TRAINING COURSES ON DISTRIBUTION SYSTEMS PROTECTION

Code: TC02/4/T

OBJECTIVES

This course aims to provide a thorough overview of the protection principles, equipment, and schemes utilized in medium-voltage distribution systems.

WHO SHOULD ATTEND

The course is designed for electrical engineers who are responsible for the operation, control and protection of distribution utilities, and need comprehensive understanding of distribution protection practices.

HOW YOU WILL BENEFIT

Upon successful completion of the course, participants will be able to:

- **Analyze balanced and unbalanced faults in distribution systems,**
- **Identify and describe ratings of distribution protective equipment,**
- **Properly size protective devices and calculate setting values,**
- **Achieve coordination between primary and backup protective devices installed throughout distribution systems (from the source substation down to distribution transformers).**

DURATION

4 Days

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DAY 1

DISTRIBUTION SYSTEMS FUNDAMENTALS

- Introduction
- Fault Analysis
- Source Impedance Calculation
- Unbalanced Faults & Symmetrical Components
- System Grounding
- Illustrative Examples*

DAY 2

PROTECTIVE EQUIPMENT CHARACTERISTICS

- Distribution Systems Protection Philosophy
- Instrument Transformers
- Circuit Breakers
- Relays
- Reclosers
- Sectionalizers
- Expulsion & Current-limiting Fuses
- Setting Criteria
- Protection Challenges

DAY 3

PROTECTION COORDINATION PRINCIPLES

- Fuse – Fuse Coordination
- Recloser – Fuse Coordination
- Relay/Breaker – Fuse Coordination
- Recloser – Recloser Coordination
- Relay/Breaker – Recloser Coordination
- Recloser – Sectionalizer Coordination
- Illustrative Examples*

DAY 4

DISTRIBUTION PROTECTION SCHEMES

- Transformer Protection
- Capacitor Protection
- Challenges in modern Distribution Systems
- Special Applications
- Illustrative Examples*

* Training examples and exercises can be also given in appropriate electrical engineering software, according to customer's preference.

For more information about **PROTASIS training courses,** contact us at **training@protasis.net.gr**