Littelfuse
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LED Lighting Surge Protection Module – LSP05G Module Series

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 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 LSP05G product series facilitates surge immunity compliance to IEEE C62.41.2 Location Category C Low Exposure, ANSI C136.2, and US Dept of Energy MSSLC Model Spec.

Applications

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

DataSheet Resources Samples

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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, ANSI C136.2 Enhanced Level Specs and US Dept. of Energy MSSLC Model Spec.
- Thermally protected varistor technology
- Parallel-connected and series-connected options
- Recognized to UL 1449[1] and complies with EN/IEC 61643-11 Class II[2]
- High line-to-earth/ground resistance

Benefits

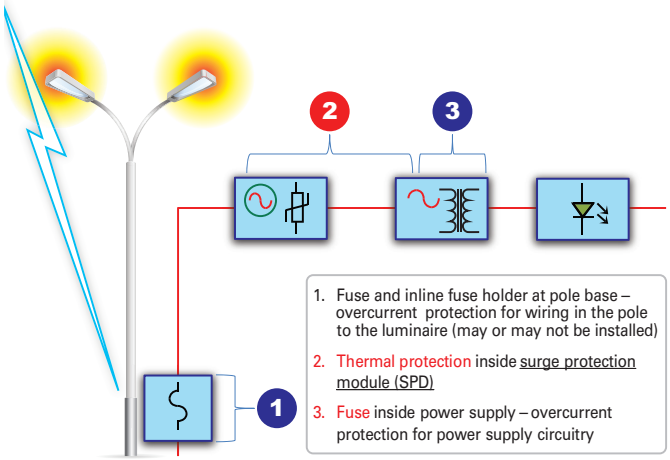
- Optimized surge immunity solution to protect the outdoor LED fixture investment
- Internal varistors thermally protected to prevent failure due to end-of-life or continuous overvoltage faults
- **Series Connection** – clear indication for SPD module replacement by turning luminaire off when the thermal 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 Key Characteristics

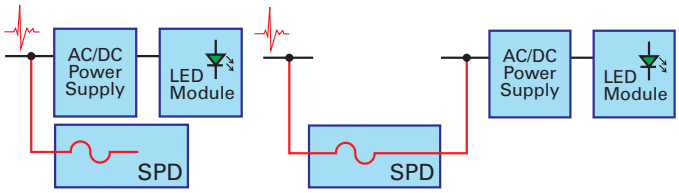
LSP05G		
Connection Type	Parallel	Series
Indication for SPD Replacement	None	Luminaire turned off
Thermal Protection	MOV thermal disconnection when overheated	
Recognition/Compliance	MSSLC Roadway Enhanced ANSI C136.2 Enhanced UL1449 Type 4 CA (120V/240V) EN/IEC 61643-11 Class II[2]	
Operating voltage	120/240/277/347/480 VAC	
Imax (max. surge current, 1-hit)	10kA	
In (norminal 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	Asia, Australia, and Africa	

Notes:
1. 120Vac and 240Vac voltage ratings.
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.