

# Protistor® size 72 aR

850 to 1250VAC (IEC) / 1300VAC (UL)

## SEMICONDUCTOR PROTECTION FUSES

### SQUARE BODY HIGH-SPEED FUSE-LINKS AC PROTECTION



These 1250/1300V 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.

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

#### TECHNICAL DATA OVERVIEW

Voltage Range AC	850 ... 1250 VAC
Ampere Range (A)	250 ... 1000 A
Speed/Characteristic	aR
I.R. AC (IEC)	100 kA 120 kA
Product Size	72

#### 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 GB 13539.4



# Protistor® size 72 aR

850 to 1250VAC (IEC) / 1300VAC (UL)

## PRODUCT RANGE

### Size 72 type TTI 3/8"-16 unified coarse threaded terminals

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I <sub>n</sub>	Pre-arcing I <sup>2</sup> t	Clearing I <sup>2</sup> t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I <sub>n</sub>	Weight	Package
A130UD72TTI280	N301036	1250 V	1300 V	280 A	10.3 kA <sup>2</sup> s	85 kA <sup>2</sup> s	100 kA	72 W	850 g	3
A130UD72TTI315	P301037	1250 V	1300 V	315 A	15.1 kA <sup>2</sup> s	125 kA <sup>2</sup> s	100 kA	76 W	850 g	3
A130UD72TTI350	Q301038	1250 V	1300 V	350 A	21 kA <sup>2</sup> s	170 kA <sup>2</sup> s	100 kA	77 W	850 g	3
A130UD72TTI400	R301039	1250 V	1300 V	400 A	32.8 kA <sup>2</sup> s	270 kA <sup>2</sup> s	100 kA	80 W	850 g	3
A130UD72TTI450	S301040	1250 V	1300 V	450 A	44.2 kA <sup>2</sup> s	360 kA <sup>2</sup> s	100 kA	87 W	850 g	3
A130UD72TTI500	T301041	1250 V	1300 V	500 A	57.1 kA <sup>2</sup> s	465 kA <sup>2</sup> s	100 kA	94 W	850 g	3
A130UD72TTI550	V301042	1250 V	1300 V	550 A	68 kA <sup>2</sup> s	550 kA <sup>2</sup> s	100 kA	110 W	850 g	3
A130UD72TTI630	W301043	1250 V	1300 V	630 A	106.3 kA <sup>2</sup> s	860 kA <sup>2</sup> s	100 kA	113 W	850 g	3
A120UD72TTI700	X301044	1100 V	1200 V	700 A	141.9 kA <sup>2</sup> s	920 kA <sup>2</sup> s	100 kA	140 W	850 g	3
A120UD72TTI800	Y301045	1100 V	1200 V	800 A	215.1 kA <sup>2</sup> s	1400 kA <sup>2</sup> s	100 kA	146 W	850 g	3



PC72UD13C630TF

### Size 72 type TTF M10 threaded terminals

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I <sub>n</sub>	Pre-arcing I <sup>2</sup> t	Clearing I <sup>2</sup> t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I <sub>n</sub>	Weight	Package
PC72UD13C315TF	Z300494	1250 V	1300 V	315 A	15.1 kA <sup>2</sup> s	125 kA <sup>2</sup> s	100 kA	76 W	800 g	3
PC72UD13C350TF	A300495	1250 V	1300 V	350 A	21 kA <sup>2</sup> s	170 kA <sup>2</sup> s	100 kA	77 W	800 g	3
PC72UD13C400TF	B300496	1250 V	1300 V	400 A	32.8 kA <sup>2</sup> s	270 kA <sup>2</sup> s	100 kA	80 W	800 g	3
PC72UD13C450TF	C300497	1250 V	1300 V	450 A	44.2 kA <sup>2</sup> s	360 kA <sup>2</sup> s	100 kA	89 W	800 g	3
PC72UD13C500TF	D300498	1250 V	1300 V	500 A	57.1 kA <sup>2</sup> s	465 kA <sup>2</sup> s	100 kA	98 W	800 g	3
PC72UD13C550TF	E300499	1250 V	1300 V	550 A	68 kA <sup>2</sup> s	550 kA <sup>2</sup> s	100 kA	110 W	800 g	3
PC72UD13C630TF	F300500	1250 V	1300 V	630 A	106.3 kA <sup>2</sup> s	860 kA <sup>2</sup> s	100 kA	113 W	800 g	3
PC72UD11C700TF	G300501	1100 V	1200 V	700 A	141.9 kA <sup>2</sup> s	920 kA <sup>2</sup> s	100 kA	140 W	800 g	3
PC72UD11C800TF	H300502	1100 V	1200 V	800 A	215.1 kA <sup>2</sup> s	1400 kA <sup>2</sup> s	100 kA	146 W	800 g	3
PC72UD10C900TF	G300869	1000 V	1100 V	900 A	312 kA <sup>2</sup> s	1800 kA <sup>2</sup> s	120 kA	152 W	800 g	3
PC72UD85V1000TF	T301294	850 V	900 V	1000 A	439 kA <sup>2</sup> s	2150 kA <sup>2</sup> s	100 kA	136 W	800 g	3

### Size 72 type long slotted blades

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I <sub>n</sub>	Pre-arcing I <sup>2</sup> t	Clearing I <sup>2</sup> t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I <sub>n</sub>	Weight	Package
A130UD72LI280	Q300670	1250 V	1300 V	280 A	10.3 kA <sup>2</sup> s	85 kA <sup>2</sup> s	100 kA	72 W	0.7233 kg	3
A130UD72LI315	R300671	1250 V	1300 V	315 A	15.1 kA <sup>2</sup> s	125 kA <sup>2</sup> s	100 kA	76 W	0.7233 kg	3
A130UD72LI350	S300672	1250 V	1300 V	350 A	21 kA <sup>2</sup> s	170 kA <sup>2</sup> s	100 kA	77 W	0.7233 kg	3
A130UD72LI400	T300673	1250 V	1300 V	400 A	32.8 kA <sup>2</sup> s	270 kA <sup>2</sup> s	100 kA	80 W	0.7233 kg	3
A130UD72LI450	V300674	1250 V	1300 V	450 A	44.2 kA <sup>2</sup> s	360 kA <sup>2</sup> s	100 kA	89 W	0.7233 kg	3
A130UD72LI500	W300675	1250 V	1300 V	500 A	57.1 kA <sup>2</sup> s	465 kA <sup>2</sup> s	100 kA	98 W	0.7233 kg	3
A130UD72LI550	X300676	1250 V	1300 V	550 A	68 kA <sup>2</sup> s	550 kA <sup>2</sup> s	100 kA	120 W	0.7233 kg	3
A120UD72LI630	Y300677	1100 V	1200 V	630 A	106.3 kA <sup>2</sup> s	690 kA <sup>2</sup> s	100 kA	125 W	0.7233 kg	3
A110UD72LI700	Z300678	1000 V	1100 V	700 A	141.9 kA <sup>2</sup> s	815 kA <sup>2</sup> s	120 kA	140 W	0.7233 kg	3
A110UD72LI800	A300679	1000 V	1100 V	800 A	215.1 kA <sup>2</sup> s	1240 kA <sup>2</sup> s	120 kA	146 W	0.7233 kg	3

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# Protistor® size 72 aR

850 to 1250VAC (IEC) / 1300VAC (UL)

## PRODUCT RANGE

### Size 72 type NH style blade contacts

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I <sub>n</sub>	Pre-arcing I <sup>2</sup> t	Clearing I <sup>2</sup> t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I <sub>n</sub>	Weight	Package
PC72UD13C315PA	H301836	1250 V	1300 V	315 A	15.1 kA <sup>2</sup> s	125 kA <sup>2</sup> s	100 kA	76 W	0.7766 kg	3
PC72UD13C400PA	B300841	1250 V	1300 V	400 A	32.8 kA <sup>2</sup> s	270 kA <sup>2</sup> s	100 kA	80 W	0.7766 kg	3
PC72UD13C450PA	C300842	1250 V	1300 V	450 A	44.2 kA <sup>2</sup> s	360 kA <sup>2</sup> s	100 kA	89 W	0.7766 kg	3
PC72UD13C500PA	P302716	1250 V	1300 V	500 A	57.1 kA <sup>2</sup> s	465 kA <sup>2</sup> s	100 kA	98 W	0.7766 kg	3
PC72UD11C630PA	N301220	1100 V	1200 V	630 A	106.3 kA <sup>2</sup> s	690 kA <sup>2</sup> s	100 kA	125 W	0.7766 kg	3
PC72UD10C800PA	M302047	1000 V	1100 V	800 A	215.1 kA <sup>2</sup> s	1240 kA <sup>2</sup> s	120 kA	146 W	0.7766 kg	3

### Size 72 for bolted connections

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I <sub>n</sub>	Pre-arcing I <sup>2</sup> t	Clearing I <sup>2</sup> t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I <sub>n</sub>	Weight	Package
PC72UD13C280EF	J300618	1250 V	1300 V	280 A	10.3 kA <sup>2</sup> s	85 kA <sup>2</sup> s	100 kA	72 W	0.758 kg	3
PC72UD13C315EF	K300619	1250 V	1300 V	315 A	15.1 kA <sup>2</sup> s	125 kA <sup>2</sup> s	100 kA	76 W	0.758 kg	3
PC72UD13C350EF	L300620	1250 V	1300 V	350 A	21 kA <sup>2</sup> s	170 kA <sup>2</sup> s	100 kA	77 W	0.758 kg	3
PC72UD13C400EF	M300621	1250 V	1300 V	400 A	32.8 kA <sup>2</sup> s	270 kA <sup>2</sup> s	100 kA	80 W	0.758 kg	3
PC72UD13C450EF	N300622	1250 V	1300 V	450 A	44.2 kA <sup>2</sup> s	360 kA <sup>2</sup> s	100 kA	89 W	0.758 kg	3
PC72UD13C500EF	P300623	1250 V	1300 V	500 A	57.1 kA <sup>2</sup> s	465 kA <sup>2</sup> s	100 kA	98 W	0.758 kg	3
PC72UD11C630EF	R300625	1100 V	1200 V	630 A	106.3 kA <sup>2</sup> s	690 kA <sup>2</sup> s	100 kA	125 W	0.758 kg	3
PC72UD10C700EF	S300626	1000 V	1100 V	700 A	141.9 kA <sup>2</sup> s	815 kA <sup>2</sup> s	100 kA	140 W	0.758 kg	3
PC72UD10C800EF	T300627	1000 V	1100 V	800 A	215.1 kA <sup>2</sup> s	1240 kA <sup>2</sup> s	120 kA	146 W	0.758 kg	3



