

Surge Protective Devices

SPDN-A Series

UL Type 2



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 NEMA-style SPDN series for external panel mount is available for 120 V to 480 V nominal voltage sub-distribution board applications.

Features & Benefits

| FEATURES | BENEFITS |
|---|---|
| More direct modes of protection (L-N, L-G, N-G) in a smaller package | Increases protection and design flexibility |
| UL 1283 EMI/RFI filtering – 50 dB from 10 kHz to 100 MHz | Helps mitigate effects on power supplies by decreasing zero crossings during ringing transients to prevent interference on performance or unsafe conditions |
| 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 |
| Stacked Metal Oxide Varistor (MOV) design | Provides more high-transient voltage protection in a compact, multi-layered structure |
| Installs on the load side of the circuit breaker | Simplifies maintenance—without impacting the other parts of the electrical system—by turning breaker off during upkeep |
| Thermally protected MOV | Eliminates catastrophic failure |
| External LED Indicator | Quickly identifies service requirements to avoid loss of protection |
| Compact Footprint | Offers easy retrofit in existing applications where space is limited |

Applications

- Construction
- Food and Beverage
- HVAC/R
- Light Industrial
- Oil and Gas
- Water/Wastewater

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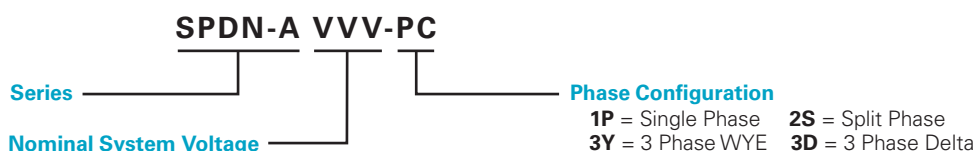
Specifications

| | |
|--|--|
| Maximum Surge Current Rating | Up to 130 kA per Phase |
| I-nominal Rating | 20 kA |
| UL1449 Short Circuit Current Rating | 200 kA |
| Direct Modes of Protection | L-N, L-G, N-G |
| UL Type | Type 2 |
| Phase Loss Monitoring | Standard |
| Audible Alarm | Standard |
| Protective Elements | Stacked High Energy MOV |
| Response Time (L-N / N-PE tA) | < 25 ns |
| Mechanical & Environmental | |
| Operating Temperature Range (Ta) | -40 °C to +85 °C (-40 °F to +185 °F) |
| Operating Frequency | 50–60 Hz |
| Typical Connection | 18" #12 AWG (pre-wired pig tails) 30 A breaker |
| Permissible Operating Humidity (RH) | 0 % to 95 % non-condensing |
| Altitude (max) | 4,000 m (13,123 ft) |
| Degree of Protection | IP20 (built-in) |
| Housing Material | Polycarbonate NEMA 4X – Lid screwed and gasketed |
| Thermal Protection | Yes |
| Operating State/Fault Indication | 1 Green LED (for each phase), 1 Red LED (Fault Indication) |
| Remote Contact Switching Capacity | Ac: 240 V/2 A, 125 V/1 A |
| Ground Reference Monitoring | N-G Voltage > 20 V Detected |
| Product Dimensions | H 2.75"; W 7.95"; D 3.06" |
| Product Weight | 1.38 lb |
| Package Dimensions | 4-3/8 x 3-1/2 x 9-1/2" |
| Package Weight | 1.8 lb |

Certification & Compliance

| | |
|--------------|--|
| cULus | UL 1449, 5th Edition E320116 |
| RoHS | RoHS 2 Directive 2011/65/EU; Directive (EU) 2015/863 |
| REACH | Regulation (EC) No 1907/2006 |

Part Numbering System



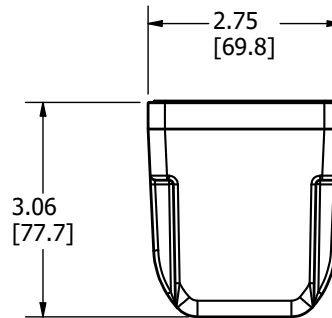
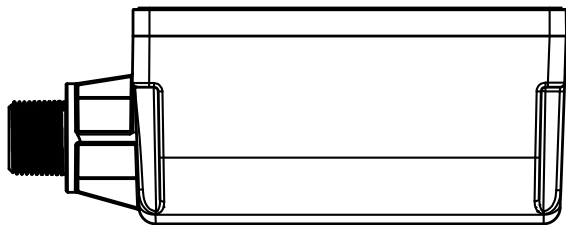
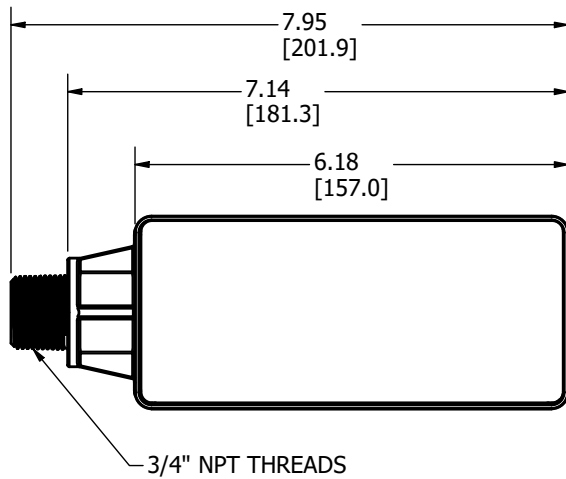
Ordering Information

| ORDERING NUMBER | NOMINAL SYSTEM VOLTAGE | PHASE CONFIGURATION | MAXIMUM CONTINUOUS AC OPERATING VOLTAGE (MCOV) | VOLTAGE PROTECTION RATING (VPR) | | | |
|-----------------|------------------------|---------------------|--|---------------------------------|------|------|------|
| | | | | L-N | L-G | N-G | L-L |
| SPDN-A120-1P | 120 | Single Phase | 180 | 700 | 700 | 700 | |
| SPDN-A120-2S | 120/240 | Split Phase | 180 | 700 | 700 | 700 | 1200 |
| SPDN-A120-3Y | 208/120 | 3 Phase WYE | 150 | 700 | 700 | 600 | 1200 |
| SPDN-A240-1P | 240 | Single Phase | 350 | 1200 | 1200 | 1200 | |
| SPDN-A240-3D | 240 | 3 Phase Delta | 275 | | 1000 | | 1200 |
| SPDN-A277-3Y | 480/277 | 3 Phase WYE | 350 | 1200 | 1200 | 1200 | 2500 |
| SPDN-A480-3D | 480 | 3 Phase Delta | 550 | | 1800 | | 1800 |

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Dimensions Inches [mm]



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

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