



# D60

## DISTANCE PROTECTION INTERACTIVE LEARNING CD

TRCD-D60-C-S-1

### INTERACTIVE LEARNING CD ADVANTAGE

The D60 Distance protection Interactive Learning CD uses simulations, hands-on examples and practical applications to provide students with the same information and practical experience they would receive if they attended the in-class course. This CD allows Engineers, Electrical Personnel and Maintenance Staff to learn at their own pace and review the course material as often as they desire.

### WHAT WILL I LEARN?

The D60 Distance Protection Interactive Learning CD provides students with a comprehensive understanding of how to protect Transmission Lines using Distance Protection Relays. The CD will then step the students through the installation of the D60 Distance Protection Relay including wiring, configuring the relay using the EnerVista UR Setup Software, and demonstrating any procedures needed for performing maintenance tasks.



### AGENDA

#### 1 - Transmission Line Fundamentals

- Introduction
- Transmission Line theory
- Current Transformers
- Voltage Transformers

#### 2 - Distance Protection Theory

- Distance protection fundamentals
- Zones of Protection
- The Mho characteristic
- Voltage Memorization

#### 3 - Zones of Protection

- Phase Distance protection
- Ground Distance protection
- Custom Mho characteristic
- Phase Quadrilateral Zones of Protection
- Faulted Phase Selector
- Configuring the D60 Zones of Protection

#### 4 - Teleprotection Schemes

- Pilot Aided Schemes
- Non-Pilot Aided Schemes
- Stepped Distance
- Extended Zone 1
- DUTT Scheme
- PUTT Scheme
- Negative Sequence Ground Directional
- Neutral Ground Directional
- POTT Scheme
- Hybrid POTT Scheme
- Directional Blocking Scheme
- Configuring the D60 Schemes

#### 5 - Control Elements

- Line Pickup protection
- VT Fuse Fail Detection
- Power Swing detection
- Autoreclose
- Trip Output Control
- Breaker Control
- D60 Control Element Configuration