

Transient Voltage  
Surge Suppressors By:



## ST-SPT-DC Series Code: IN-101029

Series Wired DC Unit with Frequency Tracking and Discrete All-Mode Protection



"Power Quality is Our Business"

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The SineTamer® ST-SPT-DC devices provide the best ring wave transient protection available for a device of its type. These devices are intended for a single 12, 24, 48, 75, 125, 250 VDC circuit applications at locations feeding sensitive/critical equipment. It is extremely effective in limiting transients generated inside the facility and is an absolute must on circuits feeding critical microprocessor based equipment.

This economical device is unique in that it is designed as a stand-alone surge suppression device and requires no special enclosure when used outside an existing enclosure or cabinet. Its compact size makes installation a breeze and the warranty is the best in the industry. Add to all that, individually thermally fused MOV's, dedicated "all mode" Frequency Attenuation Network™ and Optimal Response Network™, and you get a device that defines effective and reliable surge suppression.

### GENERAL

<b>Description:</b>	Series wired parallel-connected transient voltage surge suppressor with encapsulated <b>Optimal Response Network™</b> , <b>Frequency Attenuation Network™</b> circuitry and thermally fused suppression components.
<b>Application:</b>	Designed for use at ANSI/IEEE Category A with susceptibility up to medium exposure levels to protect sensitive/critical loads fed by a single DC circuit.
<b>Warranty:</b>	<b>25 Years Unlimited Free Replacement</b>

### MECHANICAL

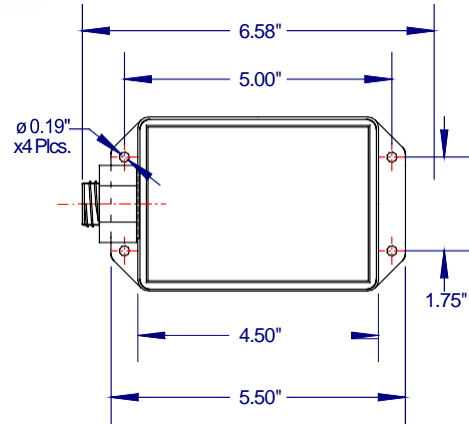
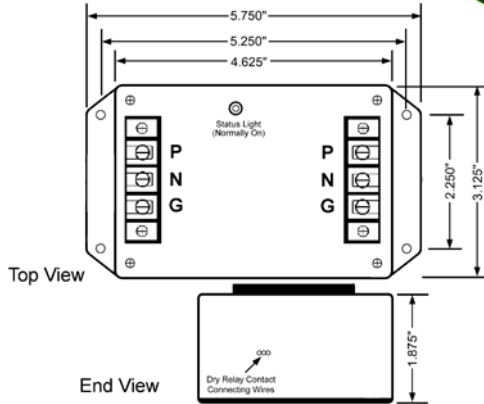
<b>Enclosure:</b>	Plastic, UL 94VA
<b>Mounting:</b>	External mounting feet.
<b>Connection Method:</b>	3-Lug screw terminal strip at input and output sides of the device or parallel with wires
<b>Shipping Weight:</b>	≈ 2lbs

### ELECTRICAL

<b>Circuit Design:</b>	Series wired, parallel connected hybrid design incorporating discrete all mode protection and utilizing our encapsulated <b>Optimal Response Network™</b> and <b>Frequency Attenuation Network</b> circuitry design to provide lowest possible let-through-voltages. All suppression circuits are completely encapsulated in our exclusive compound to assure long component life and complete protection from the environment and/or vibration.
<b>Protection Modes:</b>	Dedicated protection components and circuitry for each mode. Discrete P-N (Normal Mode), and Discrete P-G, N-G (Common Mode)
<b>Operating Temperature:</b>	Up to 80° C
<b>Capacitance:</b>	Up to 7uF
<b>Max. Operating Current:</b>	15 and 30 Amps
<b>Response Time:</b>	<1 nanosecond
<b>Circuit Diagnostics:</b>	Super Bright LED, normally on.
<b>Circuit Interrupt:</b>	External (see installation instructions for details).
<b>DIN option:</b>	
<b>Remote Alarm option:</b>	Dry Relay Contacts, 125Vrms, 0.5 amps; 30VDC, 1.0 amps – N/O, N/C. These contacts are for use in conjunction with external status monitoring devices and are connected via the 18ga wires provided. Add suffix "C" for DRC option.

