



### SALIENT FEATURES

- ◆ The trainer has built in requisite relay testing kit typically consisting of voltage injector, current injector, elapsed time counter (1 msec resolution), trip logic etc. all mounted in a light weight sturdy aluminum profile flat demo panel system.
- ◆ It facilitates study through experiment characteristics of fuse, MCB & ubiquitous bimetallic relay used in all your home/ kitchen apparatus including home mixer set etc.
- ◆ Optionally ACB, SF6 & VCB CB may be supplied for high

voltage lab to study & plot characteristics.

- ◆ Facilitates easy and safe wiring by students due to use of 4mm sturdy Shrouded banana patch cords and shrouded socket arrangements for high voltage circuits
- ◆ Each panel has ABS molded plastic sturdy enclosure, and colorful screwless overlays showing circuits diagrams & its connection tag numbers for easy understanding and connection
- ◆ Set of Instructor Guide & Student Workbook

### Technical Specifications

#### ◆ Control Power Supply & 1 Ph. AC Distribution Panel (EMT8)

- DC Multi Output power supply.
- Supplies DC power to neighboring signal conditioning circuitpanels like EMT9, CIP1, CIP2, MIT12, CE7 etc. through 20 pin FRC cable.
- Provides 1 Ph. AC supply through 3 MCB's, 4A each to power up other panels in the rack.
- Optionally Multichannel 4 position DPM for Speed, Torque etc
- Green SBS5 socket is provided for extend earth.

#### ◆ Variable voltage & current injector panel (EMT23A)

- Consist of 1 phase dimmer 230VAC/1A
- Short circuit transformer with primary 230VAC/1A, secondary 0-2-8V/12A taps.

#### ◆ Over current & elapsed time measurement panel (EMT 39)

- Consists of AC ammeter of 20A
- Elapsed time counter range 999.001 sec, resolution 1 msec.

#### ◆ Fuse, MCB & Bimetallic relay Panel (EMT 57)

- Kitkat Fuse - 2Amp
- MCB - 2Amp
- Bimetallic relay - 2Amp

#### ◆ Hall Sensor Based Zero Current Detector Panel (MIT12A)

AC/DC current hall sensor (x2nos, one optional): Closed Loop current measurement using Hall sensor IC (max. I/P

Note: Specifications are subject to change.

upto 20A, 50/60Hz), Isolation = 2.1KV, Proportional O/P = 0 - 2.5V, 1 CH Optional. DC Voltage transducer (x2 nos, one optional): Using high speed opto coupler IC (max. up to 600Vdc), isolation = 2 KV 1 CH Optional.

**Function Blocks Used :** Precision rectifier (x 2 nos) with gain = 5, LPF (x2nos) with gain = 2, Span Zero Circuit to interface with ADC(0-2.5Vdc) for both current and voltage, only 1 functional block each supplied, 2nd optional, field failure / zero current detector with Relay NO-NC Contact.

#### ◆ Air Circuit Breaker (ACB)- Table top (Optional)

- ACB 3ph, 440V, 3 pole, 50Hz, fixed type
- Rated current- 400A
- Rated voltage- 415V
- Rated S.C. breaking- 50KA
- Rated (S.T.) with stand capacity 1sec- 50KA

#### ◆ SF6 Circuit Breaker - Floor standing (Optional)

- Rated voltage- 11KV
- Rated nominal current- 630A
- Type of mechanism- spring spring
- Rated frequency- 50Hz
- Type (indoor/ outdoor)

### List of Experiments

- To study & plot characteristics of Fuse
- To study & plot characteristics of MCB
- To study & plot characteristics of Bimetallic relay
- To study & plot characteristics of ACB (Optional)
- To study & plot characteristics of SF6 (Optional)

#### ◆ Mechanical Dimensions :

1165 (L) x 300 (W) x 545 (H)