



## **POWERCLAMP SERIES 80**

**HYBRID MULTI-STAGED HIGH ENERGY  
TRANSIENT VOLTAGE SURGE SUPPRESSOR**



**For studios, subpanels,  
critical systems protection**



**80,000 amp rating  
20  $\mu$ sec surge per phase**

***POWERCLAMP*** is a sophisticated surge suppression unit that provides the ultimate in transient protection with much lower clamping levels than any other TVSS device.

***POWERCLAMP*** Series 80 wire-in PARALLEL TVSS devices are ideally suited for broadcast studios, A/V installations, repeater and transmitter sites, computer/servers, and other mission-critical facilities that have low to moderate exposure to lightning and other extreme transients. They are rated at 80,000 surge amps *per phase* and will prevent power line spikes from damaging audio/video, data, and other sensitive equipment. Their superior surge suppression will greatly improve system reliability and prevent the failures that are caused by power line disturbances. Operation is *not* affected by the power requirements of the load. Each line phase is fused, with a fuse status LED. An unlikely failure will *not* interrupt power to the load. ***POWERCLAMP*** Series 80 units should be installed at sub-panels or on branch circuits with upstream (main panel) protection. The Series 80 can also be used at the main entry panel in residential applications. The UL listed enclosure is rated for indoor or outdoor installation.

### **HOW *POWERCLAMP* OPERATES**

***POWERCLAMP*** Transient Voltage Surge Suppressor (TVSS) device is a passive, multi-staged hybrid high energy parallel device designed to react to the onset of surges with fast rise times and high amplitude ranges such as those which follow sags or other external or atmospheric induced impulses. ***POWERCLAMP*** senses the fast ramp of the transient and automatically fixes on the peak of the line voltage waveform. The unit incorporates *sine wave tracking*, to 'float' the clamping threshold with the rise and fall of the peak of the AC waveform without creating wave shape distortion. Response times are within 1-2 nanoseconds. ***POWERCLAMP*** will clamp many transients to within 2 volts of the AC waveform. Units operate at up to 120% of the normal line voltage.

### **FEATURES AND BENEFITS:**

- 80,000 Surge Amps Per Mode
- High Energy Dissipation
- Fault Indicating LEDs
- Enclosure UL #E194432
- 2-10 V Clamp Level
- Maintenance Free
- Full Voltage Range
- NEMA 1,2,3, 4X encl.
- 1-2 nS Response
- Sine wave tracking
- Voltage Reactive
- Outdoor rated
- Parallel Wire-in
- Simple Installation
- 5 Year Warranty
- Moisture Proof

**CLAMPS MANY TRANSIENTS TO WITHIN 2 VOLTS OF THE AC WAVEFORM.**

# **POWERCLAMP SERIES 80**

## **HYBRID MULTI-STAGED HIGH ENERGY TRANSIENT VOLTAGE SURGE SUPPRESSOR**

### **TECHNICAL SPECIFICATIONS**

**POWERCLAMP** is a sophisticated surge suppression unit that offers the ultimate in transient protection with *Ultra low Clamping Levels*. Its parallel installation provides these benefits:

- **No chance of power interruption**
- **No need to match load power**
- **No insertion power loss**

When tested to the ANSI/IEEE C62.41-1991/UL-1449-1994 Standard, its hybrid multistage circuitry will suppress (clamp) transient surges and spikes in all modes and bi-directionally, as listed below:

Category A waveform (6kV, 200amps, 0.5us, 100kHz): TWO (2) VOLTS of the peak of the sine wave. Measured from the baseline at the 90° point of the power sine wave (@ WAVEFORM PEAK).

Category B ringwave (6kV, 500amps, 0.5us, 100kHz): TEN (10) VOLTS of the peak of the sine wave. Measured from the baseline at the 90° point of the power sine wave (@ WAVEFORM PEAK).

Category B combination (6kV, 1.2/50us, 3,000 amps): THIRTY (30) VOLTS of the peak of the sine wave. Measured from the baseline at the 90° point of the power sine wave (@ POSITIVE WAVEFORM PEAK).

<b>Unit Model Number</b>	<b>Type Service 40-420Hz</b>	<b>Surge Joules Per Ø</b>	<b>Surge Amps 20 microsec</b>	<b>Modes of Protection</b>	<b>Connection Wiring</b>
HP80-1	120/240V 1Ø	1,344	80,000	L-L/L-N/L-G	2-L, 1-G
*HP80-2	120/240V 1Ø	1,344	80,000	L-L/L-N/L-G/N-G	2-L, 1-N, 1-G
HP80-3	120/208V 3Ø WYE	1,344	80,000	L-L/L-N/L-G	3-L, 1-G
*HP80-4	120/208V 3Ø WYE	1,344	80,000	L-L/L-N/L-G/N-G	3-L, 1-N, 1-G
HP80-7	277/480V 3Ø WYE	3,565	80,000	L-L/L-N/L-G	3-L, 1-G
*HP80-8	277/480V 3Ø WYE	3,565	80,000	L-L/L-N/L-G/N-G	3-L, 1-N, 1-G

L-L = line to line; L-N = line to neutral; L-G = line to ground; N-G = neutral to ground common mode\*

\*With Neutral-to-Ground Common Mode protection: needed when not installed at main panel where Neutral and Ground are tied.

- Response time: 1-2 nanoseconds
- Maximum leakage current: 6mA/phase
- Fusing: One fuse per phase with failure indicator LEDs
- Minimum Humidity Range: 5% to 97%
- Operating temperature: -20°C (-68° F) to 70° C (158° F) ambient temperature
- Dimensions: (all units) 6" wide, 6" high, 4" deep
- Shipping weight: approximately 5 lbs. (including packaging)
- 5 Year pro-rated Limited Replacement Warranty

**SINE CONTROL TECHNOLOGY INC.**  
PO Box 3796  
SEAL BEACH, CA 90740  
TEL: 562.493.3589

[www.sinecontrol.com](http://www.sinecontrol.com)

Specifications subject to change without notice.