User Guide

Fighter Series

Model: 600, 600B

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

- **WARNING (SAVE THESE INSTRUCTIONS):** This manual contains important instructions that should be followed during installation and maintenance of the UPS and batteries.
- The unit is intended for installation in a controlled environment.
- Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.
- When replacing battery, replace with the same number and type.
- **CAUTION:** Do not dispose of battery or batteries in a fire, the battery may explode.
- **CAUTION:** Do not open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.
- **CAUTION:** A battery can present a risk of electric shock and high short circuit current. The following precaution 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 prior to connecting or disconnecting battery terminals.

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Introduction

Please read and save this manual !

Thank you for selecting this uninterruptible power system (UPS). It provides you with a perfect protection for connected equipment. The manual is a guide to install and use the UPS. It includes important safety instructions for operation and correct installation of the UPS. If you should have any problems with the UPS, please refer to this manual before calling customer service.

1. Presentation

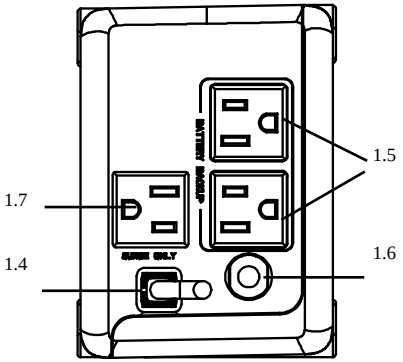
The UPS is a OFF-line uninterruptible power system (UPS). When utility input is normal, the UPS provides surge protection and energy to charge the internal battery. If the utility input is abnormal, the UPS can supply AC power to the load immediately.

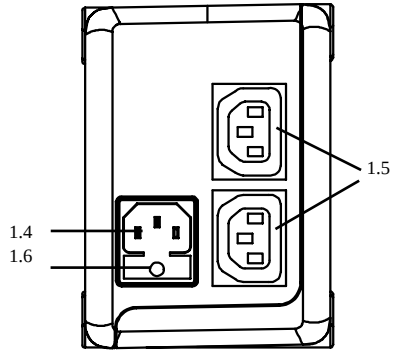
(1). Utilizes microprocessor based controls, it will minimizes the dependency on hardware. Beside this, it maximizes system flexibility and optimizes the assurance of reliability.
(2). Automatic frequency selection to match with utility power.
(3). Hi level battery charger to prolong battery's life and fully charge the battery.
(4). With actual overload protection both in line and battery mode.

1.1 Front and rear view

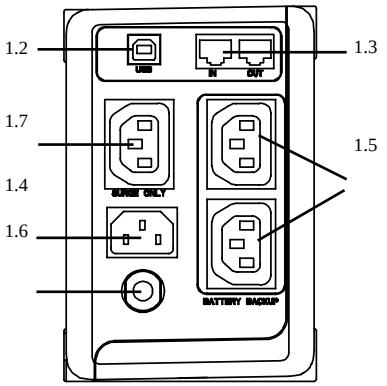
1.1) Power Switch
1.2) USB Port (option)
1.3) Phone Jack (option)
1.4) AC Input
1.5) UPS Outlets
1.6) AC Fuse/ Breaker
1.7) Convenience Outlet

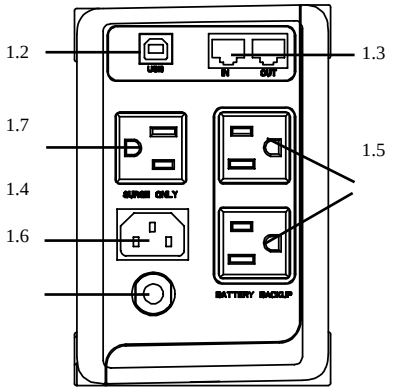
For models of FS600





For models of FS600B





2. Installation

2.1 Inspection

Inspect the UPS upon receipt. The packaging is recyclable; save it for reuse or dispose of it properly.

2.2 Utility Power

The input power cord on the rear panel needs to plug into a socket on the wall. Please notice the voltage of utility power should match with the UPS. (For example, the UPS is 220V, the input utility power should be 220V as well.)

2.3 Connection

The employed equipment's power cords (such as computer) are plugged into the sockets on the rear panel.

3. Operation

3.1 Switch on

When utility input is connected to the UPS, press power button and keep pressing until the buzzer sound stop. After that, connect the electrical cords of the equipments that will be used (such as desktop computer and LCD monitor) to the rear panel of UPS.

ATTENTION: *At backup mode, UPS can be automatically turned off if none of the connected loads is operating. (Green mode; No Load shut down function)*

CAUTION: *Never connect a laser printer or plotter to the UPS with other computer equipment. A laser printer or plotter periodically draws significantly more power than when its idle status, and may overload the UPS.*

3.2 Switch off

Press the power switch and keep pressing more than 3 seconds to turn off the UPS when UPS is in line or backup mode.

3.3 Silence

When UPS is under "BACKUP" mode, press power switch more than 1 second to silence the audible alarm. (The function is disable when UPS is under condition of "LOW BATTERY" or "OVERLOAD")

3.4 Self test function

Press power switch while utility power is connected, UPS will perform self-test procedure automatically.

4. Alarm

4.1 "BACKUP" (slow alarm)

When the UPS is working under "BACKUP" mode, the UPS would emit audible alarm. The alarm stops when the UPS is return to "LINE" mode operation.

