

# Office-Plus TBF UPS Series

P.N.16001450 Rev.11/23

# Uninterruptible Power Supply

## OFFICE Plus Series

420VA - 850VA



## USER'S GUIDE

Models:

OF420UPlus-T

OF650UPlus-T

OF850UPlus-T



**SMART POWER SYSTEMS**

# Important Safety Instructions

## Save These Instructions

This manual contains important instructions that should be followed during installation and maintenance of the UPS and batteries. Please read and follow all instructions carefully during installation and operation of the unit. Read this manual thoroughly before attempting to unpack, install, or operate.

**CAUTION!** The UPS must be connected to a grounded AC power outlet with fuse or circuit breaker protection. DO NOT plug the UPS into an outlet that is not grounded. If you need to de-energize this equipment, turn off and unplug the UPS.

**CAUTION!** The battery can energize hazardous live parts inside even when the AC input power is disconnected.

**CAUTION!** To prevent the risk of fire or electric shock, install in a temperature and humidity controlled indoor area, free of conductive contaminants. (Please see specifications for acceptable temperature and humidity range).

**CAUTION!** To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer servicing to qualified service personnel.

**CAUTION!** To avoid electrical shock, turn off the unit and unplug it from the AC power source before installing a computer component.

**CAUTION! DO NOT USE WITH OR NEAR AQUARIUMS!** To reduce the risk of fire, do not use with or near aquariums. Condensation from the aquarium can come in contact with metal electrical contacts and cause the machine to short out.

**CAUTION! DO NOT USE WITH LASER PRINTERS!** The power demands of laser printers are too large for a UPS.

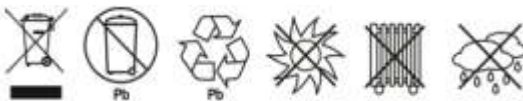
### **WARNING!!**

To reduce the risk of fire, replace only with same type of fuse.

Refer servicing to qualified service personnel only.

To reduce the risk of fire or electric shock, install in a temperature and humidity controlled indoor area free of conductive contaminants.

Risk of Electric Shock. Battery circuit is not isolated from AC input, hazardous voltage may exist between battery terminals and ground.



# Important Safety Instructions

## Save These Instructions

### **NOTICE!!!**

The output of the Office 420 is not sinusoidal. It has a total harmonic distortion of 61% and a maximum single harmonic distortion of 46.6%.

The output of the Office 650 is not sinusoidal. It has a total harmonic distortion of 46% and a maximum single harmonic distortion of 33%.

## Unpacking

### **UNPACKING**

The box should contain the following:

- (1) UPS unit with TBF™ Power Conditioner ;
- (2) User Guide ;
- (3) USB Cable




### **OVERVIEW**

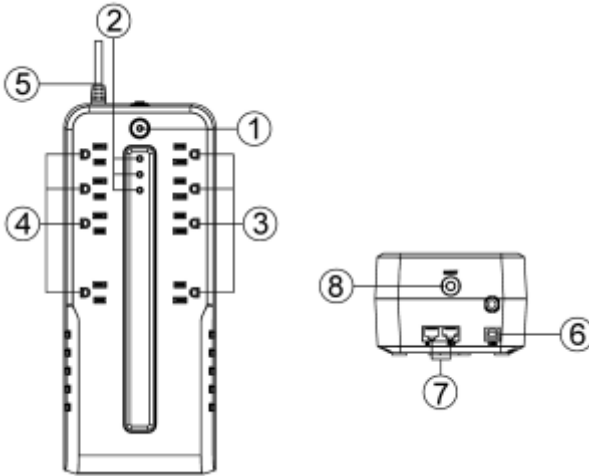
The UPS ensures consistent power to your computer system and its included software will automatically save your open files and shutdown your computer system during a utility power loss.

