



## Surge Protective Devices

## LoadTrack LTL

## Installation, Operation and Maintenance Manual



**Read entire manual before  
attempting installation**

## TABLE OF CONTENTS

Before Installation .....	3
<i>System Configuration Verification</i> .....	3
<i>Pre-installation Checklist</i> .....	3
<i>LoadTrack SPD Model Numbers</i> .....	3
<i>Mounting</i> .....	4
<i>Electrical Connections</i> .....	4
Service Configurations .....	5
<i>Single Phase</i> .....	5
<i>Split-Phase</i> .....	5
Dimensional Specifications .....	6
Standards and Listings .....	6
Warranty Statement .....	7

## BEFORE INSTALLATION



**WARNING: HAZARDOUS VOLTAGES PRESENT** Improper installation or misapplication may result in serious personnel injury and/or damage to electrical system. Read the complete installation instructions before proceeding with installation. Remove all power to the electrical panel before installing or servicing the surge protective device (SPD).



**WARNING:** Do not HIPOT the LoadTrack LTL unit or the electrical system that the LoadTrack LTL is connected to without disconnecting the LoadTrack LTL conductors including phases, neutral and ground.

**IMPORTANT SAFETY INSTRUCTIONS** All work must be performed by licensed and qualified personnel. The electrical system must be properly grounded in accordance with the U.S. National Electrical Code, state and local codes or other applicable codes for this SPD to function properly. This device is suitable for installation where the available short circuit current is 65,000 rms symmetrical amperes at 480VAC or less.

### 1. System Configuration Verification

Confirm that the voltage(s) and service configuration shown on the LoadTrack LTL product label are consistent with the voltage and service configuration of the facility. A model number is on the side of the LoadTrack LTL unit. Each model number corresponds to the configurations printed in Table 1:

Example of a SPD model number in Table 1: TK-LTL-120P-30A

### Pre-Installation Checklist

Prior to installation, verify that the voltage rating(s) of the intended LoadTrack surge protective device (SPD) match those of the electrical system or circuit to which the product is to be installed.

Table 1

LOADTRACK SPD MODEL NUMBER	NOMINAL VOLTAGE (L-N)
TK-LTL120P-30A	120
TK-LTL220P-30A	220
TK-LTL277P-30A	277

LOADTRACK SPD MODEL NUMBER	NOMINAL VOLTAGE (L-N, L-L)
TK-LTL120S-30A	120/240
TK-LTL220S-30A	220/380
TK-LTL277S-30A	277/480

The Two-Port LoadTrack SPD is provided with a Power ON indicator. When power is applied to the LoadTrack SPD, the Power ON indicator will illuminate. When power is removed from the LoadTrack series SPD, the Power ON indicator will extinguish.

The LoadTrack SPD is intended to be installed and operated in an ambient environment that does not exceed 104°F (+40°C), and does not contain conductive liquids or combustible dusts, fibers, vapors, or liquids.

The environment should also maintain a humidity range of 5% – 95% (non-condensing).

The LoadTrack SPD is intended to be stored in a dry location where the temperature range does not exceed -40°F to +140°F (-40°C to +60°C).

## Mounting

1. The LoadTrack SPD is intended to be installed in a control cabinet or similar enclosure with a degree of protection of at least IP20 (NEMA 1). The enclosure shall provide protection against accidental contact by requiring a tool, key or similar device to ensure only Qualified Personnel are allowed access to exposed live (energized) circuits. Metal enclosures shall be adequately bonded (grounded).
2. Remove all power feeding the site of the LoadTrack SPD connection.
3. The LoadTrack SPD series is designed for installation in or adjacent to electrical or electrically-driven equipment. Adjacent installation requires a sealed enclosure. Care should be taken to ensure exposed terminals do not come in contact with personnel.
4. Within the equipment to be protected, mount the LoadTrack SPD securely to the enclosure or other mounting surface using the holes provided in the opposite corners.
5. Using 10 AWG (5MM<sup>2</sup>) conductors and #8 insulated ring terminals, connect the LoadTrack SPD series using the provided #8 (m4) screws. The maximum torque to be applied to the mounting hardware is 16 in-lbs (1.8Nm).

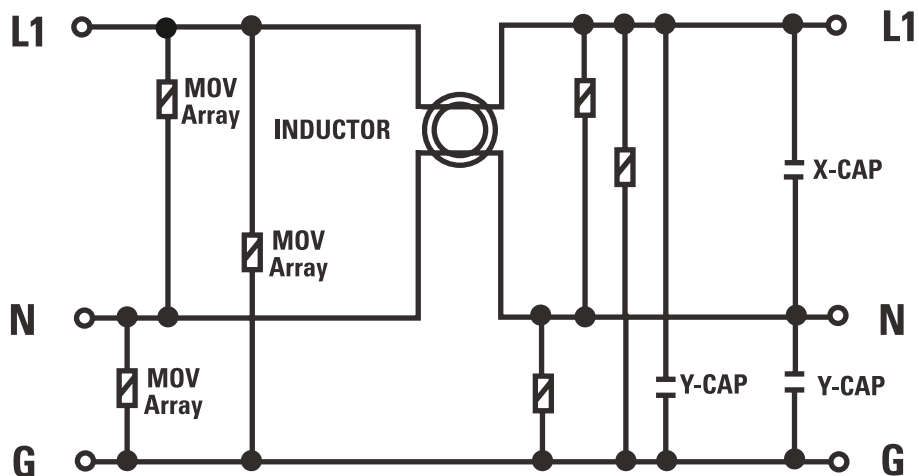
## Electrical Connections

1. The LoadTrack SPD must be protected via a circuit breaker with a maximum capacity of 30 amps.
2. Determine the location of the AC source supplying power to the load.
3. The LoadTrack SPD is to be installed in series between the AC power source and the equipment to be protected.
4. Using the appropriate phase, neutral and ground conductors, connect the incoming power source to the input terminals of the LoadTrack SPD.
5. Connect the Line 1 conductor to the L1 terminal of the LoadTrack SPD.
6. Connect the Neutral conductor to the N terminal of the LoadTrack SPD.
7. Connect the PE (Ground) conductor to the G terminal of the LoadTrack SPD.
8. For systems that have a single-phase 3W+G supply and load, connect the Line 2 conductor to the L2 terminal of the LoadTrack SPD.
9. Repeat Steps 5 through 8 on the load side of the LoadTrack SPD.
10. For best performance, the SPD should be connected as close as possible to the load. Additionally, load side conductors should not be run in the same conduit, cable tray, or cable trough as the input conductors.

