

# Protistor® SC Series size 32 aR

690 VAC (IEC) / 760VAC (UL)

## SEMICONDUCTOR PROTECTION FUSES

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



The 690/760V Protistor® SC 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 SC Series has been conceived and specially optimized to match integrators' and equipment manufacturers' main requirements while offering competitive prices.

## TECHNICAL DATA OVERVIEW

Voltage AC	690 VAC
Ampere Range (A)	500 ... 800 A
Speed/Characteristic	aR
I.R. AC (IEC)	200 kA
Product Size	32

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



# Protistor® SC Series size 32 aR

690 VAC (IEC) / 760VAC (UL)

## PRODUCT RANGE



SC32AR69V800TFU

### Size 32 type TTF without indicator

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated voltage DC (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>	Package	Weight
SC32AR69V500TFU	Y1046935	690 V	760 V	550 V	500 A	27.8 kA <sup>2</sup> s	160 kA <sup>2</sup> s	200 kA	95 W	12	0.5 kg
SC32AR69V550TFU	Z1046936	690 V	760 V	550 V	550 A	36.9 kA <sup>2</sup> s	215 kA <sup>2</sup> s	200 kA	99 W	12	0.5 kg
SC32AR69V630TFU	A1046937	690 V	760 V	550 V	630 A	54.6 kA <sup>2</sup> s	315 kA <sup>2</sup> s	200 kA	105 W	12	0.5 kg
SC32AR69V700TFU	B1046938	690 V	760 V	550 V	700 A	76.8 kA <sup>2</sup> s	442 kA <sup>2</sup> s	200 kA	110 W	12	0.5 kg
SC32AR69V800TFU	C1046939	690 V	760 V	550 V	800 A	113.4 kA <sup>2</sup> s	660 kA <sup>2</sup> s	200 kA	121 W	12	0.5 kg



SC32AR69V800TF

### Size 32 type TTF with indicator

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated voltage DC (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>	Package	Weight
SC32AR69V500TF	S1046930	690 V	760 V	550 V	500 A	27.8 kA <sup>2</sup> s	160 kA <sup>2</sup> s	200 kA	95 W	12	0.5 kg
SC32AR69V550TF	T1046931	690 V	760 V	550 V	550 A	36.9 kA <sup>2</sup> s	215 kA <sup>2</sup> s	200 kA	99 W	12	0.5 kg
SC32AR69V630TF	V1046932	690 V	760 V	550 V	630 A	54.6 kA <sup>2</sup> s	315 kA <sup>2</sup> s	200 kA	105 W	12	0.5 kg
SC32AR69V700TF	W1046933	690 V	760 V	550 V	700 A	76.8 kA <sup>2</sup> s	442 kA <sup>2</sup> s	200 kA	110 W	12	0.5 kg
SC32AR69V800TF	X1046934	690 V	760 V	550 V	800 A	113.4 kA <sup>2</sup> s	660 kA <sup>2</sup> s	200 kA	121 W	12	0.5 kg



SC32AR69V800TFM

### Size 32 type TTF with striker and microswitch

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated voltage DC (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>	Package	Weight
SC32AR69V500TFM	M1046925	690 V	760 V	550 V	500 A	27.8 kA <sup>2</sup> s	160 kA <sup>2</sup> s	200 kA	95 W	12	0.55 kg
SC32AR69V550TFM	N1046926	690 V	760 V	550 V	550 A	36.9 kA <sup>2</sup> s	215 kA <sup>2</sup> s	200 kA	99 W	12	0.55 kg
SC32AR69V630TFM	P1046927	690 V	760 V	550 V	630 A	54.6 kA <sup>2</sup> s	315 kA <sup>2</sup> s	200 kA	105 W	12	0.55 kg
SC32AR69V700TFM	Q1046928	690 V	760 V	550 V	700 A	76.8 kA <sup>2</sup> s	442 kA <sup>2</sup> s	200 kA	110 W	12	0.55 kg
SC32AR69V800TFM	R1046929	690 V	760 V	550 V	800 A	113.4 kA <sup>2</sup> s	660 kA <sup>2</sup> s	200 kA	121 W	12	0.55 kg