### **HOW TO DETERMINE THE POWER REQUIREMENTS OF YOUR EQUIPMENT**

1. Make sure that the total Volt-Amp (VA) requirements of your computer, monitor, and peripheral equipment does not exceed rated capacity.
2. Ensure that the equipment plugged into the battery power-supplied/surge outlets does not exceed the UPS unit's rated capacity. If the rated unit capacities are exceeded, an overload condition may occur and cause the UPS unit to shut down or the circuit breaker to trip.

# System Description

1. Power On/Off Switch
2. Green LED: On AC Line Mode   
Yellow LED: Battery Mode   
Red LED: Fault 
3. Battery power Plus Power Conditioning TBF™  
Receptacles with battery power plus power conditioning (TBF™) for critical devices that need to stay on when power goes out.
4. Power Conditioning TBF™ only  
Receptacles with power conditioning (TBF™) only for non-critical devices.
5. Input power cord
6. USB COMM. Port
7. Communication Protection Ports (RJ45 & RJ11)
8. Input Circuit Breaker



## DEFINITIONS FOR ILLUMINATED LED INDICATORS

LED	ALARM	CONDITION
Green LED on	Off	Normal
Yellow LED flash	Beeps every 30s	Utility Failure - The UPS is providing battery power to outlets.
Yellow LED flash	Beeps every 2s	Utility Failure - The UPS is providing battery power. The rapid beeps indicate the battery will run out of power shortly.
Red LED flash	Beeps every 0.5s	Overload - Occurs when connected equipment exceeds the rating of the unit. Turn the UPS off and unplug at least one piece of equipment from the UPS.
Red LED on	Beeps continuously	Fault - Occurs when the UPS Fail. Unplug the equipment and restart the UPS or Contact Technical Support.

# Troubleshooting

If the UPS failed to operate properly, please review the following:

<b>Symptom</b>	<b>Possible Cause</b>	<b>Solution</b>
The outlets stop providing power to equipment. Circuit breaker button is projecting from the side of the unit	Circuit breaker has tripped due to an overload	Turn the UPS off and unplug at least one piece of equipment. Reset the circuit breaker by depressing the button, and then turn the UPS on
The UPS does not perform expected runtime.	Battery not fully charged	Recharge the battery by leaving the UPS plugged in
	Battery is slightly worn out	Contact Technical Support.
The UPS will not turn on.	The on/off switch is designed to prevent damage by rapidly turning it off and on	Turn the UPS off. Wait 10 seconds and then turn the UPS on
The UPS will not turn on.	The battery is worn out	Contact Technical Support
	Mechanical problem	Contact Technical Support

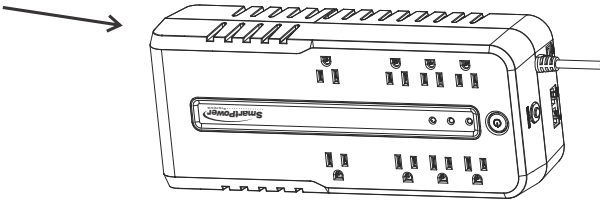
# Installation and Operation

Installing the Office Series UPS is as easy as following the steps shown. Be aware that the Power Switch must be kept in the "ON" position and all equipment must be plugged into the "Battery Power Supplied" receptacles. Otherwise the UPS will be disabled and your equipment will not be protected during a power failure.

## 1

### Inspection

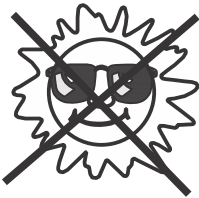
Unpack the UPS carefully and note the packing method. Retain the box and packing material for possible future shipment. Visually inspect the UPS for freight damage. Report damage to the carrier and your dealer.



## 2

### Placement

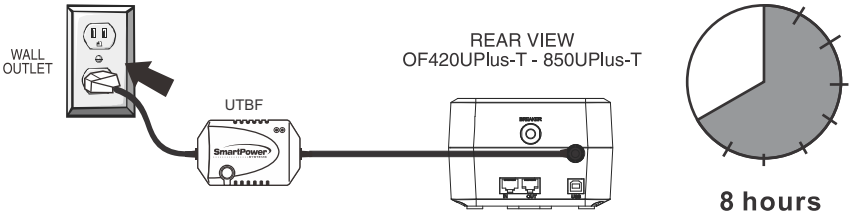
Install the UPS unit in any protected environment that provides adequate airflow around the unit, and is free from excessive dust, corrosive fumes and conductive contaminants. DO NOT operate your UPS in an environment where the ambient temperature or humidity is high.



