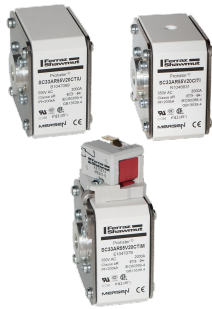


Protistor® Limited Range size 33 aR

550 to 690VAC (IEC) / 760VAC (UL)

SEMICONDUCTOR PROTECTION FUSES

SQUARE BODY HIGH-SPEED FUSE-LINKS AC PROTECTION



The 690/760V Protistor® fuse-links “OEM series” is a specific range to offer cost effective protection without concession on performance for power conversion equipment. These fuses have been engineered to provide protection for all semiconductors: diodes, thyristors and IGBT devices. They are assembled with bimetals silver and copper elements embedded in solidified sand, which helps control arcing characteristics for a lower I^2t and high interrupting rating level. Contact surfaces are tin plated to get an optimized interface with the best quality/price ratio.

This OEM range has been specially conceived to match integrators' and OEMs' main requirements while offering a limited number of part values to promote a “one rating, one size” policy that will support the reduction of parts to be stocked.

TECHNICAL DATA OVERVIEW

Voltage Range AC	550 ... 690 VAC
Ampere Range (A)	800 ... 2000 A
Speed/Characteristic	aR
I.R. AC (IEC)	200 kA
Product Size	33

FEATURES & BENEFITS

- “One rating, one size” range
- aR Class according to IEC 60269-4 and VDE 636-23
- Very low I^2t for improved semiconductor protection
- High speed AC & DC protection
- Current limiting

APPLICATIONS

- Protection of standard power conversion systems such as low voltage drives, UPS, inverter systems and similar
- All AC standard networks (up to 690V) or DC standard networks

STANDARDS

- IEC 60269-1 & -4 Compliance in AC and DC voltage
- UL/CSA Recognized E76491 in AC and DC voltage
- CCC GB 1539.4



Protistor® Limited Range size 33 aR

550 to 690VAC (IEC) / 760VAC (UL)

PRODUCT RANGE



SC33AR55V20CTFU

Size 33 type TTF without indicator

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated voltage DC (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	Package	Weight
SC33AR69V800TFU	N1046972	690 V	760 V	500 V	800 A	93 kA ² s	580 kA ² s	200 kA	132 W	6	0.77 kg
SC33AR69V900TFU	P1046973	690 V	760 V	500 V	900 A	129 kA ² s	805 kA ² s	200 kA	132 W	6	0.77 kg
SC33AR69V10CTFU	Q1046974	690 V	760 V	500 V	1000 A	171 kA ² s	1070 kA ² s	200 kA	149 W	6	0.77 kg
SC33AR69V11CTFU	R1046975	690 V	760 V	500 V	1100 A	250 kA ² s	1570 kA ² s	200 kA	149 W	6	0.77 kg
SC33AR69V13CTFU	T1046977	690 V	760 V	500 V	1250 A	353 kA ² s	2210 kA ² s	200 kA	172 W	6	0.77 kg
SC33AR69V14CTFU	V1046978	690 V	760 V	500 V	1400 A	484 kA ² s	3030 kA ² s	200 kA	172 W	6	0.77 kg
SC33AR60V15CTFU	W1046979	600 V	650 V	450 V	1500 A	496 kA ² s	2610 kA ² s	200 kA	210 W	6	0.77 kg
SC33AR60V16CTFU	Y1046981	600 V	650 V	450 V	1600 A	555 kA ² s	3000 kA ² s	200 kA	221 W	6	0.77 kg
SC33AR60V18CTFU	Z1046982	600 V	650 V	450 V	1800 A	720 kA ² s	3800 kA ² s	200 kA	263 W	6	0.77 kg
SC33AR55V20CTFU	A1046983	550 V	605 V	450 V	2000 A	988 kA ² s	4720 kA ² s	200 kA	283 W	6	0.77 kg



SC33AR55V20CTF

Size 33 type TTF with indicator

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated voltage DC (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	Package	Weight
SC33AR69V800TF	W1046956	690 V	760 V	500 V	800 A	93 kA ² s	580 kA ² s	200 kA	132 W	6	0.77 kg
SC33AR69V900TF	X1046957	690 V	760 V	500 V	900 A	129 kA ² s	805 kA ² s	200 kA	132 W	6	0.77 kg
SC33AR69V10CTF	Y1046958	690 V	760 V	500 V	1000 A	171 kA ² s	1070 kA ² s	200 kA	149 W	6	0.77 kg
SC33AR69V11CTF	Z1046959	690 V	760 V	500 V	1100 A	250 kA ² s	1570 kA ² s	200 kA	149 W	6	0.77 kg
SC33AR69V13CTF	A1046960	690 V	760 V	500 V	1250 A	353 kA ² s	2210 kA ² s	200 kA	172 W	6	0.77 kg
SC33AR69V14CTF	B1046961	690 V	760 V	500 V	1400 A	484 kA ² s	3030 kA ² s	200 kA	172 W	6	0.77 kg
SC33AR60V15CTF	F1046965	600 V	650 V	450 V	1500 A	496 kA ² s	2610 kA ² s	200 kA	210 W	6	0.77 kg
SC33AR60V16CTF	G1046966	600 V	650 V	450 V	1600 A	555 kA ² s	3000 kA ² s	200 kA	221 W	6	0.77 kg
SC33AR60V18CTF	J1046968	600 V	650 V	450 V	1800 A	720 kA ² s	3800 kA ² s	200 kA	263 W	6	0.77 kg
SC33AR55V20CTF	K1046969	550 V	605 V	450 V	2000 A	988 kA ² s	4720 kA ² s	200 kA	283 W	6	0.77 kg

Protistor® Limited Range size 33 aR

550 to 690VAC (IEC) / 760VAC (UL)

PRODUCT RANGE



SC33AR55V20CTFM

Size 33 type TTF with microswitch

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated voltage DC (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	Package	Weight
SC33AR69V800TFM	K1046946	690 V	760 V	500 V	800 A	93 kA ² s	580 kA ² s	200 kA	132 W	6	0.82 kg
SC33AR69V900TFM	L1046947	690 V	760 V	500 V	900 A	129 kA ² s	805 kA ² s	200 kA	132 W	6	0.82 kg
SC33AR69V10CTFM	M1046948	690 V	760 V	500 V	1000 A	171 kA ² s	1070 kA ² s	200 kA	149 W	6	0.82 kg
SC33AR69V11CTFM	N1046949	690 V	760 V	500 V	1100 A	250 kA ² s	1570 kA ² s	200 kA	149 W	6	0.82 kg
SC33AR69V13CTFM	P1046950	690 V	760 V	500 V	1250 A	353 kA ² s	2210 kA ² s	200 kA	172 W	6	0.82 kg
SC33AR69V14CTFM	Q1046951	690 V	760 V	500 V	1400 A	484 kA ² s	3030 kA ² s	200 kA	172 W	6	0.82 kg
SC33AR60V15CTFM	R1046952	600 V	650 V	450 V	1500 A	496 kA ² s	2610 kA ² s	200 kA	210 W	6	0.82 kg
SC33AR60V16CTFM	S1046953	600 V	650 V	450 V	1600 A	555 kA ² s	3000 kA ² s	200 kA	221 W	6	0.82 kg
SC33AR60V18CTFM	T1046954	600 V	650 V	450 V	1800 A	720 kA ² s	3800 kA ² s	200 kA	263 W	6	0.82 kg
SC33AR55V20CTFM	V1046955	550 V	605 V	450 V	2000 A	988 kA ² s	4720 kA ² s	200 kA	283 W	6	0.82 kg



SC33AR55V20CTIU

Size 33 type TTI without indicator

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated voltage DC (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	Package	Weight
SC33AR69V800TIU	R1047090	690 V	760 V	500 V	800 A	93 kA ² s	580 kA ² s	200 kA	132 W	6	0.77 kg
SC33AR69V900TIU	S1047091	690 V	760 V	500 V	900 A	129 kA ² s	805 kA ² s	200 kA	132 W	6	0.77 kg
SC33AR69V10CTIU	T1047092	690 V	760 V	500 V	1000 A	171 kA ² s	1070 kA ² s	200 kA	149 W	6	0.77 kg
SC33AR69V11CTIU	V1047093	690 V	760 V	500 V	1100 A	250 kA ² s	1570 kA ² s	200 kA	149 W	6	0.77 kg
SC33AR69V13CTIU	W1047094	690 V	760 V	500 V	1250 A	353 kA ² s	2210 kA ² s	200 kA	172 W	6	0.77 kg
SC33AR69V14CTIU	X1047095	690 V	760 V	500 V	1400 A	484 kA ² s	3030 kA ² s	200 kA	172 W	6	0.77 kg
SC33AR60V15CTIU	Y1047096	600 V	650 V	450 V	1500 A	496 kA ² s	2610 kA ² s	200 kA	210 W	6	0.77 kg
SC33AR60V16CTIU	Z1047097	600 V	650 V	450 V	1600 A	555 kA ² s	3000 kA ² s	200 kA	221 W	6	0.77 kg
SC33AR60V18CTIU	A1047098	600 V	650 V	450 V	1800 A	720 kA ² s	3800 kA ² s	200 kA	263 W	6	0.77 kg
SC33AR55V20CTIU	B1047099	550 V	605 V	450 V	2000 A	988 kA ² s	4720 kA ² s	200 kA	283 W	6	0.77 kg

