

HelioProtection® NH fuse-links 800VAC

NH gR 800VAC

SPECIAL PURPOSE FUSES

PHOTOVOLTAIC FUSES



Mersen NH fuse-links 800VAC were engineered and designed specifically for photovoltaic systems. gR types are full range breaking capacity fuse-links and are used to protect cables and equipment. They can interrupt any surge, from the lowest fusing up to their breaking capacity, and so can be used alone as protection. They are the perfect solution of protection when used with DC/800VAC Solar inverters.

This fuse range is offered along with Mersen 800VAC Fuse-switch-disconnectors, for a complete fuse-system protection.

TECHNICAL DATA OVERVIEW

| | |
|----------------------|------------------|
| Voltage AC | 800 VAC |
| Ampere Range (A) | 50 ... 400 A |
| Size per Standard | NH1, NH2 and NH3 |
| Speed/Characteristic | gR |
| I.R. AC (IEC) | 90 kA |

FEATURES & BENEFITS

- Low fault current interrupting capability
- Temperature cycle withstand capability
- Durable construction for enhanced system longevity
- High efficiency with low power losses
- Available in two versions: Plain Blade & Direct Mounting

APPLICATIONS

- General purpose cable and line protection at 800VAC
- Solar installation AC combiner box

STANDARDS

- IEC 60269-4
- RoHS compliance
- UL Recognized components: UL 248-13, UL 248-1



HelioProtection® NH fuse-links 800VAC

NH gR 800VAC

PRODUCT RANGE

NH gR 800VAC Plain Blade



NH1GR80V125



NH2GR80V250

| Catalog number | Item number | Rated current I_n | Pre-arcing I^2t | Clearing I^2t at Rated Voltage | Power dissipation at I_n | Power dissipation at $0.7I_n$ | Width | Package | Weight |
|----------------|-------------|---------------------|-------------------------|----------------------------------|----------------------------|-------------------------------|---------|---------|--------|
| NH1GR80V50 | R1069101 | 50 A | 0.65 kA ² s | 7.76 kA ² s | 11 W | 4.6 W | 39.5 mm | 3 | 0.4 kg |
| NH1GR80V63 | S1069102 | 63 A | 1.46 kA ² s | 14.95 kA ² s | 13 W | 5.4 W | 39.5 mm | 3 | 0.4 kg |
| NH1GR80V80 | T1069103 | 80 A | 2.59 kA ² s | 24.3 kA ² s | 15 W | 6.1 W | 39.5 mm | 3 | 0.4 kg |
| NH1GR80V100 | V1069104 | 100 A | 4.61 kA ² s | 39.2 kA ² s | 17 W | 7.2 W | 39.5 mm | 3 | 0.4 kg |
| NH1GR80V125 | X1069106 | 125 A | 10.37 kA ² s | 79.1 kA ² s | 18 W | 7.4 W | 39.5 mm | 3 | 0.4 kg |
| NH1GR80V160 | Y1069107 | 160 A | 20 kA ² s | 134.5 kA ² s | 23 W | 9.6 W | 39.5 mm | 3 | 0.4 kg |
| NH2GR80V200 | Z1069108 | 200 A | 64.8 kA ² s | 234 kA ² s | 27 W | 11.3 W | 51 mm | 3 | 0.7 kg |
| NH2GR80V250 | A1069109 | 250 A | 36.45 kA ² s | 400 kA ² s | 31 W | 12.9 W | 51 mm | 3 | 0.7 kg |

NH gR 800VAC Direct mounting



NH1GR80V125B



NH2GR80V250B

| Catalog number | Item number | Rated current I_n | Pre-arcing I^2t | Clearing I^2t at Rated Voltage | Power dissipation at I_n | Power dissipation at $0.7I_n$ | Width | Package | Weight |
|----------------|-------------|---------------------|-------------------------|----------------------------------|----------------------------|-------------------------------|---------|---------|--------|
| NH1GR80V50B | H1069093 | 50 A | 0.65 kA ² s | 7.76 kA ² s | 11 W | 4.6 W | 39.5 mm | 3 | 0.3 kg |
| NH1GR80V63B | J1069094 | 63 A | 1.46 kA ² s | 14.95 kA ² s | 13 W | 5.4 W | 39.5 mm | 3 | 0.3 kg |
| NH1GR80V80B | K1069095 | 80 A | 2.59 kA ² s | 24.3 kA ² s | 15 W | 6.1 W | 39.5 mm | 3 | 0.3 kg |
| NH1GR80V100B | L1069096 | 100 A | 4.61 kA ² s | 39.2 kA ² s | 17 W | 7.2 W | 39.5 mm | 3 | 0.3 kg |
| NH1GR80V125B | M1069097 | 125 A | 10.37 kA ² s | 79.1 kA ² s | 18 W | 7.4 W | 39.5 mm | 3 | 0.3 kg |
| NH1GR80V160B | N1069098 | 160 A | 20 kA ² s | 134.5 kA ² s | 23 W | 9.6 W | 39.5 mm | 3 | 0.3 kg |
| NH2GR80V200B | P1069099 | 200 A | 64.8 kA ² s | 234 kA ² s | 27 W | 11.3 W | 51 mm | 3 | 0.6 kg |
| NH2GR80V250B | Q1069100 | 250 A | 36.45 kA ² s | 400 kA ² s | 31 W | 12.9 W | 51 mm | 3 | 0.6 kg |

NH gR 800VAC Plain Blade 3



NH3GR80V400

| Catalog number | Item number | Rated current I_n | Pre-arcing I^2t | Clearing I^2t at Rated Voltage | Power dissipation at I_n | Power dissipation at $0.7I_n$ | Width | Package | Weight |
|----------------|-------------|---------------------|-------------------------|----------------------------------|----------------------------|-------------------------------|-------|---------|---------|
| NH3GR80V200 | J1211901 | 200 A | 36.45 kA ² s | 229 kA ² s | 27 W | 11 W | 70 mm | 1 | 1.00 kg |
| NH3GR80V250 | K1211902 | 250 A | 64.8 kA ² s | 392 kA ² s | 36 W | 15 W | 70 mm | 1 | 1.00 kg |
| NH3GR80V315 | L1211903 | 315 A | 115.2 kA ² s | 658 kA ² s | 43 W | 18 W | 70 mm | 1 | 1.00 kg |
| NH3GR80V350 | M1211904 | 350 A | 156.8 kA ² s | 834 kA ² s | 44 W | 18 W | 70 mm | 1 | 1.00 kg |
| NH3GR80V400 | N1211905 | 400 A | 204.8 kA ² s | 1130 kA ² s | 50 W | 20 W | 70 mm | 1 | 1.00 kg |

NH gR 800VAC Direct mounting 3



NH3GR80V200B

| Catalog number | Item number | Rated current I_n | Pre-arcing I^2t | Clearing I^2t at Rated Voltage | Power dissipation at I_n | Power dissipation at $0.7I_n$ | Width | Package | Weight |
|----------------|-------------|---------------------|-------------------------|----------------------------------|----------------------------|-------------------------------|-------|---------|---------|
| NH3GR80V200B | P1211906 | 200 A | 36.45 kA ² s | 229 kA ² s | 27 W | 11 W | 70 mm | 1 | 1.00 kg |
| NH3GR80V250B | Q1211907 | 250 A | 64.8 kA ² s | 392 kA ² s | 36 W | 15 W | 70 mm | 1 | 1.00 kg |
| NH3GR80V315B | R1211908 | 315 A | 115.2 kA ² s | 658 kA ² s | 43 W | 18 W | 70 mm | 1 | 1.00 kg |
| NH3GR80V350B | S1211909 | 350 A | 156.8 kA ² s | 834 kA ² s | 44 W | 18 W | 70 mm | 1 | 1.18 kg |
| NH3GR80V400B | T1211910 | 400 A | 204.8 kA ² s | 1130 kA ² s | 50 W | 20 W | 70 mm | 1 | 1.18 kg |

HelioProtection® NH fuse-links 800VAC

NH gR 800VAC

PRODUCT RANGE



NHHANDLE

NH Fuse handle for NH fuse links size 00-4

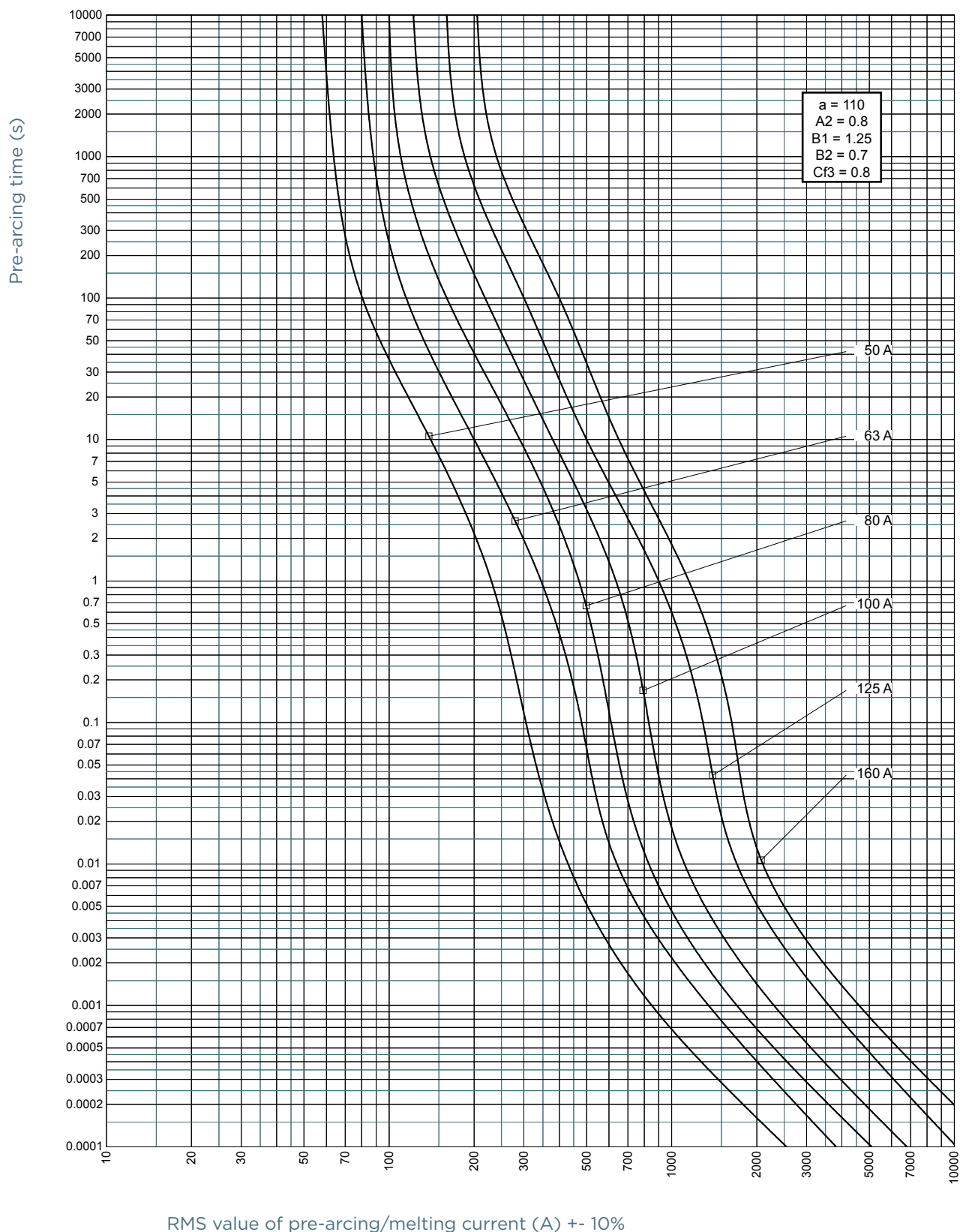
| Catalog number | Item number | Size | Design | Package | Weight |
|----------------|-------------|---------|---|---------|---------|
| NHHANDLE | P215592 | 00 to 4 | without arm protection to DIN VDE 0636-2, DIN VDE 608-4 | 5 | 0.28 kg |
| 08024.000000 | X216105 | 00 to 4 | with fire proof arm protection to DIN VDE 0636-2, DIN VDE 608-4 | 1 | 0.54 kg |



