

HelioProtection® HP15NH

Photovoltaic fuse-links gPV 1500VDC

SPECIAL PURPOSE FUSES

PHOTOVOLTAIC FUSES



Mersen HP15NH photovoltaic (PV) fuse serie was engineered and designed specifically for the protection of photovoltaic systems. Helio-Protection® HP15NH fuse links are designed for the protection of cables in a PV group of chains when a short circuit occurs in a panel (main fuse category). This HelioProtection® main fuse range enlarges our PV fuse links offering on 1XL/2XL/3L sizes having a worldwide acceptance. They are of the gPV type and comply with both IEC 60269-6 and UL 2579 PV standards.

They are available with plain blades, bolted blades for direct mounting with and without striker.

TECHNICAL DATA OVERVIEW

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

FEATURES & BENEFITS

- Global acceptance
- Low fault current interrupting capability
- Temperature cycle withstand capability
- Durable construction for enhanced system longevity
- High efficiency with low power losses
- Available in 3 versions: plain blade, direct mounted, direct mounted with striker

APPLICATIONS

- All photovoltaic applications
- Inverter DC input protection
- Re-combiner applications (sub combiner, array combiner, master combiner)

STANDARDS

- IEC 60269-6
- RoHS compliance
- UL 248-19 for fuses (E358319, Volume 1, Section 1)
- UL 4248-19 for fuseholders, Photovoltaic (E362644 Volume 1)



PRODUCT RANGE



HP15NH2XLGPV125



HP15NH3LGPV250



HP15NH2LGPV250B



HP15NH3LGPV400B



HP15NH3LPV400BI

NH-fuse-links gPV 1500VDC plain blade

Catalog number	Item number	Size	Rated current I_n	Power dissipation at I_n	Power dissipation at $0.7 \times I_n$	Package	Weight
HP15NH1XLGPV50	A1061266	1XL	50 A	21 W	8.6 W	1	0.7 kg
HP15NH1XLGPV63	Z1064508	1XL	63 A	25 W	10.2 W	1	0.7 kg
HP15NH1XLGPV80	A1064509	1XL	80 A	25.5 W	10.3 W	1	0.7 kg
HP15NH1XLGPV100	B1064510	1XL	100 A	26 W	10.5 W	1	0.7 kg
HP15NH1XLGPV125	C1064511	1XL	125 A	30 W	12.2 W	1	0.7 kg
HP15NH2XLGPV125	H1064309	2XL	125 A	33.7 W	13.6 W	1	1.05 kg
HP15NH2XLGPV160	J1064310	2XL	160 A	38 W	15.4 W	1	1.05 kg
HP15NH2XLGPV200	K1064311	2XL	200 A	48 W	19.4 W	1	1.05 kg
HP15NH2XLGPV250	L1064312	2XL	250 A	51.7 W	20.9 W	1	1.05 kg
HP15NH3LGPV160	H1037859	3L	160 A	36 W	15 W	1	1.69 kg
HP15NH3LGPV200	J1037860	3L	200 A	44 W	18 W	1	1.69 kg
HP15NH3LGPV250	K1037861	3L	250 A	50 W	20 W	1	1.69 kg
HP15NH3LGPV315	L1037862	3L	315 A	57 W	23 W	1	1.69 kg
HP15NH3LGPV350	M1037863	3L	350 A	63 W	25 W	1	1.69 kg
HP15NH3LGPV400	N1037864	3L	400 A	71 W	28 W	1	1.69 kg
HP15NH3LGPV450	R1200040	3L	450 A	68.7 W	27.8 W	1	1.98 kg
HP15NH3LGPV500	S1200041	3L	500 A	74.5 W	30.2 W	1	1.98 kg

NH-fuse-links gPV 1500VDC direct mounting

Catalog number	Item number	Size	Rated current I_n	Power dissipation at I_n	Power dissipation at $0.7 \times I_n$	Package	Weight
HP15NH1LGPV50B	C1065431	1XL	50 A	21 W	8.6 W	1	0.69 kg
HP15NH1LGPV63B	D1065432	1XL	63 A	25 W	10.2 W	1	0.69 kg
HP15NH1LGPV80B	E1065433	1XL	80 A	25.5 W	10.3 W	1	0.69 kg
HP15NH1LGPV100B	F1065434	1XL	100 A	26 W	10.5 W	1	0.69 kg
HP15NH1LGPV125B	G1065435	1XL	125 A	30 W	12.2 W	1	0.69 kg
HP15NH2LGPV125B	M1064313	2XL	125 A	33.7 W	13.6 W	1	1.02 kg
HP15NH2LGPV160B	N1064314	2XL	160 A	38 W	15.4 W	1	1.02 kg
HP15NH2LGPV200B	P1064315	2XL	200 A	48 W	19.4 W	1	1.02 kg
HP15NH2LGPV250B	Q1064316	2XL	250 A	51.7 W	20.9 W	1	1.02 kg
HP15NH3LGPV160B	T1048679	3L	160 A	36 W	15 W	1	1.66 kg
HP15NH3LGPV200B	V1048680	3L	200 A	44 W	18 W	1	1.66 kg
HP15NH3LGPV250B	W1048681	3L	250 A	50 W	20 W	1	1.66 kg
HP15NH3LGPV315B	X1048682	3L	315 A	57 W	23 W	1	1.66 kg
HP15NH3LGPV350B	Y1048683	3L	350 A	63 W	25 W	1	1.66 kg
HP15NH3LGPV400B	Z1048684	3L	400 A	71 W	28 W	1	1.66 kg
HP15NH3LGPV450B	T1200042	3L	450 A	68.7 W	27.8 W	1	1.96 kg
HP15NH3LGPV500B	V1200043	3L	500 A	74.5 W	30.2 W	1	1.96 kg

NH-fuse-links gPV 1500VDC direct mounting size 3L with striker

Catalog number	Item number	Rated current I_n	Power dissipation at I_n	Power dissipation at $0.7 \times I_n$	Power dissipation at $0.8 \times I_n$	Package	Weight
HP15NH3LPV160BI	A1057218	160 A	36 W	15 W	20 W	1	1.66 kg
HP15NH3LPV200BI	B1057219	200 A	44 W	18 W	25 W	1	1.66 kg
HP15NH3LPV250BI	C1057220	250 A	50 W	20 W	28 W	1	1.66 kg
HP15NH3LPV315BI	D1057221	315 A	57 W	23 W	32 W	1	1.66 kg
HP15NH3LPV350BI	E1057222	350 A	63 W	25 W	35 W	1	1.66 kg
HP15NH3LPV400BI	F1057223	400 A	71 W	28 W	40 W	1	1.66 kg
HP15NH3LPV450BI	W1200044	450 A	68.7 W	27.8 W	38.5 W	1	1.97 kg
HP15NH3LPV500BI	X1200045	500 A	74.5 W	30.2 W	41.7 W	1	1.97 kg

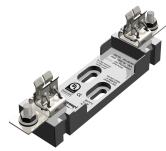
PRODUCT RANGE



MC3E1-5N

Microswitch for NH-fuse-link gPV 1500VDC size 3L (with striker)

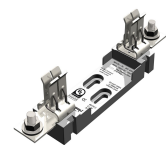
Catalog number	Item number	Rated current I_n	Rated impulse withstand voltage U_{imp}	Indication System	Package	Weight
MC3E1-5N	D310020	5 A	20 kV	standard	3	32 g



HP15FHH1XLA



HP15FHH1XLB



HP15FHH3LA

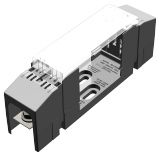


HP15FHH3LB

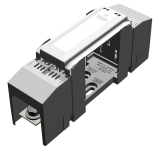
Fuse-bases for NH gPV fuse-links, single pole, 1500VDC, SCCR 30kA

