df Electric

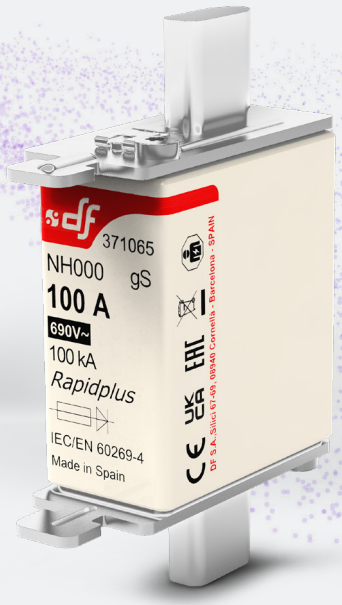
# RAPIDPLUS

HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

Rapidplus®

# gS
# NH 690V
## semiconductor protection fuse links

NH NH000




NH000 NH00 NH1 NH2 NH3

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# gS
## NH 690V
semiconductor protection fuse links

RAPIDPLUS

Rapidplus®

NH000

NH000

**RATED VOLTAGE**
690V AC

**RATED CURRENT**
20A...100A

**BREAKING CAPACITY**
100kA

**STANDARDS**
IEC/EN 60269-1
IEC/EN 60269-4


## Rapidplus®
## NH fuse links for semiconductors

RAPIDPLUS NH gS fuse links are capable to clearing all types of overcurrents, overloads as well as shortcircuits, thus the fuse links protect semiconductors as well as cables and all switchgear of installation.

They are optimized to have reduced power dissipations that allow the utilization of a wide range of fuse bases, disconnectors and fuse switches.

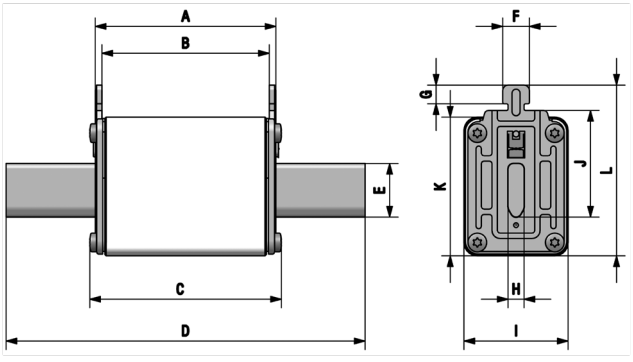
The range comprises the following fuse links:

→ **Size NH000 690V AC 20A to 100A**

Typical application comprise protection of semiconductors (diodes, thyristors, triacs, etc) used in power rectifiers, UPS, converters, motor drives (AC and DC), soft starters, solid state relays, photovoltaic inverters, welding inverters and any application where it is necessary to protect semiconductor devices.

RoHS COMPLIANT

# Dimensions




| A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 49 | 45 | 52 | 78,5 | 15 | 10 | 9,5 | 6 | 21 | 35 | 40 | 53 |

**Weight** 120gr

# Range

| In (A) | REFERENCE | PACKING Uni /BOX |
|---|---|---|
| 20 | **371025** | 3/90 |
| 25 | **371030** | 3/90 |
| 32 | **371035** | 3/90 |
| 40 | **371045** | 3/90 |
| 50 | **371050** | 3/90 |
| 63 | **371055** | 3/90 |
| 80 | **371060** | 3/90 |
| 100 | **371065** | 3/90 |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# Technical data

| | |
|---|---|
| **Rated voltage** | 690V AC<br>440V DC (L/R=10ms) |
| **Rated current** | 20A...100A |
| **Rated breaking capacity** | 100kA @690V AC<br>30kA @440V DC |
| **Operating class** | gS |
| **Storage temperature** | -40°C ... 80°C |
| **Operating temperature *** | -25°C ... 60°C |

* For ambient temperatures higher than 25ºC it is necessary to apply a derating in maximum current.

