







**POWER SERIES**

**INTELLIGENT PURE SINE WAVE INVERTER  
NON-SOLAR INVERTER**

**BOOST**  
UPS PURE SINE WAVE

## Salient Features

-  BUILT IN AUTOMATIC STABILIZER TO BOOST THE MAINS VOLTAGE UP TO 30%
-  UP TO 30% EXTRA CURRENT INCASE OF EMERGENCY THROUGH EMERGENCY CURRENT BOOST
-  BATTERY CHARGING AT LOW MAINS (90 VOLT) FOR LONGER BACKUP AND BATTERY LIFE
-  OPTIONAL MONITORING & CONTROLLING THROUGH SMART PHONE & WI-FI

-  ENHANCED TEMPERATURE PROTECTION
-  EASILY UPGRADABLE TO SOLAR UPS/PCU
-  INTERACTIVE MULTI COLOR LCD DISPLAY
-  PURE SINE WAVE BOOST TECHNOLOGY

## Application

- Power Backup for House Hold as well as Computers.
- Emergency Power System
- TV Set, Fan, Tube Light, CFL etc

\* Conditions Apply

**AVAILABLE RANGE**

**1000VA - 1500VA**

## TECHNICAL SPECIFICATIONS\*

## TROUBLE SHOOTING

SINo	Technical Parameters	Specifications
<b>A</b>	<b>BATTERY MODE</b>	<b>1000VA/12V, 1500VA/12V</b>
A.1	No Load Current @ Switch OFF	≤ 180 mA
A.2	Battery Voltage @ No LOAD	As per Table A'
A.3	Output Voltage @ No LOAD	225 ± 7V
A.4	Output Frequency @ No LOAD	50 ± 1Hz
A.5	Output Frequency @ Full LOAD	50 ± 1Hz
A.6	Battery Current @ Full LOAD	As per Table A'
A.7	Fan Run	Fan Operates Properly
A.8	Short Circuit	> 300%
A.9	Harmonic distortion in O/P wavefrom(linear load)	≤ 3%

<b>B</b>	<b>UPS MODE</b>	
B.1	Low Cut With Phase Match	145 ± 5V
B.2	Low Cut Recovery With Phase Match	9-12V Hysterisis from > Low Cut Voltage
B.3	High Cut With Phase Match	270 ± 5V
B.4	High Cut Reovery With Phase Match	9-12V Hysterisis from < High Cut Voltage
B.5	Change Over Time From Mains To UPS	≤ 10msec
B.6	Change Over Time From UPS To Mains	≤ 7msec

<b>C</b>	<b>NORMAL MODE</b>	
C.1	Low Cut With Phase Match	90 ± 5V
C.2	Low Cut Recovery With Phase Match	9-12V Hysterisis > Low Cut Voltage
C.3	High Cut With Phase Match	290 ± 5V
C.4	High Cut Reovery With Phase Match	9-12V Hysterisis < High Cut Voltage
C.5	Change Over Time From Mains To UPS	≤ 20msec
C.6	Change Over Time From UPS To Mains	≤ 10msec

<b>D</b>	<b>CHARGING MODE</b>	
D.1	Low Charging Current @ 220V AC (NC)	25% less of HC
D.2	High Charging Current @ 220V AC (HC)	As per Table A'
D.3	Boost Charging Voltage (HC/NC)	14.4 V ( per Battery)
D.4	Float Charging Voltage (HC/NC)	13.7 ± 0.2V (per Battery )

<b>E</b>	<b>PROTECTIONS</b>	
E.1	Over Load Protection with Alarm	Over Load Shut Down After 6 Auto Retries;
E.2	Over Load Shut Down Reset	Through ON/OFF Switch & Mains
E.3	Battery Low Alarm	10.6± 0.2V (per Battery )
E.4	Battery Low Protection	Battery Low Shut Down After 4 Auto Retries;
E.5	Battery Low Shut Down Reset	Through ON/OFF Switch & Mains
E.6	Over Temperature Protection With Alarm	should be OK(90 ± 5 °C);
E.7	Short Circuit Protection (Battery Mode)	Should be functional
E.8	Short Circuit Retry	One
E.9	Short Circuit Reset	Through ON/OFF Switch & Mains
E.10	Mains Fuse Blown /Thermal Reset Switch Trip	Should be functional (Reset the fuse and off &ON the System)

