

Protistor® size 33 aR

450 to 690VAC (IEC) / 700VAC (UL)

SEMICONDUCTOR PROTECTION FUSES

SQUARE BODY HIGH-SPEED FUSE-LINKS AC PROTECTION



The 690/700V Protistor® fuse-links provide maximum flexibility in equipment design and ultimate protection for today's power conversion equipment. These aR ultra-fast acting square body fuse-links are available in different body sizes, each size having multiple worldwide acceptable mounting styles.

The Protistor® have been engineered to provide state-of-the-art protection for semiconductors: diodes, thyristors and IGBT devices. Fuses are assembled with die-cut elements embedded in solidified sand, which helps control arcing characteristics for a lower I^2t and high interrupting rating level. All contact surfaces are silver plated and all hardware is non-magnetic.

Each fuse-link can be equipped with a low voltage trip-indicator which can operate a field mountable microswitch.

TECHNICAL DATA OVERVIEW

Voltage Range AC	450 ... 690 VAC
Ampere Range (A)	450 ... 2500 A
Speed/Characteristic	aR
I.R. AC	110 ... 200 kA
Product Size	33

FEATURES & BENEFITS

- Multiple body sizes and terminals or blades combination
- aR Class according to IEC 60269-4 and VDE 636-23
- Very low I^2t for improved semiconductor protection
- Ultra fast acting
- Current limiting
- Superior cycling capability

APPLICATIONS

- Protection of inverters, motor drives, UPS systems and similar 690V or less equipments.

STANDARDS

- IEC 60269-4 Compliance
- UL/CSA Recognized E76491
- CCC 1359.4



Protistor® size 33 aR

450 to 690VAC (IEC) / 700VAC (UL)

PRODUCT RANGE



PC33UD69V1100A

Size 33 type DIN80 blades

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	Weight	Package
Standard Terminal										
PC33UD69V450A	T302168	690 V	700 V	450 A	13.45 kA ² s	87 kA ² s	200 kA	88 W	0.8123 kg	3
PC33UD69V500A	G300248	690 V	700 V	500 A	19 kA ² s	110 kA ² s	200 kA	105 W	0.8123 kg	3
PC33UD69V550A	H300249	690 V	700 V	550 A	27 kA ² s	155 kA ² s	200 kA	110 W	0.8123 kg	3
PC33UD69V630A	J300250	690 V	700 V	630 A	40 kA ² s	230 kA ² s	200 kA	120 W	0.8123 kg	3
PC33UD69V700A	K300251	690 V	700 V	700 A	57 kA ² s	330 kA ² s	200 kA	125 W	0.8123 kg	3
PC33UD69V800A	L300252	690 V	700 V	800 A	93 kA ² s	540 kA ² s	200 kA	130 W	0.8123 kg	3
PC33UD69V900A	M300253	690 V	700 V	900 A	130 kA ² s	770 kA ² s	200 kA	135 W	0.8123 kg	3
PC33UD69V1000A	N300254	690 V	700 V	1000 A	170 kA ² s	990 kA ² s	200 kA	155 W	0.8123 kg	3
PC33UD69V1100A	P300255	690 V	700 V	1100 A	240 kA ² s	1390 kA ² s	200 kA	160 W	0.8123 kg	3
Reinforced Terminal										
PC33UD69V1250A	Q300256	690 V	700 V	1250 A	355 kA ² s	2053 kA ² s	200 kA	180 W	0.8123 kg	3
PC33UD69V1400A	R300257	690 V	700 V	1400 A	465 kA ² s	2700 kA ² s	200 kA	200 W	0.8123 kg	3
PC33UD65V1500A	M235071	600 V	650 V	1500 A	470 kA ² s	2500 kA ² s	160 kA	210 W	0.8123 kg	3
PC33UD60V1600A	X301803	600 V	650 V	1600 A	555 kA ² s	2900 kA ² s	160 kA	240 W	0.8123 kg	3
PC33UD60V1800A	E301971	600 V	650 V	1800 A	720 kA ² s	3870 kA ² s	160 kA	225 W	0.8123 kg	3
PC33UD55V2000A	A302657	550 V	600 V	2000 A	950 kA ² s	4500 kA ² s	150 kA	250 W	0.8123 kg	3

Size 33 type DIN110 blades

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	Weight	Package
Standard Terminal										
PC33UD69V450D1A	V302169	690 V	700 V	450 A	13.45 kA ² s	87 kA ² s	200 kA	88 W	0.874 kg	3
PC33UD69V500D1A	S300258	690 V	700 V	500 A	19 kA ² s	110 kA ² s	200 kA	105 W	0.874 kg	3
PC33UD69V550D1A	T300259	690 V	700 V	550 A	27 kA ² s	155 kA ² s	200 kA	110 W	0.874 kg	3
PC33UD69V630D1A	V300260	690 V	700 V	630 A	40 kA ² s	230 kA ² s	200 kA	120 W	0.874 kg	3
PC33UD69V700D1A	W300261	690 V	700 V	700 A	57 kA ² s	330 kA ² s	200 kA	125 W	0.874 kg	3
PC33UD69V800D1A	X300262	690 V	700 V	800 A	93 kA ² s	540 kA ² s	200 kA	130 W	0.874 kg	3
PC33UD69V900D1A	Y300263	690 V	700 V	900 A	130 kA ² s	770 kA ² s	200 kA	135 W	0.874 kg	3
PC33UD69V10CD1A	Z300264	690 V	700 V	1000 A	170 kA ² s	990 kA ² s	200 kA	155 W	0.874 kg	3
PC33UD69V11CD1A	A300265	690 V	700 V	1100 A	240 kA ² s	1390 kA ² s	200 kA	160 W	0.874 kg	3
Reinforced Terminal										
PC33UD69V12CD1A	B300266	690 V	700 V	1250 A	355 kA ² s	2053 kA ² s	200 kA	180 W	0.874 kg	3
PC33UD69V14CD1A	C300267	690 V	700 V	1400 A	465 kA ² s	2700 kA ² s	200 kA	200 W	0.874 kg	3
PC33UD65V15CD1A	H301974	600 V	650 V	1500 A	470 kA ² s	2500 kA ² s	160 kA	210 W	0.874 kg	3
PC33UD60V16CD1A	Z301437	600 V	650 V	1600 A	500 kA ² s	2900 kA ² s	160 kA	240 W	0.874 kg	3
PC33UD55V20CD1A	S1015765	550 V	600 V	2000 A	950 kA ² s	4500 kA ² s	150 kA	290 W	0.874 kg	3

MERSEN reserves the right to change, update or correct, without notice, any information contained in this datasheet.

Protistor® size 33 aR

450 to 690VAC (IEC) / 700VAC (UL)

PRODUCT RANGE

Size 33 type EF style notched blade connections

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	Weight	Package
Standard Terminal										
PC33UD69V500EF	Z300218	690 V	700 V	500 A	19 kA²s	110 kA²s	200 kA	105 W	0.852 kg	3
PC33UD69V550EF	A300219	690 V	700 V	550 A	27 kA²s	155 kA²s	200 kA	110 W	0.852 kg	3
PC33UD69V630EF	B300220	690 V	700 V	630 A	40 kA²s	230 kA²s	200 kA	120 W	0.852 kg	3
PC33UD69V700EF	C300221	690 V	700 V	700 A	57 kA²s	330 kA²s	200 kA	125 W	0.852 kg	3
PC33UD69V800EF	D300222	690 V	700 V	800 A	93 kA²s	540 kA²s	200 kA	130 W	0.852 kg	3
PC33UD69V900EF	E300223	690 V	700 V	900 A	130 kA²s	770 kA²s	200 kA	135 W	0.852 kg	3
PC33UD69V1000EF	F300224	690 V	700 V	1000 A	170 kA²s	990 kA²s	200 kA	155 W	0.852 kg	3
PC33UD69V1100EF	G300225	690 V	700 V	1100 A	240 kA²s	1390 kA²s	200 kA	160 W	0.852 kg	3
Reinforced Terminal										
PC33UD69V1250EF	H300226	690 V	700 V	1250 A	355 kA²s	2053 kA²s	200 kA	180 W	0.852 kg	3
PC33UD69V1400EF	J300227	690 V	700 V	1400 A	465 kA²s	2700 kA²s	200 kA	200 W	0.852 kg	3

Size 33 type KI short slotted blades

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	Weight	Package
Standard Terminal										
A070UD33KI500	W300238	690 V	700 V	500 A	19 kA²s	110 kA²s	200 kA	105 W	0.8451 kg	3
A070UD33KI550	X300239	690 V	700 V	550 A	27 kA²s	155 kA²s	200 kA	110 W	0.8451 kg	3
A070UD33KI630	Y300240	690 V	700 V	630 A	40 kA²s	230 kA²s	200 kA	120 W	0.8451 kg	3
A070UD33KI700	Z300241	690 V	700 V	700 A	57 kA²s	330 kA²s	200 kA	125 W	0.8451 kg	3
A070UD33KI800	A300242	690 V	700 V	800 A	93 kA²s	540 kA²s	200 kA	130 W	0.8451 kg	3
A070UD33KI900	B300243	690 V	700 V	900 A	130 kA²s	770 kA²s	200 kA	135 W	0.8451 kg	3
A070UD33KI1000	C300244	690 V	700 V	1000 A	170 kA²s	990 kA²s	200 kA	155 W	0.8451 kg	3
A070UD33KI1100	D300245	690 V	700 V	1100 A	240 kA²s	1390 kA²s	200 kA	160 W	0.8451 kg	3
Reinforced Terminal										
A070UD33KI1250	E300246	690 V	700 V	1250 A	355 kA²s	2053 kA²s	200 kA	180 W	0.8451 kg	3
A070UD33KI1400	F300247	690 V	700 V	1400 A	465 kA²s	2700 kA²s	200 kA	200 W	0.8451 kg	3
A065UD33KI1600	E302063	600 V	650 V	1600 A	555 kA²s	2900 kA²s	160 kA	240 W	0.8451 kg	3

MERSEN reserves the right to change, update or correct, without notice, any information contained in this datasheet.