08024.000000

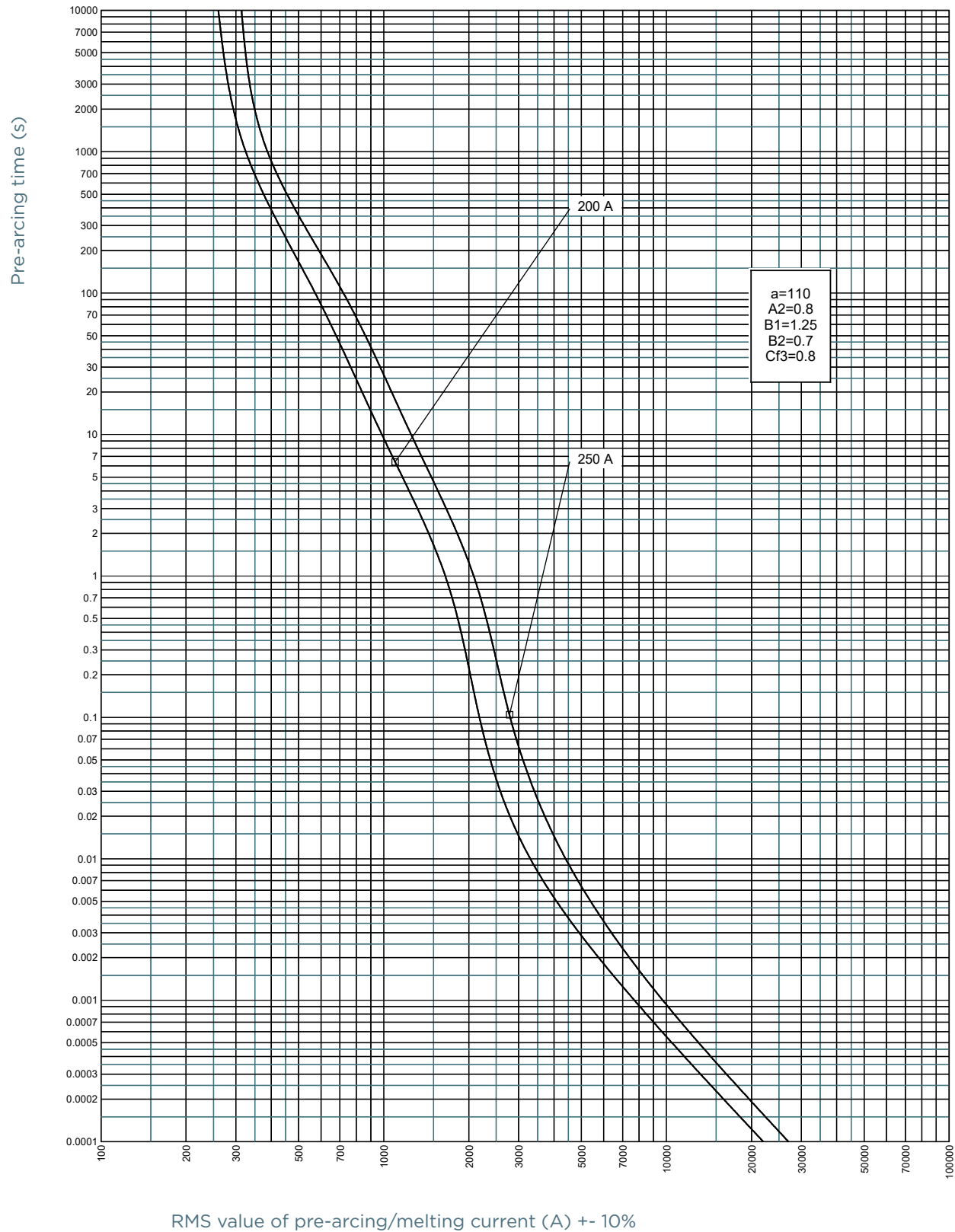
TIME CURRENT CHARACTERISTIC CURVES

Special purpose gR fuse link NH1 800V 50-160A



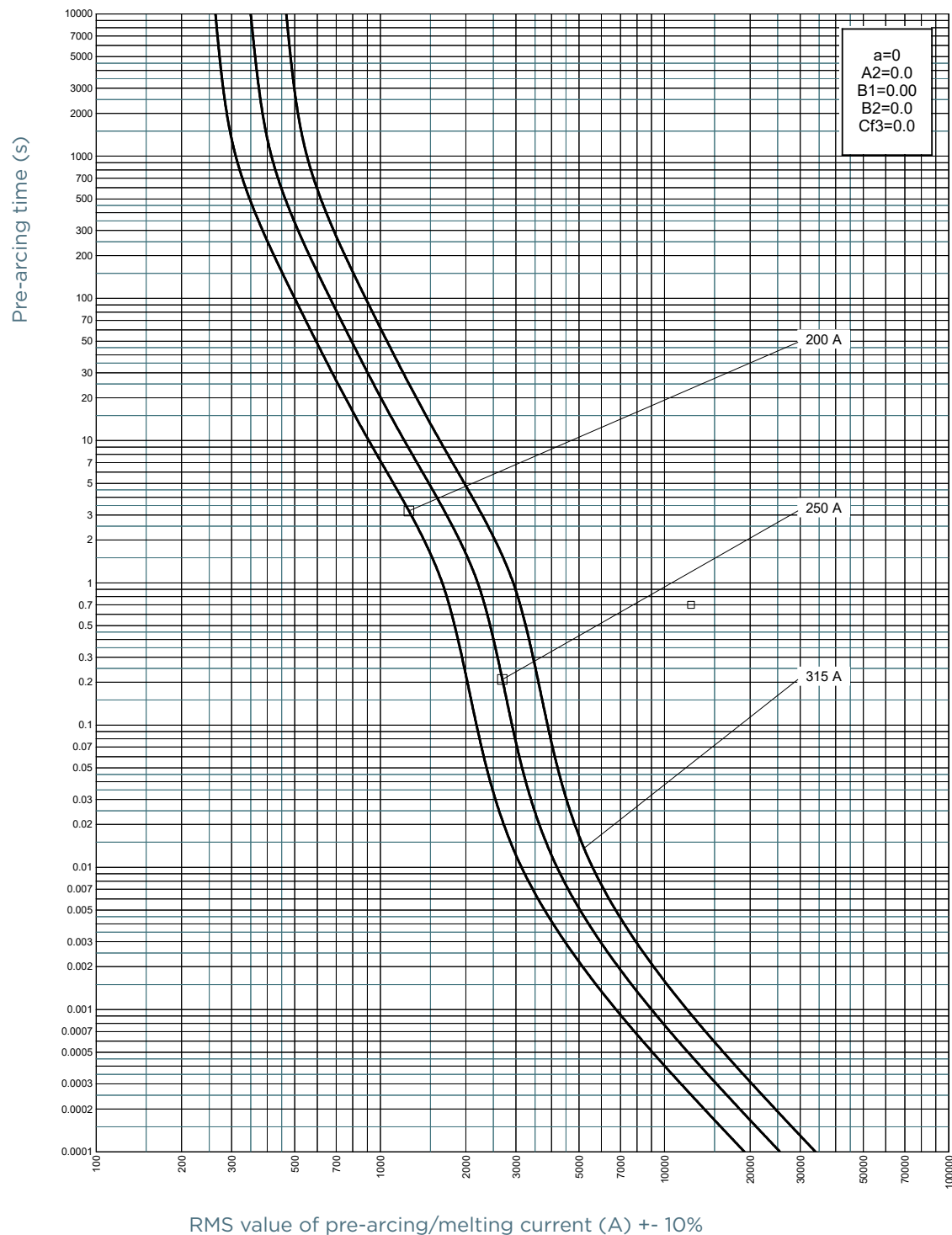
TIME CURRENT CHARACTERISTIC CURVES

Special purpose gR fuse link NH2 800V 200-250A



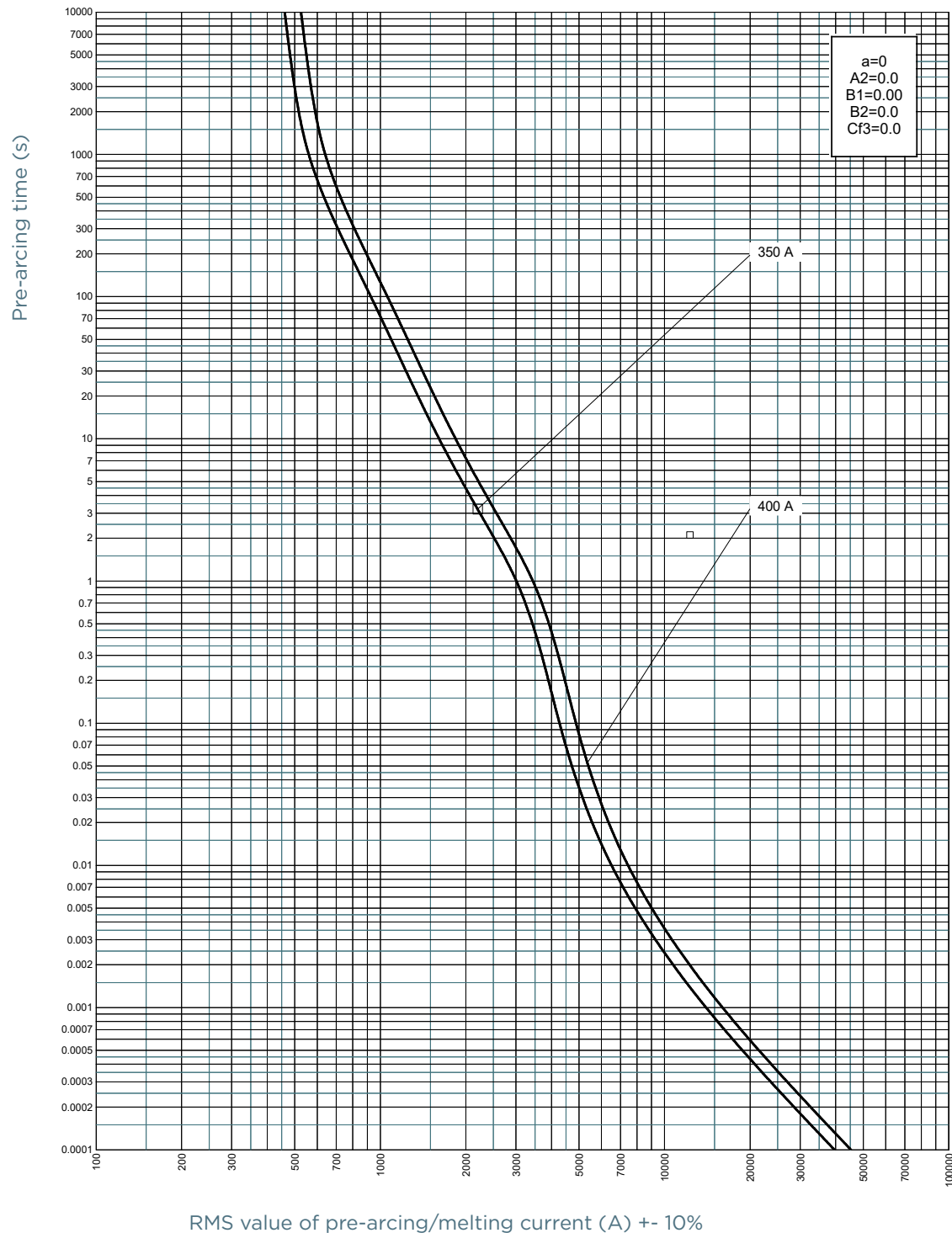
TIME CURRENT CHARACTERISTIC CURVES

Special purpose gR fuse link NH3 800V, 200A - 315A



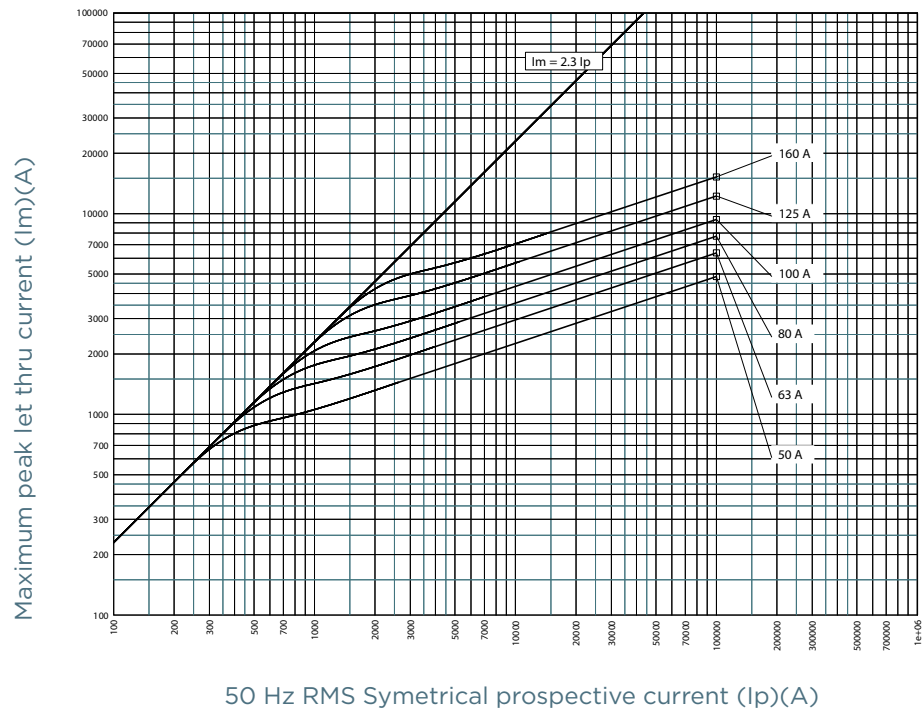