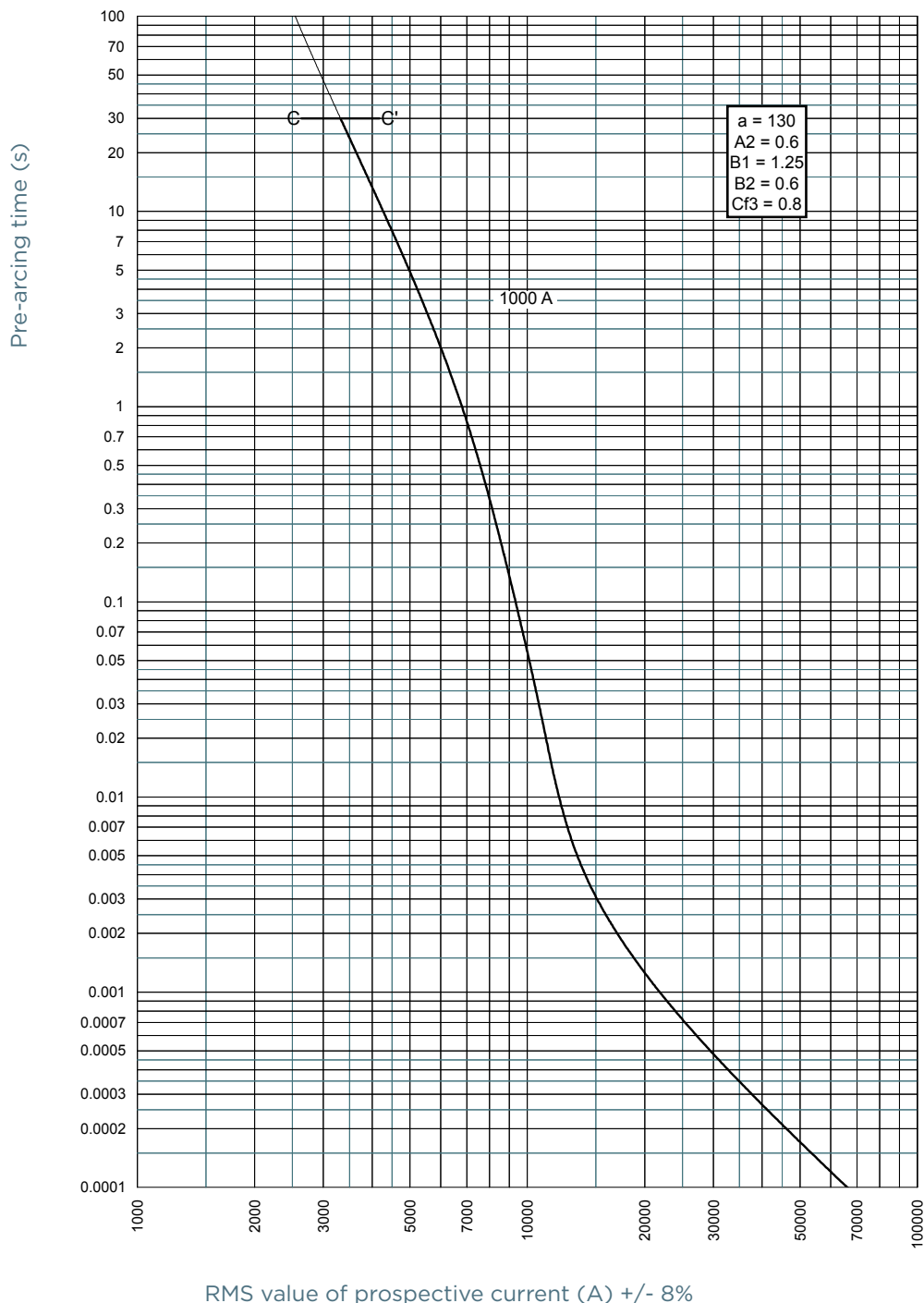
PC72UD13C550D1A

### Size 72 type DIN110

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I <sub>n</sub>	Pre-arcing I <sup>2</sup> t	Clearing I <sup>2</sup> t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I <sub>n</sub>	Weight	Package
PC72UD13C280D1A	P300554	1250 V	1300 V	280 A	10.3 kA <sup>2</sup> s	85 kA <sup>2</sup> s	100 kA	72 W	0.7033 kg	3
PC72UD13C315D1A	Q300555	1250 V	1300 V	315 A	15.1 kA <sup>2</sup> s	125 kA <sup>2</sup> s	100 kA	76 W	0.7033 kg	3
PC72UD13C350D1A	R300556	1250 V	1300 V	350 A	21 kA <sup>2</sup> s	170 kA <sup>2</sup> s	100 kA	77 W	0.7033 kg	3
PC72UD13C400D1A	S300557	1250 V	1300 V	400 A	32.8 kA <sup>2</sup> s	270 kA <sup>2</sup> s	100 kA	80 W	0.7033 kg	3
PC72UD13C450D1A	T300558	1250 V	1300 V	450 A	44.2 kA <sup>2</sup> s	360 kA <sup>2</sup> s	100 kA	89 W	0.7033 kg	3
PC72UD13C500D1A	V300559	1250 V	1300 V	500 A	57.1 kA <sup>2</sup> s	465 kA <sup>2</sup> s	100 kA	98 W	0.7033 kg	3
PC72UD13C550D1A	W300560	1250 V	1300 V	550 A	68 kA <sup>2</sup> s	550 kA <sup>2</sup> s	100 kA	120 W	0.7033 kg	3
PC72UD11C630D1A	X300561	1100 V	1200 V	630 A	106.3 kA <sup>2</sup> s	690 kA <sup>2</sup> s	100 kA	125 W	0.7033 kg	3
PC72UD10C700D1A	Y300562	1000 V	1100 V	700 A	141.9 kA <sup>2</sup> s	815 kA <sup>2</sup> s	100 kA	140 W	0.7033 kg	3
PC72UD10C800D1A	Z300563	1000 V	1100 V	800 A	215.1 kA <sup>2</sup> s	1240 kA <sup>2</sup> s	120 kA	146 W	0.7033 kg	3

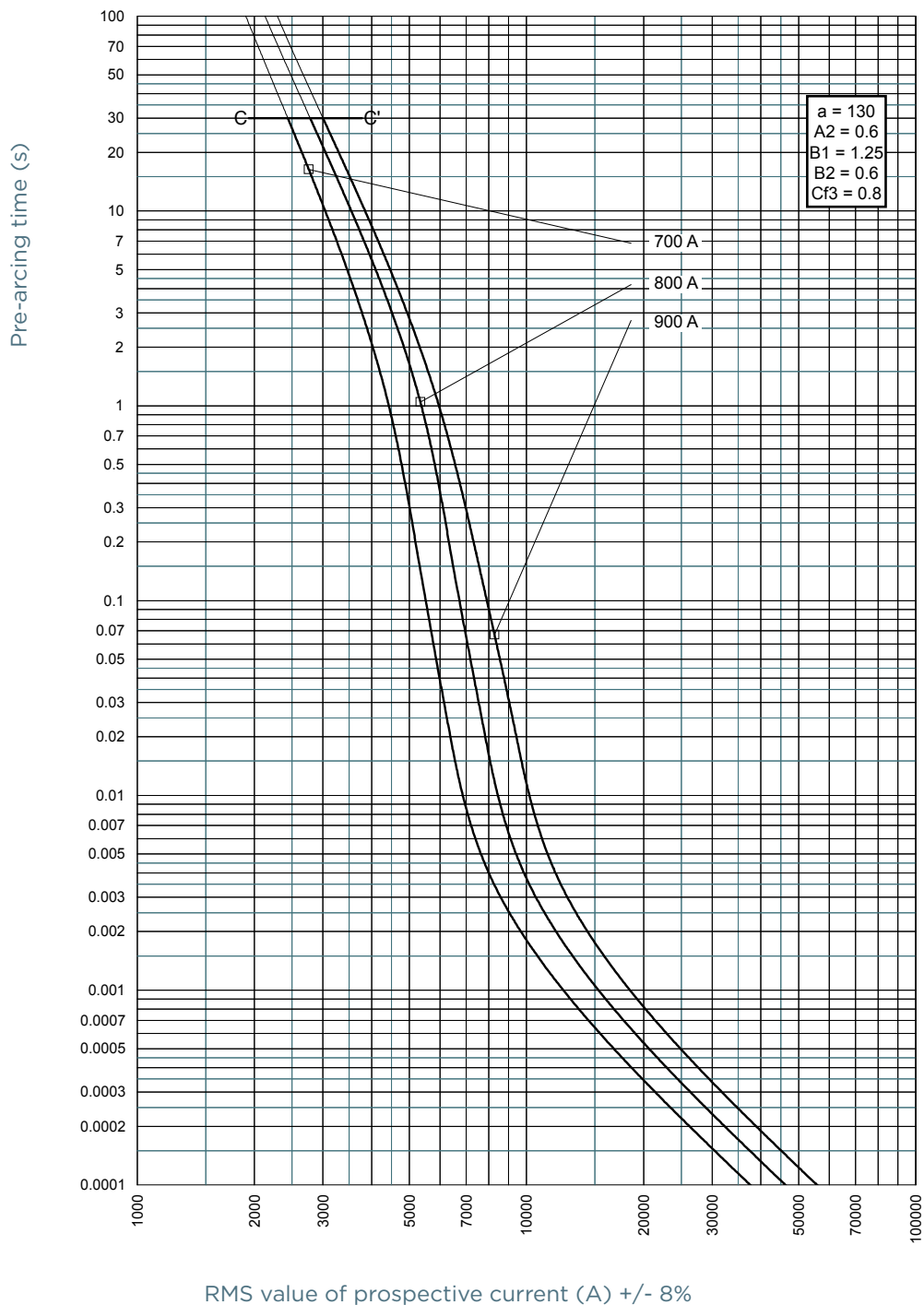
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### Size 72 aR 850V



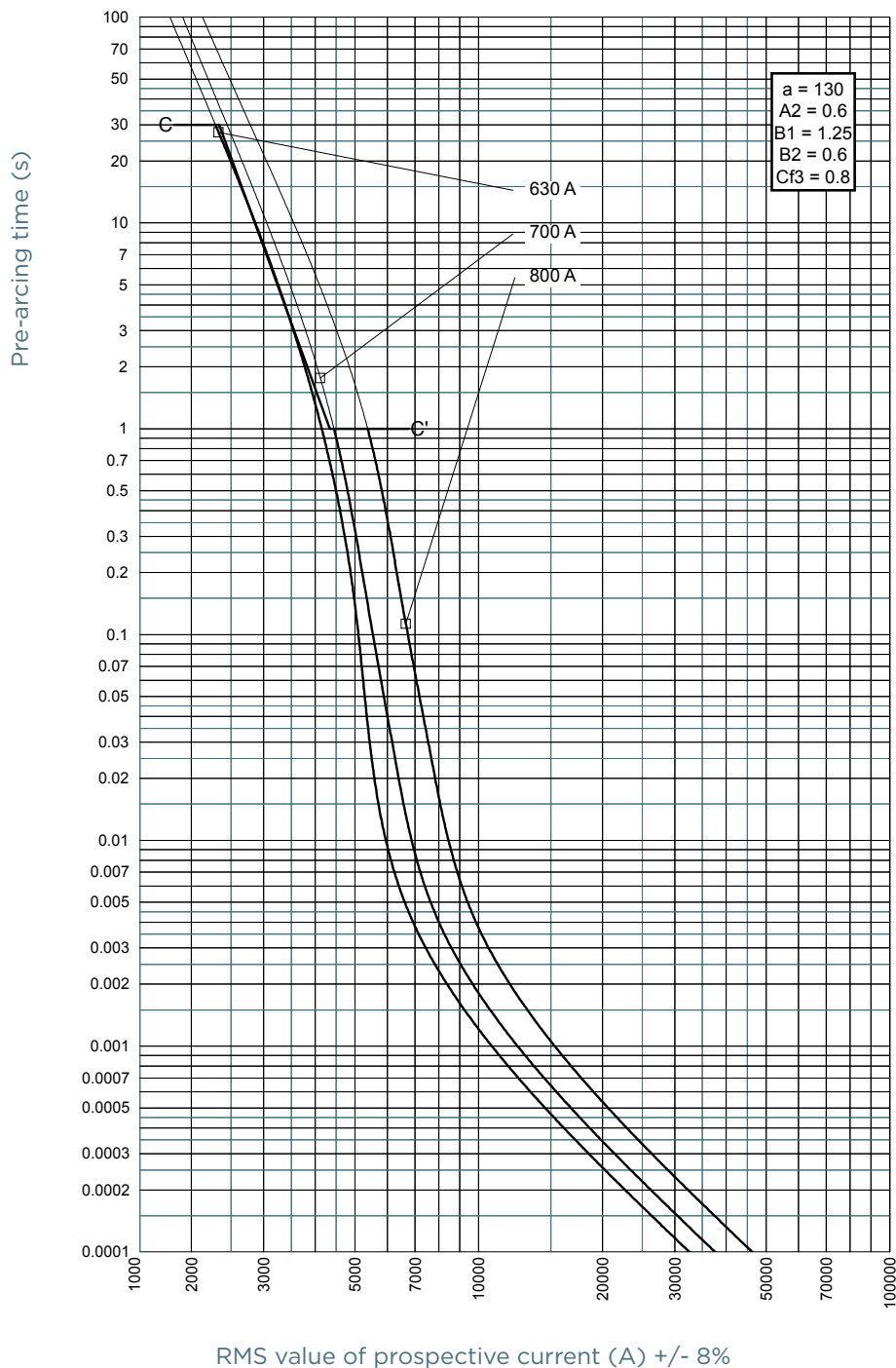
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### Size 72 aR 1000V



