

Transient Voltage  
Surge Suppressors By:

AC Distribution Panel Unit

**Model LA-STxx**

Dedicated Protection Components And Circuitry For Each Mode



"Power Quality is Our Only Business"

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The SineTamer® LA series of units blends outstanding high-energy "impulse" suppression with unsurpassed "ring-wave" transient protection Frequency Attenuation Network®. This durable device is intended for general purpose and sensitive/critical load applications. Compact size and non-metallic enclosure design also allow it to be installed directly inside electrical panels and individual equipment disconnects. The internal installation provides the absolute shortest possible lead length and optimum performance. The LA-STxx is extremely effective in limiting internally generated transients and is an absolute must on panels feeding office locations and/or microprocessor based equipment. Please discuss specific installations with your local representative.

This economical device has features that are not available in devices costing many times its price. Its compact size makes installation a breeze. **Maintenance Free** operation and **20 Year Unlimited Free Replacement Warranty** provide peace of mind.

#### GENERAL

<b>Description:</b>	Parallel connected, transient voltage surge suppressor device utilizing both high-energy handling and frequency tracking circuitry for virtual elimination of impulse and ring wave type transients.
<b>Application:</b>	Designed for use at ANSI/IEEE Categories C, B and A and IEC 61643 Category 1,2 and 3 exposure levels. Designed to protect sensitive/critical loads fed from distribution panels, branch panels and/or individual equipment panels.
<b>Warranty:</b>	<b>20 Years Unlimited Free Replacement</b>
<b>Product Qualifications:</b>	Listado ANSI/UL 1449 cuarta Edición por UL - ML record: E363345 y por CSA (MC#259700); UL1283* y Cumplimiento CE (* Tipo 2 SPDs solamente) ISO 9001:2008, ANSI C62.72-2007, IEC 61643-1 Clase 2&3.

#### MECHANICAL

<b>Enclosure:</b>	High strength ABS Plastic, Nema 1 (IP67) rated enclosure for Indoor Use.
<b>Mounting:</b>	2.54 cm conduit fitting (internally threaded) and external mounting feet.
<b>Connection Method:</b>	#10 stranded wire // 2.60 mm dia.
<b>Shipping Weight:</b>	≈6 lbs // 2.7 kg

#### ELECTRICAL

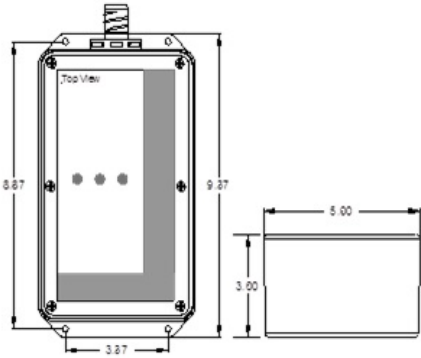
<b>Circuit Design:</b>	Parallel connected, hybrid design incorporating discrete all mode protection (10 modes for 3 phase wye units*) and utilizing our encapsulated design to provide improved durability. All suppression circuits are encapsulated in our exclusive compound to assure long component life and complete protection from the environment and/or vibration.
<b>Protection Modes:</b>	Dedicated protection components and circuitry for each mode. Discrete L-N, L-L (Normal Mode), and Discrete L-G, N-G (Common Mode). 10 modes / 3 phase wye system.
<b>Input Power Frequency:</b>	50-60Hz
<b>EMI/RFI Noise Attenuation:</b>	30dB Max. from 1kHz to 10MHz
<b>Temperature Rating:</b>	Up to 80°C
<b>Humidity</b>	0-99% Non-condensing
<b>Energy Consumption:</b>	12mA Total (Approximately 4mA per LED)
<b>Capacitance:</b>	1S1, 3Y1 & 3Y2: L-N & N-G = 3.6 uF. L-L & L-G = 1.8 uF 3N series: L-L = 1.7 uF. L-G = 0 uF
<b>kAIC Rating:</b>	200 kAIC when installed according to installation instructions
<b>Fusing:</b>	Component Level Thermal and Board Level Current Fusing
<b>Options:</b>	-V Remove Frequency Attenuation; -S Surge Counter; -C Dry Relay Contacts, Other options available. Call!

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

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# AC Distribution Panel Unit

# Model LA-STxx



Peak Surge Current per Mode/Phase for each model. See below for xx =	
60	20,000 / 60,000
120	40,000 / 120,000
180	60,000 / 180,000
240	80,000 / 240,000
300	100,000 / 300,000



## MEASURED LIMITING VOLTAGE PERFORMANCE AND ELECTRICAL SPECIFICATIONS

Model	Circuit Type	MCOV	Peak Surge Current (Amps) Per Mode	Mode	ANSI/IEEE C62.41 & C62.45 Let-Through Voltage Test Results		
					A1 2kV, 67A 100KHz Ring Wave 270° Phase Angle	Cat B3/C1 (6 kV, 3 kA) 90° Phase Angle	C3 20kV, 10kA Impulse Wave 90° Phase Angle
LA-STxx1P1	120V, Single Ø (2 wire + ground)	150 L-N 150 L-G 150 N-G	See Chart Above	L-N L-G N-G	35 60 55	377 380 541	914 1025 1176
LA-STxx1S1	120/240V, Split Ø (3 wire + ground)	300 L-L 150 L-N 150 L-G 150 N-G	See Chart Above	L-L L-N L-G N-G	75 35 60 55	576 377 380 541	1119 914 1025 1176
LA-STxx3Y1	120/208V, 3ØY (4 wire + ground)	300 L-L 150 L-N 150 L-G 150 N-G	See Chart Above	L-L L-N L-G N-G	55 35 60 55	576 377 380 541	1119 914 1025 1176
LA-ST-xx3D1	120/240 V 3Ø High-Leg Delta (4 wire + ground)	150 V 320 V 300 V 150 V 320 V 150 V	See Chart Above	L-N HL-N L-L L-G HL-G N-G	45 80 60 60 85 60	400 600 600 400 600 600	914 1,050 1,119 1,025 1,262 1,176
LA-STxx1P2	240V, Single Ø (2 wire + ground)	320 L-N 320 L-G 320 N-G	See Chart Above	L-N L-G N-G	60 80 55	560 588 941	1050 1262 1575
LA-STxx3Y2	277/480V, 240/415V, 220/380V, 3ØY (4 wire + ground)	550 L-L 320 L-N 320 L-G 320 N-G	See Chart Above	L-L L-N L-G N-G	130 60 80 55	805 560 588 941	1344 1050 1262 1575
LA-STxx3N2	240V, 3ØΔ (3 wire + ground)	320 L-L 320 L-G	See Chart Above	L-L L-G	95	576 497	1262 1262
LA-STxx3N4	380V, 3ØΔ 480V, 3ØΔ (3 wire + ground)	550 L-L 550 L-G	See Chart Above	L-L L-G	140	792 792	1344 1344

**Let-Through Voltage Test Environment:** Positive Polarity. Time base=1ms. All voltages are peak (±10%). Surge voltages are measured from the insertion point of surge on the sine wave to the peak of the surge. All tests are Dynamic (voltage applied) except N-G which is static (no voltage applied). All tests were performed with 6 inches of lead length outside the device enclosure which simulates actual "as installed" performance.

Single-pulse, surge current capacities of 200,000 amps or less are determined by single-unit testing of all components within each mode. Present industry test equipment limitations require testing of individual components or sub-assemblies within a mode for single-pulse, surge current capacities over 200,000 amps.



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