

**Rapidplus®**



# RAPIDPLUS

HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

## gS NH 690V

semiconductor protection  
fuse links



NH000

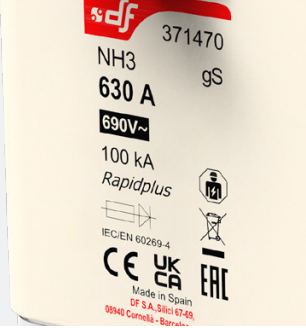
NH00

NH1

NH2

NH3

# PROTECTING THE WORLD



RATED VOLTAGE  
690V AC

RATED CURRENT  
355A...630A

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.

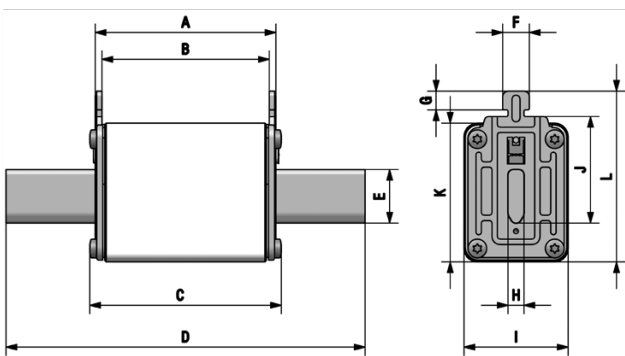
The range comprises the following fuse links:

→ Size NH3 690V AC 355A to 630A

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.



## Dimensions



A	B	C	D	E	F	G	H	I	J	K	L
68	62	73	150	32	10	9,5	6	70	60	75	87

Weight 1,02kg

## Range

$I_n$ (A)	REFERENCE	PACKING Uni /BOX
355	<b>371450</b>	1/15
400	<b>371455</b>	1/15
450	<b>371463</b>	1/15
500	<b>371465</b>	1/15
630	<b>371470</b>	1/15



## Technical data

Rated voltage	690V AC 550V DC (L/R=10ms)
Rated current	355A...630A
Rated breaking capacity	100kA @690V AC 30kA @550V DC
Utilization category	gS
Storage temperature	-40°C ... 80°C
Operating temperature *	-25°C ... 60°C