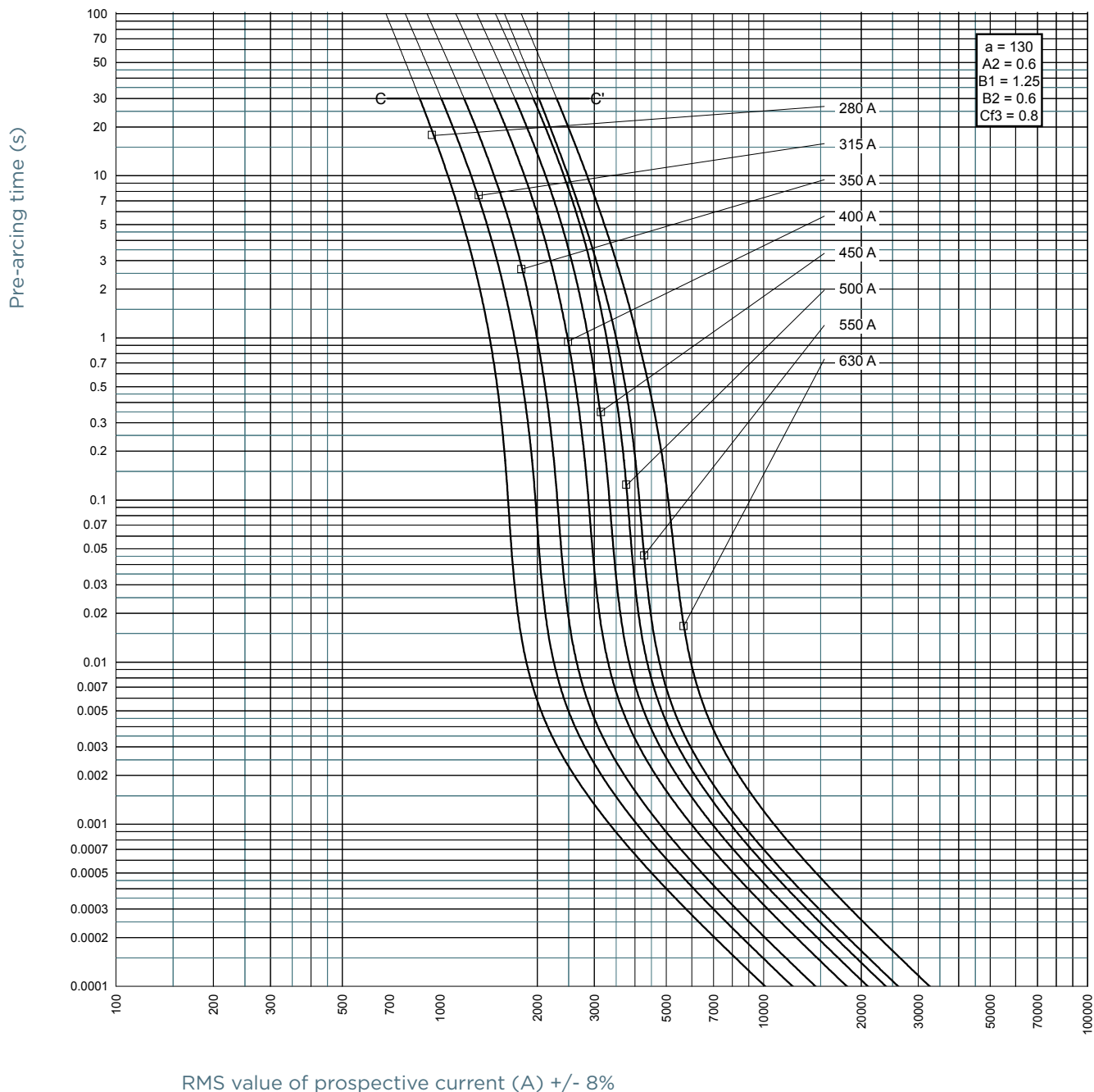
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### Size 72 aR 1100V



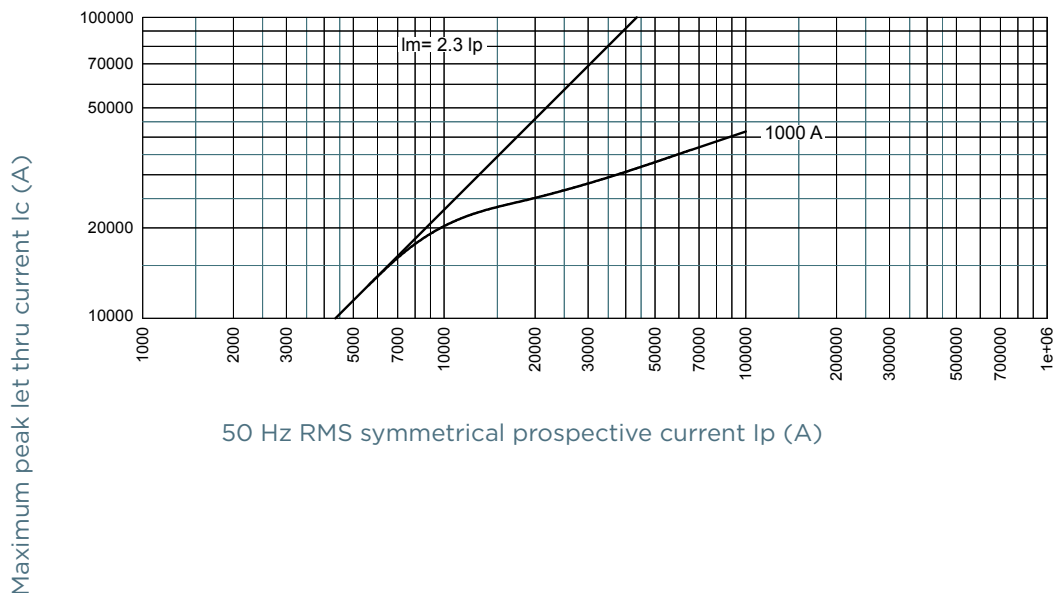
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### Size 72 aR 1250V