TIME CURRENT CHARACTERISTIC CURVES

Special purpose gR fuse link NH3 800V, 350A - 400A

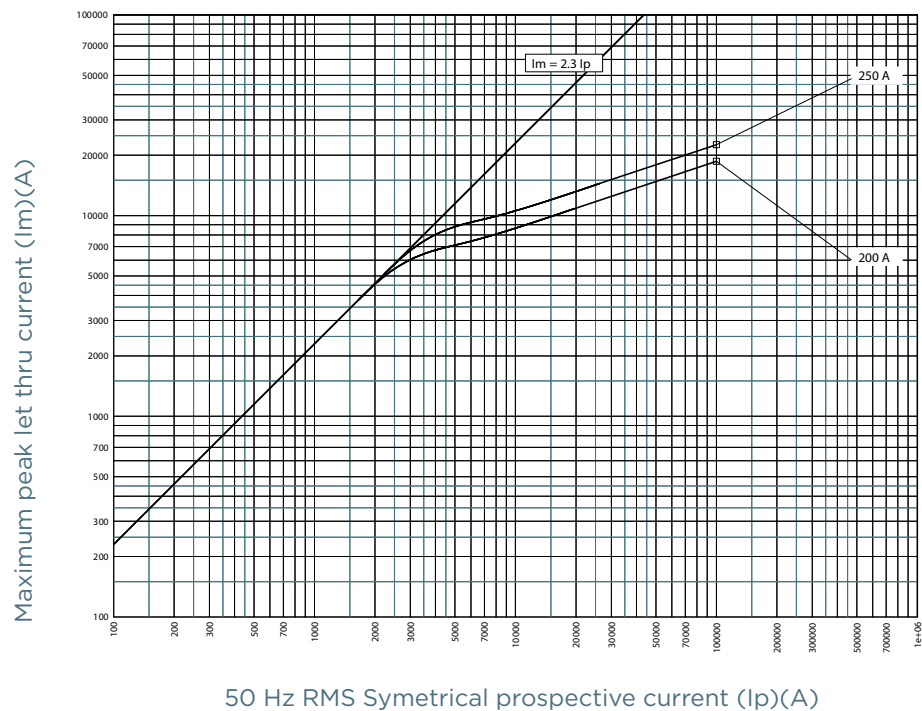


CUT-OFF CURRENT CHARACTERISTIC

NH gR 800VAC Size 1

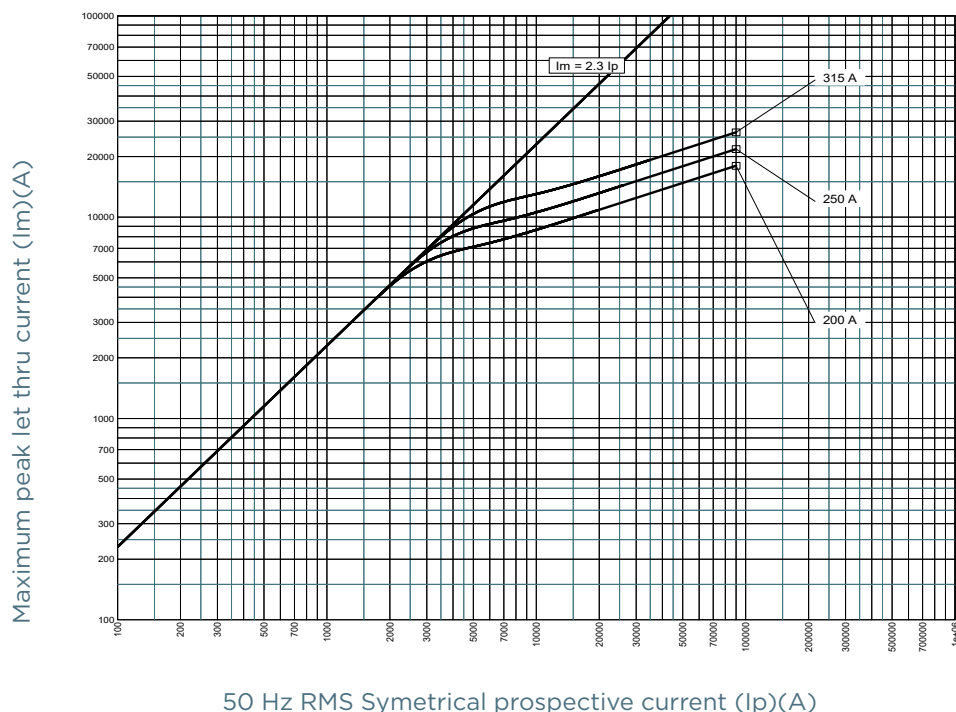


NH gR 800VAC Size 2

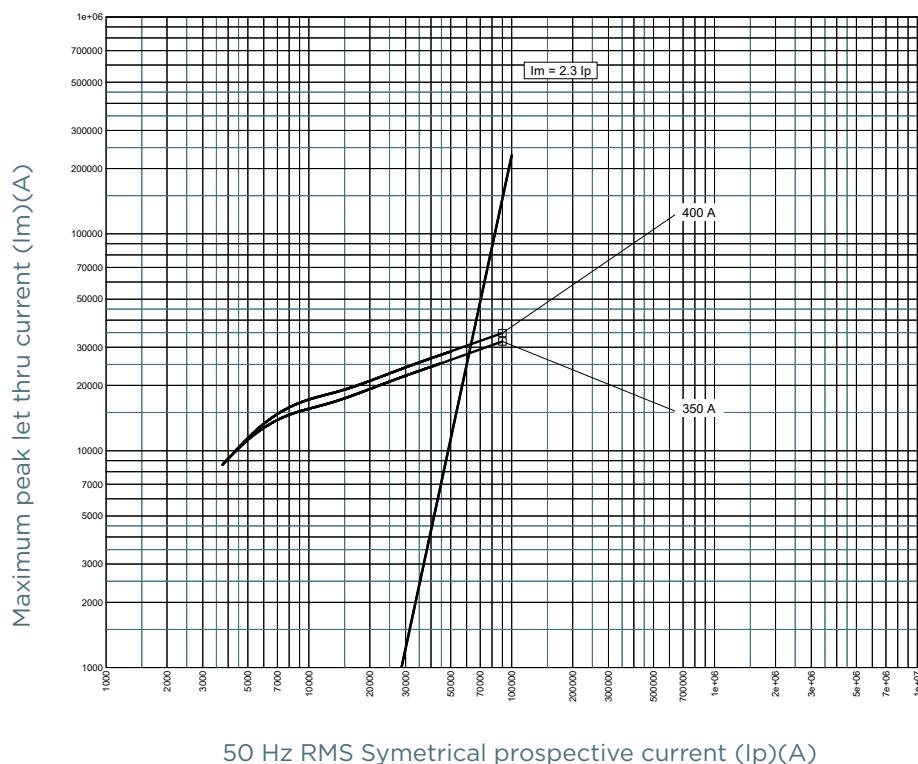


CUT-OFF CURRENT CHARACTERISTIC

NH gR 800VAC Size 3, 200A - 315A

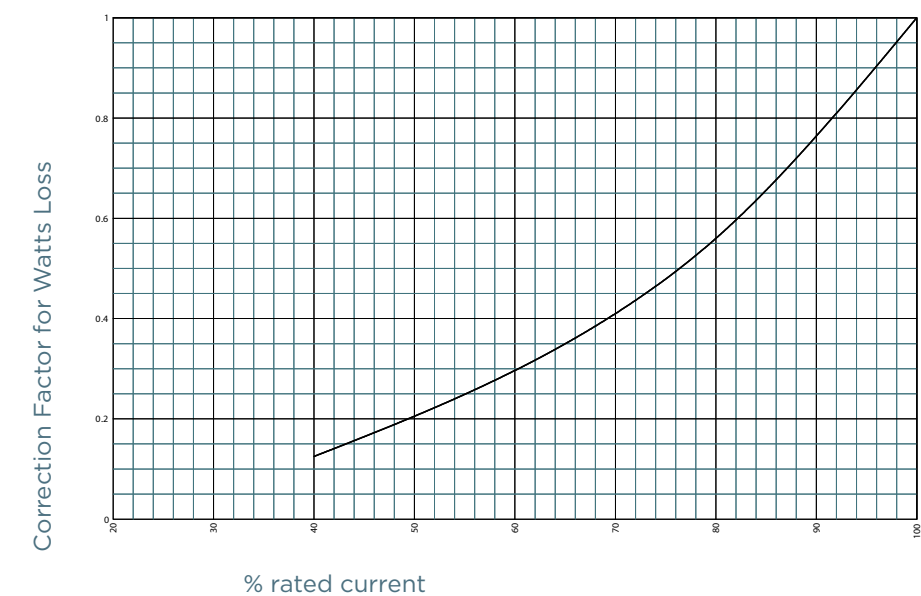


