

**Qoltec®**

# USER MANUAL

UPS Line Interactive

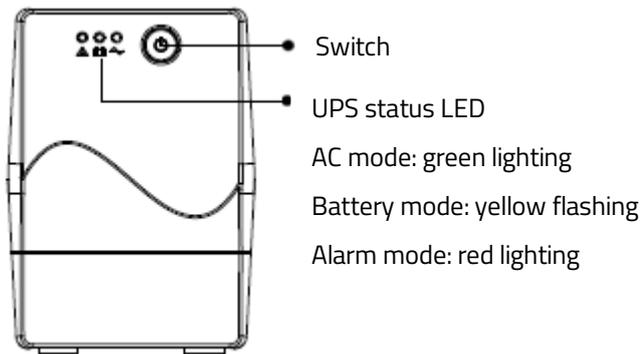
MODEL: 53970, 53971, 53972

### 1. Product introduction

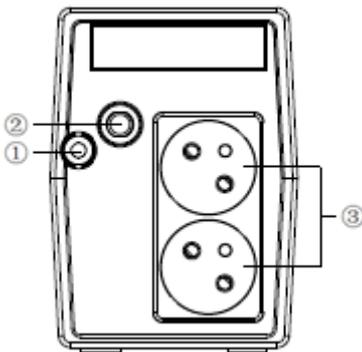
UPS power supplies in this series provide comprehensive protection against overvoltage and voltage spikes as well as against high power density. Thanks to the built-in voltage stabilizer, the UPS can continue to work online and provide stable power when voltage fluctuations. The built-in microprocessor driver ensures high reliability.

### 2. Product overview

Front view:



Back view:



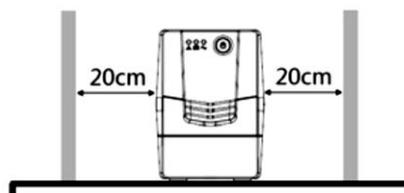
- ① Output receptacles
- ② AC input
- ③ Output receptacles

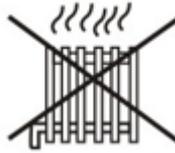
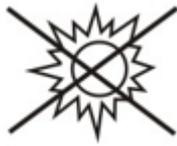
### 3. Installation and initial startup

*Note: Before installation, please check if nothing inside the package is damaged.*

#### Placement & storage conditions

Install the UPS in protected area without excessive dust and where is adequate air flow. Please place the UPS away from other devices at least 20 cm to avoid interference. Do NOT operate the UPS where the temperature and humidity it out of the specific limits.



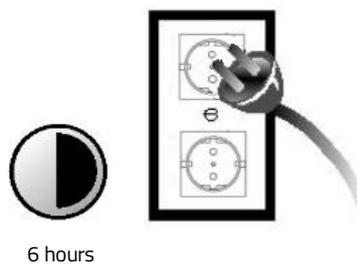


### Connection to utility power and charging

Plug in the AC input power cord to the wall outlet. For the best results, it is suggested to charge the battery for at least 6 hours before initial use. The UPS charges its batteries while connecting to the utility.

### Connect the loads

Plug in loads to output receptacles on the rear panel of the UPS, then connected devices are protected.



*Caution: NEVER connect a laser printer or scanner to the UPS. This may cause damage of the device.*



### Turn on/off the UPS

Turn on the UPS by pressing the switch. Turn off the UPS by pressing the switch again.

### Cold start function

When the UPS is off and there is no power utility, it's still possible to cold start the UPS to power the loads.

## 4. Important safety warning

Caution! To prevent the risk of fire or electric shock, install UPS in the indoor area free of conductive contaminants.

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

Caution! In the event of any emergency, press the off button and disconnect the power cord from the AC power supply to properly disable UPS.

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

Caution! If the UPS is equipped with a metal housing, it is necessary to reduce the leakage current below 3.5mA for safety reasons during installation of the UPS.

Pay attention to the risk of electric shock. Disconnecting the device from the network can be just as dangerous as there may still be voltage available through battery power. The battery supply should be disconnected and isolated before maintenance or service work are made inside the UPS.

Caution! Servicing of batteries should be performed or supervised by personnel who have knowledge about batteries and required precautions.

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

Caution! Internal battery voltage is 12V DC. Sealed, lead-acid, 6-cell battery.

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

Caution! Do not use liquid or spray detergent to clean the UPS. Unplug the UPS before cleaning.

Caution! The battery may cause an electric shock and short circuit. Before replacing it, the following precautions must be observed:

- Take off your watch, jewelry and other metal items.
- Use tools with insulated handles.
- Put on rubber gloves and shoes.
- Do not place tools or metal parts on the battery.
- Disconnect the charging source before connecting or disconnecting the battery terminals.

## 5. Troubleshooting

Problem	Probable cause	Solution
No LED/LCD display on the front panel	Low battery	Charge the UPS at least 6 hours
	Battery fault	Replace the battery with the same type of battery
	The UPS is not turned on	Press the switch again to turn on the UPS

Alarm sounds continuously when the mains is normal	The UPS is overloaded	Remove some loads first. Before reconnecting equipment, please verify if the load matches the UPS capability specified in this user manual
When power fails backup time is shorten	The UPS is overloaded	Remove some critical load
	Battery voltage is too low	Charge the UPS at least 6 hours
	Battery defect. It might be due to high temperature operation environment or improper operation to battery	Replace the battery with the same type of battery
The mains is normal but LED is flashing	Power cord is loose	Reconnect the power cord properly

## 6. Specifications

Model	450	650	850	1000B
Capacity	450VA/240W	650VA/360W	850VA/480W	1000VA/600W
Input voltage	230VAC			
Input voltage range	140-300VAC			
Output voltage regulation	+/- 10%			
Transfer time	Typical 2-6 ms, 10 max.			
Waveform	Simulated Sine Wave			
Battery type	12V/4.5Ah x 1	12V/7Ah x 1	12V/9Ah x 1	
Charging time	6 hours to 90%			
Backup time (100W)		14min	20min	25min
Size mm (W x H x D)	297 x 101 x 142			
Weight	3.7 kg	4.2 kg	4.9 kg	4.9 kg
Humidity / temperature	0-95% / 0-40°C (non-condensing)			
Noise level	Less than 40dB			

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**RoHS**

