



An ISO 9001:2015 Co.

Dual Regulated Power Supply Trainer

Model : SB-120

SINCOM SB-120 Dual Regulated Power Supply Trainer is very useful simply designed trainer to study the operation, line and load regulation characteristics of a general purpose $\pm 5V$ Dual regulated Power supply 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
- ❖ +5V and -5V Dual Regulated DC Output voltage
- ❖ Step down Transformer based Center Tap Full Wave Rectifier with Capacitor Filter circuit
- ❖ Variable Unregulated Dual DC Input voltage source
- ❖ IC LM7805 as a Positive voltage regulators
- ❖ IC LM7905 as a Negative voltage regulators
- ❖ IC includes Current limiting, thermal over load protection and safe operating area protection
- ❖ TO220 IC Package, Low Output voltage Ripples and High operating Temperature range
- ❖ Separate Facility to vary wide range of applied DC Input voltages for IC7805 and IC7905
- ❖ Very Easy for Operation
- ❖ Multi color Circuit Diagram is screen printed on the front of the white color acrylic 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 |
| ▪ Unregulated DC Input Vin1 | : Variable 0V to +12V DC Input for IC7805 |
| ▪ Unregulated DC Input Vin2 | : Variable 0V to -12V DC Input for IC7905 |
| ▪ Dual Regulated DC Outputs Vo | : +5V and -5V Dual |
| ▪ Output Load Current | : 500mA Max |
| ▪ Input Voltage Control | : By two 10K Ω Potentiometers |
| ▪ Transformer ratings | : Center tap Step Down 12V-0V-12V/500mA/50Hz |
| ▪ Rectifier and Filter | : Full Wave center tap Rectifier with Capacitor filter |
| ▪ Diodes Used | : Four Silicon PN Junction Diodes 1N4007 |
| ▪ Regulator IC Used | : IC LM7805 positive and 7905 negative Voltage regulator |
| ▪ IC Package | : 3 Pin TO-220 Package |
| ▪ Load Resistor | : Variable Resistive Load of 10K Ω |
| ▪ Regulation type | : Line and Load Regulation |
| ▪ Weight | : 2.0 kg (approx) |
| ▪ Dimensions (mm) | : L 220 x W 270 x H 110 |



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- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-50°C, 80% RH

Learning Scope

- To Study the Center tap Full Wave Rectifier (FWR) with & without C-filter.
- Observe and Note the Positive & Negative DC Unregulated O/P.
- To Study IC 78XX (7805) as +5V Positive voltage regulator.
- To Study IC 79XX (7905) as -5V Negative 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

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

Accessories Included : Set of Patch Cord and Details Instruction Manual