Protistor® size 33 aR

450 to 690VAC (IEC) / 700VAC (UL)

PRODUCT RANGE

Size 33 type LI long slotted blades

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	Weight	Package
Standard Terminal										
A069UD33LI450	Y302172	690 V	700 V	450 A	13.45 kA²s	87 kA²s	200 kA	88 W	0.8766 kg	3
A070UD33LI500	K300228	690 V	700 V	500 A	19 kA²s	110 kA²s	200 kA	105 W	0.8766 kg	3
A070UD33LI550	L300229	690 V	700 V	550 A	27 kA²s	155 kA²s	200 kA	110 W	0.8766 kg	3
A070UD33LI630	M300230	690 V	700 V	630 A	40 kA²s	230 kA²s	200 kA	120 W	0.8766 kg	3
A070UD33LI700	N300231	690 V	700 V	700 A	57 kA²s	330 kA²s	200 kA	125 W	0.8766 kg	3
A070UD33LI800	P300232	690 V	700 V	800 A	93 kA²s	540 kA²s	200 kA	130 W	0.8766 kg	3
A070UD33LI900	Q300233	690 V	700 V	900 A	130 kA²s	770 kA²s	200 kA	135 W	0.8766 kg	3
A070UD33LI1000	R300234	690 V	700 V	1000 A	170 kA²s	990 kA²s	200 kA	155 W	0.8766 kg	3
A070UD33LI1100	S300235	690 V	700 V	1100 A	240 kA²s	1390 kA²s	200 kA	160 W	0.8766 kg	3
Reinforced Terminal										
A070UD33LI1250	T300236	690 V	700 V	1250 A	355 kA²s	2053 kA²s	200 kA	180 W	0.8766 kg	3
A070UD33LI1400	V300237	690 V	700 V	1400 A	465 kA²s	2700 kA²s	200 kA	200 W	0.8766 kg	3
A065UD33LI1500	P300531	600 V	650 V	1500 A	470 kA²s	2500 kA²s	160 kA	210 W	0.8766 kg	3
A065UD33LI1600	G301076	600 V	650 V	1600 A	555 kA²s	2900 kA²s	160 kA	240 W	0.8766 kg	3
A065UD33LI1800	H301077	600 V	650 V	1800 A	720 kA²s	3870 kA²s	160 kA	260 W	0.8766 kg	3
A060UD33LI2000	J301078	550 V	600 V	2000 A	950 kA²s	4500 kA²s	150 kA	290 W	0.8766 kg	3



PC33UD69V1400TF

Size 33 type TTF M12 threaded terminals

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	Weight	Package
Standard Terminal										
PC33UD69V450TF	W302170	690 V	700 V	450 A	13.45 kA²s	87 kA²s	200 kA	84 W	0.8056 kg	3
PC33UD69V500TF	V300076	690 V	700 V	500 A	19 kA²s	110 kA²s	200 kA	105 W	0.8056 kg	3
PC33UD69V550TF	W300077	690 V	700 V	550 A	27 kA²s	155 kA²s	200 kA	105 W	0.8056 kg	3
PC33UD69V630TF	X300078	690 V	700 V	630 A	40 kA²s	230 kA²s	200 kA	110 W	0.8056 kg	3
PC33UD69V700TF	Y300079	690 V	700 V	700 A	57 kA²s	330 kA²s	200 kA	115 W	0.8056 kg	3
PC33UD69V800TF	Z300080	690 V	700 V	800 A	93 kA²s	540 kA²s	200 kA	120 W	0.8056 kg	3
PC33UD69V900TF	A300081	690 V	700 V	900 A	130 kA²s	770 kA²s	200 kA	120 W	0.8056 kg	3
PC33UD69V1000TF	B300082	690 V	700 V	1000 A	170 kA²s	990 kA²s	200 kA	135 W	0.8056 kg	3
PC33UD69V1100TF	C300083	690 V	700 V	1100 A	240 kA²s	1390 kA²s	200 kA	135 W	0.8056 kg	3
Reinforced Terminal										
PC33UD69V1250TF	D300084	690 V	700 V	1250 A	355 kA²s	2053 kA²s	200 kA	150 W	0.908 kg	3
PC33UD69V1400TF	E300085	690 V	700 V	1400 A	465 kA²s	2700 kA²s	200 kA	160 W	0.908 kg	3
PC33UD60V1500TF	Y300585	600 V	650 V	1500 A	470 kA²s	2500 kA²s	160 kA	210 W	0.908 kg	3
PC33UD60V1600TF	Z300586	600 V	650 V	1600 A	555 kA²s	2900 kA²s	160 kA	210 W	0.908 kg	3
PC33UD60V1800TF	A300587	600 V	650 V	1800 A	720 kA²s	3870 kA²s	160 kA	225 W	0.908 kg	3
PC33UD55V2000TF	B300588	550 V	600 V	2000 A	950 kA²s	4500 kA²s	150 kA	250 W	0.908 kg	3
PC33UD50V2250TF	K300757	500 V	550 V	2250 A	1250 kA²s	5160 kA²s	130 kA	280 W	0.908 kg	3
PC33UD45V2500TF	L300758	450 V	500 V	2500 A	1870 kA²s	6540 kA²s	110 kA	280 W	0.908 kg	3

Protistor® size 33 aR

450 to 690VAC (IEC) / 700VAC (UL)

