

Liebert Transient Voltage Surge Suppressor (TVSS)
The Base of the Power Quality



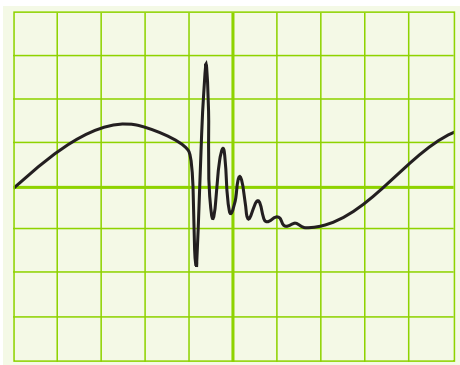
We're **Emerson Network Power**, backed by Emerson, a global company that brings technology and engineering together to provide innovative solutions for the benefit of our customers. We're the world leader in providing **Business-Critical Continuity™** to organizations like yours, enabled by our product and service centres of expertise.

For **all the Power Supply and distribution Systems connected to Business Critical Loads**, Liebert provides a series of TVSS products to protect your electronic equipments from the surges and voltage transients representing a risk for your data.

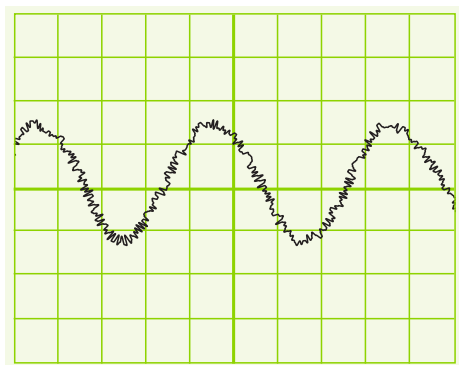
The Liebert TVSS can be easily connected to UPSs, to distribution panels or at the service entrance of the facilities, to defend the investments in Data Centers, Industry, Residential, Medical, Telecom Applications.

The Liebert TVSS products, also called Surge Protective Devices (SPDs), are high quality, high energy surge current diversion systems, designed to protect sensitive equipments from damaging transient voltage surges.

In digital technology spikes cause false triggering and reading on a digital signal, with reduced signal strenght.



Voltage transient

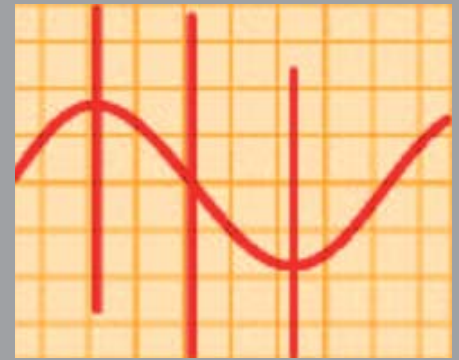


Noise

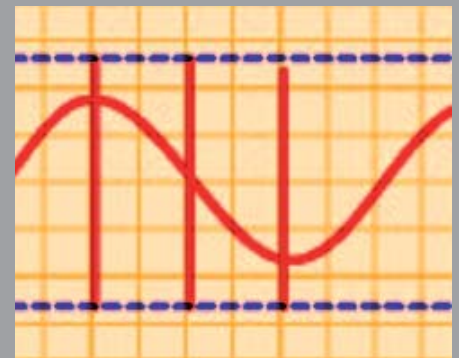


A Shield against lightnings effects

Surge Suppression



High-voltage spikes appearing on sine wave



Surge suppression limits High-voltage spike. It's your first line of defense for power quality

Reliability

Bullet-Proof Protection From Transients.

Electrical power has always been subject to transients-split-second overvoltages caused by anything from inductive loads to lightning strikes. Until the advent of sensitive electronic equipment, however, transients were never an issue.

