEC 60269-1 and 2-1<br>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 | $U_i$ | 1000Vac | 1000Vac | 1000Vac | 1000Vac |
| Fuse link size | | 000 and 00 | 1 | 2 | 3 |
| Max rated current of the fuse link | $I_n$ | 160A | 250A | 400A | 630A |
| Thermal current/Maximum cable size | $I_{th}$ | 240A with neutral link SDL-00/ Cross-section | 400A/240mm² with neutral link SDL-1/ cross-section | 560A/185mm² with neutral link SDL-2/ cross-section | 800A/2x185mm² with neutral link SDL-3/ 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 |

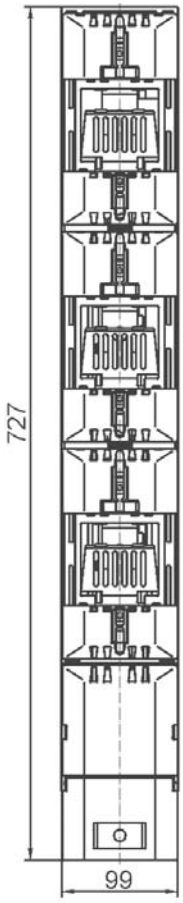
## Dimensions (mm) for BFR00-3D-FC



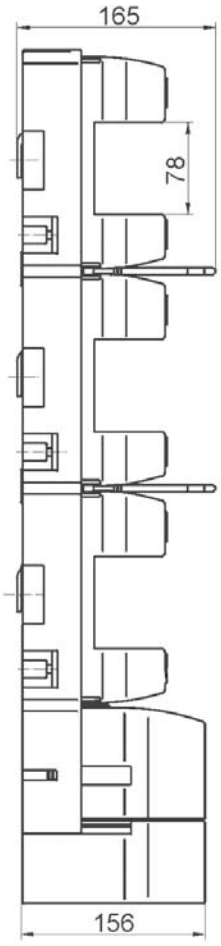
# NH Fuse rails - vertical - BFR series

## Dimensions (mm) for BFR1, BFR2 and BFR3

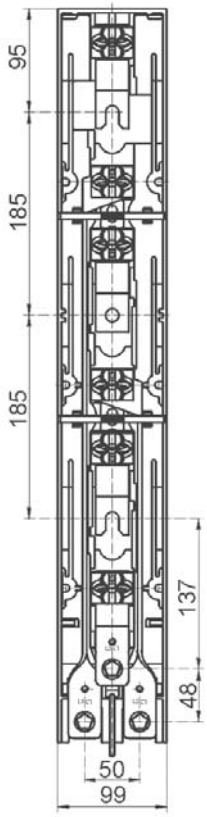
Front view with cover

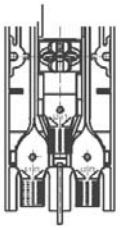



Front view with cover

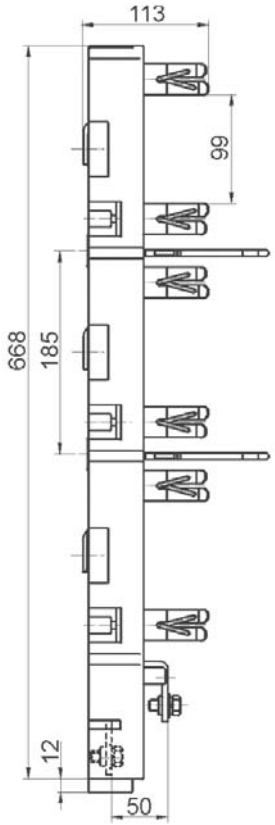



Back view

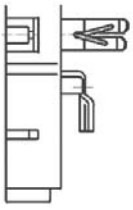


Side view without cover

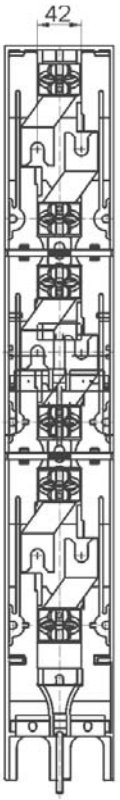



LM



LW

Front view without cover




LL

Accessories

# NH Fuse switch disconnectors - vertical - BFD series

**Description**
Vertical fuse disconnectors designed to be used with NH fuse links, enabling safe connecting and disconnection on load.

