

Surge Protective Device 10kA 10kV Type T2&T3 for LED drivers & Luminaires

LED SPD T2&T3 10kVT

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 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	T2, T3
Power grids	TNC, TNC-S, TNS, TT
Max. voltage protection level at In Up(L-N) & Up(L,N-GND)	1.8kV & 2.0kV ± 10%
Thermal protection	Yes
Maximum recommended overcurrent protection of protected by SPD line	10A, gG fuse
Status indicator "end of life"	Yes, optical, ON: SPD is functional; Light OFF: SPD must be replaced
Suitable for luminaires of protection Class	I
Ingress protection	IP20

Electrical characteristics	
Mains supply voltage Un(L-N) & Frequency	100 ... 277VAC & 50/60Hz
Max. continuous operating voltage Uc(L-N)	280VAC
Max. continuous operating voltage Uc(L-GND)	280VAC
Max. continuous operating voltage Uc(N-GND)	280VAC
Rated load current	5A
Power losses	0.5W at Uc
Temporary Overvoltage Ut (tt=5s; TN, TT-systems; LV system faults in consumer installation, 255VAC*1.32)	337VAC
Temporary Overvoltage Ut (tt=5s; TT-systems; LV system faults in consumer installation; L-PE 255VAC*√3)	442VAC
Temporary Overvoltage Ut (tt=120min; TT-systems; LV system faults in distribution system and loss of neutral, L-PE 255VAC*1.32)	337VAC
Temporary Overvoltage Ut (tt=120min; TN, TT-systems; LV system faults in distribution system and loss of neutral, 255VAC*√3)	442VAC
Temporary Overvoltage Ut (tt=200ms; TT-systems; HV system faults, L-PE 1200VAC+255VAC)	1455VAC
Temporary Overvoltage Ut (tt=200ms; TT-systems; HV system faults, N-PE 1200VAC)	1200VAC
Nominal discharge current In(L-N)	5kA 8/20uS current wave
Nominal discharge current In(L-GND) & In(N-GND)	5kA 8/20uS current wave
Max. discharge current Imax	10kA 8/20uS current wave
Open circuit voltage Uoc	10kV 1./2/50uS voltage wave
Max. voltage protection level at In Up(L-N)	1.8kV ± 10%
Max. voltage protection level at In Up(L,N-GND)	2.0kV ± 10%
Backup fuse	10A max, gG fuse
Max. earth leakage current at Uc	50uA, rms to GND

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Durability

Surge withstand capability	1 strike at 10kA max ≥ 20 strikes at 5kA max
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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	4 pole terminal block 0.5 ... 2.5sq.mm; PE/GND - yellow-green & 16AWG
Connections to protected line & device	by terminal block 0.5 ... 2.5sq.mm
Length of GND/PE wire	130mm

Sizes&Fixing

Dimensions	77*34*30mm (only body)
Fixing screw type	M8

Material

Material of Body	plastic
Weight (incl. nut)	91 ± 3 g
Replacable parts	No replacable parts

Warranty conditions

Lifespan at $t_c < 80^\circ\text{C}$	up to 100 000h in depends of strikes and T_c
Warranty	5 Years and/or according strikes and T_c

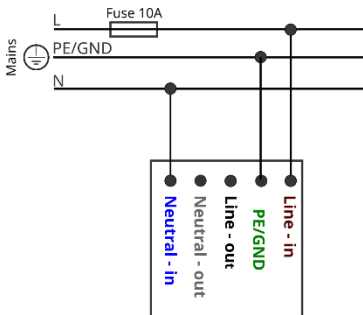
Certification

CE	
Classification	Class II tests acc. EN61643-11
Classification	Class III tests acc. EN61643-11
Designation	Type 2, Type 3 acc. EN61643-11

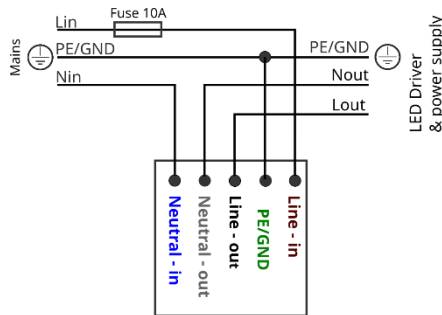
Modified Date	Rev.	Description of Change		
		Item	From	To
22.2.2024	1.2	Datasheet Release	/	/

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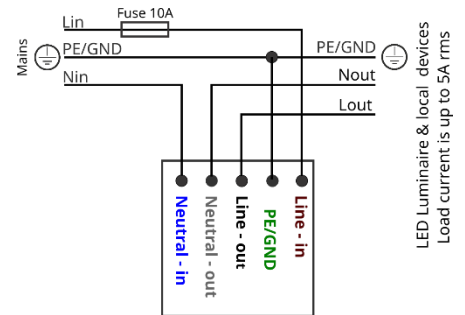
Application diagrams:



LED SPD T2&T3 10kVT
 T2 type connections
 when "end of life" is reached
 the protector is no more
 protects the line



LED SPD T2&T3 10kVT
 T3 type connections
 when "end of life" is reached
 the protector and load are
 switched off from mains



LED SPD T2&T3 10kVT
 T2 type connections
 when "end of life" is reached
 the protector and load are
 switched off from mains

LED Luminaire & local devices
 Load current is up to 5A rms