

NH fuse-links gBat 1000V-1500V DC

SPECIAL PURPOSE FUSES

GBAT FUSES FOR BATTERY ENERGY SYSTEMS



Mersen NH gBat fuse series was engineered specifically for protection of battery systems. They offer full range protection and can protect very small over currents as well as DC fault current up to 150kA at max L/R 3ms. The NH gBat fuses serie covers various ratings in 1000VDC with NH1 and NH2 sizes, and in 1500VDC with NH1XL, NH2XL and NH3L. They are of the gBat type that comply with new IEC 60269-7 standard for Battery protection. They are available with bolted type blades for direct mounting, or with plain blades.

TECHNICAL DATA OVERVIEW

Voltage Range DC	1000 ... 1500 VDC
Ampere Range (A)	50 ... 500 A
Speed/Characteristic	gBat
Product Size	NH1, NH2, NH1XL, NH2XL, NH3L
Operating temperature	-40°C - +70°C
I.R. DC (UL)	1XL/2XL 50kA@L/R=1ms 3L up to 400A 150kA@L/R=3ms 3L from to 450A to 500A 200kA@L/R=3ms

FEATURES & BENEFITS

- Design for DC applications
- Full range breaking capacity
- Low watt losses
- Minimum breaking capacity 2IN
- High cycling performance
- High interrupting rating 150kA

APPLICATIONS

- Electrical energy storage
- Battery storage system
- Line protection between battery system and DC/DC converter or battery inverter
- DC grid protection

STANDARDS

- IEC 60269-7
- UL 248-13
- RoHS compliance



NH fuse-links gBat 1000V-1500V DC

PRODUCT RANGE

NH fuse links gBat 1000VDC Plain Blade



10NH1GBAT50



10NH2GBAT200

Catalog number	Item number	Size	Rated current I_n	Pre-arcing I^2t	Power dissipation at I_n	Power dissipation at $0.7 \times I_n$	Total Clearing I^2t @ U_n (L/R=2ms)	Package	Weight
10NH1GBAT50	T1068620	1	50 A	0.65 kA ² s	11 W	4.6 W	2.4 kA ² s	3	0.3 kg
10NH1GBAT63	V1068621	1	63 A	1.46 kA ² s	13 W	5.4 W	5.35 kA ² s	3	0.3 kg
10NH1GBAT80	W1068622	1	80 A	2.6 kA ² s	15 W	6.1 W	9.5 kA ² s	3	0.3 kg
10NH1GBAT100	X1068623	1	100 A	4.6 kA ² s	17 W	7.2 W	13.25 kA ² s	3	0.3 kg
10NH1GBAT125	Y1068624	1	125 A	10.37 kA ² s	18 W	7.4 W	29.75 kA ² s	3	0.3 kg
10NH1GBAT160	Z1068625	1	160 A	20 kA ² s	23 W	9.6 W	57.4 kA ² s	3	0.3 kg
10NH2GBAT200	A1068626	2	200 A	36.45 kA ² s	27 W	11.3 W	130.4 kA ² s	3	0.6 kg
10NH2GBAT250	B1068627	2	250 A	64.8 kA ² s	31 W	12.9 W	231.7 kA ² s	3	0.6 kg

NH fuse links gBat 1000VDC Direct Mounting



10NH1GBAT50B



10NH2GBAT200B

Catalog number	Item number	Size	Rated current I_n	Pre-arcing I^2t	Power dissipation at I_n	Power dissipation at $0.7 \times I_n$	Total Clearing I^2t @ U_n (L/R=2ms)	Package	Weight
10NH1GBAT50B	K1068612	1	50 A	0.65 kA ² s	11 W	4.6 W	2.4 kA ² s	3	0.4 kg
10NH1GBAT80B	M1068614	1	80 A	2.6 kA ² s	15 W	6.1 W	9.5 kA ² s	3	0.4 kg
10NH1GBAT63B	L1068613	1	63 A	1.46 kA ² s	13 W	5.4 W	5.35 kA ² s	3	0.4 kg
10NH1GBAT100B	N1068615	1	100 A	4.6 kA ² s	17 W	7.2 W	13.25 kA ² s	3	0.4 kg
10NH1GBAT125B	P1068616	1	125 A	10.37 kA ² s	18 W	7.4 W	29.75 kA ² s	3	0.4 kg
10NH1GBAT160B	Q1068617	1	160 A	20 kA ² s	23 W	9.6 W	57.4 kA ² s	3	0.4 kg
10NH2GBAT200B	R1068618	2	200 A	36.45 kA ² s	27 W	11.3 W	130.4 kA ² s	3	0.63 kg
10NH2GBAT250B	S1068619	2	250 A	64.8 kA ² s	31 W	12.9 W	231.7 kA ² s	3	0.63 kg

NH fuse-links gBat 1000V-1500V DC

PRODUCT RANGE



15NH1XLGBAT50



15NH2XLGBAT200



15NH3LGBAT160

NH-fuse-links gBat 1500VDC plain blade

Catalog number	Item number	Size	Rated current I_n	Pre-arcing I^2t	Power dissipation at I_n	Power dissipation at $0.7 \times I_n$	Total Clearing I^2t @ U_n (L/R=2ms)	Package	Weight
15NH1XLGBAT50	C1068628	1XL	50 A	0.97 kA ² s	21 W	8.6 W	3.05 kA ² s	1	0.7 kg
15NH1XLGBAT63	D1068629	1XL	63 A	2.05 kA ² s	25 W	10.2 W	6.75 kA ² s	1	0.7 kg
15NH1XLGBAT80	E1068630	1XL	80 A	4.6 kA ² s	25.5 W	10.3 W	15 kA ² s	1	0.7 kg
15NH1XLGBAT100	G1068632	1XL	100 A	10.37 kA ² s	26 W	10.5 W	32.35 kA ² s	1	0.7 kg
15NH1XLGBAT125	H1068633	1XL	125 A	18.43 kA ² s	30 W	12.2 W	61.15 kA ² s	1	0.7 kg
15NH2XLGBAT160	Q1068640	2XL	160 A	28.8 kA ² s	38 W	15.4 W	84.6 kA ² s	1	1.05 kg
15NH2XLGBAT125	P1068639	2XL	125 A	14.11 kA ² s	33.7 W	13.6 W	38.2 kA ² s	1	1.05 kg
15NH2XLGBAT200	S1068642	2XL	200 A	54.45 kA ² s	48 W	19.4 W	129.2 kA ² s	1	1.05 kg
15NH2XLGBAT250	T1068643	2XL	250 A	115.2 kA ² s	51.7 W	20.9 W	222.2 kA ² s	1	1.05 kg
15NH3LGBAT160	Z1068648	3L	160 A	28.8 kA ² s	36 W	15 W	72 kA ² s	1	1.69 kg
15NH3LGBAT200	A1068649	3L	200 A	56.45 kA ² s	44 W	18 W	141.1 kA ² s	1	1.69 kg
15NH3LGBAT250	B1068650	3L	250 A	101.25 kA ² s	50 W	20 W	253.1 kA ² s	1	1.69 kg
15NH3LGBAT315	C1068651	3L	315 A	240.8 kA ² s	57 W	23 W	512 kA ² s	1	1.69 kg
15NH3LGBAT350	D1068652	3L	350 A	259.2 kA ² s	63 W	25 W	648 kA ² s	1	1.69 kg
15NH3LGBAT400	E1068653	3L	400 A	361.25 kA ² s	71 W	28 W	903.1 kA ² s	1	1.69 kg
15NH3LGBAT450	Y1204048	3L	450 A	609 kA ² s	68.7 W	27.8 W	1904 kA ² s	1	1.98 kg
15NH3LGBAT500	Z1204049	3L	500 A	778 kA ² s	74.5 W	30.2 W	2433 kA ² s	1	1.98 kg

NH fuse-links gBat 1000V-1500V DC

PRODUCT RANGE



15NH1XLGBAT50B



15NH2XLGBAT125B



15NH3LGBAT160B



15NH3LGBAT500B

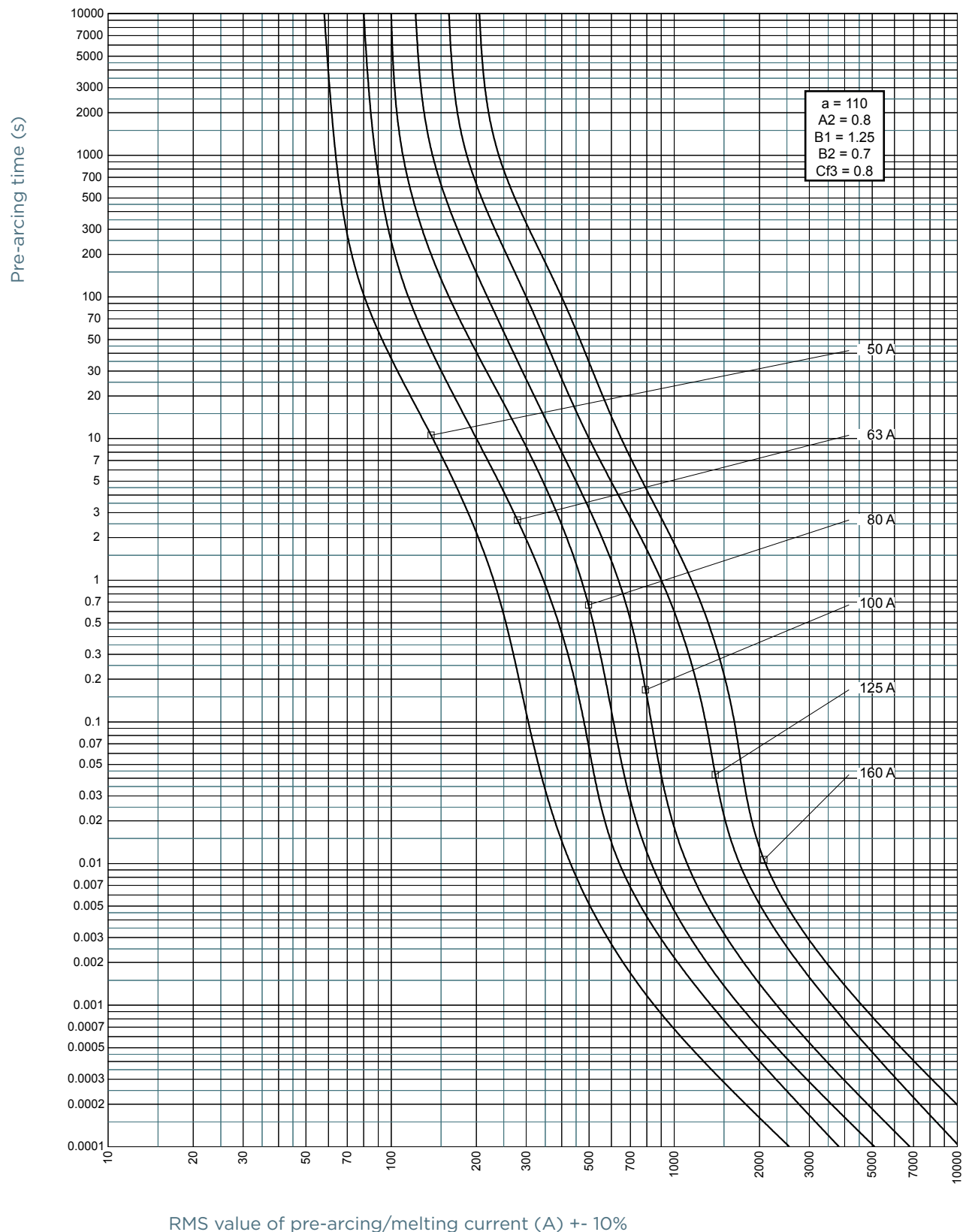
NH-fuse-links gBat 1500VDC direct mounting