PRODUCT RANGE



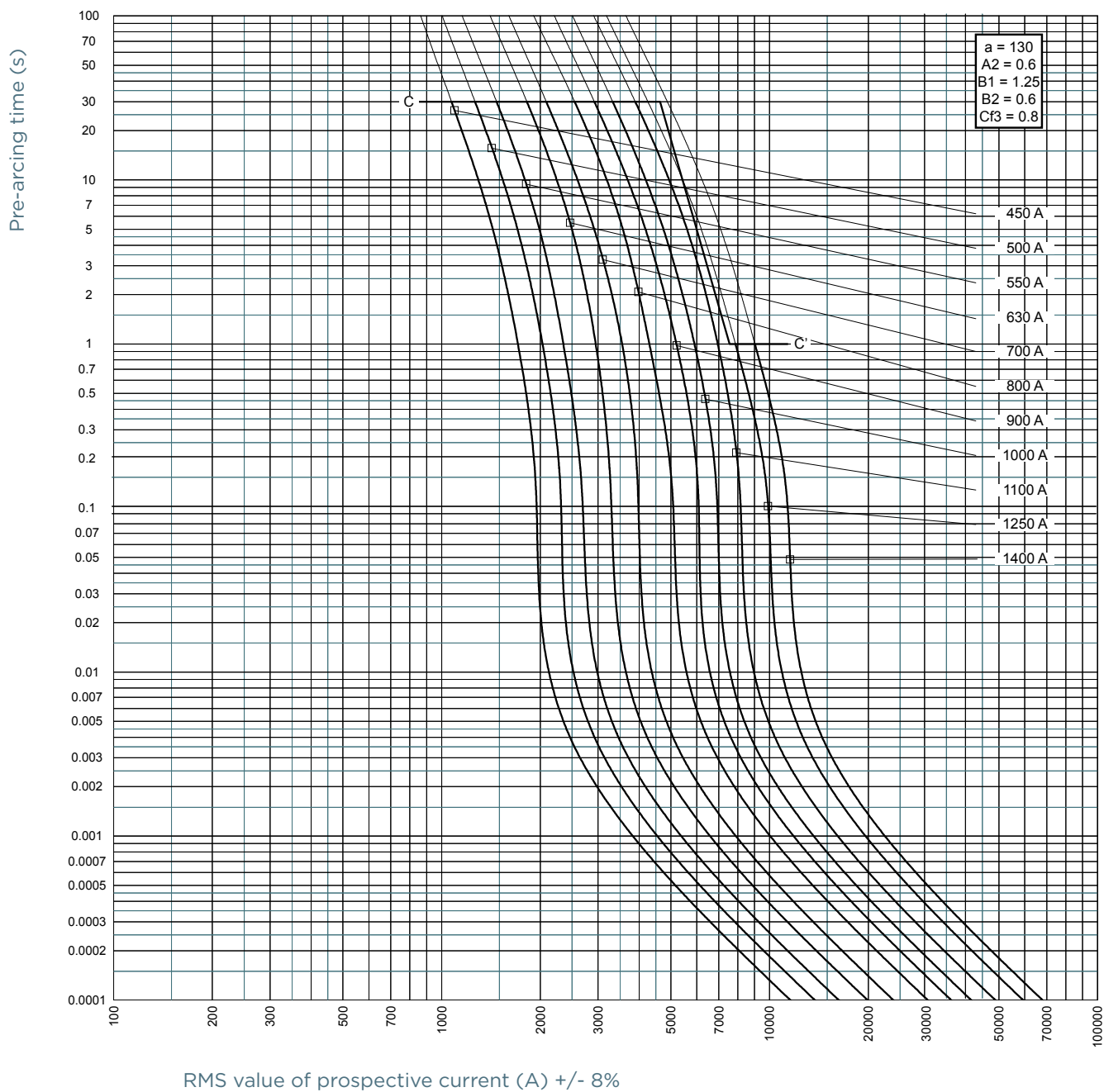
A070UD33TTI450

Size 33 type TTI 1/2"-13 unified coarse threaded terminals

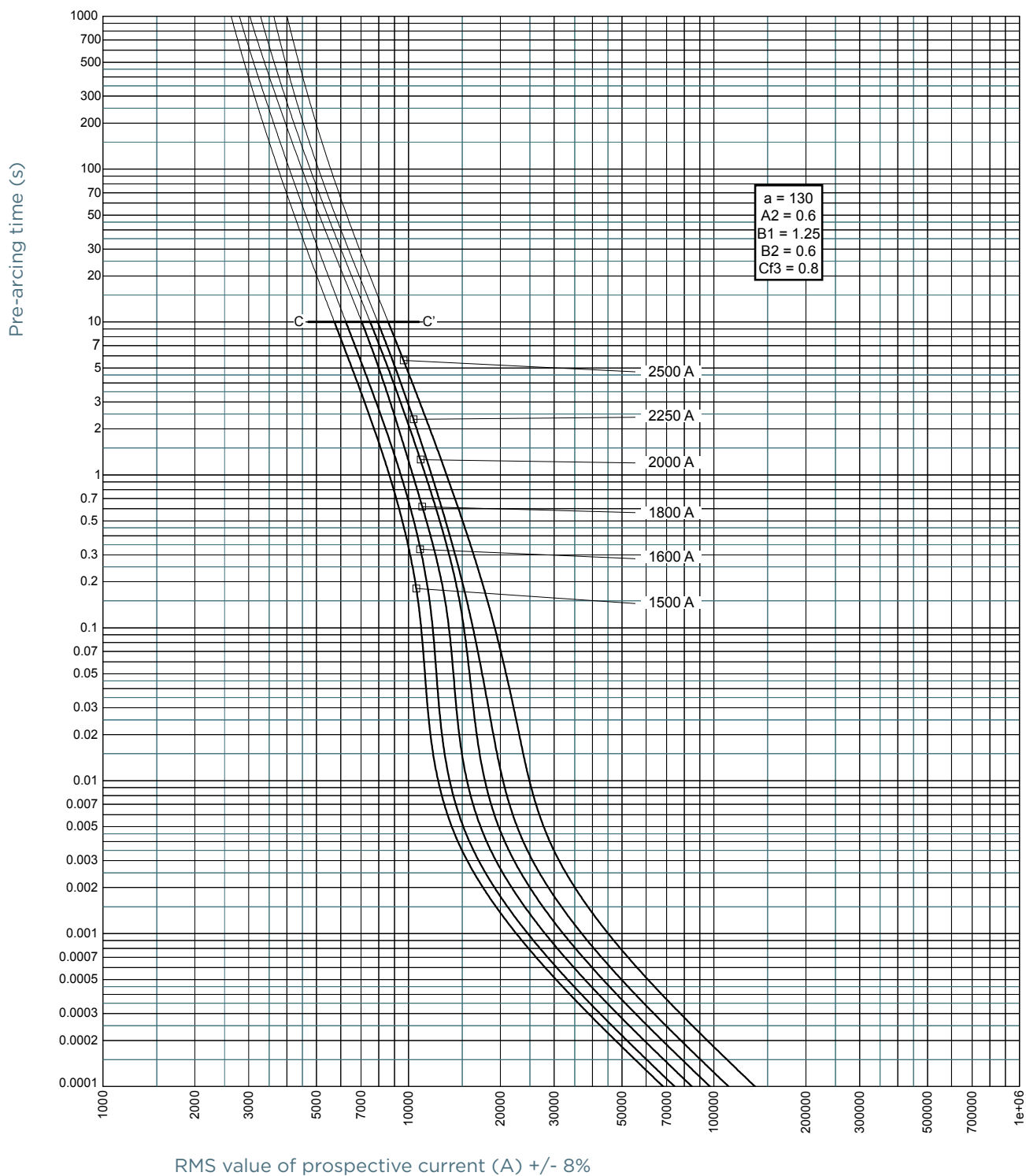
Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	Weight	Package
Standard Terminal										
A070UD33TTI450	X302171	690 V	700 V	450 A	13.45 kA²s	87 kA²s	200 kA	84 W	0.894 kg	3
A070UD33TTI500	X300446	690 V	700 V	500 A	19 kA²s	110 kA²s	200 kA	105 W	0.894 kg	3
A070UD33TTI550	Y300447	690 V	700 V	550 A	27 kA²s	155 kA²s	200 kA	105 W	0.894 kg	3
A070UD33TTI630	Z300448	690 V	700 V	630 A	40 kA²s	230 kA²s	200 kA	110 W	0.894 kg	3
A070UD33TTI700	A300449	690 V	700 V	700 A	57 kA²s	330 kA²s	200 kA	115 W	0.894 kg	3
A070UD33TTI800	T300443	690 V	700 V	800 A	93 kA²s	540 kA²s	200 kA	120 W	0.894 kg	3
A070UD33TTI900	B300450	690 V	700 V	900 A	130 kA²s	770 kA²s	200 kA	120 W	0.894 kg	3
A070UD33TTI1000	C300451	690 V	700 V	1000 A	170 kA²s	990 kA²s	200 kA	135 W	0.894 kg	3
A070UD33TTI1100	D300452	690 V	700 V	1100 A	240 kA²s	1390 kA²s	200 kA	135 W	0.894 kg	3
Reinforced Terminal										
A070UD33TTI1250	E300453	690 V	700 V	1250 A	355 kA²s	2053 kA²s	200 kA	150 W	0.894 kg	3
A070UD33TTI1400	F300454	690 V	700 V	1400 A	465 kA²s	2700 kA²s	200 kA	160 W	0.894 kg	3
A065UD33TTI1500	F302064	600 V	650 V	1500 A	470 kA²s	2500 kA²s	160 kA	210 W	0.894 kg	3
A065UD33TTI1600	S301086	600 V	650 V	1600 A	555 kA²s	2900 kA²s	160 kA	210 W	0.894 kg	3
A065UD33TTI1800	T301087	600 V	650 V	1800 A	720 kA²s	3870 kA²s	160 kA	225 W	0.894 kg	3
A060UD33TTI2000	V301088	550 V	600 V	2000 A	950 kA²s	4500 kA²s	150 kA	250 W	0.894 kg	3
A055UD33TTI2250	W301089	500 V	550 V	2250 A	1250 kA²s	5160 kA²s	130 kA	280 W	0.894 kg	3
A050UD33TTI2500	Y300838	450 V	500 V	2500 A	1870 kA²s	6540 kA²s	110 kA	280 W	0.894 kg	3

MERSEN reserves the right to change, update or correct, without notice, any information contained in this datasheet.

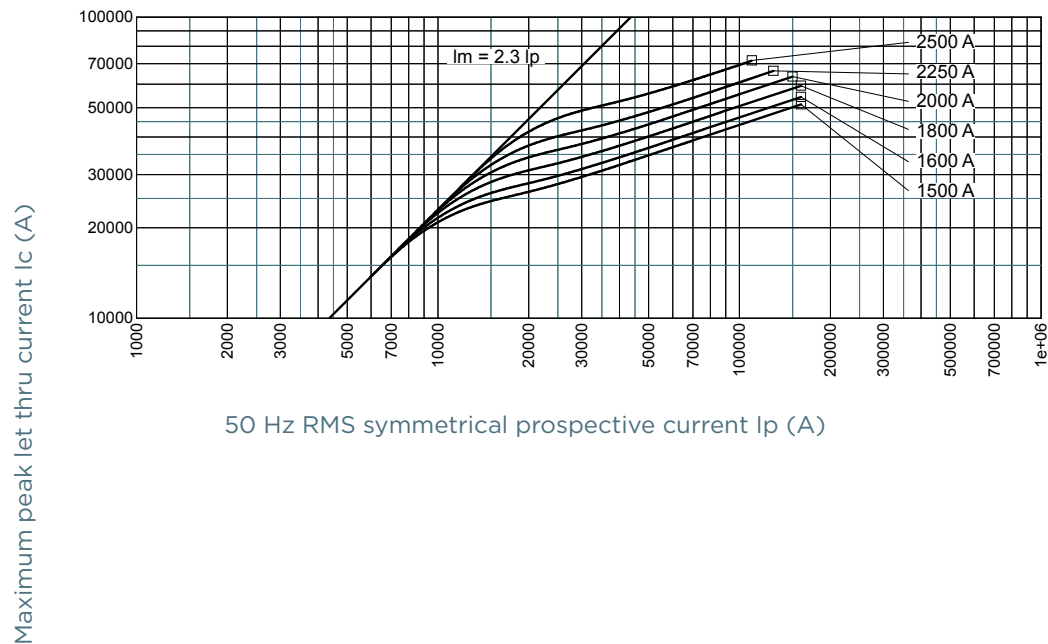
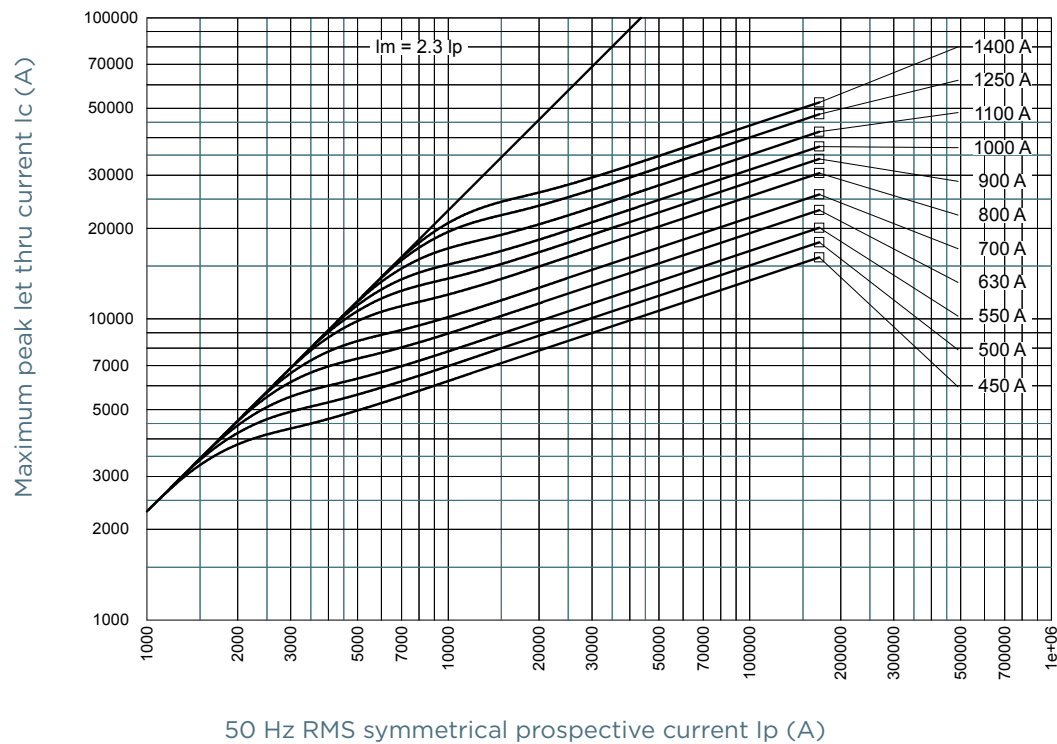
TIME CURRENT CHARACTERISTIC CURVES



