



POWERCLAMP SERIES 80

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



**For branch-circuits,
critical systems protection**



**80,000 amp rating
20 μ 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 hospitals, airports, data centers, military installations, manufacturing plants and similar mission-critical facilities that have 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 computers, servers, audio/video, process control 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 lamp. 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 environments. 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 most transients to within 2-10 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 MOST TRANSIENTS TO WITHIN 10 VOLTS
OF THE AC WAVEFORM.**

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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 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).

MODEL NUMBER	VOLTAGE LINE TO NEU/GND	VOLTAGE LINE TO LINE	PHASE	MODES OF PROTECTION**	WIRES
HP80-1	120	240	1 SPLIT	L-L, L-G	2-L, G
HP80-2*	120	240	1 SPLIT	L-L, L-N, L-G, N-G	2-L, N, G
HP80-3	120	208	3 WYE	L-L, L-G	3-L, G
HP80-4*	120	208	3 WYE	L-L, L-N, L-G, N-G	3-L, N, G
HP80-7	277	480	3 WYE	L-L, L-G	3-L, G
HP80-8*	277	480	3 WYE	L-L, L-N, L-G, N-G	3-L, N, G

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

*Common mode: Neutral to Ground, needed when not installed at main panel where Neutral and Ground are tied.

- Response time: 1-2 nanoseconds
- Maximum leakage current: 3mA
- Fusing: One 15A 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

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