

**EXTEND THE
LIFETIME**
OF YOUR LED LIGHTING WITH
RELIABLE SURGE PROTECTION



Maximum Surge Protection for Outdoor LED Lighting

The Littelfuse Surge Protection Modules are self-protected devices that can be used in European outdoor and commercial LED lighting fixtures for transient overvoltage protection.

They are constructed with Littelfuse thermally protected varistor technology and provide high line-to-earth/ground resistance.

The built-in thermal disconnect provides additional protection against catastrophic failure/fire hazard under varistor end-of-life or sustained overvoltage conditions. The LSP05GX European version module series facilitates surge immunity compliance to IEEE C62.41.2 Location Category C Low Exposure.

Applications

- Digital Signage
- Flood Lighting
- Parking Garage Lighting
- Roadway Lighting
- Street Lighting
- Traffic Lighting
- Tunnel Lighting
- Wall Wash Lighting



Datasheet



Resources



Samples

Surge Protection Module - Self-protected device designed for transient overvoltage protection of outdoor/commercial LED lighting fixtures



Parallel Connection



Series Connection

Features

- Meets IEEE C62.41.2 Location Category C Low Exposure
- Thermally protected varistor technology
- Parallel-connected and series-connected options
- Recognized to UL 1449¹ and complies with EN/IEC 61643-11 Class II²
- Unearthed option for Class II double insulated luminaire, common in Europe
- High line-to-earth/ground resistance

Benefits

- Optimized surge immunity solution to protect the outdoor LED fixture investment
- Internal varistors thermally protected to prevent failure due to end-of-life or continuous overvoltage faults
- **Series Connection** – clear indication for SPD module replacement by turning luminaire off when the thermal fail-safe protection is activated
- **Parallel Connection** – for high-reliability lighting applications, SPD disconnects itself at end-of-life and keeps luminaire powered
- Enables worldwide marketing of lighting fixtures
- Facilitates faster production line Insulation Resistance testing

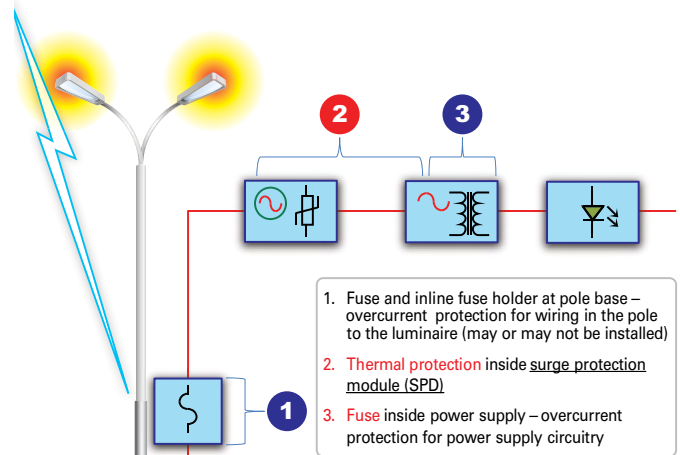
Surge Protection Module Portfolio

LSP05GX European Version		
Connection Type	Parallel	Series
Indication for SPD Replacement	None	Luminaire turned off
Thermal Protection	MOV thermal disconnection when overheated	
Recognition/Compliance	CE: Low Voltage Directive, EN/IEC 61643-11 Class II ² SPD, UL1449 Type 4 CA (240V)	
Operating Voltage	240/277 VAC	
I _{max} (max. surge current, 1-hit)	10kA	
I _n (nominal surge current, 15-hit)	5kA (10kV open-circuit voltage)	
Luminaire Insulation Class	Class I earthed/Class II unearthed	
Ingress Protection Rating	IP66	
Dimensions	46.6 x 28.6 x 26 mm	
Regional Markets	Europe	

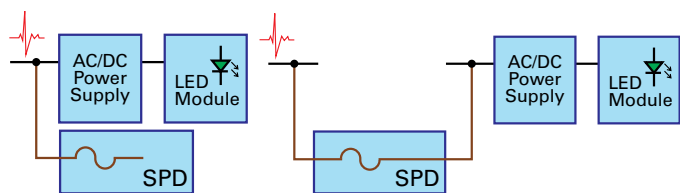
Notes:

1. 240Vac voltage rating.
2. Self-declared compliance.

LED Street Light Protection Scheme



Parallel Connection and Series Connection



Parallel Connection

- Thermal protection prevents MOV fire hazard caused by unstable line voltage and end-of-life failure.

Series Connection

- Thermal protection prevents MOV fire hazard caused by unstable line voltage and end-of-life failure.
- Series-connected SPD cuts luminaire power off to provide a clearly visible indication that SPD replacement is required.