<b>F</b>	<b>EFFICIENT CURRENT AT LOW MAINS IN NORMAL MODE ONLY</b>	
F.1	Charging Current @ 100V AC	> 8± 1A

Accessible Parameters Via Operating Display	
1. AC mains voltage	6. Warnings or Protections Status
2. O/P Load in %	i) Overload
3. Battery input voltage	ii) Short Circuit
4. Battery Charging (Bar Graph)	iii) Fuse Trip
5. Discharging current (Bar Graph)	iv) Over Temp.
	v) Empty 'Battery' Blinking

TABEL 'A'						
System Rating	Specified Vdc	Max. NLC @ OFF State	Max. NLC @ ON State	Full LOAD DC Amp	Charging Amp (HC)	NC
<b>BOOST (1000-12V)</b>	12V DC	≤ 220mA	≤ 2.0A	65± 2A	18 ± 1A	25% Less of HC
<b>BOOST (1500-12V)</b>	12V DC	≤ 280mA	≤ 2.6A	90± 2A	26 ± 1A	

### NOTE:-

- Switch 4 is used to Enable BOOST MODE with blinking of LED (Yellow) @ 1sec
- BOOST MODE mode disable in low batt, overload, short ckt., mains mode , and befor over temp.
- it automatically boosts up the mains voltage upto 30%, useful when mains supply below 185V.
- 30% EXTRA Load can Run in BOOST Mode for 15 Minute .

Problem/Symptoms	Possible Cause	Solution
No indication on LCD OR LCD not ON	Poor battery condition or Battery Fuse blown/ Battery MCB trip	Use new battery or make proper connections or replace battery fuse/ Reset the Battery MCB
'Overload' Fault with continuous buzzer #	System is Overload	Reduce the excessive load from the PCU & Off/ On system
Unit trips frequently at UPS mode	System is Overload	Reduce the load and reset the PCU
'Short Circuit' Fault with continuous buzzer #	House wiring Short Circuited	Get the House Wiring checked & Off/On system
'Thermometer' blink - Thermal Trip with continuous buzzer #	System under Thermal Trip/ shutdown	Call for Service support. There is overheat problem in the PCU
'Fuse Trip' Fault with continuous buzzer #	Mains MCB Trip	Reset AC mains MCB. Check and reduce the load connected to the PCU
'PV Reverse' Fault	Solar wires connected in reverse	Interchange the wires PV Panels at PCU end
Low surge power	Weak batteries cable too long	Refer the cable and battery recommendations in this manual
Empty 'Battery' Blinking with Continuous buzzer #	Battery low cut	Remove all loads and switch ON/OFF the system. OR Allow the battery to charge when the mains is resumed before running the system on the battery again.
Err1	LCD Communication Error	Contact to Auth. Service Center



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### Salient Features

-  BATTERY CHARGING AT LOW MAINS (100 VOLT) FOR LONGER BACKUP AND BATTERY LIFE
-  OPTIONAL MONITORING & CONTROLLING THROUGH SMART PHONE & WI-FI
-  ENHANCED TEMPERATURE PROTECTION
-  EASILY UPGRADABLE TO SOLAR UPS/PCU
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### Application

- Power Backup for House Hold as well as Computers.
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\* Conditions Apply