Catalog number	Item number	Size	Rated current I_n	Power acceptance	Rated impulse withstand voltage U_{imp}	Design	Cable termination	Package	Weight
HP15FHH1XLA	J1064586	1XL	250 A	50 W	6 kV	open design, screw mounting, for NH1XL fuse-links with blade contacts	M10 terminal screws M = 32Nm for cable lugs 25-240 mm ²	4	0.48 kg
HP15FHH1XLB	K1064587	1XL	250 A	50 W	6 kV	with touch-safe protection, screw mounting, for NH1XL fuse-links with blade contacts	M10 terminal screws M = 32Nm for cable lugs 25-240 mm ²	4	0.6 kg
HP15FHH3LA	L1064588	2XL-3L	600 A	100 W	6 kV	open design, screw mounting, for NH2XL and NH3L fuse-links with blade contacts	M12 terminal screws M = 32Nm for cable lugs 25-300 mm ²	4	0.78 kg
HP15FHH3LB	M1064589	2XL-3L	600 A	100 W	6 kV	with touch-safe protection, screw mounting, for NH2XL and NH3L fuse-links with blade contacts	M12 terminal screws M = 32Nm for cable lugs 25-300 mm ²	2	0.98 kg

PRODUCT RANGE



COVERFHH1XL



COVERFHH3L

Cover for fuse-base with touch protection

Catalog number	Item number	Design	Package	Weight
COVERFHH1XL	N1064590	pack of 4 gripping lug covers for NH1XL fuse-base with touch protection	1	0.1 kg
COVERFHH3L	P1064591	pack of 2 gripping lug covers for NH3L fuse-base with touch protection	1	0.1 kg

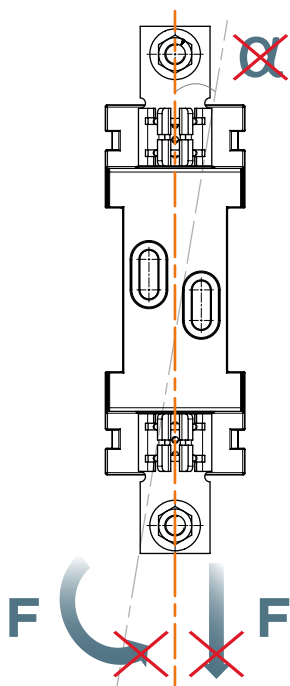
NH Fuse handle for NH fuse links HP15NHXL



NHHANDLE-1500

Catalog number	Item number	Size	Design	Package
NHHANDLE-1500	S1069815	1XL, 2XL, 3L	without arm protection to DIN VDE 0636-2, DIN VDE 608-4	1

MOUNTING RECOMMENDATION

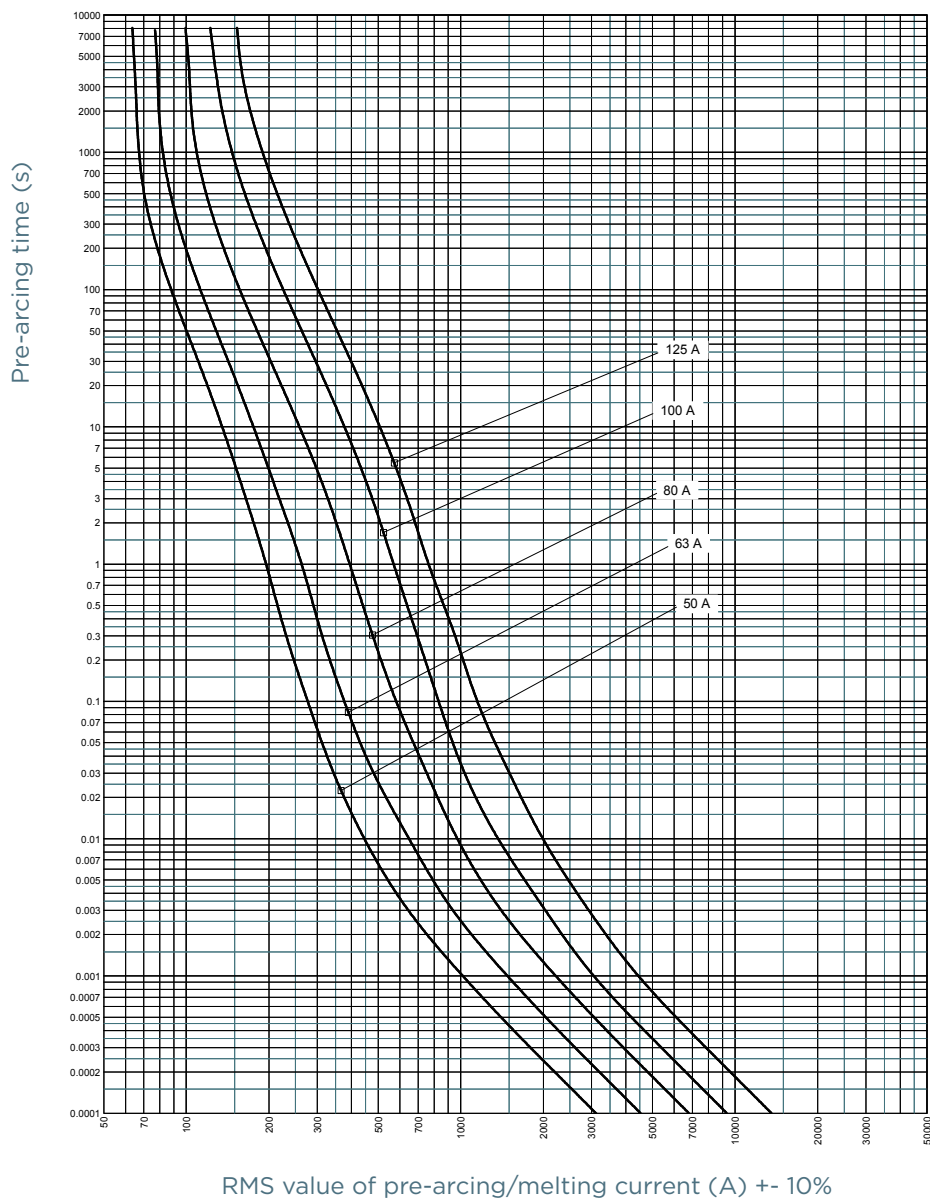


Isostatic set-up :

- the fuse-holder should be mounted vertically aligned,
- the cabling of the fuse and fuse-older system should not engender too heavy traction or flexion force

