



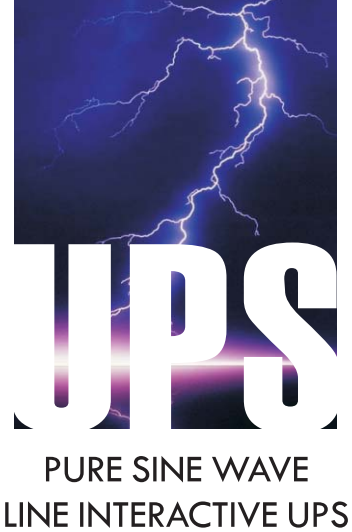
UPS

0.6-3KVA

PURE SINE WAVE
LINE INTERACTIVE UPS

USER MANUAL

Uninterruptible Power Supply



Thanks for using our products.
Please strictly obey all the instructions in this manual and pay attention to all the warning and operation information. It is not advisable to install or operate the machine before reading this manual.

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1 Package contents

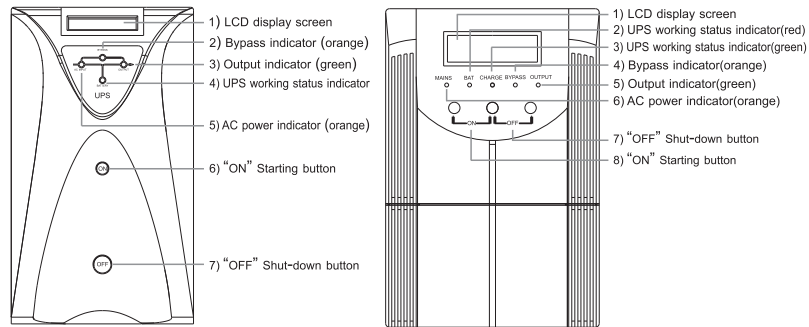
You should have received following items inside of package:

- UPS unit
- User manual
- CD disk (only for the model with USB/RS232 port)
- Communication cable (only for the model with USB/RS232 port)
- Battery connector (only for long backup model)

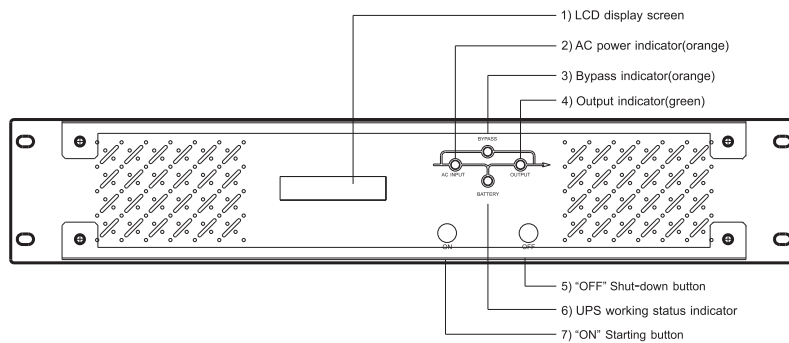
2 Product overview

2.1 Front view

➤ Tower model:

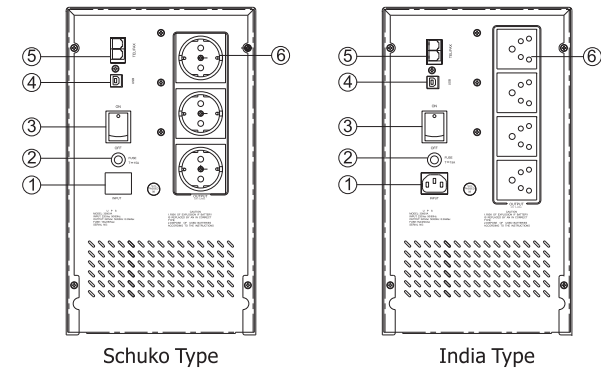
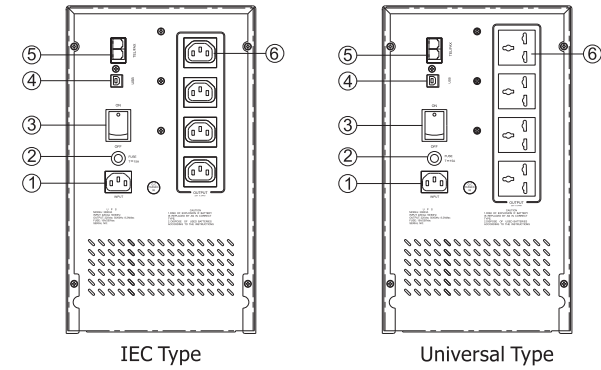


