



Model: **ST-SILAM**

**360 kA Per Phase\***

### General

**Application:** The ST-SILAM series was developed to answer a broad variety of demands from our customers. This device is robust enough to handle the punishment of service entrance applications while providing protection from transients that are generated inside the facility. The constant bombardment of these combination transients damages valuable equipment and wastes budget dollars.

**IEEE –C62.41.1 & C62.41.2-2002 environments:** Suitable for Categories: A, B & C (Most Severe Electrical Environments)

**IEC Environments:** Suitable for use in IEC 61643-11 environments

**Circuit Topology:** Parallel configured **Optimal Response Circuitry™** circuit design incorporating component-level, thermal fusing and **Patent Pending** internal, circuit board mounted, over-current fusing; and discrete **“All Mode”** protection (10 modes for 3 phase Wye units). All protection circuits are encapsulated in our high dielectric compound to assure long component life and complete protection from the weather and vibration.

**Protection Modes:** Industry-best practice of true all mode dedicated protection components for all operational modes of the electrical system. **Discrete L-N, L-L (Normal Mode) and L-G, N-G (Common Mode)** Example: Directly Connected Protection Elements in All 10 modes for a 3 phase, 4 wire, Wye system, (i.e. 3 L-N modes, 3 L-L modes, 3 L-G modes and 1 N-G mode).

**Input Power:** 50-400 Hz (60 Hz nominal)

**Temperature Rating:** Up to 80°C

**Response Time:** ≤ 1 ns

**Standard Enclosure:** NEMA 12 rated, painted steel enclosure  
(Other enclosure options available see pg. 2)

**Diagnostics:** Green LED's, one per phase, normally on. A wide range of optional diagnostics is available (see page two for details).

**Circuit Interrupt:** Internal component-level, thermal fusing and patent pending, circuit board mounted, over-current fusing.

**UL Short Circuit Current Rating:** 200 kAIC (UL's Highest Rating)

**Product Qualifications:**

*UL Lightning Protection System Certified Component  
Secondary Surge Arrestor (Q option)  
UL1449 2<sup>nd</sup> Edition, UL1283, cUL, and CE Compliant  
ISO 9001 Certified Manufacturing Facility*



\* Based on 3 Phase Wye, 4 Wire and Ground

### Key Features

- **Discrete “All Mode” Circuitry: Directly Connected Protection Elements in “All Modes” (10 modes for 3 phase, 4 wire Wye circuits) as recommend by NEMA LS-1 and IEEE Std. 1100-1999**
- **Industry Leading Measured Limiting Voltage (let-through) Performance**
- **UL 1283 Listed EMI/RFI Parallel Configured Optimal Response Circuitry™**
- **Local & Remote Diagnostics**
- **Independent Verification of Performance and Safety**
- **Component-Level, Thermal Fusing**
- **Patent Pending, Internal, Circuit Board Mounted, Over-Current Fusing**

AC Power Panel Units



**25 Year Unlimited Free Replacement Warranty**

# "Power Quality Is Our Business"

Model	Circuit Type	MCOV	ANSI/IEEE C62.41.1 & C62.41.2 Let-through Voltage Test Results (tested w/6" lead length external to the enclosure per UL 1449)			
			Test Mode	A3 6 kV, 200 A 100 kHz Ring Wave @ 90° Phase Angle	B3/C1 6 kV, 3 kA Impulse Wave @ 90° Phase Angle	C3 20 kV, 10 kA Impulse Wave @ 90° Phase Angle
ST-SILA1S1M	120/240 V 1Ø (Split) (3 wire + ground)	150 V L-N	L-N	295 V	375 V	938 V
		300 V L-L	L-L	444 V	566 V	1,153 V
		150 V L-G	L-G	287 V	374 V	824 V
		150 V N-G	N-G	493 V	590 V	860 V
ST-SILA3Y1M	120/208 V 3Ø Wye (4 wire + ground)	150 V L-N	L-N	295 V	375 V	938 V
		300 V L-L	L-L	444 V	566 V	1,153 V
		150 V L-G	L-G	287 V	374 V	824 V
		150 V N-G	N-G	493 V	590 V	860 V
ST-SILA1P2	240V, Single Ø (2 wire + ground)	320 L-N	L-N	450 V	588 V	1070 V
		320 L-G	L-G	450 V	588 V	1029 V
		320 N-G	N-G	940 V	1045 V	1320 V
ST-SILA3Y2M	220/380 - 277/480 V 3Ø Wye (4 wire + ground)	320 V L-N	L-N	429 V	506 V	1,176 V
		550 V L-L	L-L	689 V	785 V	1,395 V
		320 V L-G	L-G	409 V	502 V	1,029 V
		320 V N-G	N-G	833 V	914 V	1,320 V
ST-SILA3N2M	240 V 3Ø Delta (NN) (3 wire + ground)	320 V L-L	L-L	409 V	502 V	1,153 V
		320 V L-G	L-G	409 V	502 V	1,153 V
ST-SILA3N4M	480 V 3Ø Delta (NN) (3 wire + ground)	550 V L-L	L-L	689 V	785 V	1,395 V
		550 V L-G	L-G	689 V	785 V	1,395 V

**Let-through Voltage Test Parameters:** Positive Polarity, All voltages are peak (±10%). All tests are static except 150 V MCOV modes. Let-through voltages on static tests calculated by subtracting sinewave peak from let-through measured from zero. 150 V MCOV mode let-through voltages measured from the insertion point on the sinewave. (Scope Settings: Time Base = 20 microseconds, Sampling Rate = 250 Megasamples/sec. These settings assure Let-through voltages test results are accurate). All tests performed with 6" lead length (external to the enclosure), simulating actual installed performance.