# Standards

**IEC/EN 60269-1**
**IEC/EN 60269-4**
**RoHS Compliant**

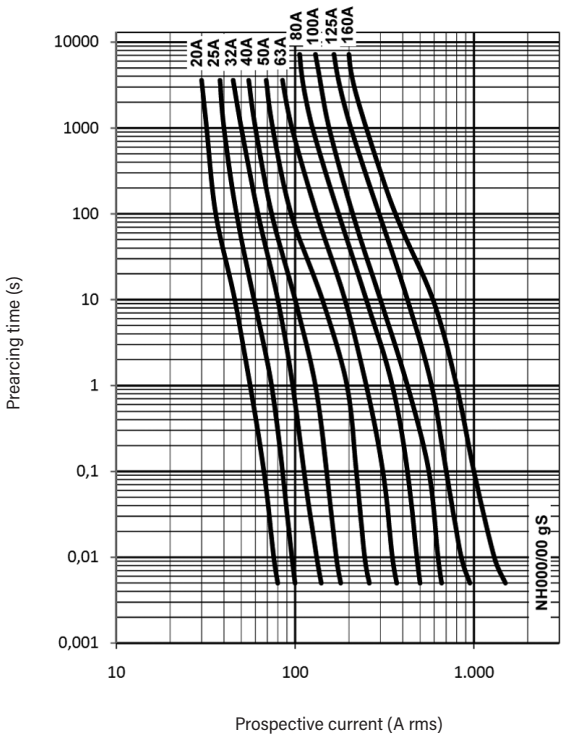
# Materials

| | |
|---|---|
| **Body** | Steatite C221 |
| **Contact blades** | Copper or brass (silver plated) |
| **Plates** | Aluminium |
| **Screws** | Zinc plated steel |

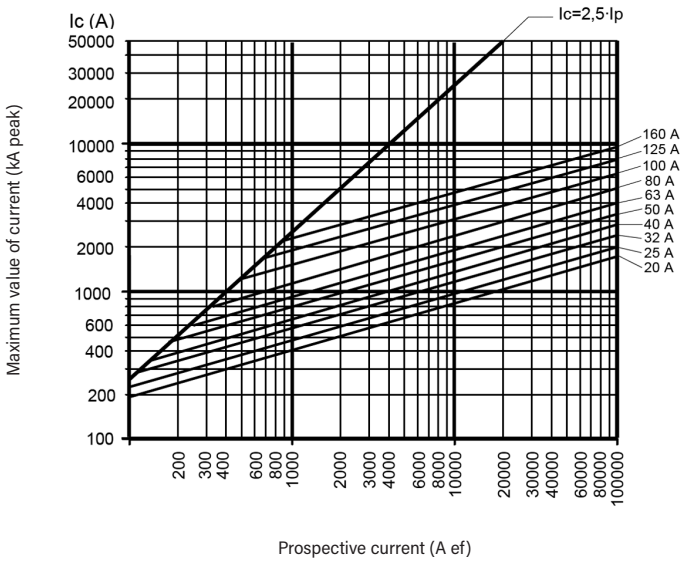
# Power dissipation

| $I_n$ | POWER DISSIPATION In | POWER DISSIPATION 0,8 · In | PREARCING $I^2t$ | OPERATING $I^2t$ |
|---|---|---|---|---|
| (A) | (W) | ($A^2S$) | ($A^2S$) | ($A^2S$) |
| **20** | 5,1 | 2,9 | 31 | 116 |
| **25** | 5,6 | 3,2 | 49 | 181 |
| **32** | 6,6 | 3,9 | 96 | 355 |
| **40** | 7,2 | 4,2 | 196 | 724 |
| **50** | 8,5 | 5,1 | 331 | 1224 |
| **63** | 9,1 | 5,3 | 782 | 2897 |
| **80** | 11 | 6,3 | 1420 | 5270 |
| **100** | 12,5 | 7,1 | 2400 | 8880 |