NH gR 800VAC Size 3, 350A - 400A

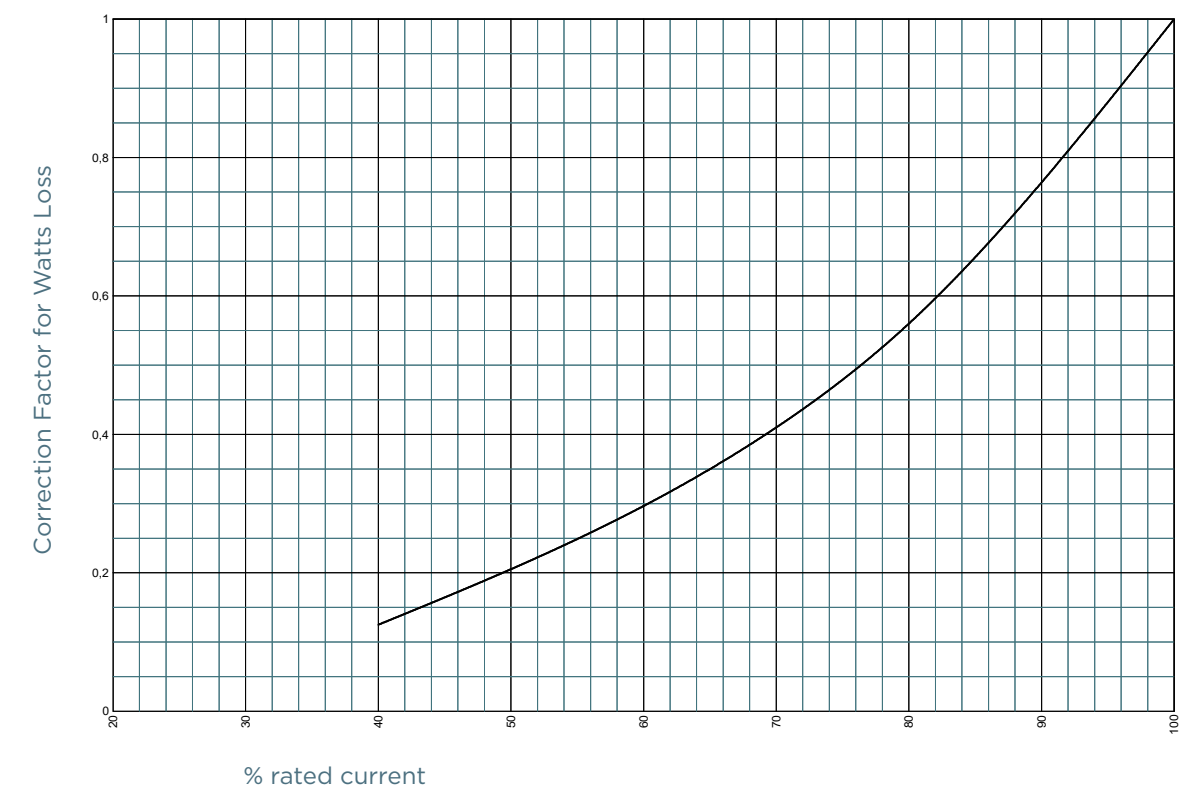


CORRECTION FACTOR

Watts Loss vs % rated Current NH gR 800VAC Size 1

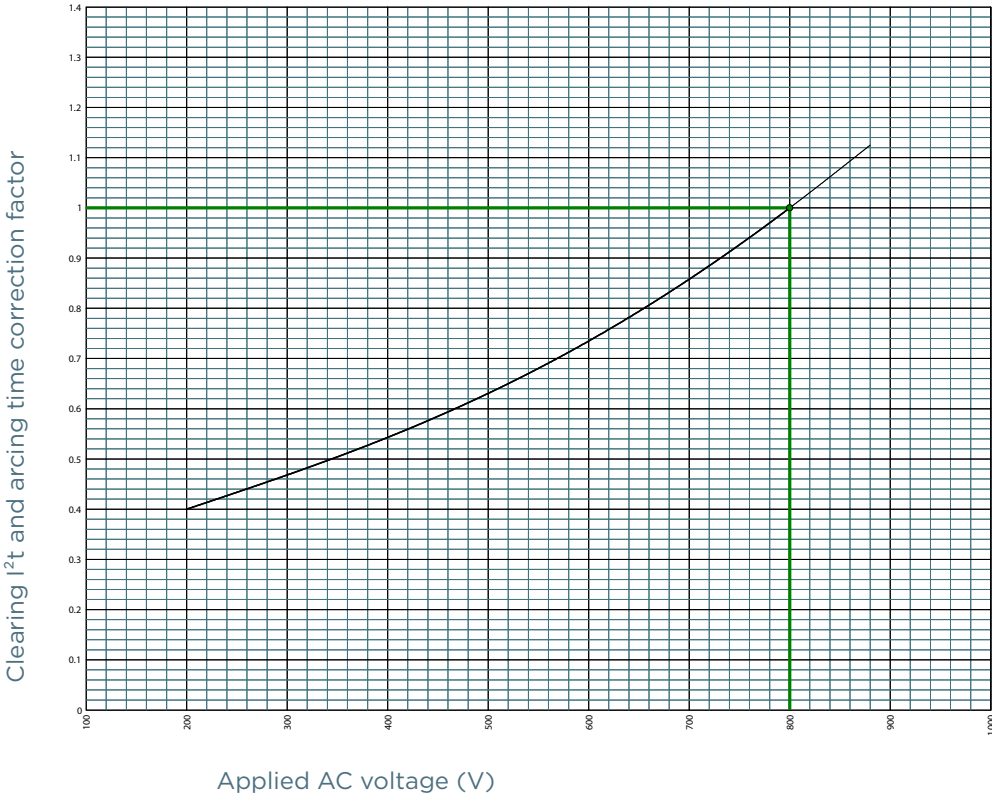


Watts Loss vs % rated Current NH gR 800VAC Size 2



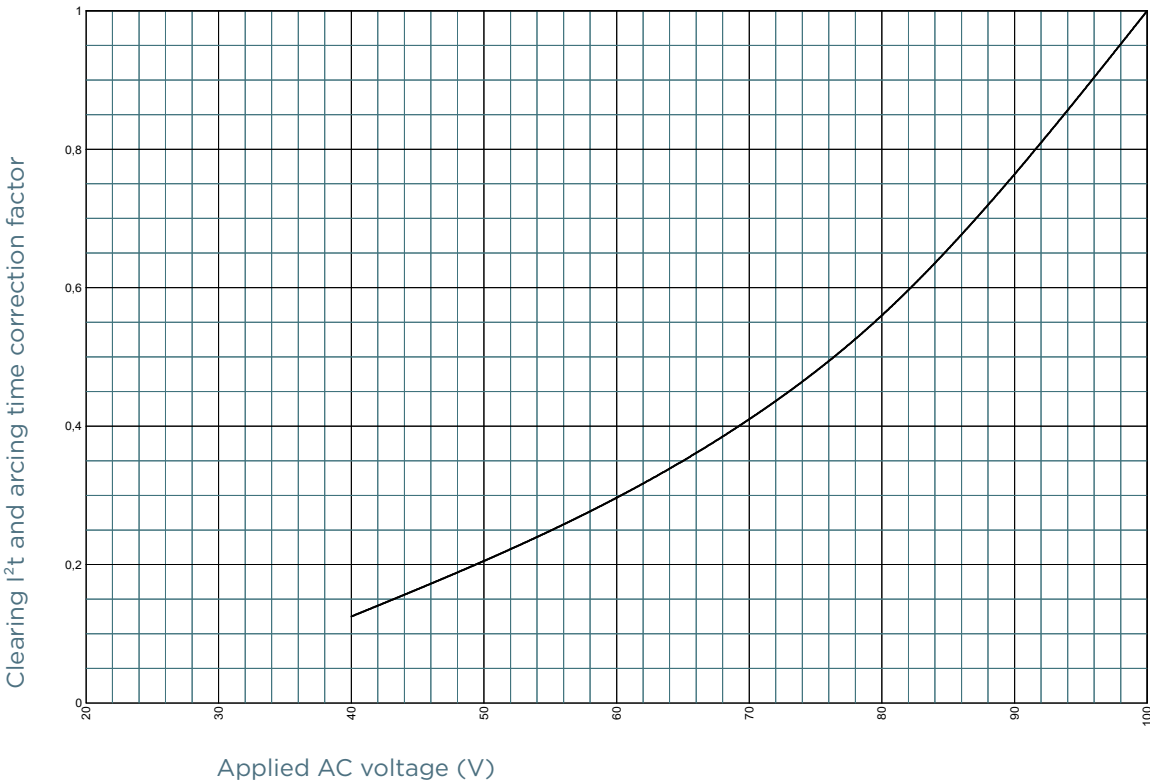
I²T MULTIPLIER COEFFICIENT

NH gR 800VAC Size 1



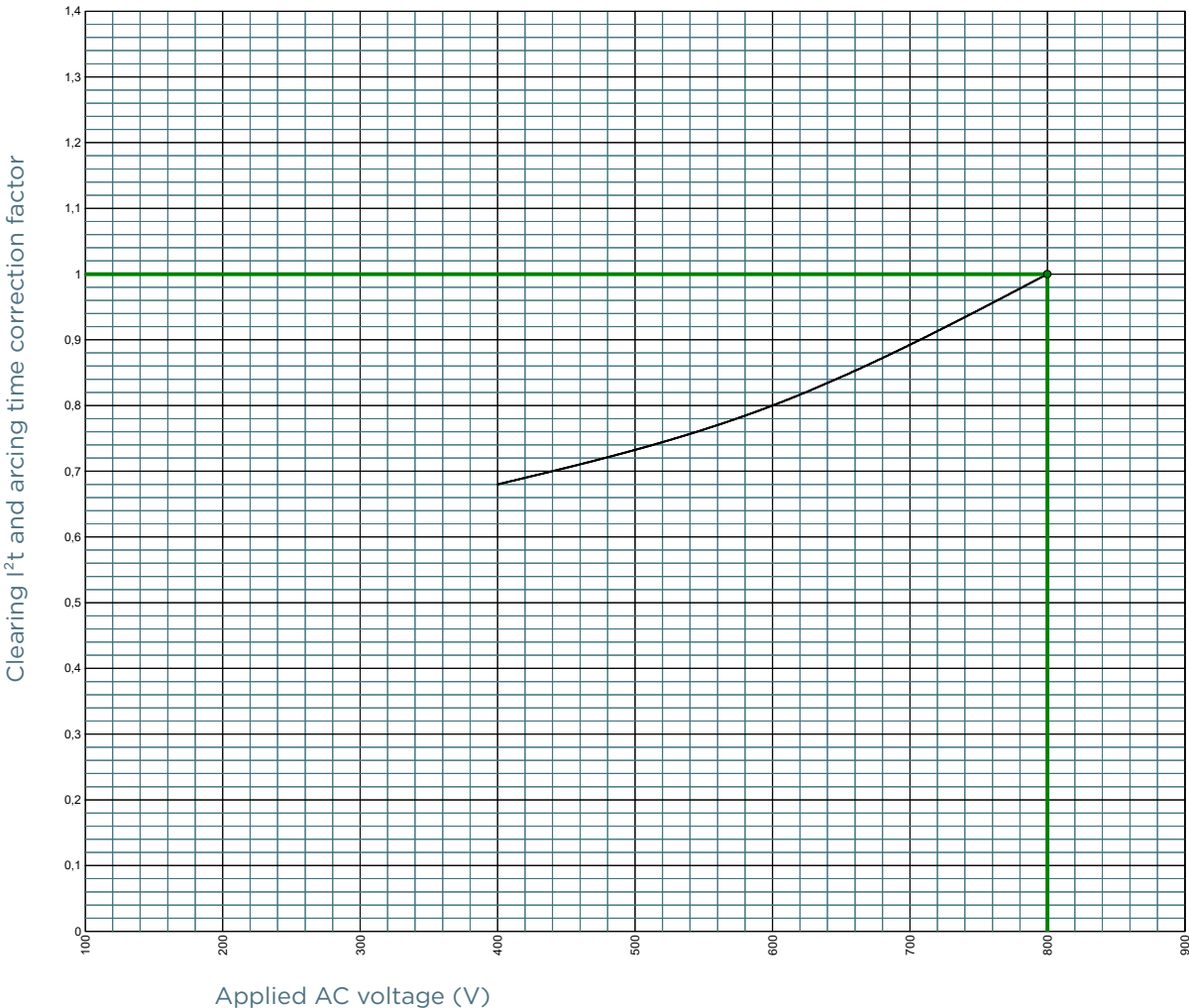
I²T MULTIPLIER COEFFICIENT

NH gR 800VAC Size 2



