



Power Electronic Training Board has been designed specifically to study the SCR conduction in different circuit configurations and under various forms of load. The load can be selected from resistive, inductive, capacitive or combinations of any of them. The SCR converter can also be used as source for other experiments.

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

Object:

01. Study of SCRs triggering in half controlled bridge under reactive loads-limitations of simple UJT triggering circuits.
02. Study of SCR triggering in half controlled bridge under reactive loads using auxiliary SCR triggering circuit with extended pulse technique.
03. Study of half controlled bridge and action of free wheeling diode.
04. Study of fully controlled full wave 4-SCR bridge operation under converter mode.

Features:

The board consists of following built-in parts:

01. UJT relaxation oscillator and triggering pulse generator with resistance ramp control.
 02. Three numbers of pulse transformers each 1:1:1 type.
 03. Mains transformer having outputs 0-12V at 100 mA, 0-12V at 100 mA & 0-32V at 500 mA.
 04. Two SCRs connected in pulse amplifier and extender configuration and used as auxiliary SCR for triggering main SCRs under reactive load.
 05. Two SCRs and two diodes connected in half-controlled bridge configuration.
 06. Four SCRs connected in full wave bridge configuration.
 07. Resistive, Inductive and Capacitive load which can be used individually or in combinations.
 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 ½ 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.

Other Apparatus Required

- * Digital Multimeter 3¾ digit - Order Code 16901
- * Dual Trace Cathode Ray Oscilloscope 20MHz (Unearthed)

Note: Specifications are subject to change.

Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com
Website: www.tesca.in