

## Electrical-Safety Sense: Elimination Of Risk

Written by Phil Allen, President, Grace Engineered Products  
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The practical side of electrical safety gets much easier when this one simple principle is embraced: elimination of risk.

The Risk Control Hierarchy in ANSI Z10 Standard explains that hazard prevention is much more effective than hazard protection. Thus, a worker who is exposed to a hazard—*and is protected accordingly*—still is in significantly more danger than workers who have no exposure to a hazard. Preventing exposure, in electrical-safety terms, requires keeping workers away from voltage.

***Translation: Electrical panels should be designed to allow more tasks to be done without exposure to voltage. Thru-panel programming ports offer that type of solution. They allow workers to program a panel without opening the panel door.***

### **PESDs: safety + compliance**

An electrical-safety program is safer when workers can determine a zero electrical-energy state without any voltage exposure to themselves. Permanent Electrical Safety Devices (PESDs) allow for thru-door electrical safety and greater NFPA 70E/CSA Z462 compliance. That's important for any safety-conscious company.

PESDs inherently enhance any mechanical or electrical lock-out/tag-out procedure because they allow for verification of electrical isolation from outside the panel—*without exposing the worker to voltage*. An example of such a voltage indicator is a PESD that mounts outside the panel. It is a hard-wired LED indicator permanently wired to the phase(s) and ground, and illuminates when 40VAC/30VDC or greater voltage differential exists between two lone inputs.

### **No question**

Before PESDs, creating an electrically safe work condition depended solely on the portable multimeter. This tool is not just used in electrical safety: Its features make it invaluable for other purposes, including electrical troubleshooting and diagnostics.

A PESD, however, leaves no question or confusion when a worker uses it in creating an

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electrically safe work condition. That's because today's PESDs have been designed, built and installed for a single purpose—*voltage indication for electrical safety*. **MT**

**To learn more about specific recommendations and practices, email the author: [philallen@grace-eng.com](mailto:philallen@grace-eng.com).**

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