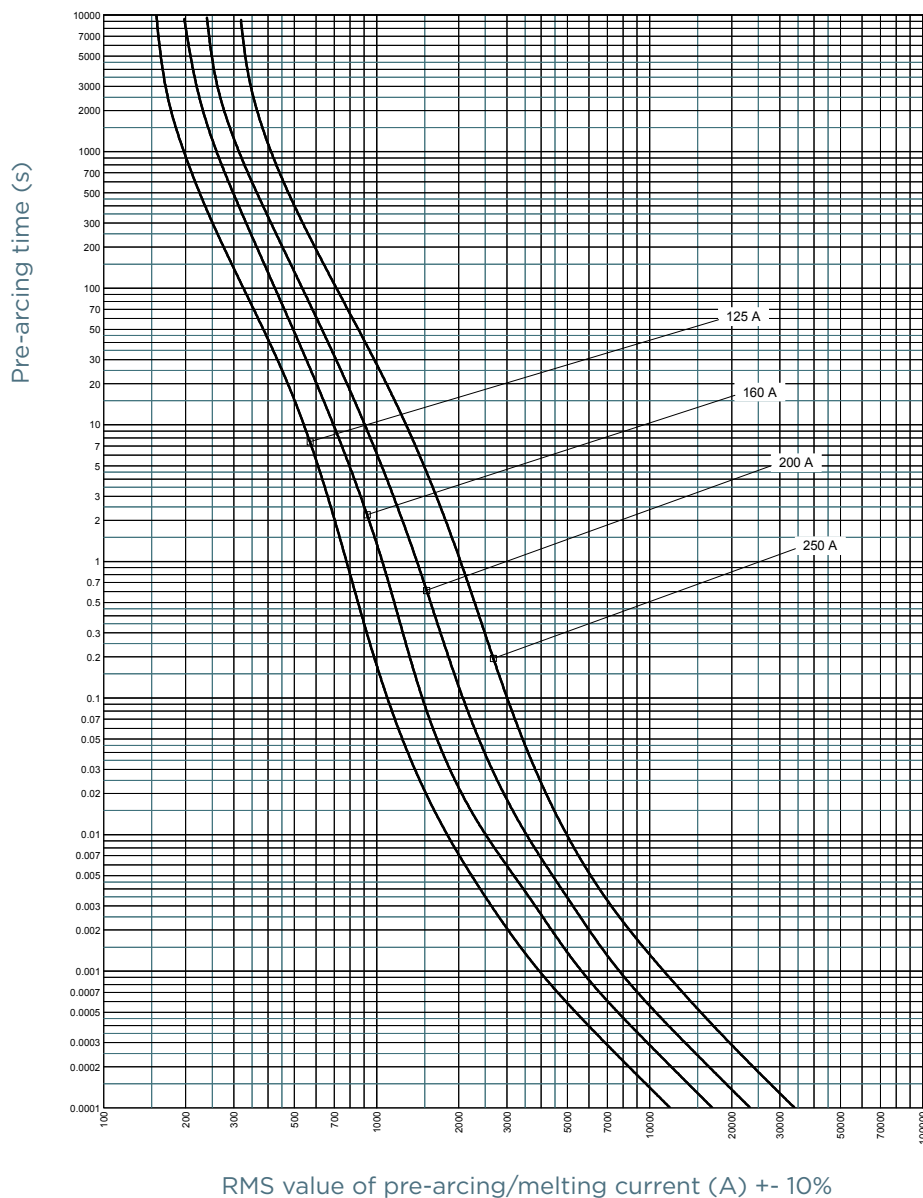
TIME CURRENT CHARACTERISTIC CURVES

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



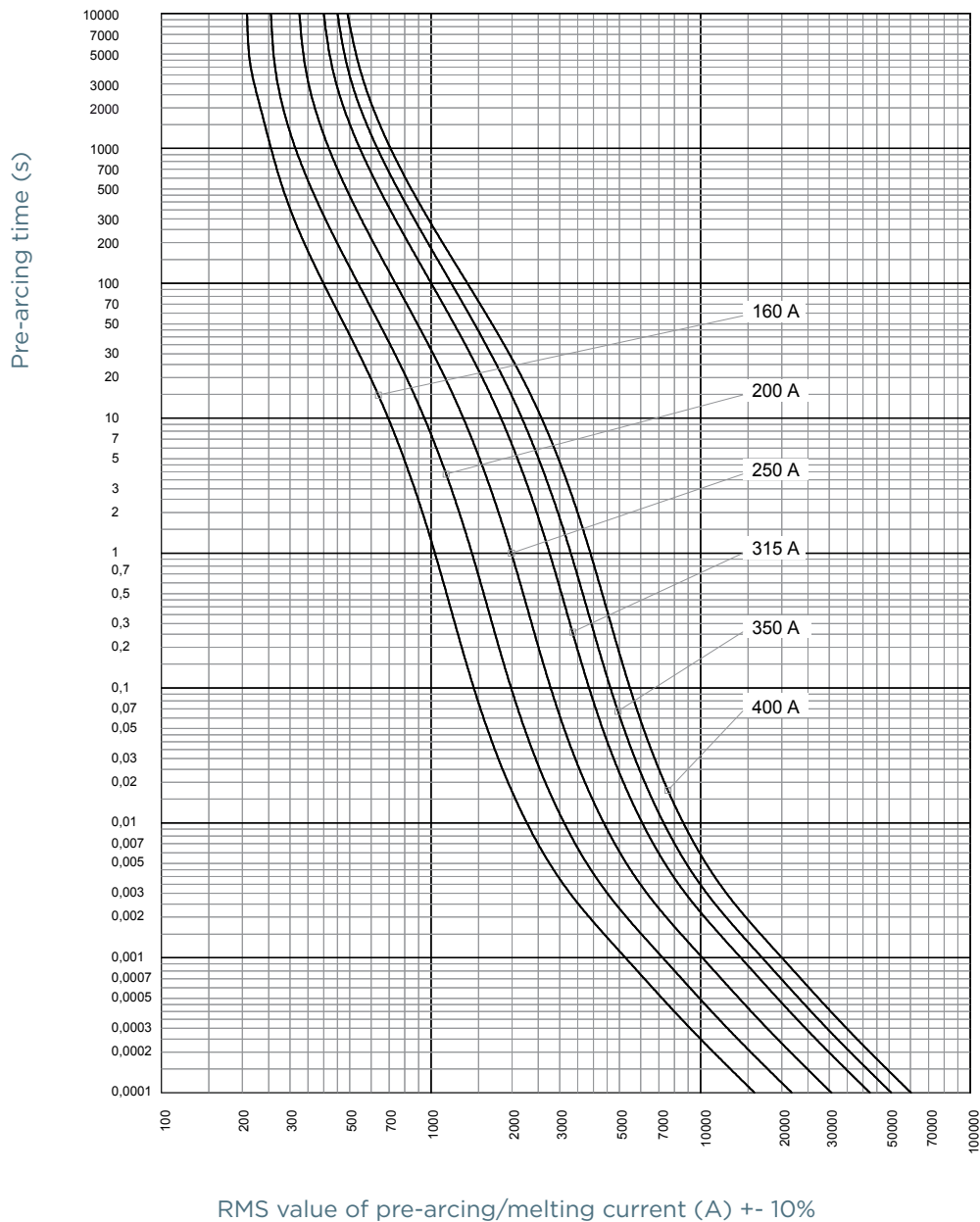
TIME CURRENT CHARACTERISTIC CURVES

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



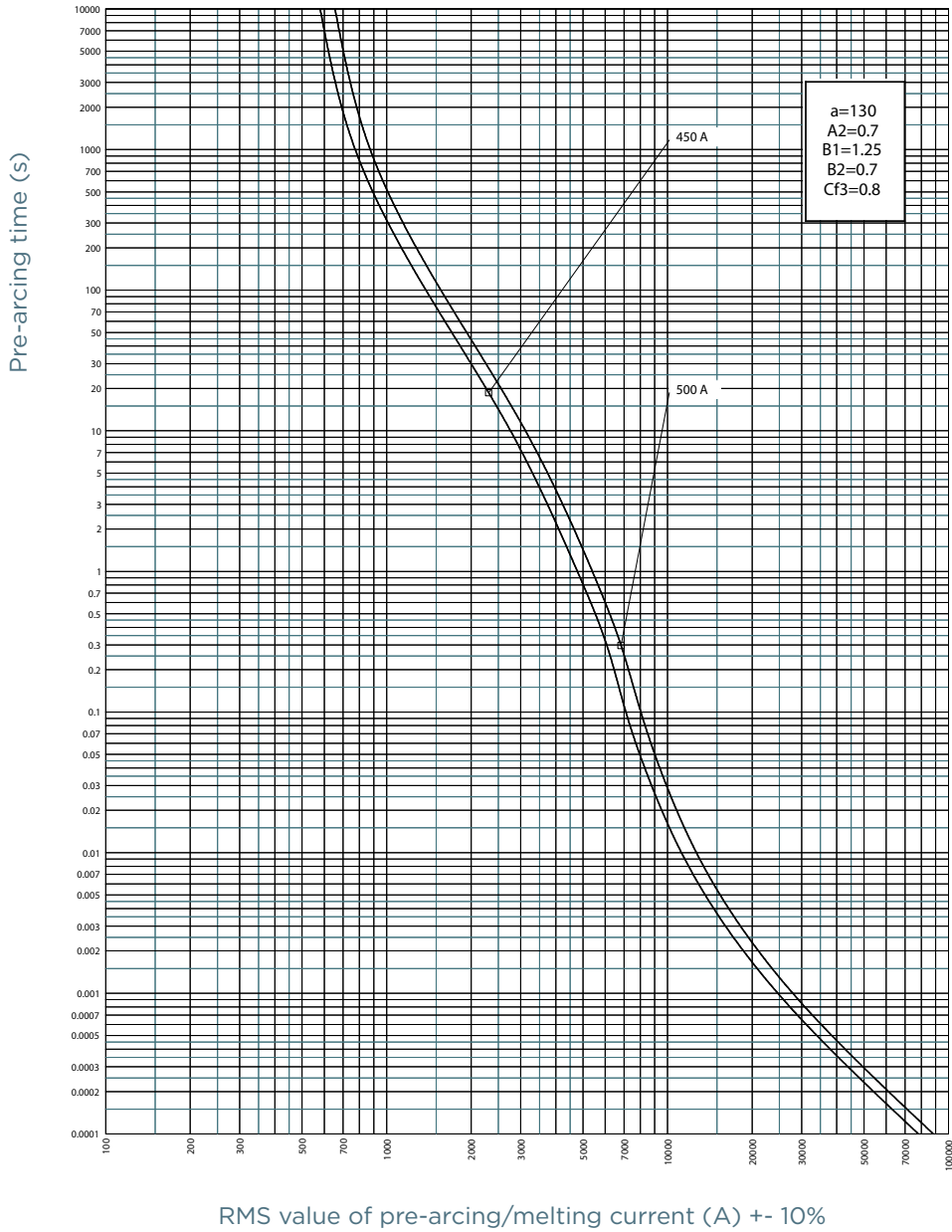
