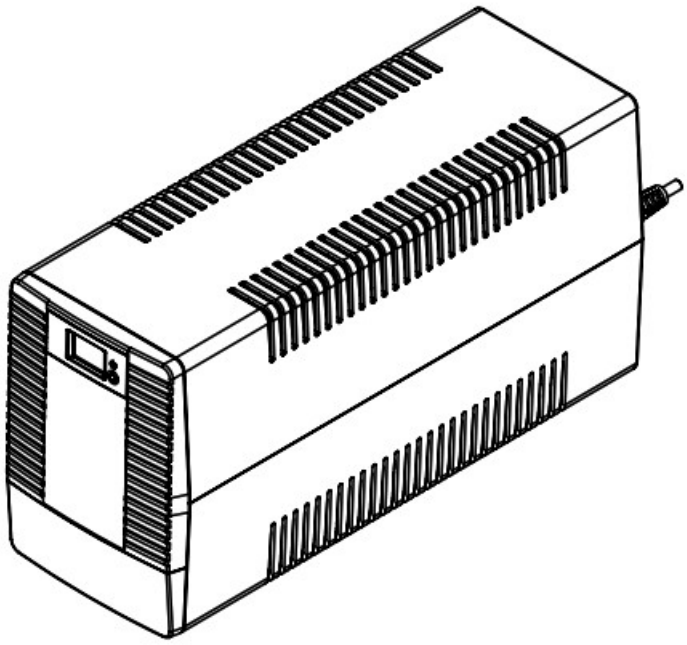
TRIPP LITE OMNIVS800LCD UPS Tower System Systems Owner's Manual

UPS Systems
Models:
OMNIVS800LCD, OMNIVS1000LCD, OMNIVS1200LCD,
OMNISMART700TSU, OMNIVS1500LCD
(Series Numbers: AG-02F0, AG-02F1, AG-02F2, AG-02F3, AG-87D5)



WARRANTY REGISTRATION
Register your product today and be automatically entered to win an ISOBAR ® surge protector in our monthly drawing!
tripplite.com/warranty

http://www.tripplite.com/warranty

1111 W. 35th Street, Chicago, IL 60609 USA • tripplite.com/support

Contents

Important Safety Instructions

SAVE THESE INSTRUCTIONS
This manual contains instructions and warnings that should be followed during the installation, operation, maintenance and storage of the UPS and batteries. Failure to heed these warnings may affect the warranty.

UPS Location Warnings

- Install your UPS indoors, away from excess moisture or heat, conductive contaminants, dust or direct sunlight.
- For best performance, keep the indoor temperature between 32º F and 104º F (0º C and 40º C).
- Leave adequate space around all sides of the UPS for proper ventilation.
- Only set the UPS upright on a sturdy flat surface. Do not block fans or ventilation holes, as this will seriously inhibit the unit’s internal cooling and cause product damage not covered under warranty.

UPS Connection Warnings

- Connect your UPS directly to a properly-grounded AC power outlet. Do not plug the UPS into itself; this will damage the UPS.
- Do not modify the UPS plug, and do not use an adapter that would eliminate the UPS ground connection.
- Do not use extension cords to connect the UPS to an AC outlet.
- If the UPS receives power from a motor-powered AC generator, the generator must provide clean, filtered, computer-grade output.
- The main socket outlet that supplies the UPS should be easily accessible and located near the UPS.

Equipment Connection Warnings

Install in accordance with National Electrical Code standards ANSI/NFPA 70 and Canadian Electrical Code, Part I, C22.1.
Short-circuit backup protection and overcurrent protection is provided by the building installation.
To reduce the risk of fire, connect only to a circuit-provided branch circuit overcurrent protection in accordance with the National Electrical Code, ANSI/NFPA 70, and the Canadian Electrical Code, Part I, C22.1. The plug on the power supply cord is intended to serve as the disconnect device. Be sure that the socket outlet is installed near the equipment and is made easily accessible.

- Use of this equipment in life support applications where the failure of this equipment can reasonably be expected to cause the failure of the life support equipment or to significantly affect its safety or effectiveness is not recommended.
- Do not connect surge protectors or extension cords to the output of your UPS. This might damage the UPS and may affect the surge protector and UPS warranties.
- Connect the UPS to an outlet that is adequately protected against excess currents, short circuits and earth faults as part of the building installation.