**Part number structure**
BFD00-33D-F: size 00 M8 cable connections
BFD(size)-3(number of poles)-LM: pressed-in nuts with M10 screw
BFD(size)-3(number of poles)-LW:V-shaped clamps
BFD(size)-3(number of poles)-LL: for use on Busbar systems with 185mm spacing. Connects to Busbar with M12 Bolts

**Standards/approvals**
IEC 60947-1 and 3, and CE

**Technical data**
- Rated voltage: 690Vac
- Rated current: 160 to 630A
- Utilisation category:
  AC23B 400Vac Size 00 to 3
  AC21B 690Vac Size 00
  AC22B 690Vac Size 1 to 3

**Compatible fuse links**
- NH 400, 500 and 690V gG and aM fuse links

**Packaging:**
- 1 per carton

**Features:**
- Lockable fuse covers.
- Label for circuit identification.
- Busbar mounting.
- Busbar mounting option.

## Part numbers

| Size | Rated current (Amps) | Part number | | Leading out terminals | Unit packing | Compatible fuse links size |
|---|---|---|---|---|---|---|
| | | 1-pole switching | 3-pole switching | | | |
| 00 | 160 | N/A | BFD00-33D-F | M8 cable connections | 1 | 000 and 00 |
| 1 | 250 | BFD1-31-LM | BFD1-33-LM | Pressed-in nuts with M10 screws | 1 | 01 and 1 |
| | | BFD1-31-LW | BFD1-33-LW | V-shaped terminals for 5845 clamps* | | |
| | | BFD1-31-LL | BFD1-33-LL | For use on Busbar system with 185mm spacing. Connects to Busbar with M12 Bolts | | |
| 2 | 400 | BFD2-31-LM | BFD2-33-LM | Pressed-in nuts with M10 screws | 1 | 02 and 2 |
| | | BFD2-31-LW | BFD2-33-LW | V-shaped terminals for 5845 clamps* | | |
| | | BFD2-31-LL | BFD2-33-LL | For use on Busbar system with 185mm spacing. Connects to Busbar with M12 Bolts | | |
| 3 | 630 | BFD3-31-LM | BFD3-33-LM | Pressed-in nuts with M10 screws | 1 | 03 and 3 |
| | | BFD3-31-LW | BFD3-33-LW | V-shaped terminals for 5845 clamps* | | |
| | | BFD3-31-LL | BFD3-33-LL | For use on Busbar system with 185mm spacing. Connects to Busbar with M12 Bolts | | |

* The clamps must be ordered separately

# NH Fuse switch disconnectors - vertical - BFD series

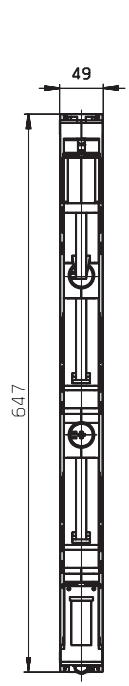
## Technical data

| Type | | BFD00 | BFD1 | BFD2 | BFD3 |
|---|---|---|---|---|---|
| Rated current | $I_n$ | 160A | 250A | 400A | 630A |
| Rated voltage | $U_n$ | 690Vac | 690Vac | 690Vac | 690Vac |
| Standards | | IEC 60947-1-3 and EN 60947-1-3 | IEC 60947-1-3 and EN 60947-1-3 | IEC 60947-1-3 and EN 60947-1-3 | IEC 60947-1-3 and EN 60947-1-3 |
| Utilisation category | $U_n$ | AC23B at 400Vac and AC21B at 690Vac | AC23B at 400Vac and AC22B at 690Vac | AC23B at 400Vac and AC22B at 690Vac | AC23B at 400Vac and 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 solid link SDL-00 | 400A with solid link SDL-1 | 560A with solid link SDL-2 | 800A with solid link SDL-3 |
| Rated frequency | f | 40-60Hz | 40-60Hz | 40-60Hz | 40-60Hz |
| Rated insulation voltage | $I_{kn}$ | 1000Vac | 1000Vac | 1000Vac | 1000Vac |
| Conditional short-circuit current with fuse links PN (RMS) | | 50kA | 120kA | 120kA - up to 250A<br>80kA - up to 400A | 120kA - up to 250A<br>80kA - up to 400A<br>50kA - up to 630A |
| Impulse withstand voltage | $U_{im}$ | 8kV | 8kV | 8kV | 8kV |
| Fuse link size | | 000 and 00 | 1 | 2 | 3 |
| Fuse link maximum rated current | $I_n$ | 160A | 250A | 400A | 630A |
| Fuse link maximum power loss | $P_v$ | 12W | 32W | 45W | 60W |
| Power losses at $I_n$ without fuse link | $P_v$ | 10W | 16W | 35W | 65W |
| Electrical durability | | 200 | 200 | 200 | 200 |
| Mechanical durability | | 1700 | 1400 | 800 | 800 |
| Degree of protection from front side, built-in device, cover closed | | IP30 | 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 | | IV | III | III | III |
| Seismic resistance acc to VDE skoda | | 3g/8 to 50Hz | 1.5g/8 to 50Hz | 1.5g/8 to 50Hz | 1.5g/8 to 50Hz |