ATTENTION: *The alarm of "BACKUP" is going to beep every 2 seconds. (Slow-speed beep).*

ATTENTION: *The UPS provides mute function for the warning. When the beeping sound occurs, press "ON" to stop it; and press "ON" again to regain the sound.*

4.2 "LOW BATTERY" (rapid alarm)

In the "BACKUP" mode, when the energy of battery becomes to lower level. (about 20%~30%) The UPS beeps rapidly until the UPS shuts down from battery exhaustion or returns to "LINE" mode operation.

ATTENTION: *The alarm of the batteries caused by low voltage beeps every 0.5 second.*

ATTENTION: *The rapid alarm under "LOW BATTERY" condition cannot be muted.*

4.3 "OVER LOAD" (continuous alarm)

When the UPS is working under overload condition (the connected loads exceed the maximum rated capacity), the UPS will emit continuous alarm to warn an overload condition. In order to protect the unit and the loads, the UPS will be automatically turn off. Please disconnect nonessential devices from UPS to eliminate the overload alarm.

5. Software and Interface Port (Option)

5.1 Power Monitoring Software

The OPTI-SAFE Sentinel software (or the other power monitoring software) is applied standard RS-232 or USB interface to perform monitoring functions. It certainly provides graceful shutdown of computer in the event of power failure. Moreover, it simultaneously monitors the UPS and displays all the diagnostic symptoms on the monitor such as voltage, frequency and battery level and so on. For UPS with RS-232 communication port, the software is compatible with Windows 95/ NT4.0/ 98/ ME/ 2000 / XP/ 2003 Server, Novell Netware, Linux, and others. For UPS with USB communication port, the software is compatible with Windows 98SE/ ME/ 2000/ XP/ 2003 Server. Call your dealer for more information about the solutions of others operating system.

5.2 Interface Kits

A series of interface kits is available for operation systems that provide UPS monitoring. Each interface kit includes the special interface cable required to convert status signals from the UPS into signals which individual operating system recognizes. The interface cable at UPS side must be connected to REMOTE PORT, at computer side can be either series port or USB port. The other installation instructions and powerful features please refer to

READ.ME file.

5.3 The characteristics of computer interface port

The computer interface port has the following characteristics:

The communication port on the back of the UPS may be connected to host computer. This port allows the computer to monitor the status of the UPS and control the operation of the UPS in some cases. Its major functions normally include some or all of the following:

- To pop-up a warning message when power fails.
- To back up opened files before operating system shutdown.
- To turn off the UPS.

Some computers are equipped with a special connector to link with the communication port. In addition, special plug-in cord may be needed. Some computers may need special UPS monitoring software. Contact your dealer for the details on the various interface Kits.

ATTENTION: *Sentinel software and interface port function just available for model name with "P" affix. The standard RS-232 cable or USB (depend on communication port on UPS) can be connected between UPS REMOTE PORT and computer COM port for the Sentinels software.*

Appendix A Troubleshooting

PROBLEM	POSSIBLE CAUSE	ACTION TO TAKE
UPS can not turn on LED not light	Power switch not pushed or push-time too short	Press the power switch more than 1 second
	Battery voltage less than 10V	Recharge the UPS at least 24 hours
	PCB failure	Call for service
	Load less than 30W at battery mode	Normal condition, "No load shutdown function" is active (See 3.2)
UPS always at battery mode	Power cord lose	Plug in the power cord
	AC fuse burn out	Replace the AC fuse
	Line voltage too high, too low or black out	Normal condition
	PCB failure	Call for service
Back up time too short	Battery is not fully charged	Recharge the UPS at least 6 hours
	PCB failure	Replace PCB, call for service
Buzzer continuous beeping	Overload	Remove some loads

Appendix B Specifications

Model		FS600	FS600B
Input	Capacity	600VA / 300W	
	Voltage	100V/110V+/-20% ,120V-20%,+15% 220V/230V/240V, 166V~280V at line input	
	Frequency	50 or 60Hz +/- 10% (auto sensing)	
Output	Voltage (Backup mode)	Simulated sine wave at 100V, 110V, 115V, 120V / 220V, 230V, 240V +/- 5% (FS600 only 220V~240V)	
	Frequency (Backup Mode)	50 or 60Hz +/- 1Hz	
	Transfer Time	4 milliseconds (Typical)	
Protection and Filtering	Spike Protection	460 Joules, 2ms	
	Unit Input	Fuse or circuit breaker for overload & short circuit protection	
	Overload Protection	UPS automatic power off if overload exceeds 110% of nominal at 10s and 130% at 3s	
	10 Base-T Cable Port	NO	YES
	Short Circuit	UPS output cut off immediately or input fuse protection	
Battery	Type	Sealed, maintenance-free lead acid batteries with 3-6 years typical lifetime	
	Typical Recharge Time	6 hours (to 90% of full capacity)	
	Protection	Auto discharge protection	
	Back up Time (PC with 17" LCD monitor)	10 min	
Physical	Net Weight Kg (lbs)	2.9(6.4)	3(6.6)
	Dimension (mm) W x D x H	90 x 254 x 126 (3.5" x 10" x 5")	90 x 254 x 146 (3.5" x 10" x 5.7")
	Input Inlet	IEC 320 power inlet	
	Receptacles	NEMA5-15R (1x0V), IEC320 female appliance coupler (2x0V)	
Alarm	Battery Back-Up	Slow beeping sound (about 0.47Hz)	
	Battery Low	Rapid beeping sound (about 1.824Hz)	
	Overload	Continuously beeping sound	
Interface	USB	NO	YES
Environment	Ambient Operation	3,500 meters max. elevation, 0-95% humidity non-condensing, 0-40℃	
	Audible Noise	<40dBA(1 meter from surface)	
	Storage Condition	15,000 meters max.	