

**Transient Voltage  
Surge Suppressors By:**

**Individual Equipment, Series ST-ICPS**

Series Wired AC Unit with Sine Wave Tracking and Discrete All-Mode Protection



"Power Quality is Our Only Business"

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The SineTamer Individual Equipment series connected devices provide the absolute best protection possible for your equipment. These products address ring wave transients with a standard available option for the most advanced Sine Wave Tracking circuitry available. These devices are intended for single circuit applications at locations feeding sensitive/critical equipment for voltages up to 250 VAC/DC. Our individual component fused design is extremely effective in virtually eliminating transients generated inside the facility and is an absolute must on circuits feeding critical microprocessor based equipment. The devices also protect critical equipment from damage from externally generated surges such as lightning since the products boast a 20 kA per mode /60 kA total peak surge current rating.

Its compact size makes installation a breeze and the 25 Year warranty is the best in the industry.

<b>GENERAL</b>	
<b>Description:</b>	Series wired, parallel connected transient voltage surge suppressor with encapsulated <b>Optimal Response Network™</b> circuitry (20 kA per mode /60 kA total peak surge current) and <b>Enhanced Sinewave Tracking™</b> for virtual elimination of ring wave type transients.
<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 electrical circuit.
<b>Warranty:</b>	<b>25 Year Unlimited Free Replacement</b>
<b>Unit Listings:</b>	UL 1449 Second Edition and CUL (where applicable)

<b>MECHANICAL</b>	
<b>Enclosure:</b>	Plastic, UL 94V-5VA (UL's highest possible fire rating)
<b>Mounting:</b>	External mounting feet. Din rail mounting feet (DIN option)
<b>Connection Method:</b>	3-Lug screw terminal strip at both the input and output sides of the device. (#10 AWG wire connections are optional)
<b>Shipping Weight:</b>	< 1 lbs

<b>ELECTRICAL</b>	
<b>Circuit Design:</b>	Series wired, parallel connected hybrid design incorporating discrete all mode protection and utilizing our encapsulated <b>Optimal Response Network™</b> design and optional <b>Enhanced Sinewave Tracking™</b> circuitry to provide lowest possible let-through-voltages. All suppression circuits are encapsulated in our high dielectric compound to assure long component life and complete protection from the environment and/or vibration.
<b>Protection Modes:</b>	Dedicated protection circuitry for every possible mode. Discrete L-N (Normal Mode), and Discrete L-G, N-G (Common Mode)
<b>Input Power Frequency:</b>	50-60 Hz
<b>Current &amp; Voltage Configurations:</b>	20, 15, 5 & 3 Amps with various models up to 250 V AC or DC (Other voltages & configurations available upon request)
<b>Response Time:</b>	< 1 ns
<b>Circuit Diagnostics:</b>	Green LED, normally on.
<b>Circuit Interrupt:</b>	External (see installation instructions for details).
<b>Option Codes:</b>	<b>R1</b> – Remote LED Indication, Remove <b>T</b> from model # – Wires instead of terminals

## MEASURED LIMITING VOLTAGE PERFORMANCE AND ELECTRICAL SPECIFICATIONS

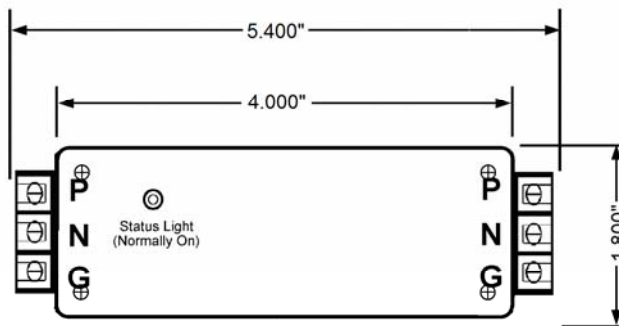
Most Common Model	MCOV	Mode	*ANSI/IEEE C62.41.1 & C62.41.2 Measured Limiting Voltage Test Categories		
			A1 Ring Wave 2 kV, 67 A 180° Phase Angle	A3 Ring Wave 6 kV, 200 A 90° Phase Angle	B3/C1 Impulse Wave 6 kV, 3 kA 90° Phase Angle
ST-ICPS24DC-##	31 P-N	P-N	< 56V (S)	< 96V (S)	< 136V (S)
	31 P-G	P-G	< 80V (S)	< 120V (S)	< 168V (S)
	31 N-G	N-G	< 64V (S)	< 96V (S)	< 176V (S)
ST-ICPS48DC-## (##=3,5,15,20)	65 P-N	P-N	< 64V (S)	< 112V (S)	< 152V (S)
	65 P-G	P-G	< 104V (S)	< 136V (S)	< 184V (S)
	65 N-G	N-G	< 64V (S)	< 120V (S)	< 176V (S)
ST-ICPS120-## (##=3,5,15,20)	150 L-N	L-N	39 (D)	464 (D)	420 (D)
	150 L-G	L-G	385 (D)	440 (D)	400 (D)
	150 N-G	N-G	371 (S)	440 (S)	380 (S)
ST-ICPS240-## (##=3,5,15,20)	320 L-N	L-N	35 (S)	95 (S)	1000 (S)
	320 L-G	L-G	710 (S)	755 (S)	935 (S)
	320 N-G	N-G	725 (S)	765 (S)	940 (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.

### Standard Model Number Selection Format

Configuration	Voltage	Amperage
ST-ICPS – Terminals, Sine Wave Tracking	5 to 250 (AC)	20
ST-ICPF – Terminals, Non-Tracking	5 DC to 250 DC	15
S – Wires, Sine Wave Tracking	*Specify DC in model by putting "DC" after number	5
Add "W" suffix to model # – Wires instead of terminals	**Models may reflect commonly used voltages or increments of 10.	3

Typical Model Number: ST-ICPS120-20 (Sine Wave Tracking, Terminal Connected, 120 VAC, and 20 Amps)



Top View



End View

Actual unit may vary from picture.