

LUMINOUS



HERCULES-SINE-1500

Sine Wave Series

24
MONTHS
WARRANTY

LUMINOUS CARE
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User Manual

1. INTRODUCTION

1.1. Welcome to the ever-increasing family of satisfied LUMINOUS users. All LUMINOUS products like the one you have just purchased undergo a stringent quality check. This instrument provides clean & reliable power to your home, office and commercial establishments and protects them from blackouts, etc. this product is designed to provide you an efficient performance with only minimal care and maintenance at your end. This manual will facilitate you to not only understand the basic working of the LUMINOUS device but will also facilitate the ease of its maintenance and use.

लूमिनस के सन्भुट तथा निरन्तर बढने वाले परिवार में आप का स्वागत है। लूमिनस के सभी प्रोडक्ट्स की क्वालिटी जॉच बड़ी कुशलता से की जाती है। यह उपकरण होम तथा ऑफिस उपकरणों को स्वच्छ एवं विश्वसनीय पावर प्रदान करता है और उन्हें ब्लैकआउट होने से बचाता है। लूमिनस के प्रोडक्ट्स इस तरह से डिजाइन किये जाते हैं ताकि यह आपको अच्छी परफार्मेंस दें तथा इन की देखभाल कम से कम समय और कम से कम खर्च से हो सके। इस मैन्युअल के द्वारा आप को इस लूमिनस उपकरण के प्रारम्भिक कामकाज को समझने और इसकी देखभाल करने में सहायित मिलेगी।

1.2. Luminous HERCULES-SINE-1500 UPS provides backup power to load (fan, bulb, computer etc.)

लूमिनस हरक्युलिस-साइन-1500 यूपीएस बिजली चले जाने के बाद पंखे, बल्ब, कम्प्यूटर इत्यादि को बैकअप पावर प्रदान करता है।

1.3. Normally, the device operates on Mains, supplying power to the load from the utility input. The battery charger uses Mains power to keep the battery at an optimal level. When the power fails, the device transfers the load to the battery and converts the battery's DC power to AC power. The loads operate normally until the battery is exhausted. The load is automatically transferred back to the utility when the normal Mains get restored.

आमतौर पर उपकरण मेन्स पर काम करते हुए लोड को मेन्स से पावर प्रदान करता है। बैट्री चार्जर बैट्री को एक उचित स्तर पर रखने के लिए मेन्स से पावर लेता है। बिजली चले जाने पर उपकरण बैट्री पर काम करते हुए लोड देता है, जब तक बैट्री क्षमता समाप्त नहीं हो जाती। बिजली वापस आने पर लोड अपने आप बैट्री से मेन्स पर ट्रांसफर हो जाता है।

2. SAFETY GUIDELINES please go through these guidelines before connecting the device.

1. Always connect the device to a 230V, 10A/16A, 3 Pin type Mains socket with earthing. The socket must be connected to appropriately protected branch of the Mains (fuse/circuit breaker). Connection to any other type of socket may result in a shock hazard. Kindly ensure that ELCB/RCCB is not connected at either input or output.

उपकरण सदैव दो पोल तथा तीन तार ग्राउंडिंग मेन्स साकेट के साथ जोड़िये। साकेट को मेन्स की उचित सुरक्षित ब्रॉच (फ्यूज / सर्किट ब्रेकर) के साथ जोड़ना चाहिए। किसी और प्रकार के साकेट से जोड़ने से बिजली का झटका लगने की संभावना रहती है। ELCB/RCCB का प्रयोग इनपुट और आउटपुट में न करें।

2. To Switch off the device output, in an emergency, use the switch on the front panel to switch the device off and disconnect the power cord from the Mains & remove at least one battery connector.

आपातकालीन अवस्था में उपकरण की आउटपुट बन्द करने के लिए सामने वाला बटन बन्द करें। पावर के तार को मेन्स से अलग कर दें। बैट्री का कम से कम एक कनेक्टर अलग कर दें।

3. Foreign particles and water must be avoided for the device. Always ensure that no objects containing a liquid are ever kept near the unit.