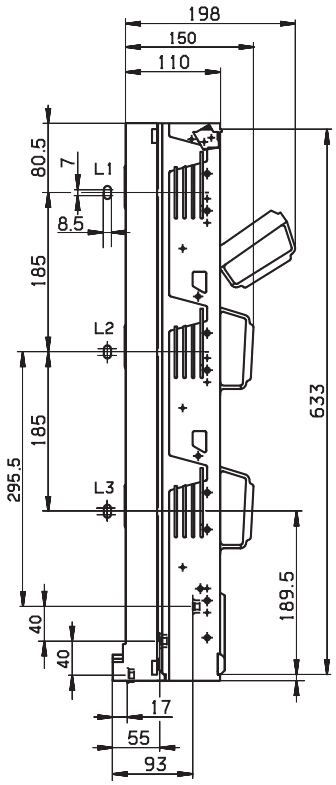
# NH Fuse switch disconnectors - vertical - BFD series

## Dimensions (mm) for BFD00-33D-F

Front view

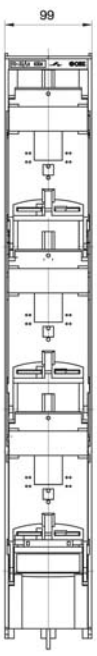



Side view

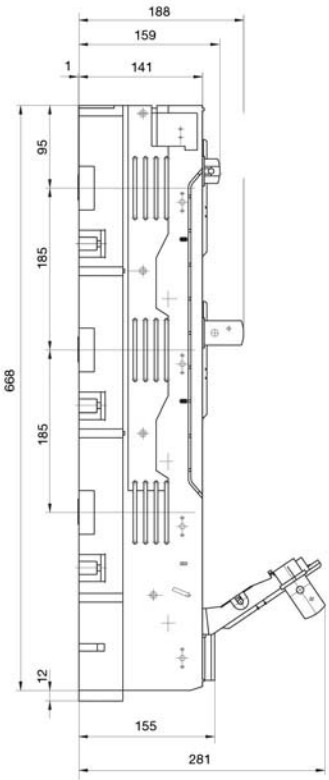



## Dimensions (mm) for BF1, BFD2 and BFD3

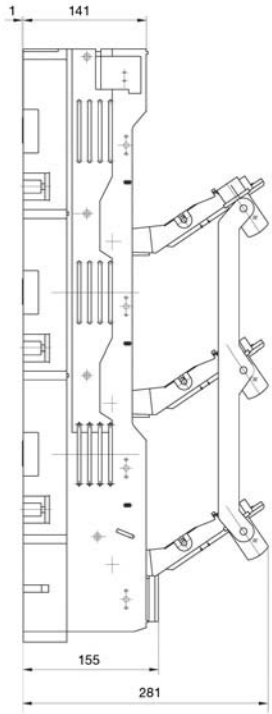
Front view




Side View




Side view



# NH Fuse switch disconnectors - horizontal - BFH series

**Description**
Horizontal fuse switch disconnectors designed to be used with NH fuse links, enabling safe connection and disconnection on load.

**Part number structure**
BFH000-(1 or 3-pole)A-T: size 000 fitted with terminal clips for 1.5 to 50mm$^2$ cable
BFH00-(1 or 3-pole)A-F: size 00 fitted with M8 terminal screw
BFH(size 1 or 2)-(1 or 3-pole)A-F: size 1 or 2 fitted with M10 terminal screw
BFH3-(1 or 3-pole)A-F: size 3 fitted with M12 terminal screw

**Standards/approvals**
IEC 60947-1 and 3, and CE

**Technical data**
- Rated voltage:
  690Vac/250Vdc size 1 to 3
  400Vdc size 000 and 00
- Rated current:
  160 to 630A
- Utilisation category:
  AC23B 400Vac
  AC22B 500Vac
  AC21B 690Vac
  DC21B 250Vdc (size 1 to 3)
  DC22B 250Vdc (size 000 and 00)

**Compatible fuse links**
- NH 400, 500 and 690V NH gG and aM fuse links

**Packaging:**
- 1 per carton

**Features:**
- Lockable fuse covers.
- Label for protected circuit identification.
- Busbar mounting with screws.
- Panel mounting with screws (size 000 can be DIN-Rail mounted)