TIME CURRENT CHARACTERISTIC CURVES

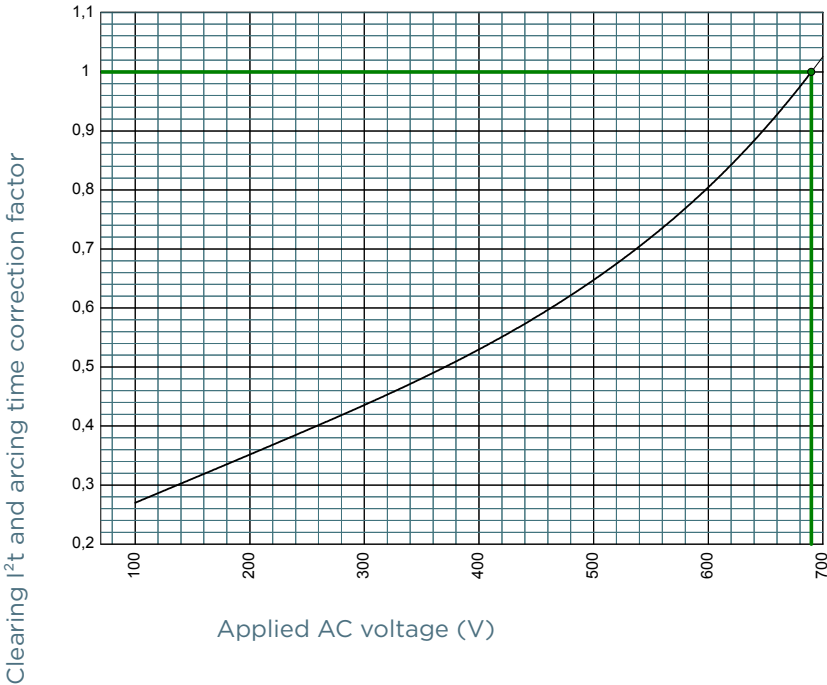


CUT-OFF CURRENT CHARACTERISTIC

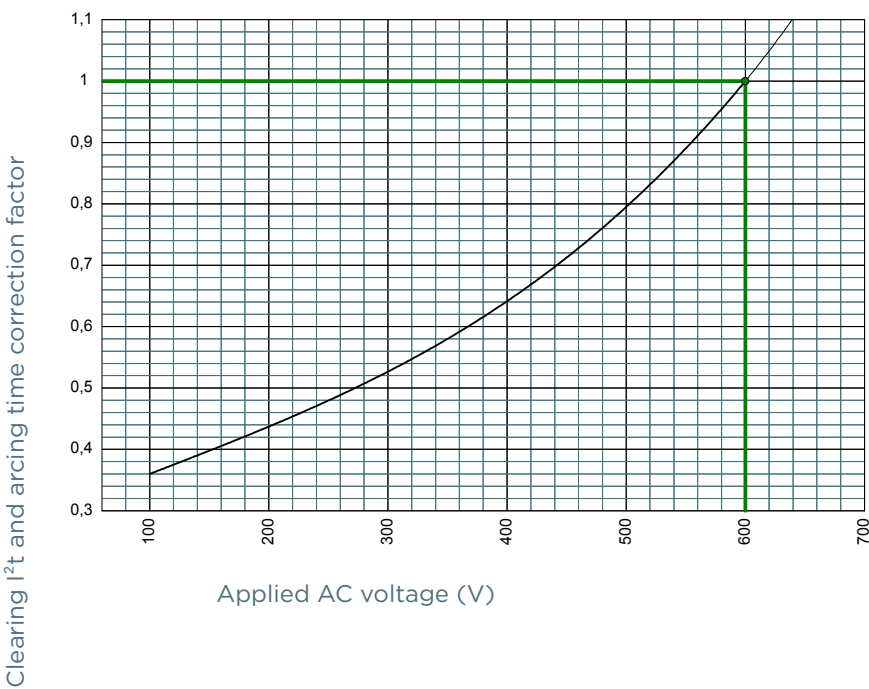


I²T MULTIPLIER COEFFICIENT

Size 33 690V

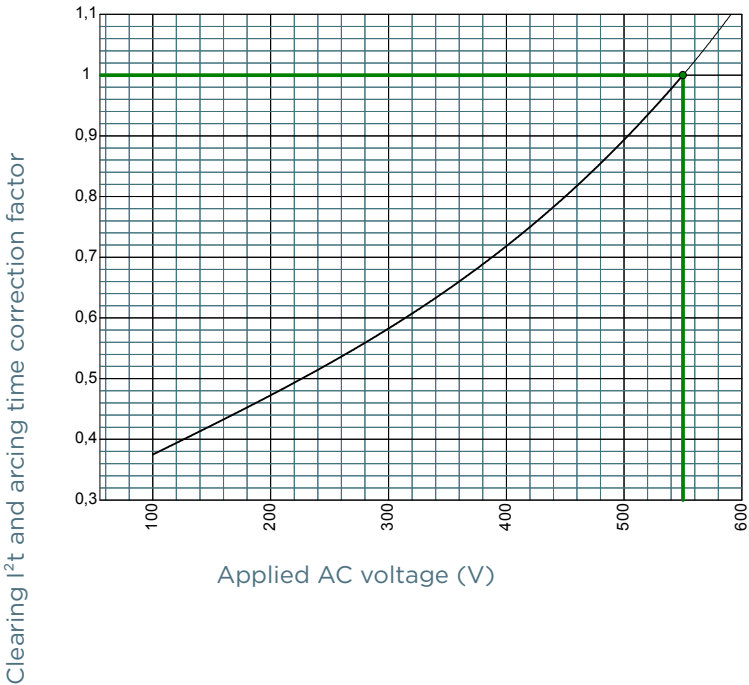


Size 33 600V

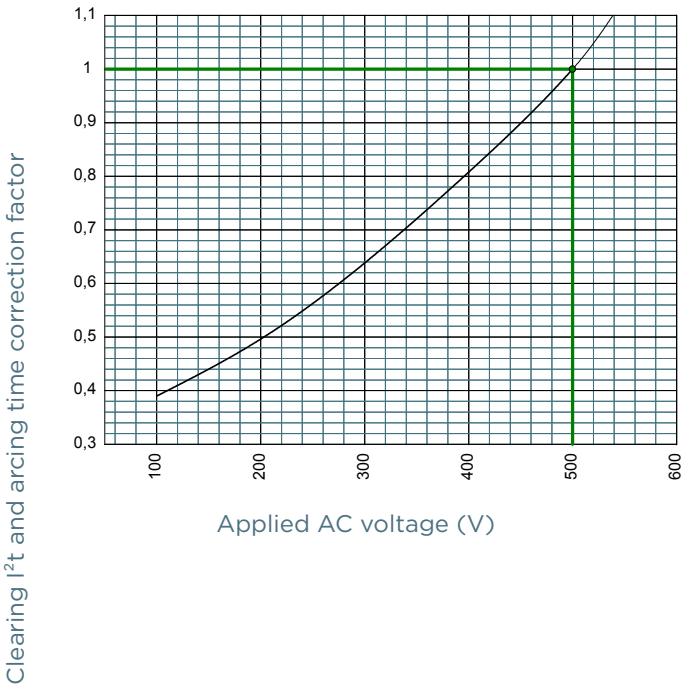


I²T MULTIPLIER COEFFICIENT

Size 33 550V

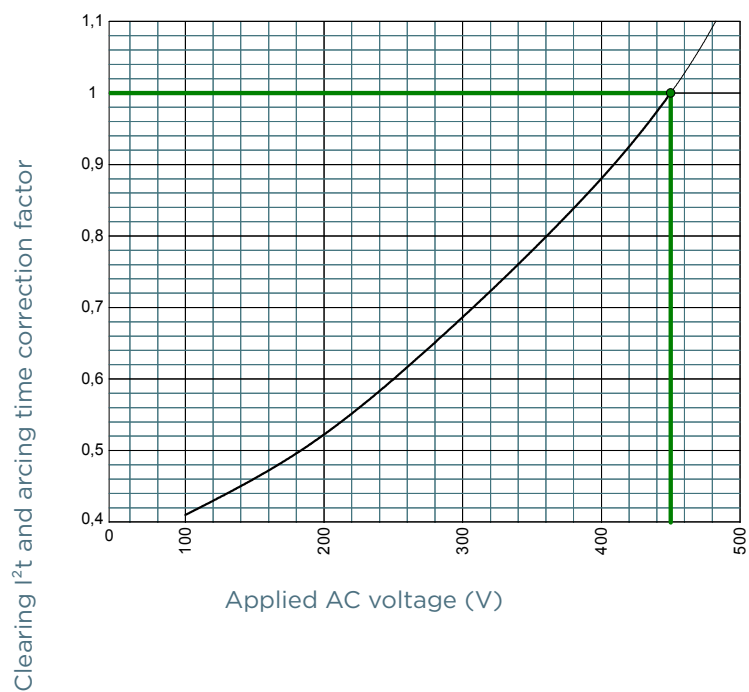


Size 33 500V



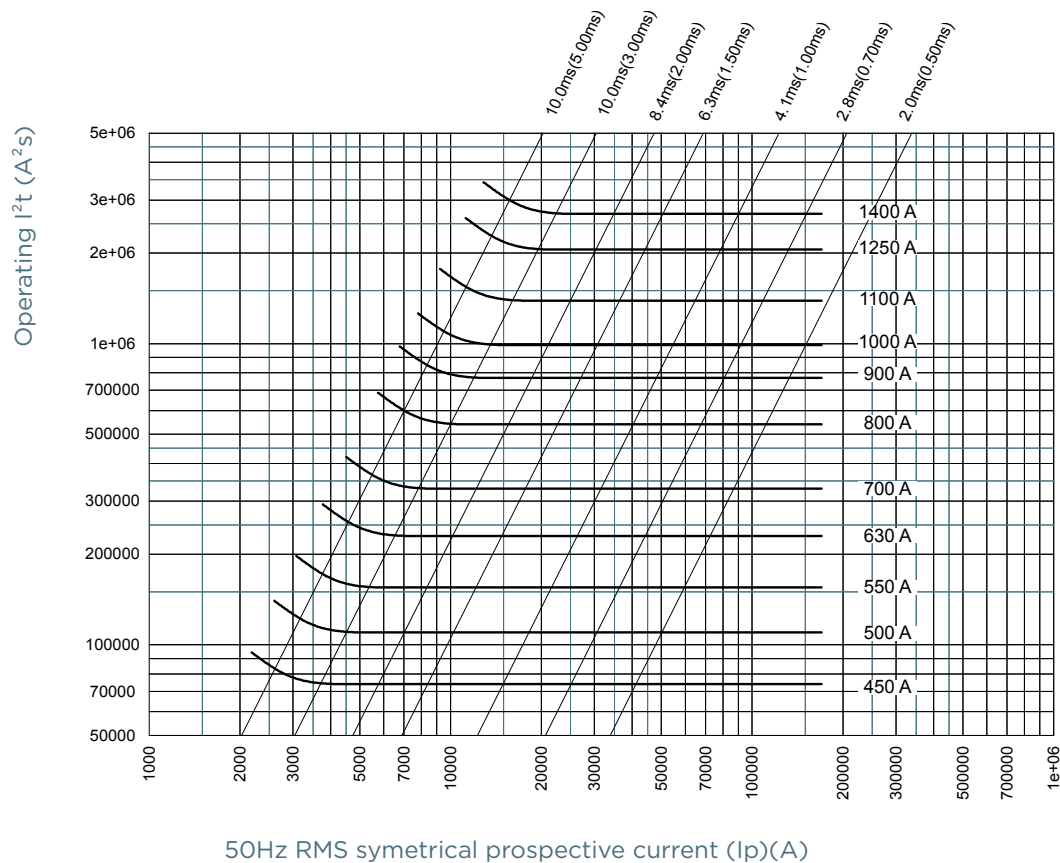
I²T MULTIPLIER COEFFICIENT