# Protistor® SC Series size 32 aR

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## PRODUCT RANGE



SC32AR69V800TIU

### Size 32 type TTI without indicator

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated voltage DC (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>	Package	Weight
SC32AR69V500TIU	P1047065	690 V	760 V	550 V	500 A	27.8 kA <sup>2</sup> s	160 kA <sup>2</sup> s	200 kA	95 W	12	0.5 kg
SC32AR69V550TIU	Q1047066	690 V	760 V	550 V	550 A	36.9 kA <sup>2</sup> s	215 kA <sup>2</sup> s	200 kA	99 W	12	0.5 kg
SC32AR69V630TIU	R1047067	690 V	760 V	550 V	630 A	54.6 kA <sup>2</sup> s	315 kA <sup>2</sup> s	200 kA	105 W	12	0.5 kg
SC32AR69V700TIU	S1047068	690 V	760 V	550 V	700 A	76.8 kA <sup>2</sup> s	442 kA <sup>2</sup> s	200 kA	110 W	12	0.5 kg
SC32AR69V800TIU	T1047069	690 V	760 V	550 V	800 A	113.4 kA <sup>2</sup> s	660 kA <sup>2</sup> s	200 kA	121 W	12	0.5 kg



SC32AR69V800TI

### Size 32 type TTI with indicator

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated voltage DC (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>	Package	Weight
SC32AR69V500TI	H1047059	690 V	760 V	550 V	500 A	27.8 kA <sup>2</sup> s	160 kA <sup>2</sup> s	200 kA	95 W	12	0.5 kg
SC32AR69V550TI	J1047060	690 V	760 V	550 V	550 A	36.9 kA <sup>2</sup> s	215 kA <sup>2</sup> s	200 kA	99 W	12	0.5 kg
SC32AR69V630TI	K1047061	690 V	760 V	550 V	630 A	54.6 kA <sup>2</sup> s	315 kA <sup>2</sup> s	200 kA	105 W	12	0.5 kg
SC32AR69V700TI	M1047063	690 V	760 V	550 V	700 A	76.8 kA <sup>2</sup> s	442 kA <sup>2</sup> s	200 kA	110 W	12	0.5 kg
SC32AR69V800TI	N1047064	690 V	760 V	550 V	800 A	113.4 kA <sup>2</sup> s	660 kA <sup>2</sup> s	200 kA	121 W	12	0.5 kg



