

# UPS - HUPS

MADE IN INDIA



## Features:

- Zero volt pick up charges the deep discharged battery also
- Gravity profile management - suitable for new / old battery
- Green mode shut down in 15 hours at no load in backup mode thus saves battery backup.
- Oscillation charging reduces charging bills by 75 %.
- Complete protection - Short circuit , phase reversal, AC back feed and battery over voltage protection
- Can run on 1/2 VA HP tullu water pump on 1 KVA & 1HP tullu water pump on 1650 VA models
- Designer Looks.
- User friendly touch switch on the front panel.
- High power new generation mosfet Capable of handling high in rush/ surge content
- Cooling fan inside to reduce the operating temperature of UPS, enhances the Performance.



## TECHNICAL SPECIFICATIONS

INVERTER MODE TESTING:		Euro 1100/12V LCD - HUPS
S.No.	Parameter	Specifications
1	Output voltage at No load	220±5V (MAX)
2	No load Inverter Batt current.	<=2.0A
3	No load Inverter output Frequency.	50.0±0.5Hz
4	Full load Inverter output Frequency.	50.0±0.5Hz
5	Full load Inverter output wave form.	Sine Wave
6	Full load Watt(Bulb load)	>=Rating*0.8
7	Inverter short circuit test.	O/P short
8	Battery current at full load.	56A+/-2AMP
9	Fan working test.	During Charging and Backup
10	Battery low voltage alarm	10.8V+/-0.2V
11	Battery low cut/trip voltage	10.5V+/-0.2V
S.No.	Features	Specifications
1	Batt Low Retry INV mode	1
2	Batt Low Retry UPS mode	0
3	Over Lode Retry UPS mode	0
4	Overload Retry INV mode	5
5	Short Circuit Retry	Instantaneous
6	Input and Output Short	short ckt protection
Audio & Visual Indication		Specifications
1	Batt Low Alarm	Audio & Visual
2	Batt Low Shutdown	Visual
3	Overload Alarm	Audio & Visual
4	Overload Shutdown	Visual
5	Short circuit Shutdown	Audio & Visual
MAINS MODE TESTING		Specifications
Parameter		Specifications
UPS MODE		UPS MODE // INV MODE
1	Mains voltage low cut	180+5V // 100V+10V
2	Mains voltage low recovery	190V+5V // 110V+10V
3	Mains voltage high cut	265V+5V // 285V+10V
4	Mains voltage high cut recovery	255V+5V // 275+10V
5	Output Frequency	same as in put
6	Change over time Mains to Inverter.	< 20ms INV // 05ms UPS
7	Change over time Inverter to Mains.	<10ms INV // 05ms UPS
8	Output wave form.	SAME AS I/P
CHARGING MODE TESTING :		Specifications
Parameter		Specifications
1	Battery Boost voltage	14.50V TB/14V SMF ±0.2V
2	Battery charging current.	LC10A / HC15A ±1.0A
Audio & Visual indication		Specifications
1	Mains	Visual
2	Inverter on	Visual
3	Battery charging	Visual
4	Battery charged	Visual ( Battery Bar full on LCD Display)
5	Battery Low	Audio & Visual
6	Overload	Audio & Visual

Parameters	Normal Mode	UPS Mode
Mains AC Lower voltage limit	100 + 10V AC	180 + 5VAC
Mains AC Lower Recovery volt	110 + 10VAC	190V + 5VAC
Mains AC Higher voltage limit	285V + 10V AC	265V + 5VAC
Mains AC Higher Recovery volt	275V + 10V AC	255V + 5V AC
No Load output voltage	220VA + 10V	
Battery Low Alarm	10.80V + 0.2V per Battery	
Battery Low cut off voltage	10.50V + 0.2V ( per Belt )	
Mains O/P Frequency	Same as input	
UPS O/P Frequency	50 + 1.0 HZ	

### Solar Charge Controller

Technology	DSP based intelligent battery charging and charge sharing with mains
Charge Controller type	PWM based
Solar battery charging current	40AMP / 50AMP
Peak Solar PV current	40AMP / 50AMP
Solar battery low cut voltage	
PV Reverse polarity protection	Available
Reverse current flow to PV protection	Available
Battery Charging	
Battery Charging volt range	110 to 280V 180 to 260V
Mains Charging Current	15 AMP ± 1 AMP
Trickle Charging Current limit	0.5±0.3A
Boost Voltage	14.50V ± 0.1V (Per Battery)
Float Voltage	13.6V ± 0.2V ( Per Battery)
Overload	100 ± 3% (with auto reset function)
Short Circuit Protection	> 300% Load (with manual reset function)
Changeover time	<15 msec. upto 2 KVA < 10 msec.

As a process of continuous product improvement, the specifications are subject to change without notice.

# UPS - PCU

## MADE IN INDIA



### Features:

- Next Gen SOLAR HYBRID PCU Incorporates DSP based technology
- The system operates with inbuilt intelligence to utilize the Solar Power efficiently in combination with AC main charging.
- In day time Solar energy is utilized for charging the batteries and running the load. Thus assured saving in electricity bill.
- Best suited for longer and Frequent Power cuts areas.
- Increased battery life because of ripples free charging from Solar panel as well as charging from the ac mains supply.
- Reverse current flow protection from battery to Solar panel generally during night
- Maximum utilization of Solar energy because of smart Solar PCU functionality,
- Solar PV reverse connection protection.
- Smart battery charging with priority to Solar.
- Inbuilt PWM Solar charge controller.
- Multicolor user friendly interactive LCD display system.
- Dual mode of working :- Wide / Narrow  
Narrow mode :- Fast switching input voltage range from 180 V to 265 V  
Wide mode :- Wide input voltage range from 100 V to 285 V.
- Longer backup as Solar panel & battery both supports the load.



