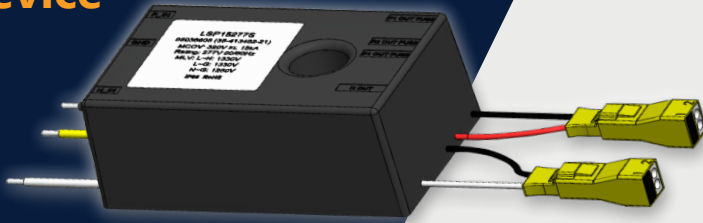


## Surge Protection Device



Project Name \_\_\_\_\_

Date \_\_\_\_\_ Type \_\_\_\_\_

Notes \_\_\_\_\_

Surge Protection is more important than ever for electronic power supplies and LED system longevity. Studies show an increasing trend in lightning strike activity in the US over the past 20 years **and projected into the future.\*** - How confident are you that your Surge Protection Device is tested and rated for **MULTIPLE** strikes?

\*Rombs, D.M., Seely, J.T., Vollaro D., Molinari, J.: SCIENCE, 14 Nov 2014, Vol 346, Issue 6211 pp. 851-854

## Did You Know?

A Surge Protection Device (SPD) may survive one C62.41.2 "High" level surge, but does it meet the repetitive surge and multi-strike requirements of ANSI C136.2's luminaire testing protocol.

There are major differences between a performance claim using C62.41.2 and comprehensive luminaire testing using C136.2.

### C136.2-2018 Test & Protocol

#### Defines Exact Test Procedure

- Defines a power source impedance representative of outdoor power distribution networks. **(Very Important)**
- Defines number of strikes, coupling modes, surge polarity, and surge phase vs AC cycle.
- Defines pre-test requirements to verify surge generator is working as intended.
- Defines pre and post test electrical measurements to verify luminaire is undamaged.
- Defines which C62.41.2 waveforms to use for testing luminaires.

**Source:** American National Standard for Roadway & Area Lighting Equipment - Dielectric Withstand and Electrical Transient Immunity Requirements.

### C62.41.2-2002 Waveforms & Categories

#### Defines the Surge Test Waveform

- Defines test waveforms and electrical conditions for various types of potential surge events.
- Defines recommended peak voltage and current levels for product locations and exposure conditions.
- Surge pulse levels for C62.41.2 category C, Low, Medium, and High equate to C136.2 Typical, Enhanced, and Extreme.

**Source:** IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000 V and Less) AC Power Circuits.

## Current offers 3 levels of protection to make sure you are covered:

- **"TYPICAL"** (40 Strikes) = ANSI C136.2-2018 rated 6kV/3kA
- **"ENHANCED"** (40 Strikes) = ANSI C136.2-2018 rated 10kV/5kA **(Option R)**
- **"EXTREME"** (40 Strikes) = ANSI C136.2-2018 rated 20kV/10kA **(Option T)**