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

## Standards

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



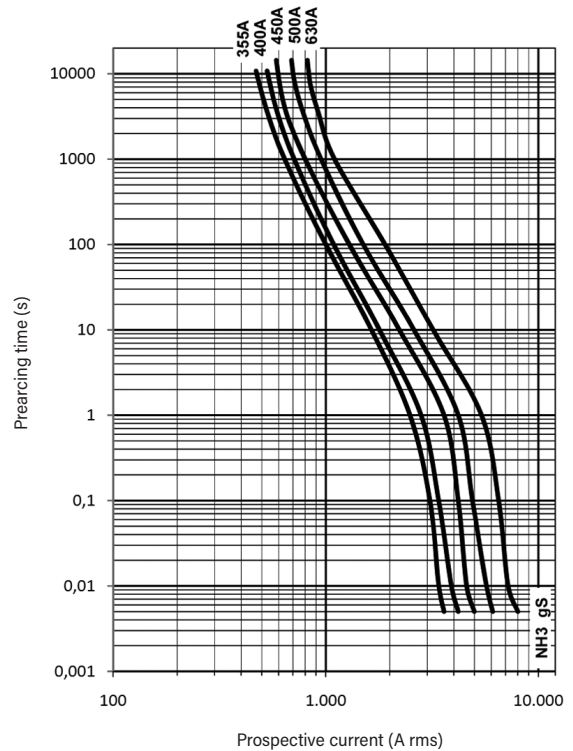
## Materials

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

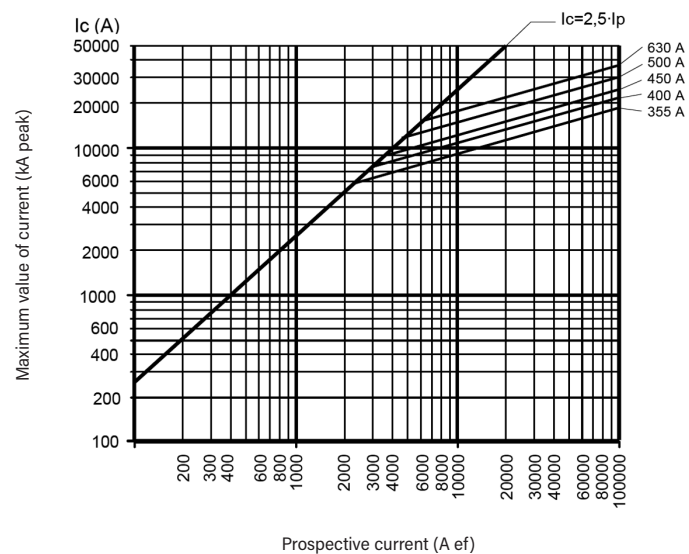
## Power dissipation

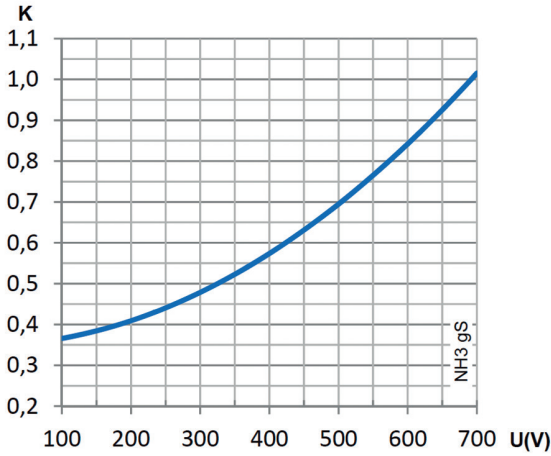
$I_n$ (A)	POWER DISSIPATION $I_n$ (W)	POWER DISSIPATION $0,8 \cdot I_n$ (A <sup>2</sup> S)	PREARCING $I_t^2$ (A <sup>2</sup> S)	OPERATING $I_t^2$ (A <sup>2</sup> S)
355	39,6	22,76	54240	151700
400	42,7	24,3	75760	211900
450	46	26,3	114770	320970
500	47,1	27,6	165270	309000
630	60,4	34,3	303060	847570

## t-I characteristics



## Cut-off characteristics

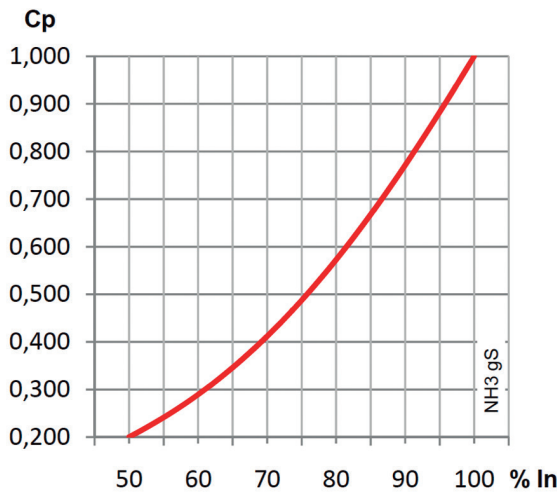




## I<sup>2</sup>t Correction factor

The total clearing I<sup>2</sup>t at rated voltage and at power factor of 0,15 are given in the electrical characteristics.

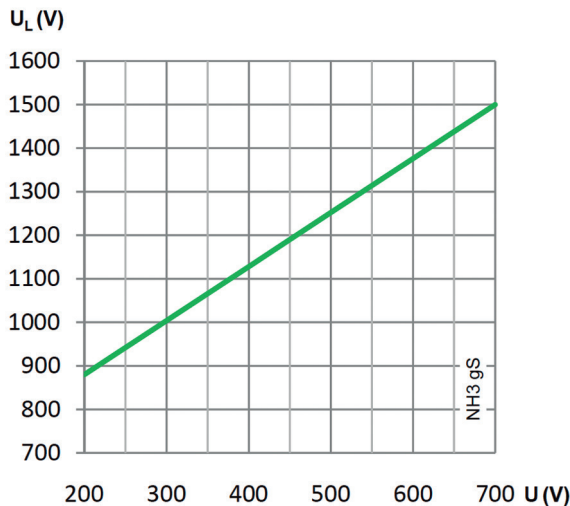
For other voltages, the clearing I<sup>2</sup>t is found by multiplying by correction factor, K.



## 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.



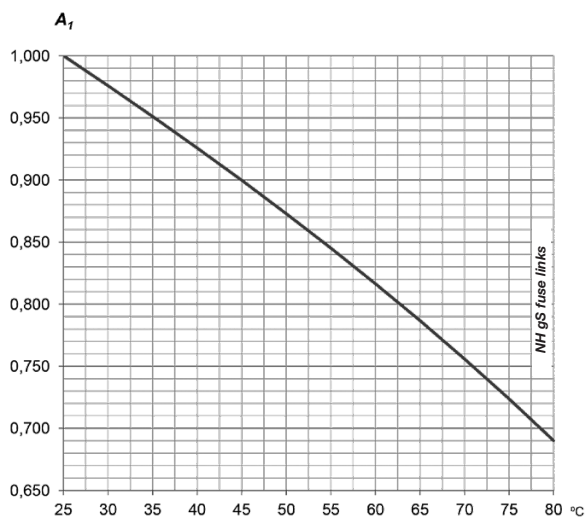
## Peak arc voltage

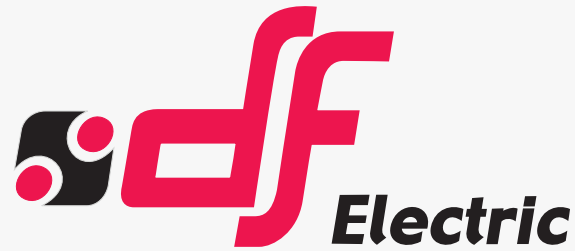
This curve gives the peak arc voltage, UL, which may appear across the fuse during its operation as a function of the applied working voltage, Eg (RMS) at a power factor of 0,15.