बाहरी कोई वस्तु या पानी उपकरण के अन्दर नहीं जाना चाहिए। इस बात को ध्यान रखना चाहिए कि गीला या तरल पदार्थ उपकरण के पास नहीं रखना चाहिए।

4. Avoid Installing the device in an excessively humid place or where there is water. Care must be taken to ensure that the device is kept away from heat emitting appliances such as a heater, blower, oven etc. The unit must also be placed in a manner that it avoids exposure to direct sunlight. The place of installation should be well-ventilated and easily accessible for servicing.

उपकरण ऐसे स्थान पर न रखें जहाँ पानी हो या अत्यधिक नमी हो। इस बात का विशेष ध्यान रखा जाए कि उपकरण को उन उपकरणों से दूर रखा जाए जिससे गर्म ताप निकलती है, जैसे हीटर, ब्लोअर और ओवन इत्यादि। उपकरण को ऐसे स्थान पर नहीं लगाना चाहिए जहाँ सीधी धूप आती हो। उपकरण रखने की जगह हवादार और सर्विसिंग के लिए सरलता से पहुँचने योग्य होनी चाहिए।

5. Don't allow any spark near battery. Be sure not to come in contact with battery acid by any means.

बैट्री के निकट कोई चिंगारी न आने दें। बैट्री के तेजाब से किसी भी तरह के सम्पर्क से बचे।

6. Place the battery compartment as near as possible to the device.

बैट्री को उपकरण के नजदीक ही लगाएँ।

7. Always switch off the device and disconnect mains when disconnecting the battery.

बैट्री को हटाने से पहले मेन्स को अवश्य बंद करें।

8. Do not open the device there are dangerous high voltages inside even when power is off, contact the company service engineer only if it is not working properly.

उपकरण को स्वयं ना खोलें और सहायता के लिए सर्विस इंजीनियर की मदद लें।

9. Replace the batteries and the fuse only with same rating and type.

बैट्री और फ्यूज को उसी रेटिंग के और मेक से ही बदलें।

DO'S & DON'TS

Do's

✓ Unplug and switch off the device before touching or cleaning the surfaces.

✓ Unplug the device from the wall outlet during a lightning storm.

Don'ts

✗ Don't block the side ventilation slots by cloth or other material it may result in fire hazard.

✗ Don't place the device near radiation or heat source.

✗ Don't install the device near kitchen sink, laundry, wash bowl, bath tub.

Do's related to battery

- ✓ Wear safety gloves and goggles.
- ✓ Use battery grade water only for battery refilling.
- ✓ Install battery in proper ventilated area.
- ✓ Apply petroleum jelly to terminals of batteries.
- ✓ Place battery horizontally & handle with care.
- ✓ Keep out of reach of children.
- ✓ Connect correct polarity of wires from device with battery.

Don'ts related to battery

- ✗ Don't add impure or mineral water in battery.
- ✗ Don't add acid to the battery as it can cause damage.
- ✗ Don't keep near a moisture area or in direct sunlight.
- ✗ Don't keep the cell caps loose or open.
- ✗ Don't increase the length of battery wire.
- ✗ Don't place the battery at height.
- ✗ Never short the terminals of the battery.
- ✗ Don't over fill the battery cells.
- ✗ Keep away flammable things from the battery.
- ✗ Don't dispose of batteries in fire.
- ✗ Don't open or mutilate batteries.
- ✗ Don't keep tools or metal parts on top of batteries.

3. PHYSICAL DESCRIPTION:

3.1 Front Panel: It has display indicators & ON-OFF Switch



1. ON MAINS : Glows when the commercial Mains is available within normal limits (approx. 90-290V) as input to the unit in unregulated UPS mode and (approx. 180-260V) as input to the unit in regulated UPS mode.

