

Parameters		Units	Rating											
System Rating		KVA	1	1	2	3	4	5	7.5	10	15			
Operating DC Voltage		V	24	48				96		120		180	240	
Photovoltaic Input														
Input Voltage range(Min.-Max.)		Voc	45-90	80-200				160-400		200-500		300-625	400-650	
Maximum PV power recommended		kW	1	2	3	4	5	7.5	10	15				
Solar Charge Controller Rating		A	40	20	40	60	80	100	50	75	60	80	55	60
MPPT Based Charge Controller														
Switching Element			MOSFET	IGBT										
Controller			DSP											
Type of Charger			MPPT											
Peak Efficiency		%	95											
Parameters			Configurable										Default Value	
Battery Low Buzzer		V	Batt. Low Cut +0.2										11.2	
Battery Low cut		V	10-11.7										11	
Battery High cut (INV.)		V	SPV Present-SPV CHG. REF +1V for 15Sec, SPV CHG. REF +1.5V for 2Sec										15.5	
			SPV Absent-SPV CHG. REF +0.5V for 15Sec, SPV CHG. REF +1V for 2Sec										15	
Battery Charging Voltage with SPV		V	12.8-16										14.5	
Battery Charging Current with SPV		A	12-60										18	
Battery Charging Voltage with Grid		V	12.5-15.5										14	
Battery Charging Current with Grid		A	6-15										10	
Grid low cut volt. (IT Mode Enb/Dis)	GRID EXPORT MODE DISABLE	V	NA/120-200										175/120	
Grid high cut volt. (IT Mode Enb/Dis)		V	NA/245-280										260/280	
Grid Charging		V	Enable/Disable										Enable	
IT Mode			Enable/Disable										Disable	
Operating mode			Smart/PCU/Hybrid/Grid Export										Smart Mode	
Input Source			Grid/Genset(for Genset, Grid Export Mode must be Disable)										Grid	
Output voltage low		V	170-190										185	
Output voltage high		V	250-260										255	
No load shutdown			Enable/Disable										Disable	
Grid Export Mode Enable														
Grid Low/recover		V	185/195											
Grid High/recover		V	280/275											
Synchronization voltage range		V	185-280V											
Synchronization frequency range		HZ	47 to 53											
Maximum Charging Current from Grid (Import)		A	6-15										10	
Battery														
Grid Disconnect (Solar Available) PCU/SMART			@14.5V/Battery for 2 minutes OR 13.5V/Battery-100% Current (if Grid Chg. Volt. Ref. set to 14.0V)											
Grid Reconnect (PCU Mode / Smart Mode), Import ON (Grid Export mode)		V	11-12										11.5	
Temp. Compensation			@ 3mV/cell/°C; 18mV/Battery/°C											
Inverter														
Switching Element			MOSFET					IGBT						
Control			PWM											
Nominal Output voltage			220											
Output supply phase			1Phase, 3 Wire											
Output waveform			Pure Sine Wave											
Nominal frequency		Hz	50											
Load Current		A	4.5	4.5	9	13.5	14.2	18	27	36	54			
Voltage regulation		%	1											
Output voltage distortion with 100% linear load		%	<3											
Overload capacity		%	IT Load Disable 100-120(2Time auto Reset) : 60sec 200 - 300%:1 Sec; 120-150(2Time auto Reset) : 30sec 300 - 400%:250msec; 150-200 : 2sec					IT Load Enable 100 - 110%:10min; 150 - 200%:2sec; 110 - 120%: 2min; 200 - 300%:1sec; 120 -150%:30sec; 300 - 400%:250msec; >400%(20msec - 30msec)				Grid Tie ON Over Load Indication @>200% >200 - 300% : 10min >300 - 400% : 1min >400% : 250ms		
Peak efficiency		%	>85											
Noise @ 1 meter		dB	50											
Cooling			Either Load Based (On ≥ 60, Off ≤ 50) or Temperature Based (On ≥ 55°C ±3°C, Off ≤ 42°C ±3°C)											
Protections			Overload, Battery Low, Battery High, Output Low, Output High, Input Low, Input High, SPV Low, SPV High, Output Short Ckt., Input Short Ckt., Over Temp., Under Frequency, Over Frequency, Solar Panel Reverse, Anti-islanding, Surge Protection, Grid/Solar Charger Open Circuit, NTC Open.											
Display Parameters			Battery Voltage, Charging Current, Discharging Current, charging KWH and discharging KWH											
			Solar Voltage, Solar Current, Instantaneous Power, Cumulative Energy											
			Grid Voltage, Grid Current, Frequency, Import Power, Import Energy ,											
			Export Power, Export Energy											
			Output Voltage, Output Current, Frequency, Instantaneous Power & Commutative Energy											
			Grid, Inverter & SPV Charger Status											
Switches			System Info : NLSD-EN, Grid CHG-EN, IT Load-EN, Input Source-Grid, Operation Mode-Smart											
Indications			Reset for System ON/OFF, UP, DOWN, BACK, ENTER (for LCD Configuration)											
			System ON, Inv. ON, SPV Charging, Grid Charging, Grid Tie ON, Battery Low/High/NLSD, Overload / Overheat, Mains Low / Mains High, Under frequency/Over frequency, Operating modes (smart, Hybrid, PCU and Gridexport), Fault, HOE											
Environment														
Operating temperature		°C	0-50											
Max. Relative Humidity @ 25 C (non condensing)		%	95											
Degree of Protection			IP-21											
Data Logging			30 Days Data Storage											
Dimension (LxWxH)		Inch	15x16x15	18 x 10 x 20				23 x 13 x 26			26 x 13 x 26			
Weight (Approx)		kg	30	35	43	50	52	60	70	78	103	120		

*Specification are subject to change without prior notice due to constant improvement in design & technology.
 *If battery is not fully charged, battery low cut voltage is 11.5V/batt. If battery is fully charged, battery low cut voltage is equal to set Voltage.