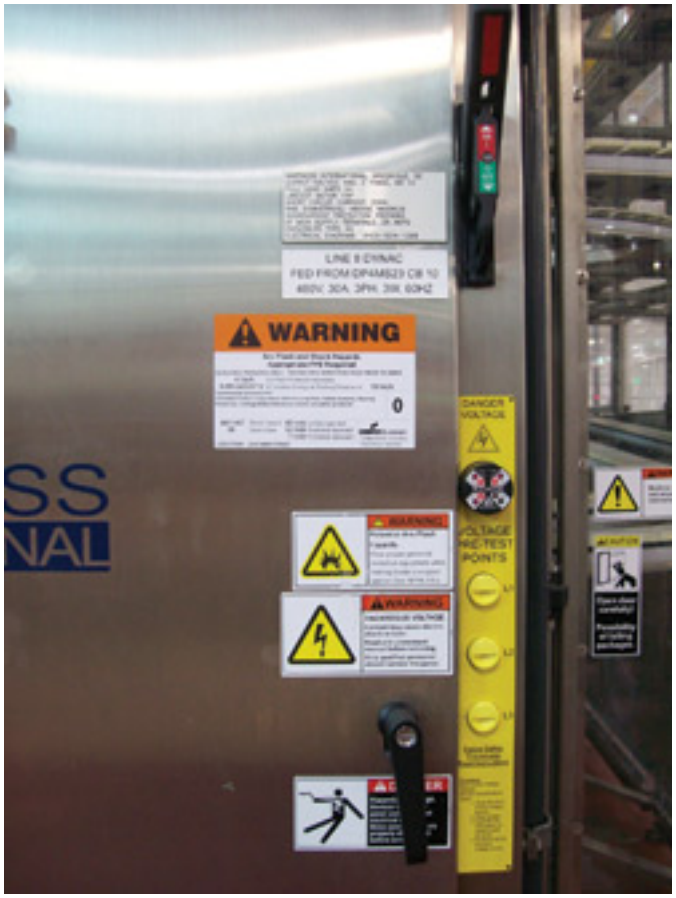
This month's edition of The Reliability Files features products from Grace Engineered Products and Littelfuse.



Thru-Panel Voltage Detection Makes Sense With NFPA 70E & CSA Z462

Problem

Workplace electrical safety has found its way into every facet of our electrical world. Maintenance departments strug-gle to keep equipment running while staying compliant with NFPA 70E/CSA Z462 standards. As a result, they look for smarter, safer and more productive ways to keep machines operational. Enter thru-door voltage detection.

Solution
Keeping personnel away from live voltage is foundational to electrical safety. More important, electrical safety demands a precise answer to the question, "Is there voltage?" Thru-panel voltage detectors go a long way in providing the crucial first answer to this overarching question, while a voltmeter provides personnel with a second, redundant answer. Thru-door voltage detectors provide much needed "visibility" of voltage from outside the enclosure without exposing personnel to the hazard. Not surprisingly, companies using thru-panel voltage detection on their equipment have found this concept to be overwhelmingly embraced by all levels of maintenance and reliability professionals.

Here are two key benefits offered by thru-door voltage detection. More benefits can be found at info.graceport.com/mt1
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Increased Productivity and Safety with Mechanical LOTO...
Workers must isolate electrical energy when performing mechanical LOTO (lockout/tagout) procedures. Externally mounted voltage detectors provide a means of checking voltage inside an electrical panel safely—*from outside the panel*. Without them, a mechanic performing mechanical LOTO would be required to work in tandem with an electrician, who, using a voltmeter would physically verify voltage inside an electrical panel. In this case, the electrician is exposed to voltage. With thru-door voltage detectors, the mechanic can single-handedly check for zero electrical energy without any exposure to voltage.

Reduced Voltage Exposure and Arc Flash Risk with Electrical LOTO...
Voltage is the common denominator in an electrical accident or an arc flash. No voltage means no accident, no arc flash. Electricians performing electrical LOTO with an installed thru-panel voltage detector reduce their own risk because they are able to pre-check the internal voltage state without opening the enclosure. Next, they open the panel to replicate a zero energy reading with their voltmeter as per NFPA 70E 120.1.(5). Because of the lessened risk of voltage exposure with an installed thru-panel voltage detector, some conclude that once the panel is open, the need for personal protection equipment (PPE) is also reduced. Whether or not you agree with this, voltage detectors remain a low-cost, redundant voltage verification tool that reduces arc-flash risk, increases safety and enhances productivity—*all for an installed cost of $150.*

Return On Investment

Those who work in the automation world need electrical safety. NFPA 70E and CSA Z462 are vital elements in providing safe work environments. Before thru-door voltage checking, companies had to sacrifice productivity for the sake of safety. Now, by incorporating thru-panel voltage detectors, employees working on machines can do so with confidence.

