

# Surge Protective Devices

## SPDN-C Series

UL Type 1

UL US RoHS REACH



## Description

Surge protective devices (SPDs) provide equipment protection from transient overvoltage events lasting microseconds. 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
<b>More direct modes of protection (L-N, N-G) in a smaller package</b>	Increases protection and design flexibility
<b>Capability to clamp and withstand high-energy transients</b>	Ensures low-residual voltage during high-energy surge events and higher nominal discharge current to prevent disruption, downtime, and degradation or damage to equipment
<b>Stacked Metal Oxide Varistor (MOV) design</b>	Provides more high-transient voltage protection in a compact, multi-layered structure
<b>Installs on the line or load side of the circuit breaker</b>	Simplifies maintenance—without impacting the other parts of the electrical system—by turning breaker off during upkeep
<b>Thermally protected MOV</b>	Eliminates catastrophic failure
<b>External LED indicator</b>	Quickly identifies service requirements to avoid loss of protection
<b>Compact footprint</b>	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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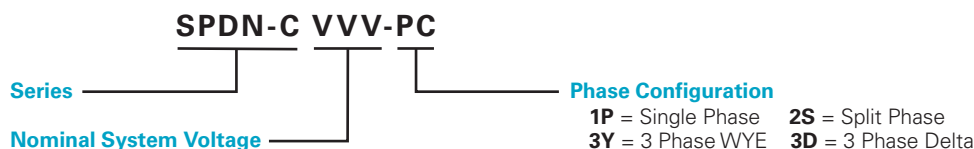
### Specifications

<b>Maximum Surge Current Rating</b>	Up to 50 kA per phase
<b>I-nominal Rating</b>	20 kA
<b>UL1449 Short Circuit Current Rating</b>	200 kA
<b>Direct Modes of Protection</b>	L-N, N-G
<b>UL Type</b>	Type 1
<b>Audible Alarm</b>	Standard
<b>Protective Elements</b>	Stacked High Energy MOV
<b>Response Time (L-N / N-PE tA)</b>	< 25 ns
<b>Mechanical &amp; Environmental</b>	
<b>Operating Temperature Range (Ta)</b>	-35 °C to +85 °C (-31 °F to +185 °F)
<b>Operating Frequency</b>	50–60 Hz
<b>Typical Connection</b>	18" #12 AWG (pre-wired pig tails)
<b>Permissible Operating Humidity (RH)</b>	0 % to 95 % non-condensing
<b>Altitude (max)</b>	4,000 m (13,123 ft)
<b>Degree of Protection</b>	IP20 (built-in)
<b>Housing Material</b>	Polycarbonate NEMA 4X – Lid ultrasonically sealed
<b>Thermal Protection</b>	Yes
<b>Operating State/Fault Indication</b>	1 Green LED (for each phase)
<b>Remote Contact Switching Capacity</b>	Ac: 240 V/2 A, 125 V/1 A
<b>Product Dimensions</b>	<b>H</b> 3.25"; <b>W</b> 5.02"; <b>D</b> 2.93"
<b>Product Weight</b>	1.0 lb
<b>Package Dimensions</b>	4-3/8 x 3-1/2 x 9-1/2"
<b>Package Weight</b>	1.3 lb

### Certification & Compliance

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

### Part Numbering System



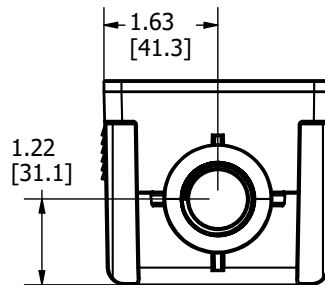
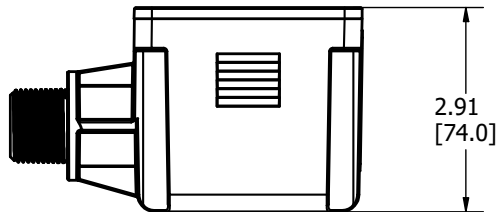
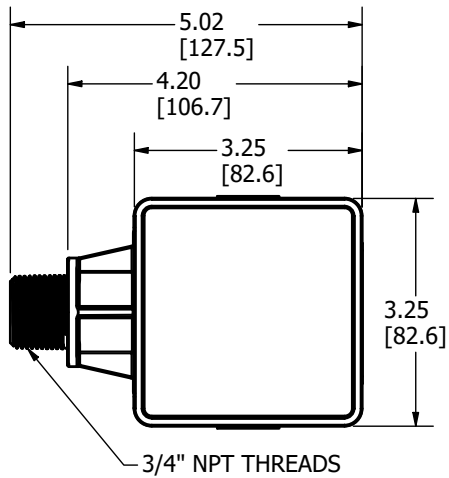
### Ordering Information

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-C120-1P	120	Single Phase	180	700	1200	600	
SPDN-C120-2S	120/240	Split Phase	180	700	1200	600	1200
SPDN-C120-3Y	208/120	3 Phase WYE	150	600	1000	600	1000
SPDN-C240-1P	240	Single Phase	350	1200	2500	1000	
SPDN-C240-3D	240	3 Phase Delta	275		1200		1200
SPDN-C277-3Y	480/277	3 Phase WYE	350	1200	2500	1000	2000
SPDN-C480-3D	480	3 Phase Delta	550		1800		1800

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### Dimensions Inches [mm]



**Warranty** – Visit [www.littelfuse.com/warranty](http://www.littelfuse.com/warranty) for details.

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