

Product Name :
 Power Electronics Lab

Product Code :
 ELC-POW-0001



Description :

Power Electronics Lab

Technical Specification :

DC power supply on board:-

- $\pm 5V$ at 100mA
- $\pm 12V$ at 150mA
- $\pm 15V$ at 50mA
- $\pm 35V$ at 50mA

AC power supply on board:-

- 18V - 0V - 18V at 50mA
- 15V - 0V - 15V at 50mA

Triggering circuit on board:-

- 5 gate signal output

Frequency range:-

- 40Hz to 900Hz Variable

Amplitude:-

- 12V
- PWM control of G1,G2,G3 and G4 duty cycle control of "Gate" signal is 0 to 100%

Single phase rectifier:-

- Firing angle control 0°-180° variables

Firing circuit on board:-

- Four gate signal output with isolation

SCR assembly:-

- 4 SCRs 2P4M, 600V,2A

Power Devices:-

- IGBT-G4BC20S, MOSFET-IRF540, UJT-2N2646, DIAC-DB3, TRIAC-BT136, PUT-2N6027

Circuit components on board:

- Capacitor 0.01uF, 0.047uF , 0.1uF, 0.33uF, 1uF/63V(4Nos.) 2.2uF/50V
- Diode 1N4007 (8Nos.)
- Zener Diode 9V (1Nos.)

- Inductors 10mH, (1Nos.), 68mH (2Nos.)
- Load resistance 120E, 270E, 1K, 2K2, each 5W
- Resistance on board ($\frac{1}{2}$ W) 22E/5W, 100E/2W, 220E/2W
- Resistance on board($\frac{1}{4}$ W) 10K (3Nos.), 22K,33K,47K,
- Potentio meter 4K7(2Mos.), 1M(1Nos.)

Pulse transformer on board:

- 2 Nos. PT4502, 1:1 and one is PT4503 1:1:1

Toggle switch:-

- SPST (1Nos.)

Power requirements:-

- 220V \pm 10%, 50Hz

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