TIME CURRENT CHARACTERISTIC CURVES

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



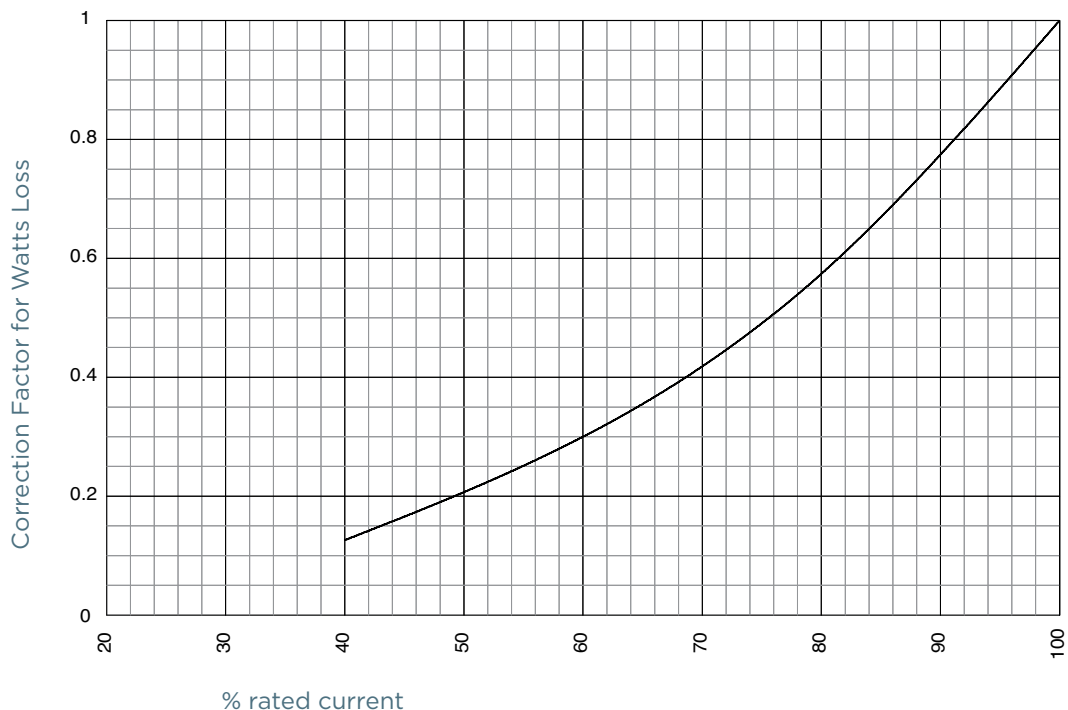
TIME CURRENT CHARACTERISTIC CURVES

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

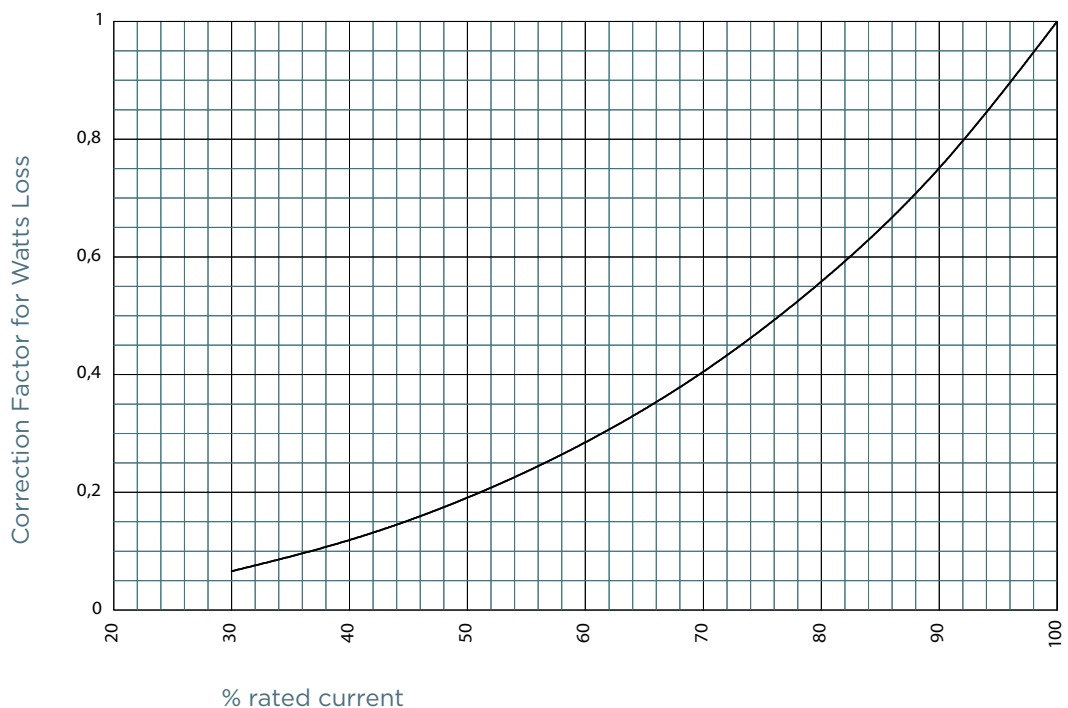


CORRECTION FACTOR

