



Tier 400SPD Series Surge Protection



**Technology, Safety and Proven Performance make the Tier 400SPD
the clear choice for any surge protection application**

Innovative Solutions for Clean, Reliable Power

Tier 400SPD Series

Product Description

In today's business environment, sensitive micro-electronics touch nearly every part of its operation; from the IT room to the manufacturing floor. As such, power line disturbances can quickly destroy important equipment, cause data processing errors, disrupt critical, process controls and ultimately impact a business' uptime. In fact power quality issues created by transients reportedly cost companies billions of dollars each year.

Southern Tier Technologies developed a series of products designed to protect your most critical locations; **the Tier 400SPD series**. At the very 'heart' of its design, the Tier 400SPD features the industry's most advanced, thermally protected, metal oxide varistor (MOV). This MOV's thermal and arc extinguishing design characteristics safely disconnect the component in the presence of abnormal fault conditions, yet is robust enough to withstand repeated, high-energy transient surge events. The component technology is then incorporated into a compact, easy to install package. The product family is available in a wide range of voltage and surge levels, ideally suited for service entrance locations on down to the smallest branch panel.

Tier 400SPD Series includes:

- **True Surge Capability:** Means each product is designed to survive surge impulses at its highest rated level
- **Life-Cycle Tested:** Repeated IEEE Category C, 10kA impulses ensures each product is designed to last for many years
- **Thermally Protected MOV:** Ensures the highest level of safety and performance
- **ANSI/UL 1449 4th Edition, CSA**
- **Short Circuit Rating of 200 kAIC:** Install products in any location
- **Sine Wave Tracking:** Type 2 for enhanced high-frequency noise attenuation
- **Warranty:** 10 Year



Modular design, steel enclosure available with rotary disconnect or terminal connection



Non-modular design, steel or NEMA 4x enclosure with wire lead connection

Tier 400SPD: At A Glance



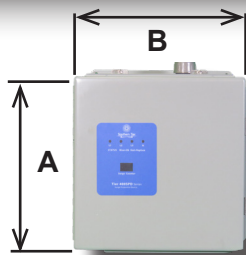
		Modular	Non-Modular			
Components, Construction & Performance	Replaceable Surge Modules	Yes				
	Disconnect Switch	Optional				
	Terminal Block	Yes				
	Wire Lead		Yes			
	Life Cycle Testing	up to 12,000 per mode	Yes			
		up to 8,000 per mode				
		up to 6,000 per mode		Yes		
		up to 3,500 per mode				
		up to 500 per mode		Yes		
	Enhanced EMI/RFI Filtering		Yes; Type 2			
	Steel Enclosure		Yes			
	NEMA 4X Non-Metallic Enclosure			Yes		
	Warranty	10 Years	All Models			
	UL 1449 Inominal / Location Type (20kA/ Type 1)		All Models			
Short Circuit Current Rating (SCCR) (200kAIC)		All Models				
Thermally Protected MOV		All Models				
Surge Rating	Up to 300kA/600kA (Mode/Phase)	Yes				
	Up to 250kA/500kA (Mode/Phase)					
	Up to 200kA/400kA (Mode/Phase)					
	Up to 150kA/300kA (Mode/Phase)		Yes			
	Up to 125kA/250kA (Mode/Phase)					
	Up to 100kA/200kA (Mode/Phase)					
	Up to 75kA/150kA (Mode/Phase)			Yes		
	Up to 50kA/100kA (Mode/Phase)					
	Up to 25kA/50kA (Mode/Phase)					Yes
	Monitor		Surge Counter	Optional		
Audible Alarm		Yes				
Blue/Red Status LEDs, Form C Relay Contacts		Yes		Yes		

Tier 400SPD Series

Technical Specifications:

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
Model Code								
T45 = 450 Family	See Source Table	See Surge Table	A = All connected modes	W= 10AWG Wire L = Lug D = Disconnect	A=LED, Form C Contact	J=NE-MA 4X; Non-metallic M=NEMA 4; Steel	1=UL Type 1 2=UL Type 2	S = Standard /No Options C = Surge Counter

Dimensional Data				
Enclosure	A	B	C	Weight
Modular 200kA/400kA to 300kA/600 kA	20" [508]	16" 406]	9" [229]	40lb (18kg)
Modular 50kA/100kA to 150kA/300 kA	16" [406]	14" [356]	8" [203]	30lb 14kg)
Non-Modular (Steel) 50kA/100kA to 150kA/300 kA	10.63" [270]	7.87" [200]	4.72" [120]	9.5lb (4.3kg)
Non-Modular (4X) 50kA/100kA to 150kA/300 kA	7.9" [200]	5.9" [150]	3.9" [100]	3.5lb (1.59kg)
Non-Modular (4X) 25A/50kA	5.12" [130]	3.15" [80]	3" [76]	1.03lb (.47kg)



General Technical Specifications	
Maximum Continuous Operating Voltage (MCOV) Range	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, Disconnect
Status Indication	Blue/Red LEDs, Form C Contacts, Surge Counter (optional)
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
Warranty	10 Years

Source Table		
Code	Configuration	Voltage
120S	Single Phase, 3W+G (L1, L2, N, G)	120/240VAC
120Y	Three Phase Wye, 4W+G (L1, L2, L3, N, G)	120/208VAC, 127/220VAC
277Y		277/480VAC, 254/440VAC
240D	Three Phase Delta, 3W+G (L1, L2, L3, G)	220VAC, 230VAC, 240VAC
480D		480VAC

Surge Table		
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