**AVAILABLE RANGE**

**2200VA - 3200VA**

## TECHNICAL SPECIFICATIONS\*

S.N.	TECHNICAL PARAMETERS	SPECIFICATIONS
<b>A</b>	<b>BATTERY MODE</b>	<b>2200VA/24V, 3200VA/24V</b>
A.1	No Load Current @ Switch OFF	≤ 200mA
A.2	Battery Voltage @ No LOAD	24V
A.3	Output Voltage @ No LOAD	225 ± 7V
A.4	Output Frequency @ No LOAD	50 ± 1Hz
A.5	Output Frequency @ Full LOAD	50 ± 1Hz
A.6	Battery Current @ Full LOAD	100± 1A
A.7	Fan Run @ Very First Start Up	Fan Operates Properly
A.8	Short Circuit	> 300% Load
A.9	Harmonic distortion in O/P wavefrom(linear load)	≤ 3%
<b>B</b>	<b>UPS MODE</b>	
B.1	Low Cut With Phase Match	180 ± 5V
B.2	Low Cut Recovery With Phase Match	9-12V Hysterisis from > Low Cut Voltage
B.3	High Cut With Phase Match	270 ± 5V
B.4	High Cut Reovery With Phase Match	9-12V Hysterisis from < High Cut Voltage
B.5	Change Over Time From Mains To UPS	≤ 10msec
B.6	Change Over Time From UPS To Mains	≤ 8msec
<b>C</b>	<b>NORMAL MODE</b>	
C.1	Low Cut With Phase Match	100 ± 5V
C.2	Low Cut Recovery With Phase Match	9-12V Hysterisis > Low Cut Voltage
C.3	High Cut With Phase Match	290 ± 5V
C.4	High Cut Reovery With Phase Match	9-12V Hysterisis < High Cut Voltage
C.5	Change Over Time From Mains To UPS	≤ 20msec
C.6	Change Over Time From UPS To Mains	≤ 10msec
C.7	Mains Tap Cut Voltage	180 ± 5V
C.8	Mains Tap Recovery Voltage	9-12V Hysterisis > Tapping Cut Voltage
<b>D</b>	<b>CHARGING MODE</b>	
D.1	Low Charging Current @ 220V AC (NC)	25%Less of HC
D.2	High Charging Current @ 220V AC (HC)	24 ± 1A
D.3	Boost Charging Voltage (HC/NC)	28.8 ± .2V
D.4	Float Charging Voltage (HC/NC)	27.4 ± .2V
<b>E</b>	<b>PROTECTIONS</b>	
E.1	Over Load Protection with Alarm	Shut Down After 6 Auto Retries;
E.2	Over Load Shut Dowm Reset	Through ON/OFF Switch & Mains
E.3	Battery Low Alarm	21.6± 0.4V
E.4	Battery Low Protection	21.2± 0.4V ;Shut Down After 4 Auto Retries;
E.5	Battery Low Shut Down Reset	Through ON/OFF Switch & Mains
E.6	Over Temperatrure Protection With Alarm	should be OK(90 ± 5 °C);
E.7	Short Circuit Protection (Battery Mode)	Should be functional
E.8	Short Circuit Retry	One
E.9	Short Circuit Reset	Through ON/OFF Switch & Mains
E.10	Mains Fuse Trip	Should be functional
<b>F</b>	<b>EFFICIENT CURRENT AT LOW MAINS IN NORMAL MODE ONLY</b>	
F.1	Charging Current @ 100V AC	> 8± 1A

### Accessible Parameters Via Operating LCD Display

1. AC mains voltage	5. Faults Status
2. O/P Load in %	i) Overload
3. Battery input voltage	ii) Short Circuit
4. Battery Charging/ Discharging Current (Bar Graph)	iii) Fuse Trip
	iv) Over Temp.
	v) Empty 'Battery' Blinking