➤ Rack mount model:

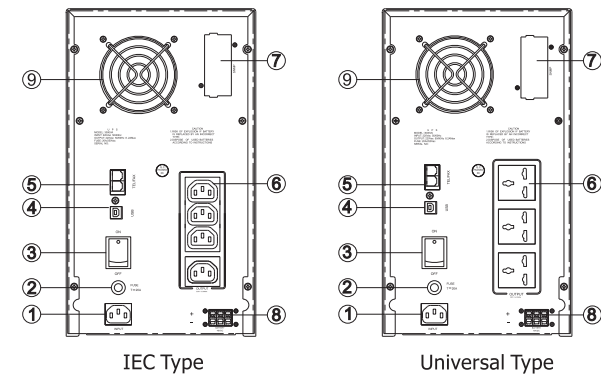


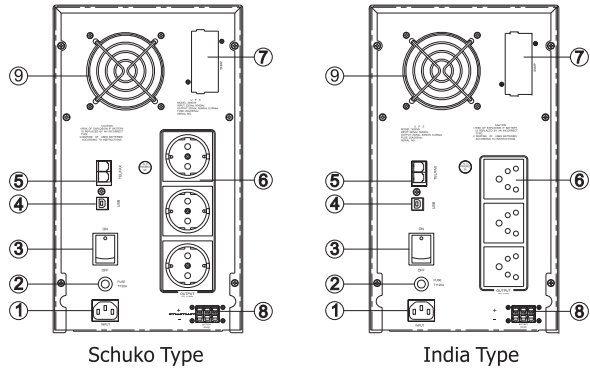
2.2 Rear view

➤ Tower Standard model:



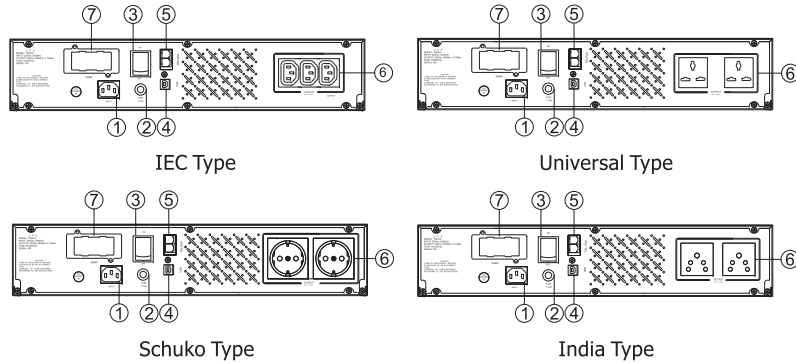
➤ Tower Long backup time model:



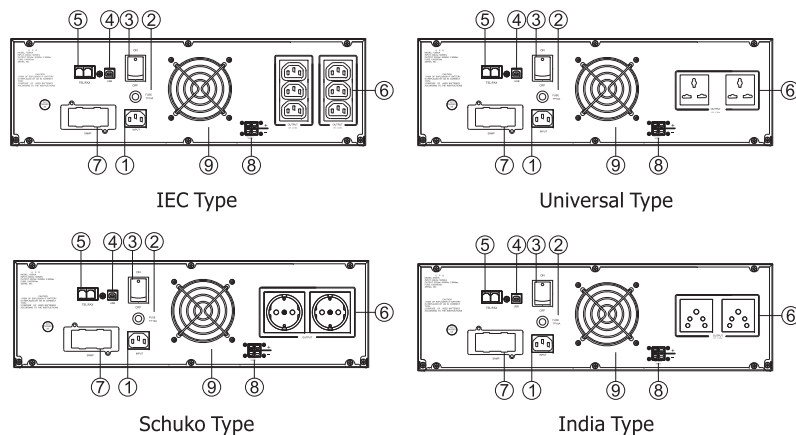


- | | |
|---|-----------------------------------|
| 1 | AC Input |
| 2 | Fuse |
| 3 | AC switch |
| 4 | USB (optional) |
| 5 | RJ11/RJ45 (optional) |
| 6 | output socket (Selectable) |
| 7 | SNMP card (optional) |
| 8 | DC input (long backup time model) |
| 9 | FAN(long back time model) |

