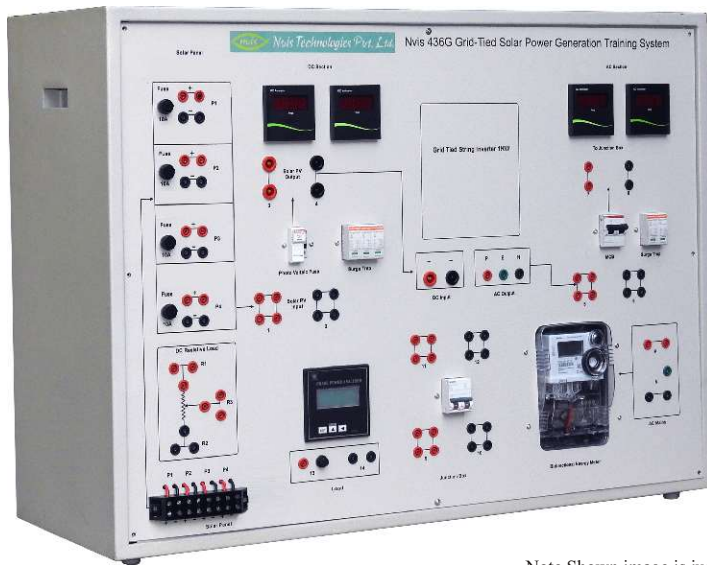




Photovoltaic Grid Tied System

Nvis 436GF



Note Shown image is just for illustration original may differ

The System consists of 2 sections. Details are given under Technical Specifications.

- Section A
- Section B

Section A - Mobile work station with an on- grid PV system

- 1.1 Electrical Balance of System accessories mounted and prewired on perforated Metal frame for suitable connectors
- 1.2 Panel is mounted to reinforced profile structure
- 1.3 Pre-mounted trunking and ducting to facilitate wiring and routing of cables. Balance of System Components are pre-mounted on board for Grid-Tie PV system with circuit completely wired and tested.
- 1.4 Control panel is provided with power flow diagrammatic representation
- 1.5 Electrical Balance of system must comprise of the following minimum components/accessories:
 - DC array Isolator with MC4 connector terminated to receive external solar cable connection to PV Solar Array
 - 2 sets of MCBs for DC Array and Controller protection; din mounted with terminal blocks to connect for multi-positive, negative and earth connections.
 - MPPT type Charge Controller with provision for DC external loads and connection to inverter
 - Grid Tie AC Inverter of suitable rating not less than 1KVA, MPPT type, with input range of 40V to 124V max, output 230V, 50 Hz, pure sine wave type
 - Smart meter unit
 - AC Isolator
 - AC consumer unit (comprising of Isolator, RCB, 4 number MCBs, 1 AC Surge Suppression Device of suitable rating
 - Provision for earthing terminations for both DC and AC connection
 - All components' rating selected must comply with approved IEC standard and meeting local regulation on over current and earth protection requirements. Cable provided must be of appropriate colour codes and sizes meeting local PV regulation requirement.



Section B

Roof top structure to be provided with Solar panels for appropriate generation of electricity to test real time power output in actual Solar irradiance

PV Module and array requirement

2.3 Monocrystalline PV modules pre-mounted and connected with following requirement on each PV module

- PV array of 1kWatt rating with each panel have approx. open circuit voltage $V_{oc}(v)$: 43V or better
- Short Circuit Current $I_{sc}(A)$: 7 A or better

Each module to be connected with bypassed diode in junction box which can be accessible for inspection and testing. The positive and negative terminal of module terminated in MC 4 connectors and properly labelled '+' and '-' terminal wires.

Parallel MC4 connectors with solar wire and MC 4 straight connector assembly to be of sufficient length and number to be able to connect up the 4 modules for series or parallel configuration training.

2.4 The PV modules are to be mounted on inclinable plane and the plane is lockable at 0, 15, 30, 45, 60, 75 & 90 degree relative to horizontal position respectively.

3. Provided full designs of a workable model

Accessories:

All accessories and essential spares required for the full feature training of the set are provided.