## TROUBLE SHOOTING

Problem/Symptoms	Possible Cause	Solution
No indication on LCD OR LCD not ON	Poor battery condition or Battery Fuse blown/ Battery MCB trip	Use new battery or make proper connections or replace battery fuse/ Reset the Battery MCB
'Overload' Fault with continuous buzzer #	System is Overload	Reduce the excessive load from the PCU & Off/ On system
Unit trips frequently at UPS mode	System is Overload	Reduce the load and reset the PCU
'Short Circuit' Fault with continuous buzzer #	House wiring Short Circuited	Get the House Wiring checked & Off/On system
'Thermometer' blink - Thermal Trip with continuous buzzer #	System under Thermal Trip/ shutdown	Call for Service support. There is overheat problem in the PCU
'Fuse Trip' Fault with continuous buzzer #	Mains MCB Trip	Reset AC mains MCB. Check and reduce the load connected to the PCU
'PV Reverse' Fault	Solar wires connected in reverse	Interchange the wires PV Panels at PCU end
Low surge power	Weak batteries cable too long	Refer the cable and battery recommendations in this manual
Empty 'Battery' Blinking with Continuous buzzer #	Battery low cut	Remove all loads and switch ON/OFF the system. OR Allow the battery to charge when the mains is resumed before running the system on the battery again.
Err1	LCD Communication Error	Contact to Auth. Service Center

# - Buzzer will sound only when the UPS switch is in ON condition



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### Salient Features

-  BATTERY CHARGING AT LOW MAINS (100 VOLT) FOR LONGER BACKUP AND BATTERY LIFE
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### Application

- Power Backup for House Hold as well as Computers.
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\* Conditions Apply

**AVAILABLE RANGE**

**3.8KVA/48V**

## TECHNICAL SPECIFICATIONS\*

S/No	TECHNICAL PARAMETERS	SPECIFICATIONS
<b>A</b>	<b>BATTERY MODE</b>	<b>3.8KVA/48V</b>
A.1	No Load Current @ Switch OFF	≤ 180 mA
A.2	Battery Voltage @ No LOAD	48V
A.3	Output Voltage @ No LOAD	225 ± 7V
A.4	Output Frequency @ No LOAD	50 ± 1Hz
A.5	Output Frequency @ Full LOAD	50 ± 1Hz
A.6	Output AC Current @ Full LOAD	12.5±/-0.5A
A.7	Battery Current @ Full LOAD	69 ± 1 Amp.
A.8	Fan Run @ Very First Start Up	Fan Operates Properly
A.9	Short Circuit	> 300%
A.10	Harmonic distortion in O/P wavefrom(linear load)	≤ 3%
<b>B</b>	<b>UPS MODE</b>	
B.1	Low Cut With Phase Match	180 ± 5V
B.2	Low Cut Recovery With Phase Match	9-12V Hysterisis from > Low Cut Voltage
B.3	High Cut With Phase Match	260 ± 5V
B.4	High Cut Reovery With Phase Match	9-12V Hysterisis from < High Cut Voltage
B.5	Change Over Time From Mains To UPS	≤ 10msec
B.6	Change Over Time From UPS To Mains	≤ 10msec
<b>C</b>	<b>NORMAL MODE</b>	
C.1	Low Cut With Phase Match	100 ± 5V
C.2	Low Cut Recovery With Phase Match	9-12V Hysterisis > Low Cut Voltage
C.3	High Cut With Phase Match	280 ± 5V
C.4	High Cut Reovery With Phase Match	9-12V Hysterisis < High Cut Voltage
C.5	Change Over Time From Mains To UPS	≤ 40msec
C.6	Change Over Time From UPS To Mains	≤ 10msec
<b>D</b>	<b>CHARGING MODE</b>	
D.1	Low Charging Current @ 220V AC (NC)	75% OF H.C
D.2	High Charging Current @ 220V AC (HC)	20.0(MAX) ± 1.0A,
D.3	Boost Charging Voltage (HC/NC)	14.4 ± 0.2V (per Battery )
D.4	Float Charging Voltage (HC/NC)	13.7 ± 0.2V (per Battery )
<b>F</b>	<b>Protections</b>	
F.1	Over Load Protection with Alarm	Over Load Shut Down After 6 Auto Retries;
F.2	Over Load Shut Down Reset	Through ON/OFF Switch & Mains
F.3	Battery Low Alarm	10.8± 0.2V (per Battery )
F.4	Battery Low Protection	Battery Low Shut Down After 4 Auto Retries;
F.5	Battery Low Shut Down Reset	Through ON/OFF Switch & Mains
F.6	Over Temperatrure Protection With Alarm	should be OK(90 ± 5 °C);
F.7	Short Circuit @ Mains Mode	AC MCB Trip
F.8	Short Circuit Protection (Battery Mode)	Should be functional
F.9	Short Circuit Retry	One
F.10	Short Circuit Reset	Through ON/OFF Switch & Mains
F.11	Mains MCB Trip	Should be functional

