MICROTEK

elite

AN ELEGANT PERFORMER. A TRUE MASTERPIECE.

1500 LCD

USER MANUAL



Battery Enclosure
In-built



Absolute
Convenience



Fast Charge
Technology



LCD Display

ISO CERTIFIED COMPANY
ISO CERTIFIED 9001:2015
ISO 14001:2015

CE

3 YEARS ON SITE WARRANTY

www.microtek.in

MICRO CONTROLLER / MICRO COMPUTER Inside: Micro Computer Based INTELLI PURE SINEWAVE UPS is designed using latest state-of-the-art Technology for Better Performance and High Reliability. The INTELLI PURE SINEWAVE Technology used enhances the life of the battery and minimum effort has to be put for maintenance.

- ◊ Digital Signal Controller / Micro Computer Inside: Micro Computer based Intelligent Control Design.
- ◊ Pure Sine Wave Output.
- ◊ PWM Controlled multistage ATM (Automatic Trickle Mode) Charging.
- ◊ Display Indications (Status & Fault).
- ◊ Smart Overload Sense and Short Circuit Protection.
- ◊ Easily Serviceable and Auto Reset Feature.
- ◊ Mains Input Voltage Range Selection.

Over Voltage Protection: The UPS will switch to UPS mode & offers power from the battery when the mains voltage is too high.

Over Load / Short Circuit Protection : If the UPS is excessively overloaded in UPS mode or encounters a short circuit, it will go into protection mode. The output will be shut down in this case.

Battery Deep Discharge / Over Charge Protection : The UPS has in-built electronic protection circuit which protects the batteries from getting deep discharged or over charged.

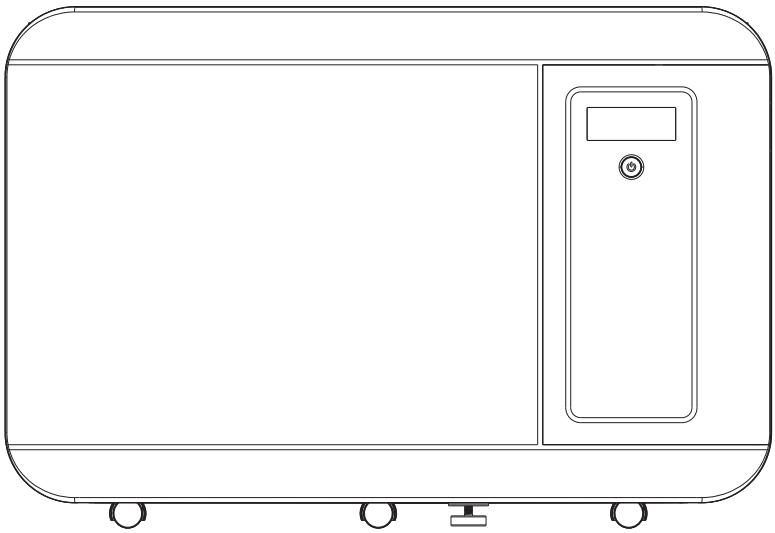
TECHNICAL SPECIFICATIONS

Product	**UPS ELITE 1500 LCD 12V SW**
VA/Wattage	**1100VA/825W**
Input voltage (Standard Range)	100V~300V
(Narrow range)	180V~260V
Output Voltage on mains mode	Same as input
Output Voltage on UPS mode	210V ± 10%
Output frequency on UPS mode	50 Hz ± 0.1 Hz
Switching from mains to UPS and from UPS to mains	Automatic
Output waveform on mains mode	Same as Input
Output waveform on UPS mode	PURE SINEWAVE
Battery charging current	Constant charging approx 10% of the rated battery current in AH
Charger	Power Factor Controlled Boost Technology
Efficiency	> 80%
UPS Overload/UPS Short Circuit	110% / 300%
UPS Transfer Time	≤ 15msec.
Browns out mains voltage	100V ± 40V
Technology	Micro Computer Based Intelligent Control Design.
Auto Reset Feature	Yes
Operating Temperature	0~45°C