Catalog number	Item number	Size	Rated current I_n	Pre-arcing I^2t	Power dissipation at I_n	Power dissipation at $0.7I_n$	Total Clearing I^2t @ U_n (L/R=2ms)	Package	Weight
15NH1XLGBAT50B	J1068634	1XL	50 A	0.97 kA ² s	21 W	8.6 W	3.05 kA ² s	1	0.69 kg
15NH1XLGBAT63B	K1068635	1XL	63 A	2.05 kA ² s	25 W	10.2 W	6.75 kA ² s	1	0.69 kg
15NH1XLGBAT80B	L1068636	1XL	80 A	4.6 kA ² s	25.5 W	10.3 W	15 kA ² s	1	0.69 kg
15NH1XLGBAT100B	M1068637	1XL	100 A	10.37 kA ² s	26 W	10.5 W	32.35 kA ² s	1	0.69 kg
15NH1XLGBAT125B	N1068638	1XL	125 A	18.43 kA ² s	30 W	12.2 W	61.15 kA ² s	1	0.69 kg
15NH2XLGBAT125B	V1068644	2XL	125 A	14.11 kA ² s	33.7 W	13.6 W	38.2 kA ² s	1	1.02 kg
15NH2XLGBAT160B	W1068645	2XL	160 A	28.8 kA ² s	38 W	15.4 W	84.6 kA ² s	1	1.02 kg
15NH2XLGBAT200B	X1068646	2XL	200 A	54.45 kA ² s	48 W	19.4 W	129.2 kA ² s	1	1.02 kg
15NH2XLGBAT250B	Y1068647	2XL	250 A	115.2 kA ² s	51.7 W	20.9 W	222.2 kA ² s	1	1.02 kg
15NH3LGBAT160B	F1068654	3L	160 A	28.8 kA ² s	36 W	15 W	72 kA ² s	1	1.66 kg
15NH3LGBAT200B	G1068655	3L	200 A	56.45 kA ² s	44 W	18 W	141.1 kA ² s	1	1.66 kg
15NH3LGBAT250B	H1068656	3L	250 A	101.25 kA ² s	50 W	20 W	253.1 kA ² s	1	1.66 kg
15NH3LGBAT315B	J1068657	3L	315 A	240.8 kA ² s	57 W	23 W	512 kA ² s	1	1.66 kg
15NH3LGBAT350B	K1068658	3L	350 A	259.2 kA ² s	63 W	25 W	648 kA ² s	1	1.66 kg
15NH3LGBAT400B	L1068659	3L	400 A	361.25 kA ² s	71 W	28 W	903.1 kA ² s	1	1.66 kg
15NH3LGBAT450B	A1204050	3L	450 A	609 kA ² s	68.7 W	27.8 W	1904 kA ² s	1	1.98 kg
15NH3LGBAT500B	B1204051	3L	500 A	778 kA ² s	74.5 W	30.2 W	2433 kA ² s	1	1.98 kg

NH fuse-links gBat 1000V-1500V DC

TIME CURRENT CHARACTERISTIC CURVES

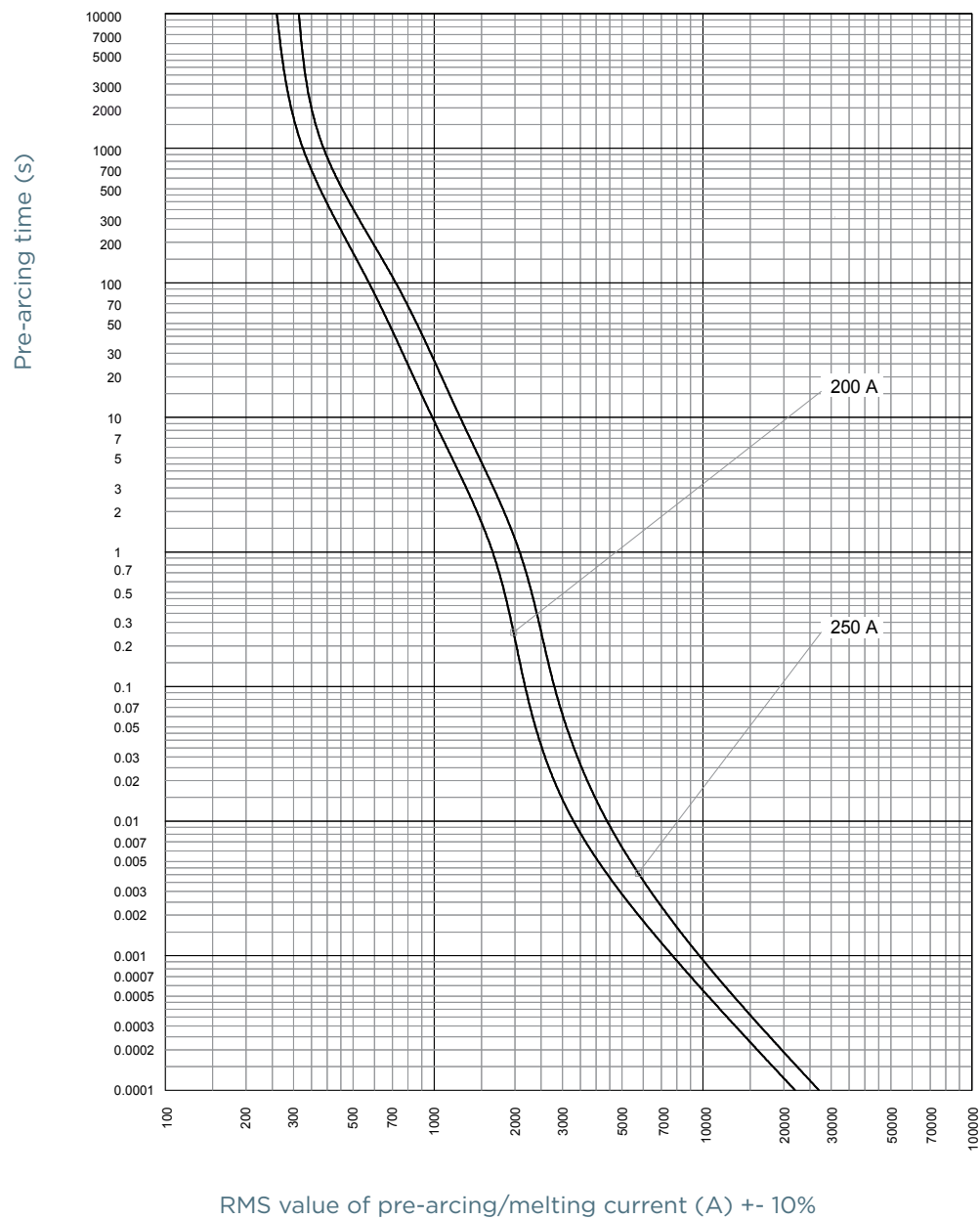
Special purpose gBat fuse link size NH1 1000V 50-160A



NH fuse-links gBat 1000V-1500V DC

TIME CURRENT CHARACTERISTIC CURVES

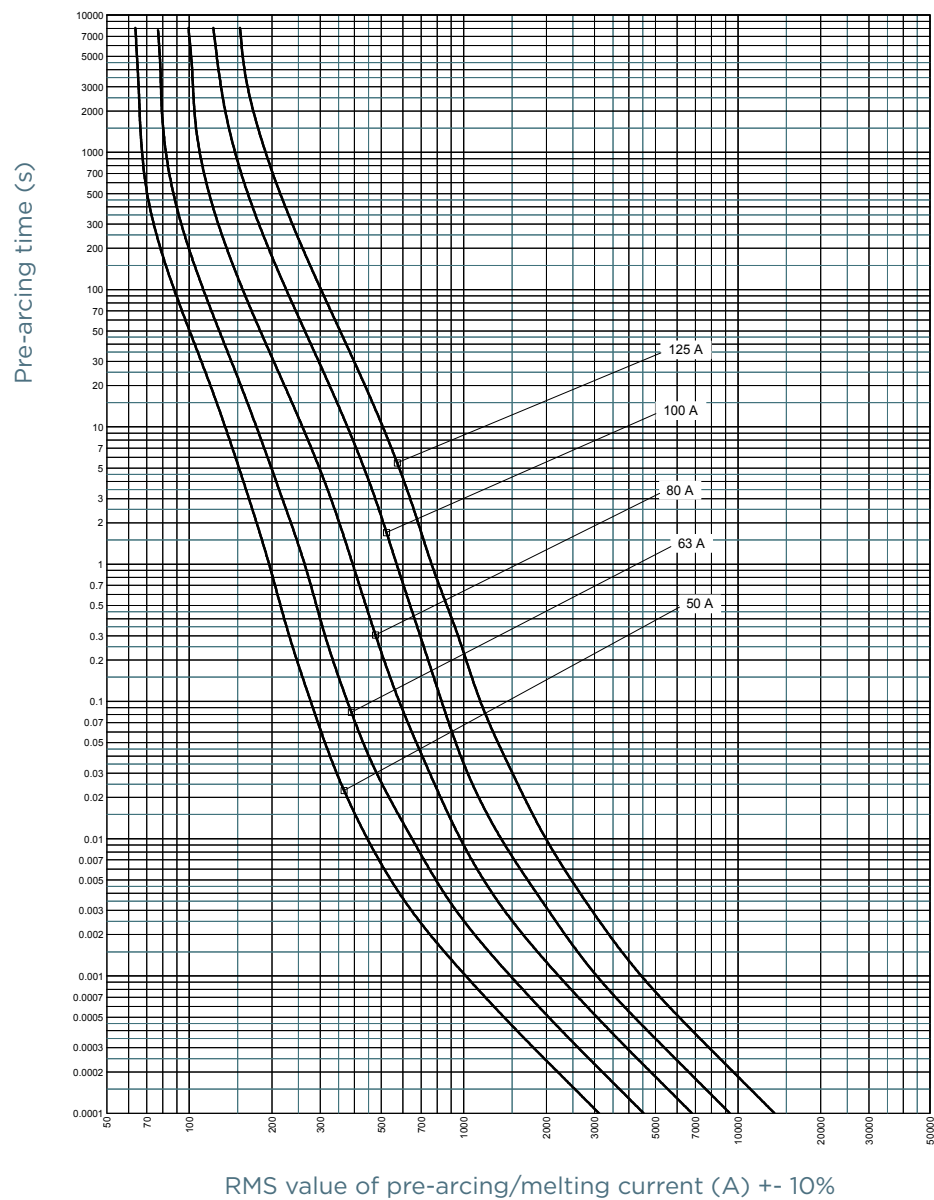
Special purpose gBat fuse link size NH2 1000V 200-250A