Battery Warnings

Batteries can present a risk of electrical shock and burn from high short-circuit current. Observe proper precautions. There are no user-serviceable parts inside the UPS. Do not open the UPS except to perform battery replacement. Do not open batteries. Do not short or bridge the battery terminals with any object. Do not dispose of batteries in a fire. The batteries may explode. Released material is harmful to the skin and eyes. It may be toxic. Unplug and turn off the UPS before performing battery replacement. Use tools with insulated handles. Battery replacement should be performed only by authorized service personnel using the same number and type of batteries (sealed lead-acid). Do not dispose of the batteries in a fire. Tripp Lite offers a complete line of UPS System Replacement Battery Cartridges (R.B.C.).Visit Tripp Lite on the Web at **tripplite.com/products/batteryfinder** to locate the specific replacement battery for your UPS.

CAUTION: A battery can present a risk of electrical shock and high shortcircuit current. Contact with any part of a grounded battery can result in electrical shock. The following precautions should be observed when working on batteries:

- Remove watches, rings or other metal objects.
- Use tools with insulated handles.
- Wear rubber gloves and boots.
- Do not lay tools or metal parts on top of batteries.

- Disconnect charging source and load prior to installing or maintaining the battery.
- Remove battery grounds during installation and maintenance to reduce the likelihood of shock.
- Remove the connection from the ground if any part of the battery is determined to be grounded.

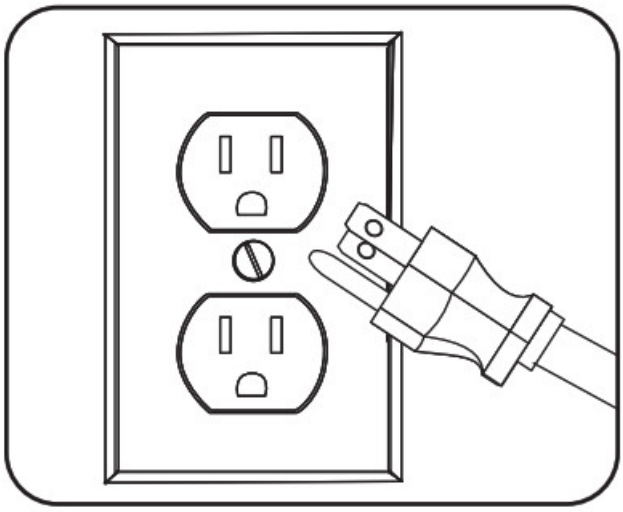
UPS and Battery Recycling

Pb

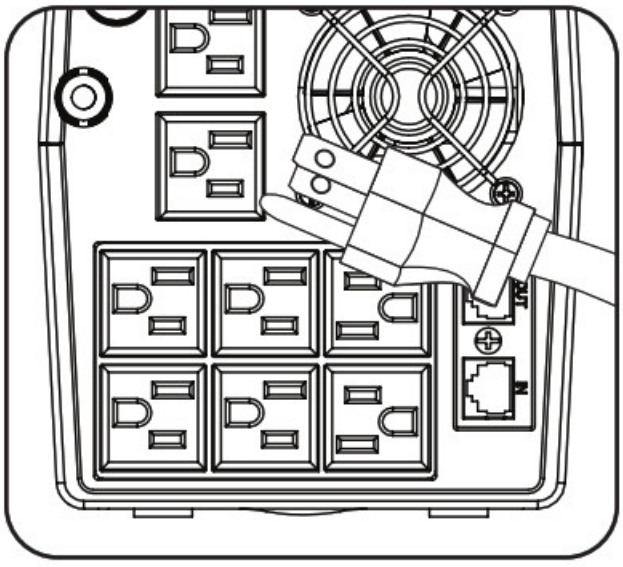
Tripp Lite products use sealed lead-acid batteries, which are highly recyclable.
Call Tripp Lite at 1.773.869.1234 or visit **tripplite.com/support/recycling-program** for more information on recycling the batteries or any other Tripp Lite product.
Please refer to local codes for disposal requirements.

Quick Installation

STEP 1: Plug the UPS into a properly grounded outlet.
After plugging the UPS into a wall outlet, press and hold the power button until the alarm starts to sound, then release to turn on the UPS.
Note: The UPS will not turn on automatically in the presence of live utility power.