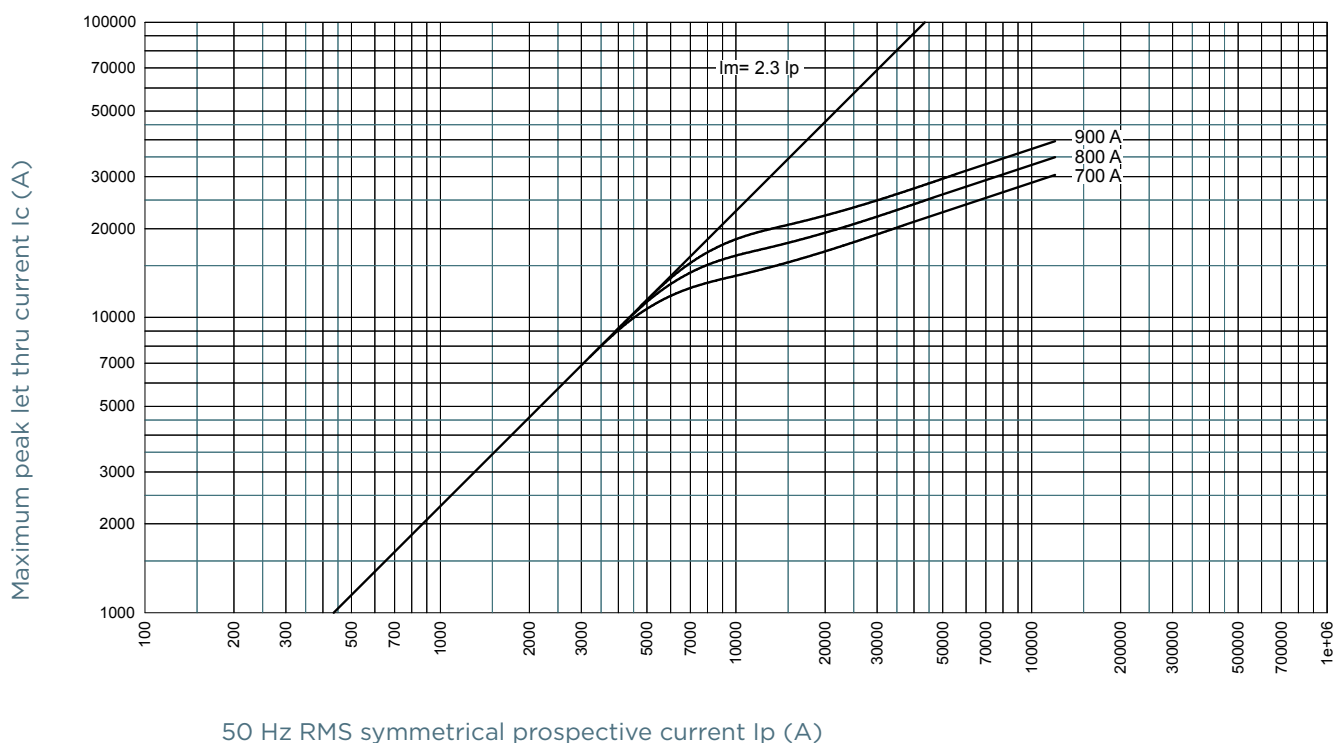


## CUT-OFF CURRENT CHARACTERISTIC

### Size 72 aR 850V



### Size 72 aR 1000V

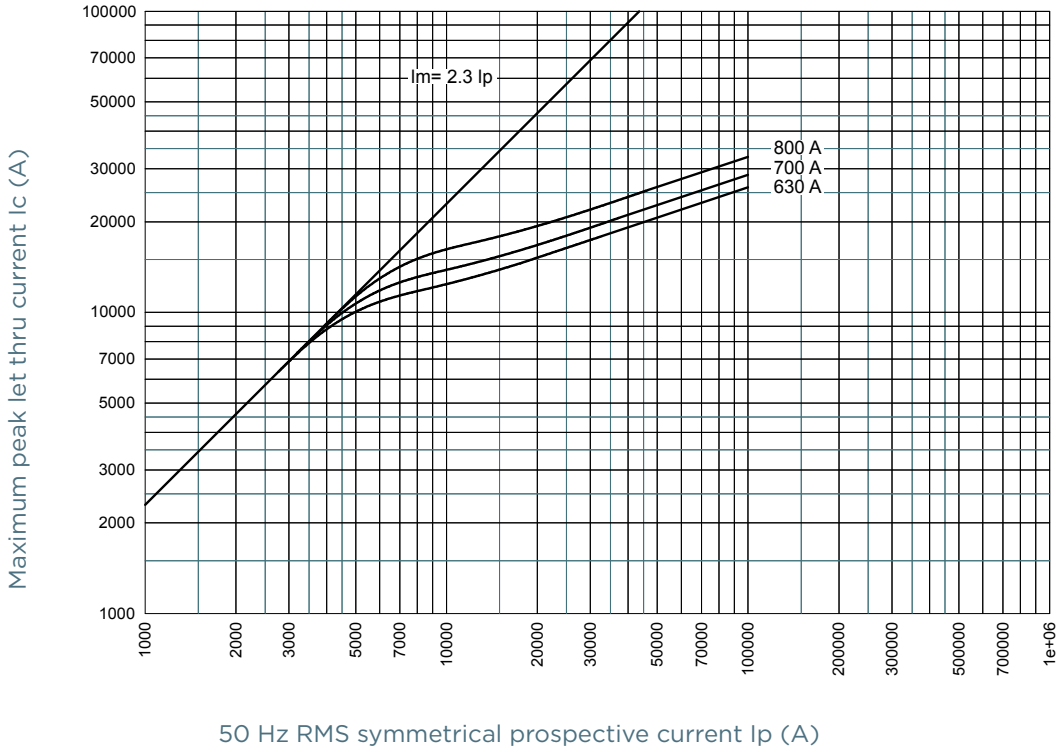


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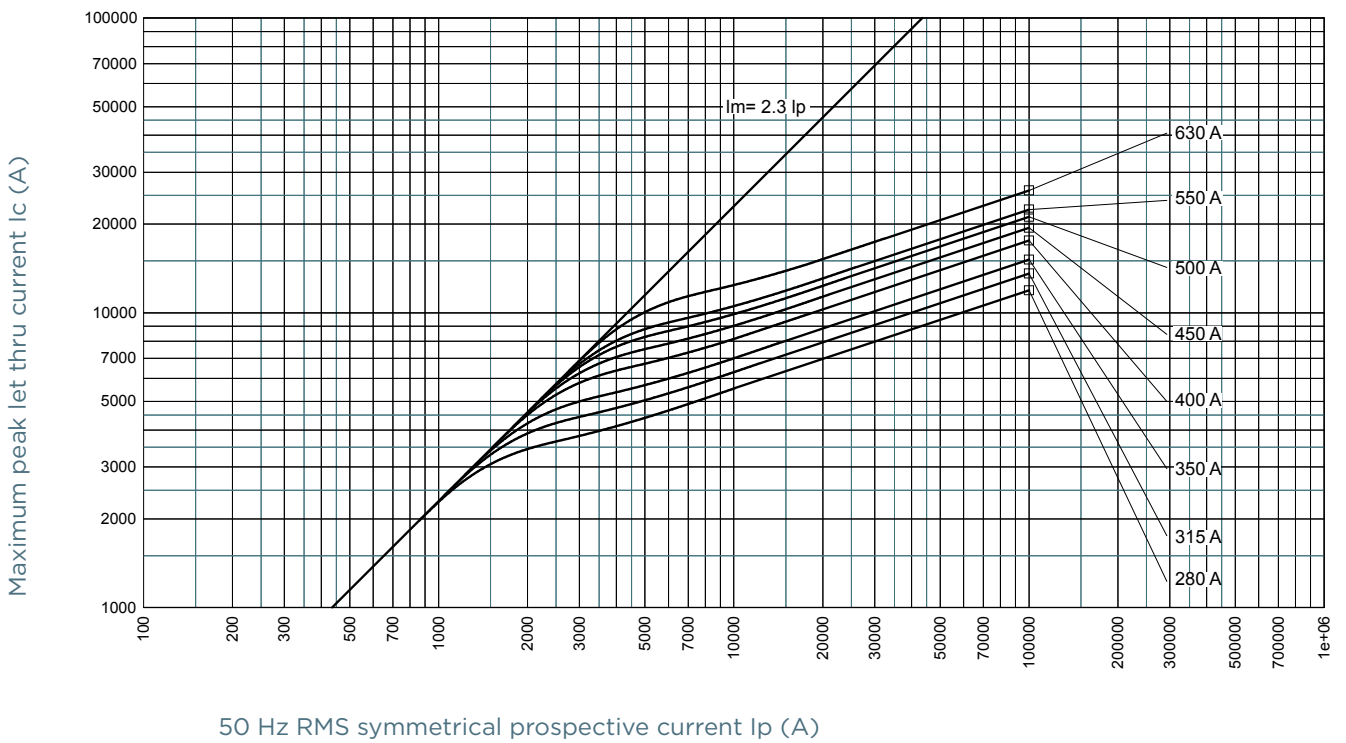


CUT-OFF CURRENT CHARACTERISTIC

Size 72 aR 1100V



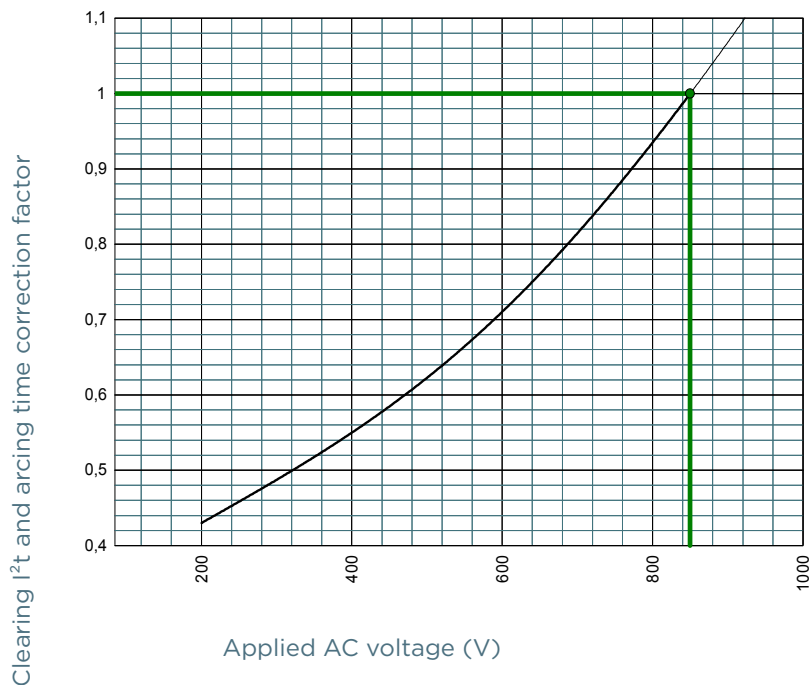
Size 72 aR 1250V



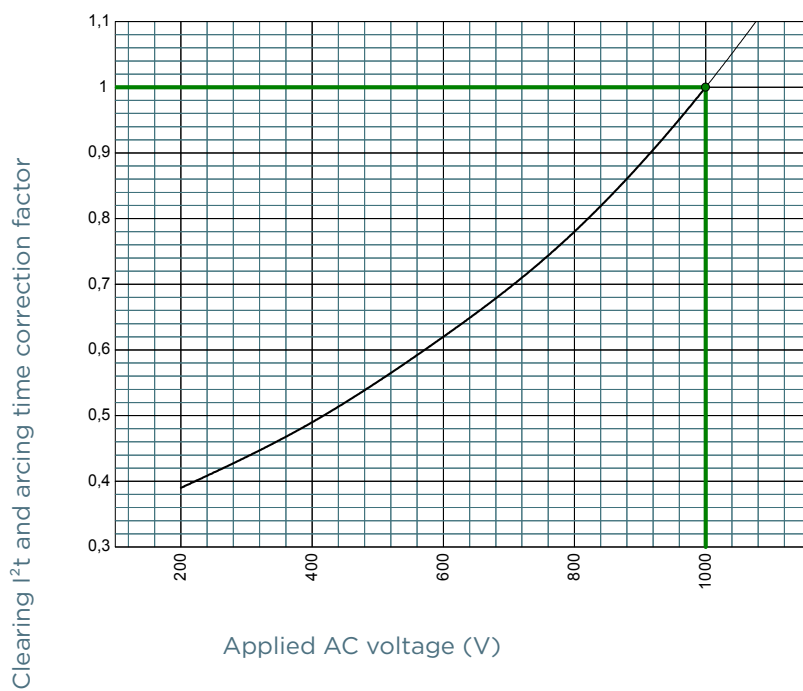
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## I<sup>2</sup>T MULTIPLIER COEFFICIENT

### Size 72 aR 850V

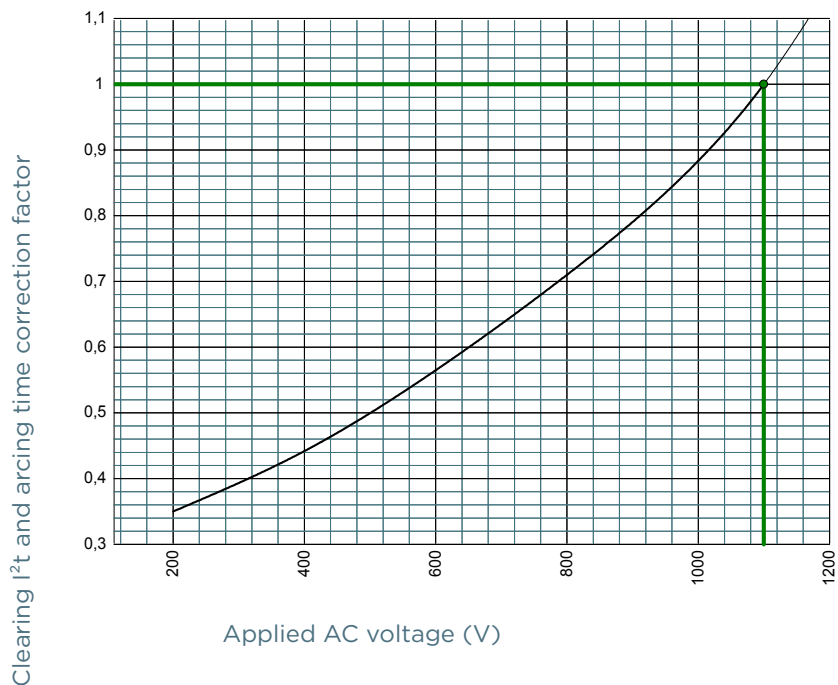


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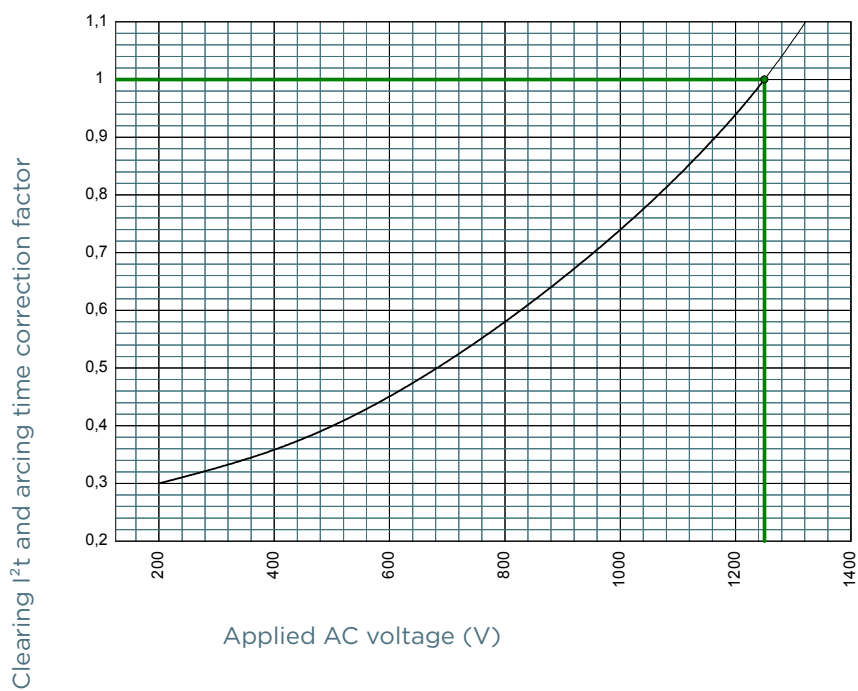


## I<sup>2</sup>T MULTIPLIER COEFFICIENT

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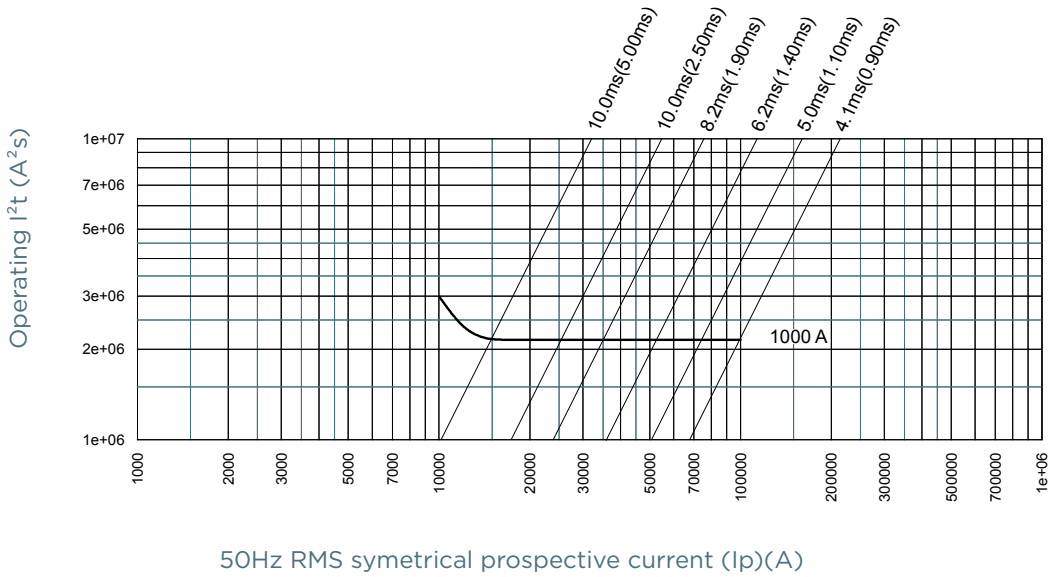