### Accessible Parameters Via Operating LCD Display

1. AC mains voltage	5. Faults Status
2. O/P Load in %	i) Overload
3. Battery input voltage	ii) Short Circuit
4. Battery Charging/ Discharging Current (Bar Graph)	iii) Fuse Trip
	iv) Over Temp.
	v) Empty 'Battery' Blinking

## TROUBLE SHOOTING

Problem/Symptoms	Possible Cause	Solution
No indication on LCD OR LCD not ON	Poor battery condition or Battery Fuse blown/ Battery MCB trip	Use new battery or make proper connections or replace battery fuse/ Reset the Battery MCB
'Overload' Fault with continuous buzzer #	System is Overload	Reduce the excessive load from the PCU & Off/ On system
Unit trips frequently at UPS mode	System is Overload	Reduce the load and reset the PCU
'Short Circuit' Fault with continuous buzzer #	House wiring Short Circuited	Get the House Wiring checked & Off/On system
'Thermometer' blink - Thermal Trip with continuous buzzer #	System under Thermal Trip/ shutdown	Call for Service support. There is overheat problem in the PCU
'Fuse Trip' Fault with continuous buzzer #	Mains MCB Trip	Reset AC mains MCB. Check and reduce the load connected to the PCU
'PV Reverse' Fault	Solar wires connected in reverse	Interchange the wires PV Panels at PCU end
Low surge power	Weak batteries cable too long	Refer the cable and battery recommendations in this manual
Empty 'Battery' Blinking with Continuous buzzer #	Battery low cut	Remove all loads and switch ON/OFF the system. OR Allow the battery to charge when the mains is resumed before running the system on the battery again.
Err1	LCD Communication Error	Contact to Auth. Service Center

# - Buzzer will sound only when the UPS switch is in ON condition



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## Salient Features

-  BATTERY CHARGING AT LOW MAINS (100 VOLT) FOR LONGER BACKUP AND BATTERY LIFE
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## Application