Protistor® Limited Range size 33 aR

550 to 690VAC (IEC) / 760VAC (UL)

PRODUCT RANGE



SC33AR55V20CTI

Size 33 type TTI with indicator

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated voltage DC (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	Package	Weight
SC33AR69V800TI	F1047080	690 V	760 V	500 V	800 A	93 kA ² s	580 kA ² s	200 kA	132 W	6	0.77 kg
SC33AR69V900TI	G1047081	690 V	760 V	500 V	900 A	129 kA ² s	805 kA ² s	200 kA	132 W	6	0.77 kg
SC33AR69V10CTI	H1047082	690 V	760 V	500 V	1000 A	171 kA ² s	1070 kA ² s	200 kA	149 W	6	0.77 kg
SC33AR69V11CTI	J1047083	690 V	760 V	500 V	1100 A	250 kA ² s	1570 kA ² s	200 kA	149 W	6	0.77 kg
SC33AR69V13CTI	K1047084	690 V	760 V	500 V	1250 A	353 kA ² s	2210 kA ² s	200 kA	172 W	6	0.77 kg
SC33AR69V14CTI	L1047085	690 V	760 V	500 V	1400 A	484 kA ² s	3030 kA ² s	200 kA	172 W	6	0.77 kg
SC33AR60V15CTI	M1047086	600 V	650 V	450 V	1500 A	496 kA ² s	2610 kA ² s	200 kA	210 W	6	0.77 kg
SC33AR60V16CTI	N1047087	600 V	650 V	450 V	1600 A	555 kA ² s	3000 kA ² s	200 kA	221 W	6	0.77 kg
SC33AR60V18CTI	P1047088	600 V	650 V	450 V	1800 A	720 kA ² s	3800 kA ² s	200 kA	263 W	6	0.77 kg
SC33AR55V20CTI	Q1047089	550 V	605 V	450 V	2000 A	988 kA ² s	4720 kA ² s	200 kA	283 W	6	0.77 kg



SC33AR55V20CTIM

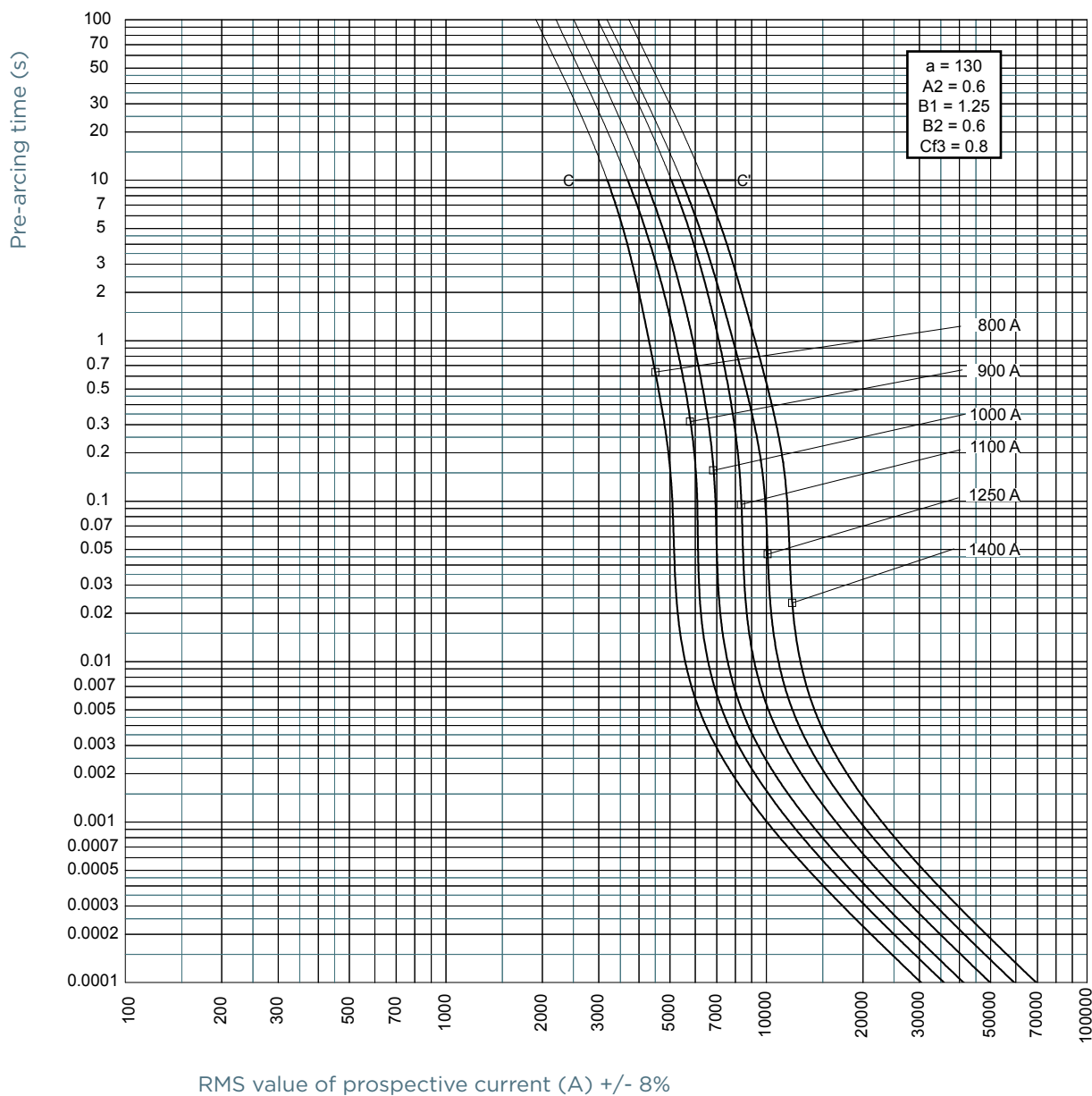
Size 33 type TTI with microswitch

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated voltage DC (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	Package	Weight
SC33AR69V800TIM	V1047070	690 V	760 V	500 V	800 A	93 kA ² s	580 kA ² s	200 kA	132 W	6	0.82 kg
SC33AR69V900TIM	W1047071	690 V	760 V	500 V	900 A	129 kA ² s	805 kA ² s	200 kA	132 W	6	0.82 kg
SC33AR69V10CTIM	X1047072	690 V	760 V	500 V	1000 A	171 kA ² s	1070 kA ² s	200 kA	149 W	6	0.82 kg
SC33AR69V11CTIM	Y1047073	690 V	760 V	500 V	1100 A	250 kA ² s	1570 kA ² s	200 kA	149 W	6	0.82 kg
SC33AR69V13CTIM	Z1047074	690 V	760 V	500 V	1250 A	353 kA ² s	2210 kA ² s	200 kA	172 W	6	0.82 kg
SC33AR69V14CTIM	A1047075	690 V	760 V	500 V	1400 A	484 kA ² s	3030 kA ² s	200 kA	172 W	6	0.82 kg
SC33AR60V15CTIM	B1047076	600 V	650 V	450 V	1500 A	496 kA ² s	2610 kA ² s	200 kA	210 W	6	0.82 kg
SC33AR60V16CTIM	C1047077	600 V	650 V	450 V	1600 A	555 kA ² s	3000 kA ² s	200 kA	221 W	6	0.82 kg
SC33AR60V18CTIM	D1047078	600 V	650 V	450 V	1800 A	720 kA ² s	3800 kA ² s	200 kA	263 W	6	0.82 kg
SC33AR55V20CTIM	E1047079	550 V	605 V	450 V	2000 A	988 kA ² s	4720 kA ² s	200 kA	283 W	6	0.82 kg

Protistor® Limited Range size 33 aR

550 to 690VAC (IEC) / 760VAC (UL)