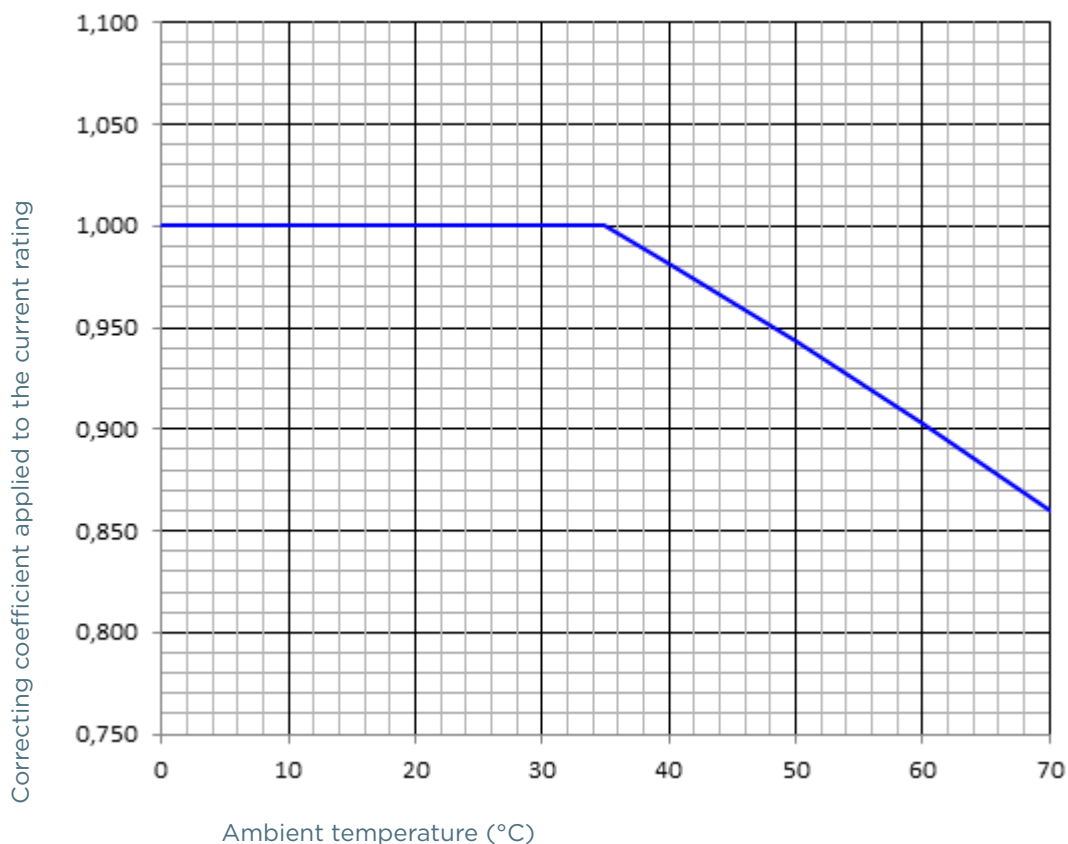
Watts loss vs % rated current 50-400A



Watts loss vs % rated current 450-500A

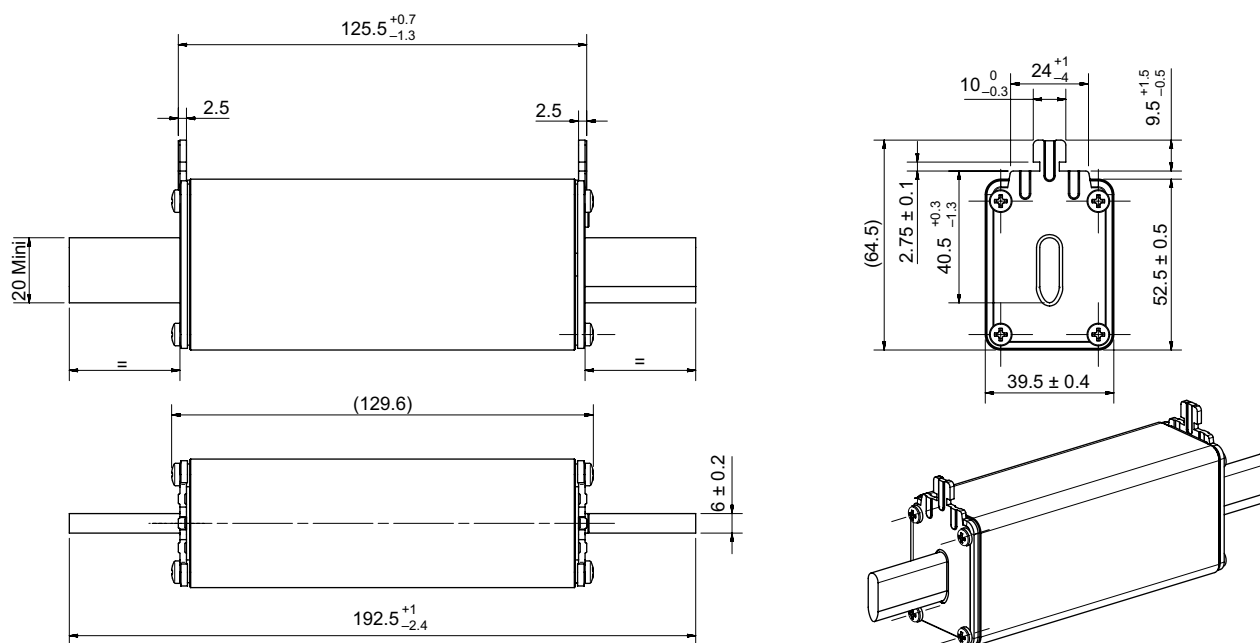


TEMPERATURE DERATING



DIMENSIONS

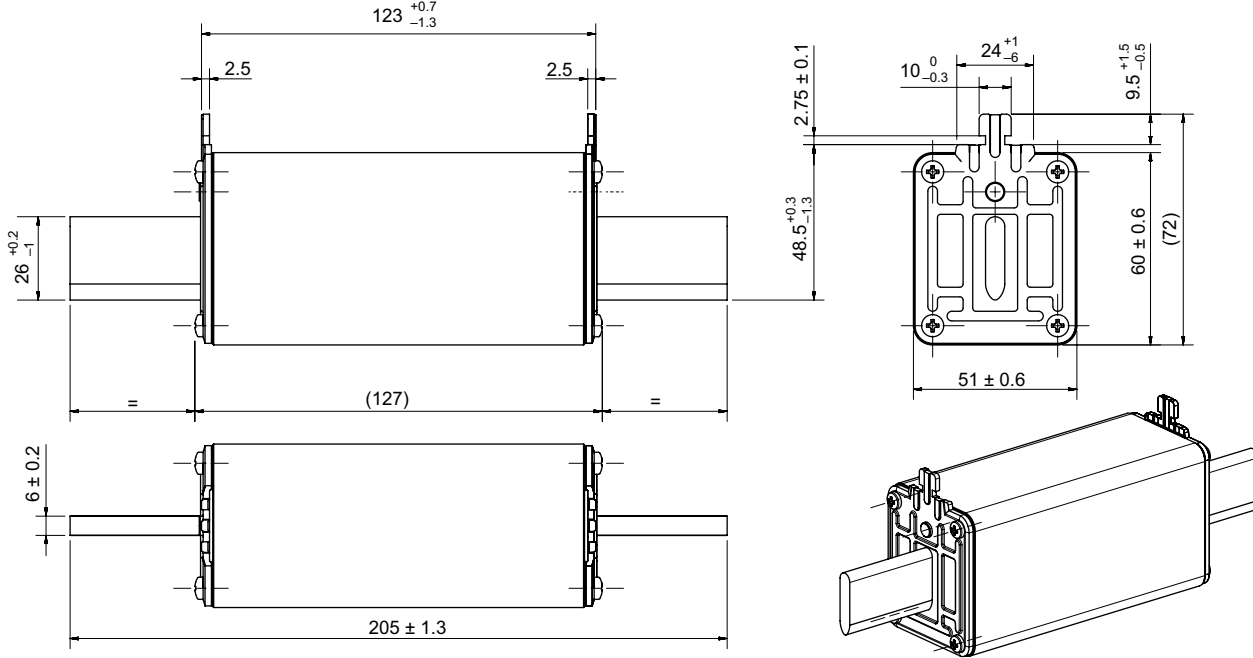
Special purpose gPV fuse link Plain Blade size 1XL



