

ZE

USER MANUAL

Thank you for choosing our product.

IMPORTANT SAFETY NOTES

This device can be installed by anyone, provided that they READ THIS MANUAL CAREFULLY AND FOLLOW THE INSTRUCTIONS WITHIN IT. This manual contains detailed instructions for the use and installation of the UPS. This manual should be kept close to the UPS and READ BEFORE THE UPS IS INSTALLED AND USED

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**⚠ Warning:**  
Read the following instructions carefully and keep this manual handy for easy referral. The mains power supply socket used to power the UPS must have an earth connection. Potentially dangerous electrical voltages are generated inside this device, even when the UPS is switched off. All repairs must be carried out by authorised personnel only. Voltage may be present on the UPS output sockets even when the UPS is not connected to a mains power supply.

In the event of a mains power supply failure (emergency UPS operation), do not unplug the power supply cable to the UPS, to ensure earth continuity to the connected loads. Do not allow liquids and/or other foreign bodies to enter the UPS. Since the mains power supply cable acts as a separation device, the mains power supply socket used that connects to the rear of the UPS must be accessible and easy to disconnect. In dangerous conditions and/or to disconnect the UPS from sources of energy, (whether mains or batteries), disconnect the power supply cable from the mains socket or from the back of the UPS and shut down the UPS using the STAND-BY/ON switch (6).

Risk of electric shock. Since internal components are connected to the batteries, they will remain powered, and therefore dangerous, even after the device has been disconnected from a mains power supply. Disconnect the batteries and ensure no voltage is present before carrying out any repair or maintenance operations.

The UPS generates an earth leakage current. Ensure that the sum of the UPS and load earth leakage current is less than 3.5mA.

Replaced batteries should be considered as TOXIC WASTE and treated as such.

Do not throw the batteries into a fire.

Do not try to open the batteries: they do not require any maintenance. Furthermore the electrolyte is dangerous if it comes into contact with skin or eyes and may be toxic.

The batteries can cause electric shock and have a high short circuit current. Take the necessary safety measures and precautions when handling them:

- do not wear watches, rings, necklaces or any other metallic material
- only use tools with insulated handles

Only use the UPS following the specific instructions in this user manual.

OPERATION

Connection to mains and battery charging

Please ensure that the mains power supply to be used with this UPS has upstream protection rated at either 10A.

- Connecting the UPS to the mains with the power supply cable provided.
- The UPS will recharge its battery each time it is connected to a mains power supply (even if it is powered down). We recommend that the UPS is charged for 6-8 hours before connecting the loads.

Connecting the loads

After having loaded the UPS, loads can be connected (e.g.: computer, monitor, etc.) to the output sockets, according to the following indications:

- **Back-up sockets (1) (9):** these sockets are only powered when the UPS is on. Should mains power fail, the back-up sockets are battery-powered.  
*N.B.:* we recommend not running laser printers or laser print devices from back-up sockets (1) (9) together with other computer peripheral equipment. On odd occasions, this equipment uses a greater quantity of energy than when at rest. This set-up may lead to UPS overload and cause all equipment connected to be switched off.
- **Surge sockets (2):** additional filtered sockets limiting line surge and mains disturbances. **They do not protect the load from power failures or short blackouts.** They can be used to power non-essential devices such as, for example, printers, scanners and suchlike. Small laser printer devices can be installed on these sockets.  
*N.B.:* the sockets are also powered when the UPS is in stand-by.

Starting up/Shutting down

Press the main STAND-BY/ON switch to start-up the UPS and power the loads.

Press the switch again to shut down the UPS and power down from the loads.

Starting up on battery (Cold start)

If there is no mains power supply present, pressing the main power switch will cause the UPS to start up using its battery as a source of power.

