

**Transient Voltage
Surge Suppressors By:**

ST-SPT-DC Series

Series Wired DC Unit with Sine Wave 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, 125 or 240 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. It boasts a robust 40 kA per phase peak surge current rating.

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 completely encapsulated Optimal Response Network™, and you get a device that defines effective and reliable surge suppression.

We believe that we offer the most versatile TVSS devices on the market with performance specs that are superior to our competitors and a warranty that is second to none.

GENERAL

Description: Series wired parallel-connected transient voltage surge suppressor with encapsulated Optimal Response Network™, Frequency Attenuation Network™ circuitry and thermally fused suppression components.

Application: 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.

Warranty: **25 Years Unlimited Free Replacement**

MECHANICAL

Enclosure: Plastic, UL 94VA

Mounting: External mounting feet.

Connection Method: 3-Lug screw terminal strip at both the input and output sides of the device.

Shipping Weight: ≈ 2lbs

ELECTRICAL

Circuit Design: Series wired, parallel connected hybrid design incorporating discrete all mode protection and utilizing our encapsulated Optimal Response Network™ and Frequency Attenuation Network 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.

Protection Modes: Dedicated protection components and circuitry for each mode. Discrete P-N (Normal Mode), and Discrete P-G, N-G (Common Mode)

EMI/RFI Noise Attenuation: 40dB Max from 1kHz to 10MHz

Capacitance: Up to 7uF

Max. Operating Current: 15 and 30 Amps

Response Time: <1 nanosecond

Circuit Diagnostics: Super Bright LED, normally on.

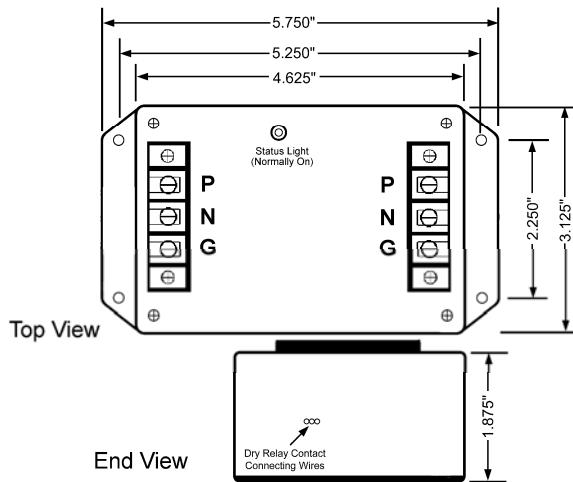
Circuit Interrupt: External (see installation instructions for details).

DIN option: Standard DIN rail mounting kit – pre installed along 5.75" edge. Use -DIN adder for option.

Remote Alarm option: 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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Unit above is a representation
of the -DIN option.

MEASURED LIMITING VOLTAGE PERFORMANCE AND ELECTRICAL SPECIFICATIONS

| Model | MCOV | 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-15 | 18 P-N | P-N | < 44V (S) | < 76V (S) | < 109V (S) |
| | 18 P-G | P-G | < 64V (S) | < 96V (S) | < 135V (S) |
| | 18 N-G | N-G | < 51V (S) | < 77V (S) | < 140V (S) |
| ST-SPT24DC-15 | 31 P-N | P-N | < 56V (S) | < 96V (S) | < 136V (S) |
| | 31 P-G | P-G | < 80V (S) | < 120V (S) | < 168V (S) |
| | 31 N-G | N-G | < 64V (S) | < 96V (S) | < 176V (S) |
| ST-SPT24DC-30 | 31 P-N | P-N | < 56V (S) | < 96V (S) | < 136V (S) |
| | 31 P-G | P-G | < 80V (S) | < 120V (S) | < 168V (S) |
| | 31 N-G | N-G | < 64V (S) | < 96V (S) | < 176V (S) |
| ST-SPT48DC-15 | 65 P-N | P-N | 20V (S) | < 60V (S) | 290V (S) |
| | 65 P-G | P-G | 50V (S) | < 140V (S) | 325V (S) |
| | 65 N-G | N-G | 35V (S) | < 100V (S) | 280V (S) |
| ST-SPT48DC-30 | 65 P-N | P-N | 20V (S) | < 60V (S) | 290V (S) |
| | 65 P-G | P-G | 50V (S) | < 140V (S) | 325V (S) |
| | 65 N-G | N-G | 35V (S) | < 100V (S) | 280V (S) |
| ST-SPT125DC-15 | 150 P-N | P-N | 35V (S) | 65V (S) | 500V (S) |
| | 150 P-G | P-G | 65V (S) | 155V (S) | 560V (S) |
| | 150 N-G | N-G | 35V (S) | 115V (S) | 490V (S) |
| ST-SPT125DC-30 | 150 P-N | P-N | 35V (S) | 65V (S) | 500V (S) |
| | 150 P-G | P-G | 65V (S) | 155V (S) | 560V (S) |
| | 150 N-G | N-G | 35V (S) | 115V (S) | 490V (S) |
| ST-SPT240DC-30 | 300 P-N | P-N | 53V (D) | 425V (D) | 600V (D) |
| | 300 P-G | P-G | 75V (D) | 475V (D) | 645V (D) |
| | 300 N-G | N-G | 62V (S) | 415V (S) | 625V (S) |

***Measured Limiting Voltage (Let-Through) Test Environment:** Dynamic (D) or Static (S), positive polarity. 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.