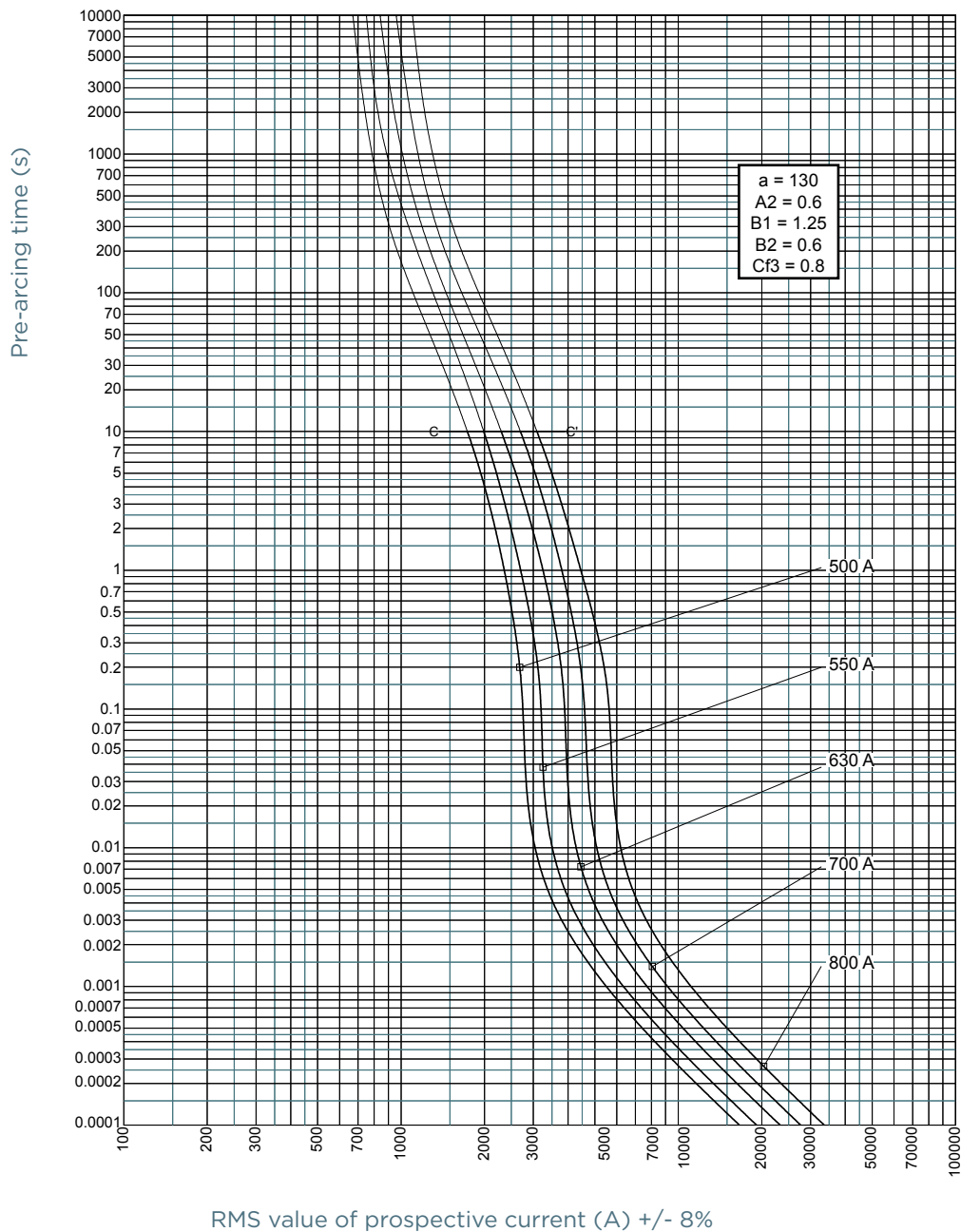
SC32AR69V800TIM

### Size 32 type TTI with striker and microswitch

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated voltage DC (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>	Package	Weight
SC32AR69V500TIM	C1047054	690 V	760 V	550 V	500 A	27.8 kA <sup>2</sup> s	160 kA <sup>2</sup> s	200 kA	95 W	12	0.55 kg
SC32AR69V550TIM	D1047055	690 V	760 V	550 V	550 A	36.9 kA <sup>2</sup> s	215 kA <sup>2</sup> s	200 kA	99 W	12	0.55 kg
SC32AR69V630TIM	E1047056	690 V	760 V	550 V	630 A	54.6 kA <sup>2</sup> s	315 kA <sup>2</sup> s	200 kA	105 W	12	0.55 kg
SC32AR69V700TIM	F1047057	690 V	760 V	550 V	700 A	76.8 kA <sup>2</sup> s	442 kA <sup>2</sup> s	200 kA	110 W	12	0.55 kg
SC32AR69V800TIM	G1047058	690 V	760 V	550 V	800 A	113.4 kA <sup>2</sup> s	660 kA <sup>2</sup> s	200 kA	121 W	12	0.55 kg

