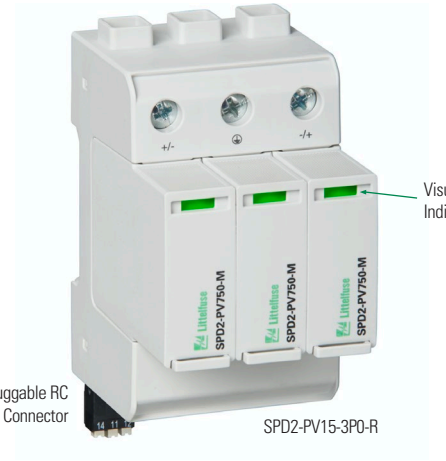
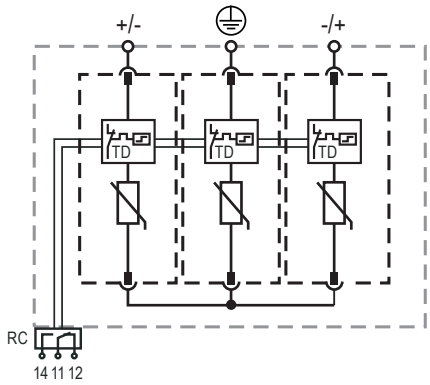
# Surge Protective Devices
SPD2 PV SERIES

## Class 2 (IEC)/Type 2 (EN)/Type 1CA (UL) Pluggable Multi-Pole for PV Systems




## Internal Configuration




**Legend**

⏚ *Protective Earth*
RC *Optional Remote Contact*
TD *Thermal Disconnection*

## Description

Surge protective devices (SPDs) provide equipment protection from transient overvoltage events lasting micro-seconds. By limiting the overvoltage to the equipment during these events, costly damage and downtime can be mitigated.

The surge protective devices for solar string box and inverter applications are available in 1100 and 1500 V dc in the 3+0 configuration.

## Features & Benefits

| FEATURES | BENEFITS |
|---|---|
| **Capability to clamp and withstand high-energy transients** | Ensures low-residual voltage during high-energy surge events and higher nominal discharge current to prevent disruption, downtime, and degradation or damage to equipment |
| **No additional overcurrent protection devices required in UL applications** | Reduces the number of components and costs required for protection |
| **Compact footprint** | Increases panel design flexibility |
| **Visual life indicator** | Quick visual determines module replacement status to avoid loss of protection |
| **Pluggable modules** | Fast and simple to replace, minimizing maintenance and downtime. No tools required |
| **Thermal protection** | Eliminates catastrophic failure |
| **IP20 protection rating** | Finger-safe design increases worker protection |

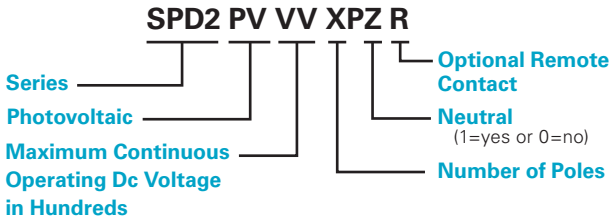
## Module & Base Ordering Information

| Ordering Number | IEC Electrical | | | | | | UL Electrical | | | | Single Unit Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Maximum Continuous Operating Dc Voltage ($U_{CPV}$) | Nominal Discharge Current (8/20 µs) ($I_n$) | Maximum Discharge Current (8/20 µs) ($I_{max}$) | Total Discharge Current ($I_{Total}$) | Voltage Protection Level ($U_p$) | Short-Circuit Current Rating ($I_{SCPV}$) | Maximum Permitted Dc Voltage ($I_{pvdc}$) | Voltage Protection Rating (VPR) | Nominal Discharge Current (8/20 µs) ($I_n$) | Short-Circuit Current Rating (SCCR) | |
| SPD2-PV11-3P0<br>SPD2-PV11-3P0-R | 1100 V | 20 kA | 40 kA | 50 kA | 4200 V | 9 kA | 1100 V | 3000 V | 20 kA | 50 kA | 333 g (0.734 lb) |
| SPD2-PV15-3P0<br>SPD2-PV15-3P0-R | 1500 V | 15 kA | 40 kA | 40 kA | 4800 V | 9 kA | 1500 V | 4000 V | 20 kA | 65 kA | 363 g (0.800 lb) |



