# **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



# Surge Protective Devices SPDN-A Series

#### **Specifications**

Maximum Surge Current Rating Up to 130 kA per Phase

I-nominal Rating20 kAUL1449 Short Circuit Current Rating200 kADirect Modes of ProtectionL-N, L-G, N-GUL TypeType 2Phase Loss MonitoringStandardAudible AlarmStandard

**Protective Elements** Stacked High Energy MOV

**Response Time (L-N / N-PE tA)** < 25 ns

**Mechanical & Environmental** 

**Operating Temperature Range (Ta)**  $-40 \,^{\circ}\text{C}$  to  $+85 \,^{\circ}\text{C}$  (-40  $^{\circ}\text{F}$  to  $+185 \,^{\circ}\text{F}$ )

**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
Ground Reference Monitoring
Product Dimensions

Ac: 240 V/2 A, 125 V/1 A
N-G Voltage > 20 V Detected
H 2.75"; W 7.95"; D 3.06"

Product Weight 1.38 lb

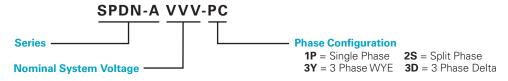
**Package Dimensions** 4-3/8 x 3-1/2 x 9-1/2"

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**



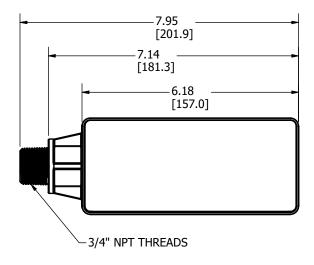
### **Ordering Information**

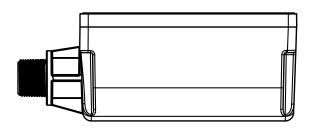
ORDERING NOMINAL SYSTEM	PHASE	MAXIMUM CONTINUOUS AC	VOLTAGE PROTECTION RATING (VPR)				
NUMBER	VOLTAGE	CONFIGURATION	N OPERATING VOLTAGE (MCOV)	L-N	L-G	N-G	L-L
SPDN-A120-1P	120	Single Phase	180	700	700	700	
SPDN-A120-2S	120/240	Split Phase	180	700	700	700	1200
SPDN-A120-3Y	208/120	3 Phase WYE	150	700	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

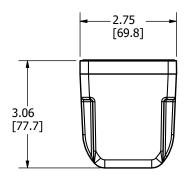


# **Surge Protective Devices SPDN-A Series**

### **Dimensions Inches [mm]**







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

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