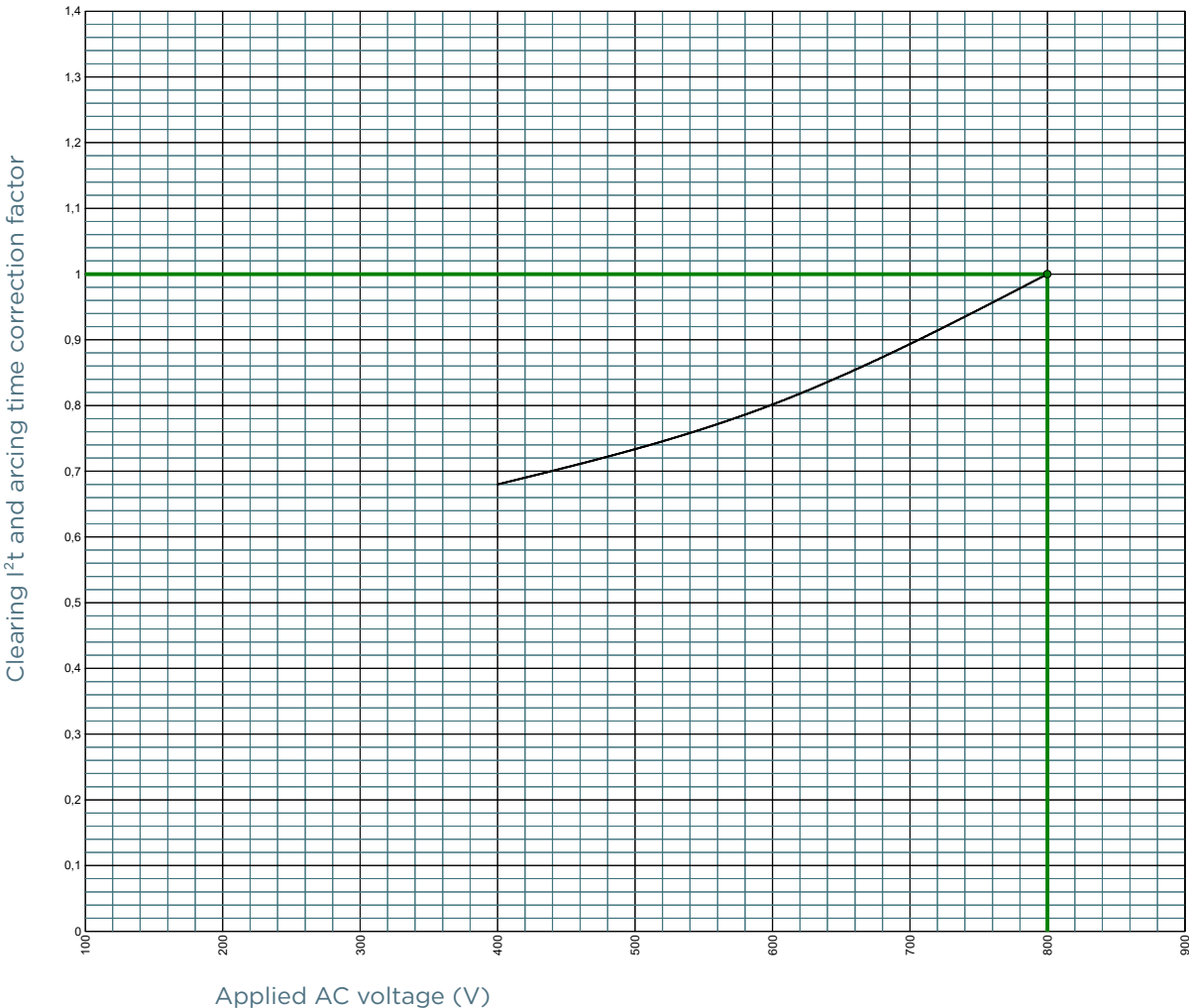
I²T MULTIPLIER COEFFICIENT

NH gR 800VAC Size 3, 200A - 315A



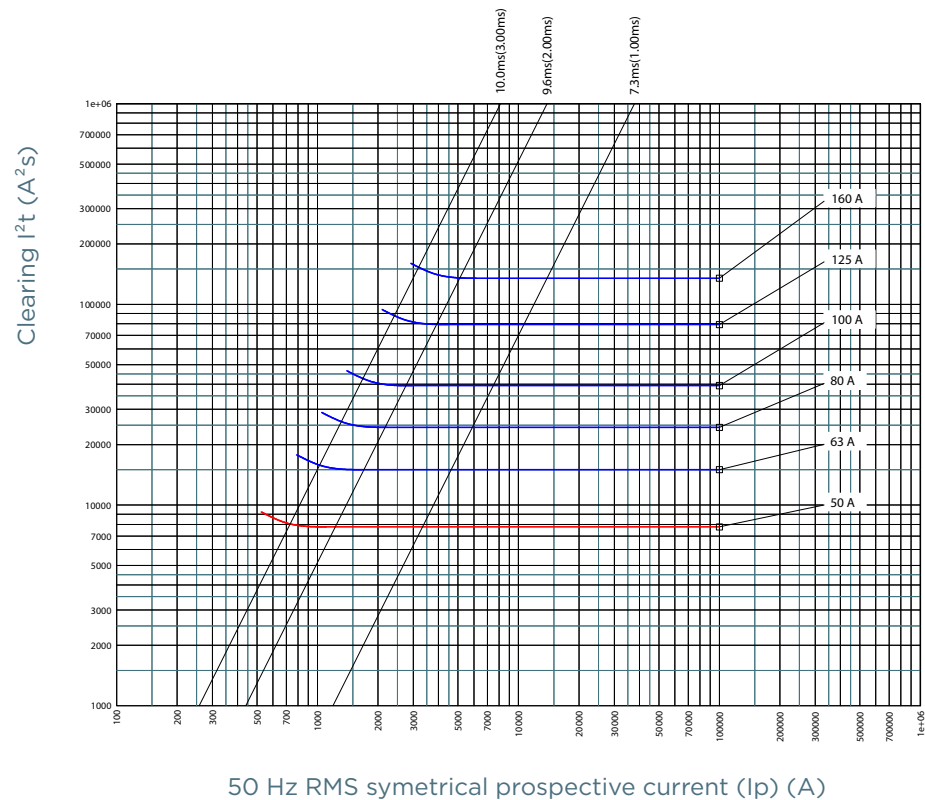
I²T MULTIPLIER COEFFICIENT

NH gR 800VAC Size 3, 350A - 400A



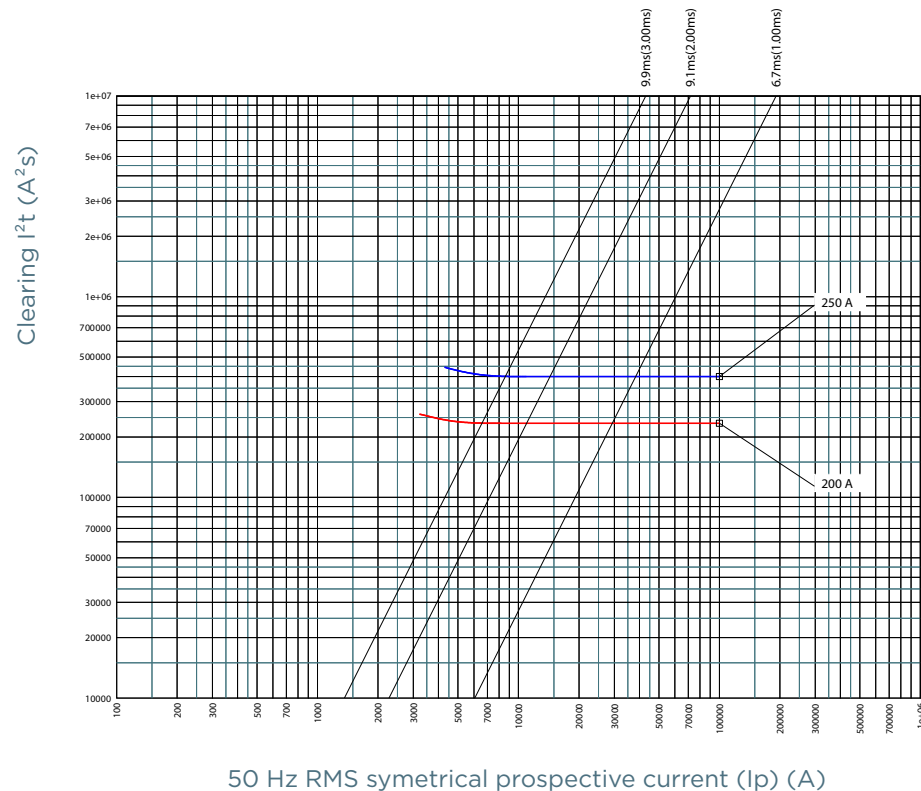
CHARACTERISTICS TOTAL I²t CURVE

NH gR 800VAC Size 1



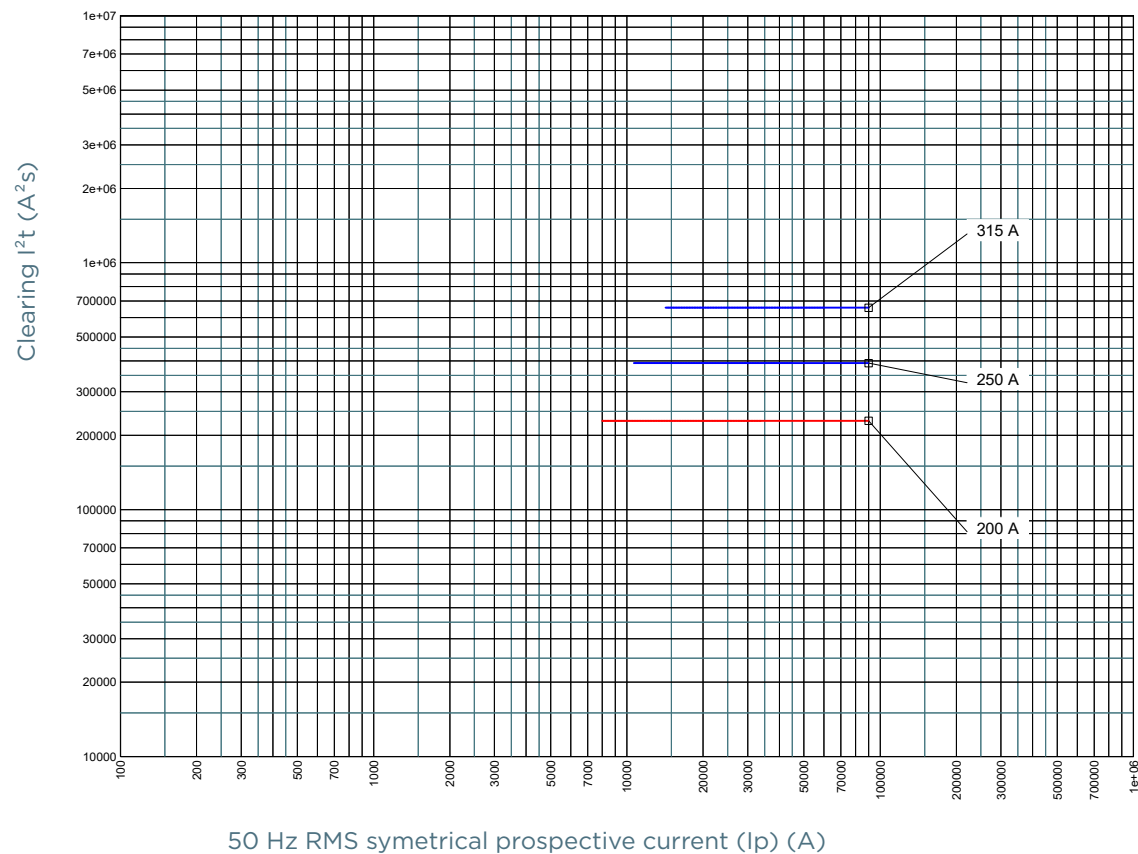
CHARACTERISTICS TOTAL I²T CURVE

NH gR 800VAC Size 2



