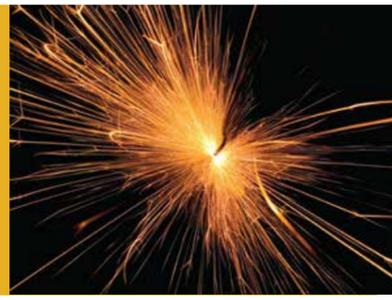


10 THINGS ABOUT ARC FLASH SAFETY

to consider when designing your data center

1 Why arc flashes occur

An arc flash is the explosive energy released when an electrical fault, for instance a short circuit, causes an arc. The dangers associated with an arc flash event include heat, flying debris, sound, UV radiation and more.



2 An explosion 4x hotter than the sun

The mere drop of a tool or accidental contact with electrical systems can set off an arc flash and instantly generate an energy explosion releasing temperatures in excess of 36,000°F. That's four times hotter than the sun.



3

As powerful as an 8-stick dynamite blast

A 10,000A arc on a 480-volt circuit can have the explosive force of eight (8) sticks of dynamite. Another example of the energy in an arc flash: copper expands at 67,000 times its volume during an arc flash event—a small, pea-sized piece of copper would expand to fill the volume of a railroad car!

4 Power intensive environments are especially vulnerable

In heavy power, continuous operation industries, arc flash poses a very real threat. Environments operating with 125 kVA or larger transformers call for special safety measures. Protecting personnel and equipment is everyone's responsibility.

5 Employees require education

Electrical workers must be trained and should understand the risks of arc flash safety. This includes reading and understanding arc flash labels and wearing the proper personal protective equipment (PPE) to perform energized work. Codes and standards are always changing and it is imperative that your organization be in compliance.



7

Avoiding electrical disasters

Time and distance are the most controllable variables reducing the risk of arc flash issues. Reducing the time that an event persists by tripping a breaker or blowing a fuse significantly reduces the arc flash incident energy. Increasing distance to the arc flash by remote operation, or with closed doors or protective barriers, protects workers in case an event occurs.

6 Arc flash labels provide advance warning

Arc flash labels indicate two key pieces of information: The expected incident energy (measured in calories per cm²)—at a working distance of 18 inches or 24 inches—which drives the proper PPE required for protection. And the distance a worker without PPE must work to avoid a non-curable burn (typically measured in feet).



8 Better equipment can help

Installing the right equipment can help mitigate arc flash hazards. Specially designed low voltage motor control centers (MCCs) and switchgear can reduce the probability of electrical shock and arc flash energy during maintenance.



9

Human error is often to blame

The most common cause of electrical accidents is human error. And the majority of those mistakes occur during routine maintenance of power system equipment or troubleshooting controls.



10 Good safety optimizes operational efficiency

A sound safety policy incorporating arc flash safety solutions will protect your people and equipment, minimizing risk and increasing uptime.

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