➤ **Rack mount Standard model:**



➤ **Rack mount Long backup time model:**

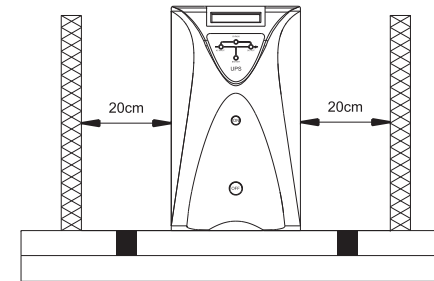


3 Installation & Initial Startup

NOTE: Before installation, please inspect the unit. Be sure that nothing inside the package is damaged.

3.1 Placement & Storage Conditions

Install the UPS in a protected area that is free of excessive dust and has adequate air flow. Please place the UPS away from other units at least 20 cm to avoid interference. DO NOT operate the UPS where the temperature and humidity is outside the specific limits. (Please check the specs for the limitations)



3.2 Connect External Battery for long backup time UPS.

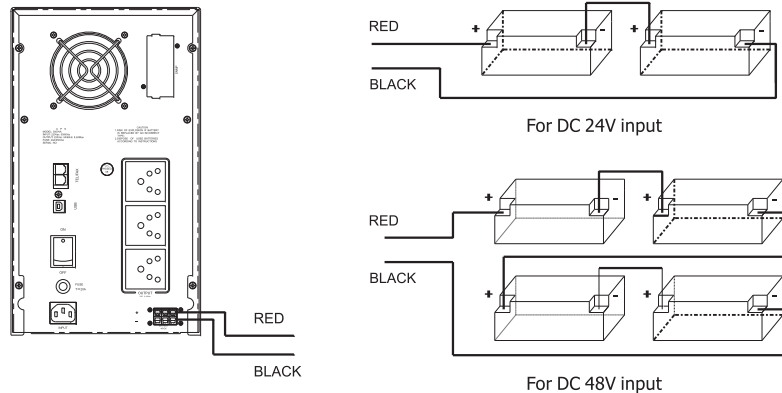
For different UPS type, users are instructed to configure different battery voltage as below sheet. More or less units are forbidden, or else something abnormal or faulty will appear.

Type	Battery Voltage (volt)	Minimum Battery Quantity (unit)
600VA	12	1
1KVA	24	2
1.5KVA	36	3
2KVA	48	4
3KVA	48	4

One end of battery cable is for UPS terminals while the other end with triple cables is for battery terminals. Correct installation procedure is highly vital or else probable electric shock will arise. Users are strictly required to follow the below procedure.

- Connect battery in correct way and make sure the total battery voltage is available for UPS.
- Correctly connect the long battery cable to battery terminals first, red wire is to positive plate while black is to negative. If users connect the UPS first, electric shock or other danger could not be avoided.
- Before connecting load after UPS, users should supply main power to UPS and energize it.
- Connect long battery cable to UPS terminals with correct poles link (red is for "+", black is for "-"), UPS will start the charging work automatically.

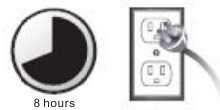
Note: For the user operation safety, we strongly recommend that you should use tapes to isolate the battery terminals before you start to operate the unit.



3.3 Connect to utility and charging

Plug in the AC input cord to the wall outlet. For the best results, suggest to charge the battery at least 8 hours before initial use.

The unit charges its battery while connecting to the utility.



3.4 Connect to the load

Plug in the loads to output receptacles on the rear panel of the UPS. Simply turn on the power switch of UPS unit, then devices connected to the UPS will be protected by UPS unit.

CAUTION: when you connect a laser printer or scanner to the UPS unit. please derate to use

3.5 Connect TEL/Modem/Fax for surge protection (Only for the model with RJ-45)

Connect a single modem/phone line into surge-protected "IN" outlet on the back panel of the UPS unit. Connect from "OUT" outlet to the computer with another phone line cable.

3.6 Connect Communication Cable (Only for the model with USB/RS232 port)

To allow for unattended UPS shut down/start-up and status monitoring, connect the communication cable one end to the UPS/RS232 port and the other to the communication port of your PC. With the monitoring software installed, you can schedule UPS shutdown/start-up and monitor UPS status through PC.

