

## Half, Full Wave and Bridge Rectifier

### with & without Filters with Digital Meters

**Model : SB-105DM**



**SINCOM SB-105DM Half, Full Wave and Bridge Rectifier with and without filters** with Digital meters is remarkable self contained simply designed **All-In-One** trainer to study the various operational aspects of a Half, Center tap and Bridge type Full wave Rectifier (FWR) using six PN Junction Diodes, with the facility to select different filters and variable load in a simple experimental way. This has different filters of C,CLC,CL,LC &  $\pi$  types with variable resistive load. The Trainer is equipped with on board Digital voltmeter & Digital Ammeter.

#### Features

- ❖ User friendly Design
- ❖ Six Silicon PN junction Diode based Half wave, Full wave-center tap and Bridge type circuit
- ❖ HWR/FWR output for with and without filters
- ❖ Single Phase center tap step down Transformer
- ❖ Filters used are C,CLC,CL,LC &  $\pi$  types
- ❖ Easy selection of filters using SPDT Switch
- ❖ Variable Resistive Load
- ❖ 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
- ❖ On Board 3 $^{1/2}$  Digit Digital Voltmeter and Ammeter
- ❖ Facility to connect Oscilloscope for signal analysis
- ❖ Interconnections by 2mm high quality banana sockets and pins
- ❖ Maximum Test points to explore all the corners of experiment
- ❖ 1 Year Warranty



An ISO 9001:2015 Co.

## Technical Specifications

▪ AC Mains Power Supply	: 230V $\pm$ 10%, 50Hz
▪ Rectifier Types	: Half wave, Center tap and Bridge type Full wave
▪ HWR Output Voltage	: +12V DC approx.
▪ FWR Output Voltage	: +12V DC approx.
▪ Diodes Used	: Six Silicon PN Junction Diodes 1N4007
▪ Diode Package	: DO-41 Tape and Reel type
▪ Transformer ratings	: Center tap Step Down 12V-0V-12V/500mA/50Hz
▪ No. of Filters	: 05
▪ Filter Types	: Selectable C,CLC,CL,LC & $\pi$ types
▪ Filters Selection	: SPDT Switch
▪ Filter Capacitors	: Two Electrolytic Capacitors of 100 $\mu$ F and 1000 $\mu$ F
▪ Filter Inductor	: One Inductor 68mH
▪ Load Resistor	: Variable Resistive Load of 10K $\Omega$
▪ Total Digital Meters	: 02 (1 Voltmeter and 1 Ammeter)
▪ Digital Voltmeter	: 0-20V
▪ Digital Ammeter	: 0-20mA
▪ Meter Display	: Red Color, 3 <sup>1/2</sup> Digit, LED Display
▪ Weight	: 2.0 kg (approx)
▪ Dimensions (mm)	: L 220 x W 270 x H 110
▪ Interconnections	: 2mm Banana sockets
▪ Operating Temperature	: 0-50 $^{\circ}$ C, 80% RH

## Learning Scope

- To Study the Half Wave Rectifier (HWR) without and with C, CLC, CL, LC &  $\pi$  filter.
- To Study the Center tap Full Wave Rectifier (FWR) without and with C, CLC, CL, LC &  $\pi$  filter..
- To Study the Bridge type Full Wave Rectifier (FWR) without and with C, CLC, CL, LC &  $\pi$  filter..
- To observe & Note the change in Ripple factor with respect to change in different filters.
- To Observe and note Input and Output waveforms on Oscilloscope.

**Other Instruments Required :** Oscilloscope.

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