

Course description

INTCB-LS04

Difference between IEC 60439 & IEC 61439

Course goal

The goal of the course is to improve the ability of Personnel from Process Industries & Infrastructure sector Customers and Consultants responsible for engineering, commissioning, operation and Maintenance of Low Voltage switchgear to use and select the Low voltage products in better way.

Learning objectives

Upon completion of this course, attendees shall be able to:

- Familiar and understand the requirements of IEC standards for Low Voltage switchgear.
- Familiar with ABB MNS switchgear, its operation & construction for ease of operation and it's maintenance.
- Understand the critical elements of MNS switchgear such as Busbars, Modules, Starter, Incomer, selection of equipments.

Participant profile

Personnel from Process industries and Consultants responsible for engineering, commissioning, operation and Maintenance of substations

Prerequisites

Degree or diploma in engineering, basic knowledge of Electrical power distribution



Topics

- **Conventional Switchgears (MNS 3.0 / MNS R)**
 - Class Room Module:
 - Construction of MNS switchgear
 - Difference between Conventional & Intelligent switchgears
 - Difference between MNS 3.0 & MNS R Switchgears
 - Type of Applications
 - Type of Modules (WD / Plugin / Fixed)
 - Difference between Power & Auxiliary circuit
 - Type of SCPD & It's importance
 - Applicable Standards
- **Intelligent Switchgears (MNS with Relay Solution)**
 - Class Room Module:
 - Difference between Conventional & Intelligent Relay solution
 - Type of Relay solution in LPLS
 - Introduction to M10x relays & it's advantages over conventional solution
 - Identification of type of M10x relays & it's accessories
 - Communication features of M10x relays
 - Brief Introduction to UMC relay solution in MNS switchgear
 - Field Module (Factory Visit & Demonstration)

Course description

INTCB-LS04

Difference between IEC 60439 & IEC 61439

- **Integrated Intelligent Switchgears (MNS *iS*)**
 - Class Room Module:
 - Product Presentation on MNS *iS*
 - Difference between Intelligent Relay solution & MNS *iS*
 - MNS *iS* Components (MLink, MControl, MView etc)
 - advantages over conventional & Relay solution
 - Communication features of MNS *iS*
 - Introduction to MNavigate
 - Field module (Factory visit & demonstration)

- **Introduction of Applicable IEC Standards**
 - Class Room Module:
 - List of Standards applicable for Low Voltage switchgear
 - Introduction to IEC61439-1/2
 - Difference between IEC60439 & IEC61439
 - Types of Testing (Type test / Routine test)
 - Internal arc test as per IEC61641
 - Ingress protection as per IEC60529

Course type and methods

This is an instructor led seminar (practical exercises where ever applicable). The language of the course is English.

Course duration

The duration of the course is one day.

Course description

INTCB-LS04

Difference between IEC 60439 & IEC 61439

Course Outline

Day 1
<ul style="list-style-type: none">■ Introduction to IEC 61439-1 & 2■ Difference between IEC 60439 & IEC 61439■ Major Technical Changes with respect to IEC 61439■ Manufacturer Compliance■ Validation of Type Test certificates carried out inline with IEC60439

ABB India Limited
Low Voltage Systems Training Centre
Survey No.88/3, 88/4, Basavana Halli,
Kasaba Hobli, Nelamangala, Bengaluru-562123
Email: training@in.abb.com
www.abb.com/abbuniversity