TIME CURRENT CHARACTERISTIC CURVES

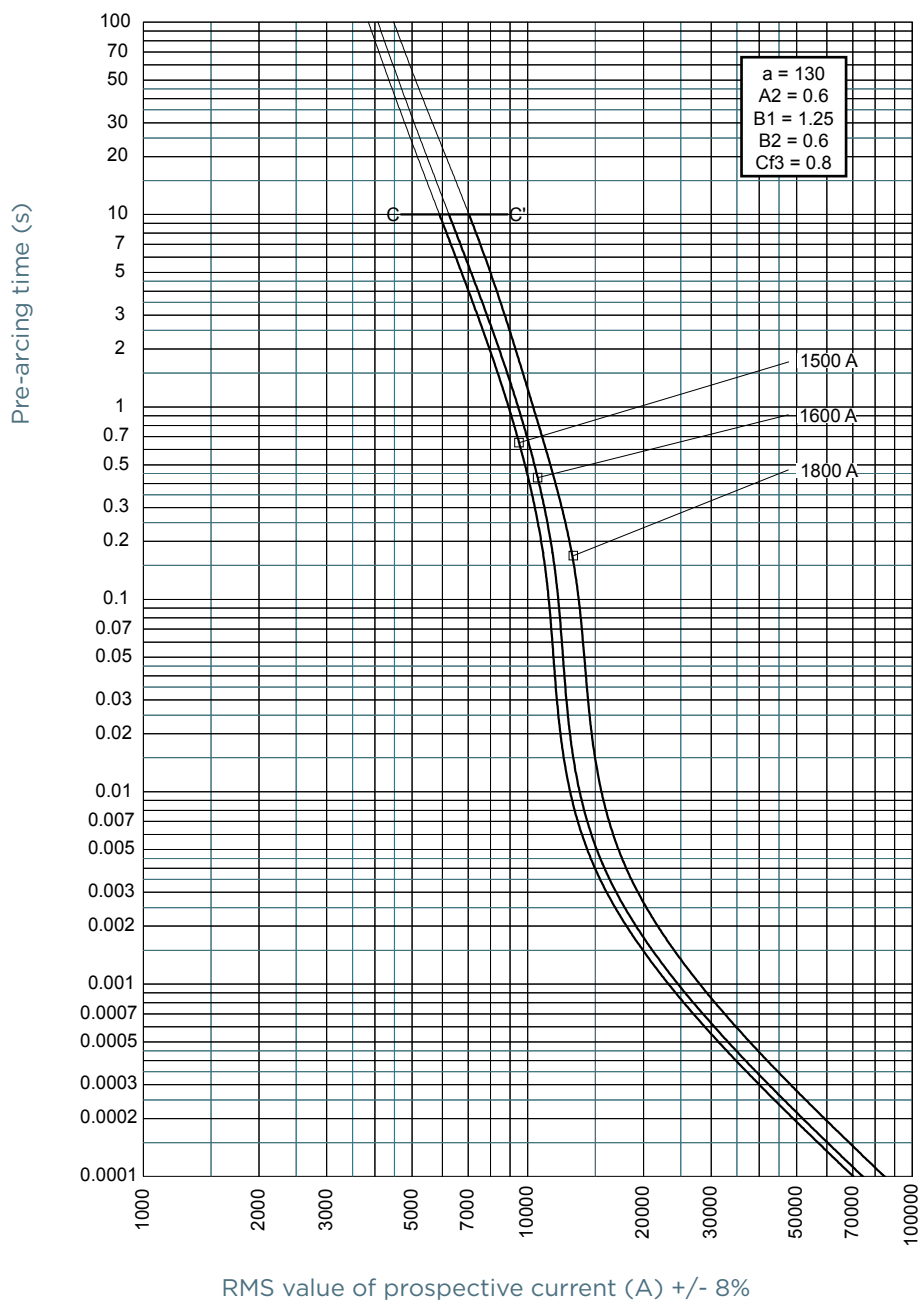


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Protistor® Limited Range size 33 aR

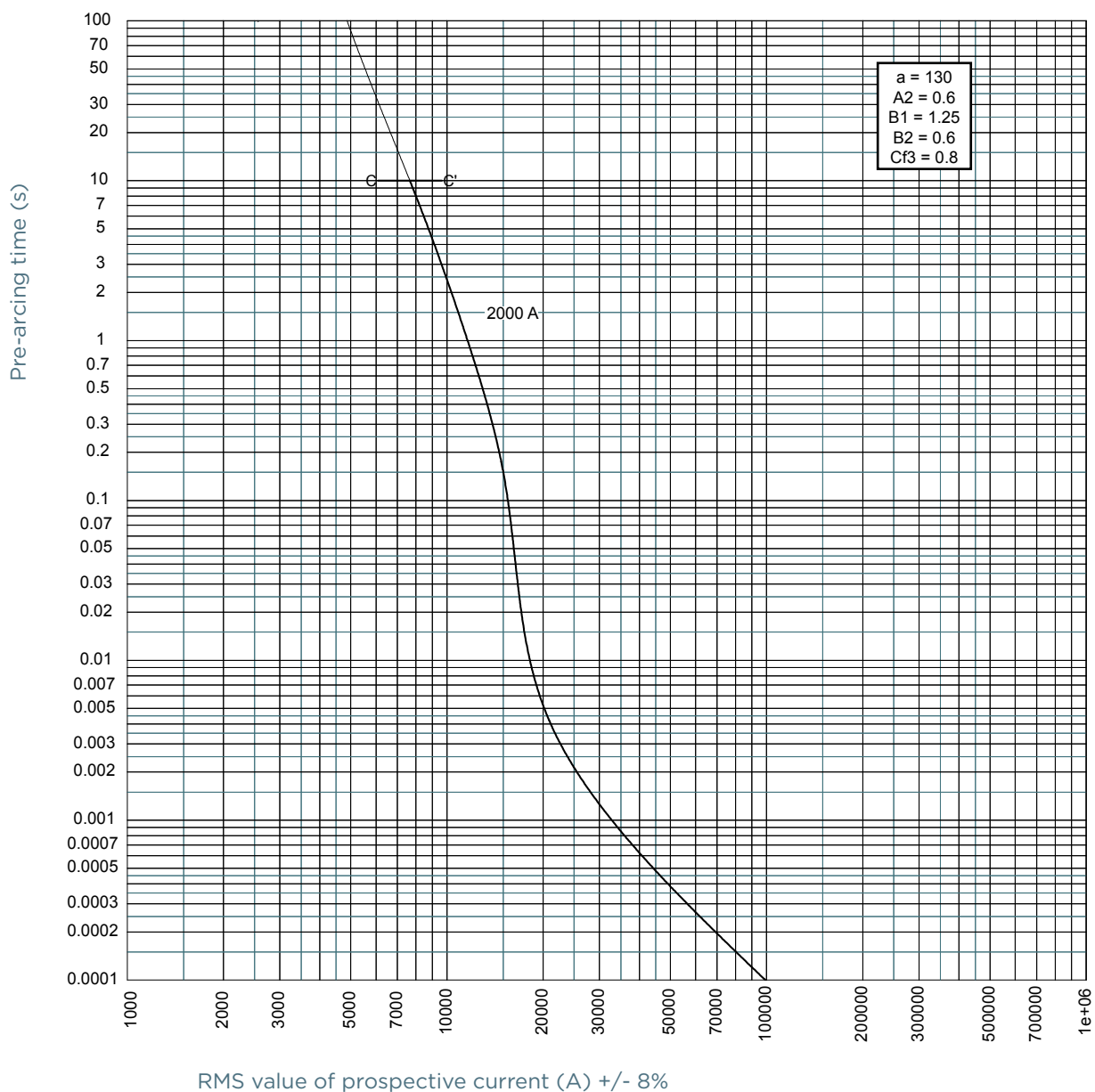
550 to 690VAC (IEC) / 760VAC (UL)

