



POWERCLAMP SERIES 2

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



**For branch circuits,
motors, local protection**



**40,000 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 2 wire-in PARALLEL TVSS devices are ideally suited for hospitals, airports, data centers, military installations, manufacturing plants and similar mission-critical facilities that have low exposure to lightning. They are rated at 40,000 surge amps per phase and will prevent power line spikes from damaging computers 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 2 units should be installed at branch or sub-panels with upstream (main panel) protection.

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:

- 40,000 Surge Amps Per Mode
- High Energy Dissipation
- Meets ANSI/IEEE C62-41 1980
- Fault Indicating LEDs
- 2 Volt Clamping Level
- Maintenance Free
- Meets UL-1449-1994
- Full Voltage Range
- 1-2 Nanosecond Response Time
- Sine wave tracking
- Non-degrading
- Voltage Reactive
- Parallel Wire-in Design
- Simple Installation
- Passive System
- 5 Year Warranty

CLAMPS MOST TRANSIENTS TO WITHIN 2 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/UL-1449 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 impulse (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).

Unit Model Number	Type Service 40-420Hz	Max RMS Voltage	Surge Joules Per Ø	Surge Amps 20 microsec	Modes of Protection	Connection Wiring
*120VF2	120V 1Ø	0-135 L-N	672	40,000	L-N/L-G/N-G	1-L, 1-N, 1-G
1240VF2	120/240V 1Ø	0-135 L-N	672	40,000	L-L/L-N/L-G	2-L, 1-G
*1240VF3	120/240V 1Ø	0-135 L-N	672	40,000	L-L/L-N/L-G/N-G	2-L, 1-N, 1-G
1208VF3	120/208V 3Ø WYE	0-135 L-N	672	40,000	L-L/L-N/L-G	3-L, 1-G
*1208VF4	120/208V 3Ø WYE	0-135 L-N	672	40,000	L-L/L-N/L-G/N-G	3-L, 1-N, 1-G
240VF3	240V 3Ø DELTA	0-270 L-L	1400	40,000	L-L/L-G	3-L, 1-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 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 8 lbs. (including packaging)
- 5 Year pro-rated Limited Replacement Warranty

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