



Solar NXT PCU

Power Maxma Solar PCUs with inbuilt MPPT Charge Controller are specially designed for Solar applications.

These 1-Phase & 3-Phase PCUs are having high conversion feature. The DC Power generated from PV array is used to charge connected battery bank and also used to cater load through these PCUs. These PCUs being bi-directional have feature to charge batteries through grid also if solar is not available.

Range available:	Single Phase	1kW to 10kW
	Three Phase	10kW to 100kW

Features

Benefits

MPPT based PCUs	Maximum utilization of solar power
Inbuilt O/P isolation transformer	Protection from internal surges & noise
Bi-directional PCU	Feature for battery charging through grid also
Selectable source priority	Choose source priority between Solar, Battery & Grid
32 bit DSP controller	Ability to handle multiple algorithm efficiently
MOSFET/IGBT switching element	High-current-handling capability, preventing thermal losses
MCB at battery and O/P	Switches off the electrical circuit during abnormal condition
Compliance to IEC standards	Consumers can have confidence that they are safe, reliable and of good quality

Technical Specifications

System Rating	1kW	2kW	3kW	5kW	6kW	7.5kW	10kW
Photovoltaic Input							
Input Voltage range (Vmp)	60-130		130-190		160-230		
Maximum PV power (kW)	1.1	2.2	3.3	5.5	6.6	8.25	11
MPPT Based Charge Controller							
Type of Charger	PWM with MPPT						
Input Voltage range (Voc)	55V – 165V DC			120-240		150-300	
Charging Stages	Float, Bulk, Boost (Adjustable)						
Grid Input							
Input Supply Phases	1Phase 2 Wire						
Nominal Voltage & Voltage range	230V AC (+15%, - 20%)						
Nominal Frequency & Range	50 Hz (+/-3 Hz)						
Battery							
Nominal Battery Bank Voltage	48V		96V		120V		
Battery recharge current setting range from Grid Side (A)	0-12	0-24	0-36	0-31	0-36	0-37	0-50
Battery recharge current setting range from Array Side (A)	0-20	0-40	0-60	0-50	0-60	0-65	0-80
Inverter							
Switching Element	MOSFET			IGBT			
Control	16 Bit DSP controlled			32 Bit DSP controlled			
Nominal Output	230 +/-1% Vac , 1 Phase 2 Wire						
Output waveform	Pure Sine Wave						
Nominal Frequency	50 Hz						
Power Factor	0.8 lag to 0.8 lead						
Nominal Output Current (A)	4.3	8.6	13	21.5	26	33	44
Overload at nominal output voltage	110% for 10 Minutes, 200% for 5 Secs						
System Data							
Noise @ 1 meter (dBA 1 2dBA)	<58dBA			<62dBA			
Transfer Time	<10 mS						
Protection	Under/Over voltage protection for Input, Output, Battery & Array, Reverse polarity protection for Array & Battery, Protection for Output Overload, Short circuit and Over Temperature, MCB & Surge protection at Grid/DG Input, Battery, Array Path and PCU O/P						
Display parameter	Voltage, Current: Array, Battery, Grid, Output						
Indications	MPPT Charger ON/OFF, Battery Charging/ Discharging, Grid ON, Load ON, Inverter ON, Array ON, Inverter Overload With Blinking Inv. On LED, Inverter over temperature						
Environment							
IP Protection Level	IP-21						
Temperature Operating (° C)	0-50 °C without any degradation						
Max. Relative humidity @ 25° C	Up to 95% (non-condensing)						
Max. Altitude above sea level without de-rating (m)	1000 m						
Standard Compliance							
Certifications	IEC 61683, IEC 60068-2(1,2 14, 30)						

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