## TIME CURRENT CHARACTERISTIC CURVES

### Size 32

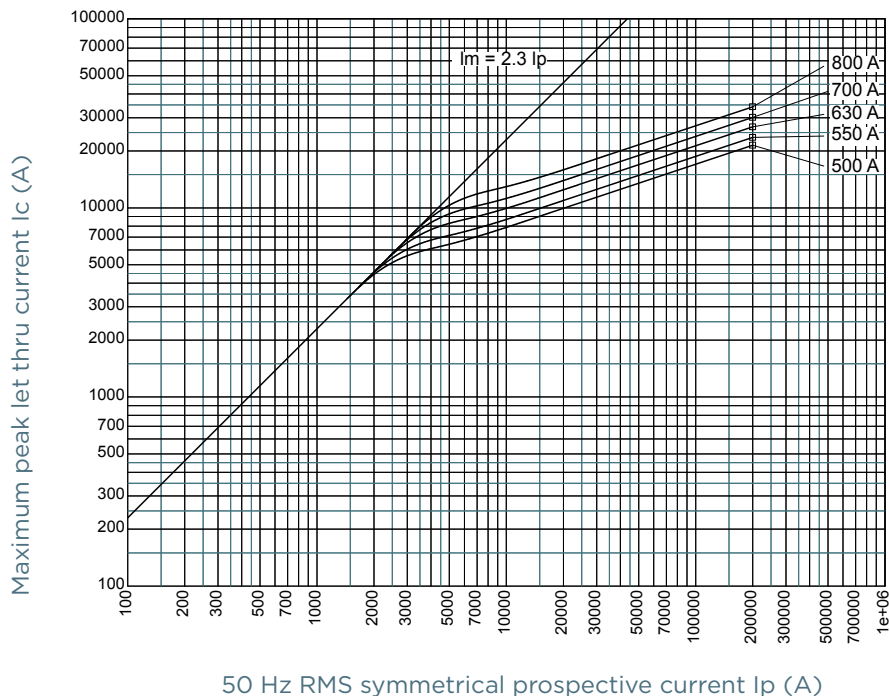


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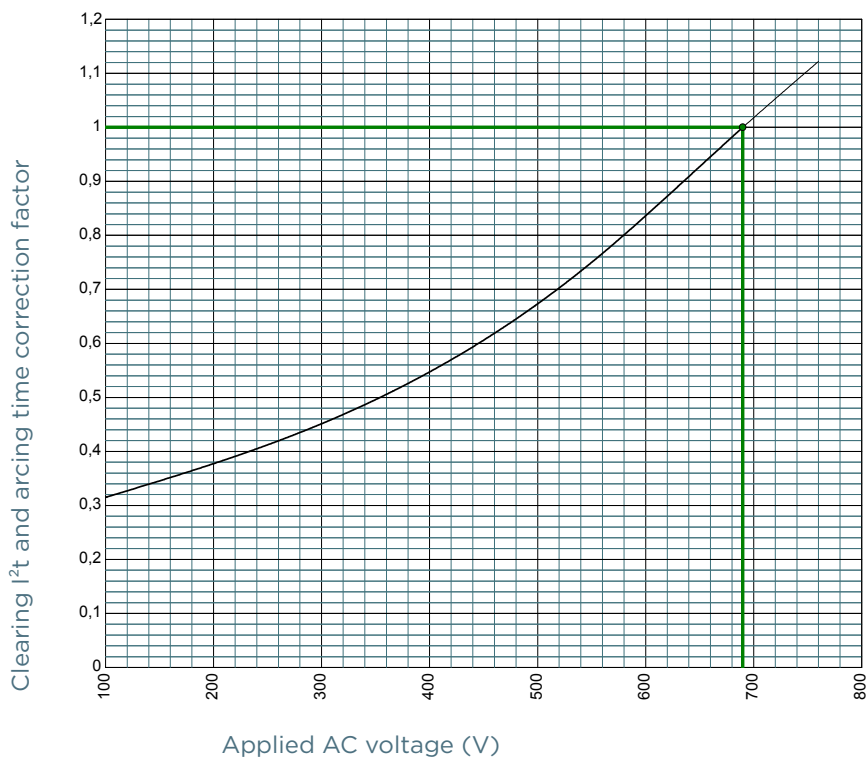
## CUT-OFF CURRENT CHARACTERISTIC

### Size 32



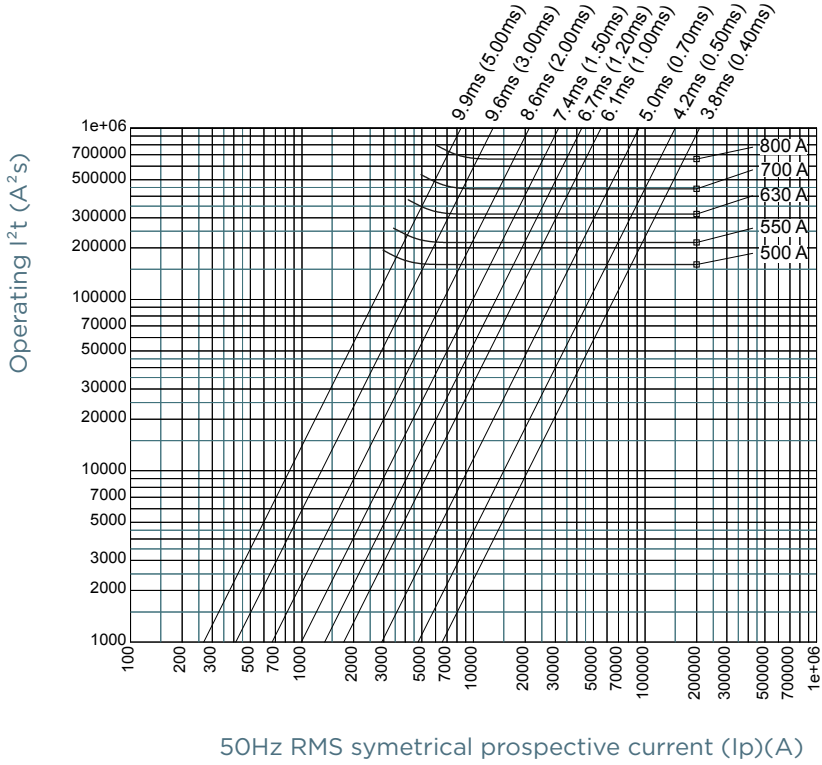
## I<sup>2</sup>T MULTIPLIER COEFFICIENT

