

Protective Device Setting & Coordination Study



Protective Device Coordination studies are required to ensure the safety including personnel and general public and to ensure that equipment is not damaged under fault conditions per the requirements of NEC 110-10. Analysis of Time Current Characteristics (TCC) data for the protective devices and equipment (such as transformers and cable) is used to permit the circuit-protective devices to clear a fault without extensive damage to the electrical components of the circuit.

There is a second type of coordination, known as Selective Coordination which uses the TCC curves to ensure that faults (short circuits) affect the least possible portion of the electrical distribution system. Improper selective coordination or no selective coordination can result in faults on branch circuits shutting down complete operations for parts or possibly a whole building, manufacturing facilities. Such undesirable events result in loss of production, loss of business income, inconvenience to customers and risk of injury. These losses can be minimized or completely eliminated by proper Selective Coordination, the second benefit of performing a coordination study.

Correct setting values can only be determined by a study based on all the pertinent electrical characteristics of the equipment in the system.

SUGGESTED SERVICES

- Description, purpose, basis and scope of the study plus a simplified single-line diagram of the portion of the power system which is included within the scope of study.
- Tabulations of circuit breaker, fuse and other equipment ratings versus calculated short-circuit duties and commentary regarding same.
- Protective device time versus current coordination curves, tabulations of relay and circuit breaker trip settings, fuse selection and commentary regarding same.
- Fault-current tabulations including a definition of terms and a guide for interpretation.
- Tabulation of appropriate tap settings for relay seal-in units.
- Relay Settings.
- Determine the correct protective device settings so that your system will be 100% protected

About Us



Martin Technical provides practical services for making facilities better, safer and more efficient. Our expert staff combines their real world work experiences of the past with today's technologies and best practices to provide our customers with the solutions and knowledge they need to maximize their operations and keep safe doing it. And because all our experts have in-field experience, we understand the difference between theory and application and are able to translate today's complex problems into simple solutions that can be implemented tomorrow.

About Our Customers

Our customers represent a broad spectrum, big and small, and we have provided services for virtually every type of company, plant or facility, including:

- Manufacturing Plants
- Schools & Universities
- Data & Service Centers
- Airports
- Government & Military
- Hospitals
- R&D Facilities
- Public Buildings
- Energy & Utility Plants
- Water & Waste Water
- Hotel & Hospitality
- Commercial Buildings

Liability / Insurance

We carry the following insurance policies:

- General Liability - \$2 Million per occurrence / \$4 Million aggregate policy
- Professional Liability - \$1 Million policy

In addition, any outside engineers used on projects are required to have their own individual professional liability and general liability insurance.



Products & Services

We specialize in making plants and facilities better, safer and more efficient by providing the following services and products:

Electrical Studies & Testing

- Arc Flash Analysis & Labeling
- Short Circuit Study
- Protective Device & Coordination Study
- Power Quality Audit
- Motor Load Studies
- Infrared Inspection

Electrical Safety

- Electrical Safety Program Development
- Electrical Safety Audit
- Electrical Safety Training
- Qualified Person / Electrical Worker Certification
- Lockout / Tagout Programs
- Infrared Inspections

Energy Management

- Energy Audits
- Boiler, Compressor & HVAC Audits
- Energy Management Training

Electrical Maintenance Training

- Electrical maintenance training topics are available through our training partners.