Apply power to the device once proper installation has been completed. An illuminated LED indicates proper operation of the device. See Figures 1 and 2 for LoadTrack SPD line diagram. This unit contains no serviceable parts.

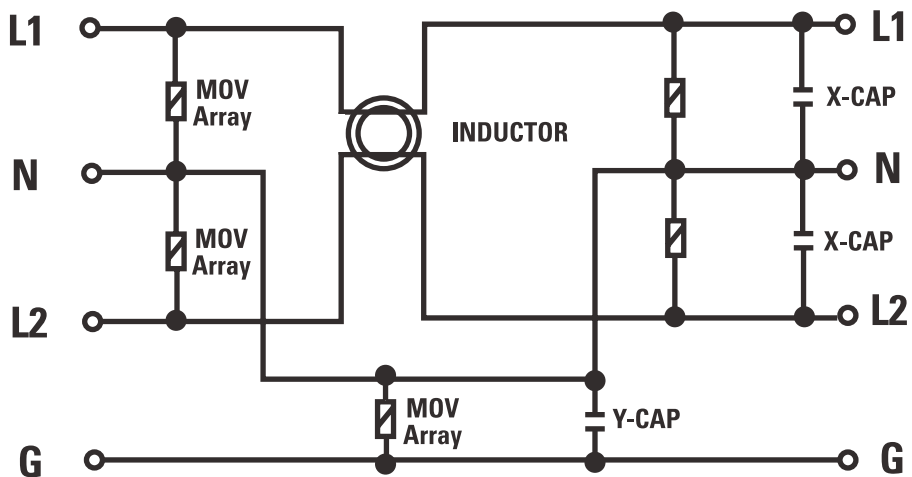
## Service Configurations

Figure 1  
Single-Phase



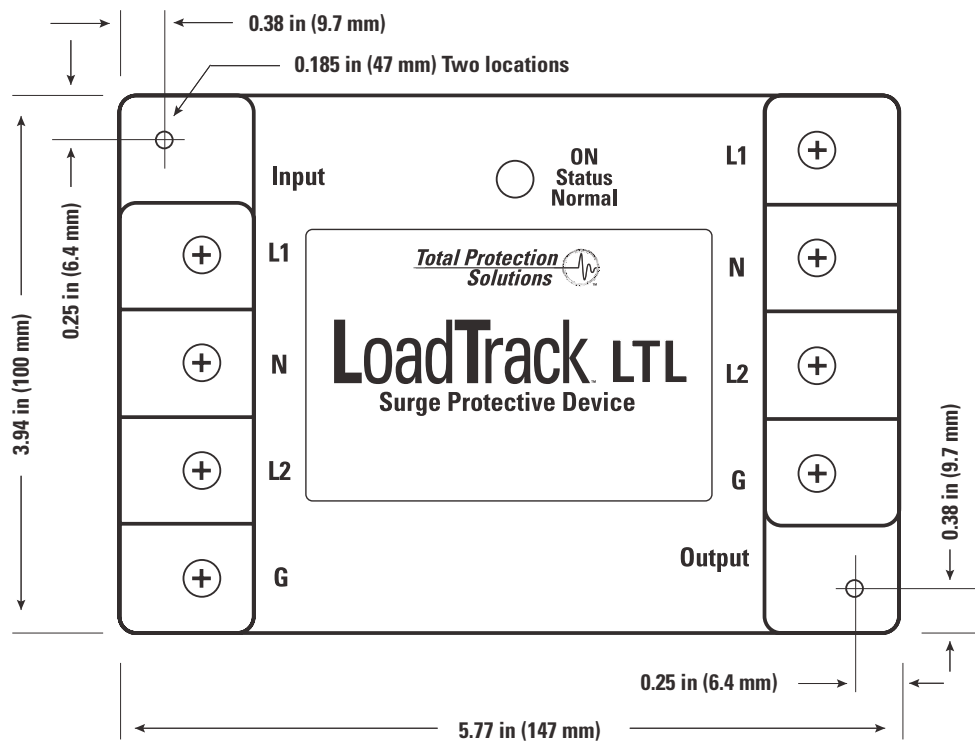
Use only the L1 Terminal lug for the phase wires (input & output) when connecting a single-phase configuration.

Figure 2  
Split-Phase



Match the corresponding L1 & L2 terminal lugs for the input & output phase wires when connecting a split-phase configuration.

**Dimensional Specifications**  
**Figure 3**



**STANDARDS AND LISTINGS**

- Listed by ETL to UL 1449 3rd Edition (2009 Revision), Type 4 for Type 2 SPD applications, cUL, and UL 1283
- Compliant to IEEE C62.41.1-2002, C62.41.2-2002 and C62.45-2002
- NFPA 70 [NEC], Article 28
- RoHS Compliant
- CE, IEC 61643-11-2011
- EMC Directive 2004/108/EC
- Low Voltage Directive 2006/95/EC



