



Engineering Services

# Arc Flash Hazard Analysis

## Are you in compliance with NEC, NFPA 70E, and OSHA requirements?

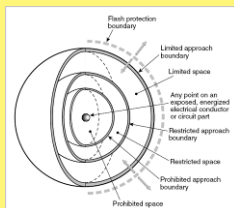
The answer is **no** if your facility is like most others. We can help. At Cooper Bussmann, we specialize in Arc Flash Hazard Analyses. We can assist you in taking the necessary steps for compliance with the OSHA, NFPA 70E, and NEC<sup>®</sup> requirements on this critical electrical safety issue.

We provide a customizable process which typically includes:

- **Data Collection** and one-line drawings of your facility to perform and complete the study.
- **Engineering Analysis** of your facility's electrical system to determine incident energy levels at each bus, panel, switchboard and other areas required by NEC<sup>®</sup> 110.16.
- **One-line electrical diagrams and supporting reports** delivered to your facility.
- **Arc Flash Warning Labels** created and delivered that indicate the Incident Energy or Personal Protective Equipment (PPE) requirements to be applied at each required location per the analysis as required by NFPA 70E-2009.
- **Training of Electrical and Safety Personnel on Arc Flash Requirements** per OSHA regulations, the NEC<sup>®</sup> (2008), and the NFPA 70E (2009).

We have provided these services to hundreds of clients, many of whom are Fortune 500 companies. We have served clients with over 35 plant locations, as well as, clients with only 1 location and facilities from 30,000 sq. ft. up to 1,000,000 sq. ft. OSHA is actively enforcing these new requirements – NOW is the time to comply.








**Call. e-mail. or fax us today to discuss our services.**









**Cooper Bussmann provides the following customizable process to assist you in bringing your facility into compliance.**




### **Collection of Data**

-  Gathering of available one-line diagrams and other pertinent electrical prints and information on your current electrical system
-  The physical collection of conductor sizes and lengths
-  The collection of distribution equipment types and ratings
-  The collection of overcurrent protection information
-  The collection of transformer ratings and impedances
-  Correspondence with the electrical utility to ascertain available energy levels incoming to plant
-  Data Collection can be performed by client and the data provided to us for the engineering analysis






### **Engineering Analysis of Your Electrical System**

-  Collating and analyzing information obtained during the data collection stage
-  Inputting information into engineering analysis software program
-  Building of electrical distribution networks
-  Cross review of information to electrical system








### **One-Line Diagrams and Reports**

-  Generation of fault analysis information and reports
-  Generation of arc flash information and reports
-  Creation of one-line diagrams

### **Creation of Arc Flash Warning Labels**

-  Using engineering analysis information to develop labels per ANSI Z535.4 specifications
-  Creation of labels on materials unique to your facility's needs
  -  Thermal generated Polyester labels
  -  Laser generated Polyester labels
-  Deliver labels to your facility for application

### **Training of Electrical and Safety Personnel on Arc Flash Requirements**

-  Classroom training on the following subjects:
  -  OSHA, NEC<sup>®</sup> (2008), and NFPA 70E (2009) Arc Flash requirements
  -  NEC<sup>®</sup> Article 110.16 labeling requirements
  -  Arc Flash Labeling information and how to comply
  -  Personal Protective Equipment (PPE) requirements
  -  Incident Energy and Electrical Safety training
-  Review of complete Arc Flash Study

## **STATEMENT OF INTEREST – UNIQUE QUALIFICATIONS**

Cooper Bussmann is uniquely qualified, as a leader in overcurrent protection, to conduct the Fault, Coordination and Arc Flash Study of your plant or facility. We have spent our 90 plus year history of providing products and services for the protection of power distribution systems in almost every type of installation. These installations cover everything from automobile wiring systems, to large sports arenas, to large medical centers and all types of manufacturing and production facilities in every market segment including commercial, industrial, institutional and healthcare. Our focus and direction in this area is unmatched in the electrical industry.

Cooper Bussmann Services division's main focus is our customers provide a safe work environment for their employees and electrical workers. We can also assist in your efforts to satisfy electrical safety requirements for these important safety issues.