### Size 72 aR 1250V



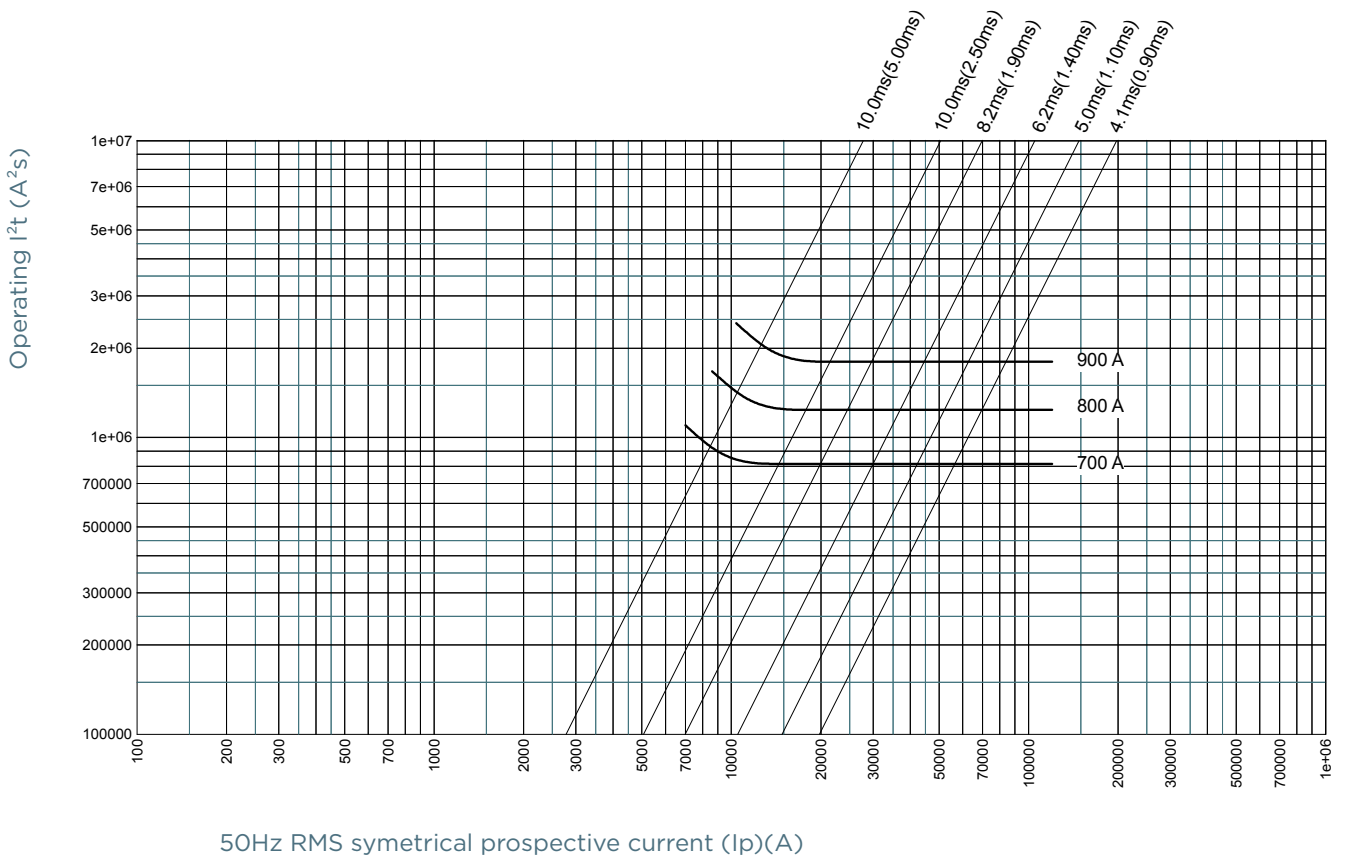
CHARACTERISTICS TOTAL I<sup>2</sup>T CURVE

Size 72 aR 850V



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

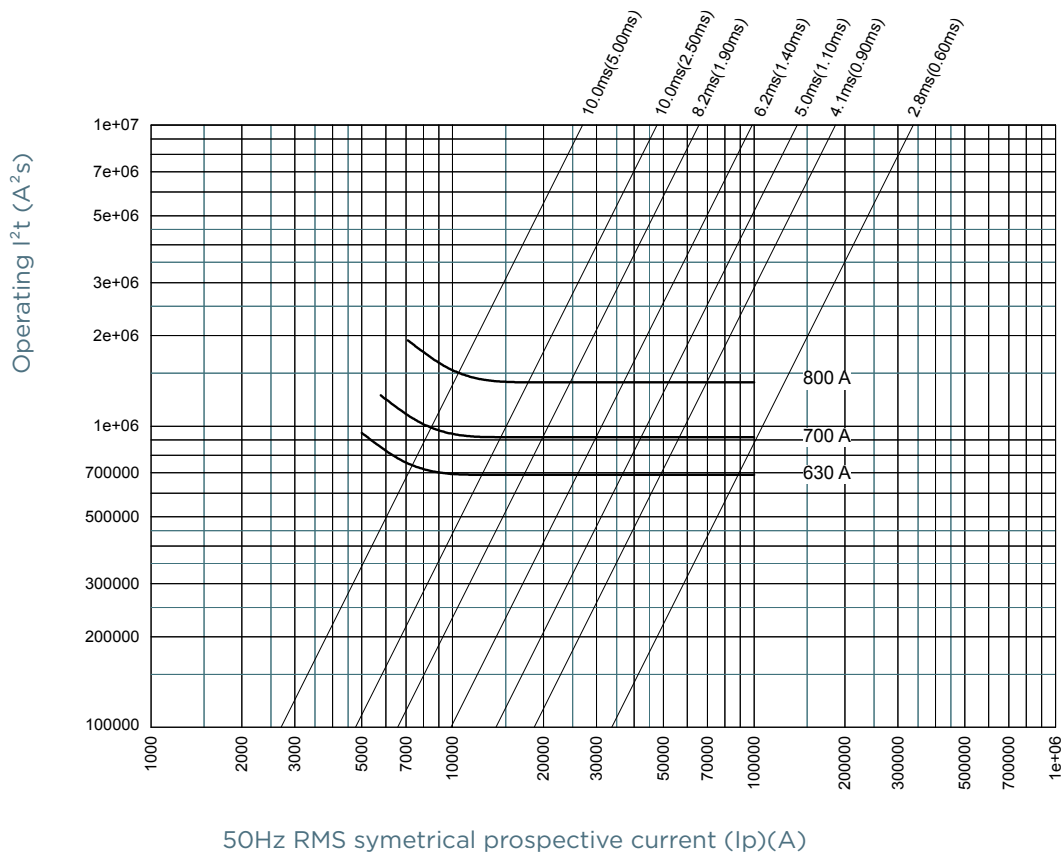
Size 72 aR 1000V



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

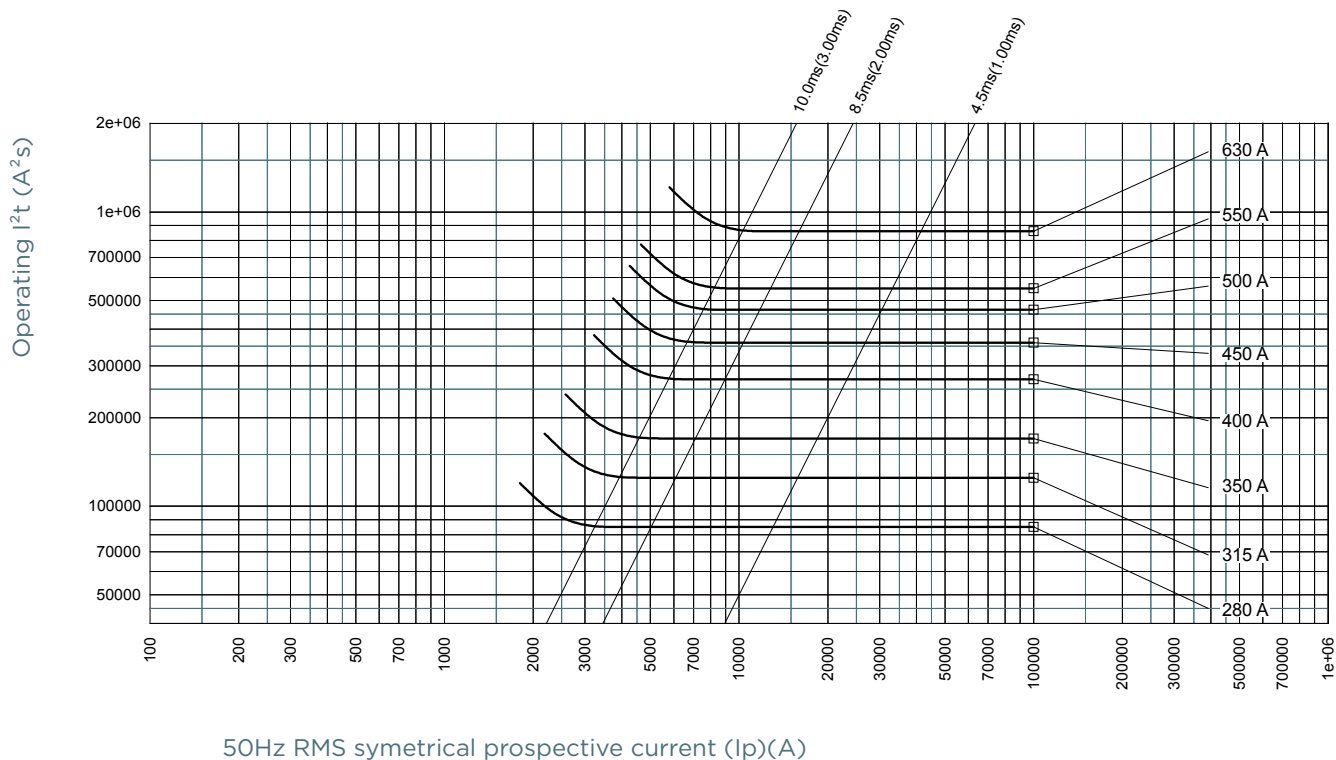
## CHARACTERISTICS TOTAL I<sup>2</sup>T CURVE

### Size 72 aR 1100V



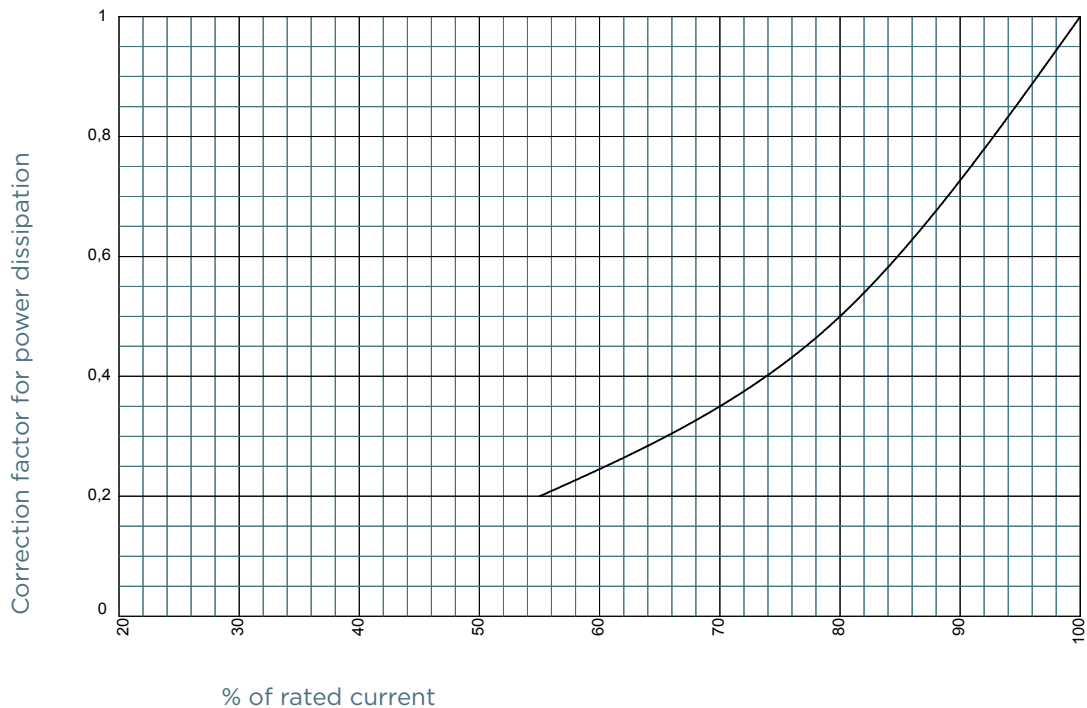
## CHARACTERISTICS TOTAL I<sup>2</sup>T CURVE