NH fuse-links gBat 1000V-1500V DC

TIME CURRENT CHARACTERISTIC CURVES

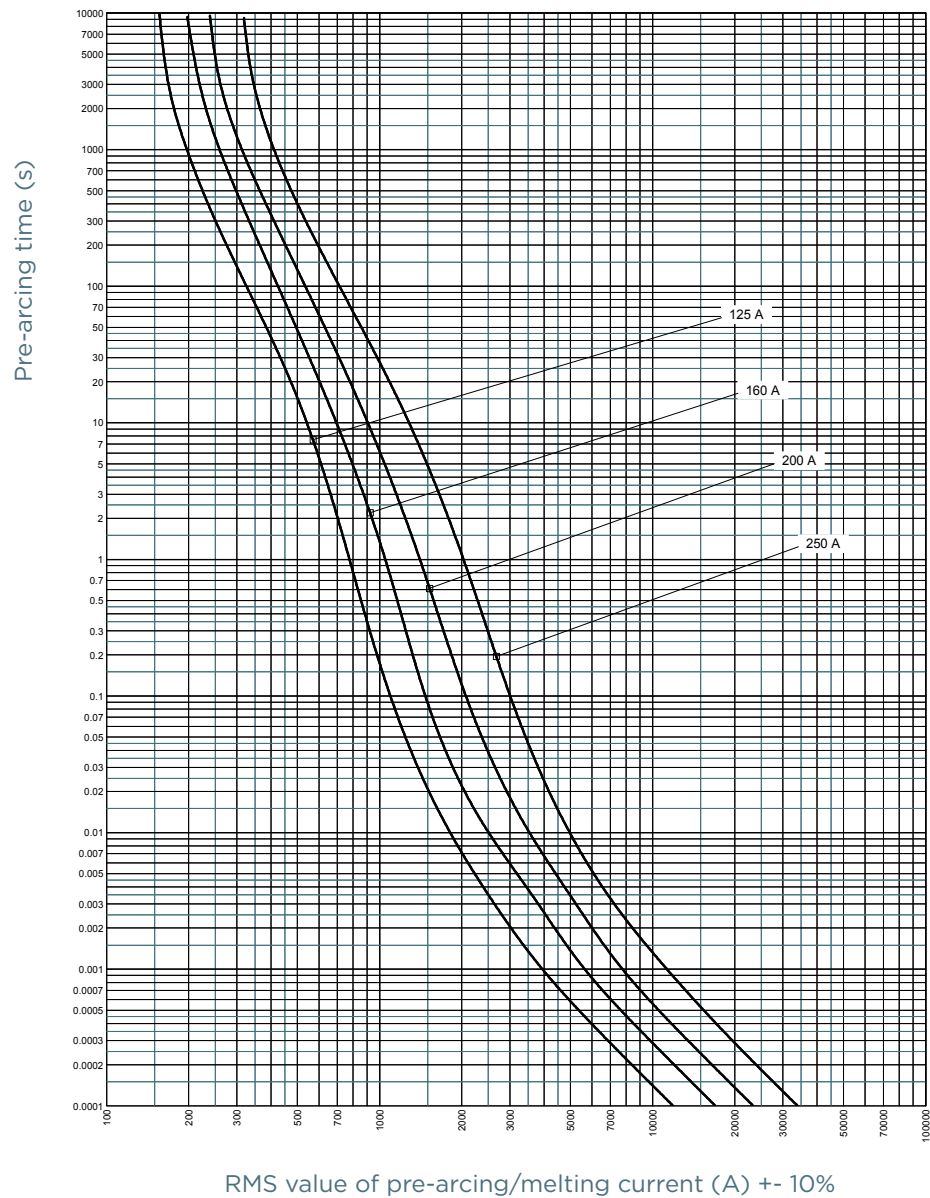
Special purpose gBat fuse link size 1XL 1500V 50-125A



NH fuse-links gBat 1000V-1500V DC

TIME CURRENT CHARACTERISTIC CURVES

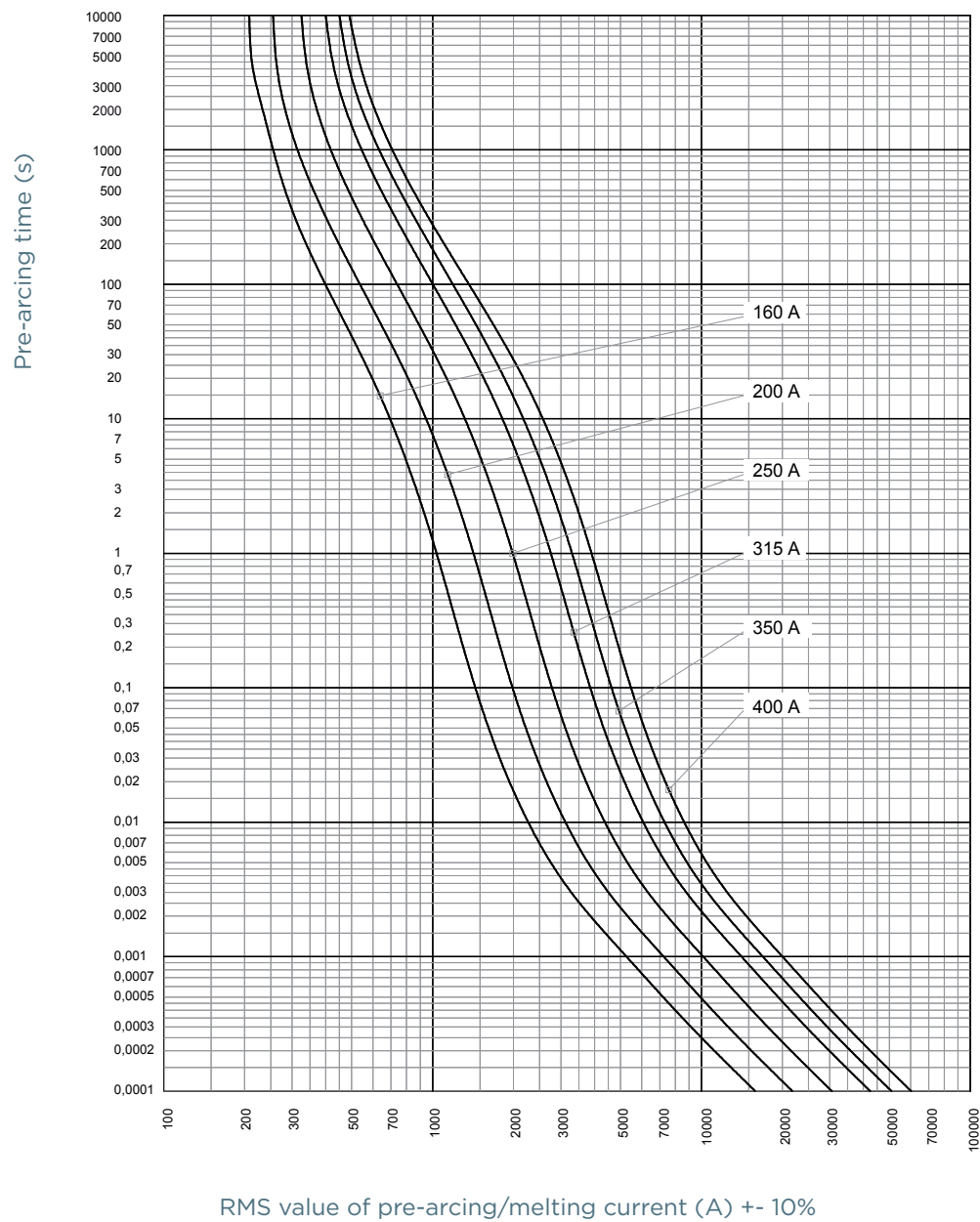
Special purpose gBat fuse link size 2XL 1500V 125-250A



