



# Tier 400SPD Series

## 450 Surge Protective Device



The Tier 400SPD series of surge protective devices (SPDs) feature the industry's most advanced metal oxide varistor (MOV) technology. Its thermally protective and arc extinguishing design have a significant advantage when subjected to abnormal over-voltage and high fault current. The 450 family of products incorporates this technology in a compact, easy to install package. The 450 is available in a wide range of surge levels, suitable for any environment or location, making this SPD an ideal choice for any business that relies on microprocessor driven equipment.

### Why Install surge protection?

*Transients generated by lightning, utility switching or an internal process can significantly impact your facility's power quality. These power anomalies can easily disrupt your process or damage important equipment, leading to costly downtime and equipment repair.*

### Features:

- Thermally Protected MOV
- Surge Current Levels:
  - 50 kA/Mode; 100 kA/Phase
  - 75 kA/Mode; 150 kA/Phase
  - 100 kA/Mode; 200 kA/Phase
  - 125 kA/Mode; 250 kA/Phase
  - 150 kA/Mode; 300 kA/Phase
  - 200 kA/Mode; 400 kA/Phase
- ANSI/UL 1449 4th Edition, CSA
- Short Circuit Rating: 200 kAIC
- Sine Wave Tracking: Type 2
- Surge Impulse Rated and Tested
- Warranty: 10 Years

*Innovative Solutions for Clean, Reliable Power*



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### Install SPDs Throughout Your Building

The IEEE (Institute of Electrical and Electronics Engineers) recommends cascading surge protection throughout your facility. Placing high surge capacity SPDs at the service entrance (or conductor entry points), followed by SPDs at critical downstream distribution and branch locations.

General Technical Specifications	
Connection Type	Parallel, Wire Lead: 10AWG
Maximum Continuous Operating Voltage	120 VAC; 150%, all others 115%
Short Circuit Current Rating (SCCR)	200kAIC
Protection Modes	All Connected Modes: L-N, L-L, L-G, N-G
Operating Frequency Range	47 - 63 Hz
UL 1449 Location Type	Type 1/ Type 2
UL 1449 Nominal Discharge Current (In)	20 kA
Connection	Wire Lead, Terminal Block, or Disconnect
Status Indication	Blue/Red LEDs, Form C, Surge Counter (opt)
Enclosure	NEMA 4X (Std), NEMA 4 (Steel) optional
50 Ohm EMI/RFI Attenuation	60 /40dB Max
Response Time	<0.5 nanoseconds
Operating Temperature	-40°C to +75°C
Operating Humidity	0% to 95% non-condensing
Size/Weight	
Non-Modular (4x): 25 kA/Mode	5.12"x3.15"x3"; 1.03lb
Non-Modular (4x): 50-150 k/Mode	7.9"x5.9"x3.9", 3.5lb
Non-Modular (Metal): 50 -150 kA/Mode	10.63"x7.87"x4.72", 9.5lb
Modular: Up to 150/Mode	16"x14"x8", 30lb
Modular: 200 - 300kA/Mode	20x16"x9", 40lb
Warranty	10 Years

Table A: Voltage & Source Configuration		
Model Code	Voltage	Source Configuration
120S	120/240	Single Phase, 3W+G (L1, L2, N, G)
120Y	120/208	Three Phase Wye, 4W+G (L1, L2, L3, N, G)
240D	240	Three Phase Delta, 3W+G (L1, L2, L3, G)
277Y	277/480	Three Phase Wye, 4W+G (L1, L2, L3, N, G)
480D	480 VAC	Three Phase Delta, 3W+G (L1, L2, L3, G)

Table B: Surge Current Capacity		
Model Code	Surge Capacity /Mode	Surge Capacity /Phase
050	50 kA	100 kA
075	75 kA	150 kA
100	100 kA	200 kA
125	125 kA	250 kA
150	150 kA	300 kA
200	200 kA	400 kA
250	250 kA	500 kA
300	300 kA	600 kA

Tier400SPD Series, 450 Family Ordering Information: Example Model Number: T45120Y100AWJ1S								
Positions: 1-3 Product Family	Positions: 4-7 Voltage / Phase Configuration	Positions: 8-10 Surge Capacity	Position: 11 Protected Modes	Position: 12 Connection Type	Position: 13 Status	Position: 14 Enclosure	Position: 15 UL Type	Position: 16 Options
T45 = 450 Family	See Table A	See Table B	A = All connected modes	W= Wire Lead L = Lug D = Disconnect	A=LED, Form C Contact	J=NEMA 4X; Non-metallic M=NEMA 4; Steel	1=UL Type 1 2=UL Type 2	S = Standard /No Options C = Surge Counter