

Course description

INTCB-LS03

Applicable IEC Standard overview for LV Systems business

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)

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- **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.

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Course Outline

Day 1
<ul style="list-style-type: none">■ Brief of Type Test on LV Switchgear■ Applicable Product Standards■ Difference between IEC60439 & IEC61439■ Internal Arc test & It's importance■ Requirement of Ingress Protection & Form of segregation

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