3.7 Turn on the UPS

On main power condition: Turn on the input switch on back panel of UPS, UPS will start self-testing and output through bypass and will be in normal condition in 15 seconds, the output indicator and working status indicator(green) of UPS will be on, the bypass indicator is off, user can start PC and other load at this moment.

On battery condition (main power off): Turn on the input switch on rear panel of UPS firstly, and then press the start button on front panel for 3 seconds, UPS will output power normally from Inverter.

3.8 Turn off the UPS

On main power condition: Press the shut-down button ("OFF") on front panel for 3 seconds, UPS will turn to bypass mode and bypass LED will be on at the moment.

On battery condition (main power off): Press the shut-down button ("OFF") on front panel for 3 seconds, UPS shut down and turn off the output.

3.9 Humanized alarm system

UPS will beep every 5 seconds when main power is off and inverter gets to work; the sound will be dispelled automatically after 40 seconds, in order not to disturb the working environment.

UPS will beep every 0.5 seconds with long ringing when the batteries will be nearly exhausted, in order to remind people that batteries are used up and UPS will be off soon.

When batteries are almost used up, UPS will shut down automatically to protect the batteries.

3.10 Overload protection

Mains mode: If the load is over 110%, UPS will alarm for 60s, and then it will turn to bypass mode, with ringing disappeared. Normal condition will recover if load has been decreased to a normal range.

Battery mode: If the load is over 110%, UPS will alarm for 60s, and then if load is decreased to a normal rang, the UPS will stop ringing. Otherwise, it will shut down itself. User need to turn on it manually by pressing the ON button in the front panel or wait for the recovering of the mains.

If the load is over 125%, UPS will alarm for 5s, and then shut down itself. User need to turn on it manually by pressing the ON button in the front panel or wait for the recovering of the mains.

3.11 Short circuit protection

When UPS in battery mode and there is shock or short-circuit, UPS will output limited current, protecting the UPS. (When in mains mode, the UPS will be protected by input fuse firstly and then transfers to the battery mode.)

4 Important Safety Warning (Save these instructions)

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

CAUTION! To reduce the risk of overheating the UPS, do not cover the UPS' cooling vents and avoid exposing the unit to direct sunlight or installing the unit near heat emitting appliances such as space heaters or furnaces.

CAUTION! Do not attach non-computer-related items, such as medical equipment, life-support equipment, microwave ovens, or vacuum cleaners to UPS.

CAUTION! Do not plug the UPS input into its own output.

CAUTION! Do not allow liquids or any foreign object to enter the UPS. Do not place beverages or any other liquid-containing vessels on or near the unit.

CAUTION! In the event of an emergency, press the OFF button and disconnect the power cord from the AC power supply to properly disable the UPS.

CAUTION! Do not attach a power strip or surge suppressor to the UPS.

CAUTION! If the UPS is with metal chassis, for safety purpose, grounding is a must during UPS installation in order to reduce leakage current below 3.5mA.

Attention! hazardous through electric shock. Also with disconnection of this unit from the mains, hazardous voltage still may be accessible through supply from battery. The battery supply should be therefore disconnected in the plus and minus pole at the quick connectors of the battery when maintenance or service work inside the UPS is necessary.

CAUTION! Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.

CAUTION! When replacing the batteries, use the same number and type of batteries.

CAUTION! Internal battery voltage is 12V dc. Sealed, Lead-acid, 6-cell battery.

CAUTION! Do not dispose of batteries in a fire. The battery may explode. Do not open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes.

CAUTION! Unplug the UPS prior to cleaning and do not use liquid or spray detergent.

CAUTION! A battery can present a risk of electric shock and high short circuit current.

The following precaution should be observed before replacing batteries:

- 1) Remove watches, rings, or other metal objects.
- 2) Use tools with insulated handles.
- 3) Wear rubber gloves and boots.
- 4) Do not lay tools or metal parts on top of batteries.
- 5) Disconnect charging source prior to connecting or disconnecting batteries terminal.

5 Software Installation & monitoring (Only for the model with communication port)

Please follow steps below to install software and monitor the UPS:

- Insert CD disk into computer, select installation icon and Follow the on-screen instructions to install the software.
- Connect the UPS and computer with communication cable.
- Open the software, select proper port to monitor the UPS.

6 Maintenance

6.1 Preventative Maintenance

Preventative Maintenance ensures the longer service life of UPS.

