Uucmna1
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Common Mode Noise
and your electronic equipment

General

Common Mode Noise (CMN) is harmful electrical interference with reference to the common or ground wire. The electrical noise, comprised of high frequency spikes with peak voltage excursions as high as 6000 volts, may reside on either the hot or the neutral wire with respect to ground. The origin of this harmful interference comes from faulty wiring, EMI & RFI and operations as simple as turning on a printer.

Common mode noise is the most harmful to electronic equipment operations and components. It is also the most difficult to remove with simple techniques or inexpensive approaches. The well-known TVSS systems that boast of lightning protection barely do anything for CMN. In the past, dedicated grounds were used to help battle CMN, but with the uncontrolled addition of peripheral devices this became a frivolous effort.

The only "rock-solid" solution is to install a computer grade isolation transformer; which generates a new clean ground to neutral bond and incorporates the basics of power conditioning. A computer grade transformer inhibits the transfer of high frequency noise from the primary to the secondary by removing the electrical return path of the noise signals. Thus, the secondary of the transformer is free of harmful interference and no ground noise seen on the primary is found at the load on the secondary.

Just what does CMN have to do with UPSs? The popular technologies of UPSs today increase the performance, regulation, harmonic content, speed, etc., but sacrifice the basics of power conditioning to stay cost competitive in the market. The new technology UPS systems have gotten away from the good old fashion "brute force and isolation" approach in exchange for high speed, light-weight digital systems.

In plain English - the new UPS systems completely ignore Common Mode Noise problems!

Solutions

The UltraUPS bypass and distribution module offers a computer grade power conditioning transformer as an option. No additional space or wiring is necessary. It's simply a plug-in module. The voltage coordination, bypass wiring and CMN issues are all resolved with this ready to go option. Power conditioning is fundamental, ask anyone who takes power protection seriously.