### Size 32

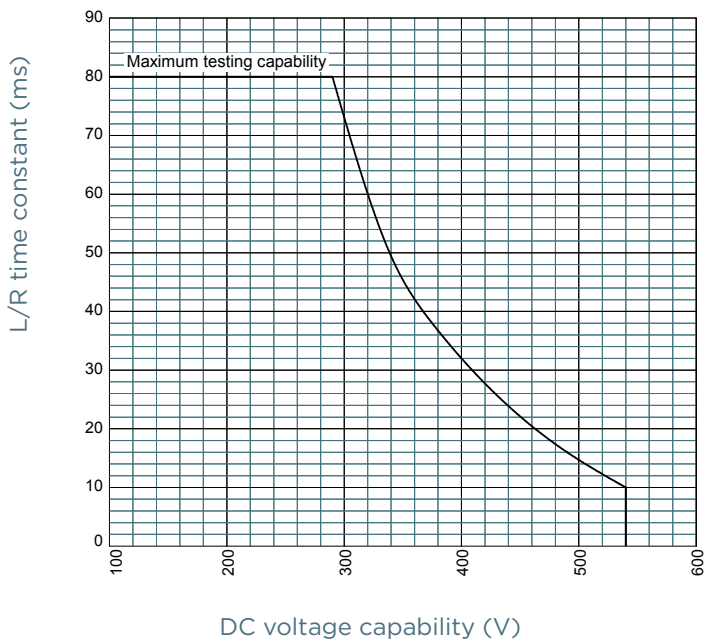


CHARACTERISTICS TOTAL I<sup>2</sup>T CURVE

Size 32



L/R TIME CONSTANT VS DC VOLTAGE CAPABILITY



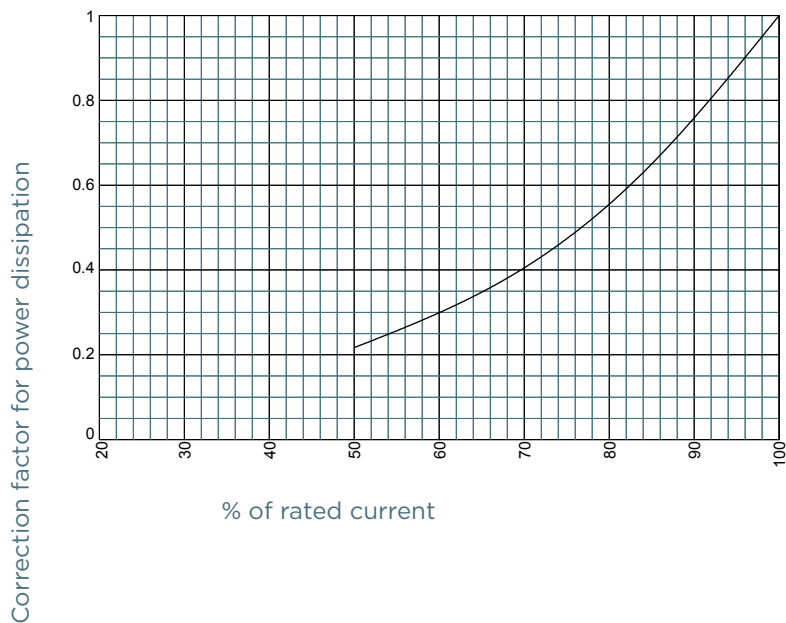
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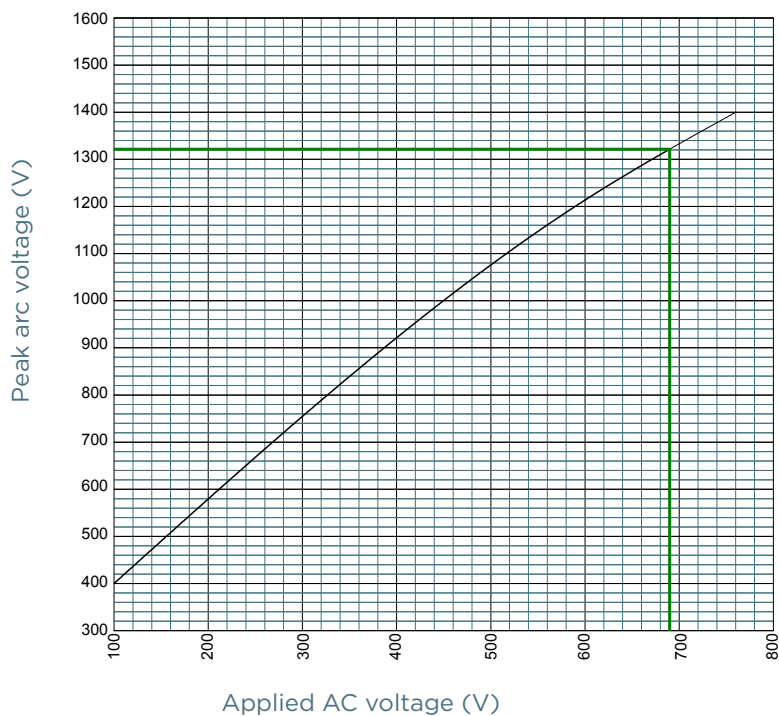
## POWER DISSIPATION