## Part Numbers

| Size | Rated current (Amps) | Part number | | Leading out terminals | Unit packing | Compatible fuse links size |
|---|---|---|---|---|---|---|
| | | 1-pole switching | 3-pole switching | | | |
| 000 | 160 | BFH000-1A-T | BFH000-3A-T | Terminal clamps for 1.5 to 50mm$^2$ cable | 1 | 000 |
| 00 | 160 | BFH00-1A-F | BFH00-3A-F | Terminal screws M8 | | 00 |
| 1 | 250 | BFH1-1A-F | BFH1-3A-F | Terminal screws M10 | | 1 |
| 2 | 400 | BFH2-1A-F | BFH2-3A-F | Terminal screws M10 | | 2 |
| 3 | 630 | BFH3-1A-F | BFH3-3A-F | Terminal screws M10 | | 3 |

# NH Fuse switch disconnectors - horizontal - BFH series

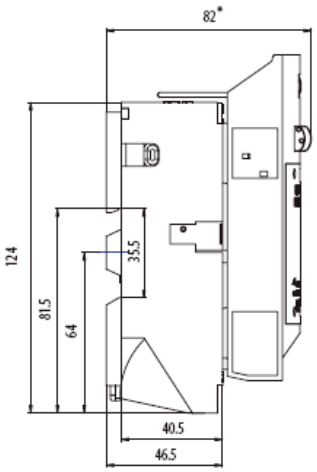
## Technical data

| Type | | BFH000 and BFH00 | BFH1 | BFH2 | BFH3 |
|---|---|---|---|---|---|
| Rated voltage | $U_n$ | 690Vac | 690Vac/250Vdc | 690Vac/250Vdc | 690Vac/250Vdc |
| Rated current | $I_n$ | 160A | 250A | 400A | 630A |
| Utilisation category | | AC23B at 400Vac<br>AC22B at 500Vac<br>AC21B at 690Vac<br>DC22B at 250Vdc<br>DC20B at 440Vdc | AC23B at 400Vac<br>AC22B at 500Vac<br>AC21B at 690Vac<br>AC22B at 690Vac/200A<br>DC21B at 440Vdc | AC23B at 500Vac for BFH2-3<br>AC23B at 400Vac for BFH2-1<br>AC22B at 690Vac<br>DC21B at 250Vdc | AC23B at 500Vac for BFH3-F<br>AC23B at 400Vac for BFH3-1-F<br>AC22B at 690Vac<br>DC21B at 250Vdc |
| Thermal current with fuse links | $I_{th}$ | 160A | 250A | 400A | 630A |
| Thermal current with fuse links with disconnecting knife | | 240A (size 000) and 250A (size 00) with solid link SDL-00 | 325A with solid link SDL-1 | 520A with solid link SDL-2 | 750A with solid link SDL-3 |
| Rated frequency | f | 40-60Hz | 40-60Hz | 40-60Hz | 40-60Hz |
| Rated insulation voltage | $U_i$ | 800Vac (size 000)<br>1000Vac (size 00) | 1000Vac | 1000Vac | 1000Vac |
| Conditional short circuit current (RMS) | $I_{kn}$ | 120kA for 400Vac/160A<br>120kA for 500Vac/100A<br>80kA for 690Vac/100A | 120kA for 400Vac/250A<br>50kA for 500Vac/250A<br>min 25kA for 690Vac/250A | 120kA for 400Vac/250A<br>50kA for 500Vac/250A<br>min 25kA for 690Vac/250A | 120kA for 400Vac/630A<br>50kA for 500Vac/630A<br>min 25kA for 690Vac/630A |
| Impulse withstand voltage | $U_{imp}$ | 8kV for BFH000-A-T | 12kV for BFH1-A-F | 12kV for BFH2-A-F | 12kV for BFH3-A-F |
| Fuse link size | | 000 and 00 | 1 | 2 | 3 |
| Max power losses of the fuse link | Pv | 9W (size 000)<br>12W (size 00) | 23W | 34W | 48W |
| Max power at $I_n$ without fuse link | Pv | 7W | 9W | 23W | 49W |
| Electrical durability (operating cycle) | | 300 at 100A<br>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 (size 000)<br>IP20 (size 00) | 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 (size 000)<br>IV (size 00) | 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 (size 000) | | | |
| Standards | | IEC 60947-1, 3 | IEC 60947-1, 3 | IEC 60947-1, 3 | IEC 60947-1, 3 |

