

Single Phase Energy Meter Trainer describes a high accuracy, low cost, single-phase energy meter. The meter is designed for use in single-phase, 2-wire distribution systems. The design can be adapted to suit specific regional requirements, e.g., in USA, power is usually distributed for residential customers as single-phase, 3-wire.

This is a highly integrated system comprised of two ADC's, a reference circuit, and a fixed DSP function for the calculation of real power. A highly stable oscillator is integrated into the design to provide the necessary clock for the IC. This includes direct drive capability for LCD Display and a high frequency pulse output for Calibration.

Features:

- Complete training system for in depth study of Single Phase Energy Meter.
- Micro controller based LCD display.
- The display acts as a counter of units consumed as well as it shows the wattage of load and the time since the system has been On.
- Easy diagrammatic representation of Energy Meter.
- Test points are provided to measure the voltages at different points.
- Low Cost Trainer with high accuracy, demonstrating all the basic concepts of Single Phase Energy Measurement.
- Good quality, reliable sockets are provided at appropriate places on board for electric board supply and load connections.
- Designed with considering all safety standards.
- Provided with an extensive e-manual.

Scope of Learning:

- Study the application of Single Phase Energy Meter for measurement of Power Consumed.
- Study of Single Phase Energy Meter using different test points and to understand its working

Technical Specifications:

Line Voltage : $230V AC \pm 10\%$, 50 Hz

Meter Constant : 1600 impulses/KWh (On LED)
Display Counter : 100 impulses /KWh (On LCD)

Maximum Current : 30 A Shunt : 350 µ

Note: Specifications are subject to change.

Website: www.tesca.in