



Power Electronic Training Board has been designed specifically for the study of speed control of universal motors in different modes, such as universal motors are series wound motors capable of operating on both A.C. and D.C. supply. This Training Board is capable of controlling the speed of universal motor up to 1/4th H.P. Capacity.

Practical experience on this board carries great educative value for Science and Engineering Students.

Object:

To perform the following experiments :

01. Half wave controller without feed back.
02. Half wave controller with feed back.
03. Half wave controller high torque at low speed version - skip cycling operation.
04. Full wave controller using triac and demonstrating hysteresis effects improved by gate slaving techniques.

Features:

The board consists of following built-in parts:

01. SCR and TRIAC for the speed control of the universal motor.
 02. Two potentiometers.
 03. Two capacitors to control firing angle of thyristors.
 04. DIAC and two Nos. of diodes.
 05. A Universal motor of 1/12 H.P. or less capacity.
 06. Snubber circuit in parallel with the triac, which helps in improving the dV/dt of the device and also helps in reducing the RFI.
 07. Adequate no. of other Electronic Components.
 08. Mains ON/OFF switch, Fuse and Jewel light.
- * The unit is operative on $230V \pm 10\%$ at 50Hz A.C. Mains.
 - * Adequate no. of patch cords stackable 4 mm spring loaded plug length 1/2 metre.
 - * Good Quality, reliable terminal/sockets are provided at appropriate places on panel for connections/ observation of waveforms.
 - * Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.
 - * Weight : 3 Kg. (Approx.)
 - * Dimension : W 340 x H 110 x D 210

Other Apparatus Required:

- * Digital Multimeter 3 1/4 digit - Order Code 16501
- * Dual Trace Cathode Ray Oscilloscope 20MHz (Unearthed)

Note: Specifications are subject to change.

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