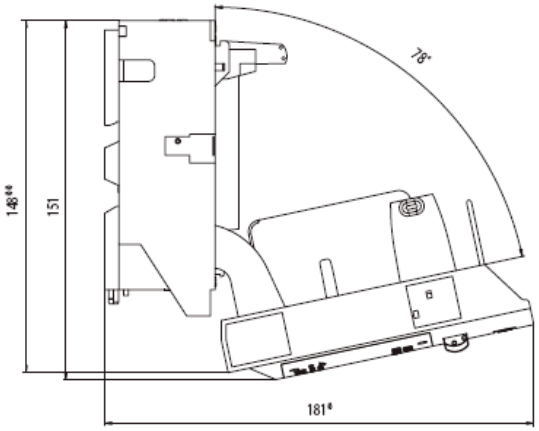
# NH Fuse switch disconnectors - horizontal - BFH series

## Dimensions (mm) for BFH000

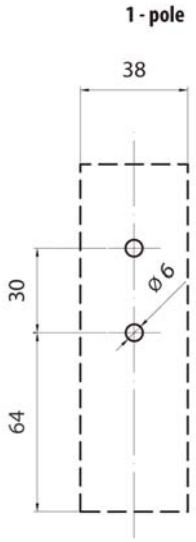
Side view




In open position

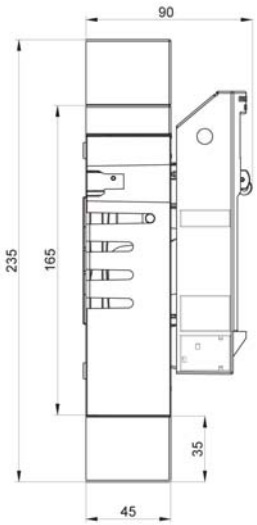



Clearance and drill plans for 1-pole, for 3-pole multiply by 3

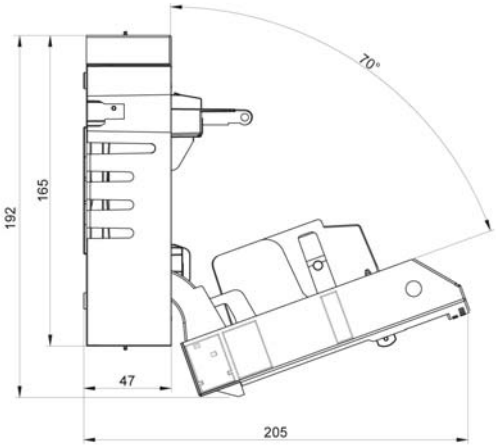



## Dimensions (mm) for BFH00

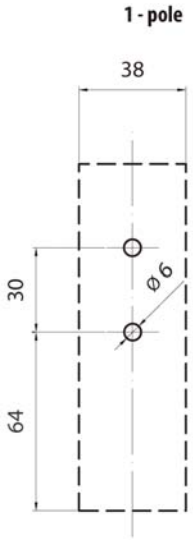
Side view




In open position



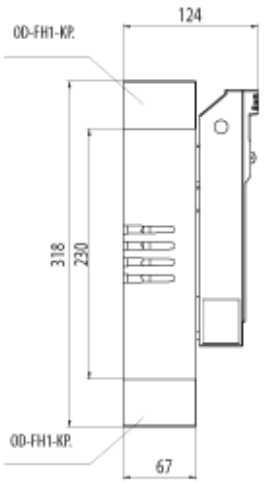

Clearance and drill plans for 1-pole, for 3-pole multiply by 3



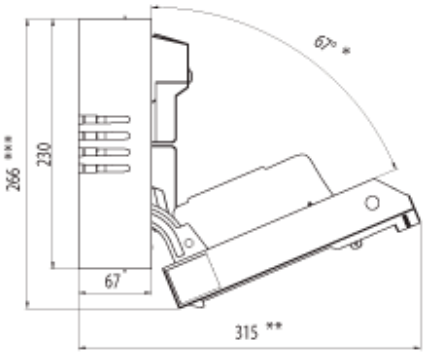
# NH Fuse switch disconnectors - horizontal - BFH series

