



Expertise Applied | Answers Delivered

July 21, 2014

Littelfuse Survey Reveals Arc-Flash Mitigation Is a Priority in Electrical Safety

Results show industrial facilities rapidly adopting arc-flash relay technology

Chicago, July 21, 2014 - A recent survey conducted by Littelfuse, Inc. reveals that arc-flash safety is a priority among plant professionals and that protection technologies such as arc-flash relays are rapidly growing in popularity.

Even 10 years ago, arc-flash danger wasn't at the top of many minds, but today 85% of the 825 survey respondents agree or strongly agree that arc-flash mitigation is important. According to OSHA, industrial arc-flash events cause 80% of electrically related accidents and fatalities among qualified electrical workers.

Not only has awareness increased; plant managers and company leaders are taking action. The majority of industrial professionals surveyed (67%) reported completing an arc-flash hazard assessment in their facilities.

Arc-flash hazard assessments have been used to determine the Hazard Risk Category (HRC) of each piece of electrical equipment (a scale of 1-4). Although the NFPA 70E is moving away from HRCs, they remain a well-known classification. More than 50% of survey respondents reported having significant (HRC 3 or higher) arc-flash hazards and agreed that reducing those hazards is important.

How then to reduce arc-flash hazards and keep workers safe? Survey respondents ranked the popularity of solutions, with arc-flash relays standing out as relative newcomers that are being rapidly embraced.

The most popular mitigation technique is current-limiting fuses, followed by arc-resistant switchgear, arc-flash relays, and high-resistance grounding. Current-limiting fuses are well established in the industry, however, since an arc flash draws less current than a bolted fault and may not be interrupted by the circuit-breaker in its instantaneous operating time, other forms of arc-flash mitigation must be used. Arc-resistant switchgear is another option but it can be a costly solution that can be difficult to implement in existing facilities and offers little additional protection when a door is open. High-resistance grounding systems lower the energy available to ground faults and therefore eliminate the occurrence of phase-to-ground arc faults. Phase-to-phase arc faults or phase-to-phase-through-ground arc faults can still occur in high-resistance grounded systems requiring additional mitigation techniques. need to be implemented to lower incident energy. Arc-flash relays stand out as relative newcomers that are being rapidly embraced. Arc-flash relays are a growing solution because they rapidly detect the light from an arc and send a trip signal to the circuit breaker to disconnect the power quickly enough to drastically reduce incident energy.

"In an industry that changes slowly, I've never seen such a fast adoption of a new technology as I have seen with arc-flash relays," said Jeff Glenney, P.Eng., of Littelfuse. "Companies feel pressure to reduce arc-flash hazards. Arc flash relays are easy to install, comparably low cost, and offer simple yet reliable operation."

"Accordingly, many plant managers are adding arc-flash relays to their electrical switchgear and motor control centers," Glenney said. The use of these and other devices on circuit-breakers rated 1200 amps or more is now included in the 2014 edition of the NEC, section 240.87 (B).

Considering that many survey respondents have electrical panels rated HRC 3 or higher, the danger of an arc flash is real. "The fast adoption of arc-flash relays and other mitigating techniques will have a significant impact in improving plant worker electrical safety," Glenney said.

To read a white paper based on the survey, visit http://www.littelfuse.com/~media/protection-relays/white-papers/littelfuse_white_paper_pgr8800_arcflash_relay.pdf.

For more information on the Littelfuse PGR-8800 Arc-Flash Relay, visit <http://www.Littelfuse.com/ArcFlash>.

About Littelfuse

Founded in 1927, Littelfuse is the world leader in protection with growing global platforms in power controls and sensing. The company serves global customers in the electronics, automotive and industrial markets with technologies including fuses, semiconductors, polymers, ceramics, relays and sensors. Littelfuse has over 7,000 employees in more than 35 locations

throughout the Americas, Europe and Asia.

For more information, please visit the Littelfuse website: littelfuse.com.

LFUS-G

Media Contact:

Eva Jelezova

Marketing Manager, Protection Relays

Littelfuse, Inc.

Tel: 773-628-0706

ejelezova@littelfuse.com