# 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 **A<sub>1</sub>** to find the maximum operating current.





# PROTECTING THE WORLD

## HEAD OFFICE AND FACTORY

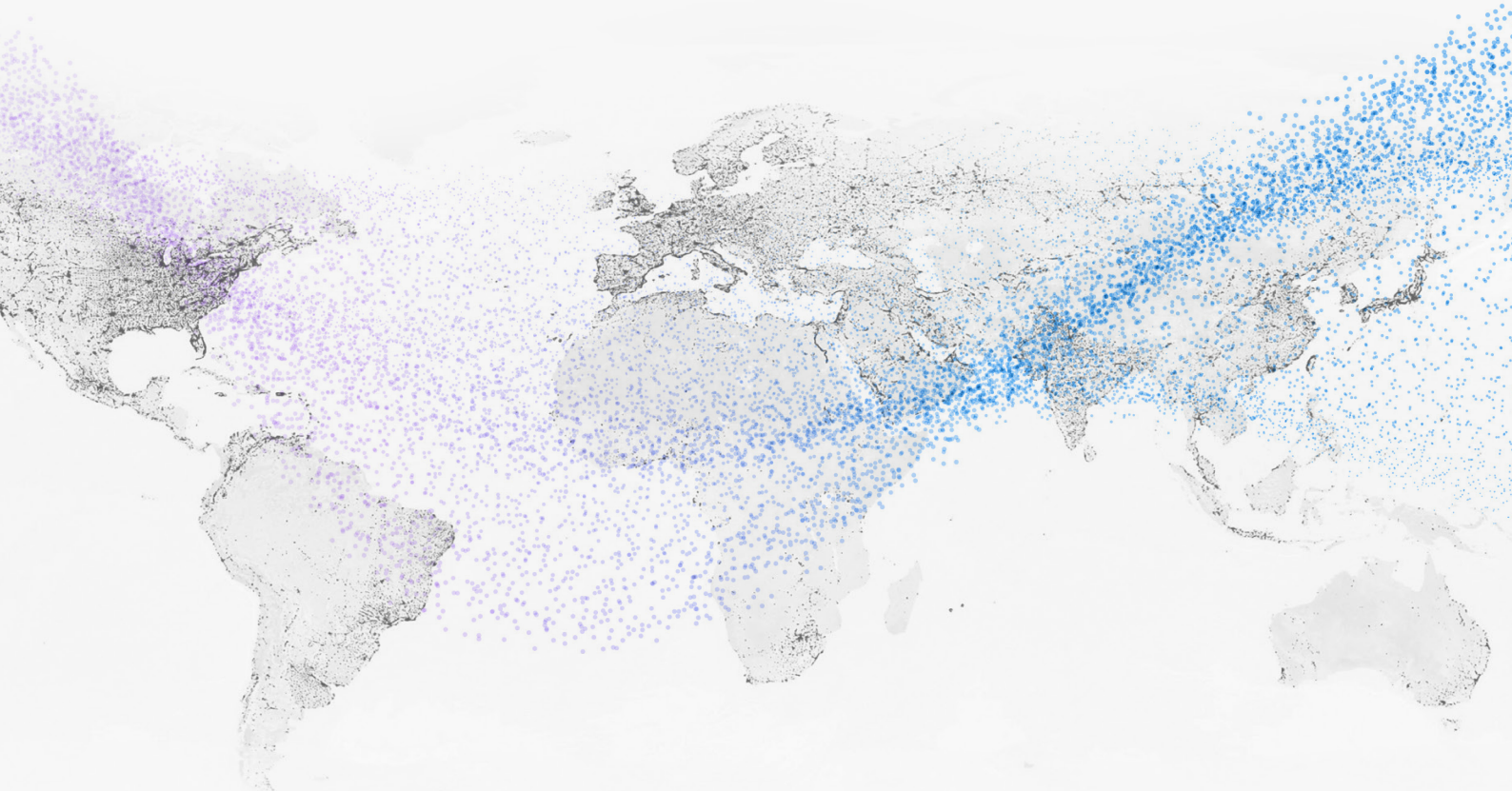
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The "electro technical expert" logo marked on the products included in this data sheet indicates that the installation of these products must be carried out by expert personnel with specialized knowledge.



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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