# t-I characteristics




# Cut-off characteristics

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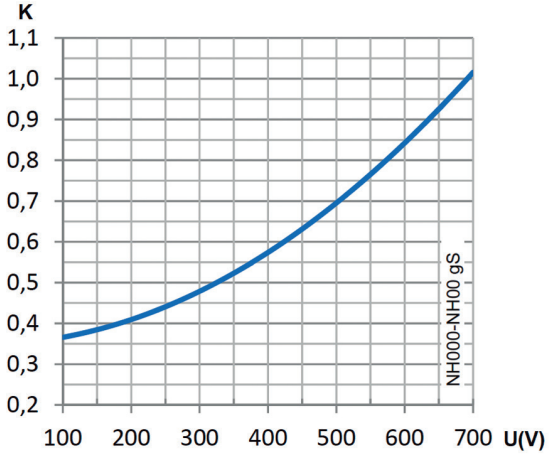
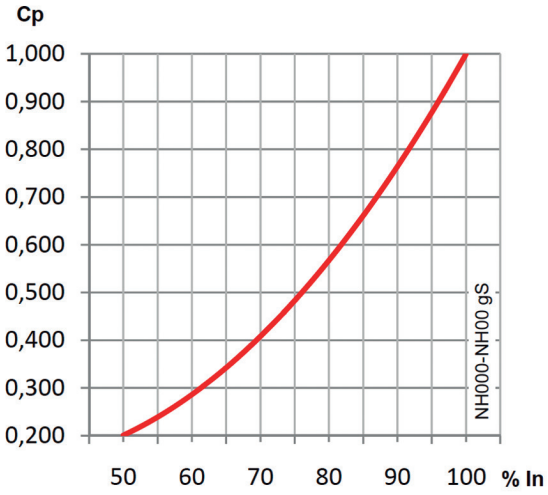



## $I^2t$ Correction factor

The total clearing $I^2t$ at rated voltage and at power factor of 0,15 are given in the electrical characteristics.

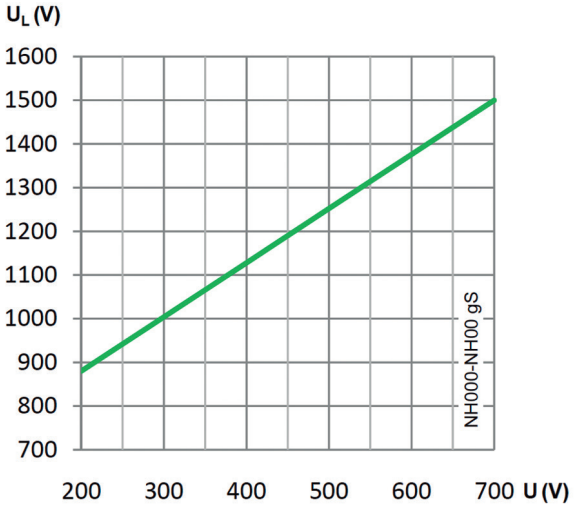
For other voltages, the clearing $I^2t$ is found by multipliying by correction factor, K.




## Correction factor for power loss

Watts loss at rated current are given in the electrical characteristics. The curve allows the calculation of the power losses at load currents lower than the rated value.

The correction factor Cp, is given as a function of the RMS load current Ib in % of the rated current.

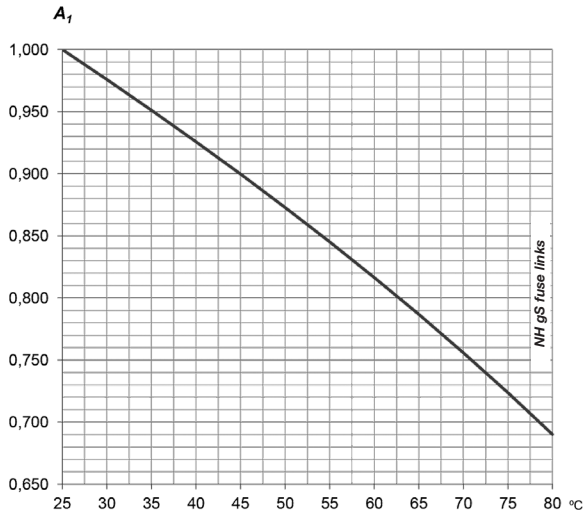



## Peak arc voltage

This curve gives the peak arc voltage, $U_L$, wich may appear across the fuse during its operation as a function of the applied working voltage, Eg (RMS) at a power factor of 0,15.

# Ambient temperature correction coefficient

Fuse current ratings are established by type tests with an ambient temperature of 25°C. When the utilization ambient temperature is higher than this reference value, the fuse-link must be "de-rated". The rated current of fuse link must be multiplied by a derating factor $\mathbf{A_1}$ to find the maximum operating current.