NH fuse-links gBat 1000V-1500V DC

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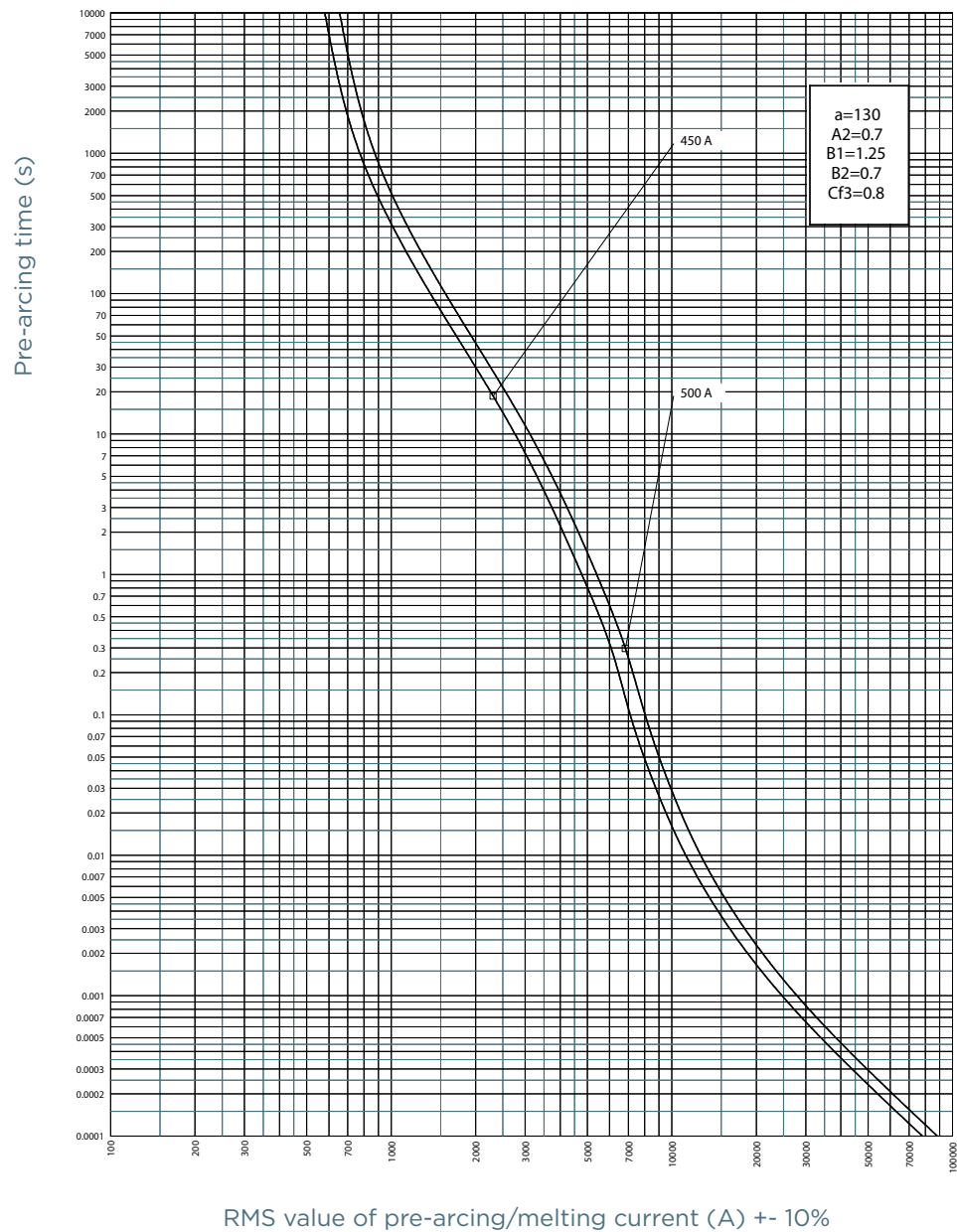
Special purpose gBat fuse link size 3L 1500V 160-400A



NH fuse-links gBat 1000V-1500V DC

TIME CURRENT CHARACTERISTIC CURVES

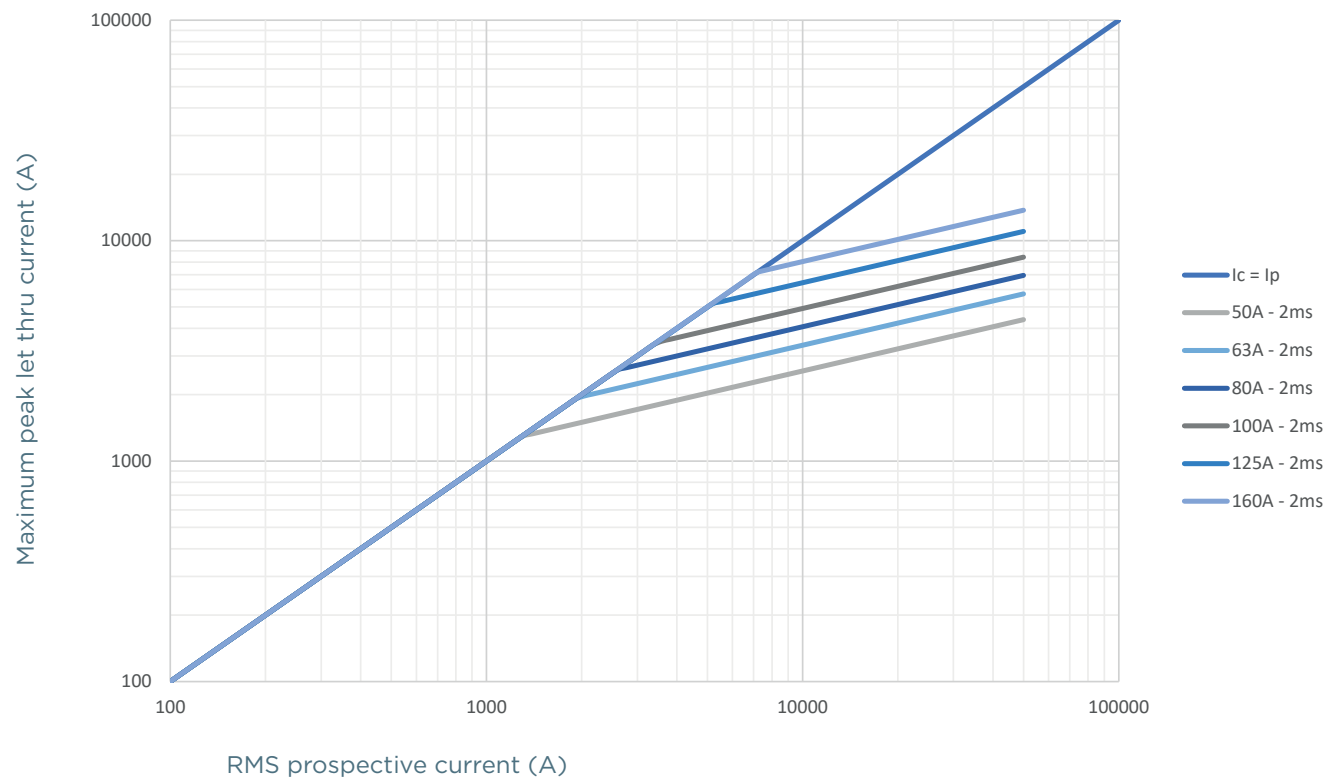
Special purpose gBat fuse link size 3L 1500V 450-500A