यह चमकता है जब कॉमर्शियल मेन्स इनपुट लगभग (approx. 90-290V) अनरेगुलेटेड यूपीएस मोड में मिलती है और (approx. 180-260V) इनपुट रेगुलेटेड यूपीएस मोड में मिलती है।

2. CHARGING : It indicates battery charging status and shall be ON/OFF as per the charge status of the battery. Charging indication turns OFF when the battery charging is about to be completed.

बैटरी के चार्ज की अवस्था की जांच करता है। इसका ऑन/ऑफ होना बैटरी के चार्ज की अवस्था पर निर्भर करता है। चार्जिंग इंडिकेशन बंद हो जाता है जब बैटरी की चार्जिंग पूरी होने लगती है।

3. ECO : When Switch in Unreg Mode and when the Mains is out of range and the device is running on battery Eco indication turn ON.

यह चमकता है जब बिजली नॉर्मल लिमिट में नहीं है और स्विच अनरेगुलेटेड मोड में हो और उपकरण बैटरी पर काम कर रहा हो।

4. UPS : Glows when the Mains is out of range and the device is running on battery in regulated mode(Switch in regulated Mode).

यह चमकता है जब बिजली नॉर्मल लिमिट में नहीं है और स्विच रेगुलेटेड मोड में हो और उपकरण बैटरी पर काम कर रहा हो।

5. LOW BATTERY : Glows when device trips due to battery energy is getting exhausted.

बैटरी की क्षमता खत्म हो जाने के कारण जब उपकरण ट्रिप हो जाता है, तब यह चमकता है।

6. OVER LOAD: Glows when the device is overloaded in battery mode.

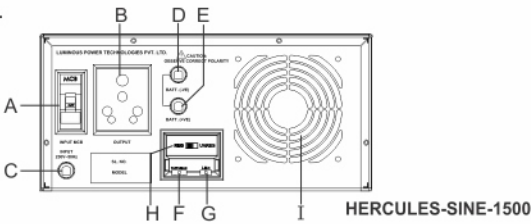
चमकता है जब उपकरण बैटरी मोड पर हो और उस पर क्षमता से अधिक लोड हो।

7. POWER / RESET SWITCH :

This switch indicates whether device is ON/OFF. (Standby LED will glow in switch OFF condition) If the switch is OFF the device will not work in the event of Mains failure, however the charging will continue if Mains is in normal limit. The switch also works as a reset in an event of overload, No-load & Low battery shutdown.

यह स्विच संकेत करता है कि उपकरण चालू है या बंद है। (बंद होने की अवस्था में स्टैंडबाय एलईडी चमकने लगेगा) यदि स्विच बंद है तो उपकरण मेन्स ना होने के कारण काम नहीं करेगा। हालांकि मेन्स सामान्य सीमा में है तो चार्जिंग जारी रहेगी। यह स्विच ओवरलोड, नो-लोड और लो बैटरी शटडाउन के मामले में रीसेट के रूप में भी काम करता है।

3.2 THE BACK PANEL



A) MAINS MCB : This is connected at the input of the device and MCB will trip in case of short-circuit or overload at output in Main mode.

यह उपकरण की इनपुट से जुड़ा है। मेन्स की अवस्था में आउटपुट पर शार्ट सर्किट या ओवरलोड हो जाए तो यह एमसीबी ट्रिप हो जाएगी।

B) OUTPUT SOCKET : This socket is provided for connecting the output of the device to the load.

यह साकेट लोड को उपकरण के आउटपुट से जोड़ने के लिए होता है।

C) MAINS LEAD : This is used to connect input AC supply (the commercial supply) to the device.

इसका प्रयोग मेन्स सप्लाई यूपीएस से जोड़ने के लिए होता है।

D) NEGATIVE BATTERY LEAD: The negative end of the battery is connected to this lead.

बैटरी का नेगेटिव सिरा इस लीड से जोड़ने के लिए होता है।

E) POSITIVE BATTERY LEAD : The positive end of the battery is connected to this lead.

बैटरी का पॉजिटिव सिरा इस लीड से जोड़ने के लिए होता है।

F) BATTERY TYPE SELECTION : This switch should be selected as per battery type.