TIME CURRENT CHARACTERISTIC CURVES



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

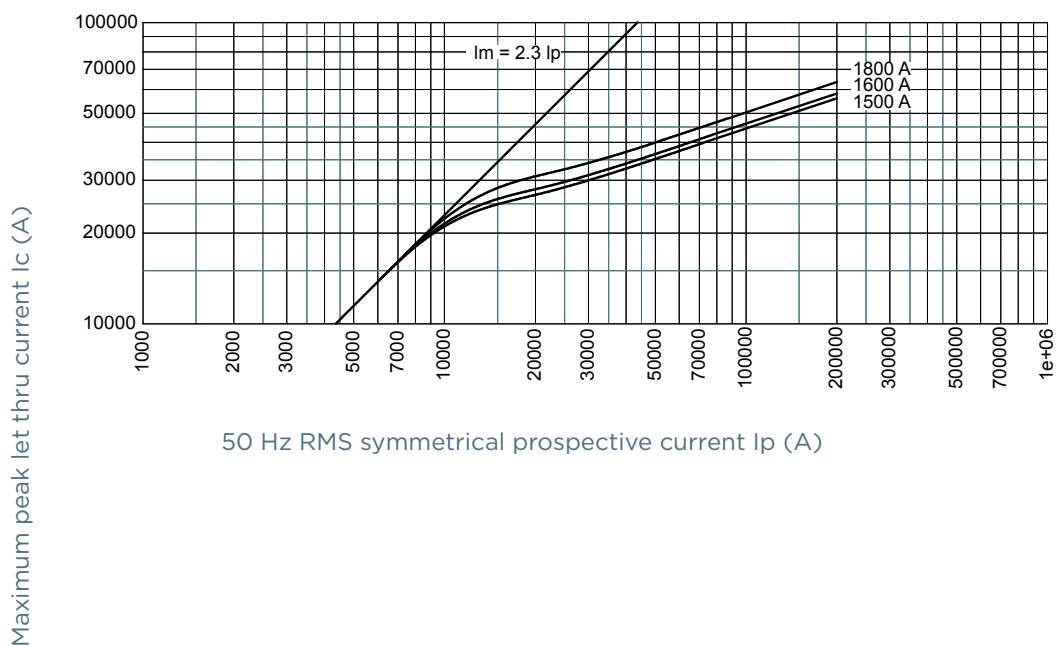
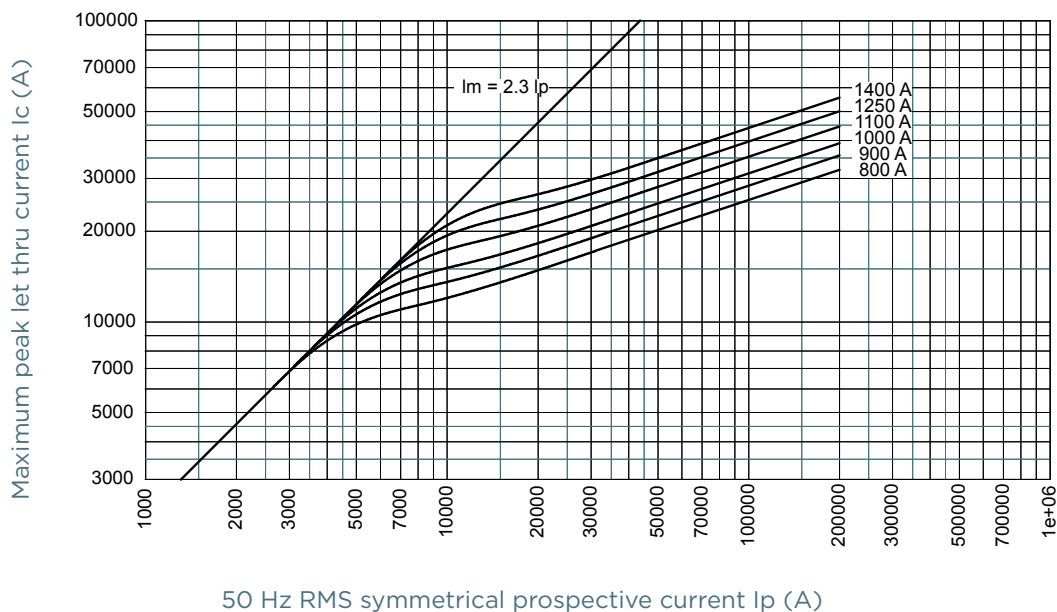
TIME CURRENT CHARACTERISTIC CURVES



Protistor® Limited Range size 33 aR

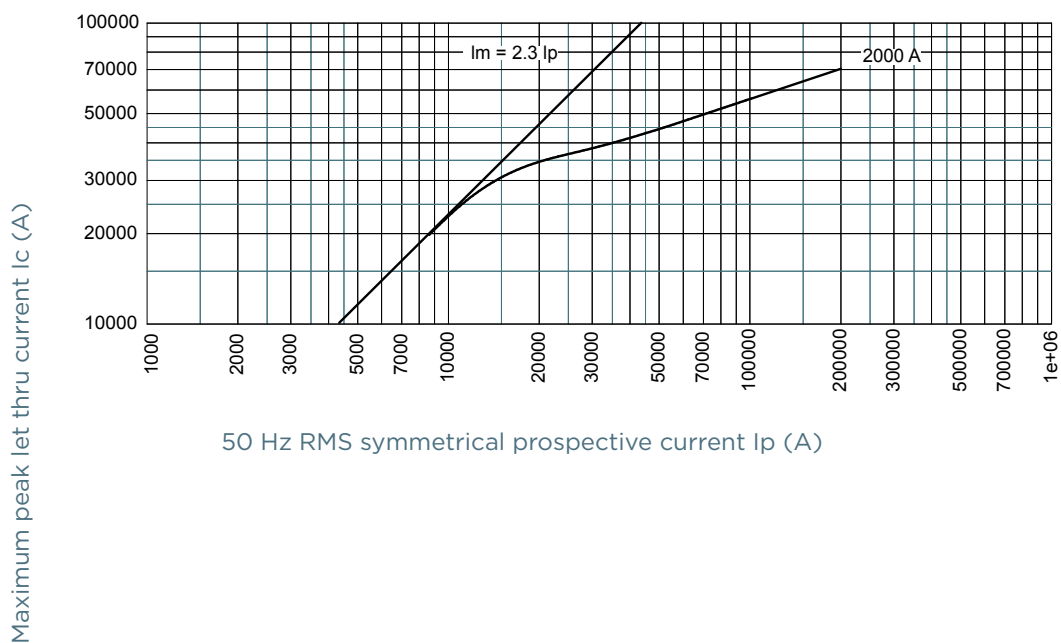
550 to 690VAC (IEC) / 760VAC (UL)

CUT-OFF CURRENT CHARACTERISTIC

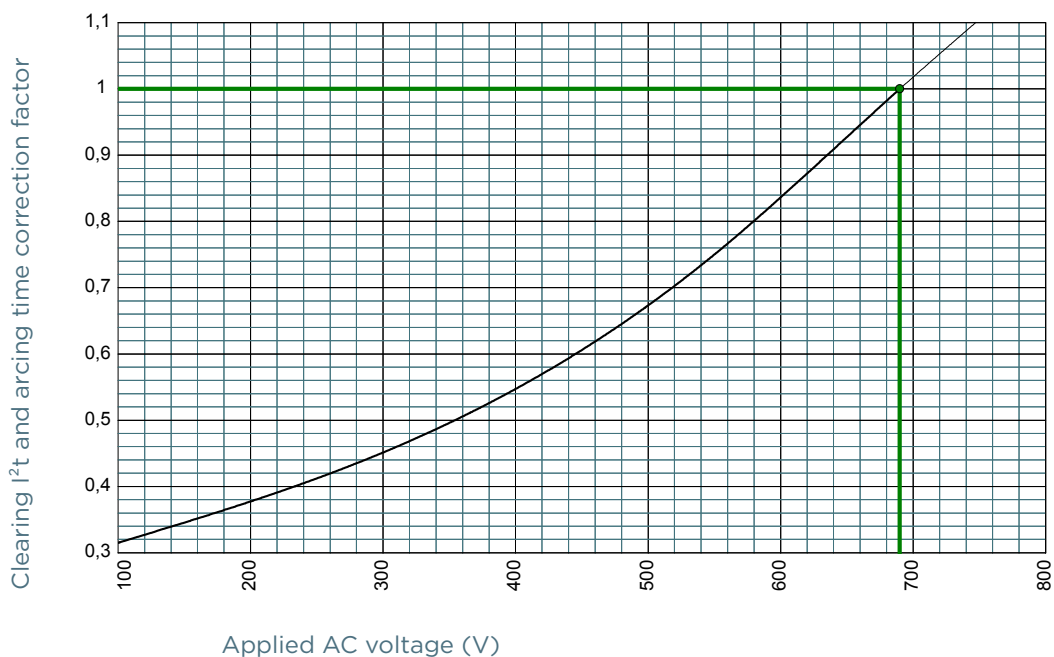


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CUT-OFF CURRENT CHARACTERISTIC



