



INTEGRATED CIRCUITS
ELECTROINC INDUSTRIES

Power Electronics Trainer IC-EL-PE-107

2024

1. Overview

The IC-EL-PE-107 Power Electronics Trainer is a comprehensive educational and training system designed to provide hands-on experience in the study of power electronic circuits and devices. It is ideal for students, educators, and engineers aiming to understand, analyze, and troubleshoot various power electronic applications.



Fig:IC-EL-PE-107

2. Learning Outcomes

A power electronics trainer is an educational tool designed to help students and engineers understand the principles, operation, and applications of power electronic devices and circuits.

Here are some key advantages:

1. Power Semiconductor Devices.
2. Circuit Configurations.
3. Variable Load Settings.
4. Measuring Instruments.
5. Safety Features.

3. Experiments to be done

1. Study the fully-controlled bridge rectifier.
2. Study the half-controlled bridge rectifier
3. Study the Characteristic I-V curve for MOSFET.
4. Study the Characteristic I-V curve for DAIC.
5. Study the Characteristic I-V curve for TRAIC.

4. Specification

- Single-phase fully-controlled bridge rectifier with static and rotating load.
- Single-phase half-controlled bridge rectifier.
- Three-phase controlled bridge rectifier.
- Characteristic I-V curve for MOSFET.
- Characteristic I-V curve for DAIC.
- Characteristic I-V curve for TRAIC.
- Single-phase ac voltage controller.
- Step-down and step-up converter.
- Single-phase bridge inverter with static and rotating loads.
- Three-phase bridge inverter.