इस स्विच को बैटरी प्रकार के प्रति चयन किया जाना चाहिए।

Battery Type	Switch Selection
Tubular	TU
Flat Plate	FP
SMF / VRLA	SM
Local / Un-branded	LC

G) BATTERY CHARGING SELECTION : This switch should be selected as per connected battery capacity. Please refer the below table for selecting the switch position.

बैटरी की क्षमता के अनुसार इस स्विच का चयन किया जाना चाहिए। स्विच की स्थिति के चयन के लिए नीचे दी गई तालिका देखें।

1500	Charging Current Selection Jumper
Battery Capacity	
80Ah to 120Ah	L
120Ah to 150Ah	M
165Ah to 220Ah	H

H) SWITCH (MODE SELECTION)

Regulated UPS Mode (REG) : Normally Switch should be kept in this mode while computer has to be run as this will ensure regulated voltage input of 180V to 260V which is suitable for most of the computers. If the input voltage goes beyond this limit, device will run on battery and will restore its operation in Mains mode on restoration of normal Mains.

रेगुलेटेड यूपीएस मोड : सामान्यतः स्विच को इस अवस्था में रखना चाहिए जब कम्प्यूटर चलाना हो, क्योंकि यह ज्यादातर कम्प्यूटरों को 180V से 260V नियमित इनपुट वोल्टेज सुनिश्चित करता है। यदि इस दौरान इनपुट वोल्टेज 180V से 260V से कम या ज्यादा हो जाएगी तो उपकरण बैटरी मोड पर चलना शुरू कर देगा और जैसे ही मेन्स नॉर्मल हो जाएगी यह मेन्स मोड में वापिस आ जाएगा।

Note: When UPS mode is selected and ECO LED is glowing, then toggle the switch once.

जब यूपीएस मोड सलैक्ट हो और इको एल ई डी चमक रही हो, तब स्विच को एक बार रिसेट (टॉगल) करें।

Unregulated UPS Mode (UNREG) : This mode can be used in case of computers having in-built regulation mechanism, or externally connected automatic voltage regulator to take care of wide input voltage fluctuation of 85V to 290V.

अनरेगुलेटेड यूपीएस मोड : यदि कम्प्यूटर में अन्तर्निर्मित रेगुलेशन मैकानिज्म (अपने आप वोल्टेज कन्ट्रॉल सिस्टम) उपस्थित है या बाहरी ऑटोमेटिक वोल्टेज रेगुलेटर से जुड़ा है तो इस मोड पर कम्प्यूटर चलाया जा सकता है। यह वोल्टेज-फ्लक्चुएशन (85-290 वोल्ट) तक काम करेगा।

Note: By default, unit is in ECO mode when battery is reset.

साधारणतः जब बैटरी रिसेट होती है तो यूनिट इको मोड में होती है।

I). FAN : The assembly for fan.

पंखे के लिए असेम्बली।

4. UNPACKING & PLACEMENT

1. Unpacking: On receiving the device, inspect for any transit damage. The packaging can be saved for future use.

उपकरण को लेते समय इस बात को सुनिश्चित कर लें कि यूपीएस क्षतिग्रस्त तो नहीं है। पैकिंग को भविष्य में उपयोग के लिए संभाल के रखें।

