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ALFA PLUS SERIES SOLAR MPPT PCU



World Class UPS



RoHS
COMPLIANT

Features:

- True MPPT Solar Charge Controller
- Battery Deep Discharge Protection
- Built-in Energy Meter
- Wide Range MPPT Input
- 6 Stage Battery Charging
- IGBT based design & Fast Charging
- RS-232 (Industrial Standard MODBUS)
- 40% less panel required than other PCUs
- Manual By-Pass Switch
- Maximized Solar Usage through Intelligent Modes
- Works as stand alone Solar Inverter in case of No-Grid
- THD <2% Linear load & <5% Non-Linear load



True
MPPT



Big User
Friendly
LCD Display



Remote
Monitoring
(Optional)



Pure Sine
Wave



Advanced
DSP Technology



Intelligent
Modes



Ai Charge
Sharing



Smart Solar
Optimization

ALFA PLUS SERIES- SOLAR MPPT PCU										
Model	Viraj	1KVA	1.5KVA	2.5KVA3KVA	3.5KVA/5KVA	6KVA/7.5KVA	10 KVA	10KVA/15KVA	15KVA	20KVA/25KVA
Operating DC Voltage	Volts	12	24	24	48	96	96/120	180	240	240
System Capacity	KW	0.8(Bulb)	1.6	2	2.4/4	4/6	6/8	8	12	16
Battery Capacity (Min/Max)	AH	100-250								
SPV Parameters										
SPV Open Circuit Voltage Range (Min-Max)	Volts	18-50	36-100		72-200	144-400	180-500	180-500	180-500	180-500
Max SPV Power	KW	1	2	2.5/3	3/5	5/7.5	7.5/10	10	15	20
Solar Charge Controller Rating	A	60	60	70	70	60	70	60	60	70
Compatible SPV Panels	36/60/72 Cell									
MPPT Based Charge Controller										
Switching Element	MOSFET			IGBT Module						
Controller	DSP									
Type of Charger	MPPT									
MPPT Battery Current Limiting (Default)	25A			40A						
Efficiency	>95%									
Parameters	Battery			Default Value						
PCU Working Mode Selection by Dip Switch/ Selection Switch	Mode	SMART HYBRID PCU		SMART	MODE SELECTION: HYBRID PCU SMART, INV. UPS SELECTION					
Grid Disconnect Solar Present (PCU/Smart)	Volts	According Battery Type Achive Boost (Mains Disconnect after 2min)		TUBULAR	According Battery Type Achive Boost (Mains Disconnect After 2min)				TUBULAR	
Grid Reconnect (SMART/PCU)	Volts	11.8/Batt +/-2%			11-12V				12V	
Low Cut Off	Volts	10.5/Batt+/-2%								
Low Cut Off Recovery by SPV	Volts	11.5/Batt+/-2%								
Low Buzzer	Volts	10.7/Batt+/-2%								
High Cut Off	Volts	16.5/Batt+/-2%								
High Cut Off Recovery	Volts	15/Batt+/-2%								
Boost Charging Volt by SPV TUB/SMF	Volts	SMF	TUB	14.8V +/-2%	-					
Grid Boost Charging Volt TUB/SMF	Volts			14.4V +/-2%						
Float Charging Voltage	Volts			13.7V +/-2%						
Grid Charging Current Enable by Dip Switch(Normal)	Amps	12A +/-2%		NA						
Grid Charging Current Enable by Dip Switch(High)	Amps	15A +/-2%		High						
Grid Charging Current Disable by Dip Switch	Amps	0Amp		Enable						
Output										
Output @ No Load	Volts	230+/-2%								
Output Frequency	Hz	50+/-2%								
Overload	Amps	3.4	6.9	8.6/10	10.4/17.3	17.3/26	26/34.7	34.7	52.2	69.5
Overload Retry UPS Mode	-	NA								
Overload Retry Inverter Mode	-	3 Times								
Grid										
Battery Charging Stages	-	5(Softstart, Boost, Absorption, Float, Equalize)								
Input Voltage	-	1 Phase-3 Wire, P, N, E								
Voltage Range(Inverter)	V	90-290 +/-2%								
Voltage Range(UPS)	V	175-255 +/-2%								
Frequency Range	Hz	45-55+/-2%								
Display										
Display	Alphanumeric	16x4 LCD		20x4 LCD						
Parameters	Output(Inverter)	Voltage, Current, Power & Frequency								
	Input(Grid)	Voltage & Frequency								
	Solar	Voltage, Current, Power & Energy (Optional)								
	Battery	Voltage, Current								
	Status/Faults	Invert Status, Mains Status, Charger Status, Solar Status & Battery Status/Charging Stages/Over Temp, System Uptime								
Inverter										
INV/UPS (IT Mode)	-	By Dip Switch			Front Switch					
Output Voltage	Volts	220+/-2%			230+/-2%					
Efficiency	-	≥80%		≥85%						
Output Waveform	-	Pure Sine Wave								
Frequency	Hz	50Hz								
Changeover (Mains to Inverter)	ms	<10ms								
Output Power Factor	Pf	0.8								
Switches	-	System On/Off, Modes Selection: Hybrid PCU Smart, INV UPS Selection								
Indication	-	Inverter On, Mains in Range, Battery Low/High, Charger On, Overload, Faults								
Alarm	-	Battery Low, Overload, Charger On, Inverter On, Solar Charger On								
Protection	-	Overload, Short Circuit Protection, Over Voltage, SPV Surge & Transient Protection (MOV Varistors), Reverse Polarity of Battery, Over Temperature Protection, Under Voltage & Over Voltage Protection								
Cooling	-	Forced Air Cooling (Temperature Controlled)								
Operating Temperature	c	0-50								
Operating Humidity	%	95								

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