**⚠ Warning:** when starting up on battery, the output frequency is set to 50Hz.

USB port

The UPS can be connected to a computer for remote monitoring and shutdown operations using a USB cable. The UPS management software and related manual can be downloaded from [www.riello-ups.com](http://www.riello-ups.com)

Replacing the batteries

**CAUTION: The models require replacement by qualified service personnel.**




**Contact technical support for information concerning the exact model of battery to use.**

- Shut down the UPS and disconnect the power cable. Remove the screws that hold the battery compartment in place under the UPS. (Fig. A)

- After removing the cover, carefully remove the battery from its housing. (Fig. B)

- Disconnect the two wires from the battery (simply by pulling them). Replace the battery with another of the same type, taking care to respect the polarity. Re-assemble the compartment. (Fig. C)

ALARMS AND REPORT SIGNALS

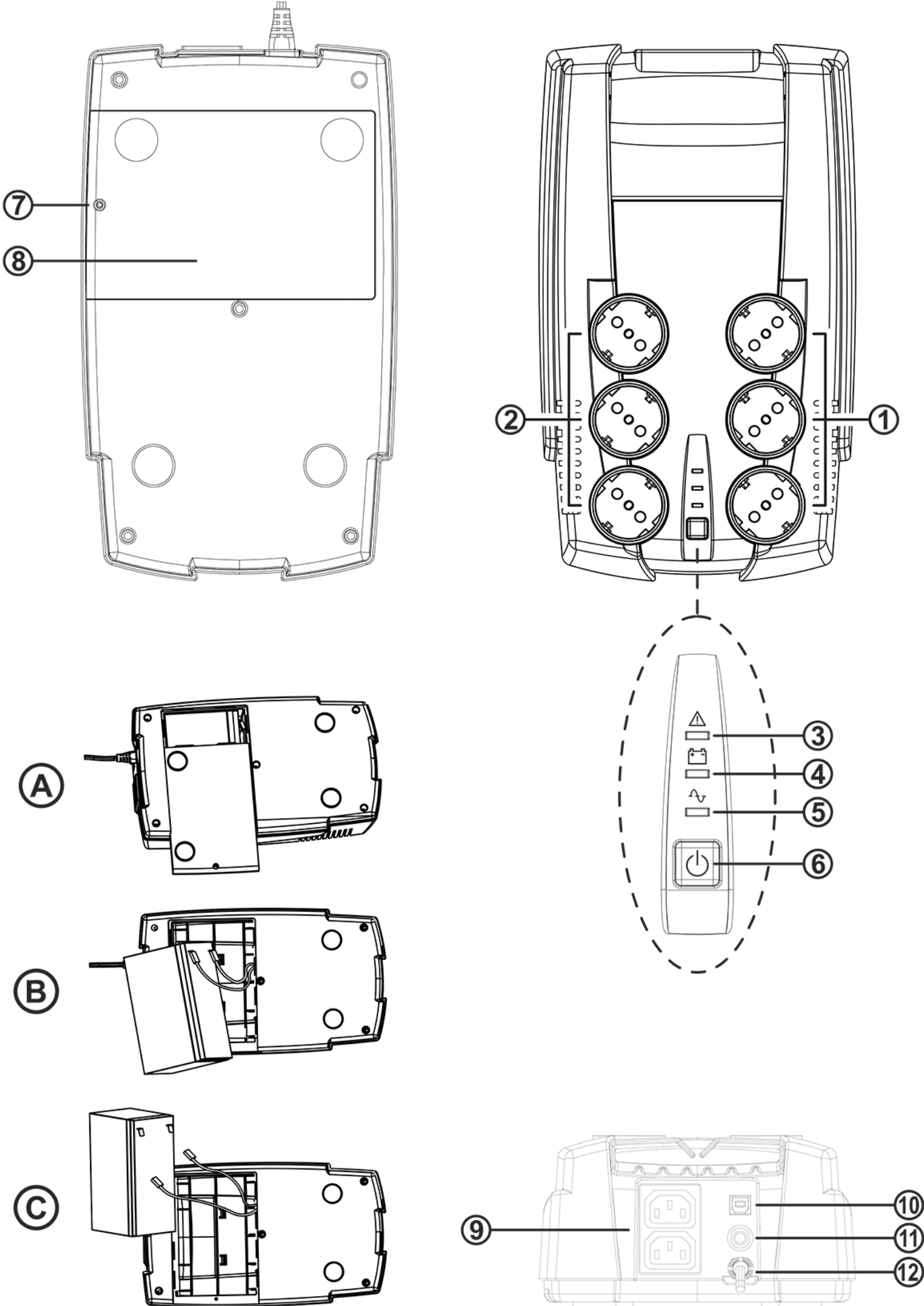
Description	Switch position (6)	Led functioning			Other report signals
		Green led 	Yellow led 	Red led 	
Stand-by	STAND-BY			Blinking	
Operation on mains power	ON	Steady			
Operation on battery	ON		Blinking		Slow blinking acoustic signal
End of discharge warning	ON		Blinking		Blinking acoustic signal
Overload	ON			Blinking	Blinking acoustic signal
Battery fault	ON	Steady		Steady	Blinking acoustic signal
Alarm or fault (other than overload)	ON			Steady	Continuous acoustic signal

