Transient Voltage Surge Suppressors By:

## 4-20mA Current Loop Models

Current Loop protection device with Discrete All-Mode Protection

Energy (	ontrol	Systems
Fort We	orth, Texas U	U.S.A.

Made in the USA

Power Quality is our Only Business"

P.O. Box 330607 Ft. Worth, TX 76163 Phone: 817.483.8497 Fax: 817.572.2242 www.sinetamer.com

The SineTamer® ST-CL devices are designed to protect current loop circuits, signal lines and/or low speed data lines feeding transducers, leak detectors, flow meters and a broad variety of similar sensory devices.

This device is connected in series using the wire clamping terminal strips provided, making your installation a breeze. A ground lug is provided on the side of the unit to insure a low impedance ground discharge path. The unique design of these devices make them among 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 transient voltage surge suppressor with encapsulated <b>O</b> ptimal <b>R</b> esponse <b>N</b> etwork™ circuitry for protection of current loop circuits, signal lines and other low speed data circuits.
Application:	Designed for use with data collection and switching circuits to protect data transmission system equipment from damaging transients generated between terminals and equipment in the data collection/transmission system.
Warranty:	25 Years Unlimited Free Replacement

MECHANICAL	
Enclosure:	Plastic, UL 94V
Mounting:	External mounting feet.
Connection Method:	Wire clamping box terminals located at the input and output sides of the device. Wire size: Lines #18-22 AWG, Ground #6-12 AWG.
Shipping Weight:	≈1lbs

CIRCUITRY	
Circuit Design:	Series wired hybrid design incorporating discrete all mode protection and utilizing our encapsulated <b>O</b> ptimal <b>R</b> esponse <b>N</b> etwork <sup>™</sup> 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 L-L (Normal Mode) and L-G (Common Mode)

PERFORMANCE	
Maximum Continuous Operating Voltage:	30VDC or 55VDC
Maximum Continuous Operating Current:	430m A
Frequency Range:	DC to 2MHz
Maximum Data Rate:	Up to 200Kbits/sec
Series Resistance:	10 ohms per line
Peak Surge Current per Pair:	L-L 20kA, L-G 20kA
Response Time:	<1 nanosecond

Let-Through Voltages Using ANSI/IEEE C62-41-1991 Test Environment: Static, positive polarity. All voltages are peak (±10%). Time base=10msec.					
Model	Maximum Continuous Operating Voltages (Vpk)	Test Mode	B3/C1 Impulse Wave 6,000V, 3000A		
ST-CL24-2	+30 L-G	L-G	<40		
	+30 L-L	L-L	<40		
ST-CL48-2	+55 L-G	L-G	<70		
	+55 L-L	L-L	<70		

