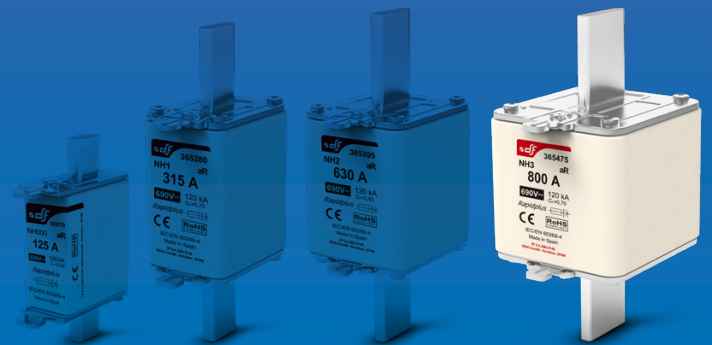


**Rapidplus®**



# aR NH

semiconductor protection  
fuse links



NH000

NH1

NH2

NH3

## PROTECTING THE WORLD





RATED VOLTAGE  
690V AC

RATED CURRENT  
500A...1000A

BREAKING CAPACITY  
120kA

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



## Rapidplus® NH fuse links for semiconductors

RAPIDPLUS NH aR fuse links have a very low  $I^2t$  values thanks to the special melting elements design, manufactured with pure silver. The sand is solidified in order to have a good arcing control, high breaking capacity and excellent capability for cyclic loads.

These fuse links have a trip indicator that can be used as a visual indication or can be equipped with a microswitch mounted directly on the fuse link.

The range comprises the following fuse links:

→ Size NH3 690V AC 500A to 1000A

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



## Accessories

REFERENCE	DESCRIPTION	PACKING Uni /BOX
<b>357010</b>	MICROSWITCH FOR NH FUSELINKS NH000...NH3	1/12



## Range

$I_n$ (A)	REFERENCE	PACKING Uni /BOX
500	<b>365465</b>	1/15
550	<b>365467</b>	1/15
630	<b>365470</b>	1/15
700	<b>365472</b>	1/15
800	<b>365475</b>	1/15
900	<b>365480</b>	1/15
1000	<b>365485</b>	1/15



## Technical data

Rated voltage	690V AC 550V DC (L/R=10ms)
Rated current	500A...1000A
Rated breaking capacity	120kA @690V AC 30kA @550V DC
Utilization category	aR
Rated frequency	42...62Hz
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

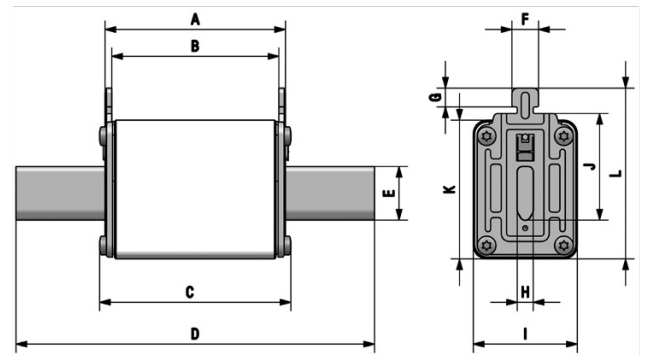
IEC/EN 60269-1  
IEC/EN 60269-4  
RoHS Compliant



