

“PCU” FEATURES & SPECIFICATIONS:

Its the new generation PCU designed for the max power conversion technology with using advanced Processor with State-of-the-art MOSFET based PWM technology along with Inbuilt MPPT / PWM technology charge controller. It has been developed in such a way that it has all the necessary features for an excellent product performance in renewable segment with extensive care on safety protection front too. The compact enclosure designed in such a way that end user can easily carry it due to light weight.

INVERTER SPECIFICATION:

Power Rating	: 1500 W
Input AVR range	: 110V to 275V
Nominal Input Voltage	: 48VDC
Input frequency range	: 40 to 60 Hz.
Inverter output frequency	: 49 to 51 Hz.
Output wave form	: Pure Sine Wave with less than 3% THD.
Output voltage in inverter	: 210V / 225V Programmable +- 5%.
Output voltage in Mains	: Same as Input Voltage.
Solar Charge controller	: Inbuilt Charger controlled with inbuilt Microcontroller
Battery Charging Current	: 1A to 12A Programmable in steps of 1A Direct Main : Priority always Solar (max current shared from Solar)
Inverter efficiency	: >85%
Power factor	: 0.8
Typical transfer time	: Less Than 40 ms in Wide mode. : Less Than 15ms in Normal mode (Optional).
Battery LVD Cut off	: 43.2 V/ 48 V System (+- 0.2V)
Load Reconnection	: 50.4 V/48V (+- 0.2V)
Charging priority	: Battery will be charged through PV as priority – Refer Charging Priority chart for details specification.

Wide Input Range:

Grid Low cut off / Recovery	: 100 V +- 5 V / 110 V +- 5 V
Grid high cut off / Recovery	: 265 V +- 5 V / 275 V +- 5 V

Normal Input Range (Optional):

Grid Low cut off / Recovery	: 170 V +- 5 V / 180 V +- 5 V
Grid high cut off / Recovery	: 265 V +- 5 V / 275 V +- 5 V

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SOLAR CHARGE CONTROLLER SPECIFICATION:

Type	: MPPT
Max Input PV Voltage (Voc)	: 85 V for MPPT
Max PV Input (Vmp)	: 70 V
Charging Current (I max)	: 30 Amps
Efficiency	: 95% pk (tracking)*.

PROTECTIONS:

- ✓ Self Diagnostic Support on Start Up.
- ✓ Battery over Charge, Under Charge, and wire removal.
- ✓ O/P Short Circuit/Over Load
- ✓ Phase Reversal.
- ✓ Mains High Voltage/Low Voltage Cut OFF.
- ✓ High Charging Current
- ✓ Optional Temp Sensing for MOSFET Protection.

OTHER SPECIFICATION:

Display Features:

Mains Status	: Yes
Charging Status	: Yes
Battery Status	: Yes
Load Status	: Yes
Error Status	: Yes