### Size 32



## PEAK ARC VOLTAGE

### Size 32



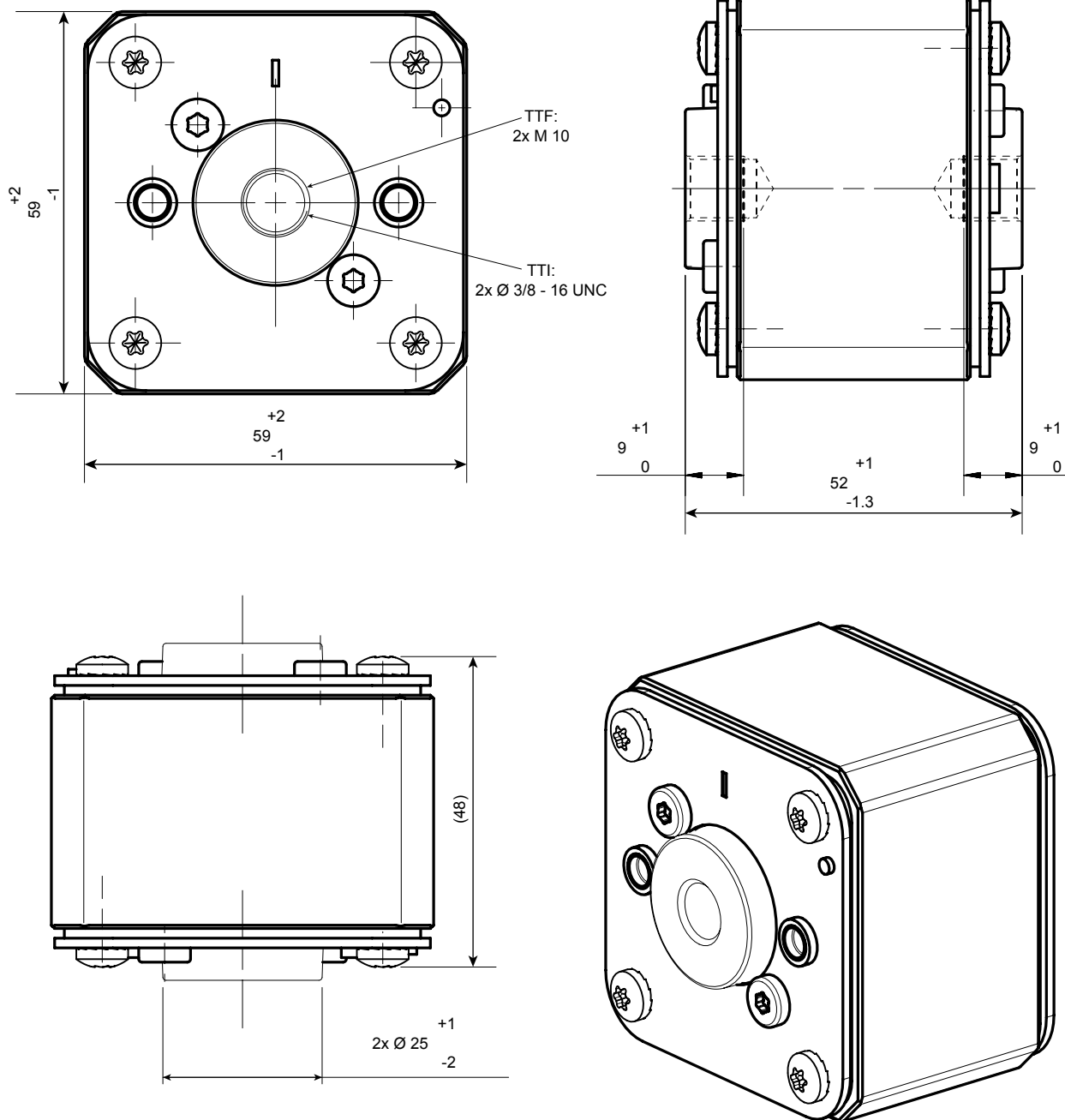
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## DIMENSIONS