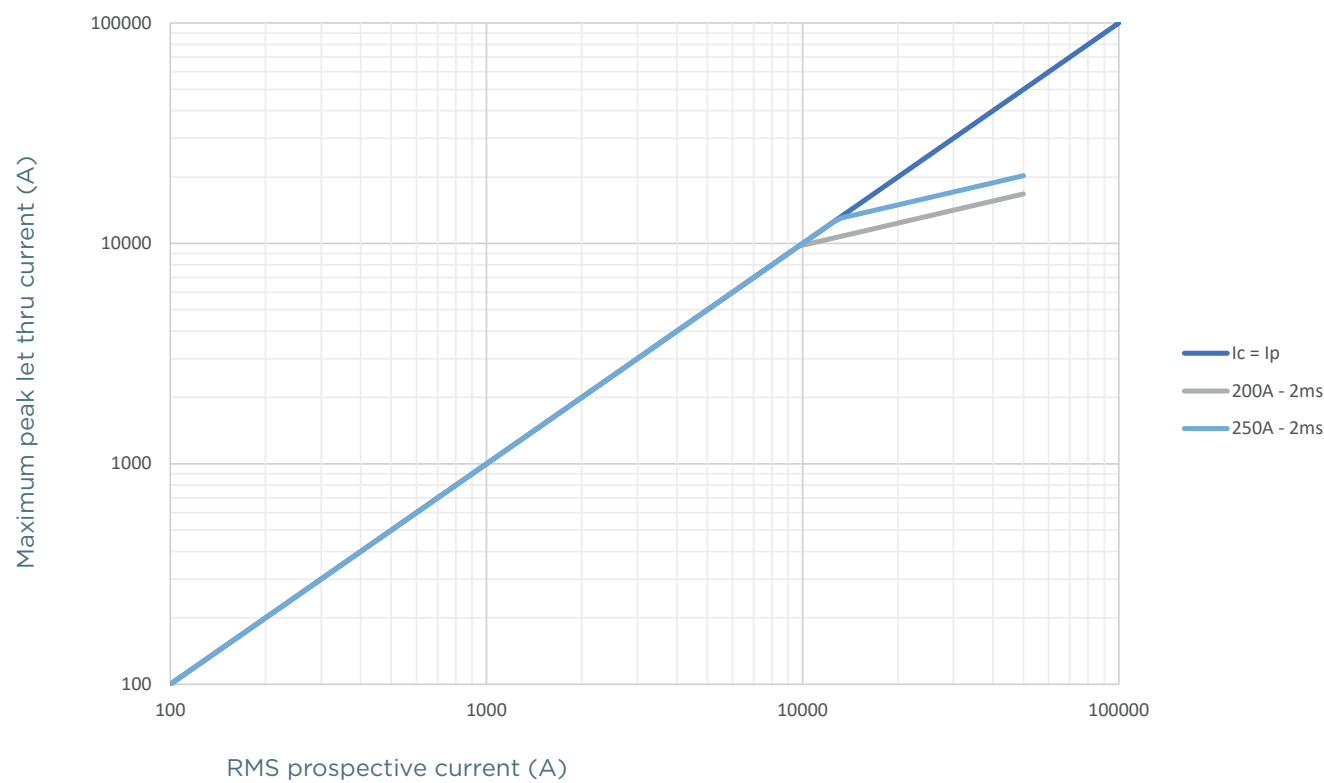
NH fuse-links gBat 1000V-1500V DC

CUT-OFF CURRENT CHARACTERISTIC

Special purpose gBat fuse link size NH1 1000V 50-160A



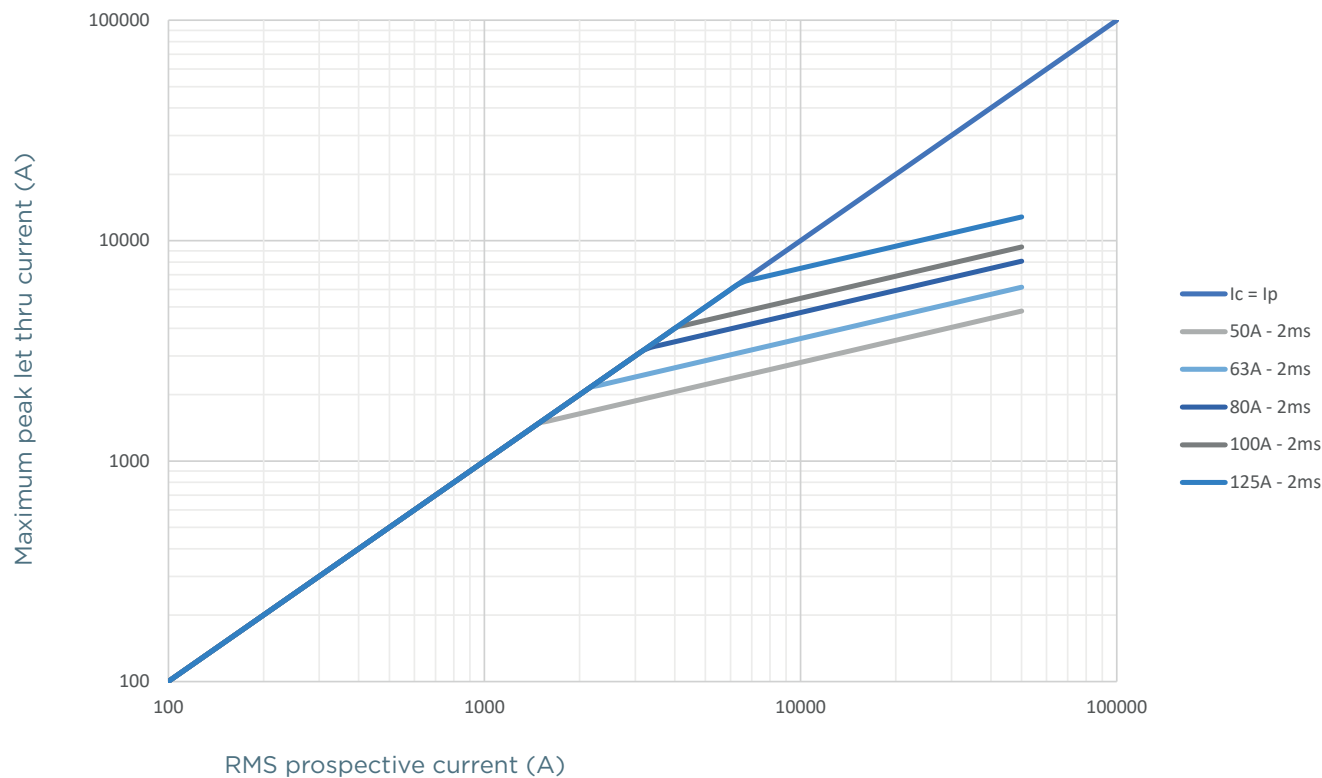
Special purpose gBat fuse link size NH2 1000V 200-250A