# 3

## Charging

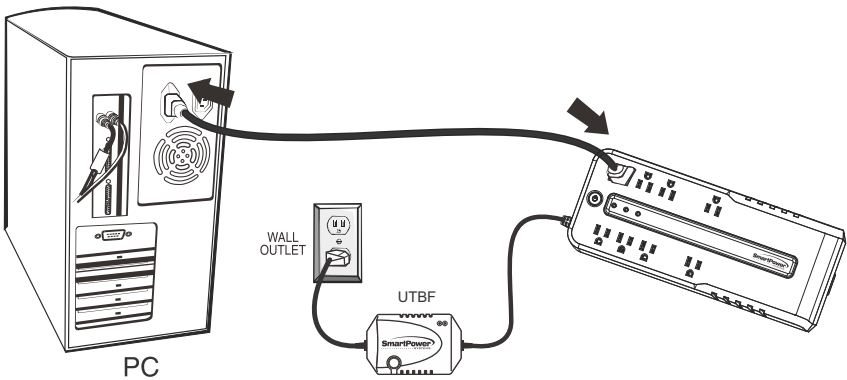
This unit is shipped from the factory with its internal battery fully charged, however, some charge may be lost during shipping and the battery should be recharged prior to use. Plug the unit into an appropriate power supply and allow the UPS to charge fully by leaving it plugged in for at least 8-10 hours with no load (no electrical devices such as computers, monitors, etc.) connected.



# 4

## Computer Connection

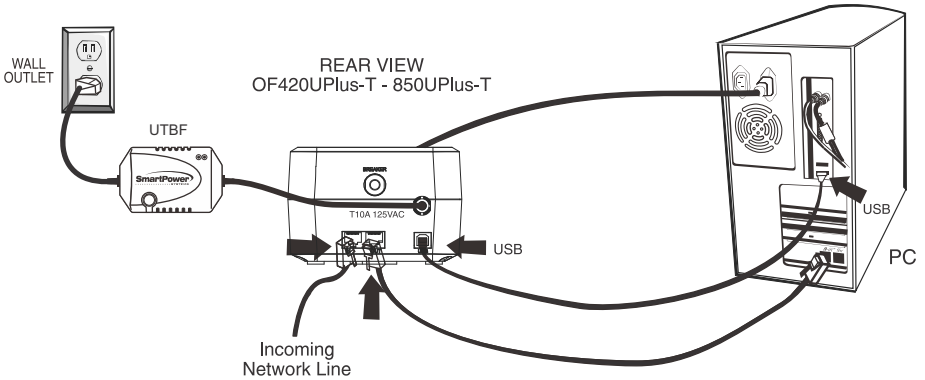
Connect one computer-related device into one of the battery supplied receptacles on the top of UPS. Office Plus UPSs provide eight receptacles, four battery supplied receptacles and four surge protected only receptacles.



# 5

## USB Connection with Network Protection

To allow for unattended system shutdown for your operating system, connect the USB cable as shown in the diagram below. To protect the Network connection, plug incoming Network line into the "in" socket at the rear panel of the Office Plus UPS. Use provided CAT5 Network cable and plug one end to the "Out" socket at the rear panel of the UPS. Plug the other end of the Network socket of the PC as shown below.



# 6

## Office TBF™ Connection

1. Turn off and un-plug all devices.
2. Plug UPS unit into grounded wall outlet.
3. Place the UTBF where monitoring lights can be observed.