STEP 2: Plug your equipment into the UPS.
There are two sets of outlets on the back of your UPS. Outlets marked SURGE PROTECTED do not provide battery backup power during power outages.
Connect common desktop items like printers, scanners and other accessories not requiring battery support to these outlets. Outlets marked BATTERY/SURGE PROTECTED offer UPS battery backup support during power failures. Connect your vital computer equipment into these outlets.



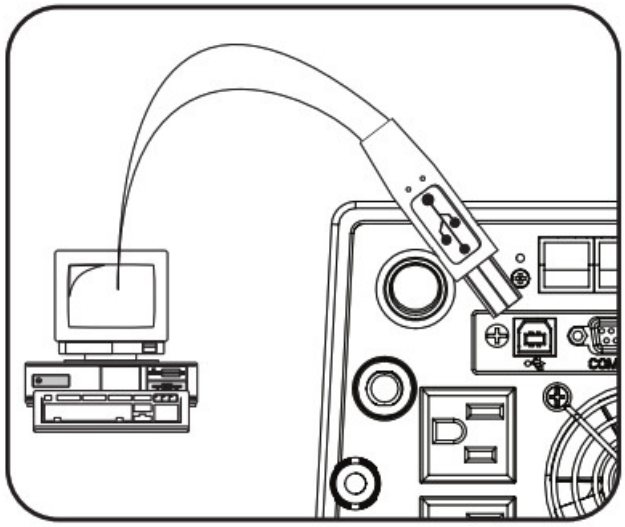
Your UPS is designed to support electronic equipment only. You will overload the UPS if the total volt-amp (VA) ratings for all the equipment connected to the BATTERY/SURGE PROTECTED outlets exceed the UPS output capacity. To find your equipment's VA ratings, look on their nameplates. If the equipment is listed in amps (A), multiply the number of amps by 120 to determine VA. For example 1A × 120 = 120VA.
If the color LCD panel does not illuminate when the UPS is turned ON, try the following:

1. Make sure that the UPS is plugged into a live AC outlet.
2. Press the power button to turn on the UPS. A beep should sound when the UPS starts.
3. If the UPS still does not start, contact Tripp Lite Tech Support for assistance.

Quick Installation

Optional Installation

All models include a USB communication port and tel/DSL/Ethernet surge protection jacks (not compatible with PoE applications). Select models will also include an RS-232 serial port. These connections are optional, as the UPS will work properly without these connections.



Basic Operation

UPS ON/OFF

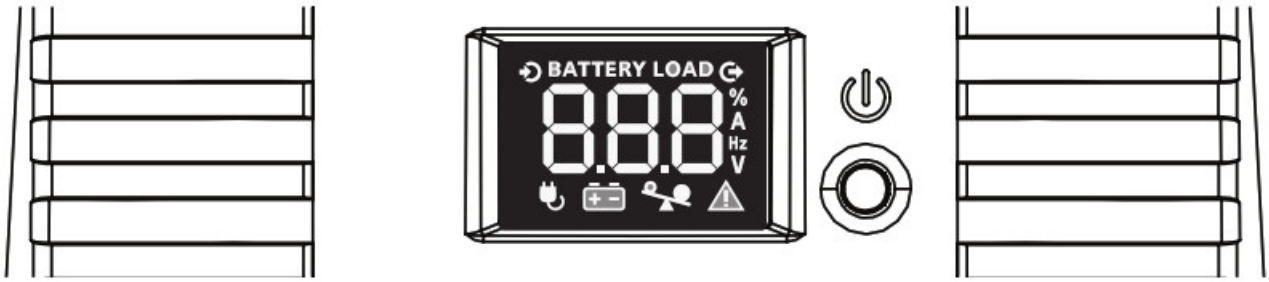
- Plug the UPS into a live, grounded outlet.

  The entire LCD screen will illuminate for 5 seconds, then the display will report output voltage of "0V". The BATTERY / SURGE PROTECTED outlets will be OFF and the SURGE ONLY outlets will be ON. The battery charger will engage as necessary.
- Plug equipment into the UPS: You will overload the UPS if the total volt-amp (VA) ratings for all the equipment connected to the BATTERY/SURGE PROTECTED outlets exceed the UPS output capacity. To find your equipment's VA ratings, look on their nameplates. If the equipment is listed in amps (A), multiply the number of amps by 120 to determine VA. For example: 1A × 120 = 120VA.
- Turn the UPS on: Press and hold the power button until the alarm begins to sound, then release. The UPS alarm will beep once briefly. The BATTERY/SURGE PROTECTED outlets will begin passing AC line power. The UPS will automatically recharge internal batteries as needed. Once turned on, your UPS is ready to protect connected equipment from blackouts, brownouts, overvoltages and transient surges.