Because we are constantly seeking to improve our products, specifications are subject to change at any time.

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(ST-SVSW series)

MEASURED LIMITING VOLTAGE PERFORMANCE AND ELECTRICAL SPECIFICATIONS						
Model xx = P / 15 / 30 Amps	MCOV	Peak Surge Current	Mode	ANSI/IEEE C62.41 & C62.45 Let-Through Voltage Test Results		
				A1 2kV, 67A 100KHz Ring Wave	A3 6kV, 200A 100KHz Ring Wave	B3/C1 6kV, 3kA Impulse Wave
ST-SPT12DC-xx	18 P-N	12kA Total	P-N	17	50	124
	18 P-G		P-G	46	91	137
	18 N-G		N-G	33	78	131
ST-SPT24DC-xx	31 P-N	12kA Total	P-N	17	50	132
	31 P-G		P-G	48	89	136
	31 N-G		N-G	32	79	127
ST-SPT48DC-xx	65 P-N	39kA Total	P-N	20	53	246
	65 P-G		P-G	48	140	277
	65 N-G		N-G	35	98	257
ST-SPT75DC-xx	100 P-N	60kA Total	P-N	35	65	500
	100 P-G		P-G	65	155	560
	100 N-G		N-G	35	115	490
ST-SVSW125DC3-xx	200 P-N	150kA Total	P-N	27	Not Tested	565
	200 P-G		P-G	27		565
	200 N-G		N-G	27		565
ST-SVSW250DC3-P	420 P-N	150kA Total	P-N	27	Not Tested	917
	420 P-G		P-G	27		917
	420 N-G		N-G	27		917

**\*Measured Limiting Voltage (Let-Through) Test Environment:** All voltages are peak ( $\pm 10\%$ ). Time Base is 1ms. 180° phase angle voltages are measured from the zero crossing, 90° phase angle voltages are measured from the positive peak of the sine wave to the positive peak of the surge indicating actual excess voltage let through. All tests were performed with the device connected in series simulating actual installation.

Model Number Selection Format	
<b>Configuration</b>	<b>Voltage</b>
<b>SPT</b> – Terminals, Frequency Attenuation	15 to 380 (AC) 15 to 75 (DC)
<b>SP</b> – Wires, Frequency Attenuation	Specify DC in model by putting "DC" after number
Remove T from model # – Wires instead of terminals	Models may reflect commonly used voltages or increments of 10.
<b>Typical Model Breakdown</b>	<b>Amperages (-x)</b>
<b>ST-SPT12DC-15</b> (Frequency Attenuation, Terminal Connected, 24 VDC, and 15 Amps)	15

Options (Suffix)	
<b>Designator:</b>	<b>Feature:</b>
<b>AC</b>	Alarm Option
<b>C</b>	Dry Relay Contacts-
<b>LP</b>	Remotely mounted NEMA-4X LED(s)
<b>N</b>	No Neutral-to-Ground Frequency Attenuation
<b>Rx</b>	Remote Diagnostics (x = 1 or 2); 1 = open frame DRC/LED pc board only, 2 = DRC/LED pc board in NEMA-1 enclosure.
<b>Special Options</b>	
<b>DIN</b>	DIN rail mounting
<b>K</b>	Kelvin Connections
<b>RJnn</b>	Modular ISDN Grade Telecom Circuit Protection (nn = 11, 14, 45, etc.)
<b>P</b>	Parallel connection
<b>T</b>	130 VmcoV MOVs (120 VAC models only)
<b>WX</b>	NEMA 4X housing
Special lead lengths are available upon request (Ex.: -48IN = 48" leads)	

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