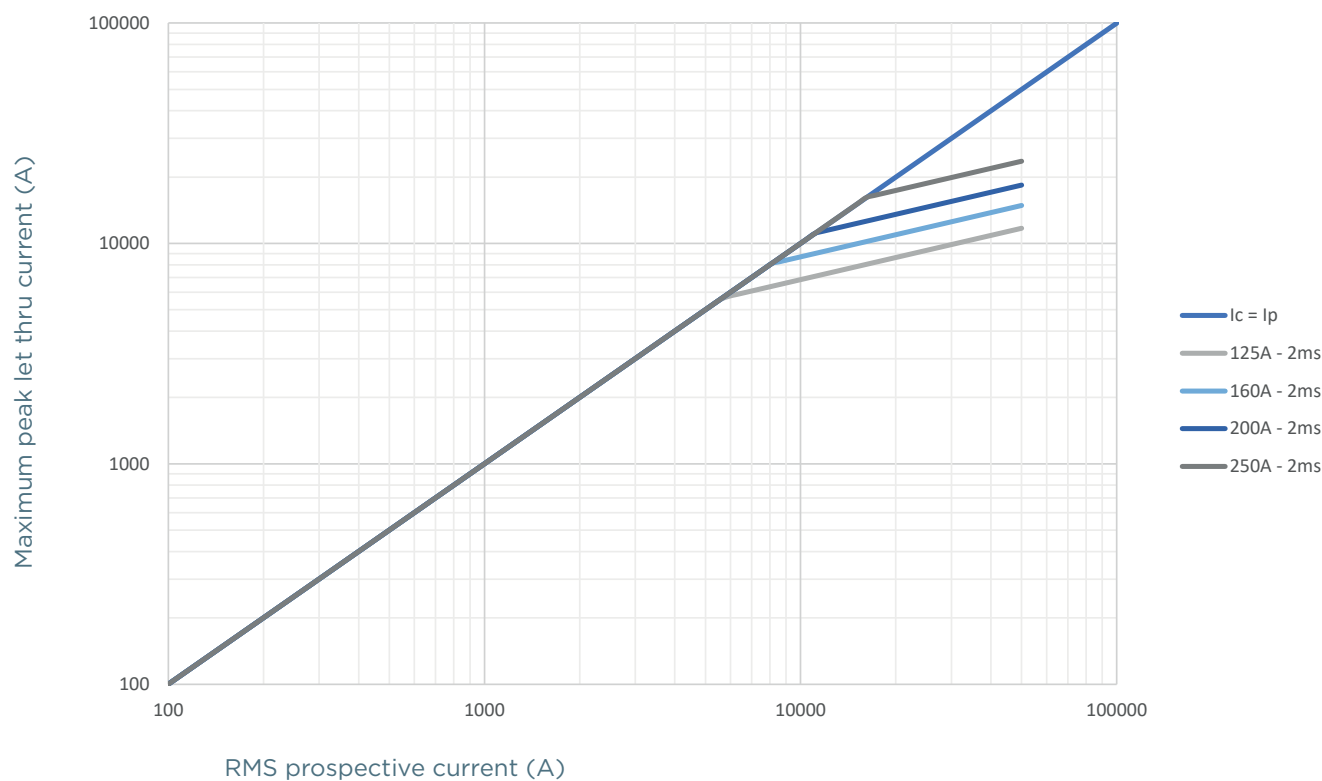
NH fuse-links gBat 1000V-1500V DC

CUT-OFF CURRENT CHARACTERISTIC

Special purpose gBat fuse link size 1XL 1500V 50-125A

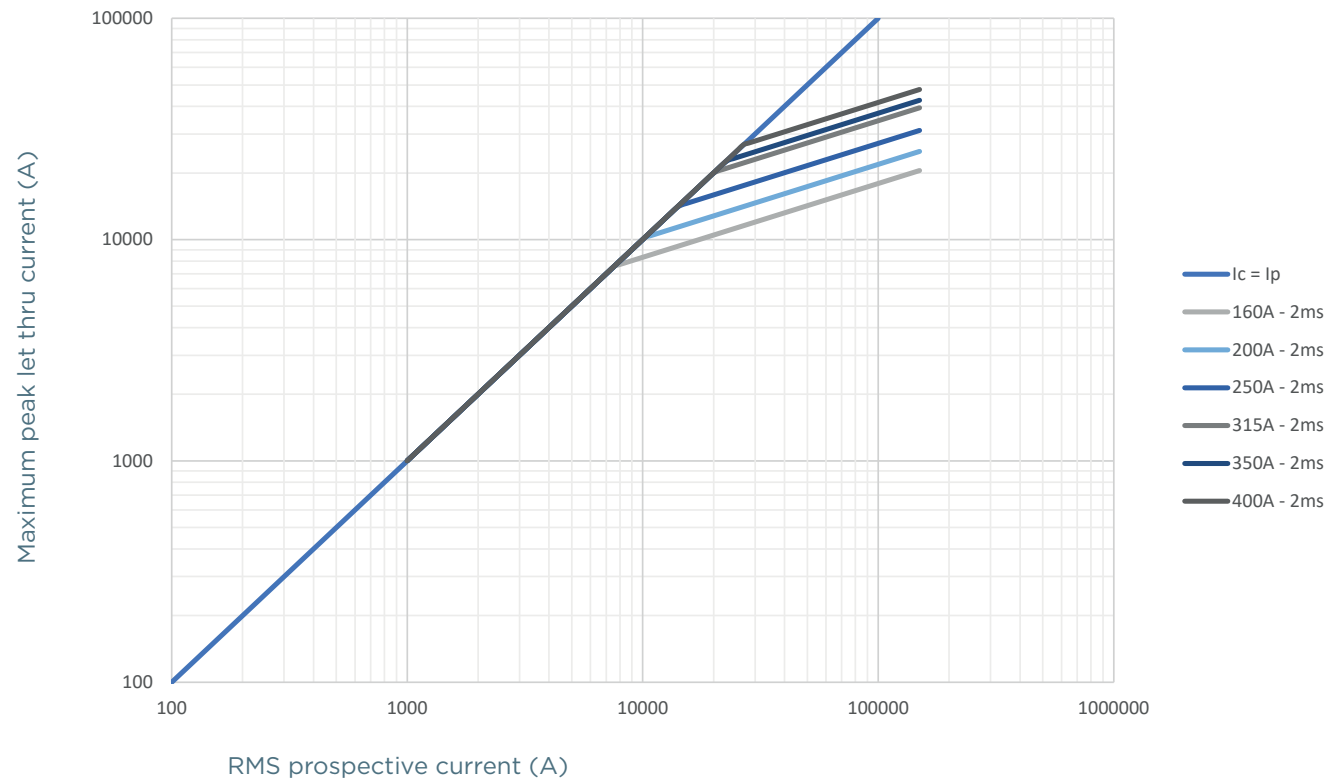


Special purpose gBat fuse link size 2XL 1500V 125-250A



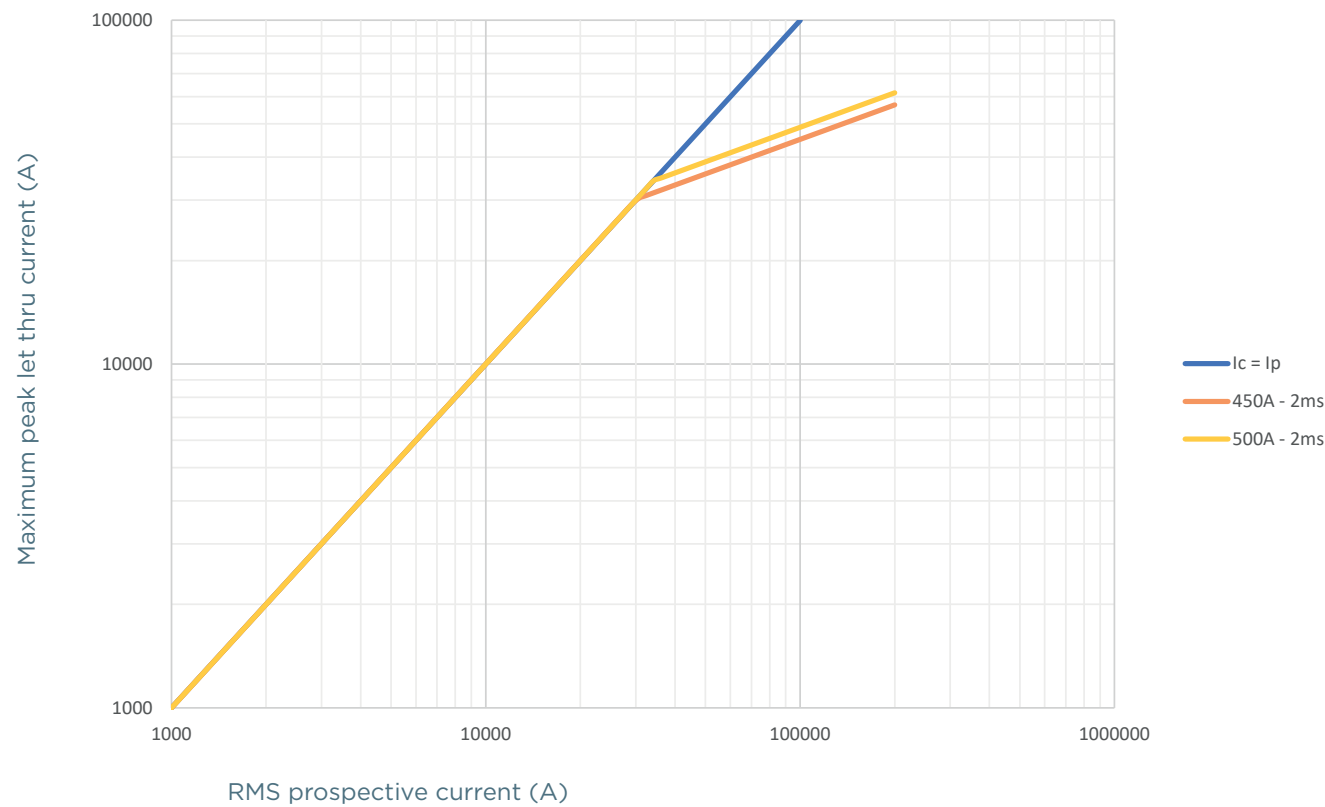
CUT-OFF CURRENT CHARACTERISTIC

Special purpose gBat fuse link size 3L 1500V 160-400A



CUT-OFF CURRENT CHARACTERISTIC

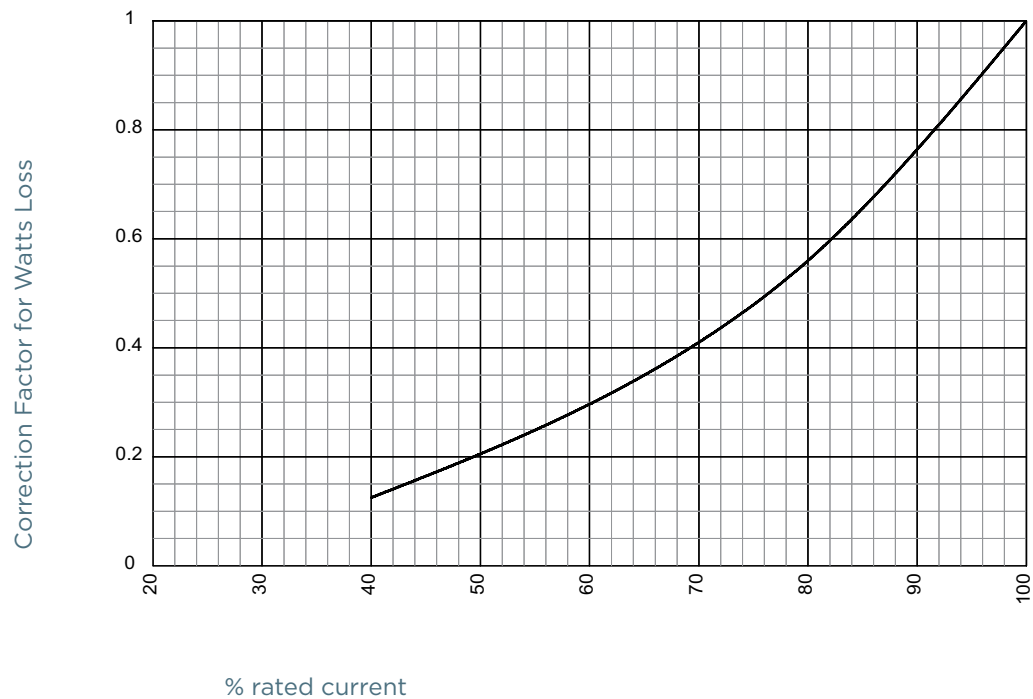
Special purpose gBat fuse link size 3L 1500V 450-500A