Size 33 450V

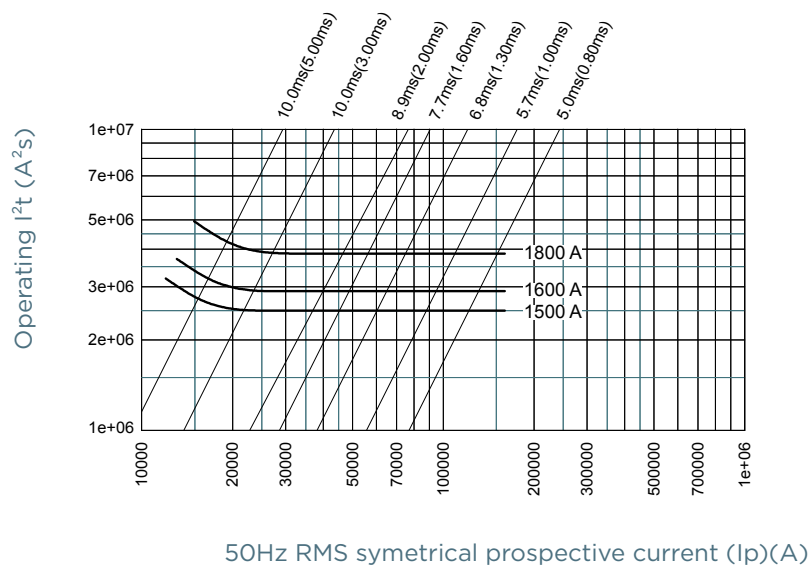


CHARACTERISTICS TOTAL I²T CURVE

Size 33 690V

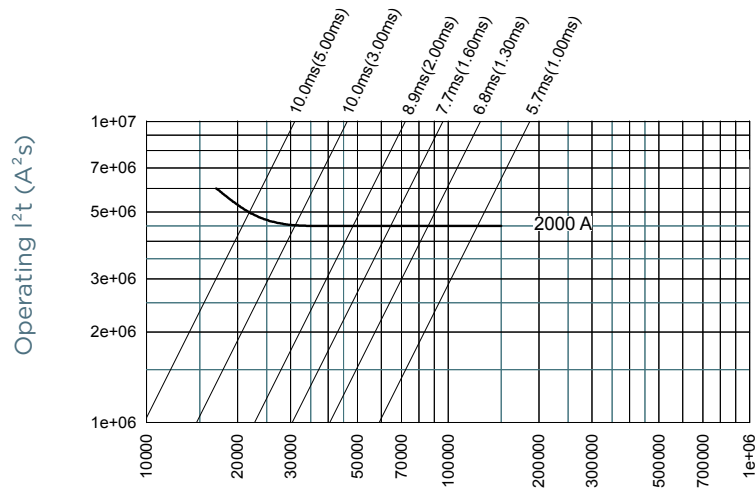


Size 33 600V



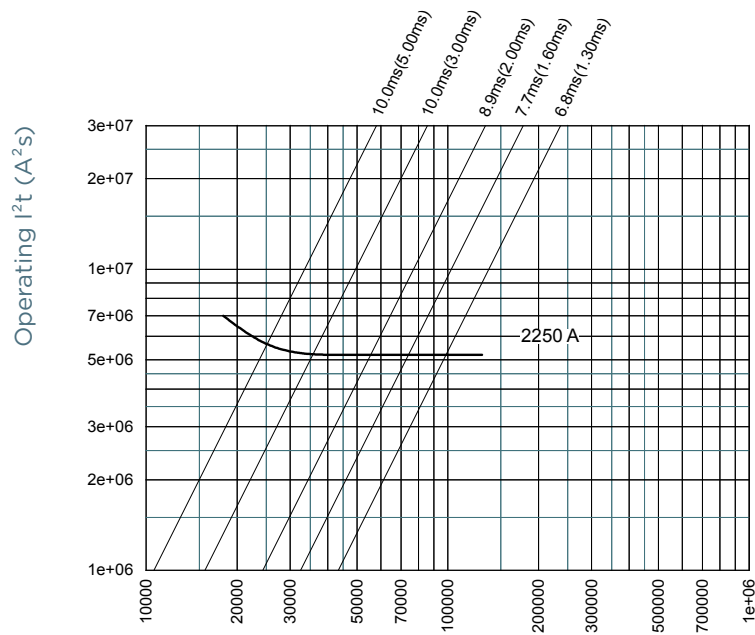
CHARACTERISTICS TOTAL I²T CURVE

Size 33 550V



50Hz RMS symmetrical prospective current (Ip)(A)

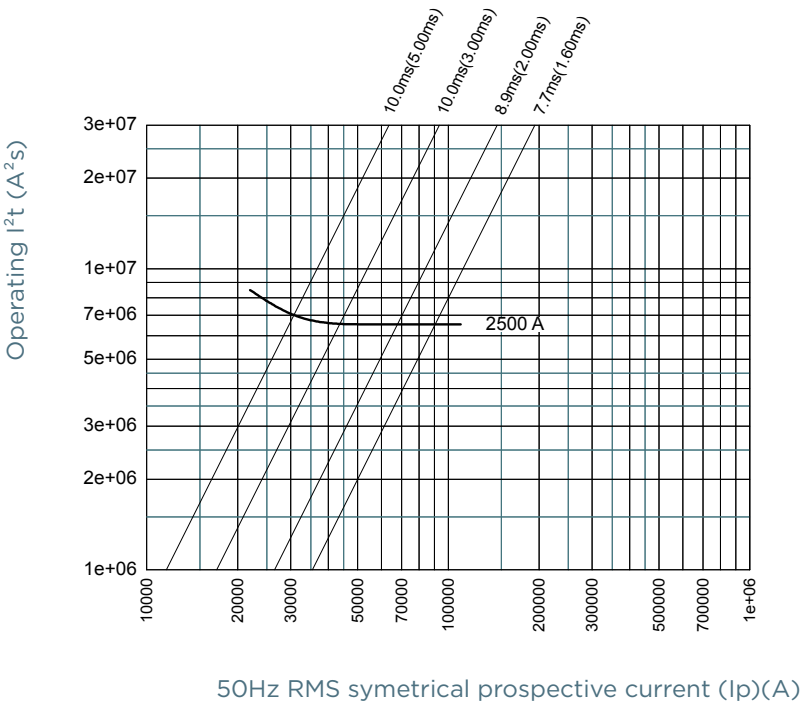
Size 33 500V



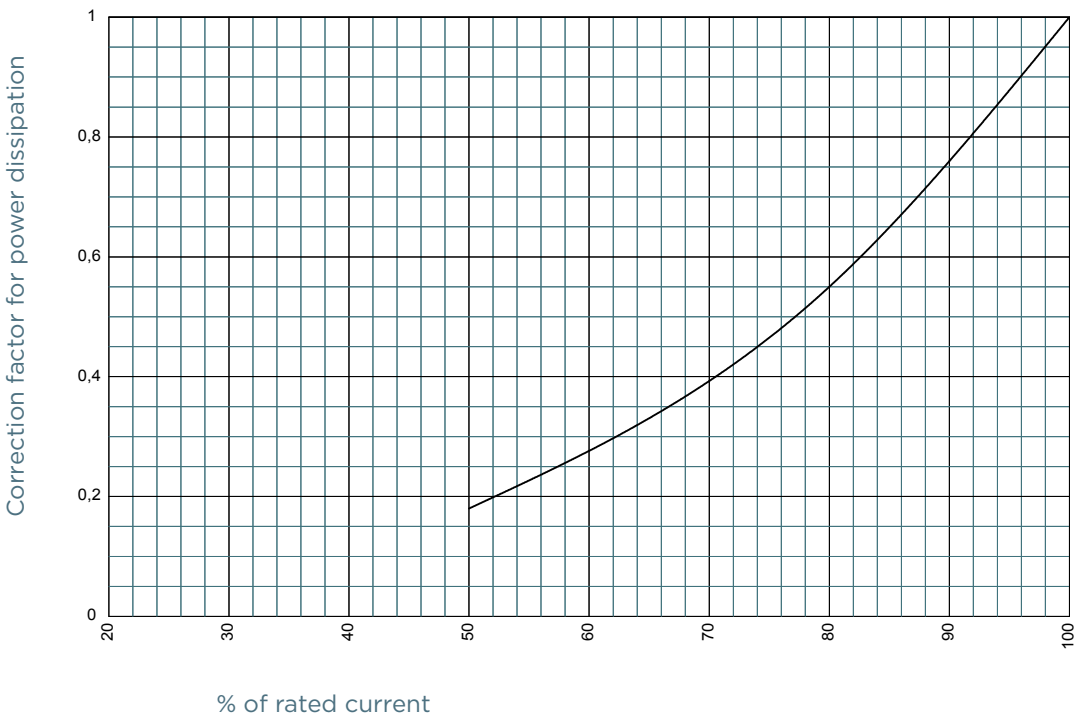
50Hz RMS symmetrical prospective current (Ip)(A)

