



SPEARHEADING

SOLAR TECHNOLOGY REVOLUTION



AFFORDABLE

CREDIBLE

RELIABLE

**ENVIRONMENT
FRIENDLY**

Maximum Power Point Tracking (MPPT) is a technique used in solar system to maximize power extraction under all conditions. MPPT PCU is an intelligent solar inverter with grid connectivity and battery backup. This PCU will provide full power from solar panels and will charge battery simultaneously keeping the grid off. In case of unavailability / partial availability of solar power it will transfer full/partial load to the batteries. If the battery voltage goes below a set level, the PCU will automatically transfer the load to the grid / DG power and charge simultaneously. Once the batteries are charged to the present level, the PCU will switch off the Grid / DG Power from the system and restore it to solar panels. The PCU automatically switches to hybrid (current sharing) mode if the solar power is low compared to the load requirement.



FEATURES

- DSP microprocessor design
- Highly efficiency and automatic operation
- Induct optimized MPPT charger controller
- Wide solar range up to 100V(battery optional)
- Easy serviceable by single card solution
- Big LCD display with transparent UI for user
- GSM based remote monitoring(optional)

TECHNICAL SPECIFICATION

Parameter	Model										
	TP20	TP25	TP30	TP35	TP40	TP45	TP50	TP55	TP60	TP65	TP70
Operating Voltage	24V	24V	24V	24V	24V	24V	24V	24V	24V	24V	24V
Performance (at 25°C)											
Voltage Regulation (Max.) (V)	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
Line Voltage Regulation (%)	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
TEMPERATURE RANGES (at 25°C)											
Power Controller	IGBT										
Type of Output	PWM (Modulated Frequency Switching)										
Efficiency	98%										
ENVIRONMENTAL RANGES (at 25°C)											
Operating Temp.	0°C to 40°C										
Storage Temp. (at 50% RH)	-40°C to 85°C (1)										
Relative Humidity (at 25°C)	10% to 90% (1)										
Operating Voltage (V)	24V (1)										
Storage Temp. (at 50% RH)	-40°C to 85°C (1)										
Change Over Time (Min.) (sec)	1000 (1)										
Modulation	SPWM (2)										
Working Mode Selection	Voltage (3)										
Regulation (Optional)	Voltage (3)										
Battery Charging (Optional)	Submodule										
EMI/RFI											
EMI/RFI (Body mounted)	EMC (1)										
EMI/RFI (PCB MOUNT)	EMC (1)										
Submodule (Optional)	EMC (1)										
IP											
IP Rating	IP20 (Indoor use only)										
INSTALLATION											
Input / Output Lead	Voltage, Current, Frequency, Power, Energy (Optional) Loadin % Actual Sampling Load in Watt, Energy (Optional) Battery Load & Battery Voltage, Charging Current by optional charging control to battery										
Battery	Charging (Charge-Equalize, Bulk, Absorption, Float & Equalize)										
Watt	Watt Voltage, Charging Current by Pulse Charging (Optional) Watt, Sub-Registration, Watt & Register										
Standard Loads	Industrial, Home High, Low, Inverter (AC/DC), 24V (Actual use), High Output Low, Battery low High										
COMMUNICATION											
RS485 (Remote Monitoring system)	RS485 (Optional) RS232 (Optional)										
OPTIONAL											
Control Interface	None										
Output Voltage	24V										
Output Power	3.0kW, (100% of R.T)										
Output waveform	Square Waveform										
Frequency	50/60										
Voltage Regulation	±0.5%										
Output Protection (Short Load)	-1%										
Overload Capacity	100% - 100% (1 Minute) 110% (5 Min) 100% - 100% (10 Min) 110% (5 Min) 100% - 100% (1 Hour) 100% (5 Min) 100% - 100% (24 Hour) 100% (5 Min)										
Size of Case (mm)	100x100x100										
Weight (kg)	1.0										
Protection	Overload, Short Circuit, Over Voltage, Over Temp and Inrush (AC/DC) overload, Reverse Polarity, External Over Temperature, Under Voltage and Over Voltage										
Environment (Indoor/Outdoor)	IP 20 (Indoor use)										

* Specification may change due to continuous R&D



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