## Materials

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

## 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

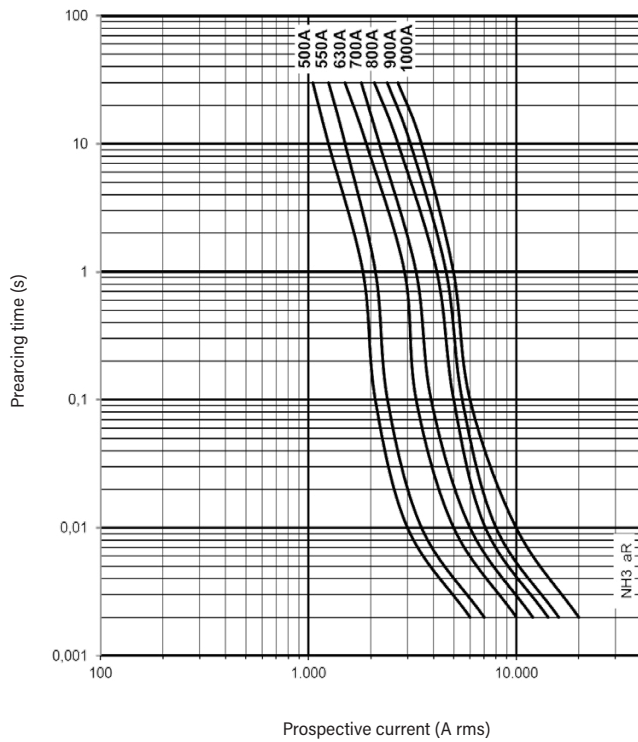
Weight 1,02kg

## Power dissipation

$I_n$	POWER DISSIPATION $I_n$	POWER DISSIPATION $0,8 \cdot I_n$	PREARCING $I_t^2$	OPERATING $I_t^2$
(A)	(W)	(A <sup>2</sup> S)	(A <sup>2</sup> S)	(A <sup>2</sup> S)
500	136	76	24460	120320
550	145	81	34170	168060
630	159	89	45500	223750
700	184	103	65520	322200
800	191	107	97870	481310
900	216	121	126380	621520
1000	268	150	182000	895000

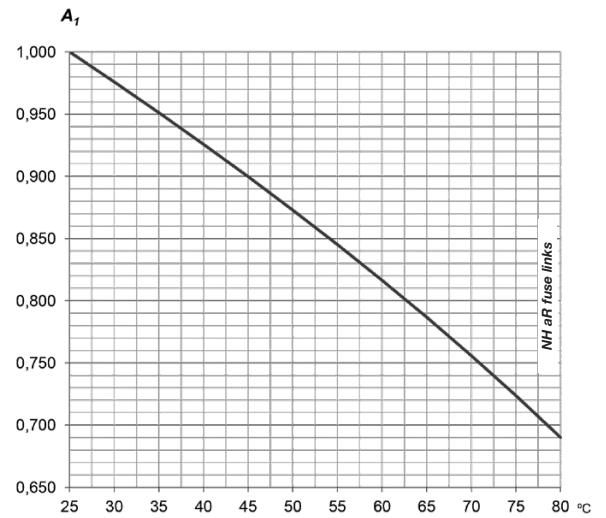


## t-I characteristics

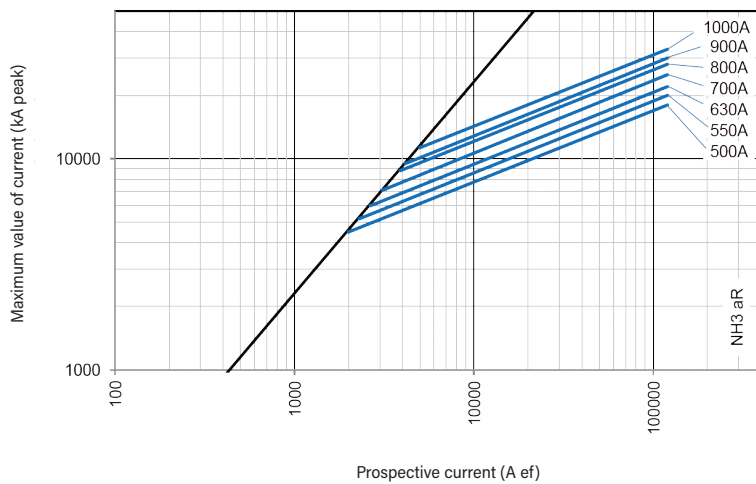


## Ambient temperature correction coefficient

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>t</sub>** to find the maximum operating current.



## Cut-off characteristics

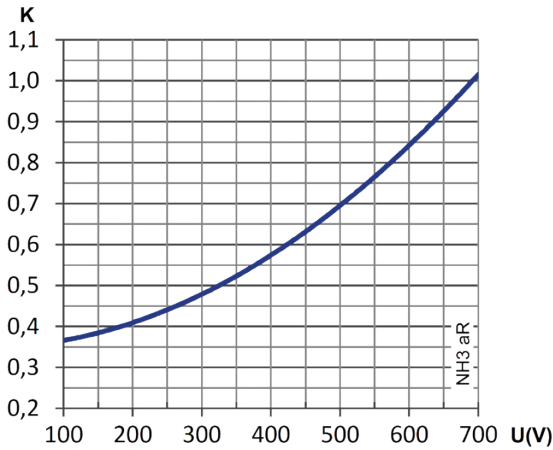


## Fuse load constant

Due to the high power dissipation of NH aR fuse links, it is necessary to apply a derating factor that determines the maximum allowable continuous current when these fuse links are installed in an NH base or in a fuse switch disconnectors.