Sound business practices require a safe working environment for your employees ... OSHA requires it, as well. If the electrical safety of your facility is in doubt, you could possibly be facing personnel injuries, property damage, loss of productivity and potential liability. Our services outlined in this package will help you provide a safer working environment for your plant or facility.

### **COMPREHENSIVE PACKAGE OF SERVICES**

The best way to ensure the safety of your facility's electrical system is with a professional, comprehensive approach that includes an analysis of your existing system, recommendations for improvements and employee training – like the electrical safety services offered by Cooper Bussmann Services. We provide all these services, as well as the training and over-current protection products.

### **SOFTWARE AND EXPERIENCE**

Cooper Bussmann uses the SKM Power Tools Software for the Fault, Coordination, and Arc Flash Studies. We also offer studies in ESA Easy Power. These are the preferred software packages that are most widely used. Our project leaders have combined experience of over 50 years experience using these software packages. The current software is Microsoft Windows based but our experience with SKM goes back to the original DOS based program. We have an extensive experience working with equipment that dates back to the 1940's and 1950's. We have expanded our libraries to accommodate equipment of this vintage all the way up to the latest new and modern equipment.

Registered Professional Engineers oversee all aspects of our electrical engineering services. Our Services group utilizes engineers who, collectively, have registrations in all 50 states. We have performed hundreds of Arc Flash studies and have the resources to perform multiple plant analyses for corporate clients with many locations. Bussmann has been the industry leader in overcurrent protection since 1914. Our unique qualifications assure accurate, comprehensive, useable analysis and labeling upon delivery. Our training is customized to meet the needs of our clients. Our scope of work and project deliverables are detailed and complete. Cooper Bussmann team members are actively involved in numerous committees and panels including:

- IEEE 1584 Committee & Task Force
- IAEI
- NJATC
- NFPA 70E Committee
- NEC code panels

Our capabilities do not stop with the Arc Flash Hazard Analysis. We also offer Selective Coordination and hazard mitigation analysis for clients who want to reduce the incident energy to the lowest possible level while not giving up selective coordination and causing nuisance opening of overcurrent protective devices, which results in costly downtime.

## HISTORY AND IMPORTANT STATISTICS

### About Bussmann

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#### Bussmann History

Bussmann, a division of Cooper Industries, is one of the world's largest producers of circuit protection devices to protect electrical, electronic and automotive systems from circuit overload. Bussmann provides the industry standard for circuit protection with over 41,000 fuse types, from large fuses for protecting the main supply in multi-story buildings and industrial complexes, to sophisticated fuses for printed circuit boards in electronic products. Through product development and a number of acquisitions Bussmann has become the market leader in fuse technology.

Bussmann is headquartered in St. Louis, Missouri, with operations in Black Mountain, NC and Goldsboro, NC; Chicago, IL; Ellisville, MO; Boca Raton, FL; Juarez, MX and Mexico City, MX; Frome and Burton, in the UK; Copenhagen, Denmark;

Costa Rica, India and Brazil. Bussmann currently employs over 5,000 team members worldwide.

#### Parent Company

In 1985, Bussmann became a division of Cooper Industries. Cooper Industries is headquartered in Houston, Texas, and employs about 30,000 team members worldwide. Cooper is a diversified manufacturer of high-quality electrical products, tools and hardware products for customers around the world. Some products manufactured by other Cooper Divisions include Crouse-Hinds, Crescent, RTE, Kyle, McGraw Edison, Halo Lighting, Cooper Tools and Crescent.

#### About Bussmann

A world leading supplier of fuses and fusible protection systems, Bussmann continues its 86-year history of blazing new trails of innovative technologies. Maker of the industry's first truly global product line, each item is backed by an efficient worldwide network of distribution, customer service and technical support. Bussmann products include the most extensive circuit protection solutions approved for use in a variety of major standards: UL, CSA, IEC, ISO...not to mention both European (DIN, French and British Standards) and North American styled fuses for a wide range of applications: industrial motor protection, power conversion, medium voltage power distribution, telecommunications network equipment, electronics, and automotive. Our manufacturing operations in the U.S., Denmark, United Kingdom, and Costa Rica earned ISO 9000 registration, and our facility in Chicago has acquired QS-9000 certification. These third party certifications assure Bussmann customers only the utmost quality across every product line. Knowledgeable, Responsive, and Customer focused, Bussmann continues to set the standard for circuit protection solutions in the global marketplace.

