

## Surge Protective Device 10kV T3 for LED drivers & luminaires

# LED SPD 10kV T3

### Features:

- Wide range of mains supply AC voltage 100-277V & 50/60Hz
- Long life time & high durability
- Suitable for insulation Class I luminaires, drivers, power supplies only
- High grade of ingress protection of body IP67
- High surge protection levels of up to 10kV / 10kA
- Can use as common protection system for all low-voltage electrical installations
- For better surge protection of LED luminaires/drivers is recommended tandem use of T2 & T3 protectors

### Applications:

- Highways lighting
- Rural roads lighting
- Industrial zones lighting



Protection	
Protection mode	Diff. mode & Comm. Mode
Type of surge protection device according IEC/EN 61643-11	T3
Power grids	TNS, TNC-S, TT
Max. voltage protection level at In Up(L-N) & Up(L,N-GND)	1.8kV & 2kV $\pm$ 10%
Thermal protection	Yes
Maximum recommended overcurrent protection of protected by SPD line	10A, gG fuse
Status indicator for end of life	Yes, optical, ON: SPD is functional; Light OFF: SPD must be replaced
Insulation class	Class I
Ingress protection	IP67, only body
Electrical characteristics	
Mains supply voltage Un(L-N) & Frequency	100 ... 277VAC & 50/60Hz
Max. continuous operating voltage Uc(L-N)	280VAC 50/60Hz
Max. continuous operating voltage Uc(L-GND)	280VAC 50/60Hz
Max. continuous operating voltage Uc(N-GND)	280VAC 50/60Hz
Rated load current	5A
Power losses	0.5W at Uc
Temporary Overvoltage Ut (tt=5s; TN, TT-systems; LV system faults in consumer installation, 280VAC $\cdot$ 1.32)	370VAC
Temporary Overvoltage Ut (tt=5s; TT-systems; LV system faults in consumer installation; 280VAC $\cdot$ $\sqrt{3}$ )	485VAC
Temporary Overvoltage Ut (tt=120min; TT-systems; LV system faults in distribution system and loss of neutral, 280VAC $\cdot$ 1.32)	370VAC
Temporary Overvoltage Ut (tt=120min; TN, TT-systems; LV system faults in distribution system and loss of neutral, 280VAC $\cdot$ $\sqrt{3}$ )	485VAC
Temporary Overvoltage Ut (tt=200ms; TT-systems; HV system faults, L-PE 1200VAC+280VAC)	1480VAC
Temporary Overvoltage Ut (tt=200ms; TT-systems; HV system faults, N-PE 1200VAC)	1200VAC
Nominal discharge current In(L-N)	5kA 8/20 $\mu$ S current wave
Nominal discharge current In(L-GND) & In(N-GND)	5kA 8/20 $\mu$ S current wave
Open circuit voltage Uoc	10kV 1.2/50 $\mu$ S voltage wave
Max. voltage protection level at In Up(L-N)	1.8kV $\pm$ 10%
Max. voltage protection level at In Up(L-GND) & Up(N-GND)	2kV $\pm$ 10%
Max. earth leakage current at Uc	50 $\mu$ A, rms to GND

## Surge Protective Device 10kV T3 for LED drivers & luminaires

### Durability

Surge withstand capability	1 strike at 10kA max
	≥ 20 strikes at 5kA max
	≥ 50 strikes at 3kA max

### Ambient conditions

Allowable operating ambient temperature $t_a$	-30 ... +70°C
Max. allowable casing temperature $t_c$	+80°C
Storage & Relative humidity	-30 ... +80°C & 5 ... 95% non-condensing
Suitable for outdoor luminaires	Yes, built-in usage only
Expose of UV radiation and/or Sun light	Not allowable, do not expose
Air pressure and altitude	80 ... 106kPa & -500 ... +2000m

### Connections

Connections to mains supply network	Line in - brown; Neutral in - blue; PE - yellow-green
Connections to protected device	Line out - black; Neutral out - white
Length of wires	5x160mm, 16AWG

### Sizes&Fixing

Dimensions	85*43*35mm (only body)
Fixing screw type	M8

### Material

Material of Body	plastic
Weight	
Replacable parts	No replacable parts

### Warranty conditions

Lifespan at $t_c < 85^\circ\text{C}$	up to 100 000h in depends of strikes and $T_c$
Warranty	5 Years and/or according strikes and $T_c$

### Certification

CE	
Classification	Class III tests acc. EN61643-11
Designation	Type 3 acc. EN61643-11

Modified Date	Rev.	Description of Change		
		Item	From	To
17.2.2023	1.2	Datasheet Release	/	/

## Surge Protective Device 10kV T3 for LED drivers & luminaires