2. Placement: Device shall be kept at a place which is protected from dust, water, temperature and humidity.

उपकरण को ऐसे जगह पर लगाएँ जो धूल, पानी, ताप और आर्द्रता से सुरक्षित हो।

5. INSTALLATION DIAGRAMS

1). BATTERY INSTALLATION

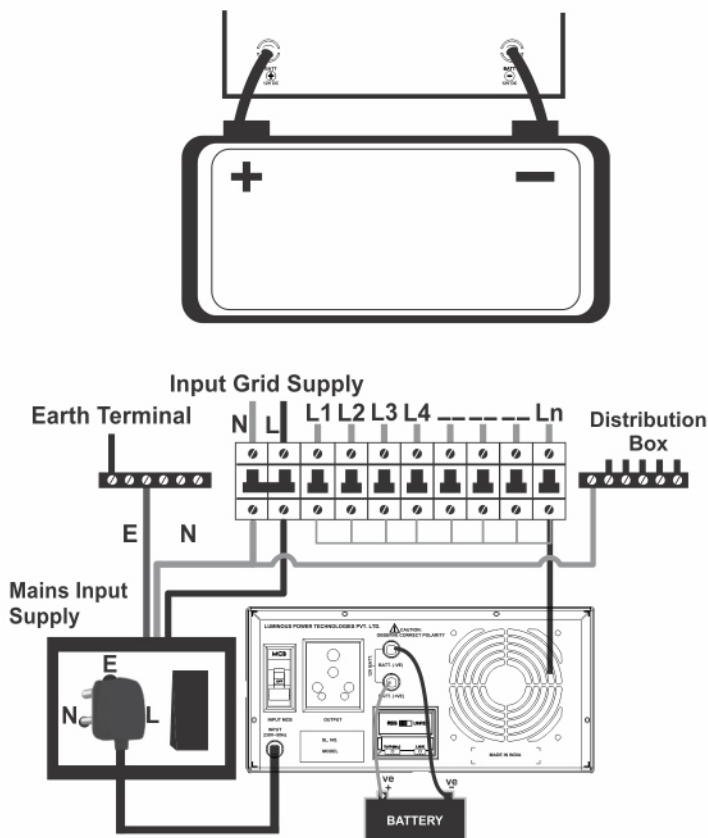
CAUTION: Battery polarity must be checked before connections. Wrong polarity connection with device will cause Reverse Protection Fuse Blown and may lead to Fire Hazards.

Installation shall be done by qualified technician.

- Take precautions while connecting the battery cable to the battery post, avoid short circuit by spanner etc.
- Battery terminals and thimble etc., should be cleaned and properly fastened otherwise it may give false indications of battery charged and low battery trips.

2). CONNECTION DIAGRAM OF DEVICE WITH MAINS & BATTERY

a) HERCULES-SINE-1500*



Load Connection (should not be greater than system capacity)

* HERCULES-SINE-1500 / 12V (Single battery device)

6. STEPS FOR DEVICE INSTALLATION:

- To be done by a competent & knowledgeable person.
- Switch OFF the supply to the distribution point to which the device is to be connected.
- Check the building wiring. Improper building wiring could result in equipment damage that is not covered in warranty.
- Connect the battery / batteries to device as per its correct polarity.
- Keep the front switch of device in OFF position.
- Switch ON the front switch & measure the output voltage on output socket, it should be as per specification & switch off the device.
- Connect the Load wire to the line point (right hole) of output plug & insert the output plug into socket located on the rear panel of device.
- Switch ON the front Switch of the device.
- Gradually put the load on device.
- Connect input plug to commercial mains socket in correct polarity.

उपकरण लगाने के तरीके:

- इंस्टालेशन दक्ष इंजीनियर द्वारा ही करा जाना चाहिए।
- उपकरण की मेन्स सप्लाय को बंद कर दें।
- वायरिंग की सही से जांच कर लें, गलत वायरिंग उपकरण की कार्यक्षमता पर असर डाल सकती है।
- बैट्री को उपकरण के साथ सही पोलैरिटी में जोड़े।
- उपकरण को स्विच ऑफ की स्थिति में ही रखें बैट्री कनेक्ट करने के बाद स्विच ऑन करें और आउटपुट वोलटेज माप लें, यदि यह निर्देशित रेंज में है तो स्विच ऑफ कर दें।
- आउटपुट प्लग को आउटपुट सॉकेट में डालें और धीरे-धीरे लोड ऑन करें।
- मेन्स इनपुट के प्लग को सही पोलैरिटी में इनपुट पॉइंट में कनेक्ट करें।

7. TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE(S)	ACTION RECOMMENDED
A. The Mains supply is normal but... a) The ON Mains indicator is off. The device is either working on battery (UPS/ECO indicator is glowing) or battery has exhausted (LOW BATT. is glowing).	<ul style="list-style-type: none">• Line cord plug is loose.• Dead wall socket.• Mains input voltage too low or too high.• Fuse blown / MCB is trip.	<ul style="list-style-type: none">• Fit the line cord plug properly.• Check the socket with any lamp etc.• Wait for Mains to normalize.• Reset the Fuse blown / MCB.
B. In the battery mode all indicators are off but the LOW BATT. indicator glows.	<ul style="list-style-type: none">• The battery may have got discharged from recent use.	<ul style="list-style-type: none">• Recharge the battery after Mains restoration.
C. (a) In the battery mode all indicators are off but the UPS OVERLOAD indication is constant. (b) In the battery mode all indicators are off but OVERLOAD indication is blinking.	<ul style="list-style-type: none">• The device has tripped due to overload condition.• The device is tripped due to short circuit in UPS mode.	<ul style="list-style-type: none">• Reduce the loads and turn the reset switch (on the front panel) on/off.• Switch off all loads and then turn on load one by one and if 'OVER LOAD' blinking indication takes place again, call for authorised technician.

8. WARRANTY

LUMINOUS POWER TECHNOLOGIES PVT. LTD. warrants it's UPS to be free from defects in materials and workmanship. This obligation is limited to servicing any instrument or part returned to the authorised service centre for that purpose and to making good any parts thereof which shall, within the warranty period, be returned to the Company or authorised service centre under a written intimation and which to the Company's satisfaction be found defective. The Company reserves the right to decide as to whether the repair work should be carried out in the Company's service centre or at site or at any other place. The freight incurred for to and fro dispatch of the defective material will have to be borne by the customer and the transit risk for the material will rest with the purchaser.

The warranty covers all parts and will last for a period of 24 months from the date of sale to consumer / dispatch of the instrument if used within its specifications. The warranty for the replaced components will lapse along with that of the main instrument. **LUMINOUS POWER TECHNOLOGIES PVT. LTD.** reserves the right to make changes in design and specifications without notice and without any obligation to install such changes on units previously supplied.

In no event will the Company, that is **LUMINOUS POWER TECHNOLOGIES PVT. LTD.**, its Distributors and/ or Dealers be liable for personal injury, damages to property, consequential or incidental damages or for any expenses incurred by the buyer or user, due to use or sale of UPSs sold by **LUMINOUS POWER TECHNOLOGIES PVT. LTD.** directly or through its authorised Distributors/ Dealers or any third party under any circumstances, whether based on tort or breach of contract claims or on any other basis, to the extent these damages may be disclaimed by law. Except as expressly provided herein, the Company makes no warranties, and disclaims all warranties, representations and guarantees (whether expressly, implied or statutory), including, but not limited to, any implied merchantability or fitness for a particular purpose.

Until superseded otherwise or in contractual form, this warranty is made expressly in lieu of all other liabilities and obligations on part of **LUMINOUS POWER TECHNOLOGIES PVT. LTD.** Title to the instrument passes to the buyer upon delivery to the common carrier.

The warranty of your UPS shall become null & void if:

- Our instruments are warranted solely against poor workmanship and use of faulty material resulting in damage that may arise despite normal operation and usage of the appliance, as prescribed in the operating manual. This warranty does not cover any other aspect, including defects arising by reasons of accidents, abuse, misuse, neglect, improper installation (if not undertaken by the company or its representative), fire, flood or other act of God or any other natural calamities. Consequences of any other un-authorised repairs done or carried out will have to be borne by the purchaser.
- The problem of Thermal Circuit Breaker blown will not be included in the warranty of the product. The services given for the same will be a paid service.
- This warranty is not valid if the serial number and/or warranty seal of the Luminous UPS has been deleted, defected or altered.
- Any accessories (like battery, battery trolley, LED/LCD, plastic parts or any house hold goods etc.) connected to the instrument will not be covered under this warranty.
- All disputes for and/ or in connection with the instrument or the warranty in respect thereof shall be subject to the exclusive jurisdiction of courts of Delhi only.

