

# IC 78XX, 79XX,317 & 723 as Voltage Regulator with Digital Meters

## Model : SB-126DM

**SINCOM SB-126DM IC 78XX ,79XX,317 and 723 as Voltage Regulator** is **All-In-One** remarkable very useful simply designed trainer to study the operation, line and load regulation characteristics of IC 7805, IC7905,IC317 and IC723 Voltage Regulators in a simple experimental way. The Trainer has separate modules of Unregulated Power supply, IC7805, IC7905,IC317 and IC723 as low and high voltage regulators. The trainer is equipped with on board Digital voltmeter & Digital Ammeter.

### Features

- ❖ User friendly Design
- ❖ All-In One IC Voltage Regulator trainer
- ❖ Separate modules of IC7805, IC7905, IC317 and IC723 voltage regulator ICs are provided.
- ❖ IC7805 and 7905 provides +5V and -5V Fixed DC Regulated outputs respectively
- ❖ IC317 wired as adjustable Positive Voltage Regulator between 5V to 12V
- ❖ IC723 wired as positive Low Voltage Regulator to provide adjustable Regulated DC Output voltage between 2V to 7V.
- ❖ IC723 wired as positive High Voltage Regulator to provide adjustable Regulated DC Output voltage between 7V to 27V.
- ❖ Output Voltage Control by Potentiometer
- ❖ IC includes Current limiting, thermal over load protection and safe operating area protection
- ❖ Low Output voltage Ripples and 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 color acrylic 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 $\pm$ 12V/500mA
▪ Regulator ICs Used	: IC LM7805, IC7905, IC LM317 and IC723
▪ Unregulated Positive DC Input	: Variable 0V to +12V DC Input for IC7805, IC317 & IC723
▪ Unregulated Negative DC Input	: Variable 0V to -12V DC Input for IC7905
▪ Regulated DC Outputs Vo	: +5V from IC7805, -5V from IC7905, 5V to 12V from IC317 and 2V to 7V & 7V to 27 V from IC723

▪ Input Voltage Control	: By two 10KΩ 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
▪ IC Output Current	: 0.5A Max
▪ Load Resistor	: Variable 10KΩ Resistive Load
▪ Regulation type	: Line and Load Regulation
▪ Total Digital Meters	: 03 (2 Voltmeter and 1 Ammeter)
▪ Digital Voltmeter	: 0-20V (2 No.)
▪ Digital Ammeter	: 0-200mA (1No.)
▪ Meter Display	: Red Color, 3 <sup>1/2</sup> Digit , LED Display
▪ Weight	: 3.0 kg (approx)
▪ Dimensions (mm)	: L 270 x W 390 x H 130
▪ Interconnections	: 2mm Banana sockets
▪ Operating Temperature	: 0-50 <sup>0</sup> C, 80% RH

### Learning Scope

- To Study IC 7805 as a Positive voltage regulator. Compare theoretical & Practical values.
- To Study IC 7905 as a Negative voltage regulator. Compare theoretical & Practical values.
- To Study IC 317 as adjustable Positive voltage regulator. Compare theoretical & Practical values.
- To Study IC 723 as adjustable Positive Low voltage regulator. Compare theoretical & Practical values.
- To Study IC 723 as adjustable Positive High 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