Surge Protective Devices
SPDN-D Series

UL Type 1

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

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>More direct modes of protection (L-N, N-G) in a smaller package</td>
<td>Increases protection and design flexibility</td>
</tr>
<tr>
<td>Capability to clamp and withstand high-energy transients</td>
<td>Ensures low-residual voltage during high-energy surge events and higher nominal discharge current to prevent disruption, downtime, and degradation or damage to equipment</td>
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<tr>
<td>Stacked Metal Oxide Varistor (MOV) design</td>
<td>Provides more high-transient voltage protection in a compact, multi-layered structure</td>
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<td>Installs on the line or load side of the circuit breaker</td>
<td>Simplifies maintenance—without impacting the other parts of the electrical system—by turning breaker off during upkeep</td>
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<td>Thermally protected MOV</td>
<td>Eliminates catastrophic failure</td>
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<td>External LED indicator</td>
<td>Quickly identifies service requirements to avoid loss of protection</td>
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<tr>
<td>Compact footprint</td>
<td>Offers easy retrofit in existing applications where space is limited</td>
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</tbody>
</table>

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

Maximum Surge Current Rating: Up to 50 kA per phase
I-nominal Rating: 20 kA
UL1449 Short Circuit Current Rating: 200 kA
Direct Modes of Protection: L-N, N-G
UL Type: Type 1
Protective Elements: Stacked High Energy MOV
Response Time (L-N / N-PE tA): < 25 ns

Mechanical & Environmental
Operating Temperature Range (Ta): -35 °C to +85 °C (-31 °F to +185 °F)
Operating Frequency: 50–60 Hz
Typical Connection: 18” #12 AWG (pre-wired pig tails)
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 ultrasonically sealed
Thermal Protection: Yes
Operating State/Fault Indication: 1 Green LED (for each phase)

Product Dimensions
- H: 2.75”
- W: 4.25”
- D: 2.41”
Product Weight: 0.5 lb

Package Dimensions
- 4-3/8” x 3-1/2” x 9-1/2”
Package Weight: 0.7 lb

Certification & Compliance
- cULus: UL 1449, 5th Edition; E320116

Part Numbering System
SPDN-D VVV-PC
- Series
- Nominal System Voltage
- Phase Configuration:
  - 1P = Single Phase
  - 2S = Split Phase
  - 3Y = 3 Phase WYE

Ordering Information

<table>
<thead>
<tr>
<th>ORDERING NUMBER</th>
<th>NOMINAL SYSTEM VOLTAGE</th>
<th>PHASE CONFIGURATION</th>
<th>MAXIMUM CONTINUOUS AC OPERATING VOLTAGE (MCOV)</th>
<th>VOLTAGE PROTECTION RATING (VPR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>L-N</td>
<td>L-G</td>
</tr>
<tr>
<td>SPDN-D120-1P</td>
<td>120</td>
<td>Single Phase</td>
<td>180</td>
<td>700</td>
</tr>
<tr>
<td>SPDN-D120-2S</td>
<td>120/240</td>
<td>Split Phase</td>
<td>180</td>
<td>700</td>
</tr>
<tr>
<td>SPDN-D120-3Y</td>
<td>208/120</td>
<td>3 Phase WYE</td>
<td>150</td>
<td>600</td>
</tr>
<tr>
<td>SPDN-D240-1P</td>
<td>240</td>
<td>Single Phase</td>
<td>350</td>
<td>1200</td>
</tr>
<tr>
<td>SPDN-D240-2S</td>
<td>240/480</td>
<td>Split Phase</td>
<td>350</td>
<td>1200</td>
</tr>
<tr>
<td>SPDN-D277-3Y</td>
<td>480/277</td>
<td>3 Phase WYE</td>
<td>350</td>
<td>1200</td>
</tr>
</tbody>
</table>
Dimensions Inches [mm]

1/2" NPT THREADS

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