

Comparison of the “IPI-sentinel®” Instantaneous Power Isolator to a Conventional Surge Arrestor - MINIMIZE DOWNTIME...

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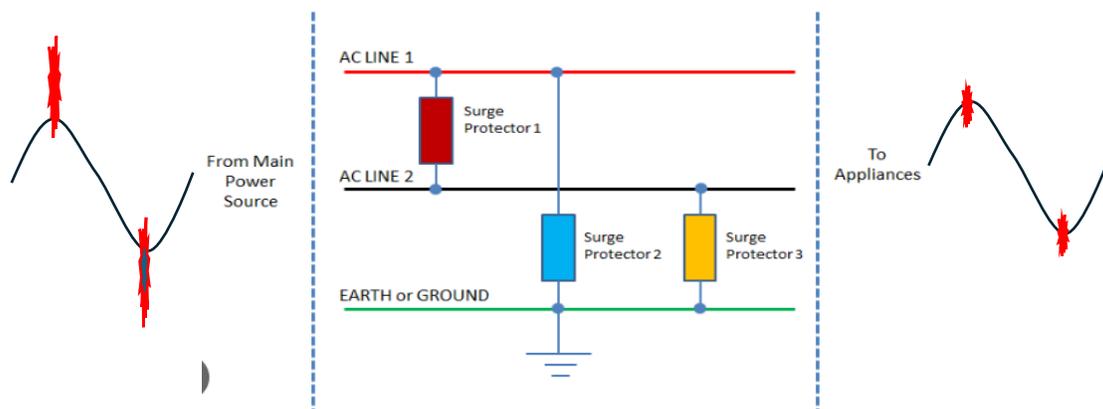
Subject: Transient Voltage Surge Protection

- **Introduction**

This document was developed to provide information quickly comparing the US Electric Technologies “IPI Sentinel” Instantaneous Power Isolator to a conventional Surge Arrestor.

- **Conventional Surge Arrestor Devices (SAD)**

Surge Arrestors are used for Transient Voltage Surge Protection. They have been developed around devices that “Switch On” when the voltage reaches a certain magnitude. When these devices “Switch On”, they either clamp or short/shunt the incoming voltage and limit it to a given and designed peak value. This is true if the devices can handle the power in the Transient Voltage Surge. If the Transient Voltage surge contains sufficient energy, the clamping device/s will be destroyed when they fire or turn on. This destruction occurs while they are drawing current and attempting to control the maximum level of the voltage waveform during the Transient Voltage Surge. The devices used in conventional Surge Arrestors are normally referred to as “SCR’s, MOV’s, Gas Discharge Tubes, and ZNR’s”. These devices are the building blocks in the design of a conventional surge arrester device.

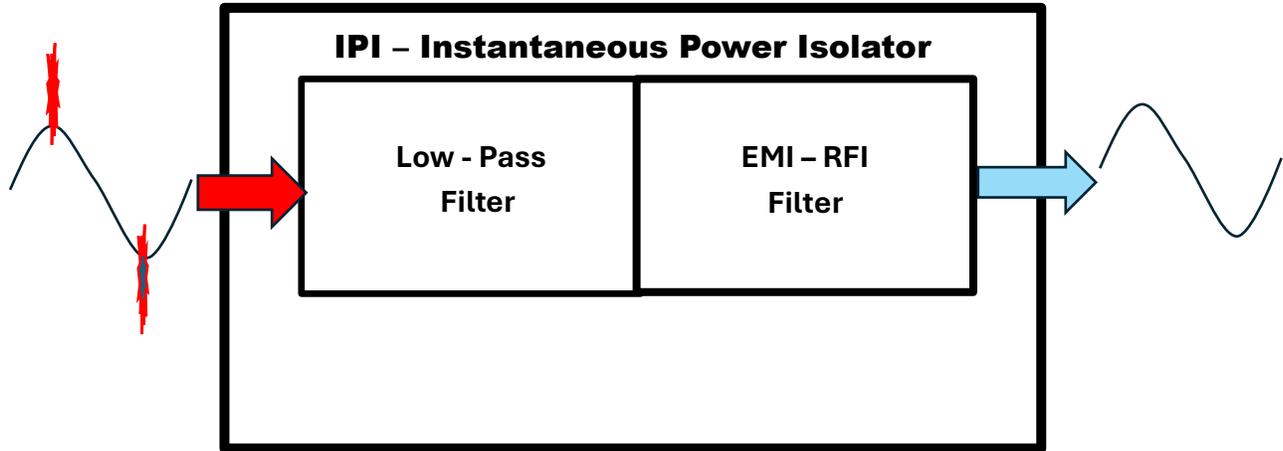


Notice – the incoming sine wave has transient surge voltages riding on the sine wave. After passing through the conventional surge arrester, the surge voltages are reduced but not eliminated. Clamped Transients and High Frequency noise continues to ride on the Power Sine Wave. High frequency noise and transient voltage continue to enter the equipment that the surge arrester is designed to protect.

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- **IPI – Instantaneous Power Isolator**

The IPI has been designed to remove both damaging Voltage Transients and interfering with High Frequency Noise by cleaning the Power Sine Wave.



The IPI is a whole new innovative approach addressing Transient Voltage Surge Protection. The IPI does not simply clip or snip the Transient Surge Voltage Waveform. The IPI uses passive circuit components and attenuates the Transient Surge Voltage Waveforms. The power sine wave passes through virtually unattenuated but the Transient Surge Voltage is attenuated virtually out of existence. Both the Low Frequency and High Frequency Components of the Voltage Transient waveform are attenuated by the IPI. When the AC power sine wave is processed by the IPI, your equipment will receive electrical power that is safe, secure and pure - sine wave power for your critical equipment load.

If you know your voltage and current requirements for your equipment, the appropriately sized IPI can be selected. The IPI can be quickly and easily installed ahead of your equipment. The IPI will provide clean power to your critical and essential electrical/electronic Loads. It is made in the USA.

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