



An ISO 9001:2015 Co.

**SINCOM**<sup>®</sup>

**Sindhu** ELECTRONICS & COMMUNICATIONS PVT. LTD.

Electronics Educational Trainer Kits

## OPTO Coupler IC MCT2E Characteristics with Digital Meters

### Model : SA-127DM

**SINCOM SA-127DM OPTO Coupler IC MCT2E Characteristics** with Digital meters is comprehensive remarkable trainer useful to study Opto coupler IC MC2TE with in-built IR LED as an Optical Transmitter and Photo Transistor as an Optical Receiver with internal optical link wired with suitable resistive network at Transmitting and Receiving end. The trainer is simply designed to study the optical transmitter and receiver link and determine its various parameters in a simple experimental way. The trainer is equipped with on board Digital voltmeter & Digital Ammeter.

### Features

- ❖ Industry Standard Dual-in line 6-pin package
- ❖ Opto coupler IC MCT2E wired with resistive network at input and output side
- ❖ Gallium arsenide infra-red LED as Opto Transmitter
- ❖ Silicon NPN phototransistor as Opto Receiver
- ❖ Fast response time and High photo sensitivity
- ❖ Variable DC Input signal link with resistive network
- ❖ Resistive load at output
- ❖ Current controlling resistor in Transmitter and Receiver side
- ❖ Facility to vary wide range of DC Input signal voltage
- ❖ In-Built Variable regulated DC Power Supply
- ❖ Multi color Circuit Diagram printed on the front of the white board
- ❖ Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- ❖ On Board 3<sup>1/2</sup> Digit Digital Voltmeter and Ammeter
- ❖ User friendly Designed
- ❖ Very Easy for Operation
- ❖ Interconnections by 2mm high quality banana sockets and pins
- ❖ Maximum Test points to explore all the corners of experiment
- ❖ 1 Year Warranty

### Technical Specifications

- |                                  |   |
|----------------------------------|---|
| ▪ AC Mains Power Supply          | : 230V $\pm$ 10%, 50Hz                  |
| ▪ DC Power Supply                | : IC Regulated variable 0 to +12V/500mA |
| ▪ Opto Coupler Used              | : IC MCT2E                              |
| ▪ Input Signal                   | : DC Input signal 0 to 5 V              |
| ▪ Max. Collector Emitter Voltage | : 12V DC                                |
| ▪ Input Controlling Resistor     | : MFR 1K $\Omega$ , $\pm$ 5%            |
| ▪ Output Load Resistor           | : MFR 10K $\Omega$ , $\pm$ 5%           |
| ▪ Input Diode Forward Voltage    | : 1.25V                                 |
| ▪ On-State Collector Current     | : 5mA                                   |



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- Total Digital Meters : 04 (2 Voltmeter and 2 Ammeter)
- Digital Voltmeters : 0-20V (Two Nos.)
- Digital Ammeter : 0-20mA (One No.)
- Meter Display : Red Color, 3<sup>1/2</sup> Digit , LED Display
- Weight : 2.0 kg (approx)
- Dimensions (mm) : L 220 x W 270 x H 110
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-50<sup>0</sup>C, 80% RH

### Learning Scope

- To Study the characteristics of Opto-Coupler IC MCT2E.
- To Observe & Note Change in O/P Current & Voltage w.r.t. Change in applied I/P Voltage.

**Other Instruments Required :** Nil

**Accessories Included :** Set of Patch Cord and Details Instruction Manual