CHARACTERISTICS TOTAL I²T CURVE

Size 33 450V

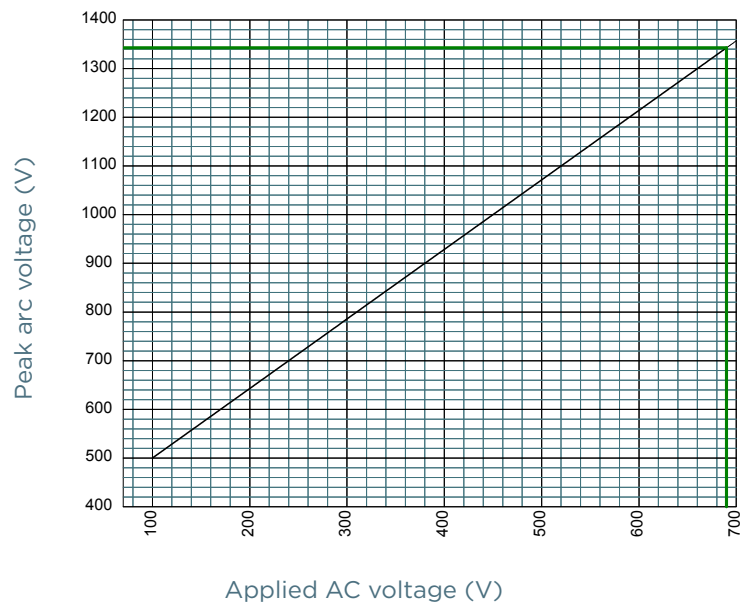


POWER DISSIPATION

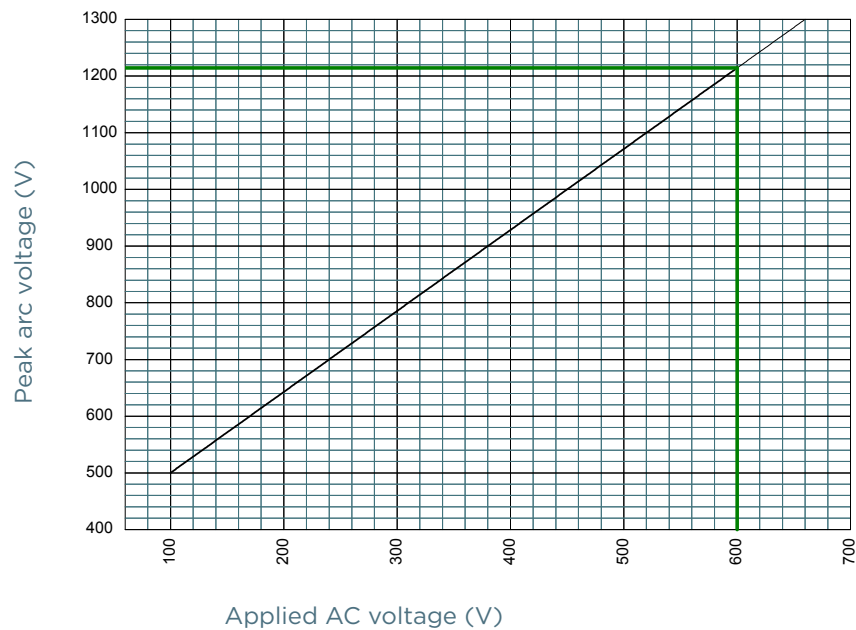


PEAK ARC VOLTAGE

Size 33 690V

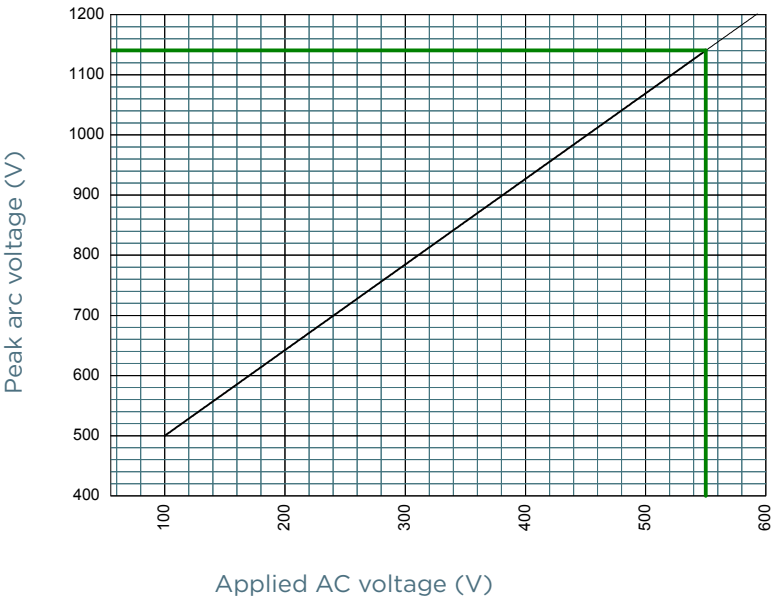


Size 33 600V

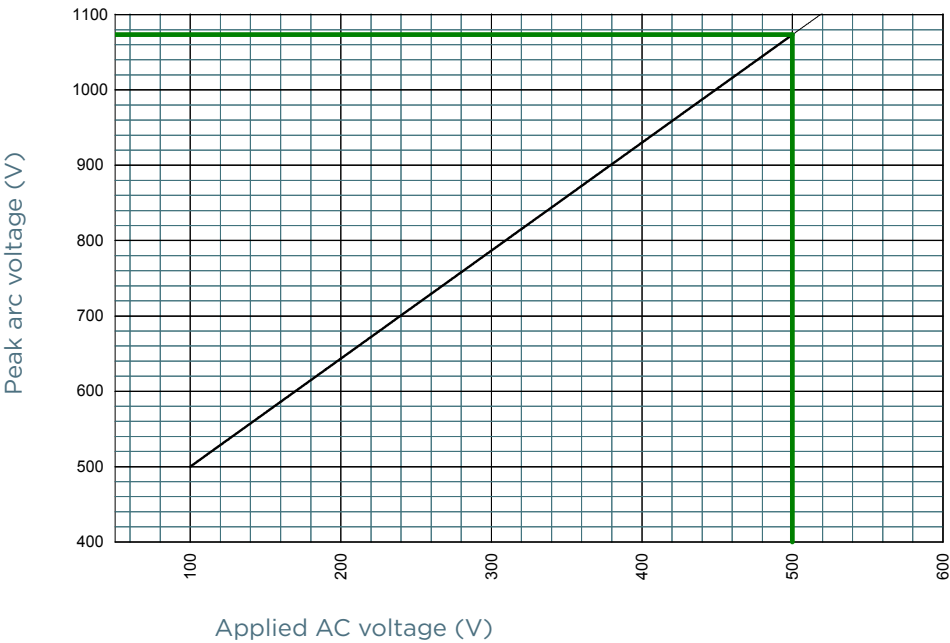


PEAK ARC VOLTAGE

Size 33 550V

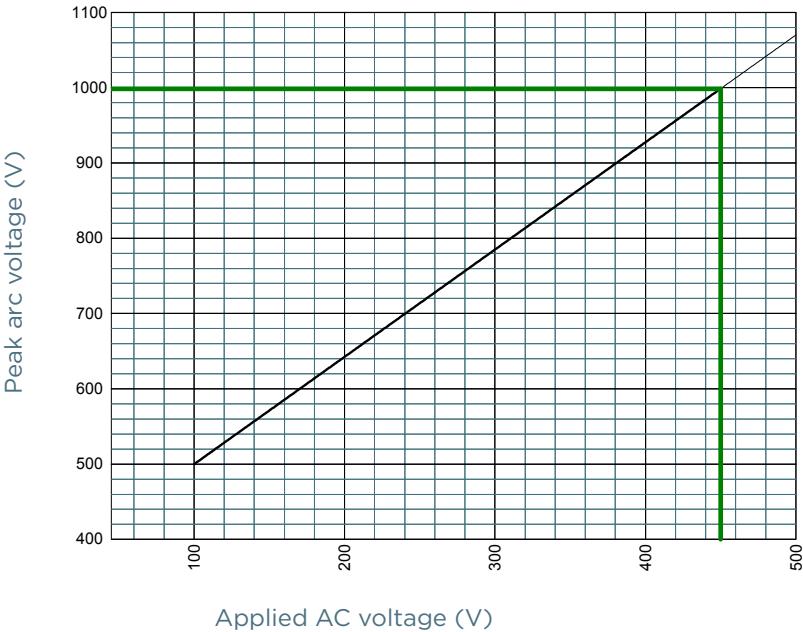


Size 33 500V



PEAK ARC VOLTAGE

Size 33 450V

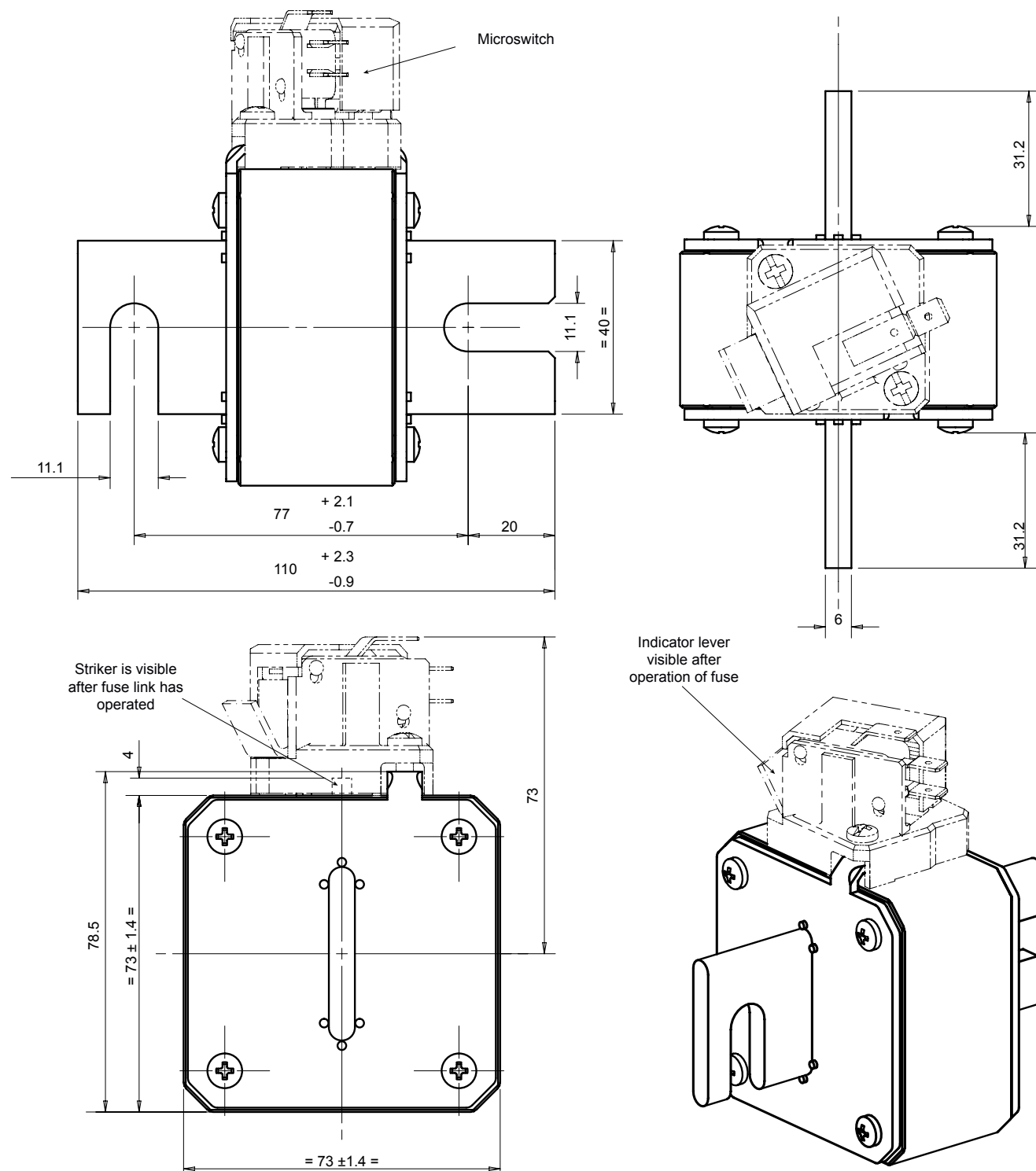


Protistor® size 33 aR

450 to 690VAC (IEC) / 700VAC (UL)

DIMENSIONS

size 33 type DIN 80 (102931)



