

# Surge Protective Devices

## SPDN-D Series

UL Type 1

UL us RoHS REACH



### 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
<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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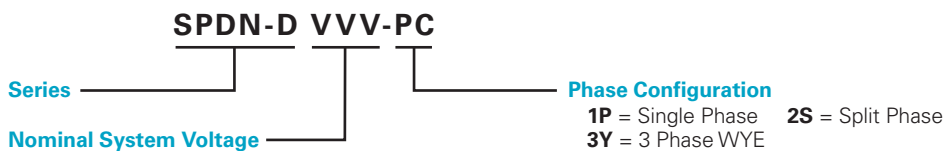
### Specifications

<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>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>Product Dimensions</b>	<b>H</b> 2.75"; <b>W</b> 4.25"; <b>D</b> 2.41"
<b>Product Weight</b>	0.5 lb
<b>Package Dimensions</b>	4-3/8" x 3-1/2" x 9-1/2"
<b>Package Weight</b>	0.7 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



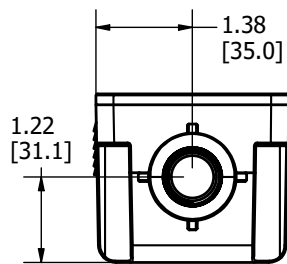
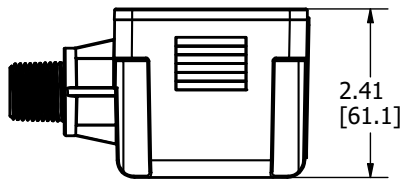
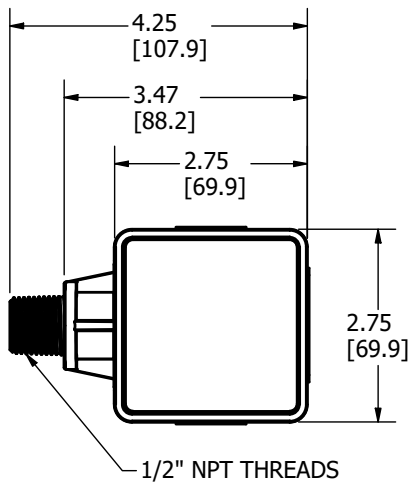
### Ordering Information

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-D120-1P	120	Single Phase	180	700	1200	600	
SPDN-D120-2S	120/240	Split Phase	180	700	1200	600	1200
SPDN-D120-3Y	208/120	3 Phase WYE	150	600	1000	600	1000
SPDN-D240-1P	240	Single Phase	350	1200	2000	1200	
SPDN-D240-2S	240/480	Split Phase	350	1200	2000	1200	2000
SPDN-D277-3Y	480/277	3 Phase WYE	350	1200	2000	1200	2000

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### Dimensions Inches [mm]



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

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