

# BJT (Transistorized) Series Voltage Regulator (SVR)

**Model : SB-108**



**SINCOM SB-108 BJT (Transistorized) Series Voltage Regulator** is very useful simply designed trainer to study the operation, line and load regulation characteristics of BJT Series Voltage Regulator with variable load in a simple experimental way. The trainer is without meters and has the facility to connect the external analog or digital Voltmeter and Ammeter in the circuit.

## Features

- ❖ User friendly Design
- ❖ Silicon NPN Transistorized circuit with one Zener Diode as controlling element
- ❖ Facility to vary wide range of applied DC Input voltage
- ❖ Variable Resistive Load
- ❖ Facility to vary regulated Output DC Voltage
- ❖ In-Built Variable regulated DC Power Supply
- ❖ 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
- ❖ Facility to connect external Digital/Analog 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            |
| ▪ Unregulated DC Input $V_{in}$ | : 0 to 12V DC Input                                 |
| ▪ Regulated DC Output $V_o$     | : Variable @ 6V to 11V                              |
| ▪ Output Voltage Control        | : By 10K $\Omega$ Potentiometer at sampling network |
| ▪ Transistors Used              | : Two No-BJT NPN Silicon- SL100 and BC548           |
| ▪ Forward Voltage Drop          | : 1.2V at $T_A = 25^\circ\text{C}$                  |



An ISO 9001:2015 Co.

- |                         |  |
|-------------------------|--|
| ▪ Load Resistor         | : 10K $\Omega$ Variable Resistive Load |
| ▪ Regulation type       | : Line and Load Regulation             |
| ▪ 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 operation of Series Voltage Regulator using Transistor.
- 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

**SINCOM Digital Multi VI meter (DMVI) : Model DMVI-03** Range  $V_1$ -20V,  $I_1$ -20mA,  $V_2$ -20V,  $I_2$ -200mA DC

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