IMPORTANT:

In the event of an instrument requiring servicing at our authorised service center, the following procedure should be adopted.

1. The instrument must be securely packed, preferably in its original packing.
2. The instrument should be despatched on Freight-prepaid basis duly insured.
3. One of our Service/ Sales Executives should be informed of the Goods Receipt No. and date of dispatch along with the name of the carrier.
4. Luminous reserve the right to charge the consignee for any damage incurred during transit.
5. This warranty card should be kept intact as the same will be required along with the original invoice to process the claim.

EQUIPMENT DETAILS

MODEL : Hercules Sine	
HERCULES-SINE-1500 <input type="text"/>	Sr. No. : <div></div>

PRN-MN-274-01

* The actual product/color may vary from that shown in the manual.

9. SPECIFICATIONS

Models		1500
Apparent Power		1400VA
Active Power		1176W
Input	UPS mode	
	Rated voltage	230V AC
	Undervoltage Cut Off	180±5V
	Undervoltage Restoration	190±5V
	Overvoltage Cut Off	265±5V
	Overvoltage Restoration	255±5V
	ECO mode	
	Undervoltage Cut Off	85±10V
	Undervoltage Restoration	95±10V
	Overvoltage Cut Off	290±10V
	Overvoltage Restoration	280±10V
Output	Rated voltage (UPS Mode)	(200 - 220)V AC ± 10%
	Voltage (Mains Mode)	Same as input
	Frequency (UPS / ECO Mode)	50 ± 0.5Hz
	Frequency (Mains Mode)	Same as input (45-55 Hz)
	Overload	> 105%
	Transfer Time(UPS Mode)	< 20 ms.
Battery	Type	80Ah-220Ah - Tubular, Flat, SMF or Local Battery
	Voltage	12V
	Number	1
	Typical Recharge Time	10-12 Hrs.
	Protection	Low Battery, Reverse Polarity
Physical	Net weight (Kg.)	13.5
	Gross weight (Kg.)	14.6
	Dimension (LxWxH) mm	305X275X130
LED Displays	Power Switch OFF Indication	"Stand By" Indication LED Steady
	Power Switch ON (ECO/UPS Mode)	"STAND BY" Indication LED OFF + UPS / ECO Indication (As per mode selection)
	Low Battery Pre-Alarm	LOW BATTERY LED will blink along with indication LED for UPS/ECO Mode depending upon mode of selection
	Low Battery (B/L)	LOW BATTERY + UPS / ECO (As per mode selection) Indication Steady
	ON Mains	ON MAINS + UPS / ECO (As per mode selection) Indication Steady
	Charging ON (CHG.)	ON MAINS + CHARGING + UPS / ECO (As per mode selection) Indication
	Overload (O/L)	OVERLOAD + UPS / ECO (As per mode selection) Indication Steady
	DC Over Voltage	(MAINS+CHG.) LEDs will blink along with indication LED for UPS/ECO Mode depending upon mode of selection
	Over Temperature	(O/L+MAINS) will glow steadily along with indication LED for UPS/ECO Mode depending upon mode of selection
	No Load Shutdown	Only ECO indication LED will blink
Alarms	UPS ON	Beeps for 5 times
	Low Battery Pre-alarm	Beeps for 10 times
	Low Battery	Continuous beep (5 Seconds)
	Overload & Short circuit	Continuous beep (5 Seconds)
	Overload Pre-alarm	Beeps for 5 times
	UPS to Mains change over	Beep
	Mains to UPS change over	Beeps for 5 times
	Over temperature	Continuous beep (5 Seconds) for 5 times
Enviro- nmental	Operating Temperature	0-45°C (32-113°F)
	Storage Temperature	0-45°C (32-113°F)
	Humidity	0-95% RH non-condensing

Due to continuous product improvement, the specifications are subject to change without notice.