



In House Programs

T₂G

TECHNICAL TRAINING GROUP

Power Distribution Equipment

At the heart of the power distribution system is the power distribution equipment. Learn how many of the major components operate, as well as obtain critical information that can be used to assist in the specification of equipment.

Course Credit: 2 Days - 1.6 CEUs or 16 PDHs



Course Agenda

Day One

Introduction to Specification and Design

Design Process, Specifications, Drawings

Conductors for General Wiring

Ampacity and Temperature, Locations, Markings, Direct Burial, Medium Voltage Cable, NEC Tables vs. Calculations, Shielding and Voltage Stress

Cable Tray and Conduit

Types of Conduit, Cable Tray, Installation

Busway

Application and Ratings, Plug on vs. Feeder

Motors

Motor Operation, Theory and Nameplate Data Speed, Slip, Full Load Current, Horsepower Efficiency, Locked Rotor Current, Service Factors, Frame Sizes, NEMA Designations, Designing Motor Circuits, Overload Protection, Short Circuit Protection

Motor Control Centers

Starter Types, Starter Sizes, Bus Bracing, Current Ratings, Fusible Protection vs. Breakers

Variable Frequency Drives

Drive Characteristics and Operation, Torque vs. Speed, Frequency Control, IGBT Operation V/F Characteristics and Speed Control, Vector - Torque Control Drives

Day Two

Switchboards and Panelboards

Lighting and Appliance Panelboards, 80% vs. 100% Ratings, Power Panelboards, Switchboards and Construction

Capacitors

Sizing and Selection, Discharge of Stored Energy, Overcurrent Protection, Impact on Motor Overloads

Circuit Breakers

Types of Breakers, Thermal Magnetic, Electronic Trip Setting Functions, L,S,I,G. Fully Rated vs. Series Rated

Fuses

Classes of Fuses, R, J, L, Let Thru Energy, Protection of Downstream Equipment - Series Ratings

Low Voltage Switchgear

ANSI Rated Breakers, Draw Out Construction

Medium Voltage Switchgear

Switchgear Construction, Relay Operation and Selection, Current Transformers, Interrupting and Momentary Ratings

Short Circuit Calculations

Calculation Procedures, Transformer Impedance and Calculations, Source Impedance, Motor Contribution

Time Current Coordination Basics

Time Current Curves, Fuse Coordination, Relay Coordination and Transformer Protection

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For more information contact:

T₂G Technical Training Group® at 800-874-8883.

See sample videos of Jim's teaching style at:

www.brainfiller.com