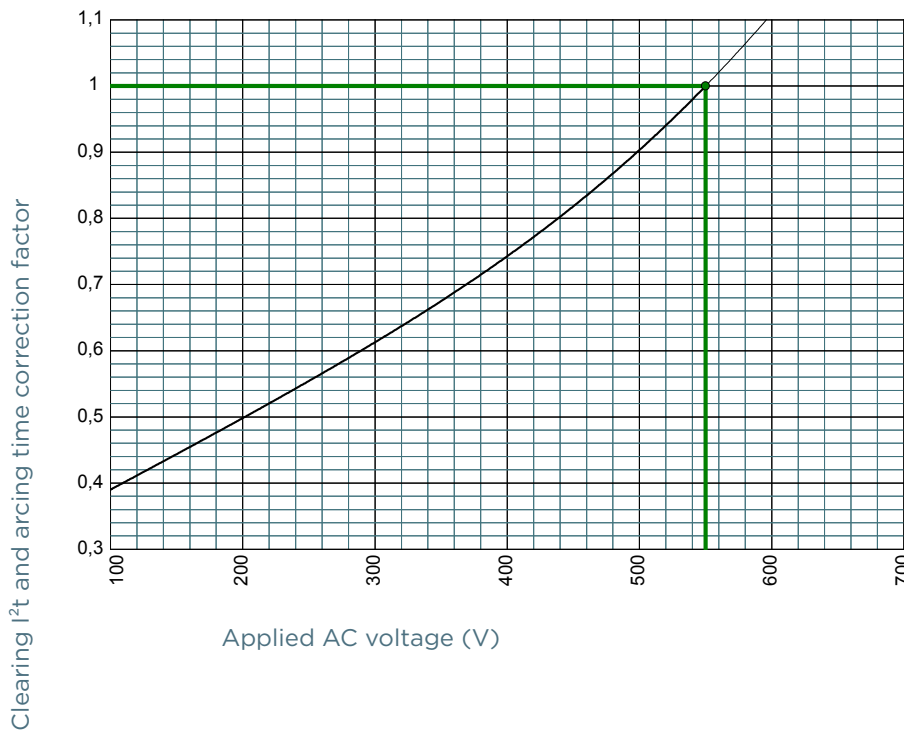
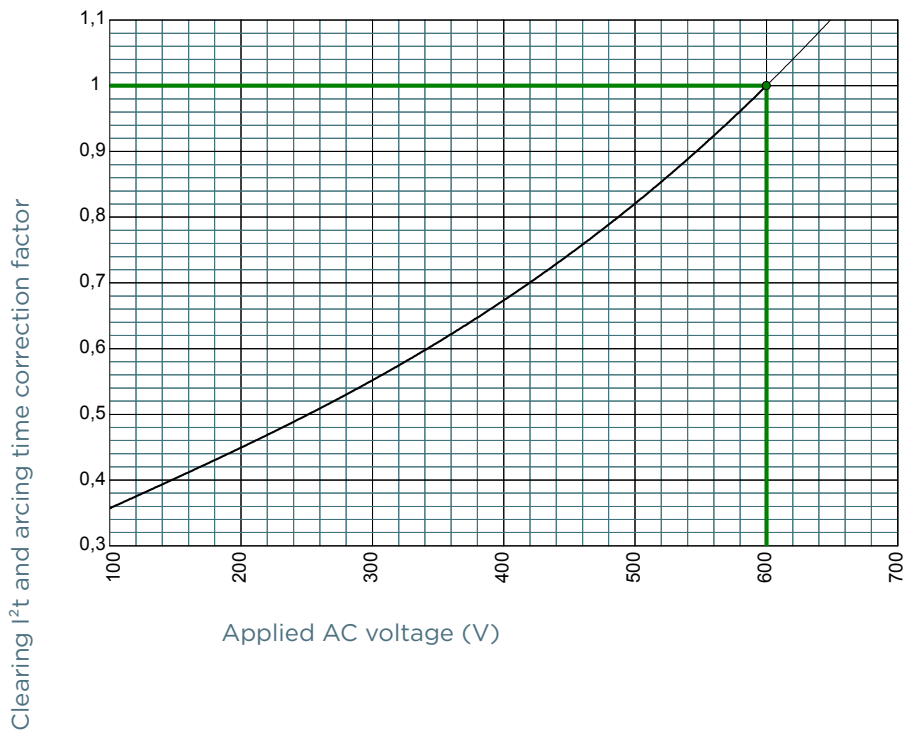
I²T MULTIPLIER COEFFICIENT



Protistor® Limited Range size 33 aR

550 to 690VAC (IEC) / 760VAC (UL)

I²T MULTIPLIER COEFFICIENT

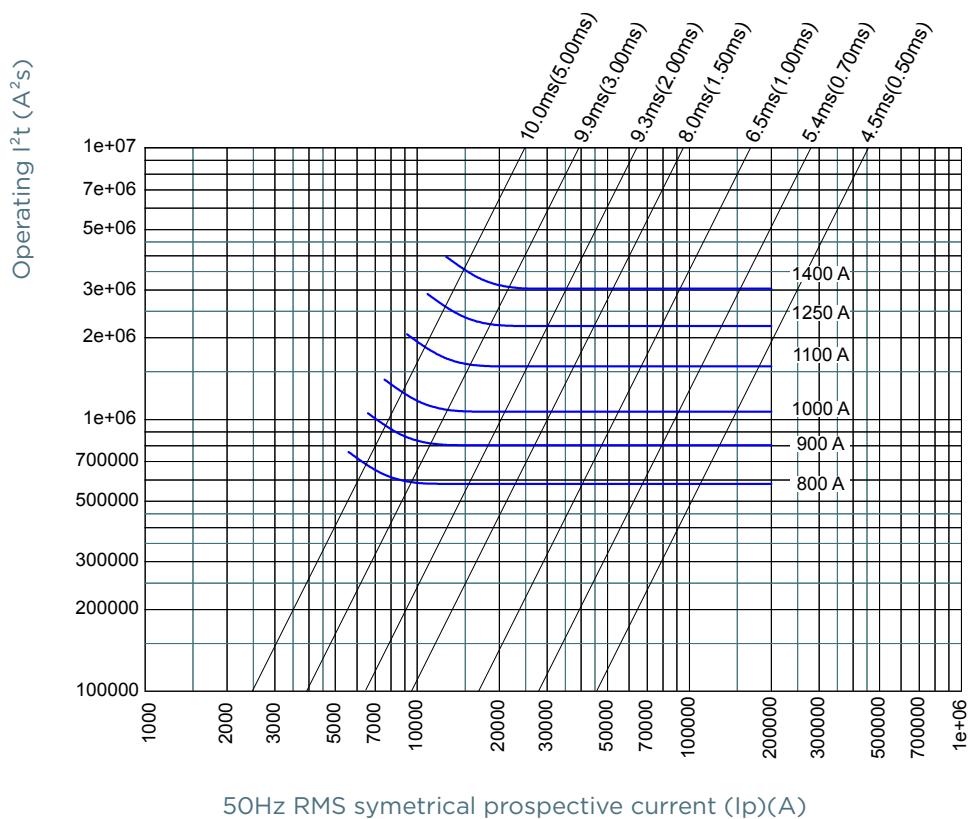


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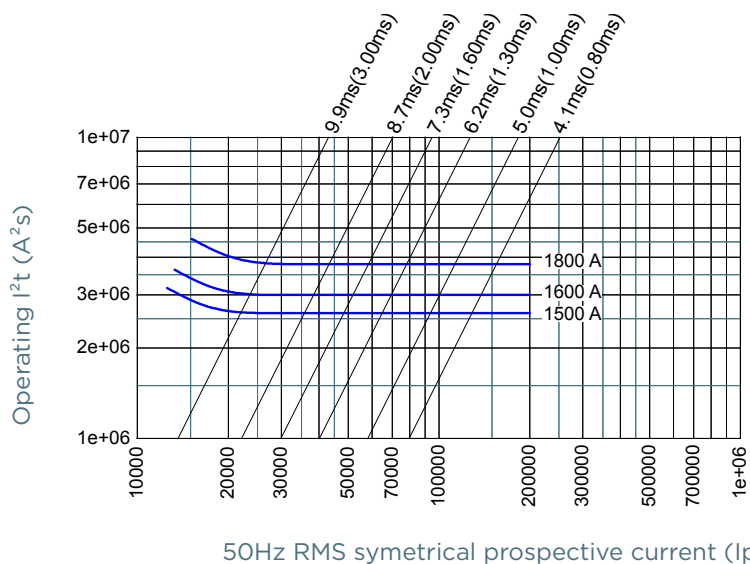
Protistor® Limited Range size 33 aR

550 to 690VAC (IEC) / 760VAC (UL)

CHARACTERISTICS TOTAL I²T CURVE



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



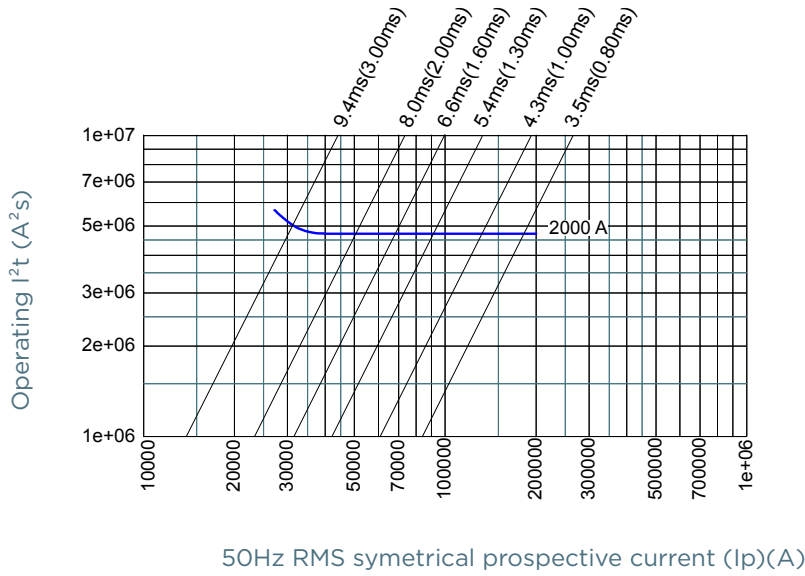
50Hz RMS symmetrical prospective current (Ip)(A)