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## Module & Base Part Numbering System




## Module Only Part Numbering System




## Replacement Module Ordering Information

| Ordering Number | IEC Electrical | | | | | | UL Electrical | | | | Single Unit Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Maximum Continuous Operating Dc Voltage ($U_{CPV}$) | Nominal Discharge Current (8/20 µs) ($I_n$) | Maximum Discharge Current (8/20 µs) ($I_{max}$) | Total Discharge Current ($I_{Total}$) | Voltage Protection Level ($U_p$) | Short-Circuit Current Rating ($I_{SCPV}$) | Maximum Permitted Dc Voltage ($I_{pvdc}$) | Voltage Protection Rating (VPR) | Nominal Discharge Current (8/20 µs) ($I_n$) | Short-Circuit Current Rating (SCCR) | |
| SPD2-PV550-M | 1100 V | 20 kA | 40 kA | 50 kA | 4200 V | 9 kA | 1100 V | 3000 V | 20 kA | 50 kA | 61 g (0.134 lb) |
| SPD2-PV750-M | 1500 V | 15 kA | 40 kA | 40 kA | 4800 V | 9 kA | 1500 V | 4000 V | 20 kA | 65 kA | 71 g (0.157 lb) |

## Specifications

**Mode of Protection** ( + ) - PE, ( - ) - PE, ( + ) - ( - )
**Nominal Discharge Current (8/20 µs) ($I_n$)** 20 kA
**Maximum Discharge Current (8/20 µs) ($I_{max}$)** Up to 40 kA
**Protective Elements** High Energy MOV
**Response Time ($t_A$)** < 25 ns
**Number of Ports** 1

### Mechanical & Environmental

**Operating Temperature Range ($T_a$)** -40 °C to +80 °C (-40 °F to +185 °F)
**Permissible Operating Humidity (RH)** 5% to 95%
**Altitude (max)** 4,000 m (13,123 ft)
**Terminal Screw Torque) ($M_{max}$)** 4.5 Nm (39.9 lbf-in)
**Conductor Cross Section (max)** 35 mm² (2 AWG) (Solid, Stranded)/ 25 mm² (4 AWG) (Flexible)
**Mounting** 35 mm DIN Rail, EN60715
**Degree of Protection** IP20 (built-in)
**Housing Material** Thermoplastic: Extinguishing Degree UL 94 V-0
**Thermal Protection** Yes

**Operating State/Fault Indication** Green Flag/No Green Flag
**Remote Contact Switching Capacity** Ac: 250 V/1 A, 125 V/1 A; Dc: 48 V/0.5 A, 24 V/0.5 A, 12 V/0.5 A
**Remote Contact Conductor Cross Section (max)** 1.5 mm² (16 AWG) (Solid)
**Standards Passed** EN 50539-11:2013+A1:2014
UL 1449 4th Edition; E320116

### Product Dimensions

**3TE Module and Base** **H** 90.7 mm (3.57"); **W** 53.8 mm (2.11"); **D** 66.1 mm (2.60")
**1TE Replacement Module** **H** 45.0 mm (1.77"); **W** 18.0 mm (0.71"); **D** 57.2 mm (2.25")

### Package Dimensions

**3TE Module and Base** **H** 102.0 mm (4.01"); **W** 64.0 mm (2.52"); **D** 110.0 mm (4.33")
**1TE Replacement Module** **H** 102.0 mm (4.01"); **W** 28.0 mm (1.10"); **D** 110.0 mm (4.33")

**Warranty** – Visit **www.littelfuse.com/warranty** for details.

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