

MV Power Distribution Design

Overview

This course provides an introduction to the design of MV distribution systems for building including the selection of the MV switchgear, transformers and cables

Course Aim

The aim of this course is to give electrical engineers currently involved in LV distribution design an understanding of the principle aspects of MV distribution design

Learning Objectives:

At the end of the course attendees will:

- Be aware of the principle regulations in Ireland in relation to MV distribution
- How to select the most appropriate switchgear system for a particular application
- Understand the function of CTs, VTs, protection relays, battery alarm tripping units and other ancillary equipment
- Understand the factors involved in selection and sizing an MV cable

Programme

Part 1 - MV Distribution - Regulations

- ESB Networks: - Conditions Governing Connection to the Distribution System
- ETCl - National Wiring Rules for Installations over 1 kV ac

Part 2 - MV Switchgear

- Circuit Breakers - Vacuum v SF6 and AIS v GIS
- Current Transformers (CTs) and Voltage Transformers (VTs)
- Protective Relays, types, settings, ANSI Codes
- Earthing arrangements
- Battery alarm tripping units

Part 3 – MV/LV Power Transformers

- Power transformers ratings and selection to suit load
- Oil filled vs. cast resin types
- Transformer protection, alarm and trip signalling

Part 4 - MV Cables

- Structure of MV cables, terminations etc.
- Single core versus 3 core MV cables
- Sizing of MV cables

Who Should Attend

This course will benefit electrical engineers and contractors already involved in the supply chain of LV power distribution systems for buildings.

Duration:

1 day – 7 Hours

Trainer Profile:

Brendan Dervan is a Chartered Engineer with over 40 years' experience in all aspects of mechanical and electrical building services including; design, installation, commissioning and maintenance. After completing an electrical apprenticeship in 1982 he went on to study electrical engineering in DIT. He has worked in M&E consultancy at senior engineer / director level since 1990. In 1999 he started his own M&E consultancy, Dervan Engineering Consultants (DEC), which merged with Cundall in 2016. His Company provided M&E consultancy and project management services to a diverse range of clients in both the public and private sectors. He is owner and director of Best Training since 2019.