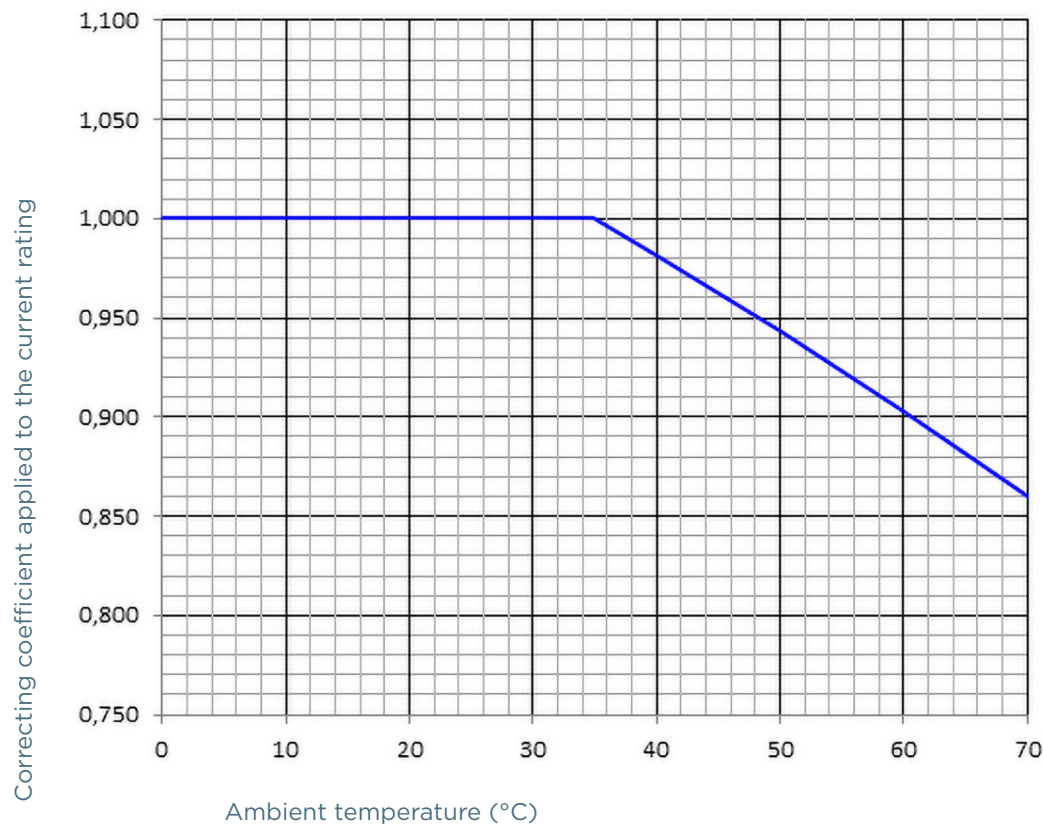
NH fuse-links gBat 1000V-1500V DC

CORRECTION FACTOR

Watts loss vs % rated current



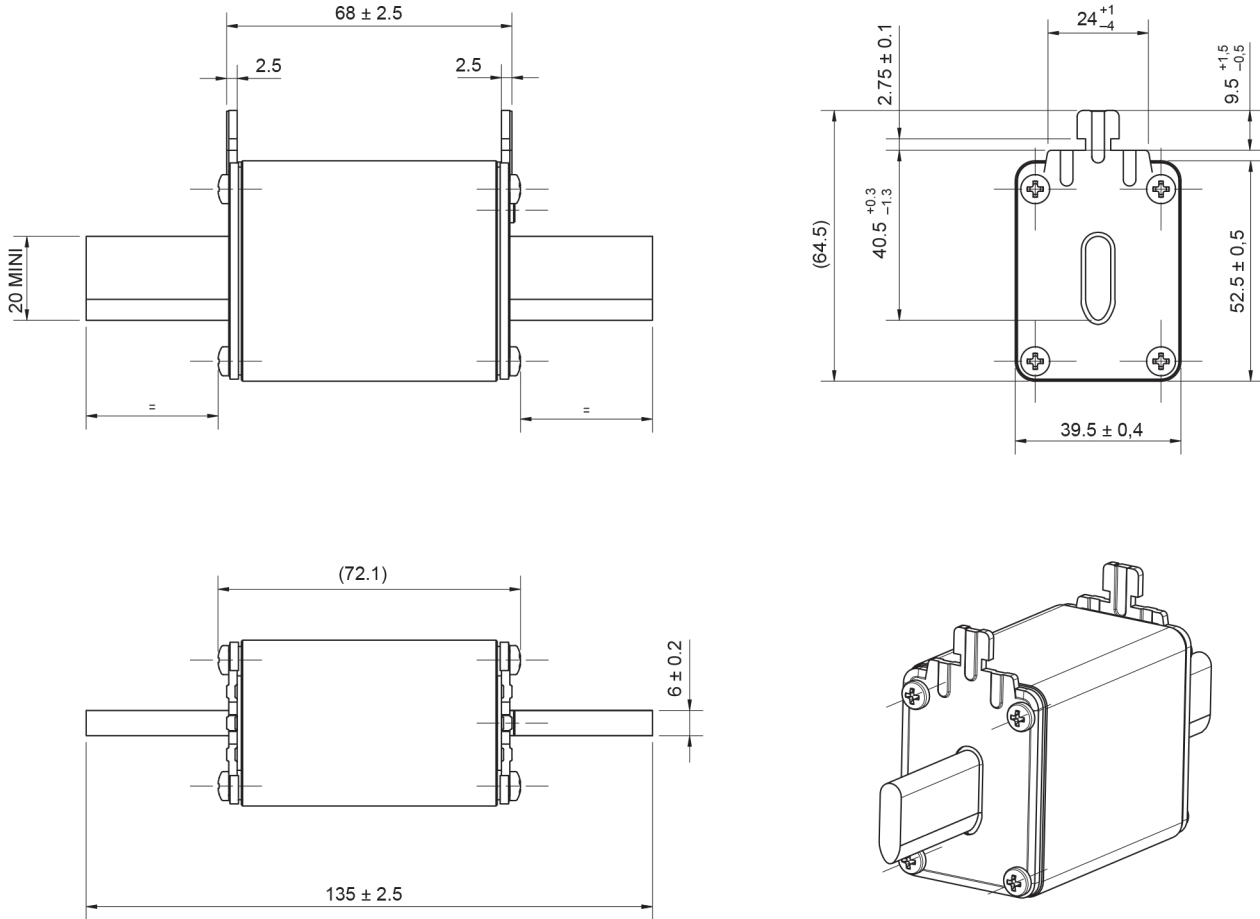
TEMPERATURE DERATING



NH fuse-links gBat 1000V-1500V DC

DIMENSIONS

Special purpose gBat fuse link size NH1 Plain Blade without trip indicator

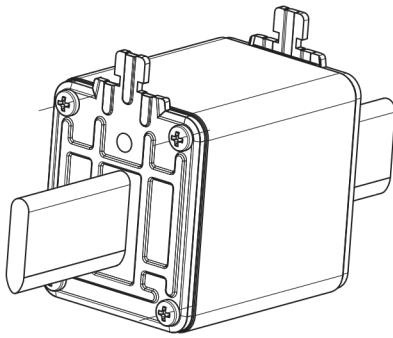
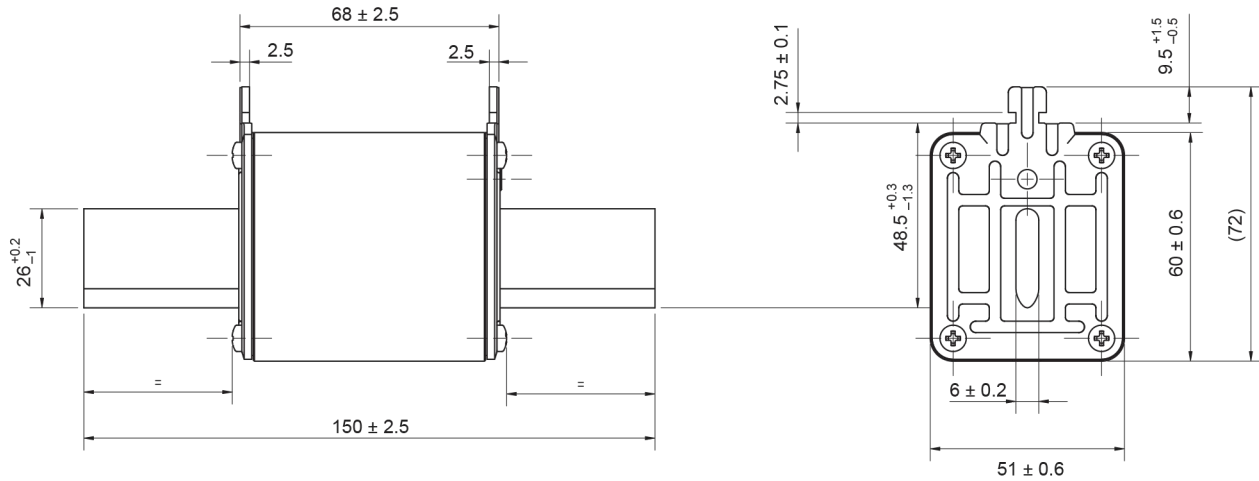


Dimensions in mm

NH fuse-links gBat 1000V-1500V DC

DIMENSIONS

Special purpose gBat fuse link size NH2 Plain Blade without trip indicator

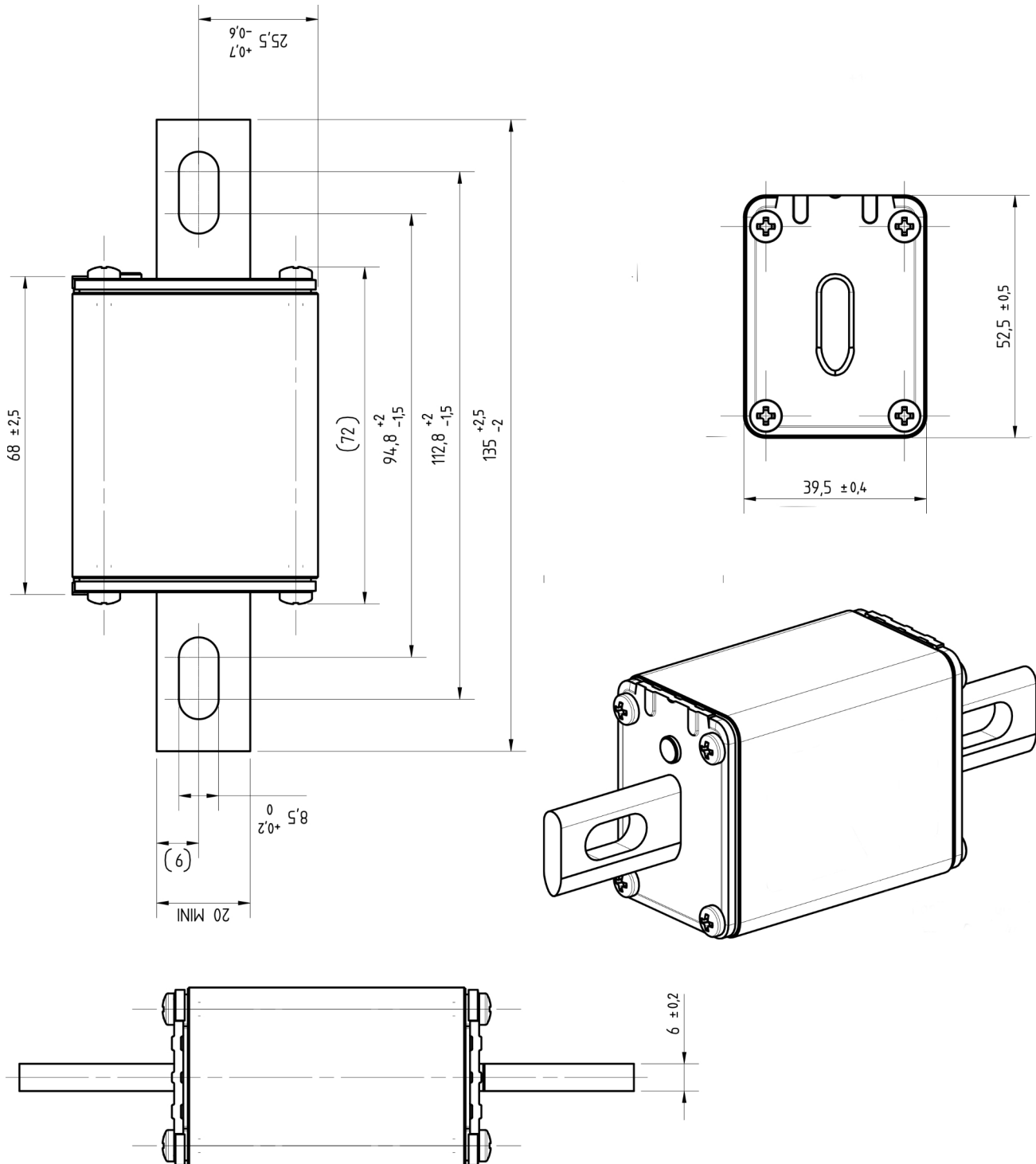


Dimensions in mm

NH fuse-links gBat 1000V-1500V DC

DIMENSIONS

Special purpose gBat fuse link size NH1 Direct Mounting without trip indicator and without lugs

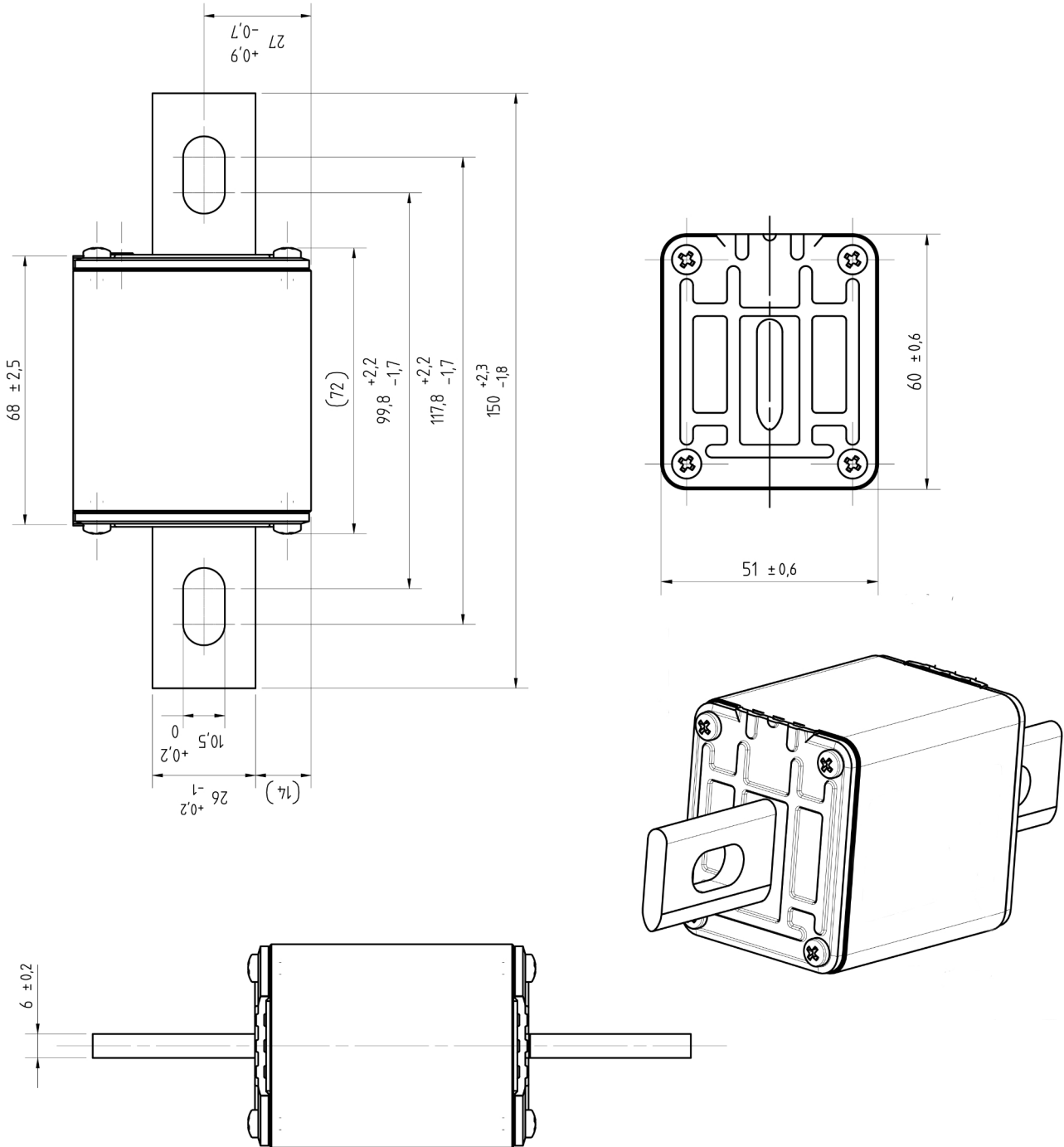


Dimensions in mm

NH fuse-links gBat 1000V-1500V DC

DIMENSIONS

Special purpose gBat fuse link size NH2 Direct Mounting without trip indicator and without lugs

