

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

LED SPD T2&T3 10kVT3

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	3 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	M8x10

Material

Material of Body	plastic
Weight (incl. nut)	92 ± 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

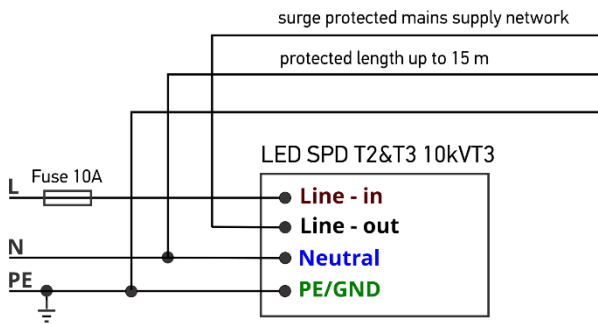
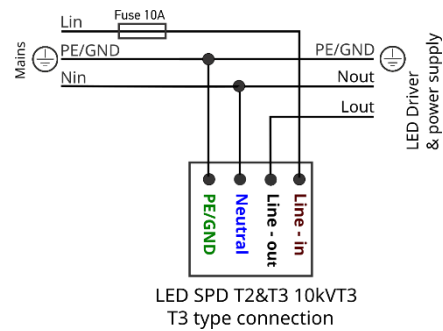
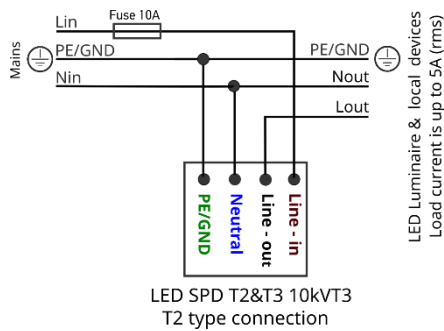
Certification

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

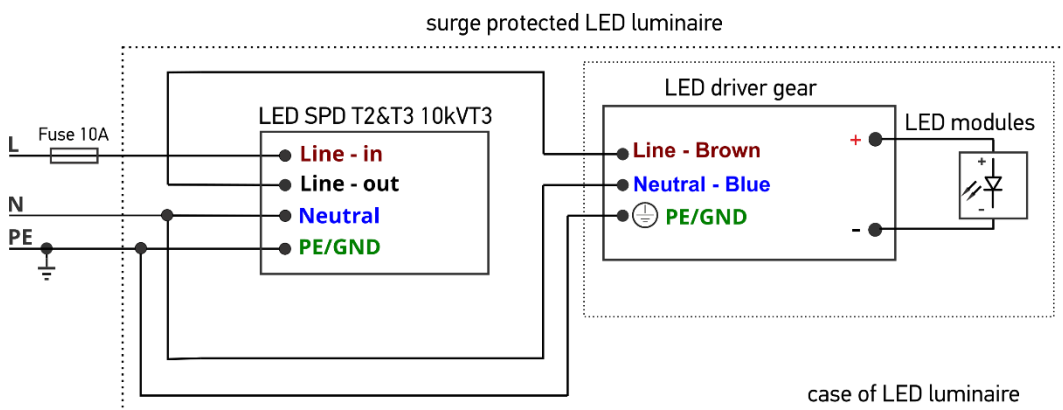
Modified Date	Rev.	Description of Change		
		Item	From	To
22.2.2024	1.2	Datasheet Release	/	/

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Application diagrams:



application as T2 protector - only for built-in usage
Summarized input current of protected devices is up to 5A (rms)



application as T3 protector - only for built-in usage
SPD T3 type must be mounted close to protected LED driver
SPD T3 type must be fastened inside of case of LED luminaire
Input current of LED luminaire must be no more than 5A (rms)