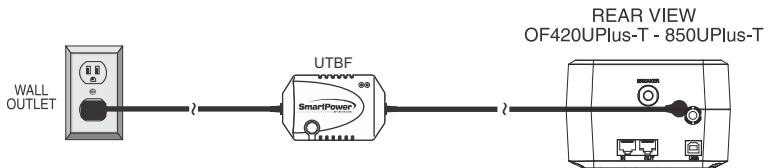
### UTBF INDICATORS:

**Green light only** - It confirms properly connected equipment is fully protected.

**Green and Red light** - Reverse polarity or loss of ground at the wall outlet.

Call your electrician to correct the problem.

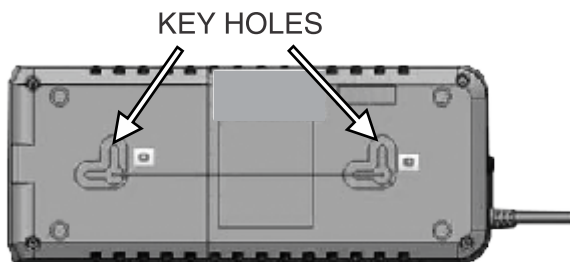
**Green light off** - Power failure or UTBF fault. Contact customer service.



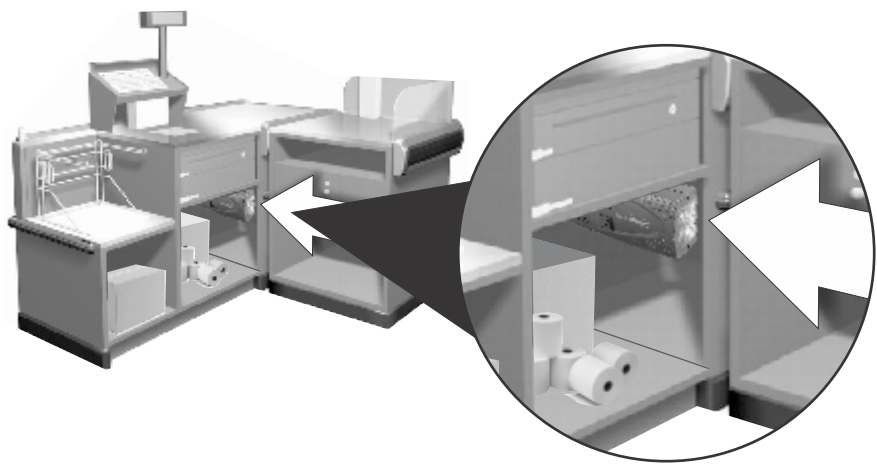


## 7 Wall mounting instructions

The wall mount key holes in the back of the UPS let you mount your Office Plus UPS on a wall or other surface. Make sure to place the unit where monitoring lights can be observed.

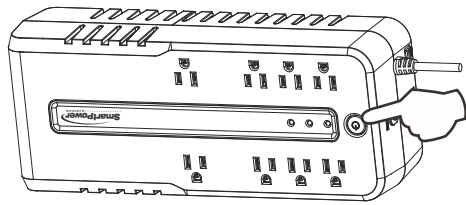


## WALL MOUNT - RETAIL APPLICATION



## 8 Turn On/Off

Press power switch to turn on the Office Plus UPS. Press power switch again to turn off the UPS.



**9****DC Start Function**

DC Start Function enables UPS to be started up when AC utility power is not available and battery is fully charged. Just simply press the power switch to turn on the UPS.

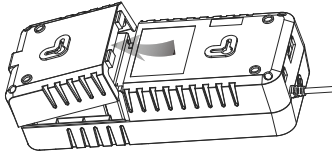
**10****Battery Replacement**

**CAUTION: Battery replacement should be performed by qualified service personnel.**

Follow the charts below to replace the batteries.

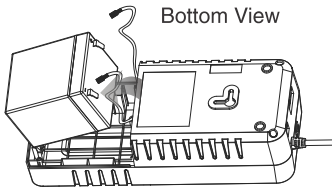
Remove the screws located on the bottom of the UPS to open the battery cover.