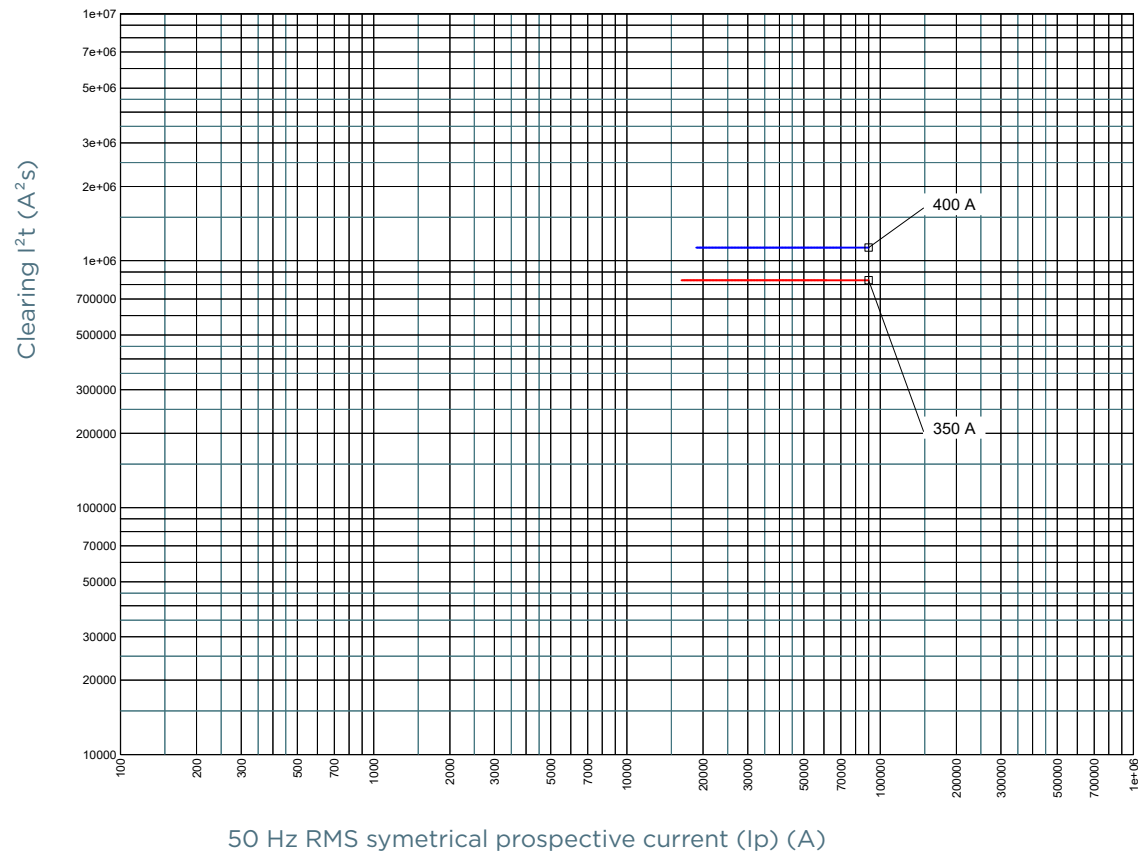
CHARACTERISTICS TOTAL I²t CURVE

NH gR 800VAC Size 3, 200A - 315A

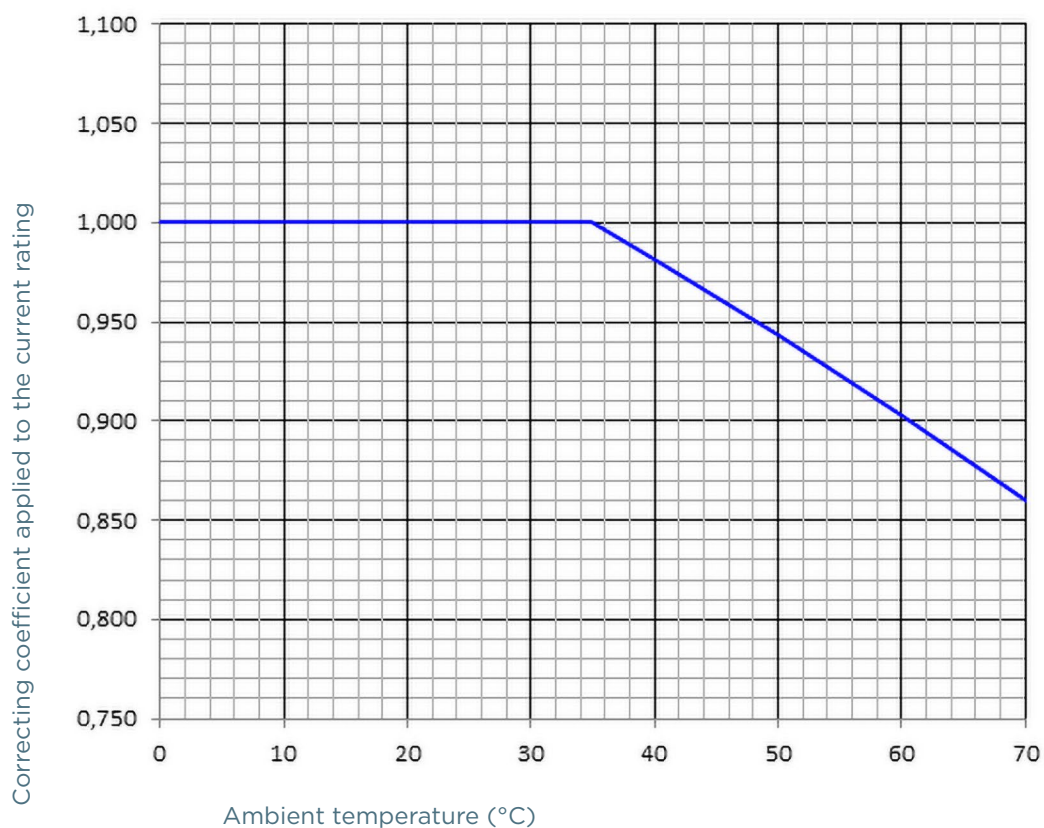


CHARACTERISTICS TOTAL I²T CURVE

NH gR 800VAC Size 3, 350A - 400A



TEMPERATURE DERATING

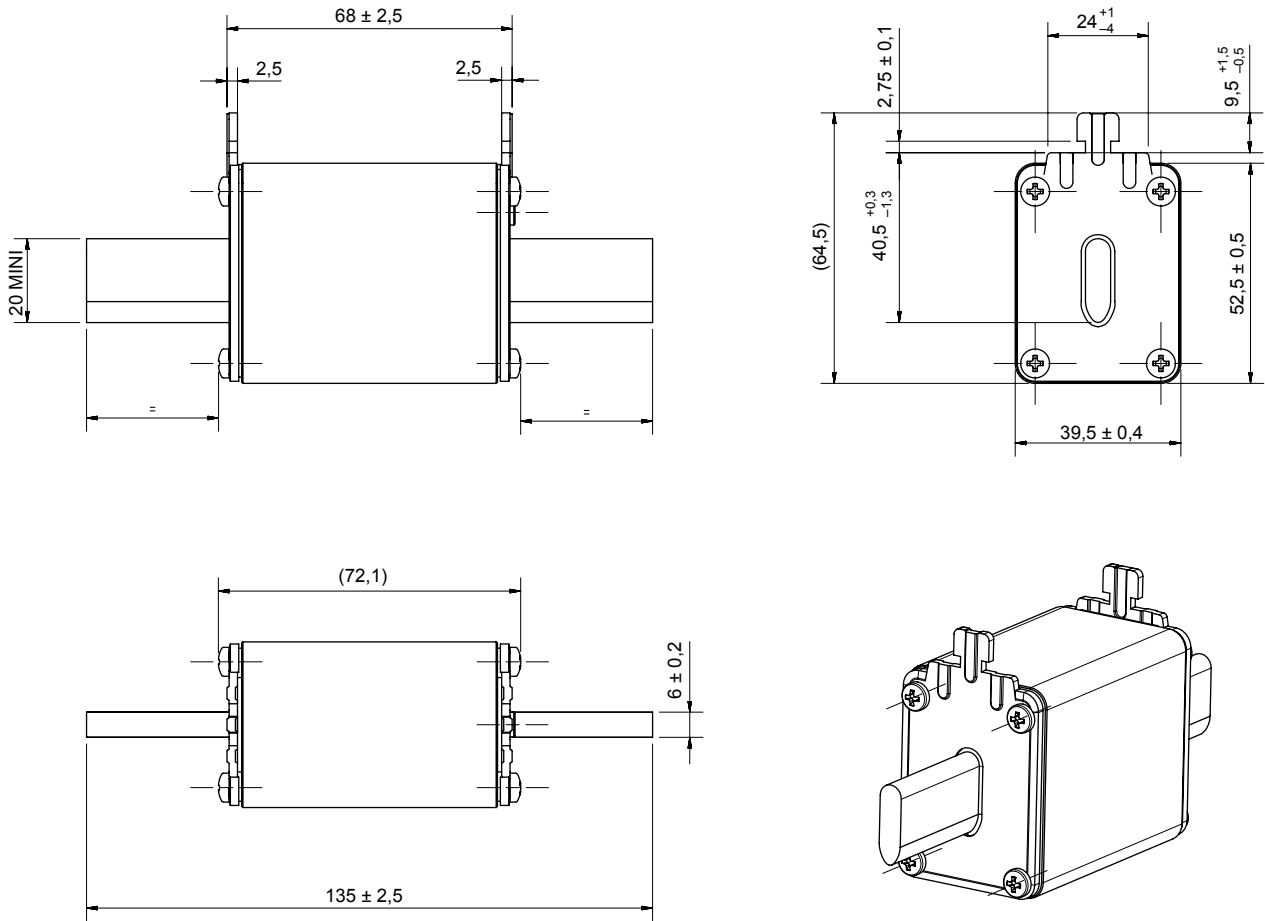


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NH gR 800VAC

DIMENSIONS

NH Size 1 Plain Blade



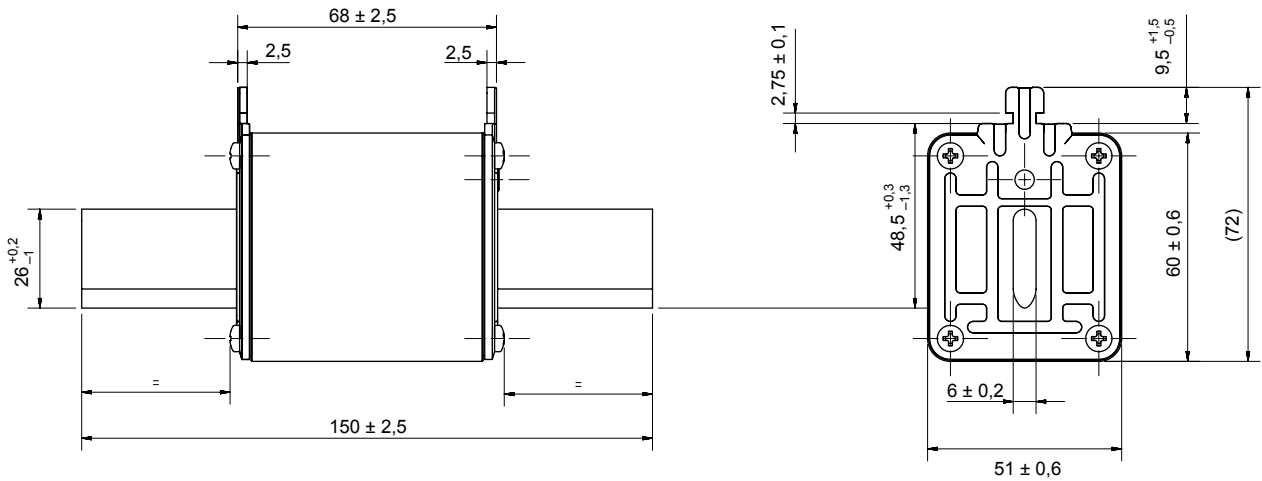