- Turn the UPS off: Press the power button.

  Note: UPS system will function properly upon initial startup; however, maximum runtime for the unit's battery will only be accessible after it has been charged for 24 hours.

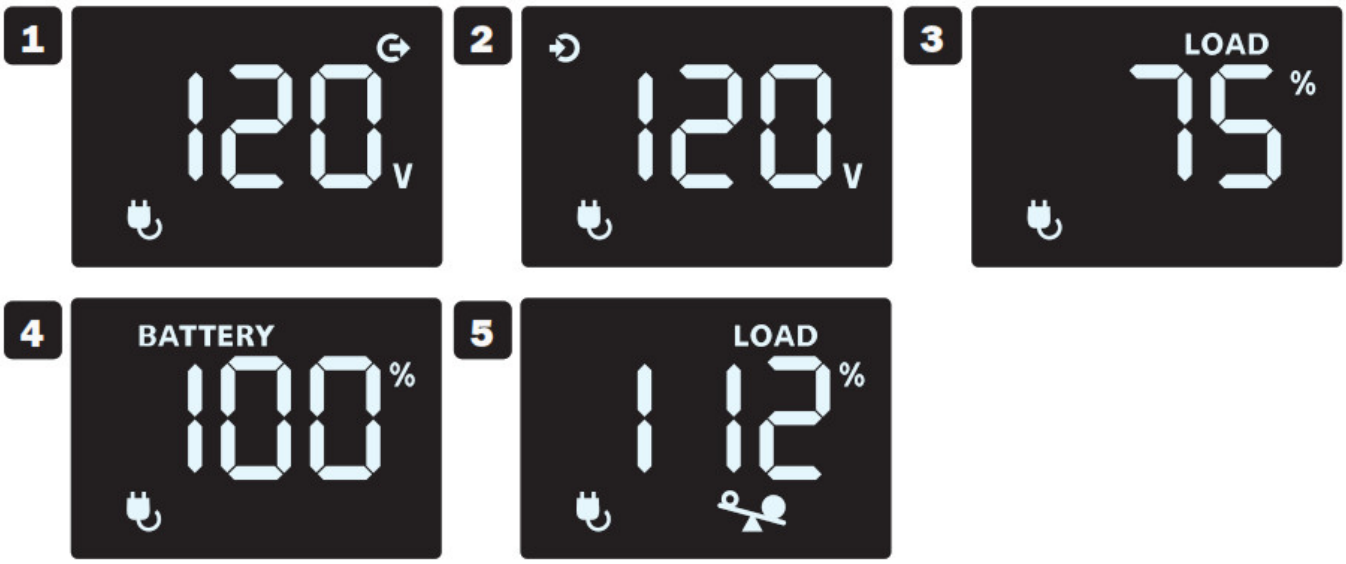
Display UPS/Power Conditions



On-Line AC Power Mode LCD Data

The LCD touchscreen offers 5 screens of UPS and site power information when the UPS is operating in online power mode. Screens 1-4 (Output Voltage, Input Voltage, Load %, Battery Charge Level) are available for viewing in online power mode. Press the front panel LCD to advance to the next screen. Screen #5 (Overload) is displayed automatically only when the UPS is loaded to levels greater than 100%.

The LCD screen reports that AVR (Auto Voltage Regulation) buck/boost circuits are active any time the online power  symbol is flashing.