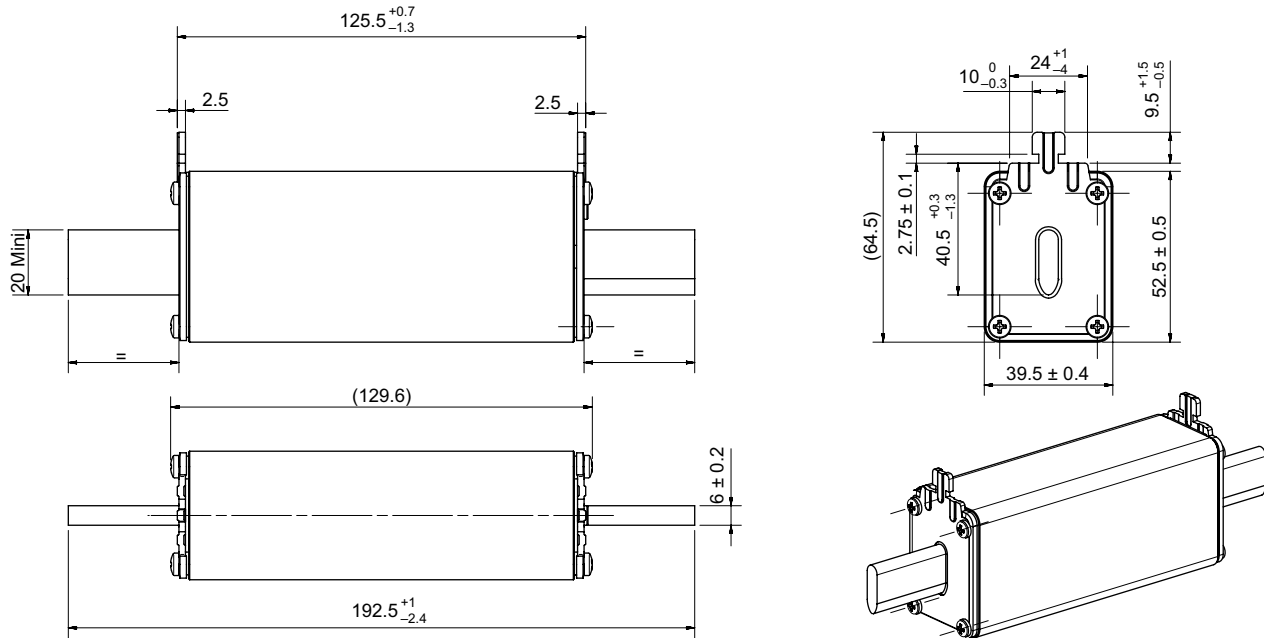


Dimensions in mm

NH fuse-links gBat 1000V-1500V DC

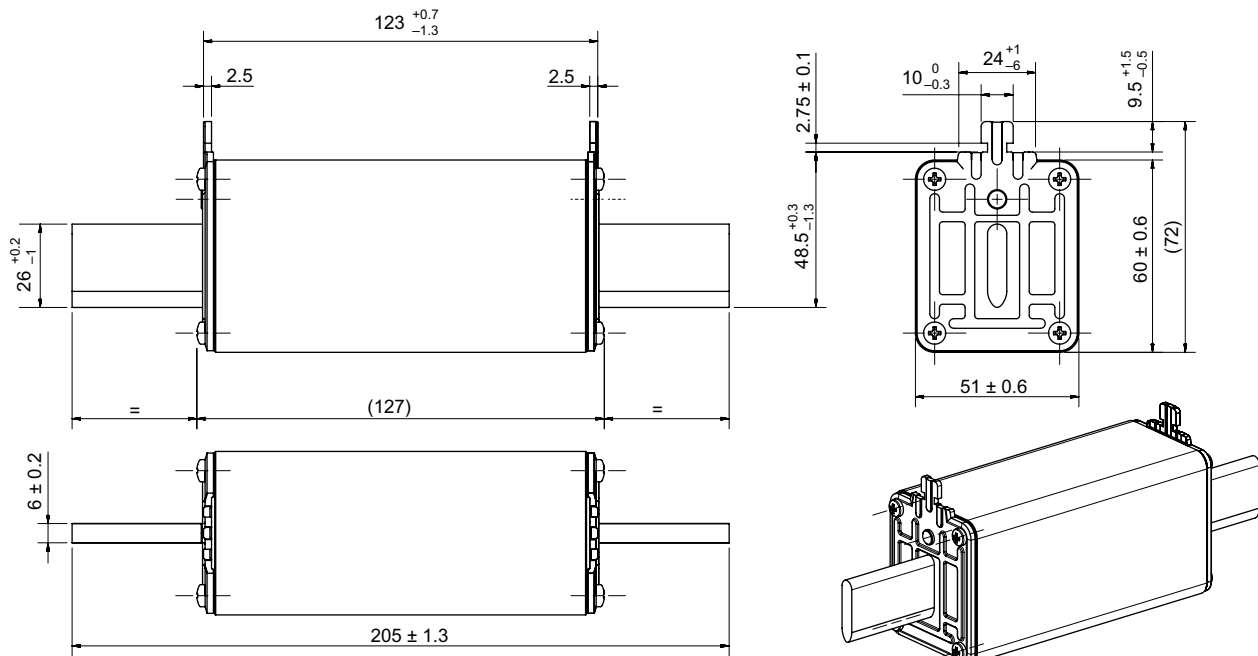
DIMENSIONS

Special purpose gBat fuse link Plain Blade size 1XL



Dimensions in mm

Special purpose gBat fuse link Plain Blade size 2XL

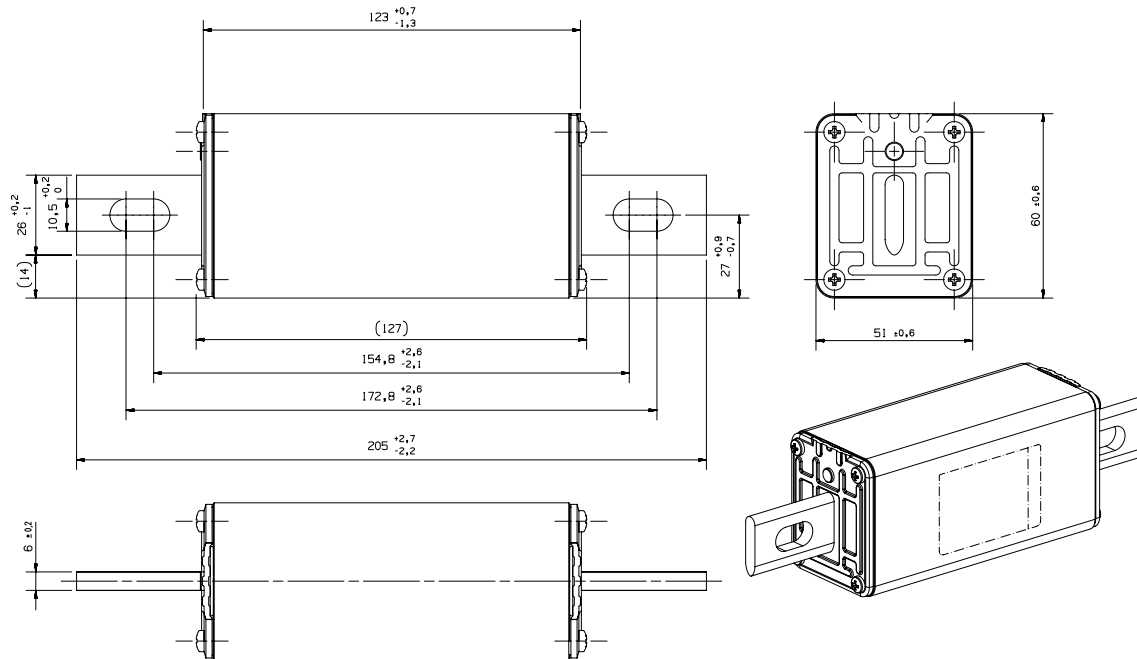


Dimensions in mm

NH fuse-links gBat 1000V-1500V DC

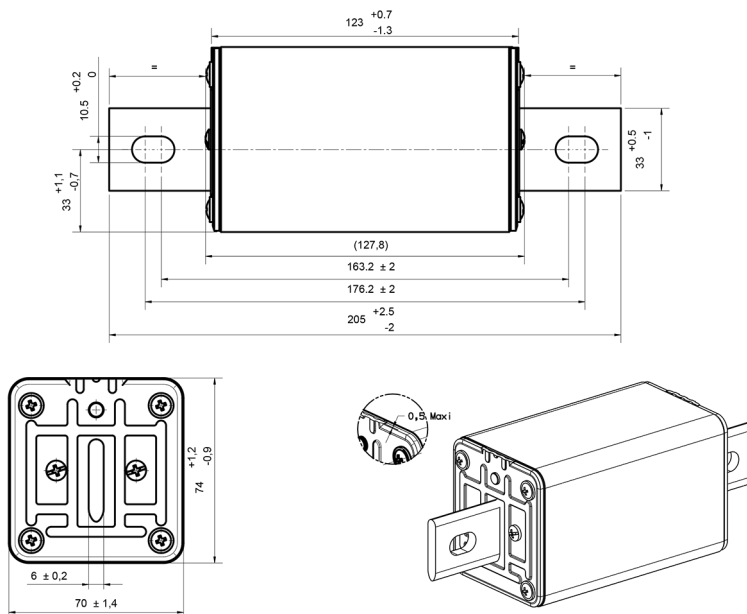
DIMENSIONS

Special purpose gBat fuse-link size 2XL Direct Mounting without striker and without lugs



Dimensions in mm

Special purpose gBat fuse-link size 3L Direct Mounting without striker and without lugs



Dimensions in mm