Size 32 type TTF / TTI without indicator



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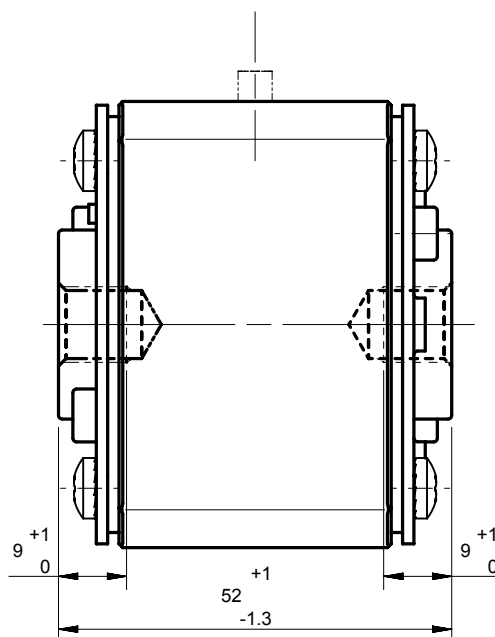
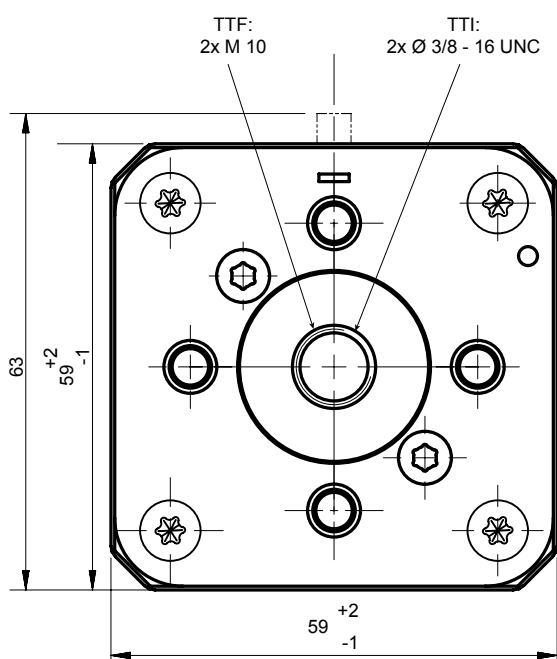
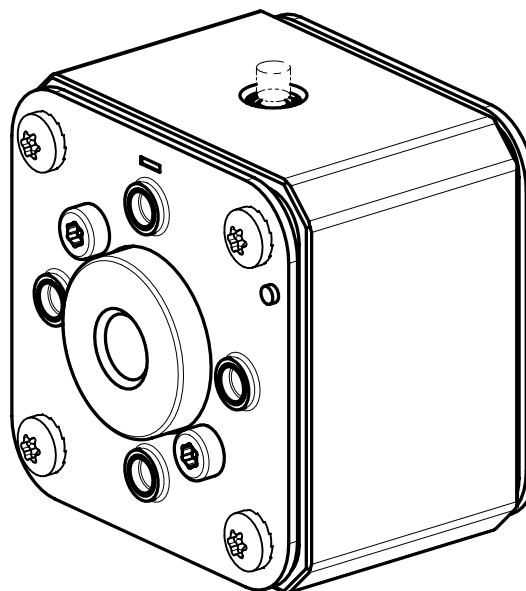
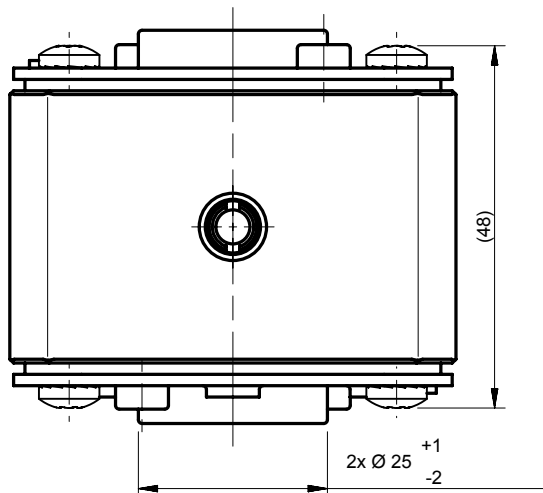