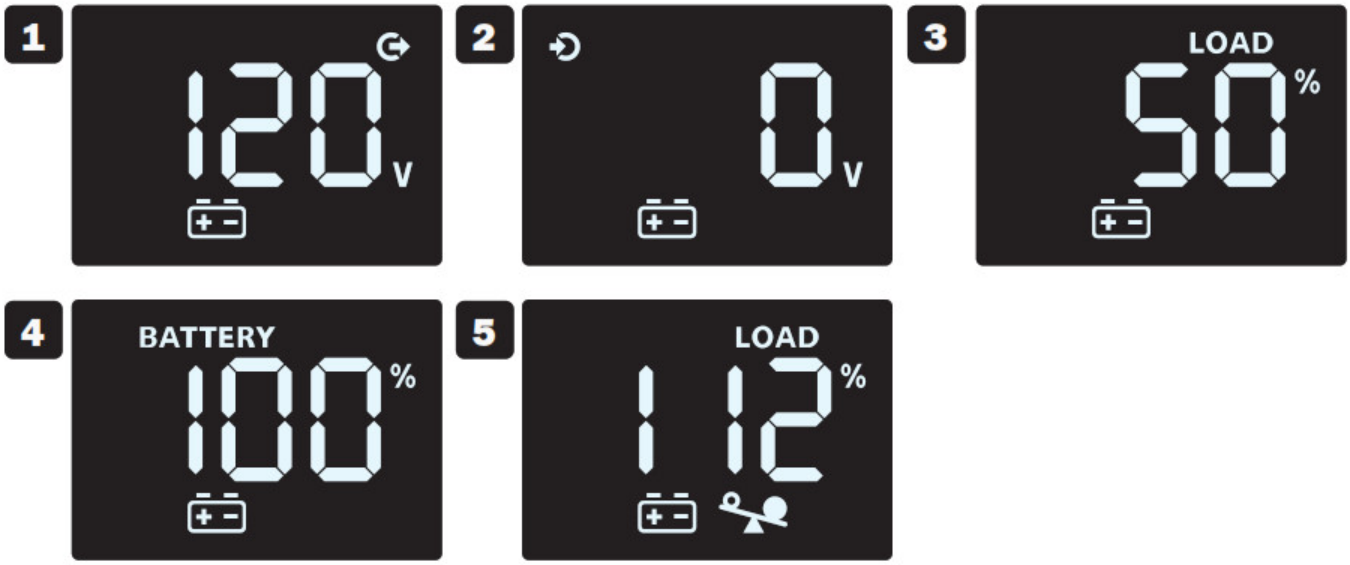
1. Output Voltage
2. Input Voltage
3. Load %
4. Battery Charge Level
5. Overload

Note: The LCD touchscreen automatically turns off in online power mode 20 seconds after it was last touched. To re-activate the LCD for an additional 20 seconds, touch the screen.

Operating Mode		Alarm Description
Battery Mode	Normal	No Alarm
	Battery Low	Sounds Every Second
	Over Load	Sounds Every 0.5 Second
On-Line Mode	Normal	No Alarm
	Over Load	Sounds Every 0.5 Second
	Battery Replace	Sounds Every Minute
Fault Mode		Sounds Continuously

Battery Power Mode LCD Data

The LCD touchscreen offers 5 screens of UPS and site power information when the UPS is operating in battery power mode. Screens 1-4 (Output Voltage, Input Voltage, Load %, Battery Charge Level) are available for viewing in battery power mode. Press the front panel LCD to advance to the next screen. Screen #5 (Overload) is displayed automatically only when the BATTERY/SURGE PROTECTED outlets are loaded to levels greater than 100%.



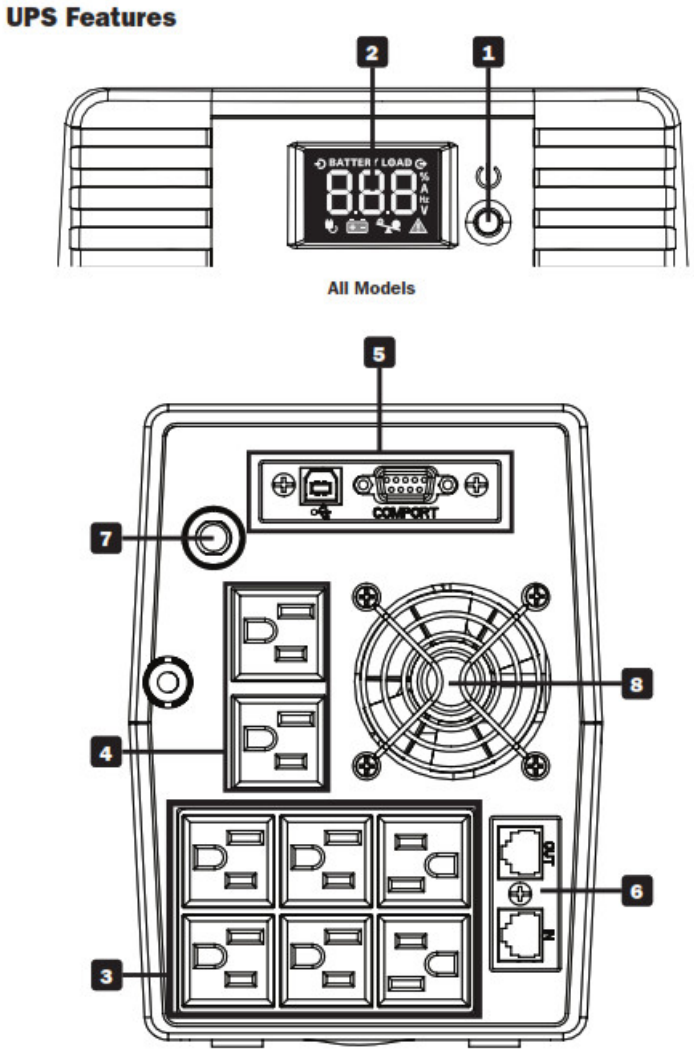
1. Output Voltage
2. Input Voltage
3. Load %
4. Battery Charge Level
5. Overload

