

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

▪ 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



An ISO 9001:2015 Co.

- 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 V₁-20V, I₁-20mA, V₂-20V, I₂-200mA DC,
Oscilloscope

Accessories Included : Set of Patch Cord and Details Instruction Manual