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Engineering Quality of Life®

ILLINOIS / INDIANA / KENTUCKY / WISCONSIN



**ARC
FLASH
HAZARDS**

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ARE YOU PROTECTED?

TIP: Safety of personnel is the priority. If there is equipment within your facility that needs to be serviced, checked, or even operated under normal conditions while energized, an arc flash hazard can exist.

WE CAN HELP.

ELECTRICAL ENGINEERING SERVICES

WARNING	
Arc Flash and Shock Risk	
Appropriate PPE Required	
25 in	Flash Hazard Boundary
2.0 cal/cm ²	Flash Hazard at: 18 in
240 VAC	Shock Hazard when cover is removed
00	Glove Class
42 in	Limited Approach
Avoid Contact	Restricted Approach
PPE REQUIRED	
Arc-Rated Shirt & Pants or Arc-Rated Coverall or Arc-Rated Flash Suit	
Arc-Rated Face Shield with Balaclava as Needed. Hearing Protection.	
Minimum Arc Rating of PPE Equal to Flash Hazard cal/cm ² Above.	
BUS:	Panel 4B/MSD
PROT:	4A/4MSB1-4B/MSD

Flash Protection

Each year thousands of workers are treated for severe arc flash injuries. The results can have lasting effects and in some cases may cause death. With the increasing awareness of arc flash, industries, facility owners, and their insurance companies are actively identifying and reducing the potential for personal injury.

The National Electrical Code states that “switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers that are in other than dwelling occupancies and are likely to require examination, adjustment, servicing, or maintenance while energized shall be field marked to warn qualified persons of potential electric arc flash hazards.”

What does this mean for your facility?

The electrical equipment in your facility, as described in the NEC, requires labeling to warn of potential electrical arc flash hazards and requires identification of proper Personal Protective Equipment (PPE) and limits of approach. These values are determined through a series of calculations and tasks including:

- System modes of operation
- Bolted fault and arcing fault current at each bus
- Arcing fault current seen by each protective device
- Trip time for each protective device based on arcing fault current
- Incident energy at working distance
- Arc flash boundary calculations and PPE requirements

Enhancing Your Safety Program

Clark Dietz can perform the required calculations and offers assistance to assure that your facility is safe and compliant. Using the results of the analysis, we recommend modifications to the distribution system, which can often reduce the hazard level, increase safety, and save maintenance time. We also assist with integrating the elements of the arc flash hazard analysis into your safety program.

Electrical Safety Training

Anyone who comes in contact with electrical equipment must receive electrical safety training to be in compliance with OSHA Standard CFR 1910.331-335. Clark Dietz provides electrical safety training and credential hours for:

- Electrical Safety in the Workplace
- Personal Protective Equipment (PPE)
- Safety Precautions for Electrical Testing Equipment
- Working Safely Around Electrical Equipment

Consulting Services:

- Developing an Electrical Safety Program
- Implementing an Electrical Safety Program

Services

- Power System Studies + Analysis
- Fault Current + Coordination Studies
- Electrical Systems Design
- Arc Flash Hazard Analysis
- Power Factor Correction
- Voltage Monitoring
- Load Monitoring
- Infrared Scanning
- Equipment Testing
- Systems Troubleshooting
- Electrical Safety Training
- Electrical equipment labels identifying proper PPE and limits of approach
- Developing and implementing an electrical safety program