# Protistor® SC Series size 32 aR

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## DIMENSIONS

Size 32 type TTF / TTI with indicator

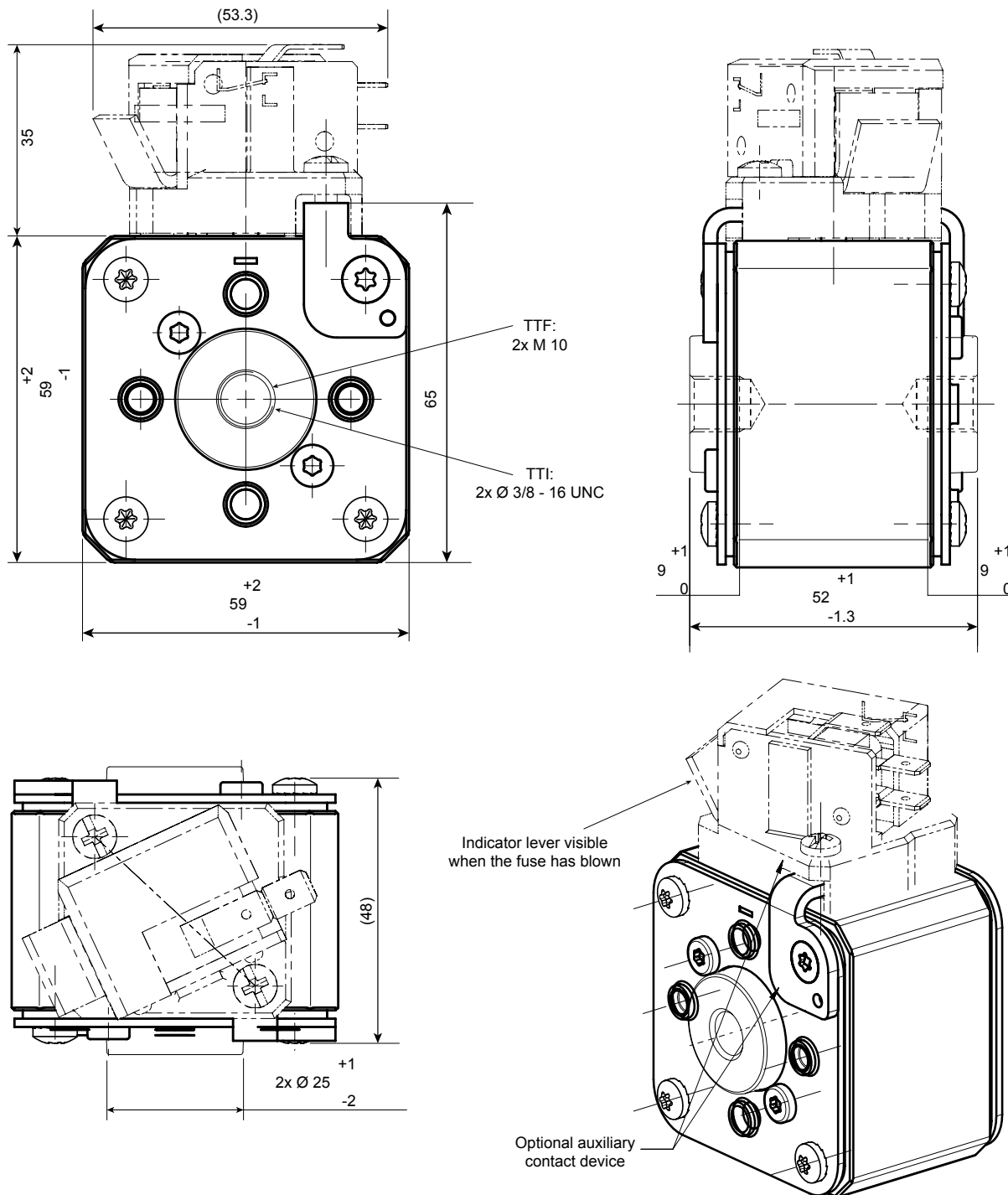


# Protistor® SC Series size 32 aR

690 VAC (IEC) / 760VAC (UL)

## DIMENSIONS

### Size 32 type TTF / TTI with microswitch



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