Please check the following things every month:

- Make sure the airway not blocked.
- Make sure that the UPS surface is not covered by dust.
- Check whether the input, output and battery connecting lines are firm or not and the insulation is effective or not.
- Make sure that the UPS is not affected with damp.
- Let the UPS work in battery mode for about 5 minutes and in this period, if there is no other alarm from the UPS, then the UPS is normal; if there is other alarm message, please contact the local dealer for help.

6.2 Battery maintenance

The UPS contains sealed lead-acid maintenance-free battery. The bad environment, high discharging frequency, high temperature etc will dramatically reduce the service life of battery. The service life of battery will also reduce even it is not used. It is suggested to discharge the battery once every 3 months when AC is normal. When battery is near the end of its life, the battery will end in bad performance.

7 Trouble Shooting

Use the table below to solve minor problems.

Phenomenon	Confirmation and solution
Main power is normal, main power indicator is off.	1, Whether cable is loose. 2, Whether fuse is burnt.
UPS can not stay in mains mode,The mains power indicator is off with the buzzer ringing, even the UPS input plug has been inserted to main power socket, and power switch is pushed.	Whether fuse is burnt or not after pulling out the UPS plug, use screwdrivers to revolve the fuse counterclockwise and get it out. Check that whether the fuse is fusing, if so, need replacement
Mains Mode no problem, battery mode can not work.	Whether the battery is not charged or not; Whether UPS is not switched on
When power is off, computer will stop working.	When main power is normal, start UPS. Charge the battery for more than ten hours, and then start the UPS.
When mains connected, UPS beeps for 60 seconds, then transfer to bypass; when no AC input, UPS shut of automatically after 60 seconds beeping.	Check UPS is overload or not
When UPS transfer to battery mode, but shut off immediately; when AC connected, UPS stay in bypass mode, and LCD shows "PWR ON" "△" or "Fault".	Battery connection cables open circuit or battery damage

8 Specifications

CAPACITY		600VA	1000VA	1500VA	2000VA	3000VA
INPUT						
Voltage		100V/110V/120VAC±25% or 220V/230V/240VAC±25%(-35%optional)				
Frequency		50/60Hz±10%(Auto Sensing)				
OUTPUT						
Power Factor		0.6				
Voltage		100V/110V/120VAC or 220V/230V/240VAC				
Voltage Regulation		AC mode: ±10%,Battery mode: ±5%				
Frequency		50/60Hz±1%(Auto Sensing)				
Waveform		Pure sine wave				
Crest Factor		3:1				
Harmonic Distortion		≤5%(Liner Load)				
Transfer Time		≤8ms				
EFFICIENCY						
AC Mode		≥96%				
Battery Mode		≥80%				
BATTERY						
Standard Model	DC Voltage	12V	24V	24V	36V	48V
	Type & Number	1*12V7Ah	2*12V7Ah	2*12V8Ah	3*12V8Ah	4*12V8Ah
Long time Model	DC Voltage	12V	24V	36V	48V	48V
	Charger Current	12A(Max)				
Typical Recharge Time		8 hours recover to 90% capacity				
PROTECTION						
Full Protection		Overload, Short circuit protection, Battery overcharge and discharge protection				
ALARM						
Battery Mode		Beep every 5seconds,be silent after 40seconds				
Battery Low		Beep every 0.5second				
Overload		Beep every 1second				
ENVIRONMENT						
Humidity		10~90% RH @ 0~40℃ (non-condensing)				
Noise Level		≤50dB (1m)				
MANAGEMENT						
USB/RS-232/SNMP(Optional)		Supports Windows 98/2000/2003/XP/Vista/2008/ Windows 7/Windows 8				
PHYSICAL						
Tower	Dimension(mm)	125*320*220	145*360*215		145*430*215(S) 145*360*215(H)	190*475*337
	Net Weight(kg)	7.0(H),8.0(S)	9.4(H),12.2(S)	10.1(H),13.7(S)	13.4(H),18.0(S)	22.5(H),26.7(S)
Rack Mount	Dimension(mm)	483*309*88		483*360*132		
	Net Weight(kg)	10.5(H),11.5(S)	12.4(H),15.2(S)	16.0(H),19.0(S)	18.0(H),22.6(S)	21.8(H),26.0(S)

Mark: S means standard model, H means long backup time model