Bottom View

**Chart 1****11**

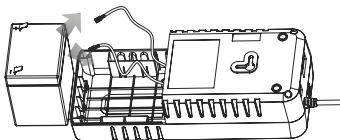
After removing the battery cover, gently extract batteries from the case.

Bottom View

**Chart 2****12**

Disconnect the two wires connecting it to the Office Plus UPS and replace it with the same type of batteries. Dispose of the old batteries properly at an appropriate recycling facility.

Bottom View

**Chart 3**

# Specifications

MODEL	OF420UPlus-T	OF650UPlus-T	OF850UPlus-T
<b>OUTPUT</b>			
Capacity VA / W	420 / 210	650 / 330	850 / 450
Voltage (on battery)	Simulated sine wave at 120VAC ±10%		
Frequency (on battery)	50/60Hz ±1%		
Transfer Time	4 milli seconds typical		
<b>INPUT</b>			
Voltage Range	90-140VAC		
Frequency	47-63Hz (auto sensing)		
<b>PROTECTION &amp; FILTERING</b>			
Spike Protection (Joules)	1710		
Overload and Short Circuit Protection	Electronic and circuit breaker		
Lowest Pass Through Voltage	<10V Normal Mode (L-N) <0.5V Common Mode (N-G) None of the competitors publish N-G Pass Through Voltage		
Phone/Network/LAN Protection	RJ11 / RJ45		
Communication Port	USB		
Communication Software	Automatic save and shutdown for unattended PCs, reboot/shutdown scheduling, self test scheduling, power condition analysis		
<b>BATTERY</b>			
Type	Sealed, maintenance-free lead acid		
Back-up Time (half load) Minutes	11.5	9.5	7
<b>PHYSICAL</b>			
Net Weight (Lbs. / Kg.)	6.99 / 3.17	7.65 / 3.47	
Shipping Weight (Lbs. / Kg.)	7.45 / 3.42	8.20 / 3.72	
Dimensions D x W x H (In./mm)	12 x 4.92 x 3.30 / 305 x 125 x 84		
Input Inlet	AC cord 6 ft. (5-15P) plug		
Receptacles	8 (4-NEMA 5-15R Battery Power Plus Power Conditioning TBF™ 4-NEMA 5-15R Power Conditioning TBF™ only)		
<b>ALARM</b>			
Audible Warnings	On Battery, Battery Low, Overload, Fault		
Visual Indicators	Site Wiring Fault, UPS On, On Battery, Overload, UPS Fault		
<b>CONFORMANCE</b>			
Safety	cTUVus, FCC		
Warranty	Two years on the unit and \$25,000 Lifetime Connected Equipment Warranty		
<b>ENVIRONMENT</b>			
Ambient Humidity	0-90% humidity non-condensing		
Ambient Temperature	0-40 deg C		

Specifications and features subject to change without notice.

## **LIMITED PRODUCT WARRANTY**

We warrant this product to be free from defects in material and workmanship for 2 years. The battery has a 2 year warranty. If a product proves to be defective in material or workmanship during the warranty period, we will at our sole option repair or replace the product with a like product. Visit our website for details -

<http://smartpowersystems.com/downloads/archives/030714-SPS-CEPP.pdf>

## **CONNECTED EQUIPMENT PROTECTION POLICY**

If the Smart Power Systems equipment fails and this failure causes the surges to pass through and damage the connected equipment, Smart Power Systems will pay for the repair or replacement of the connected equipment up to \$25,000 (hardware only) in accordance to the Connected Equipment Protection Policy. Visit our website for details -

<http://smartpowersystems.com/wp-content/uploads/2014/08/030714-SPS-CEPP.pdf>

## **IMPORTANT**

If for any reason you need to return the unit to the manufacturer, you should obtain an RMA (Return Material Authorization) number before returning the unit. To request an RMA number please call 1-800-772-7633 or visit the website at <http://smartpowersystems.com/support-2/rma/>

## **FCC COMPLIANCE STATEMENT**

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 B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Important: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canadian Compliance

CANICES-3 (B)/NMB-3 (B)



**SMART POWER SYSTEMS**

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