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**Cooper Bussmann has locations throughout the world. Cooper Bussmann headquarters are located in St. Louis, MO. We have Field Application Engineers (FAE's), District Sales Engineers (DSE's), Technical Sales Engineers (TSE's) and Manufacturer Representatives covering all fifty states. Our consulting services group is headquartered at our Corporate office in St. Louis, MO. Our world presence is also outlined in the following listing.**

## **Headquarters**

Cooper Industries  
Bussmann Division  
P. O. Box 14460  
St. Louis, Missouri 63178-4460  
USA  
Phone: 636 394 2877  
Fax: 800 544 2570  
International: 636 527 1413  
Email: [fusebox@buss.com](mailto:fusebox@buss.com)

## **Cooper Bussmann Chicago**

175 Hansen Ct.  
Wood Dale, IL 60191-1145  
  
630-422-2400 Phone  
630-422-2500 FAX  
Email: [info@busscc.com](mailto:info@busscc.com)

## **European Headquarters**

Cooper (UK) Ltd.  
Bussmann Division  
Burton-on-the-Wolds  
Leicestershire LE12 5th, England  
Phone: 44 1509 882737  
Fax: 44 1509 882786  
Email: [info@bussmann.co.uk](mailto:info@bussmann.co.uk)

## **Bussmann Asia-Pacific**

1 Jalan Kilang Timor  
#06-01 Pacific Tech Centre  
Singapore 159303  
Republic of Singapore  
Phone: 65 278 6151  
Fax: 65 278 3151  
Email: [bussmann@bussasiapac.com.sg](mailto:bussmann@bussasiapac.com.sg)

## **Cooper Electrical Australia Pty Ltd**

205-209 Woodpark Road  
Smithsfield, NSW 2164  
(PO Box 2577)  
Phone: 61 2 8787 2777  
Fax: 61 2 9609 2342

## **Bussmann Brasil**

Bussmann do Brasil Ltda.  
Rodovia Santos Dumont, Km 23  
Cruz das Almas  
Itu - Sao Paulo- 13 300-000  
Brasil  
Phone: 55 11 40241856  
Fax: 55 11 4024 1721

## **Bussmann Denmark**

5 Literbuen  
DK-2740 Skovlunde  
Copenhagen, Denmark  
Phone: 45 4485 0900  
Fax: 45 4485 0901  
Email: [technical@bussmann.dk](mailto:technical@bussmann.dk)

## **Bussmann India**

Cooper Bussmann India Pvt Ltd  
3A Evr Street  
Sedarapet  
605 111 Pondicherry  
Phone: 91-413-267-2005  
Fax: 91-413-267-8182

## **Cooper Electronic Technologies, Inc.**

1225 Broken Sound Pkwy NW  
Suite F  
Boca Raton, FL 33487  
Phone: (561)998-4100  
Fax: (561) 241-6640  
Email: [sales@cooperet.com](mailto:sales@cooperet.com)

## **Enbray Contactors**

Cooper (UK) Limited  
Salterbeck Trading Estate  
Workington, Cumbria  
CA14 5DT  
England  
Tel : +44 (0) 1946 839000  
Fax : +44 (0) 1946 833000  
Email: [sales@enbray.co.uk](mailto:sales@enbray.co.uk)

## **AVAILABILITY AND COMMITMENT OF KEY PROFESSIONALS**

**We have the staff available right now to begin your project. Our core business in the services division is performing Arc Flash Hazard Assessments. We are a highly focused company dedicated to bringing our clients into compliance with OSHA, the NEC, the NPFA70E, and other industry related Arc Flash requirements. Our mission is to improve the safety of electrical workers by performing professional, accurate and complete Arc Flash Hazard Assessments and Training. Our vision is to be the recognized leader in this field in the United States, US Territories, Canada, and beyond.**

**We are pursuing these services in all fifty states, as well US Territories. Even though we cover this large market area, it is well within our ability to serve your safety needs in a timely fashion.**