Size 72 aR 1250V

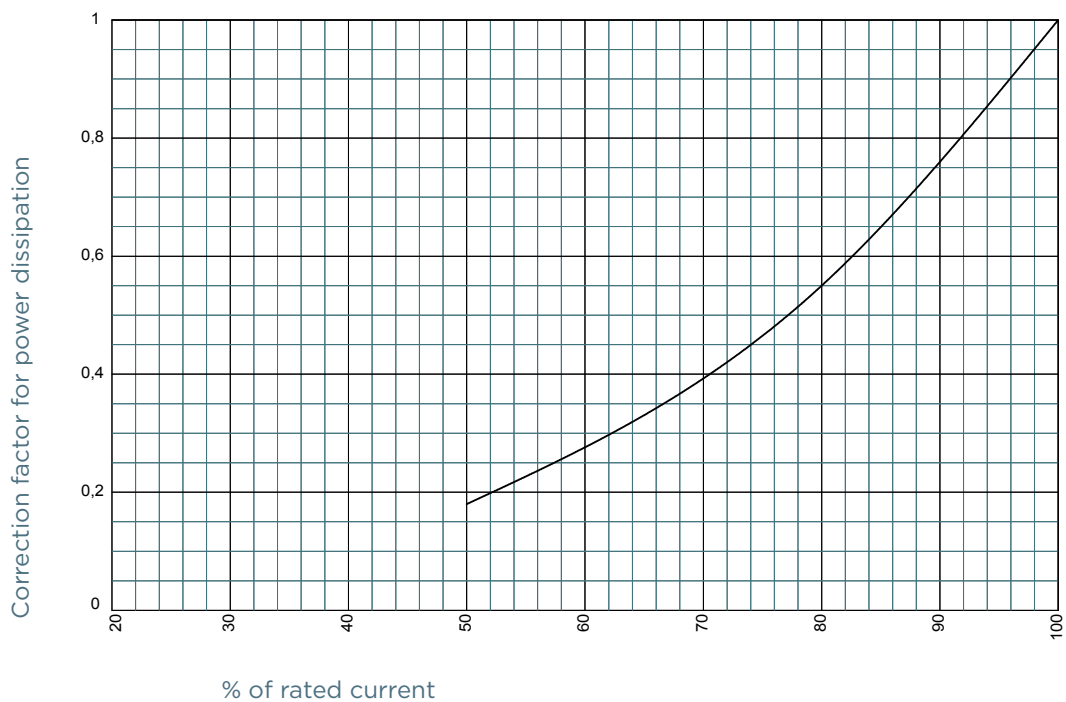


## POWER DISSIPATION

### Size 72 aR 850V - 1000V - 1100V

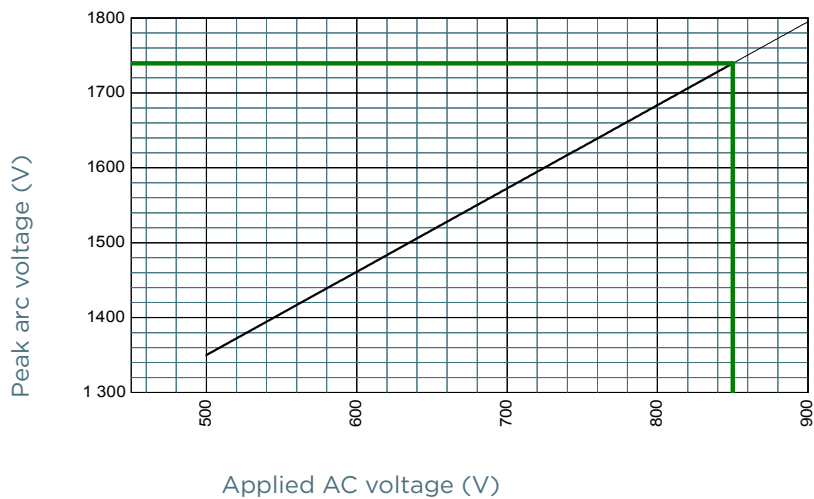


### Size 72 aR 1250V

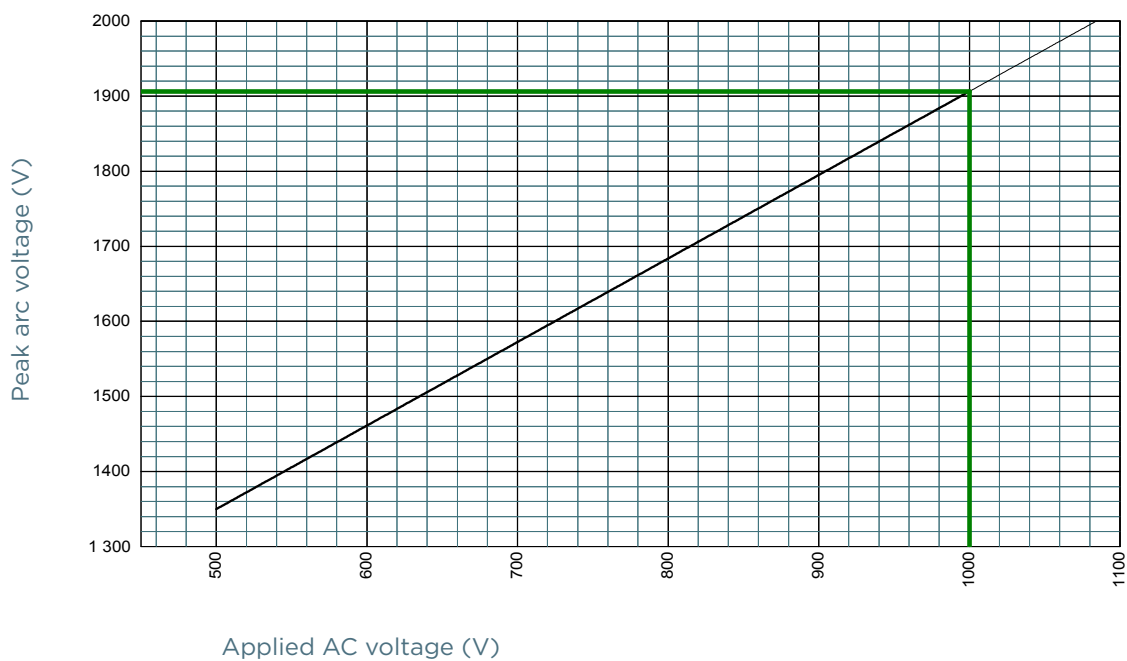


## PEAK ARC VOLTAGE

### Size 72 aR 850V



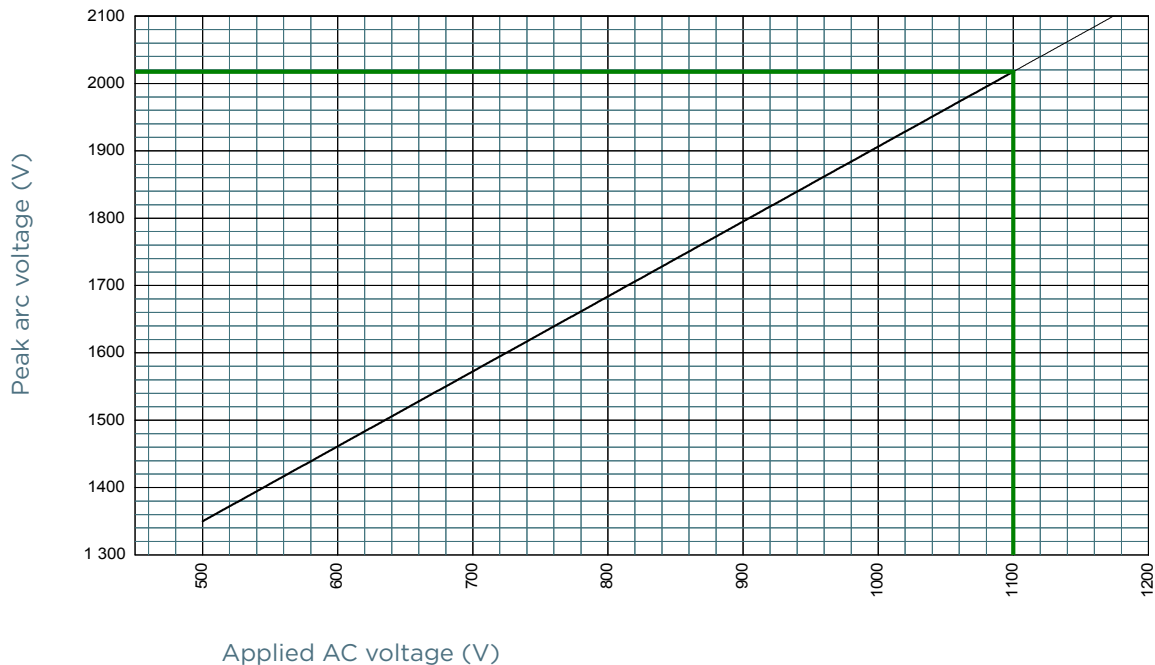
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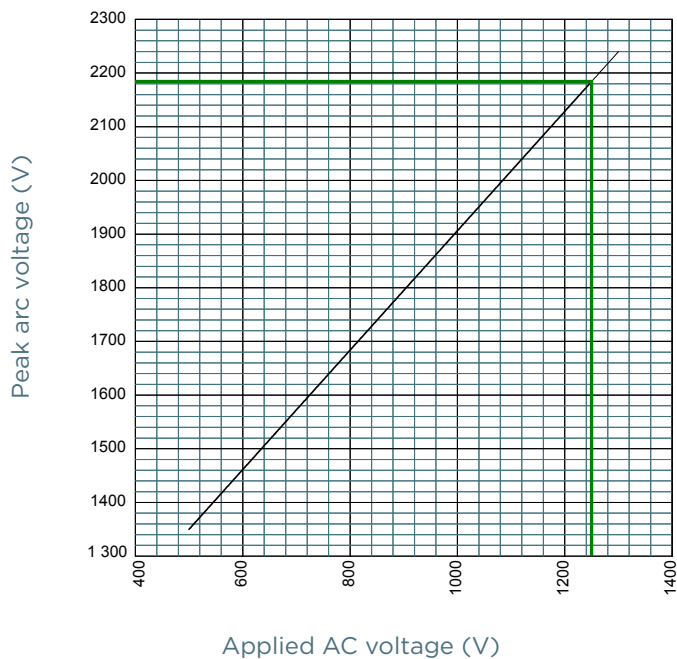


## PEAK ARC VOLTAGE

### Size 72 aR 1100V



### Size 72 aR 1250V

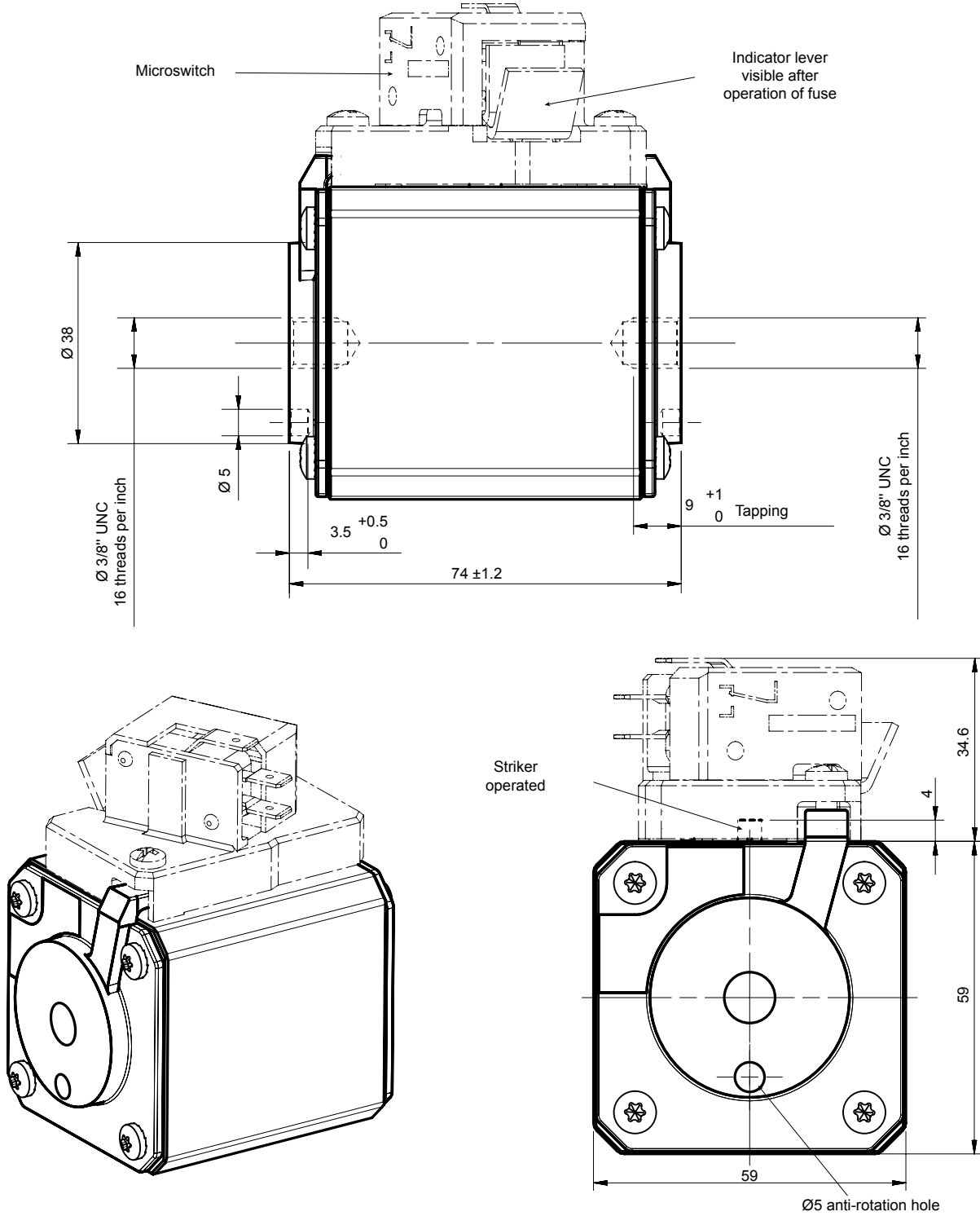


# Protistor® size 72 aR

850 to 1250VAC (IEC) / 1300VAC (UL)