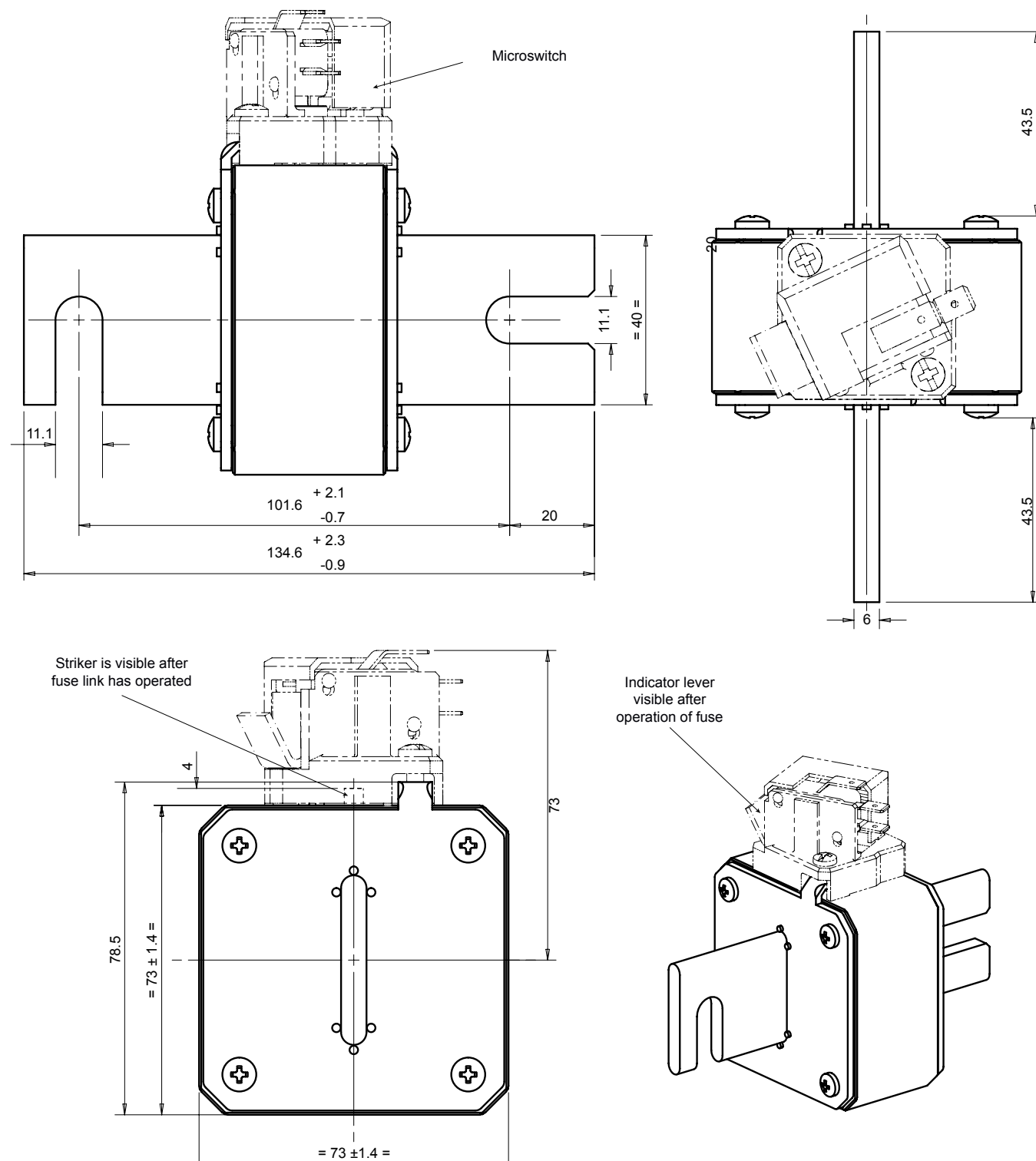
Dimensions in mm

Protistor® size 33 aR

450 to 690VAC (IEC) / 700VAC (UL)

DIMENSIONS

size 33 type DIN 110 (102932)



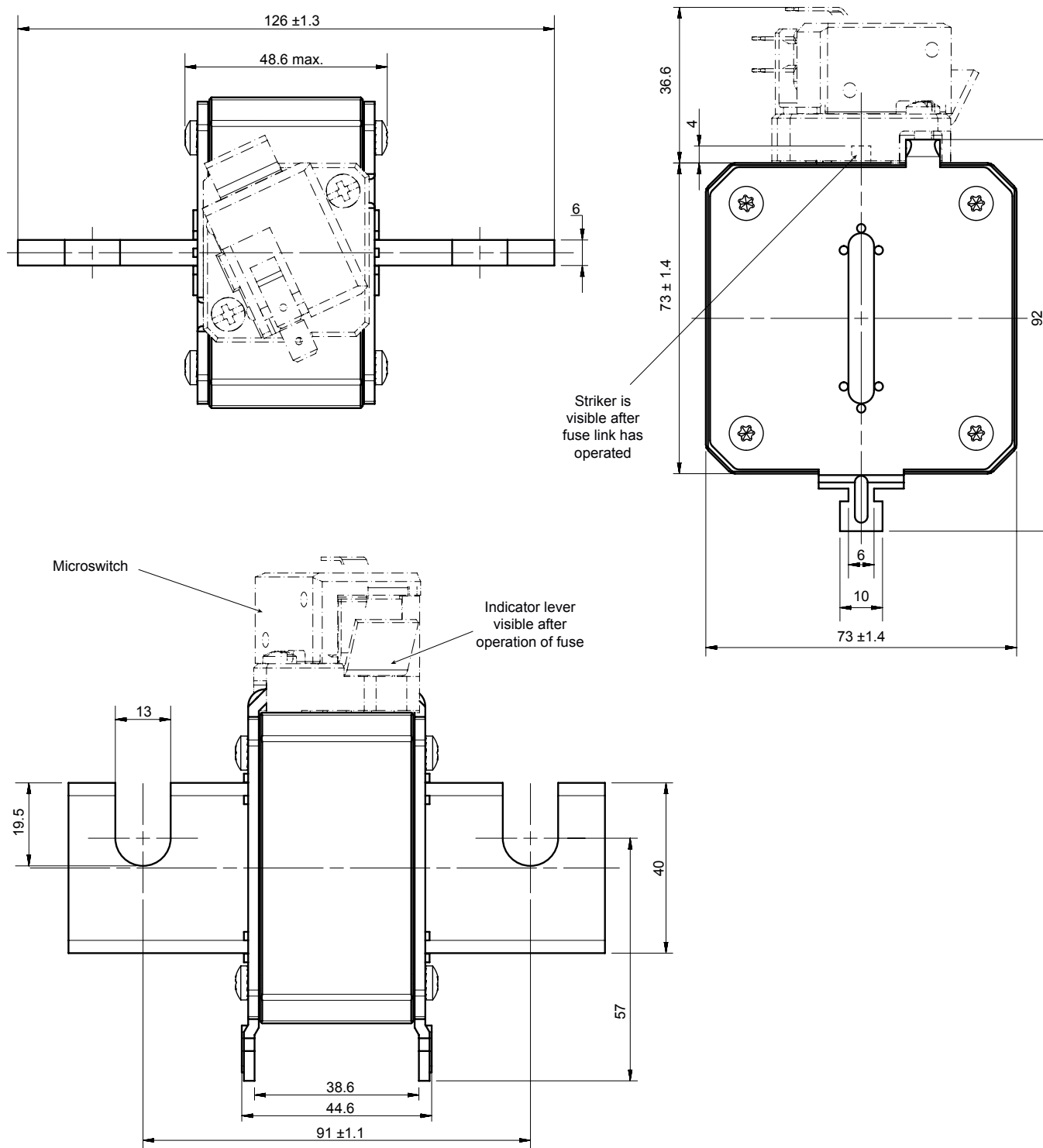
Dimensions in mm

Protistor® size 33 aR

450 to 690VAC (IEC) / 700VAC (UL)

DIMENSIONS

size 33 type EF (102930)



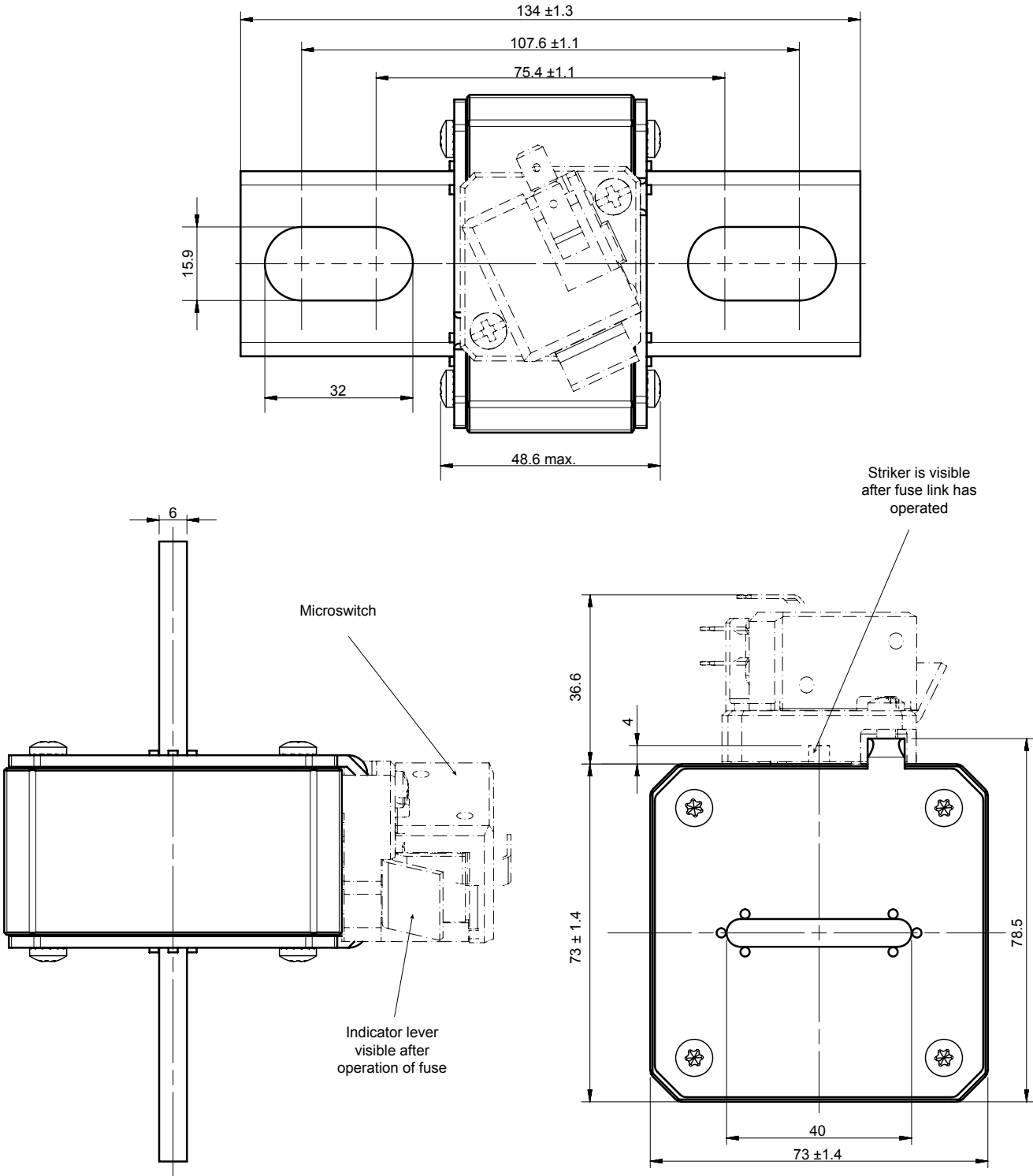
Dimensions in mm

Protistor® size 33 aR

450 to 690VAC (IEC) / 700VAC (UL)

DIMENSIONS

size 33 type KI (102929)