Dimensions in mm

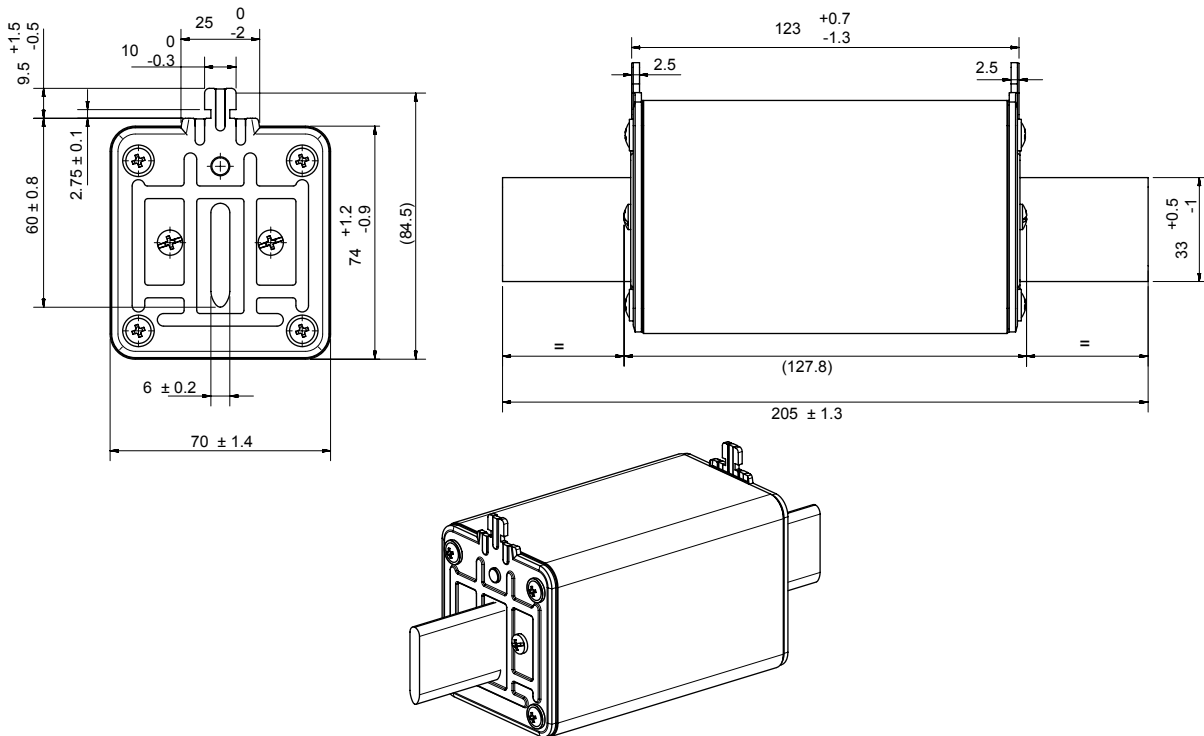
DIMENSIONS

Special purpose gPV fuse link Plain Blade size 2XL



Dimensions in mm

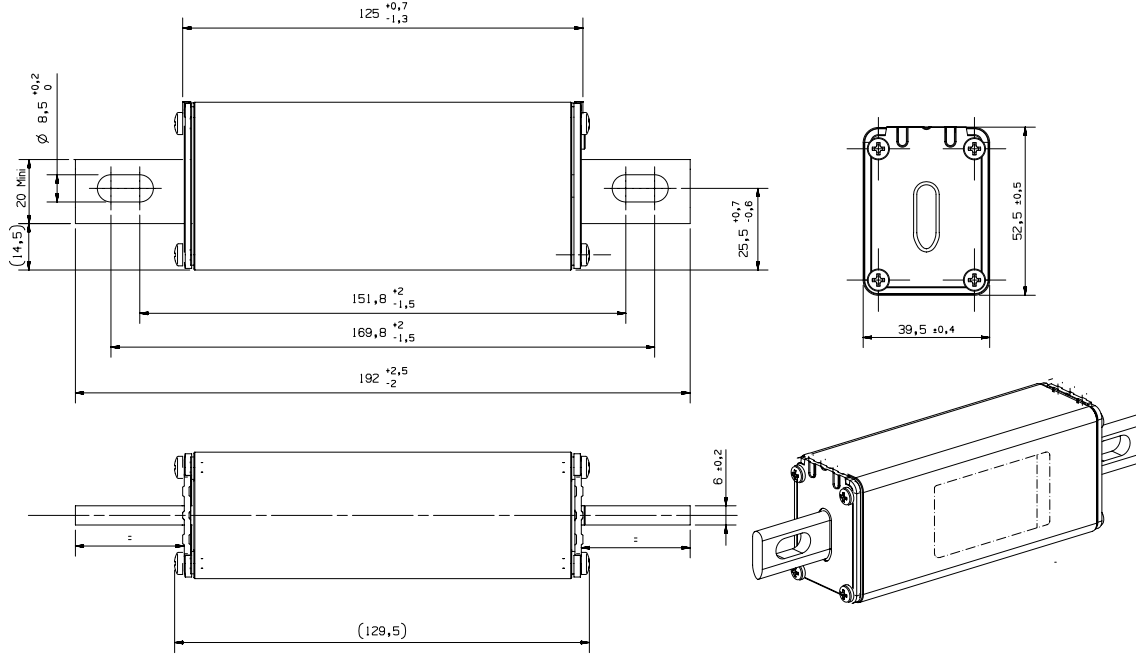
Special purpose gPV fuse-link size 3L Plain Blade without striker



Dimensions in mm

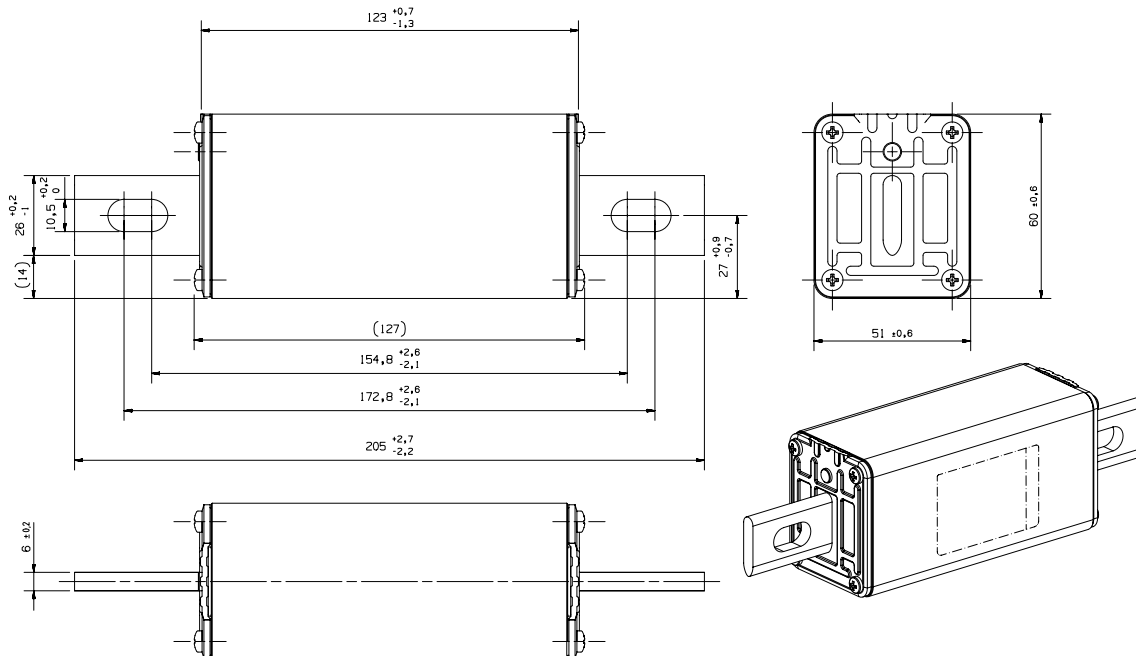
DIMENSIONS

Special purpose gPV fuse-link size 1XL Direct Mounting without striker and without lugs



Dimensions in mm

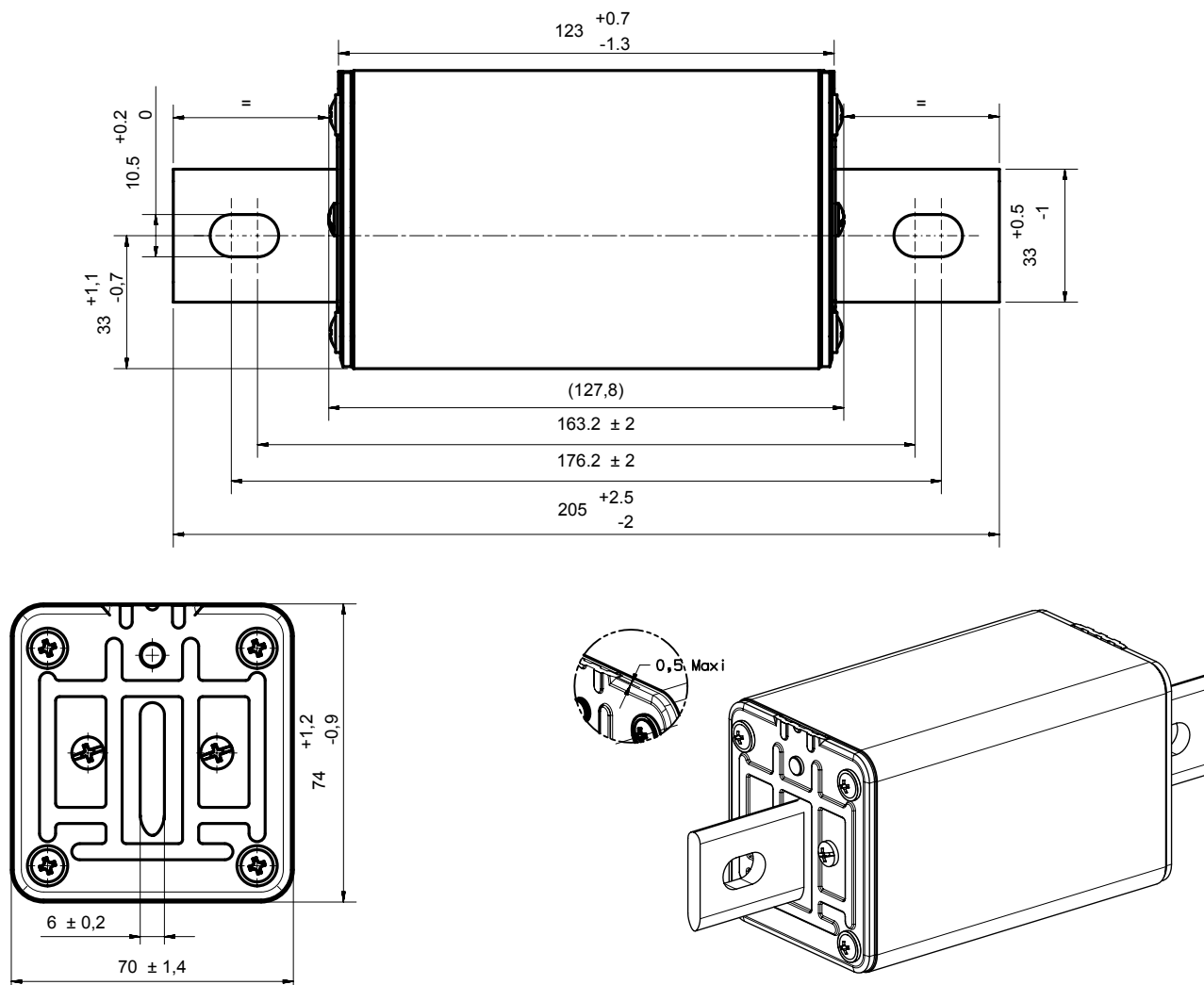
Special purpose gPV fuse-link size 2XL Direct Mounting without striker and without lugs