## TECHNICAL SPECIFICATIONS

INVERTER MODE TESTING:	EURO 2050 Solar PCU
Parameters	Specifications
Type of Charger	PWM Charger
Nominal Battery Voltage	24V
Input Voltage	220V A.C.±2%
Output Voltage	220V A.C.±2%
Output(Max. Resistive Load)	1050W
No load Power consumption	<2 A
Output Frequency	50Hz
Short Circuit Protection	Yes
Low Battery Alarm	22.0 V D.C. ±2%
Low Batt. cut	21.0V D.C. ±2%
<b>Protections:</b>	
Over Voltage both at input & output	Yes
Over Current both at input & output	Yes
Over Frequency	Yes
Surge Voltage	Yes
Instrumentation Audio Signal	Low Batt. , Short circuit , Over load
Solar Charging Voltage	28.60 V ±3%
Solar Reconnect Voltage	27.2 V DC.±3%
Recommended panel wattage(Max.)	1250W
Panel Voltage(Voc) Max.	45V
Panel Voltage(Vmp) Max.	36V
Charging Voltage (LI)	28.80V D.C. ±3%
Reconnect Voltage(LI)	27.20V D.C. ±3%
Charging Voltage Tublar	28.0V D.C. ±3%
Reconnect Voltage Tublar	26.4V D.C. ±3%
Grid Charging	15 Amp.±5%
Inverter High Voltage Cut	290V AC.±5%
Inverter Low Voltage Cut	90V AC.±5%
UPS High Voltage Cut	260 V AC.±5%
UPS Low Voltage Cut	185 V AC.±5%
Battery Terminal Wire	10Sq. mm Length=800mm
Display	LCD (16*2)mm

MAINS MODE		EURO 2550 PCU	
1	Mains AC low cut UPS mode	175VAC±10VAC	
2	Mains AC low cut recovery UPS mode	185VAC±10VAC	
3	Mains AC high cut UPS mode	265VAC±10VAC	
4	Mains AC high cut recovery UPS mode	255VAC±10VAC	
5	Mains AC low cut WUPS mode	90VAC±10VAC	
6	Mains AC low cut recovery WUPS mode	110VAC±10VAC	
7	Mains AC high cut WUPS mode	295VAC±10VAC	
8	Mains AC high cut recovery WUPS mode	285VAC±10VAC	
9	Input frequency range	48HZ to 52HZ	
10	Voltage output in Mains mode	SAME AS INPUT	
11	Charging current @ Grid priority	20A±1A	
12	Charging current @ Battery priority		
13	Frequency output in Mains mode	SAME AS INPUT	
<b>BATTERY</b>			
1	Battery type	LA/TUB/SMF	
2	DC input voltage	24V	
3	Battery quantity 12v 100AH to 220AH	2	
4	Float charging voltage	27.4V±0.2V	
5	Boost charging voltage for LA battery	28V±0.2V	
6	Boost charging voltage for Tubular and SMF Battery	29V±0.2V	
7	Battery deep Discharge Recovery	Independent charger to recover Deep discharge battery	
<b>BACKUP MODE</b>			
1	Output voltage	220V±5%-10%(Untill battery low alarm)	
2	Output frequency	50Hz ± 0.2Hz	
3	Output waveform	Pure Sine Wave	
4	No load current	1.3A±0.2A	
5	Capacity resistive bulb load	1800watt	
6	Discharging current @ full load	70A±2Amp.	
7	Low battery warning	21.6V±0.2V	
8	Low battery cut	21.2V±0.2V	
9	Change over time UPS mode	<10msec	
10	Change over time WUPS mode	<25msec	
11	Output voltage at full load	≥200VAC	
<b>PROTECTION</b>			
1	Overload in backup mode	≤100% load Continuously run	
2	Short circuit in Backup mode	System will shutdown after 3 retries	
3	Short circuit in Mains mode	AC MCB will trip	
4	Reverse Battery	DC fuse will blown	
<b>SOLAR CHARGE CONTROLLER</b>			
1	Solar charge controller type	PWM	
2	Maximum Panel wattage can be connected	1500WATT	
3	Maximum PV current	50AMP.	
4	Reverse PV protection	YES provided, it will also display on LCD panel	
5	Reverse current flow to PV	YES provided, it will also display on LCD panel	
6	Option for Grid and battery priority	YES provided, user can set according to his choice whether to consume Grid or battery in order to save his bill.	
7	Sharing of current when PV and Grid Both are available	If PV power is not sufficient to charge the battery, system will start sharing battery charging from mains	
<b>SAFETY</b>			
1	HV test input to Earth	Leakage current <5ma when 1.5kv applied for 1 min	
2	HV test Output to earth	Leakage current <5ma when 1.5kv applied for 1 min	
3	IR test input to earth	>5MΩ between @500VDC	
4	IR test output to Earth	>5MΩ between @500VDC	
5	Earth leakage current in Mains mode	<2.5mA	
6	Earth leakage current in Backup mode	<2.5mA	
7	Operating temprature	0° to 50°C	