## DIMENSIONS

Size 72 aR type TTI (109499)



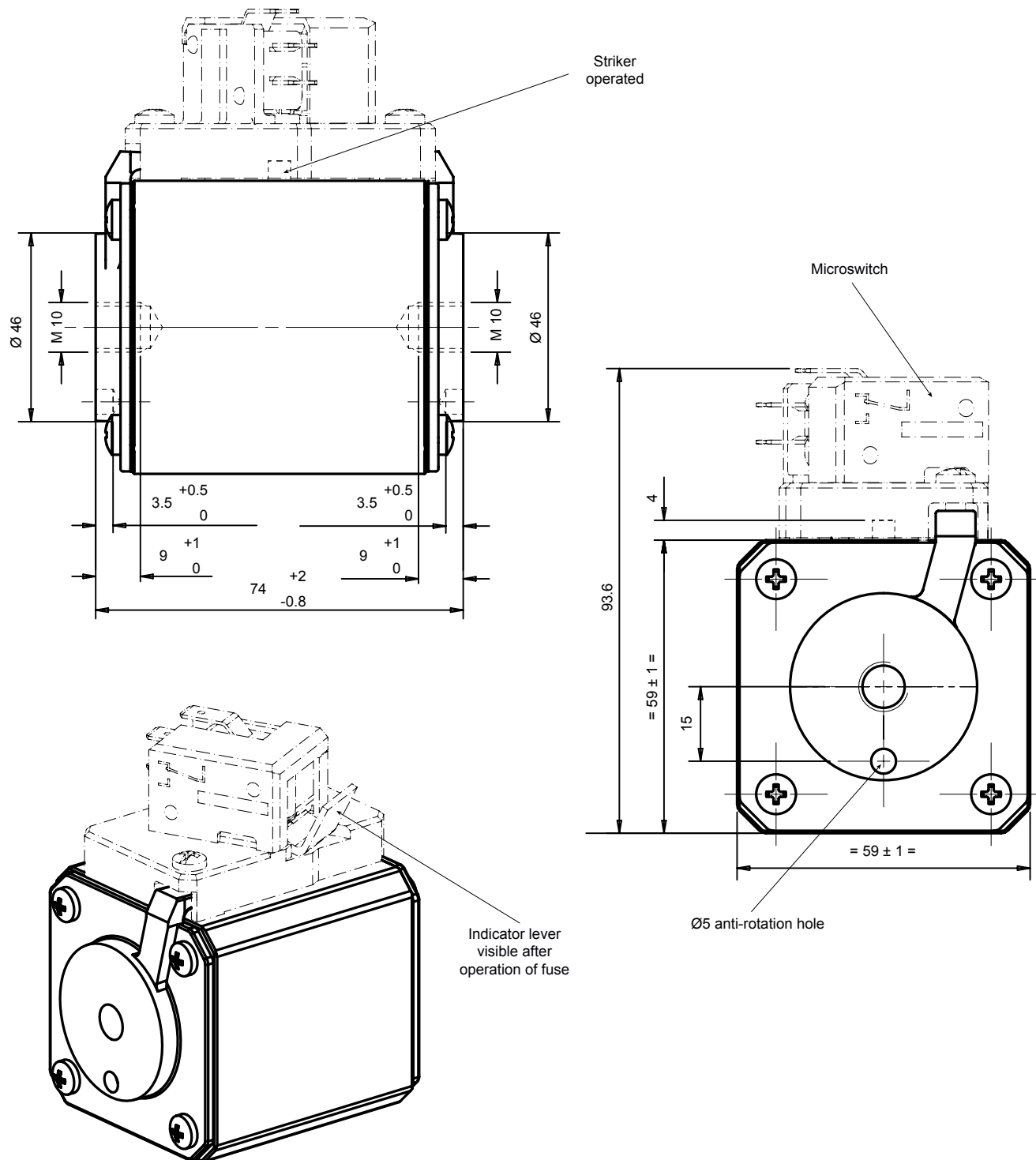
Dimensions in mm

# Protistor® size 72 aR

850 to 1250VAC (IEC) / 1300VAC (UL)

## DIMENSIONS

Size 72 aR type TTF (105700)



Dimensions in mm

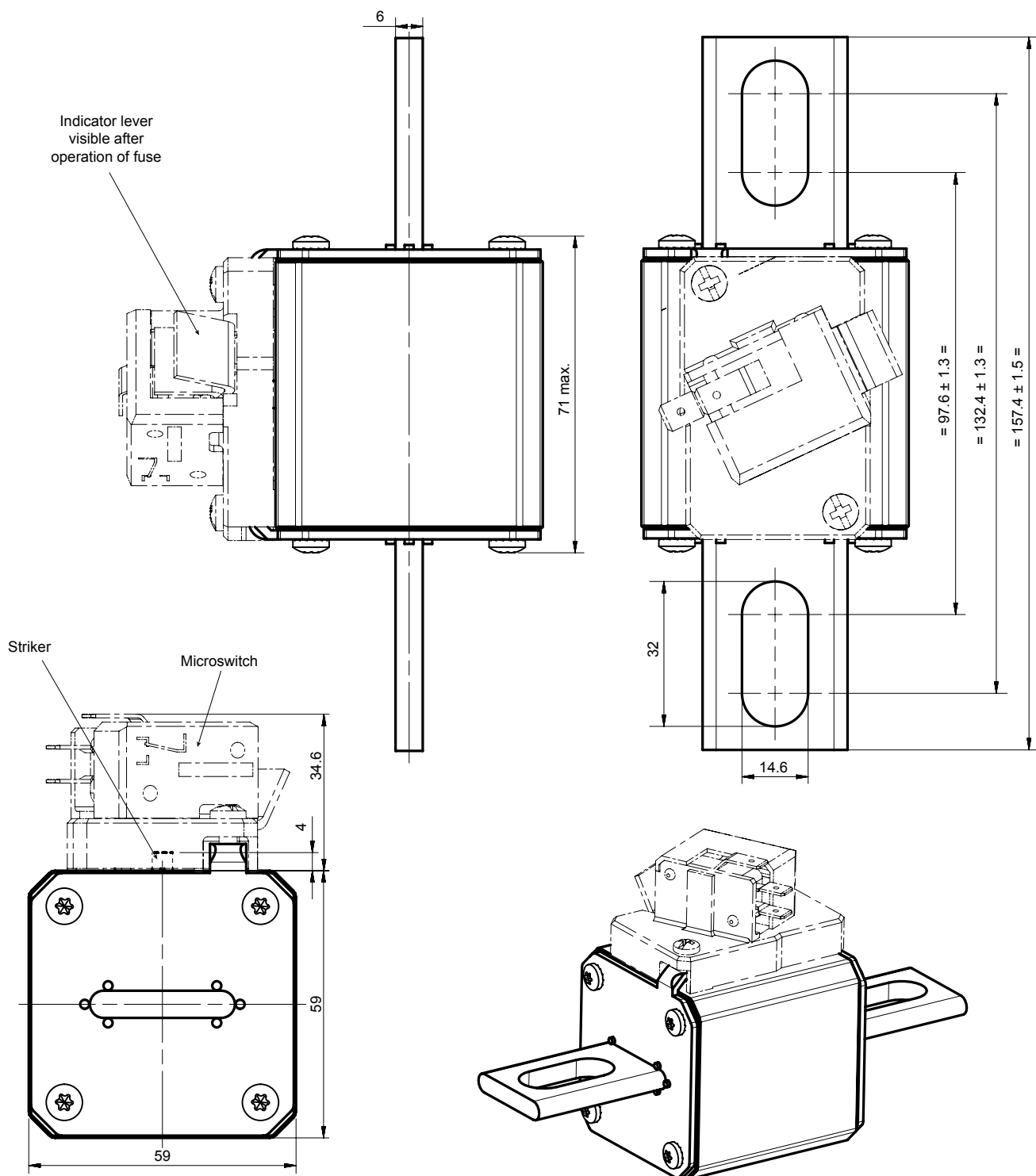
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# Protistor® size 72 aR

850 to 1250VAC (IEC) / 1300VAC (UL)

## DIMENSIONS

Size 72 aR type LI (105923)



Dimensions in mm

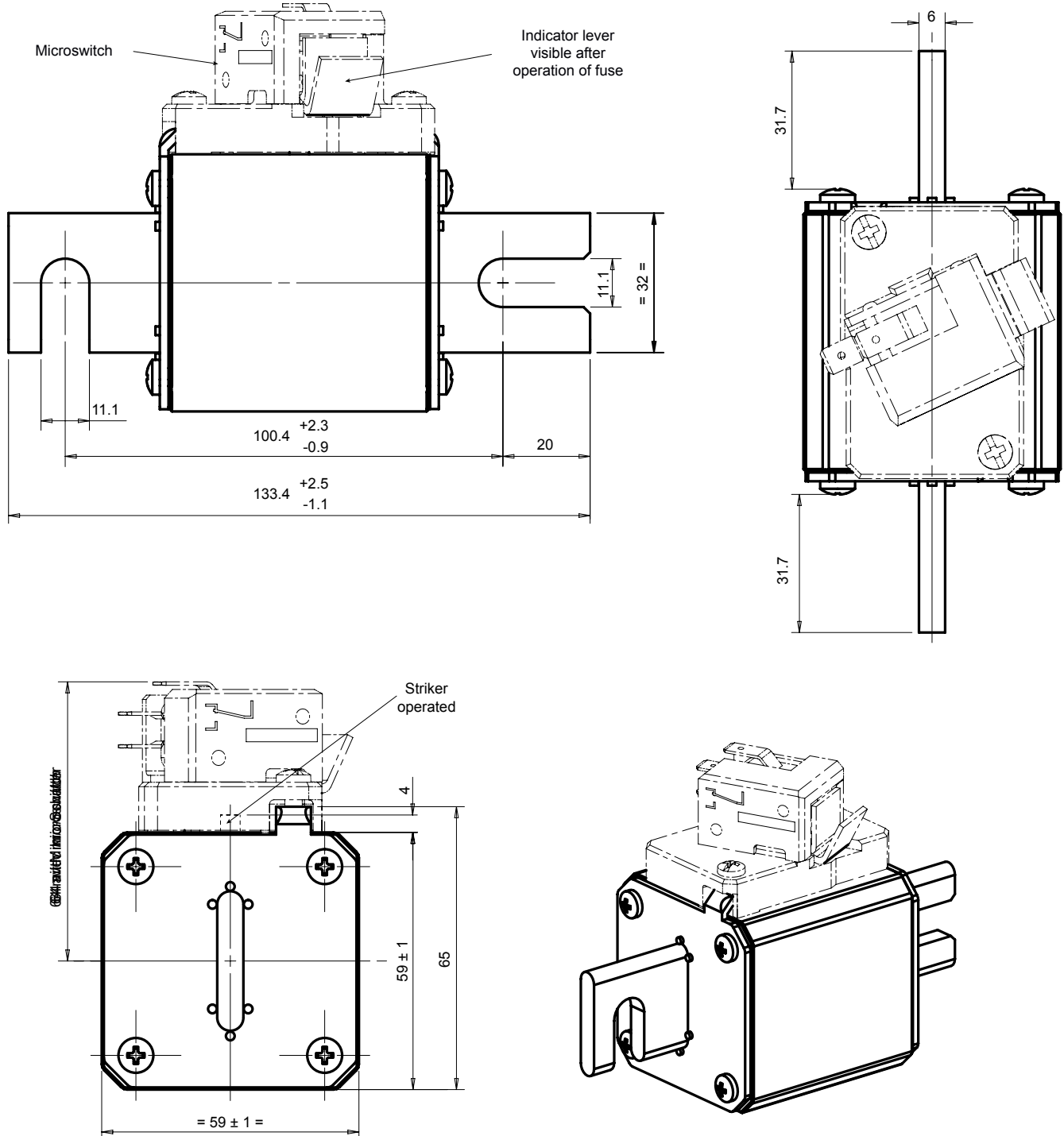
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# Protistor® size 72 aR

