

Product Name :
Power Supply Trainer

Product Code :
NLAB-ELECTRONICSAB210027



Description :

Power Supply Trainer

Technical Specification :

The Power Supply Trainer is a comprehensive training system for the laboratories. It is useful in understanding the various concepts of a DC Power Supply. As we know that power supply is a very basic element of any electronic circuit or appliance. Starting from a mobile charger to a huge Computer system, each needs an efficient Power Supply. It is essential for an engineer to know basic concepts of Electronic Power Supplies. This trainer describes the Transformer, Rectifiers, Filters, Regulators, Role of Bleeder resistor, Load and Line regulation etc. While performing any experiment students have to connect the links by patch cords so it is very helpful for students to learn the inputs and outputs of different sections of any Power Supply circuit. It also consists of a demonstration bridge which is made up of LEDs for visualization of each part of an AC cycle.

Technical Specifications

Input : 230 V $\pm 10\%$, 50 Hz

Outputs

Zener diode outputs : 10 V, 5.6 V regulated

Regulators outputs : +12 V regulated

-12 V regulated

1.8 to 17 V adjustable

Load : 5 K variable with 1 K fixed resistance.

Bleeder Resistor : 5 K variable with 1 K fixed resistance.

Astable Multivibrator : 1 Hz, 14 Vpp

Transformer : Primary 0 to 220 V

Secondary 18-0-18, 6-0-6 (500 mA)

Fuse : 500 mA (slow blow, spare fuse is given in mains socket)

Real time appearance of components

Test points are provided in different sections of Power Supply

Demonstration bridge

Designed by considering all the safety standards

Provided with a detailed Operating manual

Low cost yet including many experiments

Experiments that can be performed

Study of Transformers and its working

Study of Two diode Full Wave Rectifier

Study of Full Wave Bridge Rectifier

Study of Demonstration Bridge

Study of Ripple Factor and to calculate Ripple Factor of Half Wave, Full Wave and Bridge Rectifier

Study of LC and π filter

Study of Bleeder Resistor and its effect on load current

Study of Zener Diode as Regulator

Study of Positive Regulated Supply

Study of Negative Regulated Supply

Study of Adjustable Regulated Supply

Study of Line Regulation

Study of Load Regulation

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