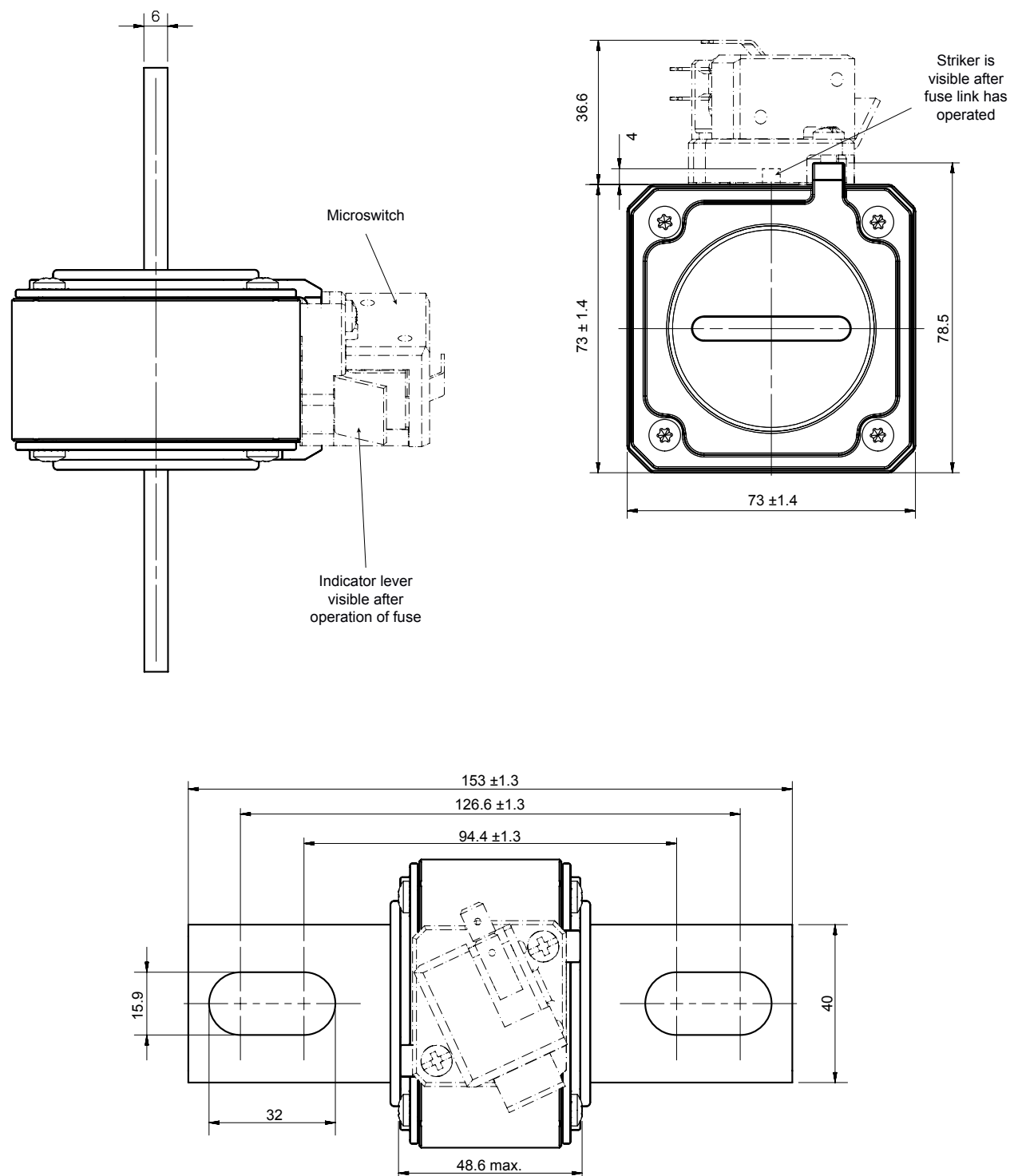
Dimensions in mm

Protistor® size 33 aR

450 to 690VAC (IEC) / 700VAC (UL)

DIMENSIONS

size 33 type LI reinforced (109524)



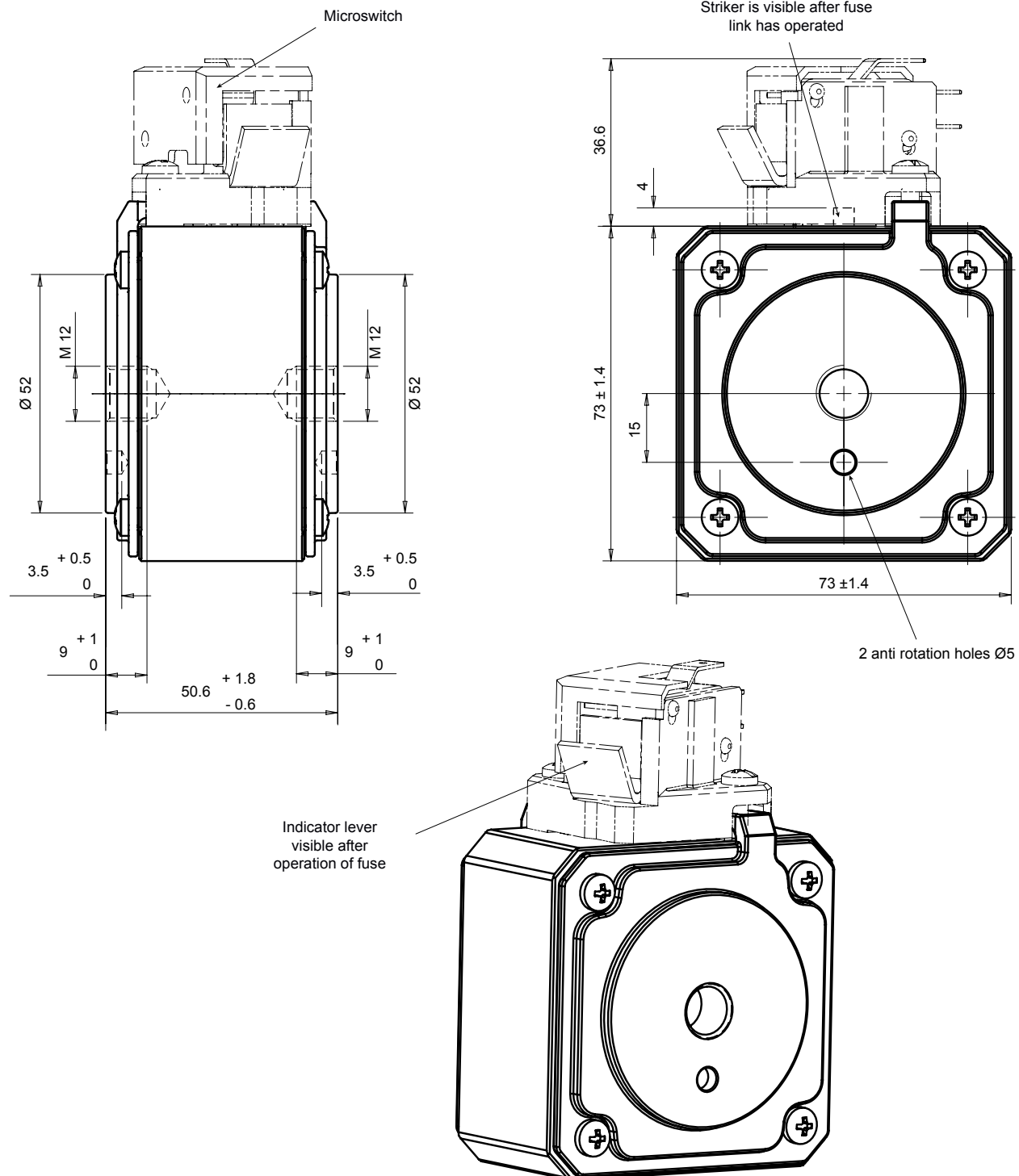
Dimensions in mm

Protistor® size 33 aR

450 to 690VAC (IEC) / 700VAC (UL)

DIMENSIONS

size 33 type TTF reinforced (107900)



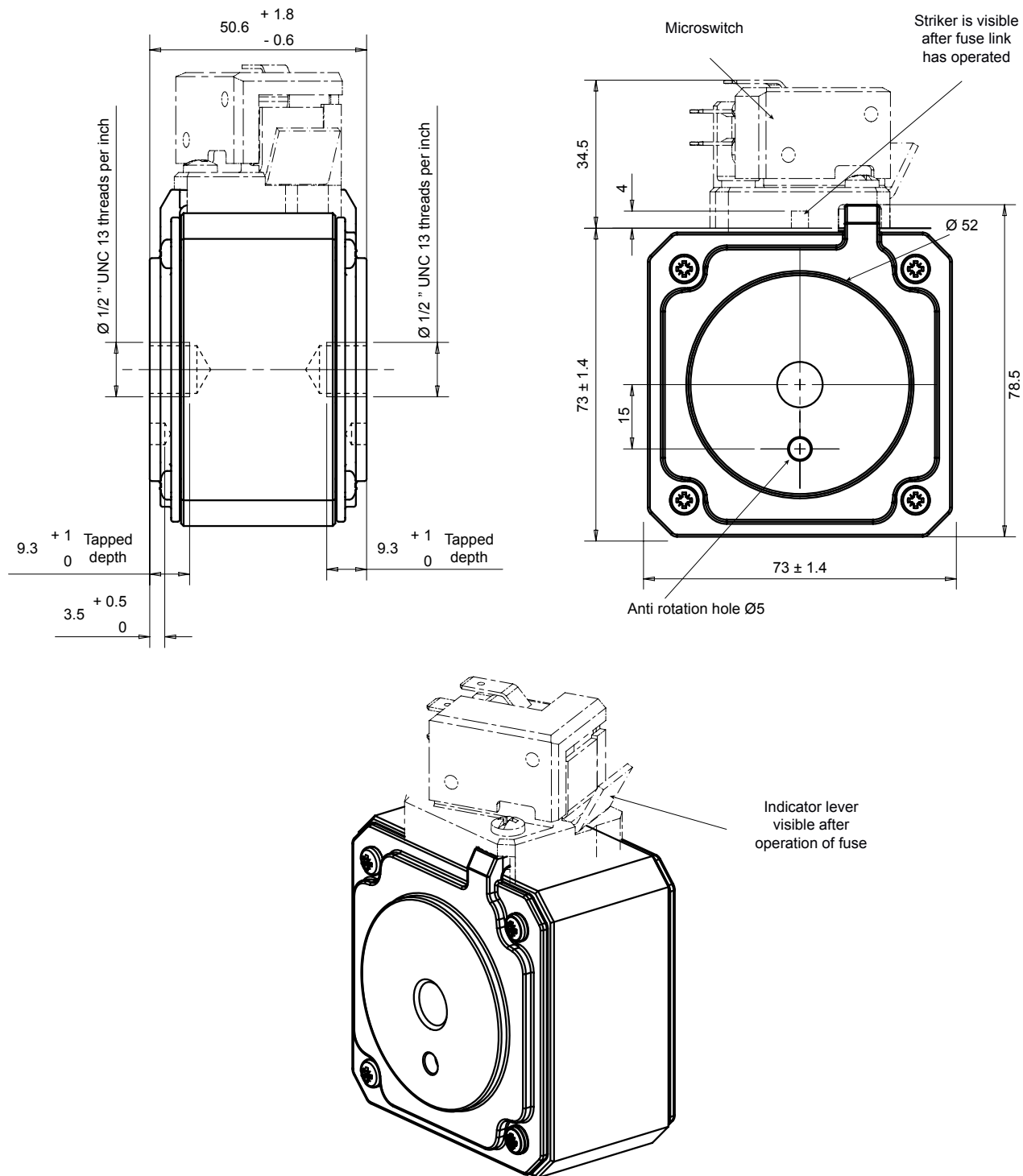
Dimensions in mm

Protistor® size 33 aR

450 to 690VAC (IEC) / 700VAC (UL)

DIMENSIONS

size 33 type TTI reinforced (108835)



Dimensions in mm