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

Revised: 04/25/2023

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

SPDN-A VVV-PC

Series

Nominal System Voltage

Phase Configuration

1P = Single Phase **2S** = Split Phase
3Y = 3 Phase WYE **3D** = 3 Phase Delta

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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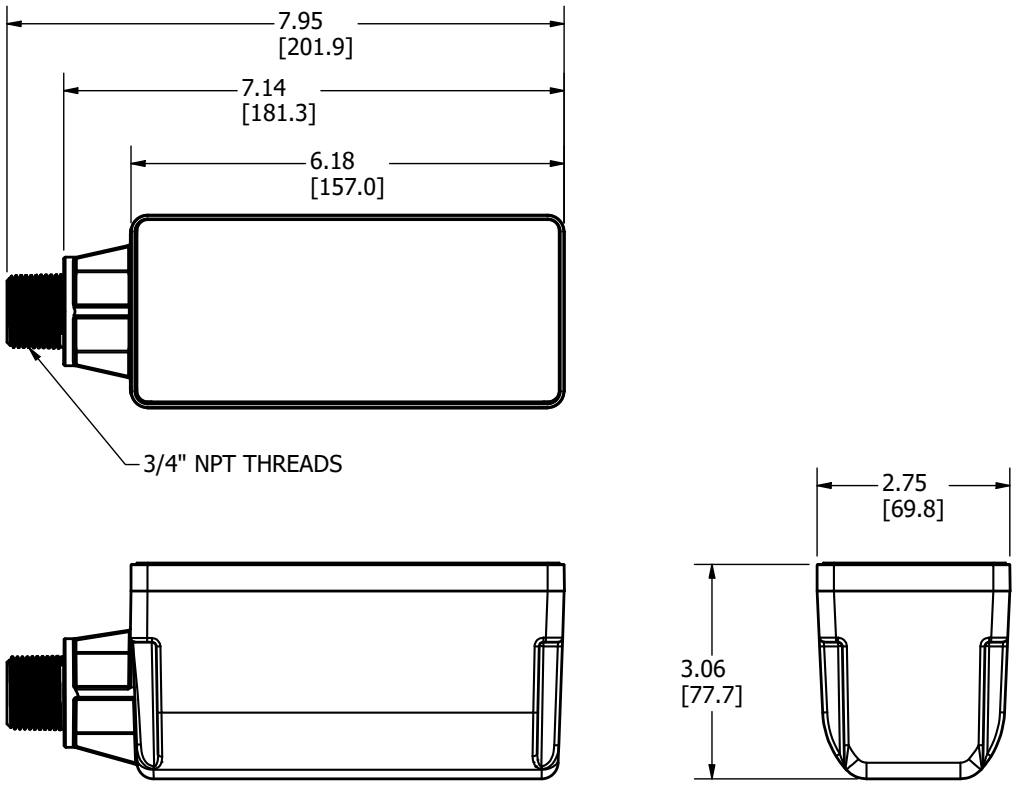
Dimensions Inches [mm]



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