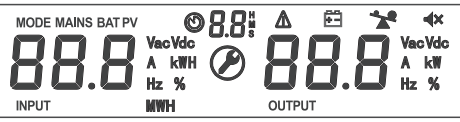
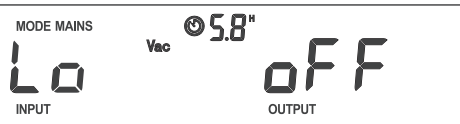
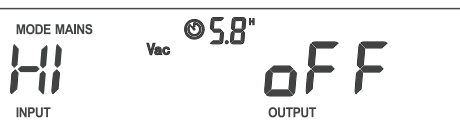
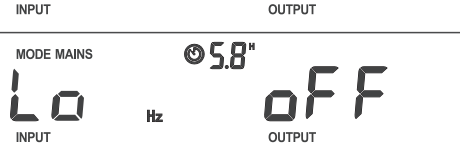
NOTE: *Power Factor may vary depending upon the Load. * Because of a policy of continuous product improvement, specifications are subject to change without notice.

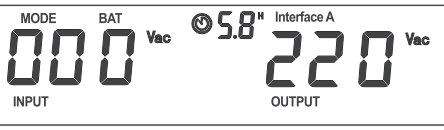
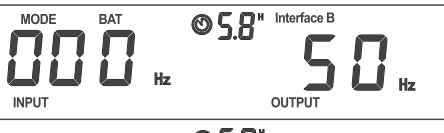
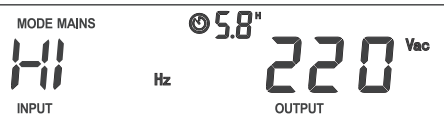
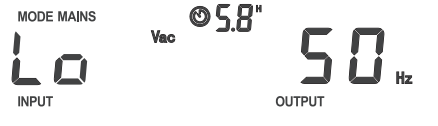
FRONT PANEL

I. LCD



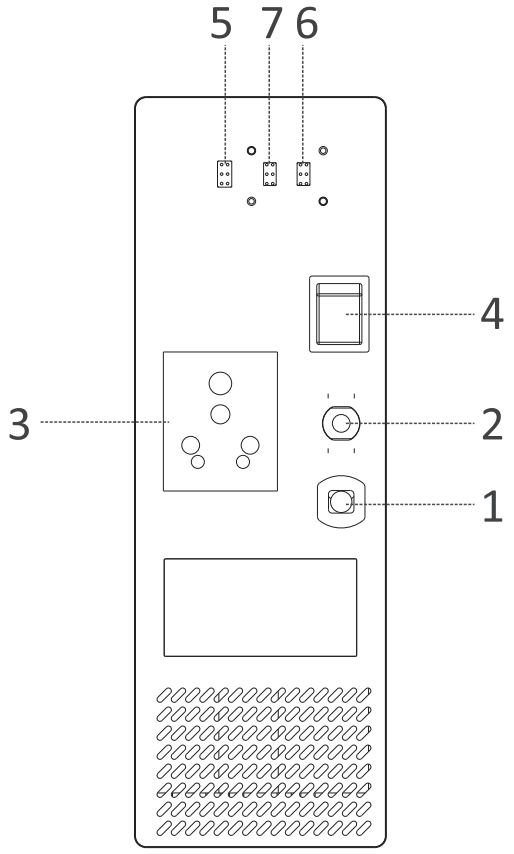
LCD DISPLAY

CONDITIONS			LCD DISPLAY CONTENT	COMMENT
ALL Segments On				
Standby mode (only connect the battery @ON/OFF Switch:OFF)				Only this interface
Mains Mode	Power Switch OFF	Input voltage and Input freq. are in normal range		This interface (interface1/ interface 2/interface 3)/4 scroll display The icon 5.8" Indicates the residual charging time. The icon 0.1* indicates the display show, “CHr Ful”.
				
