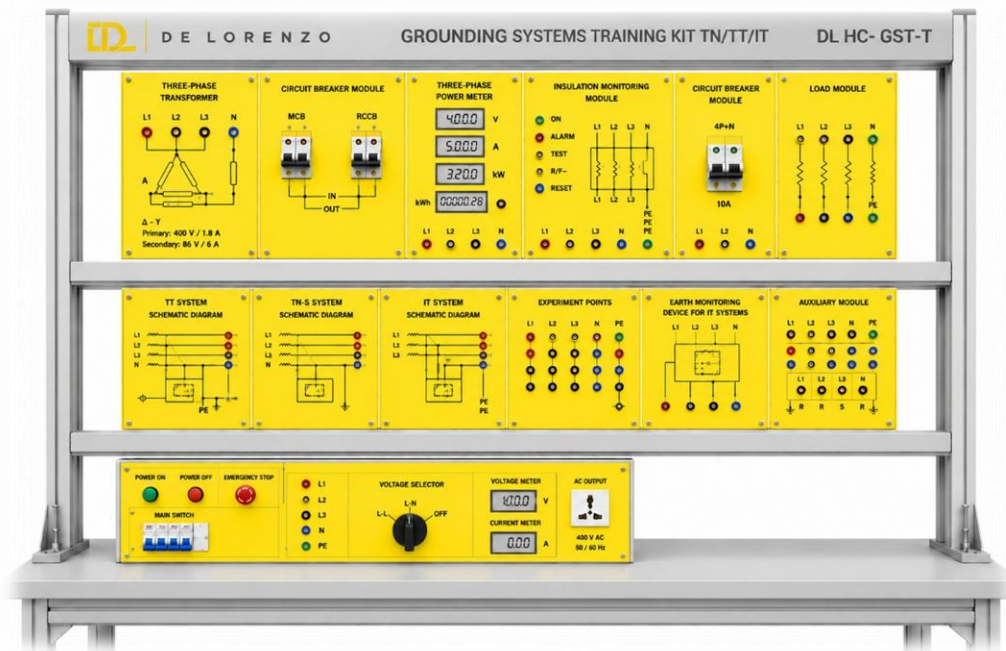




GROUNDING SYSTEMS TRAINING KIT TN/TT/IT



The image is only for reference

DL HC-GST-T

Overview

The TN, TT, and IT grounding systems represent different methods for connecting the power supply source and exposing conductive parts of an electrical installation to earth. The training kit allows trainees to configure and study these grounding arrangements, including normal operation, circuit breaker tripping behavior, and insulation monitoring in IT systems. The training kit consists of multiple modules that can be configured and combined with the electrical installation framework. Once the modules are connected, trainees can perform grounding experiments to develop practical knowledge and understanding of grounding systems.

Specifications

- The training kit includes a power control panel and experimental modules that can be combined with different grounding experiments.
- All modules are equipped with power terminals and ground terminals to receive power from the main rack.
- The kit enables students to understand the design and implementation of electrical wiring and grounding circuits.
- The kit includes a three-phase transformer module. This module is configured as a delta-star step-down transformer used in distribution stations and can simulate TN, TT, and IT grounding systems.
- The circuit breaker module consists of a four-pole miniature circuit breaker (MCB) and a four-pole residual current circuit breaker (RCCB). The input terminal of the RCCB is internally connected to the output terminal of the MCB, indicating a cascaded circuit breaker configuration.



ELECTRICAL INSTALLATIONS



- The three-phase power meter module measures power grid parameters, calculates energy consumption, and displays the values on an LCD screen.
- The kit also includes an insulation monitoring module for additional experiments.
- An additional circuit breaker module is provided to allow trainees to protect the implemented circuit.
- The modules are protected within the provided kit to prevent wear and deterioration.
- The training device uses an aluminum profile structure.

Technical Data

Three-Phase Transformer

- Configuration: Δ/Y .
- Primary: 400 V, 1.8 A.
- Secondary: 86 V, 6 A.

Circuit Breaker Module

- Rated operational voltage: 400 Vac, 50/60 Hz.
- Pole description: 4P+N.
- Rated current: 10 A.

Three-Phase Power Meter Module

- Maximum measuring current: 10 A.
- Maximum measuring voltage: 450 Vac, line-to-line voltage.

Insulation Monitoring Module

- Applicable to both single-phase and three-phase AC systems, with a maximum voltage range of $0 \div 500$ V.
- The monitoring device also isolates the voltage system.
- Power-off during tripping.
- Auxiliary voltage, measuring circuit, and output contacts.
- Manual and automatic reset using test and reset buttons.
- Can be connected to external test and reset buttons.
- Operation and alarm LED indicators.
- Two changeover contacts.

Experiments

TT System

- Connection of the TT system and normal operation.
- Circuit breaker thermal tripping.
- Circuit breaker magnetic tripping.

TN-S System

- Connection of the TN-S system and normal operation.
- Circuit breaker thermal tripping.
- Circuit breaker magnetic tripping.

IT System

- Connection of the IT system and normal operation.
- Circuit breaker thermal tripping.
- Circuit breaker magnetic tripping.
- Earth monitoring device for IT systems.