



An ISO 9001:2015 Co.

Zener Diode as Shunt Voltage Regulator with Digital Meters

Model : SB-107DM

SINCOM SB-107DM Zener Diode as Shunt Voltage Regulator with Digital meters is remarkable self contained simply designed trainer to study the operation, line and load regulation characteristics of Zener Diode as Shunt voltage Regulator with variable load in a simple experimental way. The trainer is equipped with on board Digital voltmeter & Digital Ammeter.

Features

- ❖ User friendly Design
- ❖ Two Zener diodes of different voltage ratings are provided
- ❖ Facility to vary wide range of applied DC Input voltage
- ❖ Variable Resistive Load
- ❖ In-Built Variable regulated DC Power Supply
- ❖ Easy to select the different Zener Diodes
- ❖ Very Easy for Operation
- ❖ Multi color Circuit Diagram printed on the front panel of the white board.
- ❖ Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- ❖ On Board 3^{1/2} Digit Digital Voltmeter and Ammeter
- ❖ Interconnections by 2mm high quality banana sockets and pins
- ❖ Maximum Test points to explore all the corners of experiment
- ❖ 1 Year Warranty

Technical Specifications

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| ▪ AC Mains Power Supply | : 230V ±10%, 50Hz |
| ▪ DC Power Supply | : IC Regulated Variable 0V to +12V/500mA |
| ▪ Unregulated DC Input Vin | : 0 to 12V DC Input |
| ▪ Regulated DC Output Vo | : 6.2V and 6.8V DC ±10% |
| ▪ Zener Diodes Used | : Two Nos. |
| ▪ Zener Voltage Vz | : 6.2V and 6.8V, ±10% |
| ▪ Diode Package | : DO-41 Tape and Reel type |
| ▪ Forward Voltage Drop | : 1.2V at T _A = 25 ⁰ c |
| ▪ Current Controlling Resistor | : MFR 470Ω, ±5% in series |
| ▪ Load Resistor | : 10KΩ Variable Resistive Load |
| ▪ Regulation type | : Line and Load Regulation |
| ▪ Total Digital Meters | : 03 (2 Voltmeter and 1 Ammeter) |
| ▪ Digital Voltmeter | : 0-20V (2 No.) |
| ▪ Digital Ammeter | : 0-20mA (1No.) |
| ▪ Meter Display | : Red Color, 3 ^{1/2} 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 ⁰ C, 80% RH |



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Learning Scope

- To Study operation of Zener Diode as a Shunt Voltage Regulator.
- To Study Change in O/P Voltage w.r.t. change in I/P Voltage with Load RL constant (Line Regulation)
- To Study Change in O/P Voltage w.r.t change in Load RL with I/P voltage constant (Load Regulation)

Other Instruments Required : Nil

Accessories Included : Set of Patch Cord and Details Instruction Manual