				
Mains Mode	Power Switch OFF	Input freq. Low out of normal range		This interface interface1/ interface 2 & 3 scroll display Total 3 interfaces
Mains Mode	Power Switch OFF	Input freq. High out of normal range		This interface interface1/ interface 2 & 3 scroll display Total 3 interfaces
Mains Mode	Power Switch OFF	Input freq. Low out of normal range		This interface interface1/ interface1 & 3 scroll display Total 3 interfaces
Mains Mode	Power Switch OFF	Input freq. High out of normal range		This interface interface1/ interface 1 & 3 scroll display Total 3 interfaces

CONDITIONS			LCD DISPLAY CONTENT	COMMENT
Mains Mode	Power Switch OFF	Input voltage and Input freq. are in normal range	 	If the input voltage or the input freq. are out of the normal range then the ups will transfer to backup mode.
Mains Mode	Power Switch OFF	No Mains	  	This 3 interface (interfaceA/ interface B& interface C) scroll display The icon 5.8" Indicates the residual charging time
Backup Mode	Power Switch OFF	Mains on,but voltage Low out of the normal range		This interface interface B/ interface B & C scroll display Total 3 interface
Backup Mode	Power Switch OFF	Mains on,but voltage high out of the normal range		This interface interface B/ interface B & C scroll display Total 3 interface
Backup Mode	Power Switch OFF	Mains on,but voltage Low out of the normal range		This interface interface B/ interface A & C scroll display Total 3 interface
Backup Mode	Power Switch OFF	Mains on,but voltage high out of the normal range		This interface interface B/ interface A & C scroll display Total 3 interface
Warning and Fault in Backup Mode	Power Switch OFF	Overload Warning		This interface interface B/ interface A & C scroll display Total 3 interfaces This icon Blinking
Warning and Fault in Backup Mode	Power Switch OFF	Overload Shut Down		This interface Locked only this interface icon Continouusly Glows
Warning and Fault in Backup Mode	Power Switch OFF	Battery Low Warning		This interface interface B/ interface A, B & C scroll display Total 4 interfaces This icon Blinking
Warning and Fault in Backup Mode	Power Switch OFF	Battery Low Shutdown		This interface , Locked only this interface icon Continuously Glows
Warning and Fault in Backup Mode	Power Switch OFF	Battery High Shutdown		This interface , Locked only this interface icon Continuously Glows

CONDITIONS			LCD DISPLAY CONTENT	COMMENT
Warning and Fault in Backup Mode	Power Switch OFF	Output Shutdown	SHt Ct	This interface , Locked only this interface icon Continuously Glows ⚠
Warning and Fault in Backup Mode	Power Switch OFF	Output Shutdown	000 Vac 58" INPUT otP	This interface , Locked only this interface icon Continuously Glows ⚠
Warning and Fault in Backup Mode	Power Switch OFF	Output Shutdown	220 Vac 58" INPUT CbL	This interface , Locked only this interface icon Continuously Glows ⚠

BACK PANEL



1. Mains Input Lead for AC input.
2. Circuit Breaker for mains Overload, Short Circuit and Charger Protection.
3. Output Socket for Load.
4. Rocker Switch used to select UPS or Bypass Mode.
5. Slide Switch for Charging Current Selection

   I) High Charging II) Standard Charging
6. Slide Switch to Select the Float Charging Battery Voltage (TUB / LC/FP).

   Select appropriate Voltage as recommended by the Battery manufacturer/ Supplier.

CAUTION:

Proper selection of switch position is recommended based on the battery manufacturers specifications, for proper backup and also to avoid any damage to the battery due to wrong selection.

7. Slide Switch for Mains Input Voltage Range

   (INV: 100V~300V / UPS: 180V~260V) selection.