Note: The LCD touchscreen will remain ON continuously during battery mode operation.

Critical Fault Screens

Error Code	Critical Fault	Solution
F1	OUTPUT SHORT	Disconnect load(s) from UPS outlets. Power off UPS and contact Tr ipp Lite Technical Support for assistance.
F2	OVERLOAD	Remove excess load, check load meter on LCD for load status.
F3	OVERCHARGE	Turn unit off, unplug UPS and contact Tripp Lite Technical Support f or assistance.
F4	BATTERY LOW VOLTA GE	Charge UPS for 24 hours. If the problem persists, replace the batte ry and contact Tripp Lite Technical Support if the problem persists.
F5	BATTERY MODE HIGH OUTPUT	Turn off power to the UPS and contact Tripp Lite Technical Support for assistance.

Features



1. ON/OFF Button: When the UPS is OFF, press and hold the ON/OFF button until a beep is heard to turn the UPS ON. When the UPS is ON, press and hold the ON/OFF button to turn the UPS OFF.
2. LCD Touchscreen Panel: Provides current status of the UPS. For a detailed description, refer to “Display UPS/Power Conditions” in the Basic Operation section.
3. Battery Backup/Surge Protected Outlets: These outlets offer battery backup support and premium surge suppression for critical devices requiring battery backup support.

4. Surge Protected Outlets: These outlets offer premium surge suppression for critical devices.
5. USB and RS-232* Communication Ports: These ports can connect your UPS to any computer for automatic saves and unattended shutdown in the event of a power failure.

   Use Tripp Lite's PowerAlert ® Software (available as a FREE download at **tripplite.com**) and the USB cable included with your UPS. These connections are optional, your UPS will work properly without them.

   *All models include a USB communication port. Select models also include an RS-232 serial port.

   Note:

   This UPS System provides basic communication compatibility with most integrated Windows ®, Macintosh ®and Linux ® power management applications.
6. Tel/DSL/Ethernet Line Protection Jacks: These jacks protect equipment against surges over a single phone line or network connection. Connecting your equipment to these jacks is optional; your UPS will work properly without this connection.

   Note: Not compatible with PoE (Power over Ethernet) applications.
7. Resettable Input Circuit Breaker: Protects your electrical circuit from overcurrent draw from the UPS load. If this breaker trips, remove some of the load, then reset by pressing it in.
8. Fan: Provides cooling during AVR mode or when the UPS is operating in battery mode.

Battery Replacement

Under normal conditions, the original battery in your UPS will last several years. Battery replacement should only be performed by qualified personnel. Refer to "Battery Warnings" in the Important Safety Instructions section for more information.
Models OMNIVS800LCD, OMNIVS1000LCD, OMNIVS1200LCD and OMNISMART700TSU require two 12V DC, 7Ah replacement batteries
Model OMNIVS1500LCD requires two 12V DC, 9Ah replacement batteries.
For further information about replacement compatibility and ordering, visit **tripplite.com/products/battery-finder**.

 Battery replacement must be done using the same battery type and quantity: 12V DC sealed lead-acid, 6-cell and in compliance with UL 1989.

 **CAUTION:** Risk of energy hazard. Before replacing batteries, remove conductive jewelry such as chains, wristwatches and rings. High energy passing through conductive materials may cause severe burns.