## Dimensions (mm) for BFH1

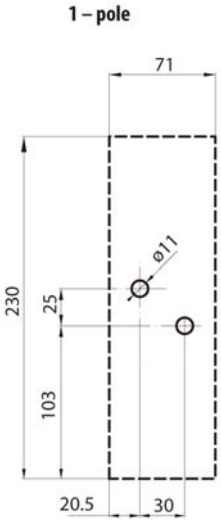
Side view




In open position

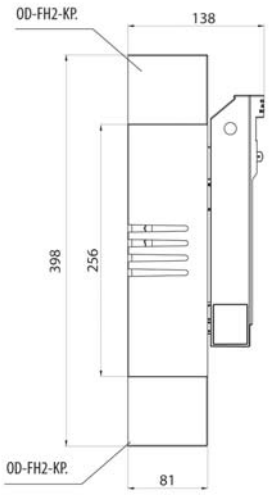



Clearance and drill plans for 1-pole, for 3-pole multiply by 3

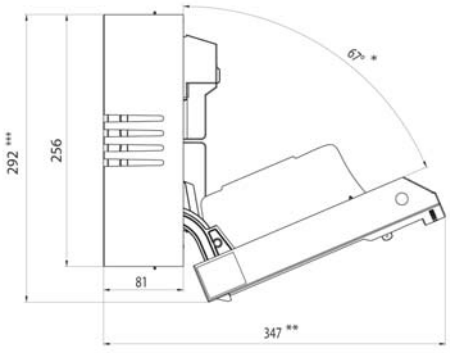



## Dimensions (mm) for BFH2

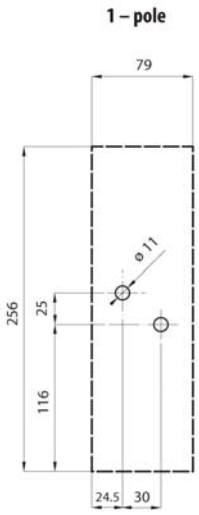
Side view




In open position




Clearance and drill plans for 1-pole, for 3-pole multiply by 3

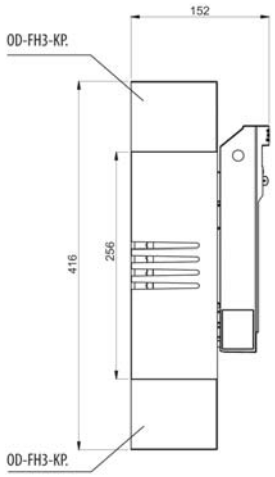



Accessories

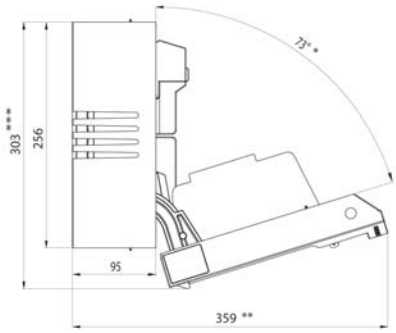
# NH Fuse switch disconnectors - horizontal - BFH series