*TUB: TUBULAR LC: LOCAL FP: FLAT PLATE

TROUBLE SHOOTING

Problem	Possible Cause / Action Suggested
1. **Main Supply is Normal but:-**	
a) UPS is working on battery	a) Dead wall socket. Line AC input connections are loose / not proper.
b) CB Trip or No output from UPS	b) Check Circuit Breaker at the Rear. Push the Circuit Breaker (Reset) to Switch On the output. If Trips again call the auth. service engineer to check Shorting/Overload in the output circuit.
2. **UPS trips frequently at UPS mode.**	The load is more. Reduce the load and reset the UPS.
3. **UPS Mode but no power:-**	
a) Overload	a) Reduce the load and reset the switch on the front panel(OFF-ON).
b) Low Battery	b) Battery has discharged. Recharge the battery after the mains restoration.
c) Short Circuit	c) Check the wiring, reduce the load & turn the reset switch on the front panel (ON-OFF-ON).
4. **Backup Time is Less.**	a) Check battery water & Charge the battery with mains minimum 8-12 hours. If still less backup, get the battery Checked up from auth. service engineer.
5. **UPS does not operate.**	a) Check the batt. & the mains connection. b) Internal problem, Bypass UPS as explained in next section and call auth. service engineer.

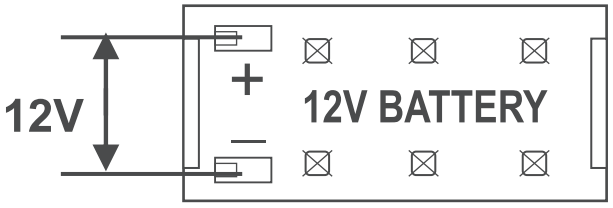
BATTERY - INSTALLATION & CONNECTIONS

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

Installation shall be done by a knowledgeable person.

- Take precautions while connecting the thimble of battery cable to the battery post, avoid short circuit by spanner etc.

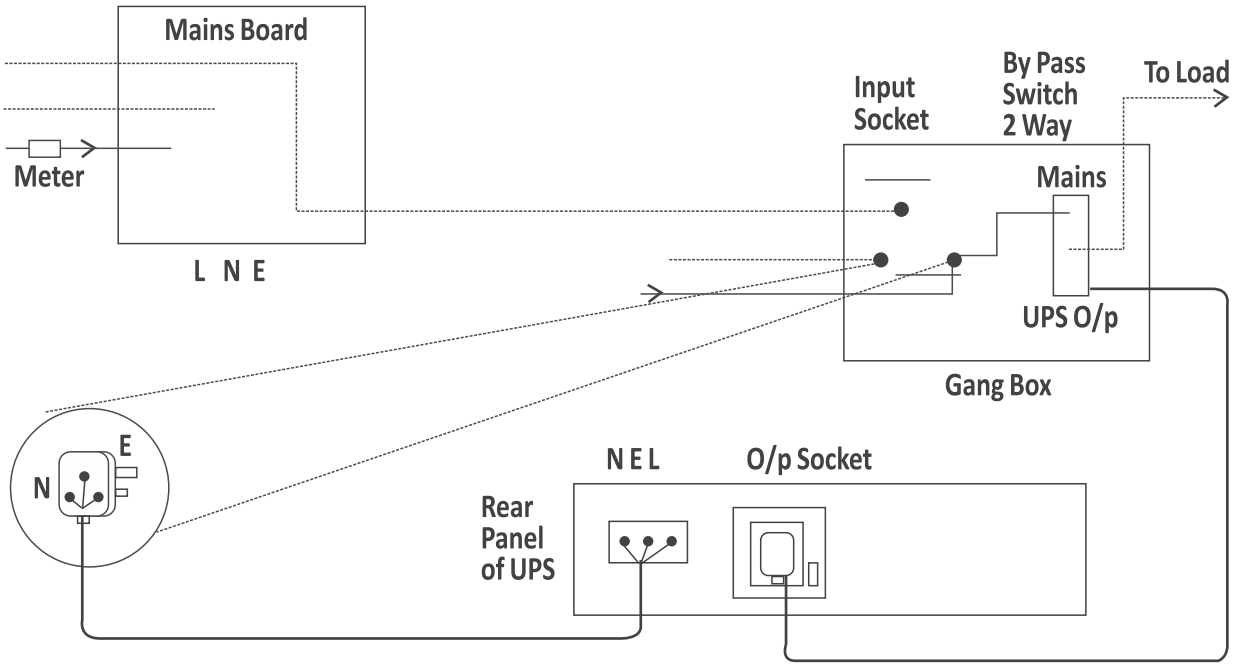
BATTERY CONNECTIONS:



