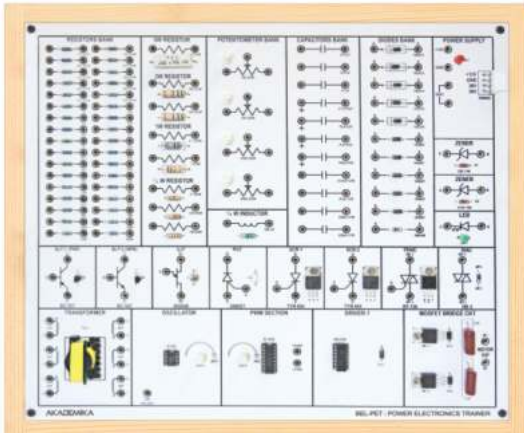


BEL - PET

Power Electronics Trainer



FEATURES

- Covers different power electronics devices i.e. thyristors
- On-board passive and active components
- IEEE Symbol of all components provided on the PCB

SPECIFICATIONS

- Characteristics and application study of different types of power electronics devices i.e. THYRISTORS (SCR (TYN604), TRIAC(BT-136), DIAC(DB-3), UJT(2N2646), PUT (2N6027), MOSFET(IRF-Z44N),BJT PNP(BC-557), BJT NPN (BC-547))
- Oscillator (IC 555) with a tuning pot should be provided
- 12 TAP Transformer with different number of windings
- Pulse Width Modulation section with a tuning pot to display HPWM & LWPM
- MOSFET bridge circuit with a motor output
- **Resistor bank (29 Resistors)**
Range from : 10 Ω to 910 K ($\frac{1}{4}$ watt)
- **Different wattage Resistors (8 Resistors)**
Range from : 0.1 Ω to 1M Ω
Range from : $\frac{1}{2}$ W to 5 W
- **Capacitor Bank (11 capacitors)**
Range from : 0.01 μ F to 220nF
- **Inductor $\frac{1}{2}$ W** : 100 μ H
- **Potentiometer bank (4 pots)**
Range from : 100 Ω to 500K Ω
- **Diode Bank (10 diodes)**
1N4007_5 nos.
1N5819_5 nos.
- **Power Supply** : 30V AC & 12V DC

EXPERIMENTS

Using SCR

- Study of rectifier half wave control
- Study of full wave controlled rectifier
- Study of DC to AC inverter
- AC power flasher using SCR
- Lamp Dimmer Circuit using DIAC-TRIAC
- DC to DC converter (dual)
- Low voltage lamp flasher using PUT and SCR
- LED flasher using SCR and UJT
- Study SCR triggering using IC555
- SCR time delay relay

