



Protection of Low Voltage Power Systems

Course Introduction:

Protection of low, medium and high voltage power systems requires an understanding of system faults and their detection as well as their safe disconnection from the power system. This course presents a comprehensive description of the concepts and principles of operation and application of protection schemes for various power system elements such as feeders, transformers, motors, buses and generators.

Learn about protection systems from a practical perspective and important functional aspects, such as the testing and coordination of protection systems. The course is specially designed for industries and utilities which depend on proper system protection for operational efficiency and minimizing damage to equipment.

Course Objectives:

After participating in this course, you will be able to:

- Use your knowledge of protection techniques
- Further your understanding of protective devices
- Determine your own relay settings
- Apply your awareness of recommended practices in protection schemes
- Understand problems generally faced and develop solutions

Who Should Attend?

Engineers • Technicians & Technologists • Consultants • Designers • Regulatory Inspectors • Operations & Maintenance personnel

Course Outline:

LOW VOLTAGE CIRCUIT BRAKERS

- Low voltage Circuit Breakers – definitions, function, MCB's, fundamentals, types, ratings, capacities, o/l & s/c and application
- Symmetry and Asymmetry - considerations as it applies to Circuit Breakers
- Power Factor considerations as it applies to Circuit Breaker applications
- Summary of Session

STANDARDS SPECIFICATIONS AND STATUTORY REQUIREMENTS

- Standards applicable
- What is the practice in other countries?
- IEC 60898

- The statutory requirements in
- Wiring of premises – Certificate of Compliance

PROTECTION

- Fault levels
- Types of protection systems
- Special applications

DISCRIMINATION SELECTIVE CO-ORDINATION

- What is this selective co-ordination?
- What is discrimination?
- Back-up Protection

EARTH LEAKAGE PROTECTION

- SA a leader in this field
- Definitions
- Standards
- Sensitivity
- Circuit considerations
- Limitations

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work
- Discussion
- Presentation

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Fees:

To be advised as per course locations. This rate includes participant's manual, Hand-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Timings:

Daily Course Timings:

08:30 - 08:50	Morning Coffee/Tea
08:50 - 10:20	First Session
10:20 - 10:40	Recess (Coffee/Tea/Snacks)
10:40 - 12:20	Second Session
12:20 - 12:40	Recess (Coffee/Tea/Snacks)
12:40 - 14:30	Last Session

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