Storage and Service

Storage
To avoid battery drain, all connected equipment should be turned off and disconnected from the UPS. Press the power button and disconnect the unit from AC power. Your UPS will be completely turned off (deactivated), and will be ready for storage. If you plan on storing your UPS for an extended period, fully recharge the UPS batteries every three months. Plug the UPS into a live AC outlet and allow the batteries to recharge for 4 to 6 hours. If you leave your UPS batteries discharged for a long period of time, they will suffer a permanent loss of capacity.
Service
A variety of Extended Warranty and On-Site Service Programs are available from Tripp Lite.
For more information on service, visit **tripplite.com/support**.
Before returning your product for service, follow these steps:

1. Review the installation and operation procedures in this manual to ensure that the service problem does not originate from a misreading of the instructions.
2. If the problem continues, do not contact or return the product to the dealer.

Instead, visit **tripplite.com/support**.

3. If the problem requires service, visit **tripplite.com/support** and click the Product Returns link. From here you can request a Returned Material Authorization (RMA) number, which is required for service. This simple on-line form will ask for your unit's model and serial numbers, along with other general purchaser information. The RMA number, along with shipping instructions, will be emailed to you. Any damages (direct, indirect, special or consequential) to the product incurred during shipment to Tripp Lite or an authorized Tripp Lite service center is not covered under warranty. Products shipped to Tripp Lite or an authorized Tripp Lite service center must have transportation charges prepaid. Mark the RMA number on the outside of the package. If the product is within its warranty period, enclose a copy of your sales receipt. Return the product for service using an insured carrier to the address given to you when you request the RMA.

Specifications

Model	OMNIVS800LCD	OMNIVS1000LCD	OMNIVS1200LCD	OMNISMART 700TSU	OMNIVS1500LCD
Nominal input voltage(s) and range:	120V~, 89-145 V~	120V~, 89-145 V~	120W~, 89-145 V~	120V~, 89-145V~	120W~, 89-145 W~
Nominal input frequency and tolerance:	50/60 Hz (+/- 5 Hz)	50/60 Hz (+/- 5 Hz)	50/60 Hz (+/- 5 Hz)	50/60 Hz (+/- 5 Hz)	50/60 Hz (+/- 5 Hz)
Nominal output voltage:	120V~ sinusoidal in line mode and 120V~PWM in battery mode	120V~ sinusoidal in line mode and 120V~ PWM in battery mode	120V~ sinusoidal in line mode and 120V~ PWM in battery mode	120V~ sinusoidal in line mode and 120V~ PWM in battery mode	120V~ sinusoidal in line mode and 120V~ PWM in battery mode
Nominal output frequency:	50/60 Hz (+/-0.5 Hz)	50/60 Hz (+/-0.5 Hz)	50/60 Hz (+/-0.5 Hz)	50/60 Hz (+/-0.5 Hz)	50/60 Hz (+/-0.5 Hz)
Output voltage regulation in line mode:	120 V~ (+6% / – 12%)	120 V~ (+6%/ – 12%)	120 V~ (+6% / – 12%)	120 V~ (+6%/ – 12%)	120 V~ (+6% / – 12%)
Output voltage regulation in battery mode:	120V~ (+/-10%)	120W- (+/-10%)	120V~ (+/-10%)	120V~ (+/-10%)	120V~ (+/-10%)
Nominal output power in W/ VA:	475W / 800VA	560W / 1000VA	600W / 1200VA	480W / 700VA	900W / 1440VA
Output voltage waveform:	Sinusoidal in line mode and quasi-sine (PWM) in battery mode	Sinusoidal in line mode and quasi-sine (PWM) in battery mode	Sinusoidal in line mode and quasi-sine (PWM) in battery mode	Sinusoidal in line mode and quasi-sine (PWM) in battery mode	Sinusoidal in line mode and quasi-sine (PWM) in battery mode
Maximum output current @ P.F.	6.7A @ 120V~	8.3A @ 120V~	10A @ 120V~	5.8A @ 120V~	12A @ 120V~
	P.F. = 0.6	P.F. = 0.56	P.F. = 0.5	P.F. = 0.685	P.F. = 0.625

