



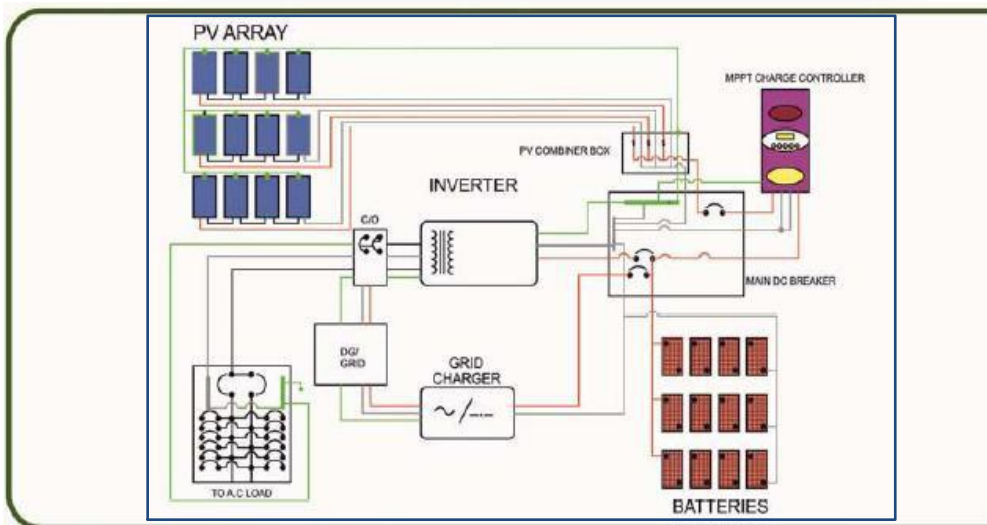
SOLAR PCU - ATLAS SERIES (10KVA-25KVA)



A) Priority- Solar->Grid->Battery

B) Priority- Solar->Battery->Grid

BLOCK DIAGRAM:-



❖ **OPERATIONAL SEQUENCE FOR SOLAR OFF GRID INVERTER:-**

A) Priority- (solar-grid-battery) (NO CHANGE OVER)

B) Priority- (solar-battery-grid) (NO CHANGE OVER)

A)

- When solar energy is sufficient then total o/p load will operate on solar through MPPT & Inverter. Excess solar power will charge batteries.
- When solar energy is weak then inverter is taking DC source from solar & balance from grid.
- When solar energy is absent then the entire load is working on grid via grid charger.
- When grid is absent then the load will be shifted onto batteries and moment the grid energy resumes load will be shifted back to grid. During this sequence any discharge of batteries will be refurbished via grid & available solar.
- All the operational logic will work with a zero transfer time for sensitive loads.

B)

- When solar energy is sufficient then total o/p load will operate on solar through MPPT & Inverter. Excess solar power will charge batteries.
- When solar energy is weak then inverter is taking DC source from solar & balance from batteries.
- When batteries reach 75% discharge level (25% kept as a buffer) the o/p load is shifted to grid without any change over time.
- After shifting load to grid the batteries are charged from solar energy and if solar energy not sufficient to charge the batteries, then remaining DC power is taken from grid charger. Once the batteries are fully charged then load is shifted back onto battery backup from grid.
- During changeover of load from battery backup to grid supply (i.e 75% battery discharged) and if grid supply is absent then load is shifted to inverter to use buffer battery backup (i.e balance

MODEL		ENERTECH ATLAS SERIES			
Rating	10KVA	15KVA	20KVA	25KVA	
DC Voltage	240V	240V	240V	240V	
Solar Voltage range	280V-500V				
Charge Controller	MPPT based Charge Controller				
MPPT Rating	KVA=KW as per rating				
Grid charger Rating	As Per System & Battery Capacity				
Grid Input	Three Phase				
Grid Voltage Range	360V-470V				
Type of Inverter	IGBT based PWM Inverter				
O/P Waveform	Pure Sine wave				
O/P Power Capacity	KVA @ 0.8 PF				
O/P Voltage	230 \pm 3% (1-Phase)				
	415 \pm 3% (3-Phase)				
Frequency	50Hz				
O/P P.F	0.8 lagging to Unity				
Inverter Efficiency	>90%				
Overload Capacity	100%-110% for 30sec				
	110%-150% for 0 sec				
Change Over Time	<u>'0 Seconds'</u> for Atlas series.				
Duty Cycle	Continuous				
Operating Mode	Off-Grid Online				
Operating Temperature	0-50 Deg. Celsius				
Storage Temperature	-10 Deg. Celsius to 55 Deg. Celsius				
Humidity	95% (Non Condensing)				
Altitude	<1000m above sea level				
Enclosure Protection	IP20				
Cooling	Forced Air Cooling				
Color	Siemens Gray/Black				
Cable Entry	Bottom Rear Side				
Dimensions	1000mmx800mmx500mm (LXHW) approx				
Weight	200kg - 450kg (10KVA-25KVA)				
Metering	Solar Voltage	O/P Voltage	Grid Voltage	Battery	
	Solar Current	O/P Current	Grid Current	Voltage	
	Solar Power			Battery	

Protections	MCB at Grid MCB at Array MCB at Battery Rotary at O/P	Fuses at Inverter I/P Fuses at Array I/P	AC Over AC Under DC Over DC Under	Over Temperature* Overload Short Circuit
			Above Protections with Alarm	
Pre Alarm	Overload & Battery Low			

**Specifications are subject to change without prior notice*

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