

“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 | : 1000 W |
| Input AVR range | : 110V to 275V |
| Nominal Input Voltage | : 24VDC |
| 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 10A 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 | : 22.6 V/ 24 V (+- 0.2V) |
| Load Reconnection | : 25.2 V/24V (+- 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) | : 24 V to 48 V auto detection with MPPT System. |
| Charging Current (I max) | : 40 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 |

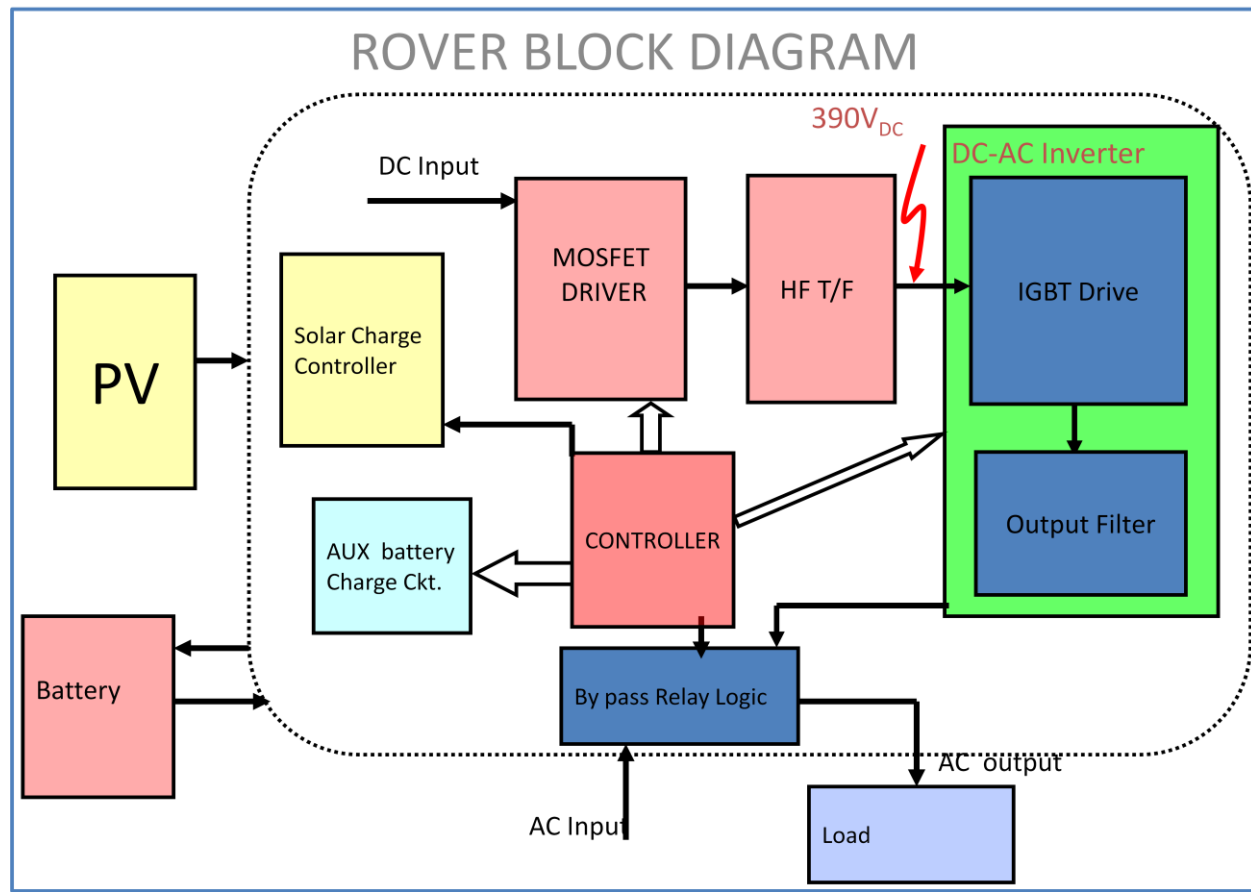
Environmental Features:

| | |
|-----------------------|-----------------------------------|
| 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 – GENERAL ILLUSTRATION:

| PV | GRID | Battery Status | Charging By | Output Mode |
|-------------|-----------|------------------|-------------|-------------|
| 100% | AVAILABLE | 23.6 V TO 27 V | PV* | INVERTER |
| 100% | AVAILABLE | > 28.4 V | PV* | INVERTER |
| 50% TO 100% | AVAILABLE | 23.6 V TO 27 V | PV+ GRID | INVERTER |
| 50% TO 100% | OFF | 23.6 V TO 27 V | PV | INVERTER |
| 50% TO 100% | OFF | > 28.4 V | PV | INVERTER |
| OFF | AVAILABLE | 23.6 V TO 27 V | GRID | GRID |
| OFF | AVAILABLE | > 28.4 V | NO CHARGING | INVERTER |
| OFF | OFF | > 28.4 V | NO CHARGING | INVERTER |
| 50% TO 100% | AVAILABLE | <21.6 (Low bat) | PV + GRID | GRID |
| 50% TO 100% | OFF | <21.6 (Low bat) | PV | OFF |
| OFF | AVAILABLE | <21.6 (Low bat) | GRID | GRID |
| OFF | OFF | <21.6 (Low bat) | NO CHARGING | OFF |

- Negligible from Grid

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