

Electrical and Energy Studies Laboratory

Definition, working principles, parameterization and working of basic electrical components are the capabilities of electrical and energy studies lab.

Features of the Laboratory

- ❖ This Lab has equipped with AC Drives (Sinamic G120), DC Drive (Sinamic 6RA80), Soft starter panel(3RW44), Energy Saving Kit, ACB's (3RT-4000 Amp and 3WL-6630 Amp), Star-Delta Kit, Type two Coordination System, Timer and Relay Kit, SIMOCODE (Sirius Motor Management Control Device), MCB's, RCCB's, MCCB's, Switch Disconnectors, Contactors,
- ❖ OLR's (Over Load Relays), MPCB's (Motor Protection Circuit Breaker), PAC Meters,
- ❖ This Laboratory is fully associate the Electronic, Electrical and Process instrumentation applications.

Significance of the Laboratory

After successfully completing this course, Participants can be able to:

- ❖ Power and control wiring of drives, Communicate Drives with STARTER Software, Parameterization/Configuration of drives, Troubleshooting of Drives
- ❖ To understand the nameplate details of Induction Motors.
- ❖ To do the Installation, Maintenance & Control of Induction motor.
- ❖ To do the Assembling and Dismantling of Induction Motor.
- ❖ To do the Testing of Induction Motor.
- ❖ To do the Overhauling of Induction Motor.
- ❖ To Configure SIMOCODE.
- ❖ Identify switchgear and its ratings
- ❖ Rack breakers into or out of connected position safely
- ❖ Locate close and trip coils and motors

- ❖ Interpret Siemens schematics and wiring diagrams
- ❖ Configure Soft starter
- ❖ Configure PAC meter
- ❖ Start the Induction motor with different starting methods
- ❖ Understand the Construction, Characteristics and operation Various Low Voltage Switch Gear
- ❖ Get Brief Idea on Power Generation, Transmission and Distribution
- ❖ Understanding of Different types of Earthing Systems and Cable dimensioning
- ❖ Understand Type of Faults and protection
- ❖ Get a Brief Idea of SIMARIS DESIGN
- ❖ Create electrical Single Line Diagram(SLD) and Analysis on it by SIMARIS.