## Dimensions (mm) for BFH3

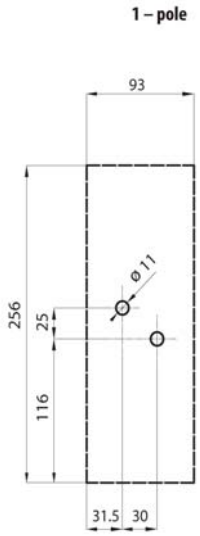
Side view




In open position




Clearance and drill plans for
1-pole, for 3-pole multiply by 3



# Index by part numbers

| Part Number | Size | Voltage | Class | Type | Page |
|---|---|---|---|---|---|
| 170H0236 | N/A | 250 | N/A | Microswitch | 49 |
| 170H0238 | N/A | 250 | N/A | Microswitch | 49 |
| BFD | 00-3 | 690 | N/A | Fuse disconnector | 56 - 58 |
| BFH | N/A | 400-690 | N/A | Fuse disconnector | 59 - 63 |
| BFR | 00-3 | 690 | N/A | Fuse rail | 53 - 55 |
| BVL50 | N/A | 250 | N/A | Microswitch | 49 |
| FEH | 00-3 | N/A | N/A | Fuse extraction handle | 52 |
| NHG000B | 000 | 500 | gG | Fuse - Metal | 22 |
| NHG000B-400 | 000 | 400 | gG | Fuse - Metal | 14 |
| NHG000B-690 | 000 | 690 | gG | Fuse - Metal | 34 |
| NHG000BI | 000 | 500 | gG | Fuse - IMGL | 22 |
| NHG000BI-400 | 000 | 400 | gG | Fuse - IMGL | 14 |
| NHG00B | 00 | 500 | gG | Fuse - Metal | 23 |
| NHG00B-400 | 00 | 400 | gG | Fuse - Metal | 15 |
| NHG00B-690 | 00 | 690 | gG | Fuse - Metal | 35 |
| NHG00BI | 00 | 500 | gG | Fuse - IMGL | 23 |
| NHG00BI-400 | 00 | 400 | gG | Fuse - IMGL | 15 |
| NHG01B | 01 | 500 | gG | Fuse - IMGL | 25 |
| NHG01B-400 | 01 | 400 | gG | Fuse - Metal | 16 |
| NHG01BI | 01 | 500 | gG | Fuse - IMGL | 25 |
| NHG01BI-400 | 01 | 400 | gG | Fuse - IMGL | 16 |
| NHG02B | 02 | 500 | gG | Fuse - Metal | 27 |
| NHG02B-400 | 02 | 400 | gG | Fuse - Metal | 17 |
| NHG02BI | 02 | 500 | gG | Fuse - IMGL | 27 |
| NHG02BI-400 | 02 | 400 | gG | Fuse - IMGL | 17 |
| NHG03B | 03 | 500 | gG | Fuse - Metal | 29 |
| NHG03B-400 | 03 | 400 | gG | Fuse - Metal | 18 |
| NHG03BI | 03 | 500 | gG | Fuse - IMGL | 29 |
| NHG03BI-400 | 03 | 400 | gG | Fuse - IMGL | 18 |
| NHG0B | 0 | 500 | gG | Fuse - Metal | 24 |
| NHG0BI | 0 | 500 | gG | Fuse - IMGL | 24 |
| NHG1B | 1 | 500 | gG | Fuse - Metal | 26 |
| NHG1B-400 | 1 | 400 | gG | Fuse - Metal | 16 |
| NHG1B-690 | 1 | 690 | gG | Fuse - Metal | 36 |
| NHG1BI | 1 | 500 | gG | Fuse - IMGL | 26 |
| NHG1BI-400 | 1 | 400 | gG | Fuse - IMGL | 16 |
| NHG2B | 2 | 500 | gG | Fuse - Metal | 28 |
| NHG2B-400 | 2 | 400 | gG | Fuse - Metal | 17 |
| NHG2B-690 | 2 | 690 | gG | Fuse - Metal | 37 |
| NHG2BI | 2 | 500 | gG | Fuse - IMGL | 28 |
| NHG2BI-400 | 2 | 400 | gG | Fuse - IMGL | 17 |
| NHG3B | 3 | 500 | gG | Fuse - Metal | 30 |
| NHG3B-400 | 3 | 400 | gG | Fuse - Metal | 18 |
| NHG3B-690 | 3 | 690 | gG | Fuse - Metal | 38 |
| NHG3BI-400 | 3 | 400 | gG | Fuse - IMGL | 18 |
| NHG4B-690 | 4 | 690 | gG | Fuse - Metal | 39 |
| NHG4G | 4 | 500 | gG | Fuse - Metal | 31 |
| NHM000B | 000 | 500 | aM | Fuse - Metal | 42 |
| NHM000B-690 | 000 | 690 | aM | Fuse - Metal | 42 |
| NHM00B | 00 | 500 | aM | Fuse - Metal | 43 |
| NHM00B-690 | 00 | 690 | aM | Fuse - Metal | 43 |
| NHM1B | 1 | 500 | aM | Fuse - Metal | 44 |
| NHM1B-690 | 1 | 690 | aM | Fuse - Metal | 44 |
| NHM2B | 2 | 500 | aM | Fuse - Metal | 45 |
| NHM2B-690 | 2 | 690 | aM | Fuse - Metal | 45 |
| NHM3B | 3 | 500 | aM | Fuse - Metal | 46 |
| NHM3B-690 | 3 | 690 | aM | Fuse - Metal | 46 |
| SD-D | 00-3 | 690 | N/A | NH base | 47 - 51 |
| SD-S | 00-4 | 690 | N/A | NH base | 47-51 |
| SDL | 00-3 | N/A | N/A | Neutral links | 48 |
| SD-PB | 00-3 | N/A | N/A | Protection accessories | 49 |
| SD-SK | 1-3 | N/A | N/A | Shroud kits | 48 |
| TD-D | 00-3 | 690 | N/A | NH base | 47-51 |
| TD-IP20 | 00-3 | N/A | N/A | IP Protection kit | 49 |

