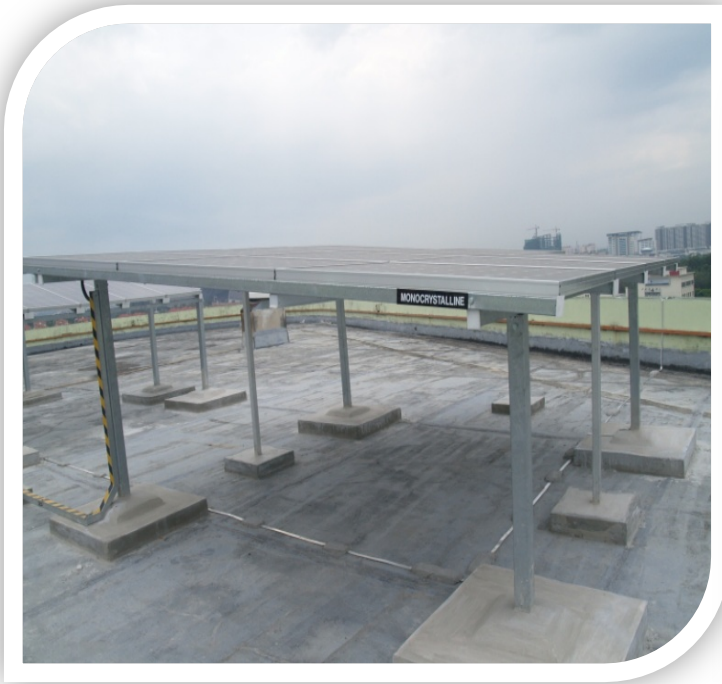




Solar PV Training Systems

Grid Connected System



The system is to teach the principal of Grid Connected Solar PV. A Grid Inverter will convert the energy generated from the PV from DC to AC. The Grid Inverter will synchronise with the Grid Supply and exports the PV energy to the Grid.

The student will be able to understand the PV configuration and perform standard testing recommended for such installation.

16 Units of Polycrystalline solar PV and Mounting Structure

The trainer comes with 15 nos Polycrystalline modules and configure it to suit the grid inverter. The system will be installed as per MS:1834 in order to protect the system. The module shall be mounted on ground mounting structure. 16 Nos of modules will be connected. The module will be configured as 2 parallel circuit with 7 nos in series.

Panasonic Polycrystalline Solar PV Module specification :

Peak Power (Pmax) : 255Wp	Dimension : 1665mm x 991mm x 38mm
Short Circuit Current (Isc) : 8.95A	Weight : 18kg
Open Circuit Voltage (Voc) : 37.6V	Comply with IEC 61215
Maximum Power Current (Ipmax) : 8.42A	
Maximum Power Voltage (Vpmax) : 30.5V	

Mounting Structure

The ground mounting structure will be made of galvanised steel structure with 5% tilting angle. Aluminium frame will be fitted on top of the structure to mount the solar modules c/w adequate number of clamps.

RAPS 2.0-CoBx Combiner box

The DC combiner box must come with string fuses depending on the system configuration and it must be DC rated which comply to MS:1834

The DC DB must come with suitable DC breaker and DC Surge protection device which comply to MS:1834



WORKSTATION

RAPS2.0GT Solar PV Installer Workstation

The workstation must be made of insulated material such as wooden with fine finishing surface. All wiring must be in trunking with DC rated cable for DC section. The system consist of :

RAPS-DC 35 DC Distribution Board

The DC DB must come with suitable DC breaker and DC Surge protection device which comply to MS:1834

RAPS-AC 35 AC Distribution Board

The AC DB must come with suitable AC breaker and AC Surge protection device which comply to MS:1834

RAPS 3.0GT Grid Tie Inverter (Zigor Sunzet 3TL)

The RAPS 3.0GT string inverter is easy operation device that have been designed to cover the needs and high efficiency that exceed 97%. The inverter comes with web server application accessible through its SNMP connection and through WIFI connection (option). In addition this inverter comes with LCD where the customer able to access inverter information including production data.

Inverter Specification :

DC Side

Nominal DC Power (KW) : 3KW

Operating input voltage range : 120-500 (360 nominal)

MPPT Voltage : 150-450V

Max DC current : 14.6A

AC Side

Nominal AC Power : 3KW

AC Grid Connection : 230Vac 50Hz + PE

Maximum AC voltage : 180-264V

Maximum AC line current : 8.7A

Conversion Efficiency

Maximum efficiency : 97%



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