$$I_{MAX} = I_n \times C_L$$

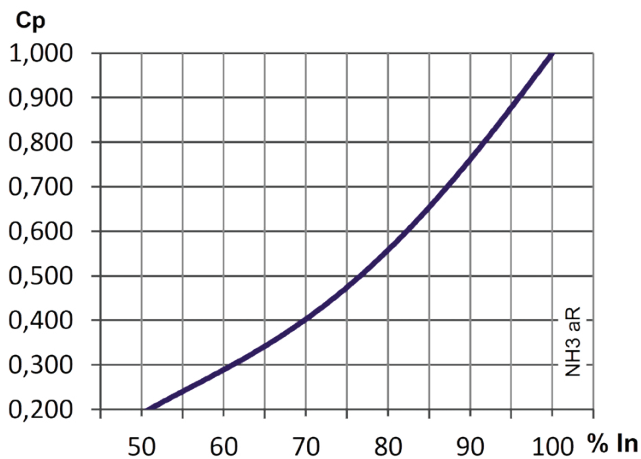
I <sub>n</sub> (A)	OPEN TYPE FUSE BASES	FUSE SWITCH DISCONNECTORS
	500	0,70
550	0,70	0,65
630	0,70	0,65
700	0,70	0,60
800	0,70	0,60
900	0,65	0,55
1000	0,60	0,50



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

Total clearing I<sup>2</sup>t values at rated voltage and at power factor of 0,15-0,20 are given in electrical characteristics tables.

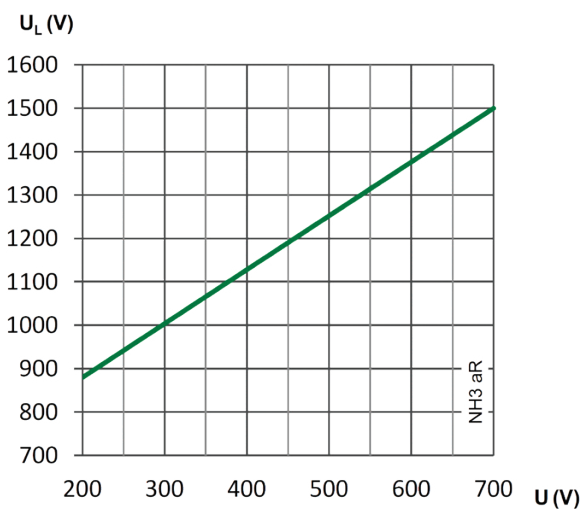
For other voltages, clearing I<sup>2</sup>t values can be calculated multiplying these values by correction factor **K**.



## Power dissipation correction factor

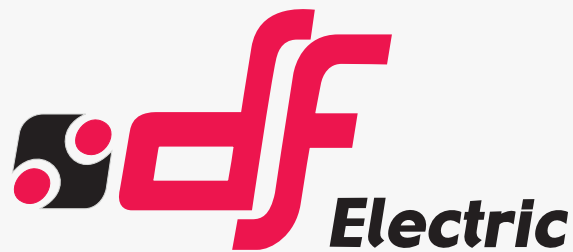
Power dissipation values are given at rated voltage (In) and at 0,8In (80% of rated current). It is possible to calculate values of power dissipation for other currents multiplying these values by correction factor **Cp** for power loss as a function of % of rated current.

This value is very important to choose the appropriate fuse base to install these fuse-links. The power dissipation of fuse-link at the normal working conditions must be lower than the maximum value that the fuse base can withstand.



## Arc voltage

This graphic gives the peak arc voltage **UL** that can appear across the fuse link during operation as a function of working voltage.