850 to 1250VAC (IEC) / 1300VAC (UL)

## DIMENSIONS

Size 72 aR type DIN 110 (105713)



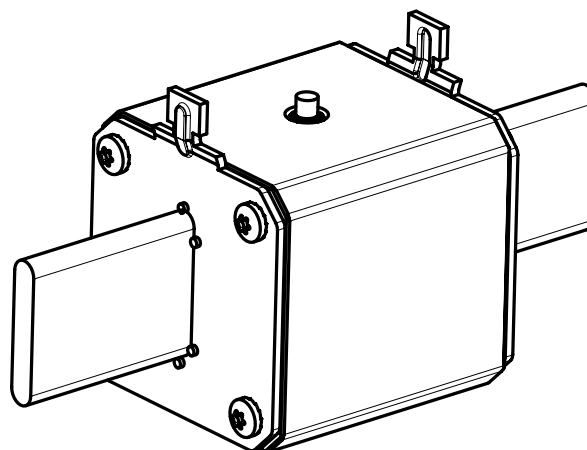
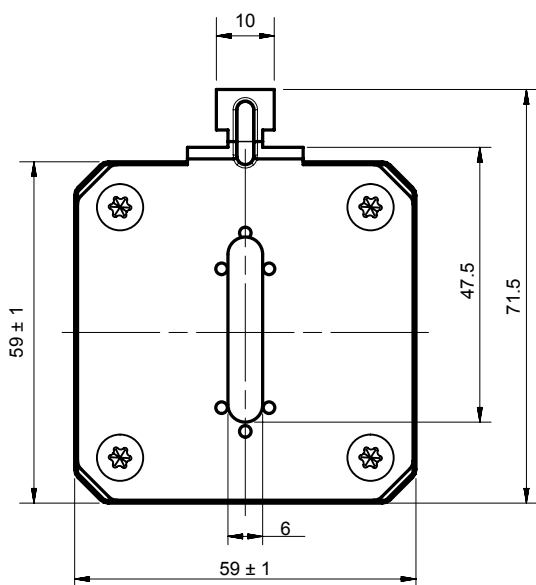
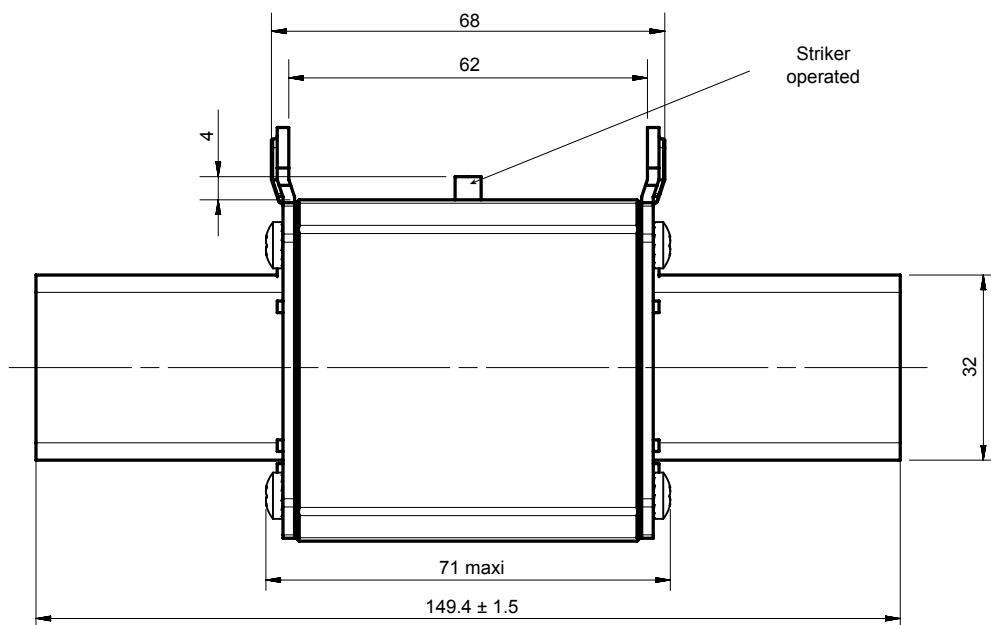
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# Protistor® size 72 aR

850 to 1250VAC (IEC) / 1300VAC (UL)

## DIMENSIONS

Size 72 aR type PA (107131)



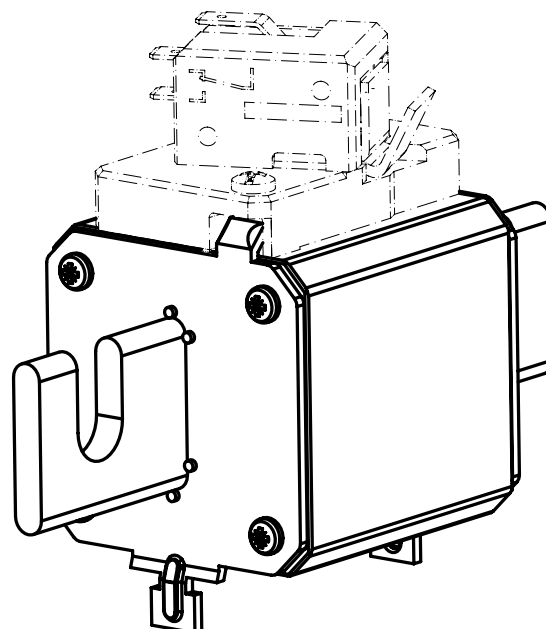
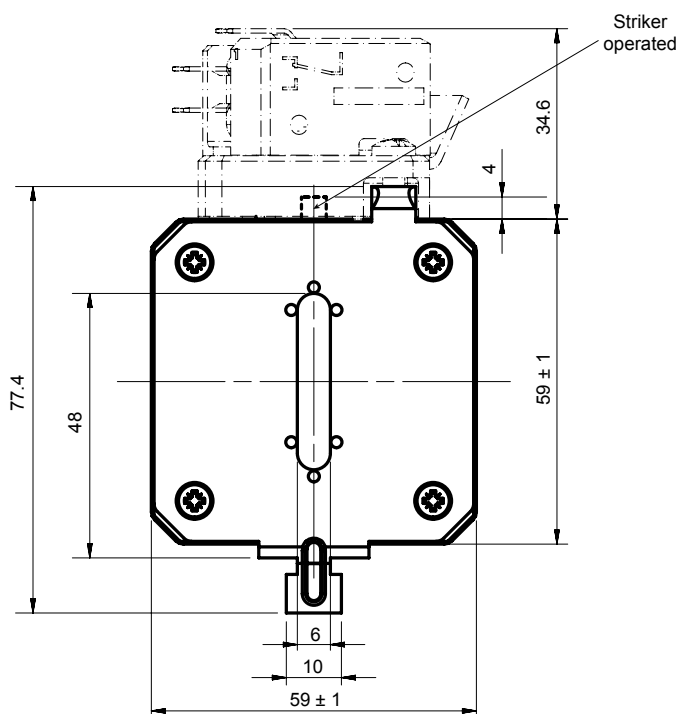
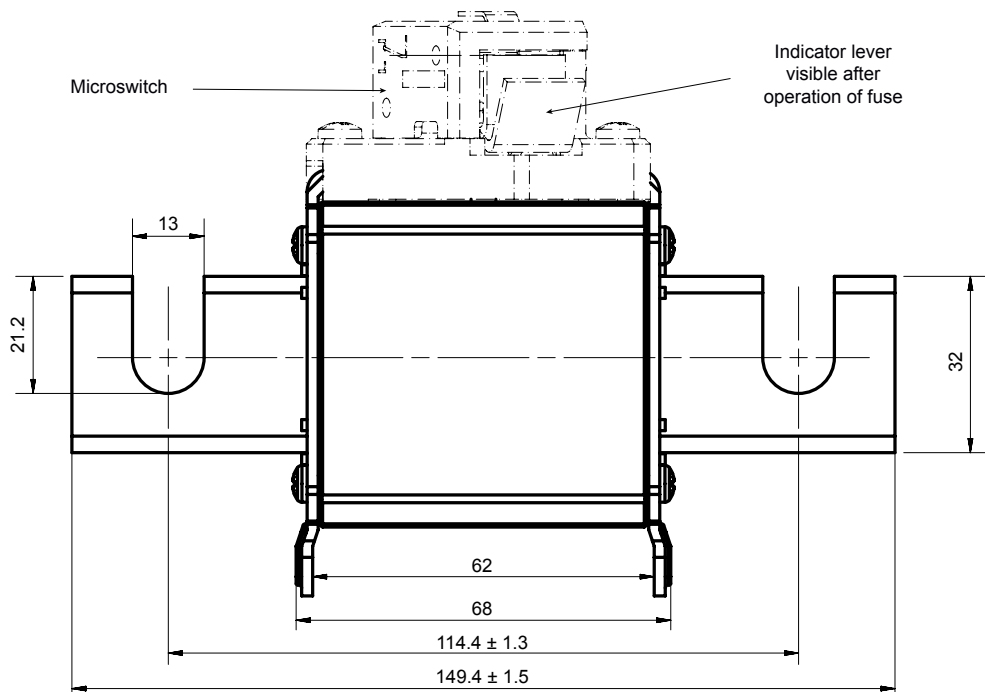
Dimensions in mm

# Protistor® size 72 aR

850 to 1250VAC (IEC) / 1300VAC (UL)

## DIMENSIONS

Size 72 aR type EF (105881)



Dimensions in mm

# Protistor® size 72 aR

850 to 1250VAC (IEC) / 1300VAC (UL)

## APPENDIX

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A130UD72TTI400	R301039	-	2
A130UD72TTI450	S301040	-	2
A130UD72TTI500	T301041	-	2
A130UD72TTI550	V301042	-	2
A130UD72TTI630	W301043	-	2
A120UD72TTI700	X301044	-	2
A120UD72TTI800	Y301045	-	2
PC72UD13C315TF	Z300494	125URD72TTF0315	2
PC72UD13C350TF	A300495	125URD72TTF0350	2
PC72UD13C400TF	B300496	125URD72TTF400	2
PC72UD13C450TF	C300497	125URD72TTF450	2
PC72UD13C500TF	D300498	125URD72TTF500	2
PC72UD13C550TF	E300499	125URD72TTF550	2
PC72UD13C630TF	F300500	12.5URD72TTF0630	2
PC72UD11C700TF	G300501	11URD72TTF0700	2
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PC72UD10C900TF	G300869	10URD72TTF0900	2
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PC72UD13C400PA	B300841	12,5 URD 72 PA 0400	3
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PC72UD13C280EF	J300618	12,5 URD 72 EF 0280	3
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PC72UD13C280D1A	P300554	12.5URD72D11A0280	3
PC72UD13C315D1A	Q300555	12.5URD72D11A0315	3
PC72UD13C350D1A	R300556	125URD72D11A0350	3
PC72UD13C400D1A	S300557	12.5URD72D11A0400	3
PC72UD13C450D1A	T300558	12.5URD72D11A0450	3
PC72UD13C500D1A	V300559	12.5URD72D11A0500	3
PC72UD13C550D1A	W300560	125URD72D11A0550	3
PC72UD11C630D1A	X300561	11URD72D11A0630	3
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MERSEN reserves the right to change, update or correct, without notice, any information contained in this datasheet.



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