SERVOTEC
smart power solutions

SOLWAVE

MPPT SERIES PCU

CORE FEATURES

CONFIGURABLE USER SETTINGS

PURE SINE WAVE

TRUE MPPT

REMOTE MONITORING IoT

ADVANCED DSP TECHNOLOGY

INTELLIGENT MODES

AI CHARGE SHARING

- Big Data Big Display
- Built-in Energy Meter
- Maximized Solar Usage through Intelligent modes.
- 40% less panel required than other PCUs
- RS-232 (Industrial Standard MODBUS)
- Incorporated with Microchip and ST DSP Engines
- Safety and Protections
- IGBT based design and Fast Charging
- Wide range MPPT Input
- 6 Stage Battery Charging
- Multiple Battery Selection
- Sleek & Aesthetic design
- Works as standalone Solar Inverter in case of No-Grid

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SOLWAVE
MPPT SERIES PCU

SOLWAVE - SOLAR MPPT PCU										
Technical Specifications										
Parameters	Units	Rating								
Model	Viraj	1KVA	2KVA	2.5KVA (CU)	3KVA/5KVA	5KVA/7.5KVA	10KVA	10KVA	15KVA	
Operating DC Voltage	Volts	12	24	24	48	96	120	180	240	
SPV Parameters										
SPV Open Circuit Voltage Range (Min-Max)	Volts	18-45	36-90	36-90	72-180	144-360	180-450	270-450	360-600	
Max SPV Power	KW	1	2	2.5	3/5	5/7.5	10	10	15	
Compatible SPV Panels	36 / 60 / 72 Cell									
MPPT Based Charge Controller										
Switching Element	IGBT Module									
Controller	DSP									
Efficiency	> 95%									
Battery Charging Stages	5 (Softstart, Boost, Absorbtion, Float, Equalise)									
Battery										
Low Cut Off	Volts	10.5 / Battery +/-2%								
Low Cut Off Recovery	Volts	11.5 / Battery +/-2%								
Low Buzzer	Volts	10.7 / Battery +/-2%								
High Cut Off	Volts	15.5 / Battery +/-2%								
High Cut Off Recovery	Volts	15.0 / Battery +/-2%								
Boost Charging Volt by SPV(TUB)	Volts	14.5 / Battery +/-2%								
Boost Charging Volt by Grid(TUB)	Volts	14.0 / Battery +/-2%								
Charging Current by Grid	Amps	10A +/-2%								
No Load Battery Current	%	0.02								
Output										
Output@ No load	Volts	230 +/-2%								
Output Frequency	Hz	50 +/-2%								
Overload	Amps	3.5	3.5	3.5	7	8.7	10.5/17.4	17.4 / 26.0	26.0 / 34.8	34.8	52.2
	Watts	800W	800W	800W	1.6KW	2KW	2.4KW / 4KW	4KW / 6KW	6KW / 8KW	8KW	12KW
Output Low Retry	-	1 Time								
Output Short Circuit	-	1 Time								
Grid										
No of Phase	-	1Phase-3Wire P,N,E								
Voltage Range(Inverter Mode)	V	100-280 +/-2%								
Voltage Range(UPS Mode)	V	175-255 +/-2%								
Frequency Range	Hz	45 - 55 +/-2%								
Display										
Display	Alphanumeric	16X2 LCD			20X4 LCD					
Parameters	Output (Inverter)	Voltage, Current, Power and Frequency								
	Input (Grid)	Voltage and Frequency								
	Solar	Voltage, Current, Power and Energy (Optional)								
	Battery	Voltage, Current								
	Status/Faults	Inverter Status, Mains Status, Charger Status, Solar Status and Battery Status/Charging Stages								
Inverter										
Switching Element	-	MOSFET					IGBT Module			
Output voltage	Volts	230 +/-2%								
Phase	-	1Phase-3Wire P,N,E								
Output Waveform	-	Digitally Filtered Pure Sine Wave								
Frequency	Hz	50 +/- 2%								
Changeover (Mains to Inverter)	ms	<10ms								
Output Power Factor	Pf	0.8								
Overload Retry	-	3 Times								
Switches	-	System ON/OFF, Mode Selection: Hybrid / PCU / Smart, INV /UPS Selection								
Indication (LED)	-	Inverter On, Mains In Range, Battery Low/High, Charger On, Overload, Faults								
Alarm (Audible)	-	Battery Low, Overload, Charger On, Inverter On, Solar Charger On								
Protection	-	Overload, Short Circuit Protection, Over Voltage, SPV Surge and Transient protection (MOV Varistors), Reverse Polarity of Battery, Over temperature Protection, Under Voltage and Over Voltage Protection								
Cooling	-	Forced Air cooling(Temp Controlled)								
Communication	-	Remote Monitoring System (Over GPRS / BLE and Wifi) or RS232								
Operating Temp	C	0-50								
Operating Humidity	%	95								
Protection class	-	IP20								
Dimension(LXWXH)	mm	355x330x205			510x460x305			750x500x350		750x500x350
Weight	kg	18		21	31.5		40	52	63	71	85

Note: Technical Specs are subject to change with prior notice, because of continous development and improvement in design and technology.