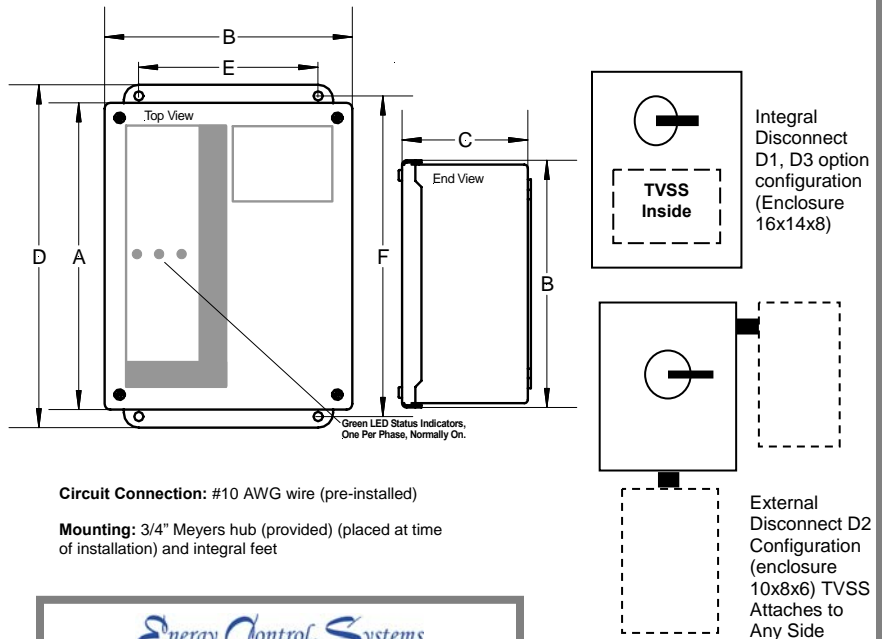
**Surge Current Testing:** Single-pulse surge current testing for all modes at rated currents as recommended by NEMA LS1-1992. Single pulse surge current capacities of 200,000 amps or less are determined by testing all suppression components within each mode as a group. Present industry test equipment limitations require testing of individual suppression components or sub-assemblies within a mode for single-pulse surge capacities over 200,000 amps.

## Options

- AC** = Internal Audible Alarm w/ test button, mute switch and red LED
  - C** = Form C dry relay contacts
  - D1** = Integral, non-fused disconnect switch (TVSS unit mounts inside)
  - D2** = External non-fused disconnect switch (TVSS mounts to outside)
  - D3** = Same as **D1**, except no external handle
  - F** = Internal, circuit board mounted over-current fuses
  - G** = Removes the EMI/RFI capacitors from the suppressor (Available for non-sinewave tracking units only)
  - LP** = Remote LEDs in individual NEMA 4X housings
  - P** = Flush Mount Plate
  - Q** = Labeled as a secondary surge arrester-UL category OWHX (Requires F option)
  - R1** = Remote lights on separate circuit board (no enclosure)
  - R2** = Remote lights on separate circuit board in separate enclosure
  - S** = Surge counter w/ reset button
  - W** = NEMA 4 Steel Enclosure
  - X** = NEMA 4X Composite Fiberglass Enclosure
  - XS** = NEMA 4X Stainless Steel Enclosure
- External Accessories:** **EACS** = Externally mounted diagnostic module, combines **AC**, **C**, and **S** options  
(Also available: **EAC**, **EC**, **ECS**, and **ES**)

## Mechanical

Enclosure Dimensions			
Inches (mm)	Standard Model	Enclosure Options	
		W	X
<b>A</b>	10.00 (354)	10.00 (354)	16.00 (407)
<b>B</b>	8.00 (204)	8.00 (204)	14.00 (356)
<b>C</b>	4.00 (102)	4.00 (102)	8.00 (204)
<b>D</b>	11.50 (293)	11.50 (293)	12.00 (305)
<b>E</b>	6.00 (153)	6.00 (153)	12.00 (305)
<b>F</b>	10.75 (274)	10.75 (274)	16.94 (431)
<b>Type</b>	<b>NEMA 12 Steel</b>	<b>NEMA 4 Steel</b>	<b>NEMA 4X composite</b>
<b>lbs. (kg)</b>	14 (6.36)	14 (6.36)	32 (14.52)



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