

## AFRIPOWER PRODUCT SPECIFICATION

### 1KVA/12V MPPT Based Solar Inverter

#### 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	12V
Battery Quantity 12V 100Ah to 220Ah	1
Float charging voltage	13.7V±0.2V
Boost charging voltage for LA Battery	14V±0.2V
Boost charging voltage for Tubular and SMF Battery	14.5V±0.2V
Bulk Absorbion Battery Voltage	14.8V±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	1100VA
Capacity Resistive Bulb Load	820watt
Discharging current @ full load	68A ± 2A
Low Battery Warning	10.8V±0.2V
Low Battery Cut	10.6V±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	<p>≤ 100% Load Continuously run.</p> <p>&gt;100% to &lt;120% Load, System will shut down in 3 min.</p> <p>&gt;120% to &lt;140% Load, System will shut down in 1 min.</p> <p>&gt;140% to &lt;160% Load, System will shut down in 17sec.</p> <p>&gt;160% to &lt;180% Load, System will shut down in 6sec.</p> <p>&gt;180% to &lt;200% Load, System will shut down in 3sec.</p> <p>&gt;200% Load, System will show short circuit.</p>
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	DC fuse will burn
Phase to Phase protection in mains mode	Yes provided

#### SOLAR CHARGE CONTROLLER

Solar Charge Controller type	MPPT
Maxi Panel wattage can be connected	750 WATT
Maximum PV Voltage	50V
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 Belown / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Backfeed
Buzzer	Mains Fuse Belown / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Backfeed