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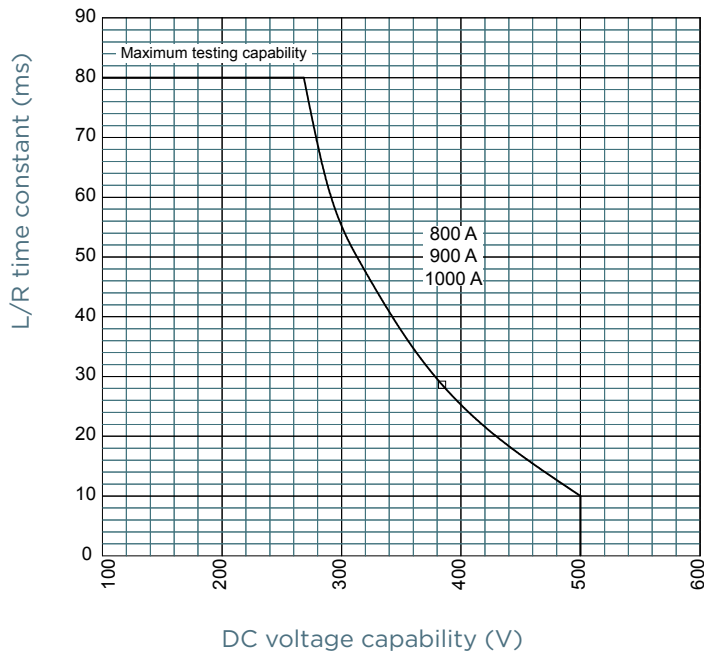
Protistor® Limited Range size 33 aR

550 to 690VAC (IEC) / 760VAC (UL)

CHARACTERISTICS TOTAL I²T CURVE



L/R TIME CONSTANT VS DC VOLTAGE CAPABILITY

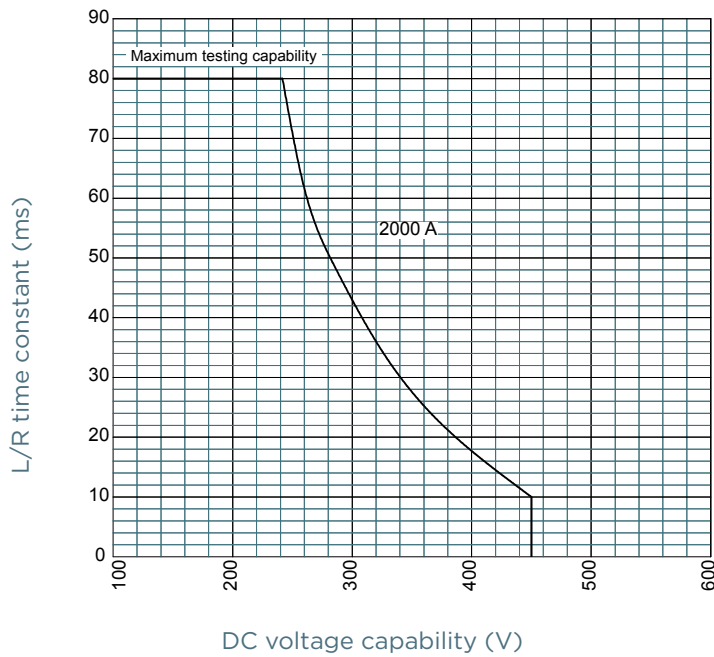
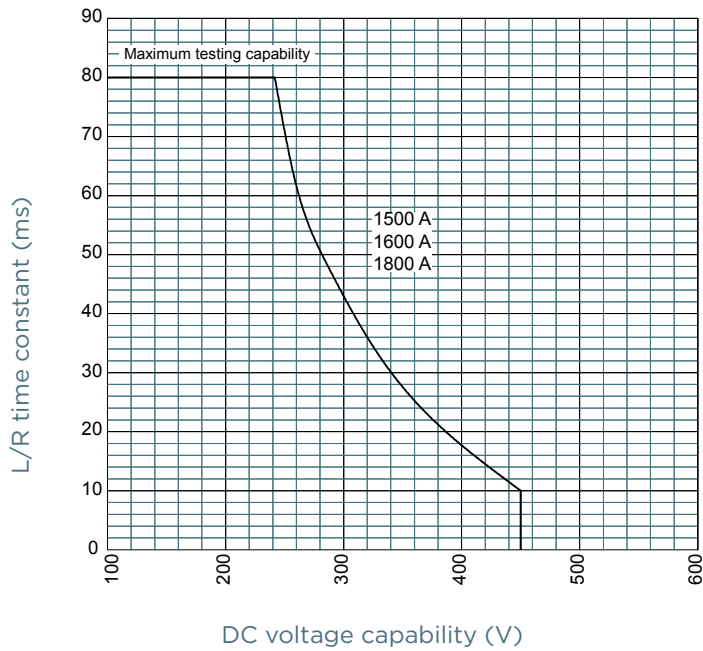


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Protistor® Limited Range size 33 aR

550 to 690VAC (IEC) / 760VAC (UL)

L/R TIME CONSTANT VS DC VOLTAGE CAPABILITY

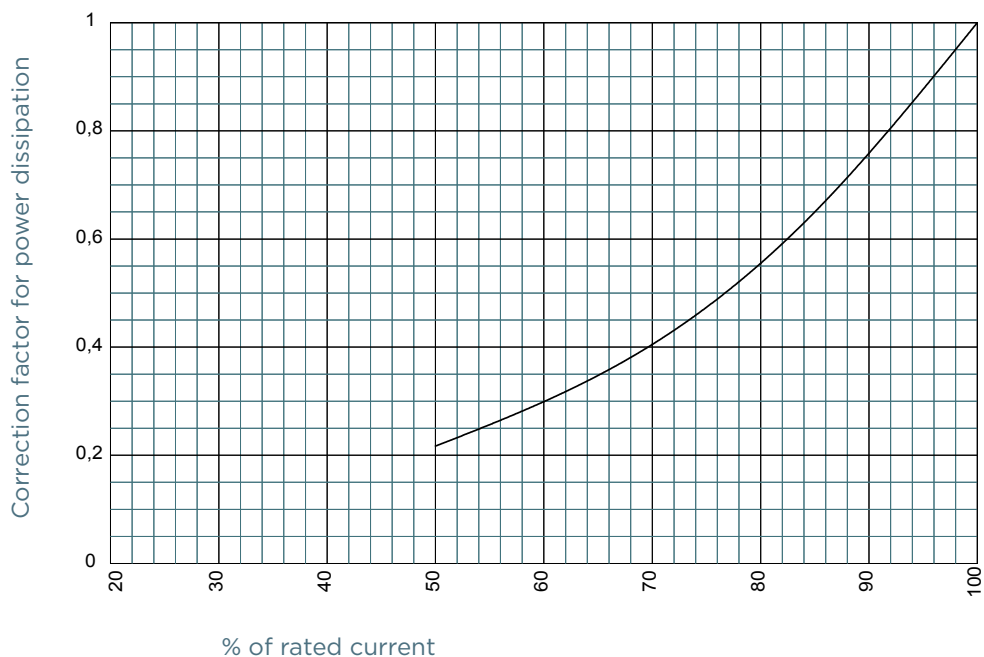


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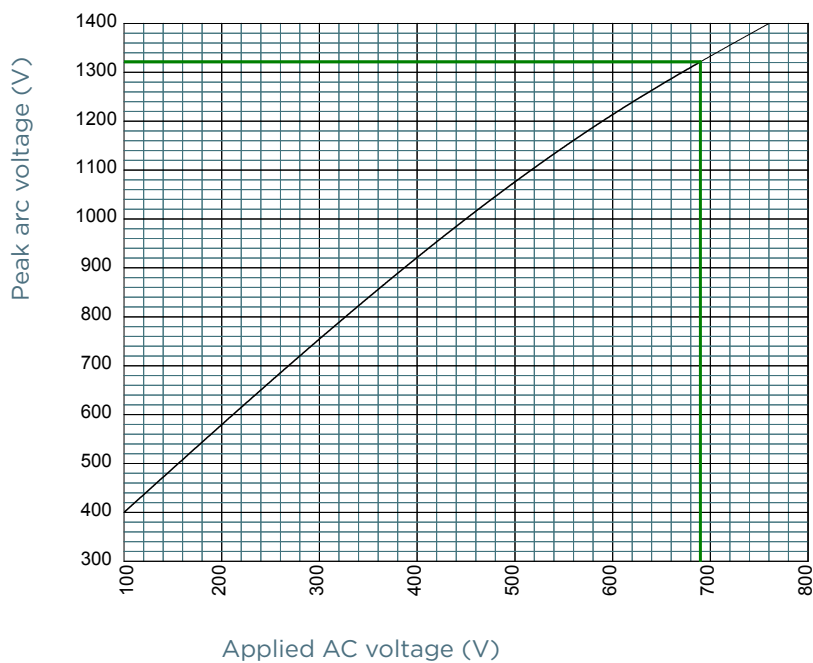
Protistor® Limited Range size 33 aR

