LED Lighting SPD Series

AC Power Surge Suppressor

- **20kA surge protection per mode**
- **Protects loads up to 12 Amps in series, unlimited Amps in parallel**
- **Suitable for AC power application**
- **Thermal and short circuit protection**
- **LED status indication feature**
- **10 year product warranty**
- **UL1449 4th Edition Type 4CA**
- **Protects LED lighting systems and drivers**
- **Rated for harsh environments, IP66**

The LEDSPD series of surge protection devices protects LED drivers and electronic ballasts against the effects of 'noise pollution' induced in power supplies. LEDSPD units 'clean up' the effects of industrial surges caused by lightning, switching devices, thyristor controls, transmission system overloads and power-factor correction circuits.

Industrial control systems utilizing programmable logic controllers (plc) and industrial computers are particularly vulnerable due to the aggressive electrical environments for which they are intended, such as process plants, factories and water treatment sites. Although industrial computers and plcs are designed to be rugged, the extra protection provided by the LEDSPD unit is critical. Ideally suited for protecting panel mounted equipment and typically used in the controls section of a motor control centre (MCC), the LEDSPD range provides protected power.

With a unique 'two-stage' combination of protection elements, these units suppress conducted voltage surges. The circuit elements are first, surge clipping components to absorb transient surges that may otherwise damage equipment, and second, 'ring' suppression. The second of these prevents surges causing the filter to 'ring' (oscillate) under low load conditions – an effect that actually accentuates interference in most commercially available filters.

Suitable for AC application, LEDSPD units reduce both electromagnetic emissions and the susceptibility of the associated equipment to emissions from other sources. LEDSPD devices also offer ultimate installation flexibility. To protect circuits rated 12A or less, LEDSPD devices should be installed in series. To protect higher current circuits, simply install the LEDSPD in parallel.

An LED status indication facility is standard with the LEDSPD units. This displays both 'power on' and that protection is present. Thermal fusing is also incorporated into each 20kA rated device as an additional safety feature. LEDSPD units also offer short circuit protection for added peace of mind.

LEDSPD devices exceed the requirements of IEC 61000-4-5. As LEDSPD units suppress voltage surges they enable associated equipment to comply with this aspect of European 'CE' mark standards. With ingress protection to IP66 (NEMA 4X), the LEDPSD series can be installed in most locations and carries an unrivaled "no fuss" 10 year manufacturers warranty.

Powering Business Worldwide

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SPECIFICATION

All figures typical at 77°F (25°C) unless otherwise stated

Maximum surge current
20kA (8/20µs) per mode (verified)

Maximum leakage current
<0.3mA

Maximum continuous operating current
12A series connection
Unlimited Amps in parallel

Working voltage
100V – 277V AC

Maximum continuous operating voltage
320Vac

Limiting voltage
@ 1kA 8/20µs 850V
@ 2kA 8/20µs 960V
@ 3kA 8/20µs 1050V
@10kA 8/20µs 1475V

Modes protected
L-N, L-E, N-E

Ambient temperature limits
–40°F to +185°F (working)
–40°C to +85°C (working)

Humidity
95% RH (non-condensing)

Casing
ABS / PC Blend, UL94-V5

Terminals
(2.5mm2) 12AWG

Mounting
0.19" (4.8mm) Tabs

Weight
4.8oz (136g)

Dimensions
See figure 1

EMC compliance
BS EN 61326-1 : 2006
IEC 61643-11 : 2011

LED indication
Green LED on Protection present
Green LED off Internal failure

STANDARDS

- ANSI/IEEE C62.41:2002 Location C, High Exposure
- SPD requirements of US Air Force ETL 10-2 LED Fixture Design and Installation Criteria
- ANSI C136.2 10kV BIL
- Commercial Building Energy Alliance (CBEA) LED Lighting Performance Specifications

INSTALLATION

Typical wiring connections for LEDSPD Series devices are indicated in figure 2. The grounding of the surge protector and the protected equipment is very important and, if possible, should be accomplished as illustrated.

APPROVALS

Country	Standard/Authority	Approved for	Product
US / Canada	Underwriters Laboratories	UL1449 4th Edition	LS20N-277V-B

TO ORDER SPECIFY: LS20N-277V-B

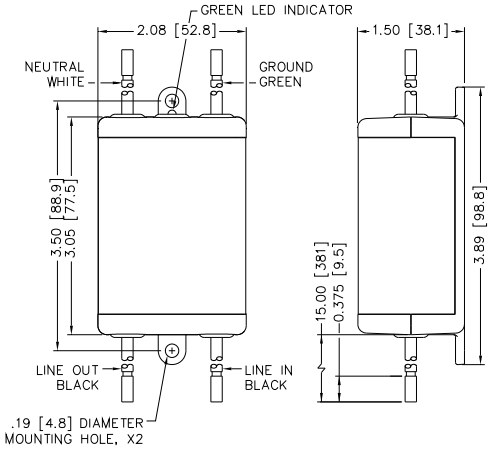
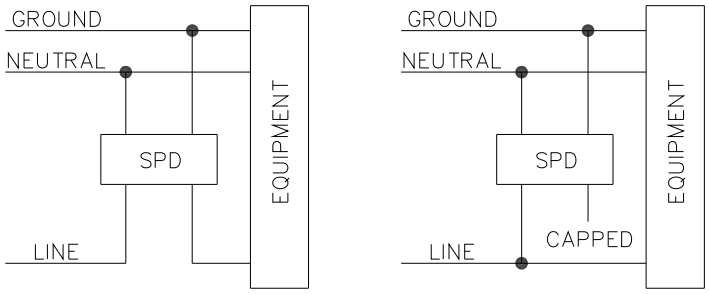


Figure 1: Dimensions



Series Connection
Current </=12A

Parallel Connection
Current >12A

Figure 2: Installation

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