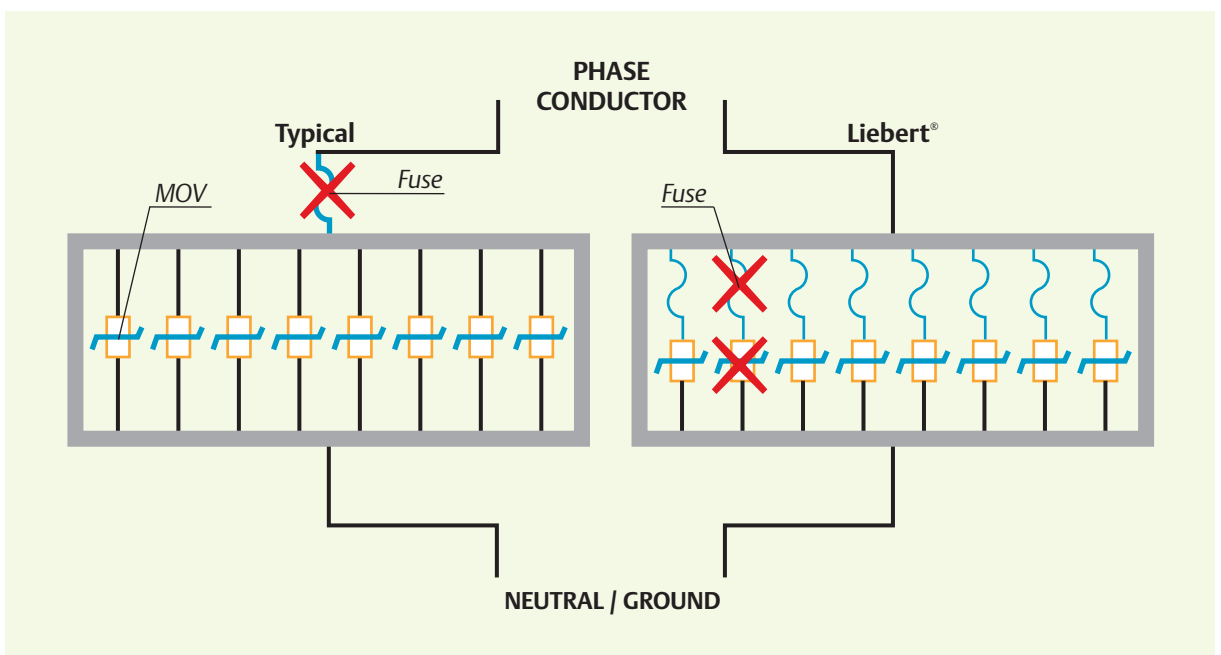
Things have changed. In today's world, almost **every business depends on relatively fragile micro-electronics** to run everything from sophisticated computers to heavy machinery. Which means that power disturbances can disrupt or cripple equipment, causing the loss of data, productivity and money.

That's why smart companies are looking for effective ways to intercept transients, provide clean power in their facilities and **safeguard their businesses from the unnecessary cost of equipment damage and downtime.** This is the base of the Power Quality (Tier one).

The **MOV (Metal Oxide Varistors)** technology provides a reliable way to clamp the surge voltage transients while diverting surge current, in Liebert Surge Protecting Devices parallel connected.



The modules in Liebert TVSS equipment are designed with a **parallel of MOVs devices**, each one fused. This is to avoid that a failure of a single MOV could open a single fuse upstream the parallel, blocking the protecting effect of the TVSS system.



Flexibility

Solutions for all the Levels of Exposure



Medium Exposure

AccuVar:

designed to protect all kind of systems For Unmatched Protection That Exceeds Industry Standards. The AccuVar ACV Series incorporates proven technology to provide unmatched protection from transient surges and electrical line noise.

AccuVar utilizes patent pending circuitry to monitor the status of all protection modes, including neutral to ground. Should protection be unavailable in any mode, the green

LED will be out, and the red LED will illuminate and an audible alarm will sound.

In addition, high isolation form C dry contacts for remote monitoring provide indication of: suppression system failure, under voltage, and phase or power loss. AccuVar's suppression integrity monitoring indicates failure for both shorted or opened suppression components.





Flexibility

Solutions for all the Levels of Exposure

Low Exposure



DRS:
To protect low exposure loads just where they are.



**PowerSure Panel
Low Exposure:**
Designed for use on branch panels or equipment in low exposure locations.

High Exposure

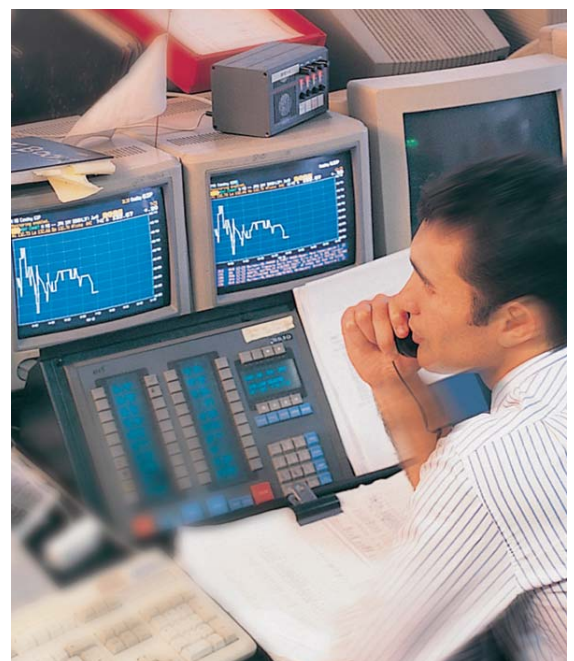


**IslaGuard High
Exposure (IH)**
Designed for service entrance or distribution panel applications of 800 amperes and above.



