



An ISO 9001:2015 Co.

## IC 78XX as Positive Voltage Regulator with Digital Meters

### Model : SB-117DM

**SINCOM SB-117DM IC 78XX as Positive Voltage Regulator** with Digital meters is a remarkable self contained simply designed trainer useful to study the operation and line regulation characteristics of IC 7805 and IC7809 as a Positive Voltage Regulator in a simple experimental way. The Trainer is equipped with on board Digital voltmeter & Digital Ammeter.

### Features

- ❖ User friendly Design
- ❖ TO220 three pin IC Package
- ❖ IC LM7805 and IC LM7809 positive voltage regulators are provided
- ❖ IC includes Current limiting, thermal over load protection and safe operating area protection
- ❖ +5V and +12V Two Fixed Regulated DC Output voltage
- ❖ Low Output voltage Ripples
- ❖ Variable Unregulated DC Input source using Center Tap Full Wave Rectifier and Capacitor Filter circuit
- ❖ High operating Temperature range
- ❖ Separate Facility to vary wide range of applied DC Input voltages
- ❖ In-Built Variable regulated DC Power Supply
- ❖ Very Easy for Operation
- ❖ Multi color Circuit Diagram is screen 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
- ❖ 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 0V to +12V/500mA                     |
| ▪ Transformer ratings      | : Center tap Step Down 12V-0V-12V/500mA/50Hz                 |
| ▪ Rectifier and Filter     | : Full Wave Center Tap Rectifier with Capacitor filter       |
| ▪ Unregulated DC Input Vin | : Two Nos. Variable 0V to 12V DC Input for IC7805 and IC7809 |
| ▪ Regulated DC Output Vo   | : +5V and +9V  |
| ▪ Input Voltage Control    | : By two 10K $\Omega$ Potentiometers                         |
| ▪ IC Used                  | : IC LM7805 and 7809 positive Voltage regulator              |
| ▪ IC Package               | : 3 Pin TO-220 Package                                       |
| ▪ IC Output Current        | : 0.5A Max   |
| ▪ Load Resistor            | : 10K $\Omega$ Resistive Load                                |
| ▪ Regulation type          | : Line Regulation  |
| ▪ Total Digital Meters     | : 02   |
| ▪ Digital Voltmeter        | : 0-20V (2 No.)  |



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|-------------------------|---|
| ▪ 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°C, 80% RH                                  |

### Learning Scope

- To Study IC 7805 as a Positive voltage regulator. Compare theoretical & Practical values.
- To Study IC 7809 as a Positive voltage regulator. Compare theoretical & Practical values.
- 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