



An ISO 9001:2015 Co.

## IC 317 as a Adjustable Positive Voltage Regulator

### Model : SB-116

**SINCOM SB-116 IC317 as a Adjustable Positive Voltage Regulator** is very useful simply designed trainer to study the operation and line regulation characteristics of IC317 as a Positive Voltage Regulator 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
- ❖ TO220 three pin IC Package
- ❖ IC317 wired with Resistive network as an adjustable Positive Voltage Regulator
- ❖ Variable Unregulated DC Input source using Center Tap Full Wave Rectifier and Capacitor Filter circuit
- ❖ IC includes Current limiting, thermal over load protection and safe operating area protection
- ❖ Adjustable Regulated DC Output voltage between 5V to 12V
- ❖ Output Voltage Control by Potentiometer
- ❖ High operating Temperature range
- ❖ Facility to vary wide range of applied DC Input voltage
- ❖ Facility to vary regulated Output DC Voltage
- ❖ 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
- ❖ 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

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|----------------------------|--|
| ▪ 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 | : 0 to 12V DC Input                                    |
| ▪ Regulated DC Output Vo   | : Adjustable between 5V to 12V                         |
| ▪ Output Voltage Control   | : By 10K $\Omega$ Potentiometer                        |
| ▪ IC Used                  | : IC LM317 adjustable Voltage regulator                |
| ▪ IC Package               | : 3 Pin TO-220 Package                                 |
| ▪ IC Output Current        | : 0.5A Max   |
| ▪ Load Resistor            | : 10K $\Omega$ Variable Resistive Load                 |
| ▪ Regulation type          | : Line Regulation                                      |
| ▪ Weight                   | : 2.0 kg (approx)                                      |



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| ▪ 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 IC 317 as (adjustable) 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

**SINCOM Digital VV meter (DVV) : Model DVV-01** Range  $V_1$ -20V,  $V_2$ -20V DC

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