**Islatrol® Elite
(series connected):**
Microprocessor-based products, including industrial PLCs, OEM applications, and motion control systems. Multi-stage hybrid design, combining unique hybrid clamping network with Active Tracking® technology, to provide protection against internally-generated

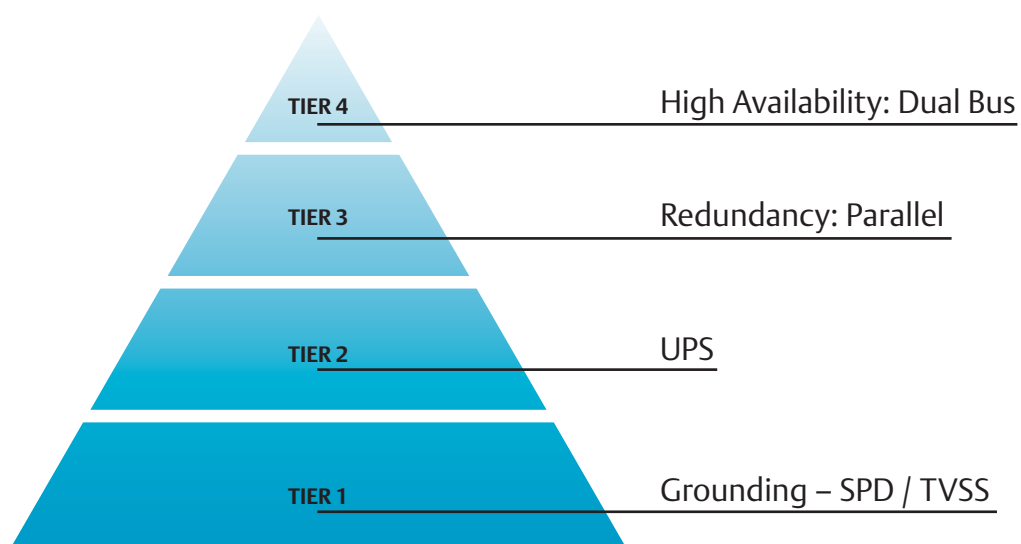
disturbances by industrial equipment. Active Tracking® Filtering eliminates both high voltage transients and potentially damaging noise, providing clean and reliable AC power For critical industrial loads drawing up to 3, 5, 10 or 20 amps of continuous current.





Total cost of Ownership

You can choose the level of Power Quality you want: Liebert provides you also the basic one (Tier 1), Liebert Transient Voltage Surge Suppressor (TVSS).



Technical Specifications

	Connection Mode	Protection Mode	Surge current rating/Phase	Response Time	Short Circuit Current Rating	EMI/RFI max attenuation	Dimensions WxDxH [mm]	Weight [kg]
DRS	Parallel	L-N; N-PE	20 kA	25 ns	40 kA	-	79x91x68	1.36
PowerSure Panel Low Exposure	Parallel	All modes	25 kA, 50 kA, 100 kA	<0.5 ns	14 kAIC	40 dB	120x145x136	2.27
Islatrol® Elite	Series	All modes	30kA	<0.5 ns	-	90 dB	78x103x97	1.36
AccuVar	Parallel	All modes	65 kA, 80 kA, 130 kA, 160 kA	<0.5ns	200 kAIC	60 dB	121x206x105	3.60
IslaGuard High Exposure (IH)	Parallel	All modes	200 kA, 400 kA	<0.5ns	200 kAIC	54 dB	356x406x203	25.40

Ensuring The High Availability Of Mission-Critical Data And Applications.

Emerson Network Power, a business of Emerson (NYSE:EMR), is the global leader in enabling Business-Critical Continuity™. The company is the trusted source for custom, adaptive and ultra-reliable solutions that enable and protect its customers' business-critical technology infrastructures. Backed by the largest global services organization in the industry, Emerson Network Power offers a full range of innovative power, precision cooling, connectivity and embedded products and services for computer, communications, healthcare and industrial systems. Key product brands within the Emerson Network Power family include Liebert, Knurr, ASCO, Astec, Lorain.

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