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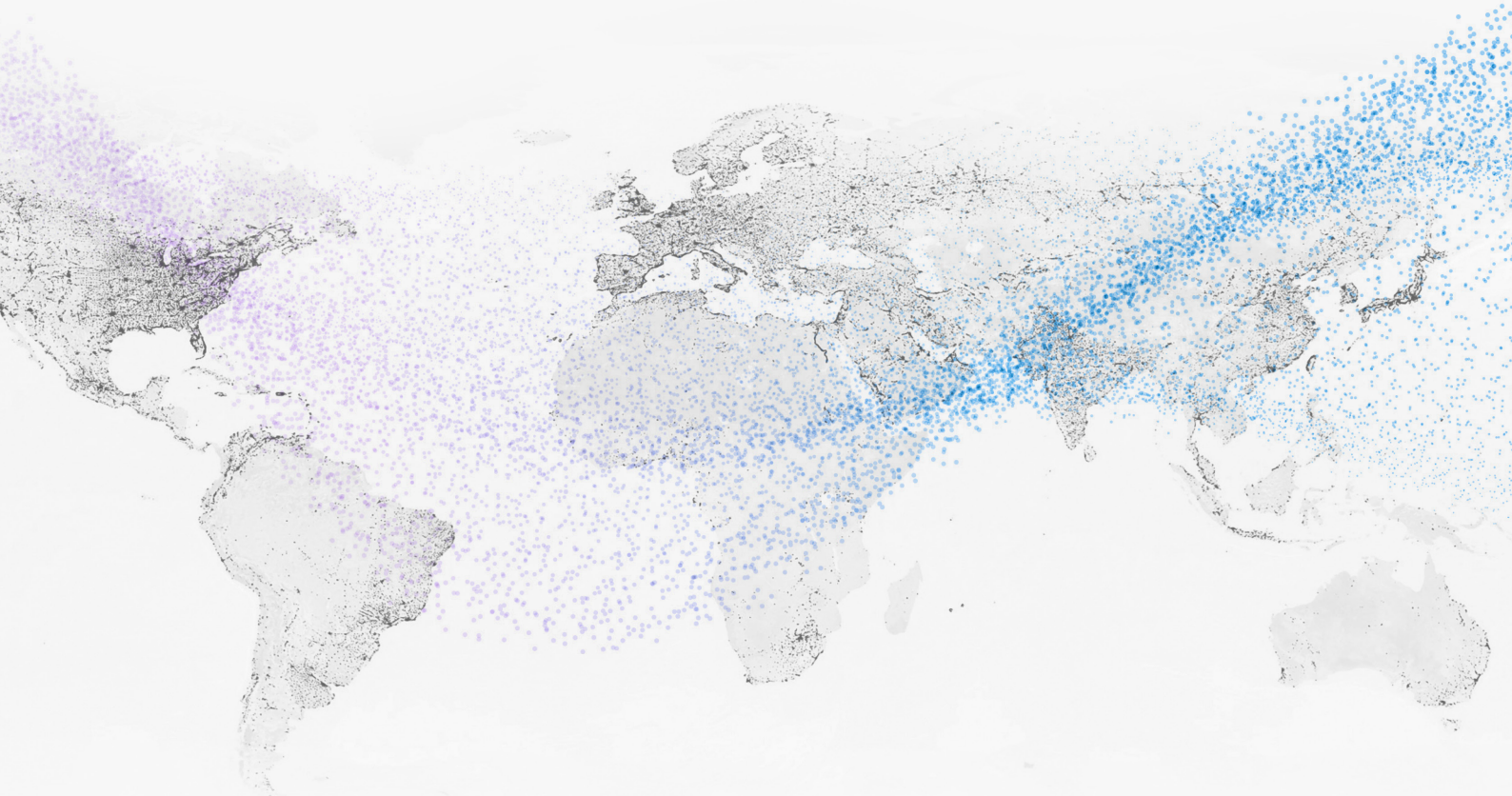

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MADE IN SPAIN

According to the waste of electrical and electronic equipment directive, electrical material should not be part of the usual waste. This symbol alerts users that these products should be recycled according to local environmental waste disposal regulations.

The "electro technical expert" logo marked on the products included in this data sheet indicates that the installation of these products must be carried out by expert personnel with specialized knowledge.

To prevent electrical hazards, carry out the installation without voltage.

**Safety notice**
Please capture the following QR code and read our safety notice carefully before installing our products.

The data reflected in this technical record are subject to the correct installation of the product in accordance with manufacturer's instructions, relevant installation standards and professional practices, maintained and used in applications for which they were made.

The products described in this document have been designed, developed and tested in accordance with specific standard. They are considered components that are integrated as part of installation, machine or equipment. The correct general operation of the referred product is responsibility of the manufacturer of the installation, machine or equipment.

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