Dimensions in mm

DIMENSIONS

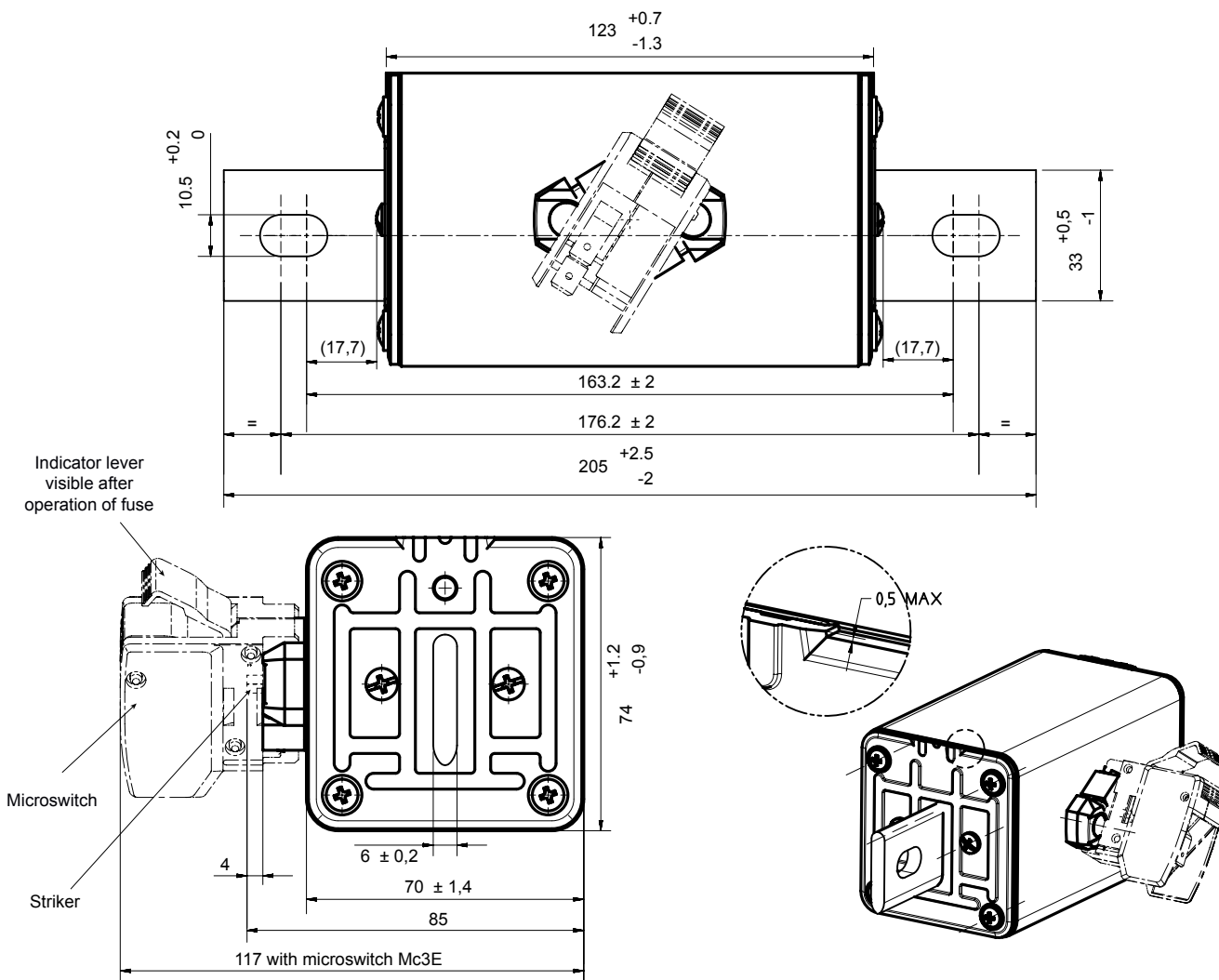
Special purpose gPV fuse-link size 3L Direct Mounting without striker and without lugs