# PROTECTING THE WORLD



### HEAD OFFICE AND FACTORY

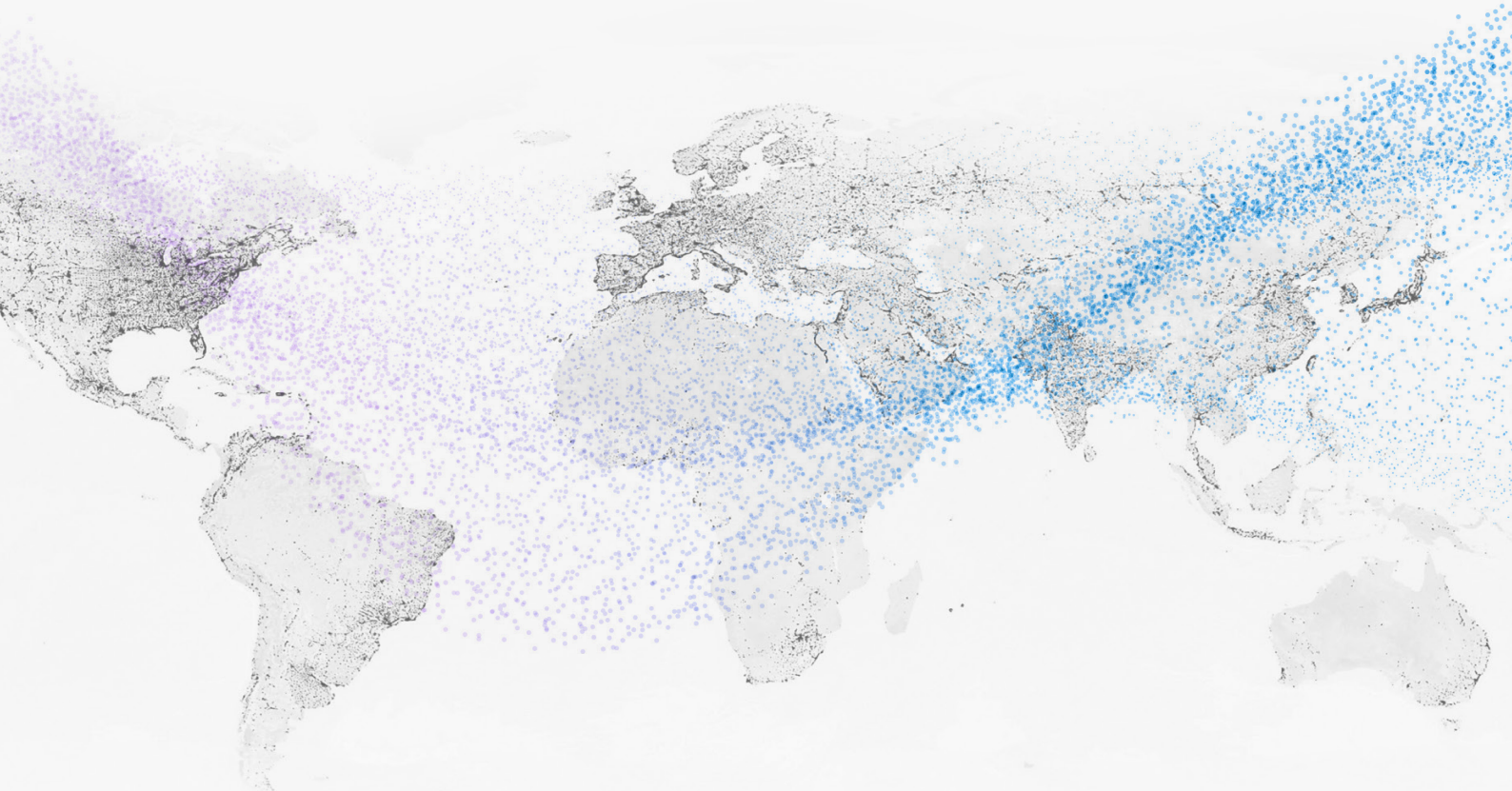
SILICI, 67-69  
08940 CORNELLA DE LLOBREGAT  
BARCELONA · SPAIN  
Tel. +34 93 377 85 85  
Fax +34 93 377 82 82

### INTERNATIONAL SALES

Tel. +34 93 475 08 64  
Fax +34 93 480 07 75  
export@dfelectric.es

### NATIONAL SALES

Tel. 93 475 08 64  
Fax 93 480 07 76  
comercial@dfelectric.es



dfelectric.es



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.

DF ELECTRIC cannot guarantee the characteristics of an installation, machine or equipment that has been designed by a third party. Once a product has been selected, the user must verify that it is appropriate for its application, through the verifications and/or tests that it deems appropriate.

DF ELECTRIC retains the right to change the dimensions, specifications, materials or design of its products at any time with or without notice.

©2018 DF Electric. All rights reserved