NOTE: Recommended Battery(Lead Acid Type) 1x12V: 100AH to 200AH.

CONNECTION DIAGRAM FOR INSTALLATION

TO BE DONE BY A COMPETENT & KNOWLEDGEABLE PERSON.



L - Mains Line I/p

N - Neutral

E - Earth

* When the Push switch is at OFF position then it By-Pass the mains AC supply & charges the Battery.
* When the Push switch is at ON position(Pressed) and is having alternating supply, It charges the battery and has mains By-Pass and when the alternating supply(mains) is not present at that instant it is ready for Backup.

STEPS FOR UPS INSTALLATION

TO BE DONE BY A COMPETENT & KNOWLEDGEABLE PERSON.

- Switch OFF the supply to the distribution point to which the UPS unit is to be connected.
- For extra safety also remove the fuses from the line. Make absolutely sure with measurement that there is no power.
- A readily accessible disconnect device must be incorporated in all fixed input wiring. The disconnect device shall have a contact separation of at least 3mm. The UPS has automatic backfeed isolation but for extra safety a warning label can be added on all primary power isolators installed remote from the UPS to warn electrical maintenance personnel.
- Check the building wiring, Improper wiring will not prevent the UPS from operating but will limit its protection capability. Improper building wiring could result in equipment damage that is not covered in warranty.
- Connect the Battery/Batteries to UPS as per its requirement.
- Keep the front switch of UPS on OFF position.
- Connect the Load wire to the right hole of Output Socket located on the rear panel of UPS.
- Switch ON the front Switch of the UPS.
- Connect AC input wire to commercial mains socket.

SERVICING / WARRANTY

Microtek International P. Ltd., warrants each instrument to be free from defects in materials and workmanship for a period of Three years after initial delivery. This obligation is limited to servicing any instrument or part returned to the authorised service center for that purpose and to making good any parts thereof which shall, within the warranty period, be returned to the company or authorised Service center 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 center or at site or at any other place.

The freight incurred for to and fro dispatch will have to be borne by the customer and the transit risk for the material will rest with the customer.

The warranty will be invalidated if defects arising in company's opinion are by reasons of accident, abuse, misuse, neglect, Improper Installation (If not undertaken by the company or its representative), fire, flood, any other act of God and any other natural calamities. Further, this warranty does not extend to any instrument which has been repaired / tampered with by any agency/person not authorized by the company. The services given for the same will be paid service.

The warranty will last for a period of 36 months from the date of initial delivery/dispatch of the instrument if used within its specifications. The warranty for the replaced components will lapse along with that of the main instrument.

MICROTEK International P. 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 MICROTEK International P. Ltd., its distributors / dealers be liable for any loss or injury or damage caused to life or property or death & disability caused to any form of life for any reasons whatsoever. The company, its distributors / dealers will also not be liable for consequential damages or for any expenses incurred by the buyer or user, due to use or sale of products sold by MICROTEK International P. Ltd., directly or through its authorised Distributors / dealers or any third party.

SAFETY INSTRUCTIONS

Always connect the UPS to a two pole, three-wire grounding mains socket, near by the product. The socket must be connected to appropriate branch protection (fuse/circuit-breaker). Connection to any other type of socket may result in a shock hazard.

To switch off the UPS output in emergency, use switch on the Front panel. Also disconnect the mains cord and battery wires.