IMGL: Insulated Metal Gripping Lugs

# Index by size

| Size | Voltage | Part Number | Class | Type | Page |
|---|---|---|---|---|---|
| 0 | 500 | NHG0BI | gG | Fuse - IMGL | 24 |
| 0 | 500 | NHG0B | gG | Fuse - Metal | 24 |
| 00 | 400 | NHG00BI-400 | gG | Fuse - IMGL | 15 |
| 00 | 400 | NHG00B-400 | gG | Fuse - Metal | 15 |
| 00 | 500 | NHG00BI | gG | Fuse - IMGL | 23 |
| 00 | 500 | NHG00B | gG | Fuse - Metal | 23 |
| 00 | 500 | NHM00B | aM | Fuse - Metal | 43 |
| 00 | 690 | NHG00B-690 | gG | Fuse - Metal | 35 |
| 00 | 690 | NHM00B-690 | aM | Fuse - Metal | 43 |
| 000 | 400 | NHG000BI-400 | gG | Fuse - IMGL | 14 |
| 000 | 400 | NHG000B-400 | gG | Fuse - Metal | 14 |
| 000 | 500 | NHG000BI | gG | Fuse - IMGL | 22 |
| 000 | 500 | NHG000B | gG | Fuse - Metal | 22 |
| 000 | 500 | NHM000B | aM | Fuse - Metal | 42 |
| 000 | 690 | NHG000B-690 | gG | Fuse - Metal | 34 |
| 000 | 690 | NHM000B-690 | aM | Fuse - Metal | 42 |
| 00-3 | 690 | BFD | N/A | Fuse disconnector | 56 - 58 |
| 00-3 | 690 | BFR | N/A | Fuse rail | 53 - 55 |
| 00-3 | 690 | SD-D | N/A | NH base | 47 - 51 |
| 00-3 | 690 | TD-D | N/A | NH base | 47-51 |
| 00-3 | N/A | FEH | N/A | Fuse extraction handle | 52 |
| 00-3 | N/A | TD-IP20 | N/A | IP Protection kit | 49 |
| 00-3 | N/A | SDL | N/A | Neutral links | 48 |
| 00-3 | N/A | SD-PB | N/A | Protection accessories | 49 |
| 00-4 | 690 | SD-S | N/A | NH base | 47-51 |
| 01 | 400 | NHG01BI-400 | gG | Fuse - IMGL | 16 |
| 01 | 400 | NHG01B-400 | gG | Fuse - Metal | 16 |
| 01 | 500 | NHG01B | gG | Fuse - IMGL | 25 |
| 01 | 500 | NHG01BI | gG | Fuse - IMGL | 25 |
| 02 | 400 | NHG02BI-400 | gG | Fuse - IMGL | 17 |
| 02 | 400 | NHG02B-400 | gG | Fuse - Metal | 17 |
| 02 | 500 | NHG02BI | gG | Fuse - IMGL | 27 |
| 02 | 500 | NHG02B | gG | Fuse - Metal | 27 |
| 03 | 400 | NHG03BI-400 | gG | Fuse - IMGL | 18 |
| 03 | 400 | NHG03B-400 | gG | Fuse - Metal | 18 |
| 03 | 500 | NHG03BI | gG | Fuse - IMGL | 29 |
| 03 | 500 | NHG03B | gG | Fuse - Metal | 29 |
| 1 | 400 | NHG1BI-400 | gG | Fuse - IMGL | 16 |
| 1 | 400 | NHG1B-400 | gG | Fuse - Metal | 16 |
| 1 | 500 | NHG1BI | gG | Fuse - IMGL | 26 |
| 1 | 500 | NHG1B | gG | Fuse - Metal | 26 |
| 1 | 500 | NHM1B | aM | Fuse - Metal | 44 |
| 1 | 690 | NHG1B-690 | gG | Fuse - Metal | 36 |
| 1 | 690 | NHM1B-690 | aM | Fuse - Metal | 44 |
| 1-3 | N/A | SD-SK | N/A | Shroud kits | 48 |
| 2 | 400 | NHG2BI-400 | gG | Fuse - IMGL | 17 |
| 2 | 400 | NHG2B-400 | gG | Fuse - Metal | 17 |
| 2 | 500 | NHG2BI | gG | Fuse - IMGL | 28 |
| 2 | 500 | NHG2B | gG | Fuse - Metal | 28 |
| 2 | 500 | NHM2B | aM | Fuse - Metal | 45 |
| 2 | 690 | NHG2B-690 | gG | Fuse - Metal | 37 |
| 2 | 690 | NHM2B-690 | aM | Fuse - Metal | 45 |
| 3 | 400 | NHG3BI-400 | gG | Fuse - IMGL | 18 |
| 3 | 400 | NHG3B-400 | gG | Fuse - Metal | 18 |
| 3 | 500 | NHG3B | gG | Fuse - Metal | 30 |
| 3 | 500 | NHM3B | aM | Fuse - Metal | 46 |
| 3 | 690 | NHG3B-690 | gG | Fuse - Metal | 38 |
| 3 | 690 | NHM3B-690 | aM | Fuse - Metal | 46 |
| 4 | 500 | NHG4G | gG | Fuse - Metal | 31 |
| 4 | 690 | NHG4B-690 | gG | Fuse - Metal | 39 |
| N/A | 250 | 170H0236 | N/A | Microswitch | 49 |
| N/A | 250 | 170H0238 | N/A | Microswitch | 49 |
| N/A | 250 | BVL50 | N/A | Microswitch | 49 |
| N/A | 400-690 | BFH | N/A | Fuse disconnector | 59 - 63 |

IMGL: Insulated Metal Gripping Lugs

## Notes

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