



An ISO 9001:2015 Co.

SINCOM[®]

Sindhu ELECTRONICS & COMMUNICATIONS PVT. LTD.

Electronics Educational Trainer Kits

Half Wave Rectifier (HWR) With & Without Filters with Digital Meters

Model : SB-101DM

SINCOM SB-101DM Half Wave Rectifier (HWR) with and without filters with Digital meters is remarkable self contained simply designed trainer to study the various operational aspects of a Half wave Rectifier (HWR) using one 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 & π types with variable resistive load. The trainer is equipped with on board Digital voltmeter & Digital Ammeter.

Features

- ❖ User friendly Design
- ❖ Silicon PN junction Diode based Half Wave Rectifier circuit
- ❖ HWR output for with and without filters
- ❖ Filters used are C,CLC,CL,LC & π 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

Technical Specifications

- | | |
|-------------------------|---|
| ▪ AC Mains Power Supply | : 230V \pm 10%, 50Hz |
| ▪ HWR Output Voltage | : +12V DC @ |
| ▪ Diodes Used | : One Silicon PN Junction Diode 1N4007 |
| ▪ Diode Package | : DO-41 Tape and Reel type |
| ▪ Transformer Ratings | : Step Down 12V-0V/500mA/50Hz |
| ▪ No. of Filters | : 05 |
| ▪ Filter Types | : Selectable C,CLC,CL,LC & π types |
| ▪ Filters Selection | : SPDT Switch |
| ▪ Filter Capacitors | : Two Electrolytic Capacitors of 100 μ F and 1000 μ F |
| ▪ Filter Inductor | : One Inductor 68mH |
| ▪ Load Resistor | : Variable Resistive Load of 10K Ω |
| ▪ Total Digital Meters | : 02 (1 Voltmeter and 1 Ammeter) |
| ▪ Digital Voltmeter | : 0-20V |
| ▪ Digital Ammeter | : 0-20mA |
| ▪ Weight | : 2.0 kg (approx) |



An ISO 9001:2015 Co.

- Dimensions (mm) : L 220 x W 270 x H 110
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-50⁰C, 80% RH

Learning Scope

- To Study the Half Wave Rectifier (HWR) without filter.
- To Study the Half Wave Rectifier (HWR) with C, CLC, CL, LC & π 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