Dimensions in mm

HelioProtection® NH fuse-links 800VAC

NH gR 800VAC

DIMENSIONS

NH Size 2 Plain Blade



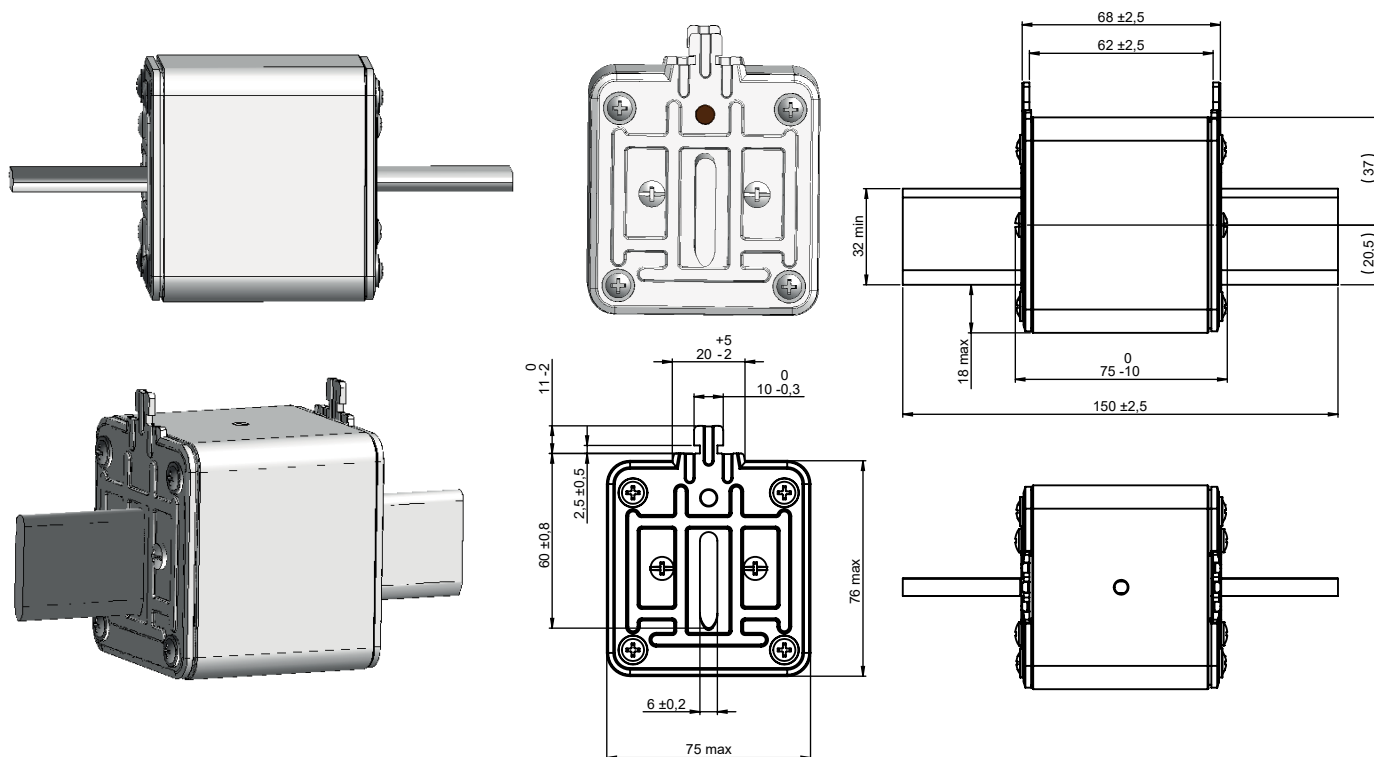
Dimensions in mm

HelioProtection® NH fuse-links 800VAC

NH gR 800VAC

DIMENSIONS

NH Size 3 Plain Blade



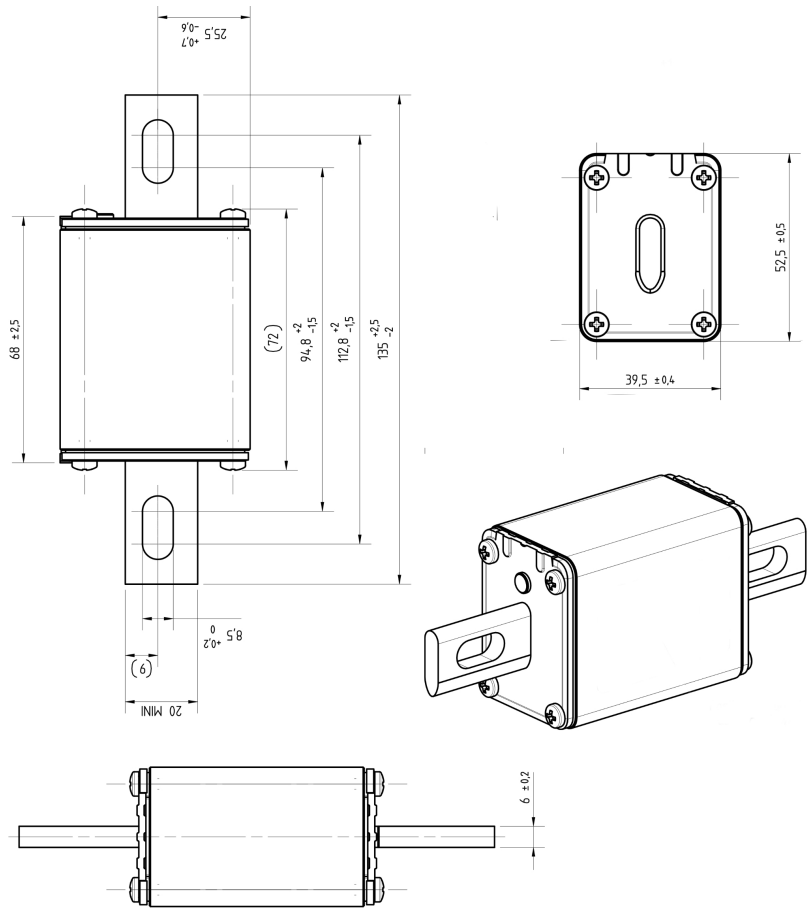
Dimensions in mm

HelioProtection® NH fuse-links 800VAC

NH gR 800VAC

DIMENSIONS

NH Size 1 direct mounting