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	PROCEDURE
The UPS does not switch on	The UPS is switched off	Check that the STAND-BY/ON switch is in the ON position
	The UPS input thermal protection device has been triggered	Disconnect non-essential equipment from the UPS. Reset the protection (11) by depressing the button. If the switch resets, start up the UPS and reconnect the equipment one device at a time. If the protection activates again, one of the connected devices is causing an overload condition.
The UPS is working on battery even though mains power is available	The UPS input thermal protection device has been triggered	Disconnect non essential equipment from the UPS. Reset the protection (11) by depressing the button.
	The mains power supply socket the UPS is connected to is not supplying power to the device	Connect the UPS to another mains power supply socket or have the mains supply checked by a qualified electrician.
When there is a mains power supply failure, the UPS does not work for the expected runtime	The UPS battery is not sufficiently charged as there was not enough time for it to recharge after a recent power failure	Wait for the battery to recharge. It recharges each time the UPS is connected to a mains socket. It usually takes 8 hours for the battery to recharge fully. UPS operation time is a function of how charged the battery is.
	The battery needs to be replaced.	Replace the battery.
The alarm icon (3) is lit and the acoustic signal sounds.	The UPS has a fault.	Remove the external devices from the UPS. Turn off the UPS and disconnect it from the mains. Connect the UPS to the mains and turn on again. If the UPS message the anomaly again, contact your authorized service centre.
Battery fault message.	Battery fault.	Replace the battery.
The UPS is not communicating with a PC.	The software sends a message that communication has been lost.	Check that the USB cable is connected between the UPS and the PC and that 'USB' has been selected as the communication port in the software configuration.
	The software is not installed	Install the specific software for your computer's operating system.

TECHNICAL DATA

MODEL		600VA	800VA
INPUT	Voltage	230V +20%/ -25%	
	Frequency	50 or 60Hz +/-5% (with auto-sensing)	
OUTPUT	Voltage (from battery)	230Vac +/-10% (Pseudo-sinusoidal wave)	
	Frequency (from battery)	50 or 60Hz +/-1Hz (with auto-sensing)	
	Trigger time	2-6 ms typical	
	Rated power VA	600	800
	Rated power W	360	480
SURGE SOCKETS	Max. current	5A	8A
PROTECTION DEVICES AND FILTERS	Overload and shortcircuit protection	From mains: overload input protection. From mains: automatic shutdown after 5 minutes with load >110% and immediate shutdown with load >120% or for shortcircuit. From battery: automatic shutdown after 5 seconds with load >110% and immediate shutdown with load >120% or for shortcircuit.	
BATTERY	Type	Sealed lead batteries, maintenance-free	
	Model	12V 7Ah	12V 9Ah
	Typical recharge time	6-8 hours	
	Protection	Protection against total discharge, battery replacement indicator	
AMBIENT CONDITIONS	Operating conditions	Max altitude 6,000 m, 0-90% non condensing humidity, 0-40°C	
VARIOUS	Noise	<40dB (at 1 m from source)	
	Earth leakage current	<1mA	



**Storage**  
The UPS must be fully recharged if it is to be stored for a long time. A full discharge and charge cycle should be carried out every 6 months to keep the battery in good condition.