550 to 690VAC (IEC) / 760VAC (UL)

POWER DISSIPATION



PEAK ARC VOLTAGE

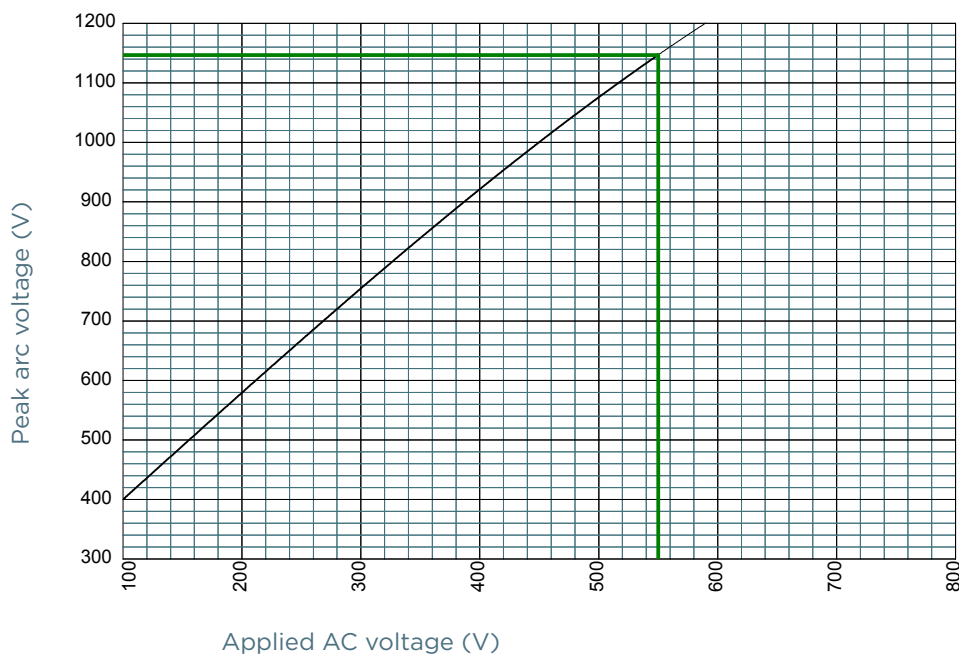
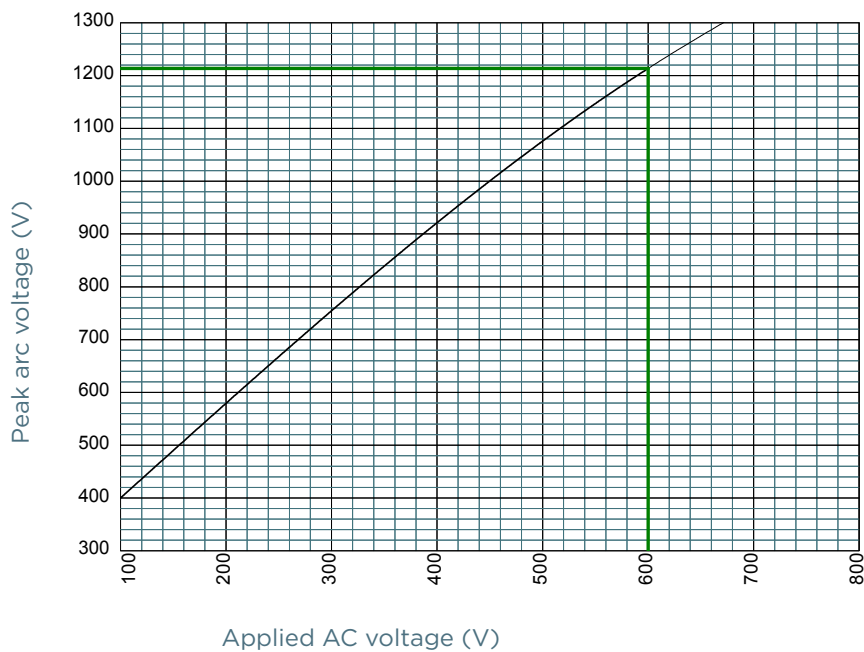


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Protistor[®] Limited Range size 33 aR

550 to 690VAC (IEC) / 760VAC (UL)

PEAK ARC VOLTAGE



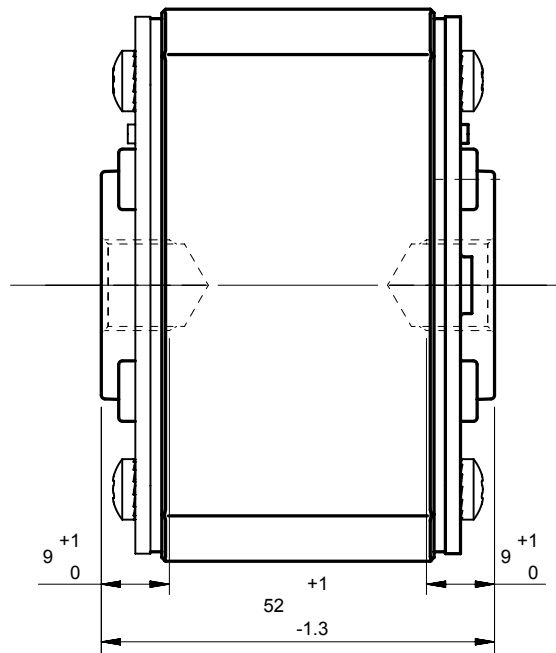
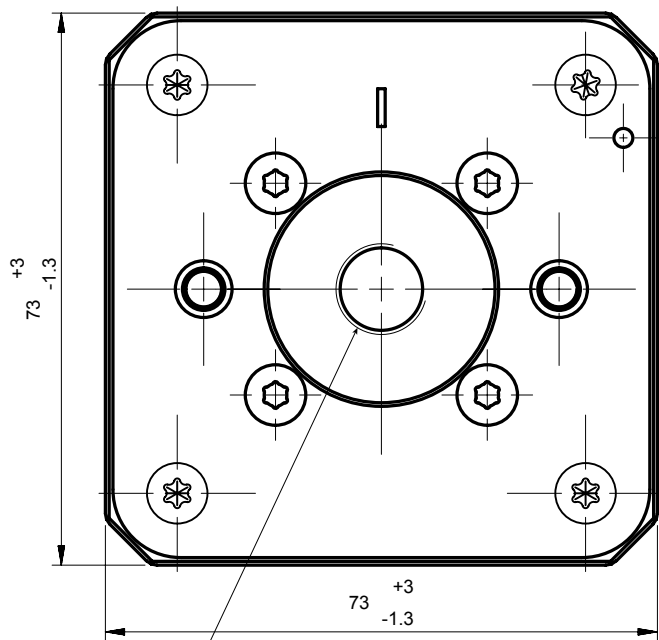
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Protistor® Limited Range size 33 aR

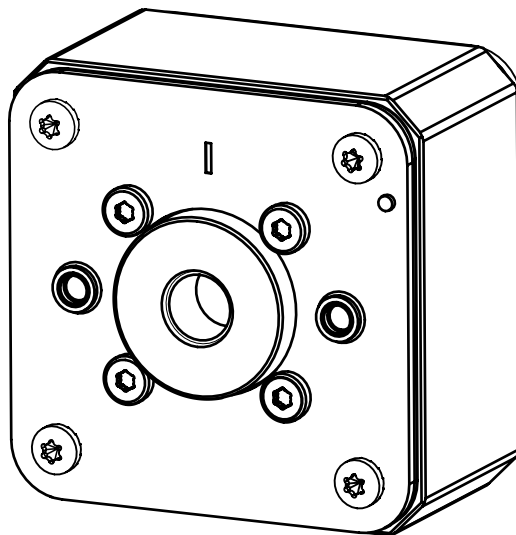
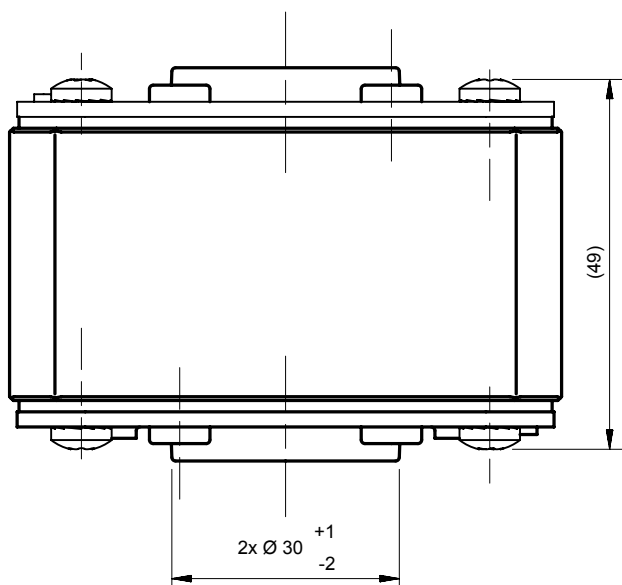
550 to 690VAC (IEC) / 760VAC (UL)