Avoid installing the UPS in open, excessively humid place or where there is water or near flammable materials (plywood, chemicals, gasoline etc.). Care must be taken to ensure that the UPS 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 sunlight. The place of installation should be well-ventilated & easily accessible for servicing. Ensure that ELCB/RCCB is not connected at either Input or Output, Only MCB upto 63A or MCCB above 100A to be used as per UPS capacity.

Foreign objects and water must not enter the UPS. Always ensure that objects containing liquid are avoided near the unit.

Place the Battery Compartment as near as possible to the UPS. Don't allow sparks near the Battery. Be sure not to come in contact with Battery Acid by any means.

Always Switch Off the UPS and disconnect mains when disconnecting the Battery.

Avoid connecting the stabilizer between Utility Power and UPS. The AVR of the stabilizer may cause rebooting of the Computer. The equipment must be earthed.

Do not open the UPS there are dangerous high voltages inside even when the power is OFF, Contact the Company only if it is not working properly.

Replace Batteries and the Fuse only with same Rating and Type.

Do not place UPS on a sloping shelf unless properly secured. Use perfect stand to hold the UPS.

Backfeed, See the warning label on the UPS.

IMPORTANT

In the event of any instrument requiring service at our authorised service centre, the following procedure should be adopted:-

1. The instrument must be securely packed, preferably in its original packing. Also ensure that nothing inside packing is damaged. Please transport the product in its original packing to protect against shock, damage & Impact.
2. We reserve the right to charge the consignee for any damage incurred during transit.
3. The output of the UPS should never be connected to a generator or incoming utility power source. This situation is far worse than a short-circuit. If the unit survives the condition, it will shutdown until correction is made.

GOING ON VACATIONS

1. Must put the UPS ON/OFF Switch in OFF Position.

DO'S & DON'TS RELATED TO UPS

Do's Related to UPS

- ✓ Unplug and Switch OFF the UPS before touching or cleaning the surface.
- ✓ Unplug the UPS from the wall outlet during a Lightening Strom.

Don'ts Related to UPS

- ☒ Don't block the bottom ventilation slots by cloth or other material it may result in fire hazard.
- ☒ Don't place the UPS near radiation or heat source.
- ☒ Don't Install near Kitchen Sink, Laundry, Wash Bowl, Bath Tub or Swimming Pool.

In case of any Service requirement kindly contact Microtek Customer Care, specifying following details:

(i) Model Number & Serial Number of the Product.
(ii) Name & phone no. of the contact person with full address & e-mail ID if any.
(iii) Reported problem/description of the complaint.

Note: (a) Refer all servicing queries to Microtek Customer Care only.

(b) Please take care that Serial Number is kept intact and that the product is not allowed to be fiddled (opened) by any unauthorised person; otherwise the warranty will be void.

MICROTEK CUSTOMER CARE:

ALL INDIA : 7283838383

WHATSAPP: 8800255733 E-mail: cc@microtek.in

*All disputes subject to Delhi jurisdiction only.

MICROTEK INTERNATIONAL P. LTD.
H-57, Udyog Nagar, Rohtak Road, New Delhi-110041.

POST WARRANTY ANNUAL MAINTENANCE CONTRACT (AMC)

Microtek Offers Annual Maintenance Contract to save you from any inconvenience in case of a product failure post warranty. Various options are available in select cities for all models of Microtek Products:-

For Details, Contact nearest Microtek Branch or
e-mail at: ho@microtek.in

INSTRUMENT DESCRIPTION

MICROTEK ELITE SINEWAVE UPS

Single Battery 12V System:

UPS ELITE 1500 LCD 12V SW ☐
(MTKTV1K5S)

SERIAL NO.

Authorised Dealer Stamp with Signatures

Vend. C:
Form No.: QPN/003-415
Issue No.: 03, 25/04/2024 (PART CODE: 902-EL2-1500) 002-465-ELITE 1500 LCD SW V.3