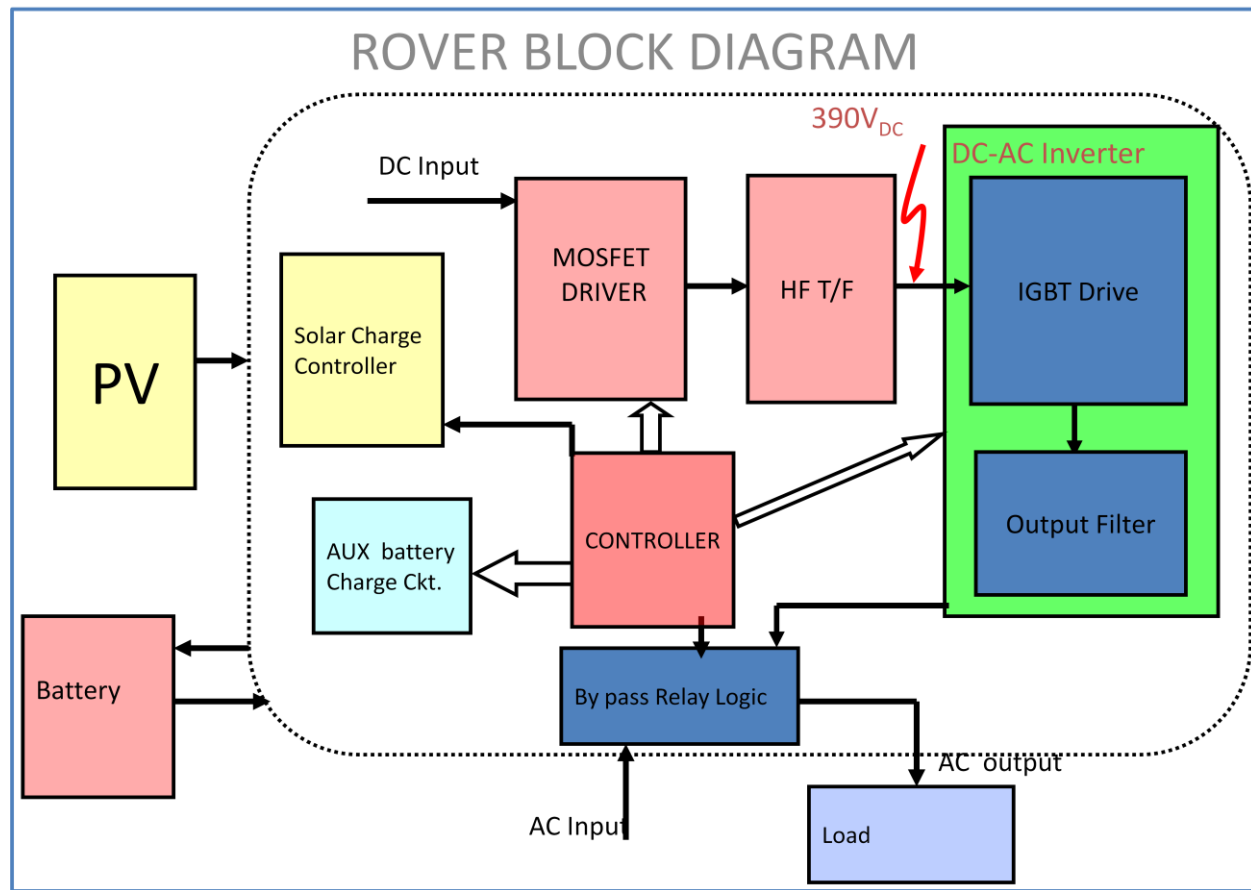
Environmental Features:

Operating temperature	: 0 Degree to +50 Degree Celsius.
Storage Temperature	: 0 Degree to +55 Degree Celsius.
Acoustics Noise	: < 60 db
Humidity	: 0 to 95% RH
Cooling Type	: Convection

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BLOCK DIAGRAM:



CHARGING PRIORITY CHART:

PV	GRID	Battery Status	Charging By	Output Mode
100%	AVAILABLE	47.2 V TO 54 V	PV*	INVERTER
100%	AVAILABLE	> 56.8 V	PV*	INVERTER
50% TO 100%	AVAILABLE	47.2 V TO 54 V	PV+ GRID	INVERTER
50% TO 100%	OFF	47.2 V TO 54 V	PV	INVERTER
50% TO 100%	OFF	> 56.8 V	PV	INVERTER
OFF	AVAILABLE	47.2 V TO 54 V	GRID	GRID
OFF	AVAILABLE	> 56.8 V	NO CHARGING	INVERTER
OFF	OFF	> 56.8 V	NO CHARGING	INVERTER
50% TO 100%	AVAILABLE	<43.2 (Low bat)	PV + GRID	GRID
50% TO 100%	OFF	<43.2 (Low bat)	PV	OFF
OFF	AVAILABLE	<43.2 (Low bat)	GRID	GRID
OFF	OFF	<43.2 (Low bat)	NO CHARGING	OFF

- Negligible from Grid

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