DIMENSIONS

TTF / TTI without indicator



TTI: 2x Ø 1/2 - 13 UNC
TTF: 2x M 12



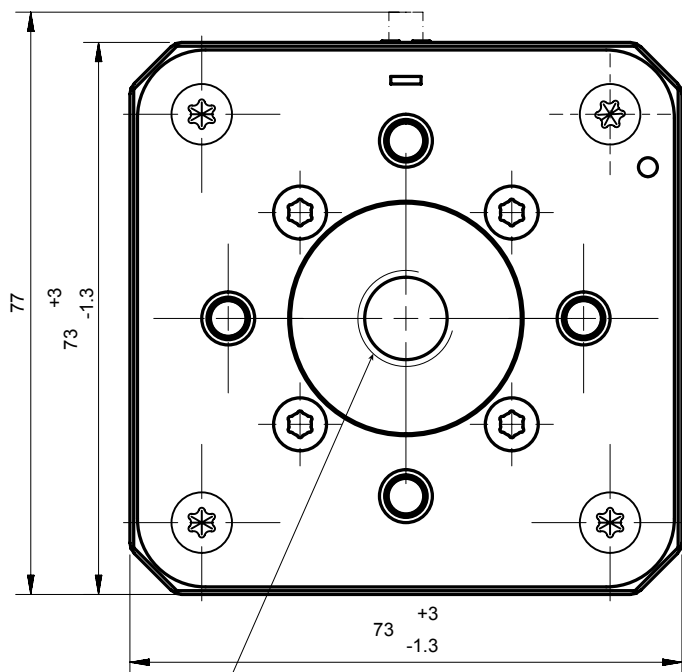
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Protistor® Limited Range size 33 aR

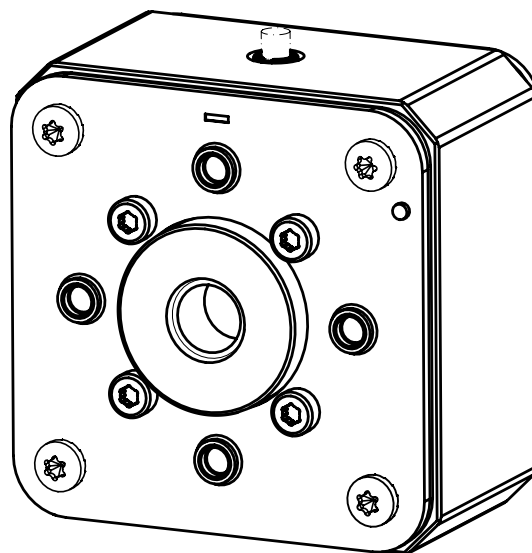
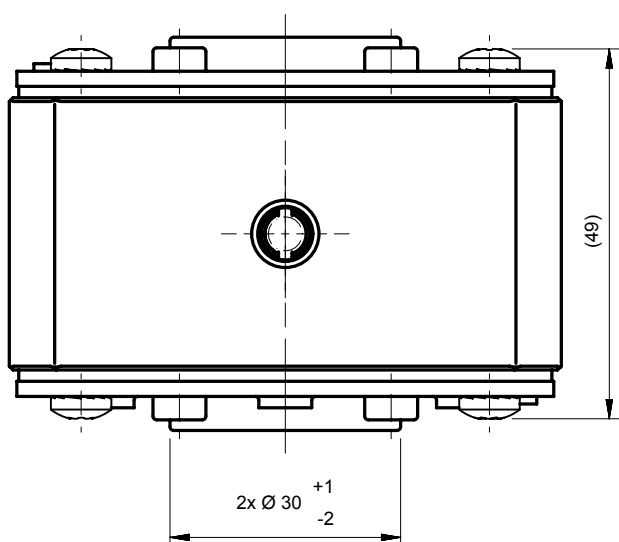
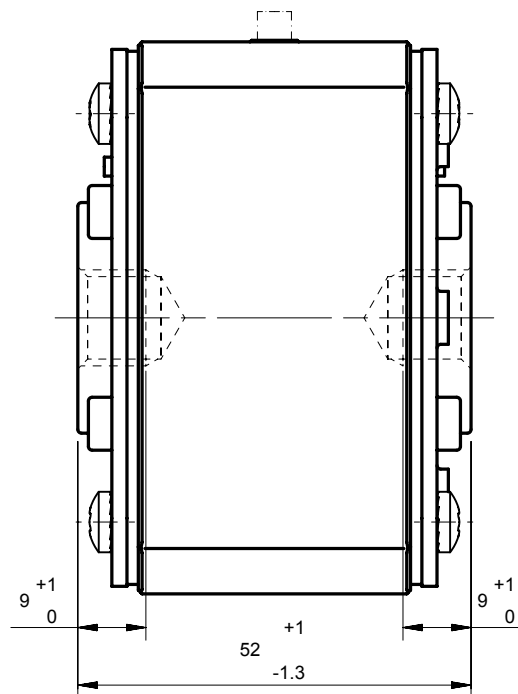
550 to 690VAC (IEC) / 760VAC (UL)

DIMENSIONS

TTF / TTI with indicator



TTI: 2x Ø 1/2 - 13 UNC
TTF: 2x M 12



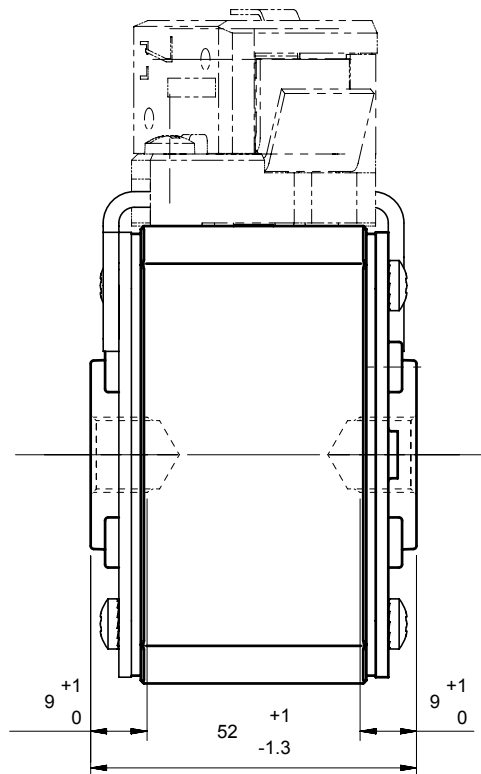
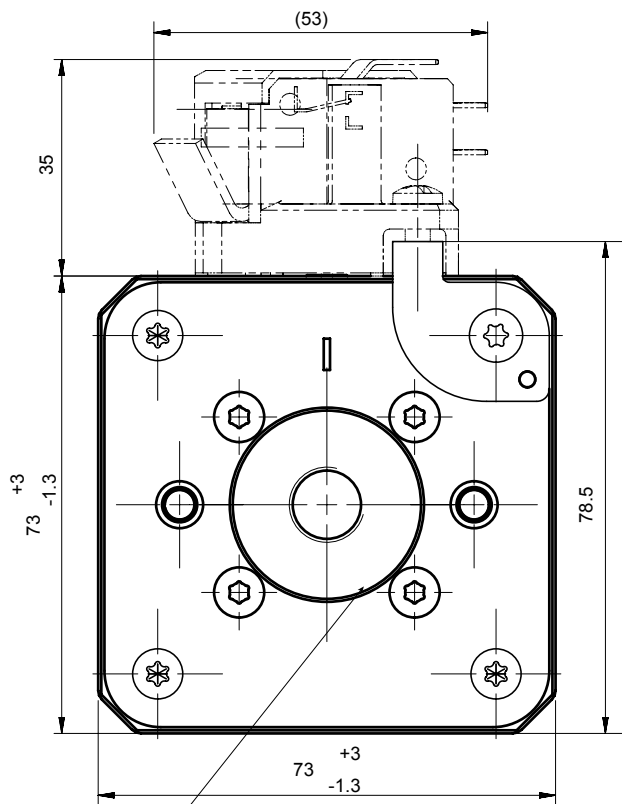
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Protistor® Limited Range size 33 aR

550 to 690VAC (IEC) / 760VAC (UL)

DIMENSIONS

TTF / TTI with microswitch



TTI: 2x Ø 1/2 - 13 UNC
TTF: 2x M 12