Dimensions in mm

DIMENSIONS

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



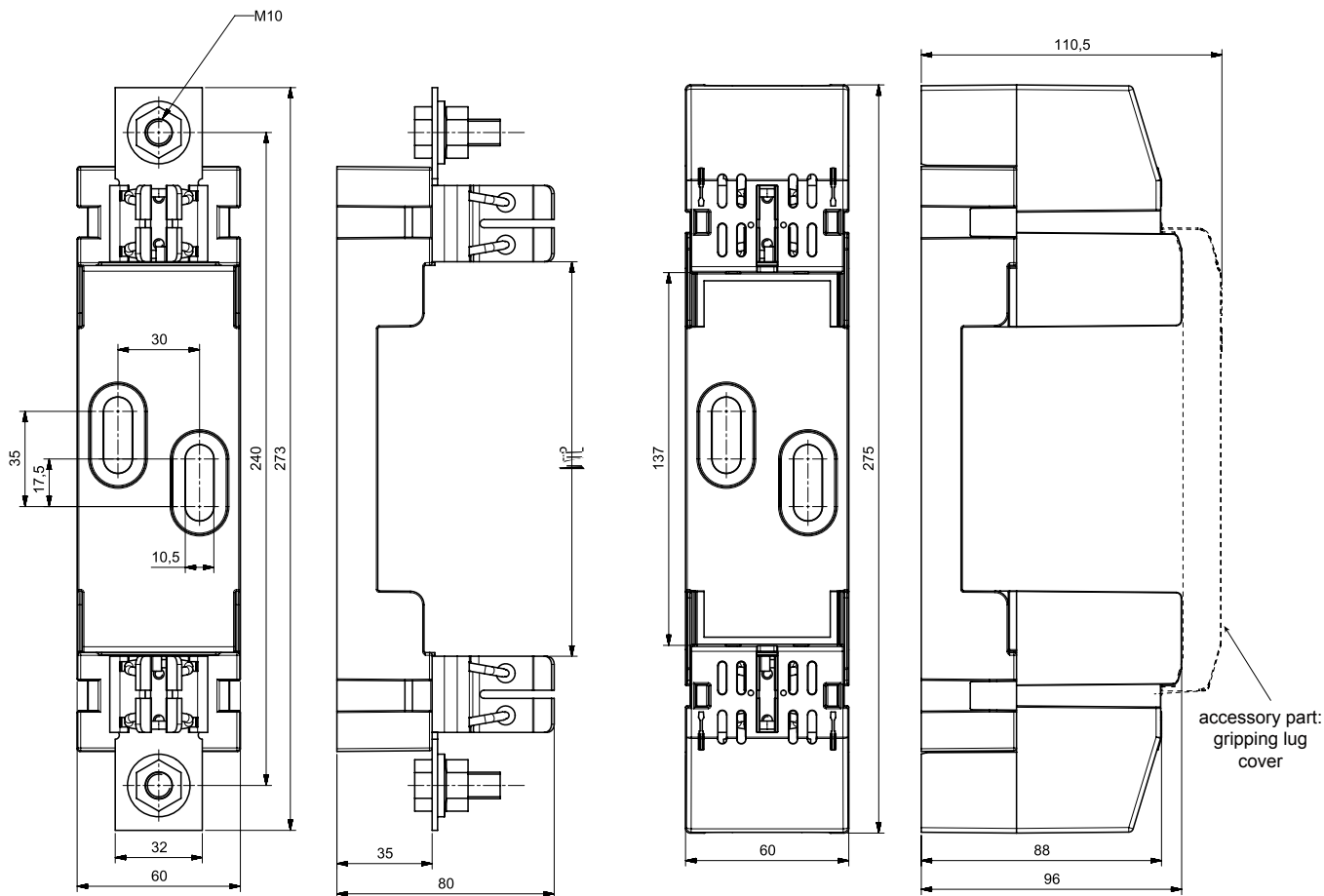
Dimensions in mm

HelioProtection® HP15NH

Photovoltaic fuse-links gPV 1500VDC

DIMENSIONS

NH fuse base for gPV fuse-link 1XL open design and with touch-safe protection



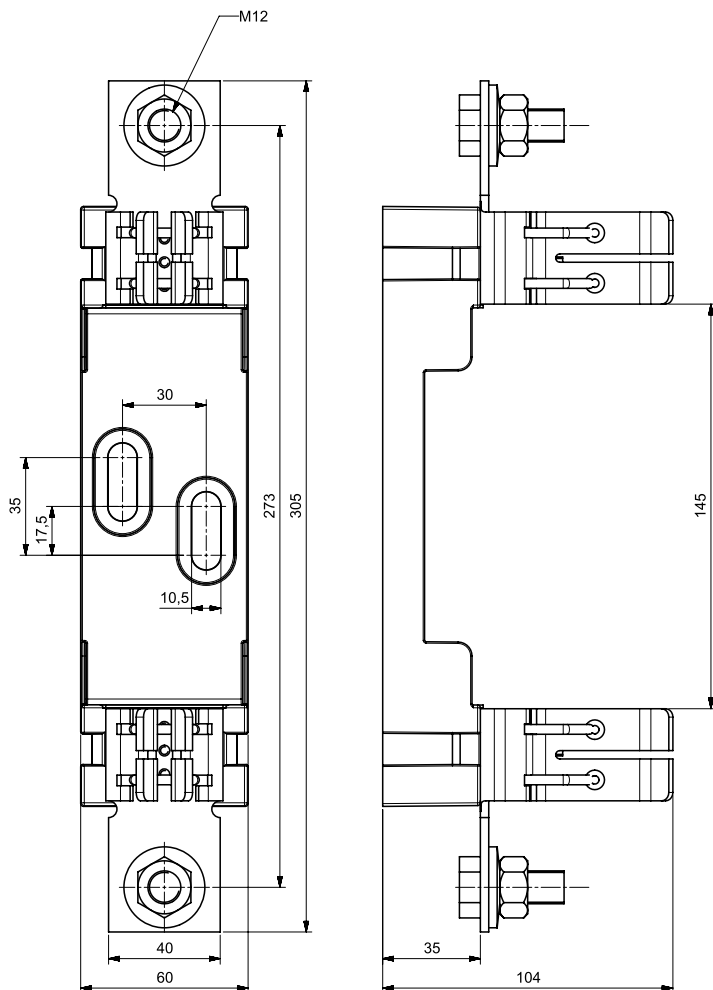
Dimensions in mm

HelioProtection® HP15NH

Photovoltaic fuse-links gPV 1500VDC

DIMENSIONS

NH fuse base for gPV fuse-link 2XL and 3L, open design



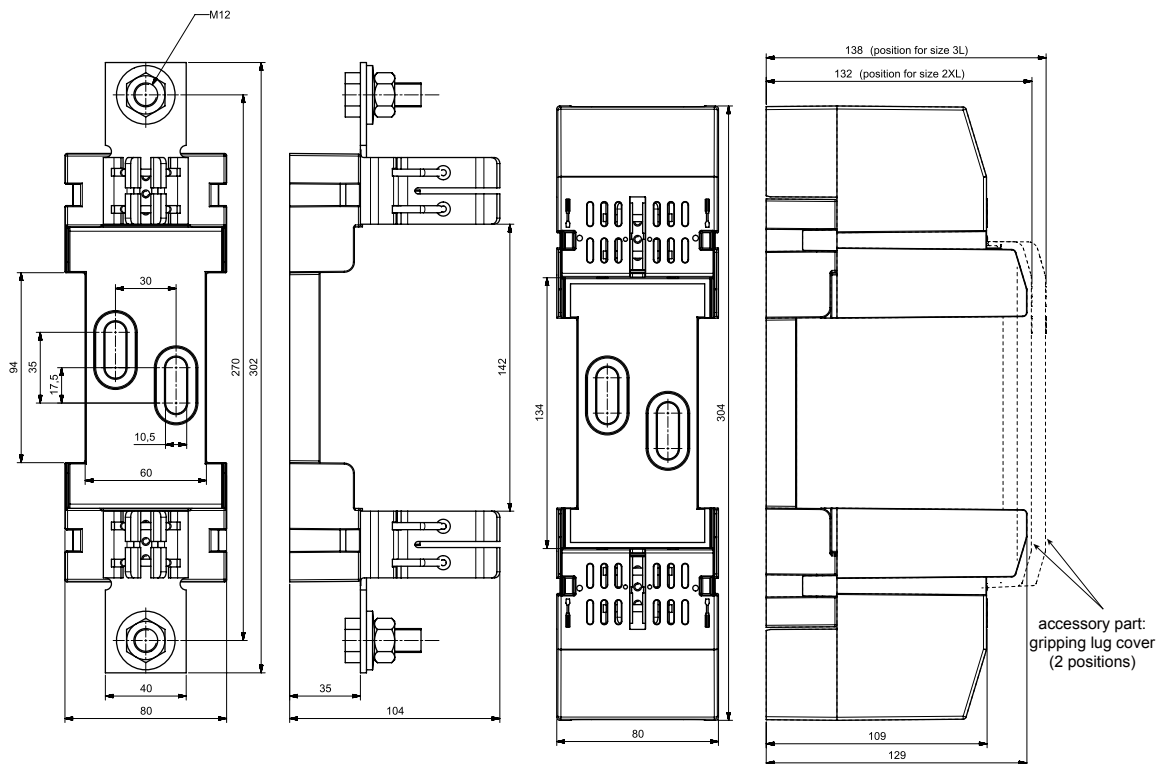
Dimensions in mm

HelioProtection® HP15NH

Photovoltaic fuse-links gPV 1500VDC

DIMENSIONS

NH fuse base for gPV fuse-link 2XL and 3L, with touch-safe protection



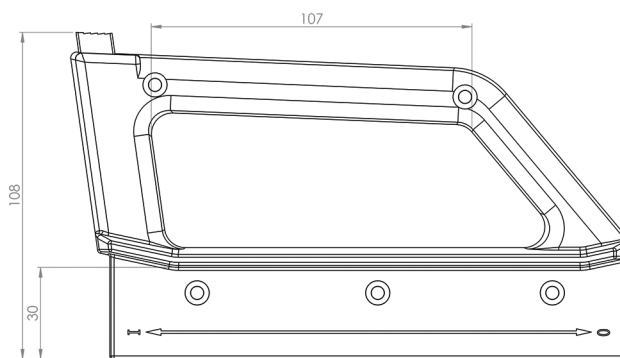
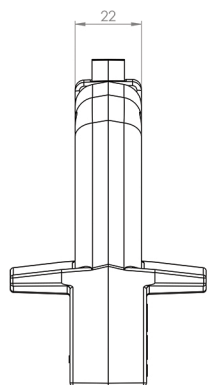
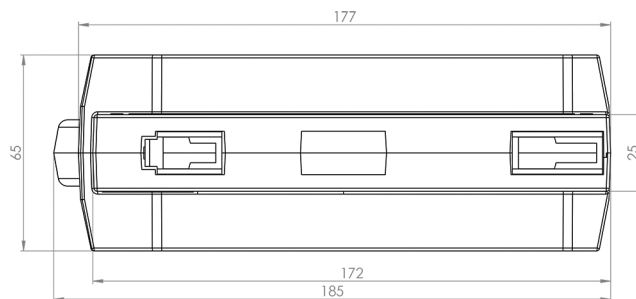
Dimensions in mm

HelioProtection® HP15NH

Photovoltaic fuse-links gPV 1500VDC

DIMENSIONS

NH-fuse handle 1XL 2XL 3L



Dimensions in mm