Philip Allen is president of Grace Engineered Products. He believes increased electrical safety and productivity are natural byproducts when exposure to voltage is reduced or eliminated. For more information on thru-panel voltage detection, please visit info.graceport.com/mt1 .

Grace Engineered Products
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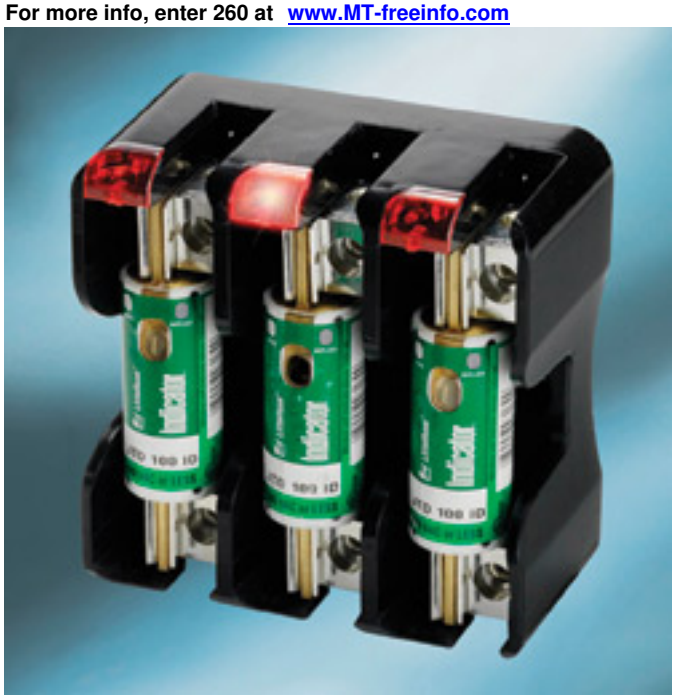
For more info, enter 260 at www.MT-freeinfo.com



3 Low-Cost Ways To Cut Downtime By Using Fuse Indication

Problem

Every minute of downtime is costly, so open fuses must be found and replaced quickly. The process includes tracing down the open circuit, donning PPE (personal protective equipment) and testing to pinpoint the open fuse. Workers might well wish an open fuse could talk and tell them where it is located. Well, now it can.

Solution

Fuses and fuse holders are now available that can tell operators that they have opened, increasing safety and reducing downtime—which in some industries can cost more than $50,000 per minute. Fuse indication is accomplished in three different ways: on the body of the fuse, on the fuse holder
and remotely by communicating with other systems.

#1. Indicating fuses...
The simplest way to know which fuse is open is to use indicating fuses on which a darkened indicator window on the side of the fuse provides instant visual identification of a down circuit. By clearly showing whether the fuse is open or not, indicator fuses minimize the hazards of poking around an energized circuit panel to locate the open fuse. Operators can test the circuit, replace the fuse and get equipment running quickly and safely.

#2. Indicating fuse holders...
Indicating fuse holders that indicate an open fuse with a light have been recently introduced. In a dark electrical panel, a bright red neon light on the fuse holder provides an obvious reminder that power is still on, as well as a time-saving notification of which fuse is open. An indicating fuse holder may be used with indicating fuses that will confirm which fuse needs to be replaced.

#3. Remote indication technology...
The third way for you to begin a dialog with your fuses is through remote indication fuse holders. Far simpler than systems that require proprietary network protocols, a remote indicating fuse holder communicates fuse status with a signal that may be wired into any existing PLC or plant monitoring system. A PLC or system may be programmed to alarm in various ways, such as a stack light, audible alarm or text message. If the user programs the PLC with specifics about the fuse, additional information such as fuse type, part number, necessary PPE and where replacement fuses are located can be communicated.

In this way, the maintenance worker has all the information he/she needs to handle the problem in one trip. There's no need to walk around the plant just to find the problem—*workers can bring new fuses and correct PPE with them, thus avoiding extra costly trips back to the storeroom.*

Estimates are that remote indication can cut a 52-minute process down to 16 minutes. Remote monitoring throughout the manufacturing environment saves time for lean staffs and improves the uptime of official loads via immediate detection and notification of problems.

Return On Investment
In this economy, the focus has shifted from expensive, time-consuming pro-jects to finding low-cost ways to cut downtime. Indicating fuses and fuse holders provide three easy ways to achieve this goal. Don't look at them as mere components. Think of them as important partners

on your journey to electrical safety and uptime.

For more information on indicating fuses and fuse holders, please visit www.littelfuse.com .

Littelfuse
Chicago, IL

For more info, enter 261 at www.MT-freeinfo.com