Efficiency with nominal load:	95%	95%	95%	95%	95%
Maximum operating altitude at 100% of nominal power:	2,000 m above the sea level	2,000 m above the sea level	2,000 m above the sea level	2,000 m above the sea level	2,000 m above the sea level
Online overload capability:	110%±10%, goes to fault after 5 min.; 120%±10%, goes to fault immediately	110%±-10%, goes to fault after 5 min.; 120%±10%, goes to fault immediately	110%±10%, goes to fault after 5 min.; 120%-±10%, goes to fault immediately	110%-±10%, goes to fault after 5 min.; 120%±10%, goes to fault immediately	110%±10%, goes to fault after 5 min.; 120%±10%, goes to fault immediately
Overload capacity in battery mode:	110%±10% shuts down in 5 sec.; 120%±10%, shuts down immediately	110%±10% shuts down in 5 sec.; 120%±10%, shuts down immediately	110%±10% shuts down in 5 sec.; 120%±10%, shuts down immediately	110%±10% shuts down in 5 sec.; 120%-±10%, shuts down immediately	110%±10% shuts down in 5 sec.; 120%±10%, shuts down immediately
Current limitation:	Input 10A	Input 15A	Input 15A	Input 10A	Input 15A
Autonomy time at full load:	3 minutes @ 475W	2 minutes @ 560W	2 minutes @ 600W	3 minutes @ 480W	2 minutes @ 900W
Battery recharge time:	8 hours	8 hours	8 hours	8 hours	8 hours
Transfer time:	6 milliseconds typical (10 milli- seconds max)	6 milliseconds typical (10 milli-seconds max)	6 milliseconds typical (10 milli-seconds max)	6 milliseconds typical (10 milli-seconds max)	6 milliseconds typical (10 milliseconds max)
Outlets:	6x 5-15R outlets with battery back- up, regulation and surge, 2x 5-15R outlets only for surges	6x 5-15R outlets with battery back- up, regulation and surge, 2 x 5-15R outlets only for surges	6x 5-15R outlets with battery back- up, regulation and surge, 2 x 5-15R outlets only for surges	6x 5-15R outlets with battery back- up, regulation and surge, 2 x 5-15R outlets only for surges	6x 5-15R outlets with battery backup, regulation and surge, 2x 5-15R outlets only for surges
Maximum input current:	10A	12A	12A	10A	15A~

Product Registration

Visit **tripplite.com/warranty** today to register your new Tripp Lite product. You'll be automatically entered into a drawing for a chance to win a FREE Tripp Lite product! *
* No purchase necessary. Void where prohibited. Some restrictions apply. See website for details.

Regulatory Compliance

FCC Part 68 Notice (United States Only)

If your Modem/Fax Protection causes harm to the telephone network, the telephone company may temporarily discontinue your service. If possible, they will notify you in advance. If advance notice isn't practical, you will be notified as soon as possible. You will be advised of your right to file a complaint with the FCC. Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper operation of your equipment. If it does, you will be given advance notice to give you an opportunity to maintain uninterrupted service. If you experience trouble with this equipment's Modem/Fax Protection, please visit **tripplite.com/support** for repair/warranty information. The telephone company may ask you to disconnect this equipment from the network until the problem has been corrected or you are sure the equipment is not malfunctioning. There are no repairs that can be made by the customer to the Modem/Fax Protection. This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs. (Contact your state public utility commission or corporation commission for information.)

FCC Notice, Class A

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. WARNING: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Equipment Attachment Limitations (models with the Industry Canada label in Canada only)

NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets the telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements Document(s). The Department does not guarantee the equipment will operate to the user's satisfaction. Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that the compliance with the above conditions might not prevent degradation of service in some situations.

Regulatory Compliance

Regulatory Compliance Identification Numbers

For the purpose of regulatory compliance certifications and identification, your Tripp Lite product has been assigned a unique series number. The series number can be found on the product nameplate label, along with all required approval markings and information. When requesting compliance information for this product, always refer to the series number. The series number should not be confused with the marking name or model number of the product.

Tripp Lite has a policy of continuous improvement. Product specifications are subject to change without notice. Photos and illustrations may differ slightly from actual products. Photos and illustrations may differ slightly from actual products.

Note on Labeling

Two symbols are used on the label.

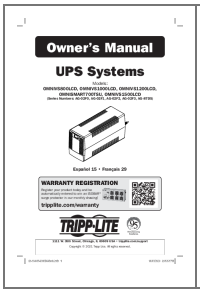
V~ : AC Voltage

V⎓ : DC Voltage

TRIPP·LITE

95 OVER YEARS Manufacturing Excellence.

Documents / Resources

	TRIPP LITE OMNIVS800LCD UPS Tower System Systems [pdf] Owner's Manual OMNIVS800LCD, OMNIVS1000LCD, OMNIVS1200LCD, OMNISMART700TSU, OMNIVS1500 LCD, UPS Tower System Systems