

Afriipower

AFRIPOWER PRODUCT SPECIFICATIONS

3.5KVA/48V MPPT Based Solar Inverter

Product Specification Range of MPPT Solar PCU.		3.5KVA/48V
MAINS INPUT MODE		
Mains AC low cut UPS mode		175VAC ± 10VAC
Mains AC low cut recovery UPS mode		185VAC ± 10VAC
Mains AC high cut UPS mode		265VAC ± 10VAC
Mains AC high cut recovery UPS mode		255VAC ± 10VAC
Mains AC low cut WUPS mode		90VAC ± 10VAC
Mains AC low cut recovery WUPS mode		110VAC ± 10VAC
Mains AC high cut WUPS mode		295VAC ± 10VAC
Mains AC high cut recovery WUPS mode		285VAC ± 10VAC
Input Frequency Range		48Hz to 55Hz
Charging Current By Grid		15±1Amp.
Voltage Output in Mains Mode		Same as input
Frequency Output in Mains Mode		Same as input
BATTERY		
Battery Type		LA / Tubular / SMF
DC input voltage		48V
Battery Quantity 12V 100Ah to 220Ah		4
Float charging voltage		54.8V±0.2V
Boost charging voltage for LA Battery		56V±0.2V
Boost charging voltage for Tubular and SMF Battery		58V±0.2V
Bulk Absorption Battery Voltage		59.2V±0.2V
Battery deep Discharge Recovery		Yes (Independent Charger to Recover Deep Discharge Battery)
BACKUP MODE		
Output voltage		220VAC +5% -10% (until battery low alarm)
Output frequency		50Hz ± 0.2 Hz
Output waveform		Pure Sine Wave ≤ 5% THD
No Load current		1.5Amp.
Capacity		4KVA
Capacity Resistive Bulb Load		3000 Watt
Discharging current @ full load		60A ± 2A
Low Battery Warning		43.2V±0.2V
Low Battery Cut		41.6V±0.2V
Change over time UPS mode		< 10msec
Change over time WUPS mode		< 25msec
Switching Element		MOSFET
Cooling		Temp. Controlled Fan
PROTECTIONS		
Overload in backup mode		≤ 100% Load Continuously run. >100% to <120% Load, System will shut down in 3 min. >120% to <140% Load, System will shut down in 1 min. >140% to <160% Load, System will shut down in 17sec. >160% to <180% Load, System will shut down in 6sec. >180% to <200% Load, System will shut down in 3sec. >200% Load, System will show short circuit.
Short Circuit in Backup Mode		System will shut down after 3 - retries in case of output short circuit
Short Circuit in Mains Mode		Mains MCB Trip
Backfeed		System will shutdown in case of backfeed and there is no retry
Over temperature		Yes provided, if heat sink temperature goes above 100°C System will shut down
Reverse Battery		Protected by DC MCB
Phase to Phase protection in mains mode		Yes provided
SOLAR CHARGE CONTROLLER		
Solar Charge Controller type		MPPT
Maxi Panel wattage can be connected		3000 WATT
Maximum PV Voltage		135V
Maximum Battery current		50 Amp.
Reverse PV protection		Yes provided, it will also display on LCD panel
Switches		Menu[Select],up,Down,Esc.
Reverse current flow to PV		Yes provided
Sharing of current when PV and Grid Both are available		If PV power is not sufficient enough to charge the battery, system will start sharing battery charging from PV and grid.
DISPLAY AND ALARMS		
LCD Initial Display		Welcome, System Capacity, Charging Till 90VAC and Deep Discharge Battery, System Setting, UPS / WUPS mode, I/P range 90-295VAC / 170-265VAC, Battert Type Selected LA / SMF / Tubular, DOD.
LCD Status Display		Mains ON, Input Voltage, Input Frequency, Battery Voltage, Battery Charging, Battery Charged, Charging Current, Backup Mode, UPS ON, UPS OFF, Battery Voltage, Load %, Output Voltage, Output Frequency, Battery Current, PV Current,PV Voltage, Mains Low Cut, Mains High Cut, Mains Not Available, Mains Frequency Cut
LCD Fault / Protection Status Display		Mains Fuse Below / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Backfeed
Buzzer		Mains Fuse Below / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Backfeed