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\* Conditions Apply

## AVAILABLE RANGE

5.5KVA/48V  
10KVA/96V  
10KVA/120V

## TECHNICAL SPECIFICATIONS\*

SINo	TECHNICAL PARAMETERS	SPECIFICATIONS
<b>A</b>	<b>BATTERY MODE</b>	<b>5.5KVA/48V, 10KVA/96V, 10KVA/120V</b>
A.1	No Load Current @ Switch OFF	≤ 180 mA
A.2	Battery Voltage @ No LOAD	48V
A.3	Output Voltage @ No LOAD	225± 7V
A.4	Output Frequency @ No LOAD	50 ± 1Hz
A.5	Output Frequency @ Full LOAD	50 ± 1Hz
A.6	Output AC Current @ Full LOAD	18.5+/-0.5A
A.7	Battery Current @ Full LOAD	104 ± 1 Amp.
A.8	Fan Run @ Very First Start Up	Fan Operates Properly
A.9	Short Circuit	> 300%
A.10	Harmonic distortion in O/P wavefrom(linear load)	≤ 3%
<b>B</b>	<b>UPS MODE</b>	
B.1	Low Cut With Phase Match	185 ± 5V
B.2	Low Cut Recovery With Phase Match	9-12V Hysterisis from > Low Cut Voltage
B.3	High Cut With Phase Match	265 ± 5V
B.4	High Cut Reovery With Phase Match	9-12V Hysterisis from < High Cut Voltage
B.5	Change Over Time From Mains To UPS	≤ 10msec
B.6	Change Over Time From UPS To Mains	≤ 10msec
<b>C</b>	<b>NORMAL MODE</b>	
C.1	Low Cut With Phase Match	105 ± 5V
C.2	Low Cut Recovery With Phase Match	9-12V Hysterisis > Low Cut Voltage
C.3	High Cut With Phase Match	280 ± 5V
C.4	High Cut Reovery With Phase Match	9-12V Hysterisis < High Cut Voltage
C.5	Change Over Time From Mains To UPS	≤ 40msec
C.6	Change Over Time From UPS To Mains	≤ 10msec
<b>D</b>	<b>CHARGING MODE</b>	
D.1	Low Charging Current @ 220V AC (NC)	18.0 ± 1.0A
D.2	High Charging Current @ 220V AC (HC)	24.0 ± 1.0A
D.3	Boost Charging Voltage (HC/NC)	14.4 ± 0.2V (per Battery )
D.4	Float Charging Voltage (HC/NC)	13.7 ± 0.2V (per Battery )
<b>F</b>	<b>PROTECTIONS</b>	
F.1	Over Load Protection with Alarm	Over Load Shut Down After 6 Auto Retries;
F.2	Over Load Shut Down Reset	Through ON/OFF Switch & Mains
F.3	Battery Low Alarm	10.8± 0.2V (per Battery )
F.4	Battery Low Protection	Battery Low Shut Down After 4 Auto Retries;
F.5	Battery Low Shut Down Reset	Through ON/OFF Switch & Mains
F.6	Over Temperatrure Protection With Alarm	should be OK(90 ± 5 °C);
F.7	Float Charging Voltage (HC/NC)	13.7 ± 0.2V (per Battery )
F.8	Short Circuit @ Mains Mode	AC MCB Blown
F.9	Short Circuit Protection (Battery Mode)	Should be functional
F.10	Short Circuit Retry	One
F.11	Short Circuit Reset	Through ON/OFF Switch & Mains
F.12	Mains MCB Trip	Should be functional

### Accessible Parameters Via Operating LCD Display

1. AC mains voltage	5. Faults Status
2. O/P Load in %	i) Overload
3. Battery input voltage	ii) Short Circuit
4. Battery Charging/ Discharging Current (Bar Graph)	iii) Fuse Trip
	iv) Over Temp.
	v) Empty 'Battery' Blinking

## TROUBLE SHOOTING

Problem/Symptoms	Possible Cause	Solution
No indication on LCD OR LCD not ON	Poor battery condition or Battery Fuse blown/ Battery MCB trip	Use new battery or make proper connections or replace battery fuse/ Reset the Battery MCB
'Overload' Fault with continuous buzzer #	System is Overload	Reduce the excessive load from the PCU & Off/ On system
Unit trips frequently at UPS mode	System is Overload	Reduce the load and reset the PCU
'Short Circuit' Fault with continuous buzzer #	House wiring Short Circuited	Get the House Wiring checked & Off/On system
'Thermometer' blink - Thermal Trip with continuous buzzer #	System under Thermal Trip/ shutdown	Call for Service support. There is overheat problem in the PCU
'Fuse Trip' Fault with continuous buzzer #	Mains MCB Trip	Reset AC mains MCB. Check and reduce the load connected to the PCU
'PV Reverse' Fault	Solar wires connected in reverse	Interchange the wires PV Panels at PCU end
Low surge power	Weak batteries cable too long	Refer the cable and battery recommendations in this manual
Empty 'Battery' Blinking with Continuous buzzer #	Battery low cut	Remove all loads and switch ON/OFF the system. OR Allow the battery to charge when the mains is resumed before running the system on the battery again.
Err1	LCD Communication Error	Contact to Auth. Service Center

# - Buzzer will sound only when the UPS switch is in ON condition