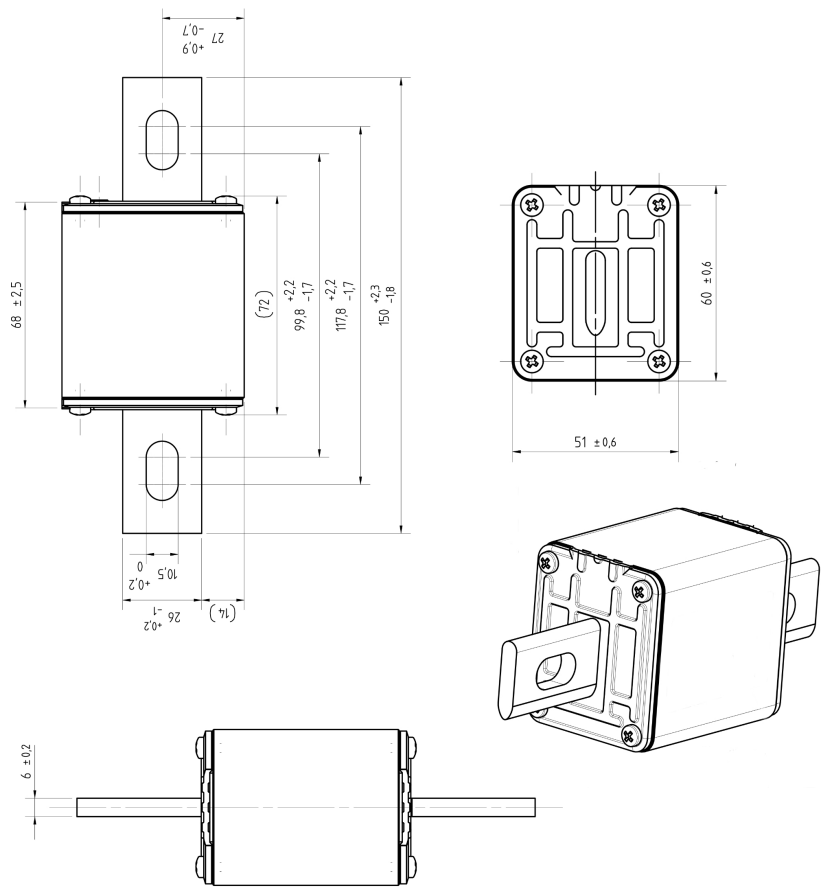
Dimensions in mm

HelioProtection® NH fuse-links 800VAC

NH gR 800VAC

DIMENSIONS

NH Size 2 direct mounting



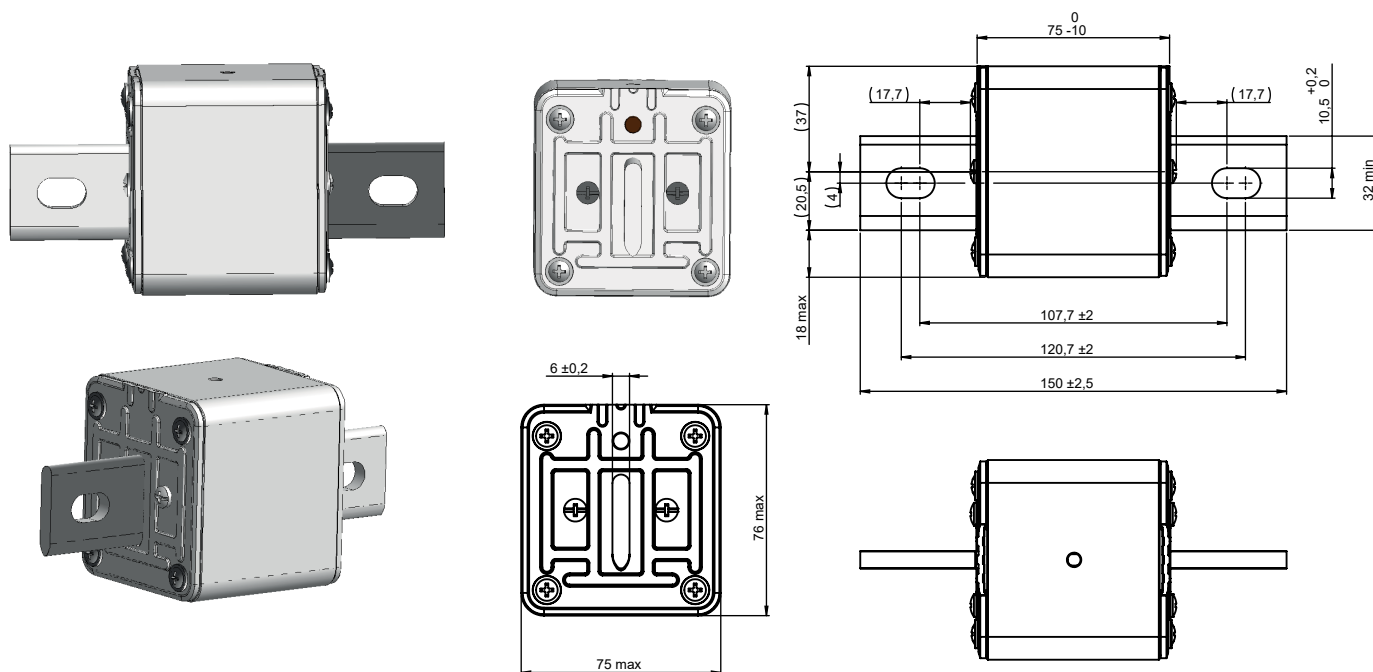
Dimensions in mm

HelioProtection® NH fuse-links 800VAC

NH gR 800VAC

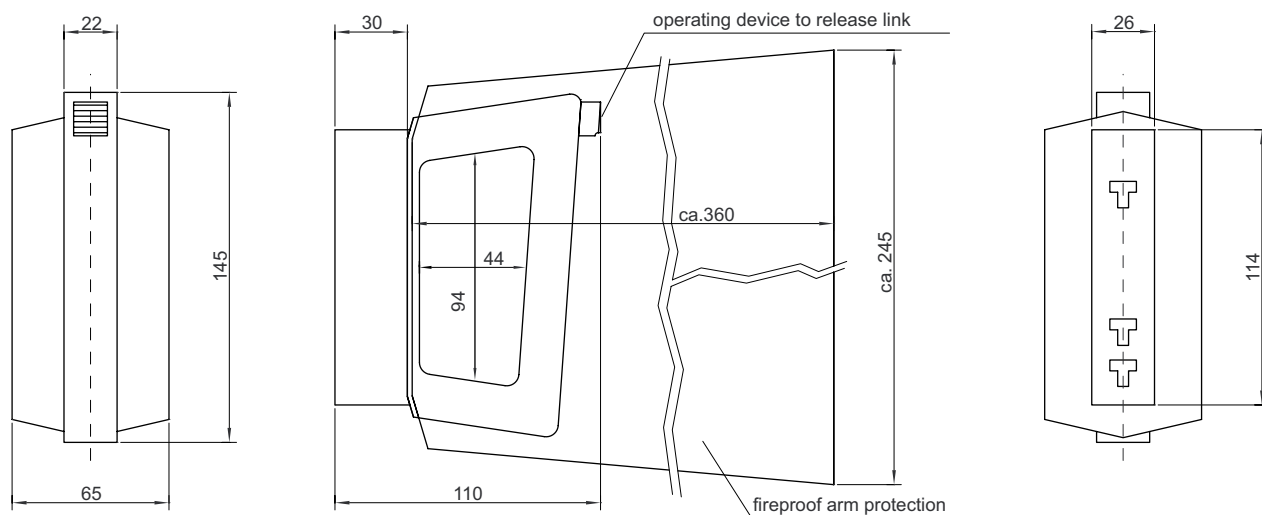
DIMENSIONS

NH Size 3 Direct mounting



Dimensions in mm

NH fuse-handle for NH fuse-links size 00 to 4



Dimensions in mm