KSTAR

UPS User Manual

Line-interactive UPS with AVR

400 / 600 / 800 / 1000 / 1200 / 1500 / 2000 VA series



English translation of the supplied Romanian-language KSTAR user manual. Model-dependent features and connectors are identified where applicable.

Safety and Warnings

Dangerous voltages may remain inside the UPS. Read these instructions before installation, use, cleaning or servicing.

- The voltage and electrical energy stored in the UPS are dangerous. Do not attempt to disassemble the unit. It contains no user-serviceable parts. Repairs must be performed only by authorized service personnel.
- The internal battery is a sealed, six-cell, 12 V lead-acid battery.
- Connect the UPS only to a properly grounded, two-pole, three-wire power outlet. Other connections can present an electric-shock hazard and may violate power-supplier requirements.
- In an unexpected event, press OFF and disconnect the power cord from the mains to switch the UPS off completely.
- Do not allow liquids or foreign objects to enter the UPS. Do not place containers of liquid on or near the unit.
- Use the UPS in a controlled indoor environment with stable temperature. Avoid locations with standing or flowing water.
- Never connect the UPS input to its own output.
- Do not connect extension cords or surge-protection devices to the UPS.
- According to this manual, connect only desktop computers and monitors to the UPS.
- Do not obstruct the UPS or its ventilation openings. Keep it out of direct sunlight and away from radiators, heaters, stoves or other sources of heat.
- Disconnect the power cord and press OFF before cleaning. Do not use liquid or aerosol cleaners.
- Do not open, disassemble or damage the batteries. Battery electrolyte can injure the skin and eyes and may be toxic.

Battery servicing precautions

- Batteries can present a risk of electric shock or short circuit. Remove watches, rings and other metal objects before working on batteries.
- Use tools with insulated handles, and wear rubber gloves and footwear.
- Do not place tools or other metal objects on batteries.
- Battery maintenance must be carried out or supervised by authorized technical personnel. Replace batteries with the same type and number.
- Maximum ambient operating temperature: 40°C.

Product Overview and Preparation

Introduction

This compact UPS is designed primarily for personal computers. It uses automatic voltage regulation (AVR) to stabilize the input supply and supports starting on battery power when mains power is unavailable.

Main features

- Microprocessor-controlled operation for high reliability.
- Automatic voltage regulation (AVR).
- Green Power function to reduce power consumption.
- Battery start (cold start).
- Automatic restart when mains power returns.
- Compact size and low weight.
- Overload protection.

Inspection

Remove the UPS from its packaging and inspect it for damage. If there are signs of impact or other damage, return it to the retailer from which it was purchased.

Initial battery charging

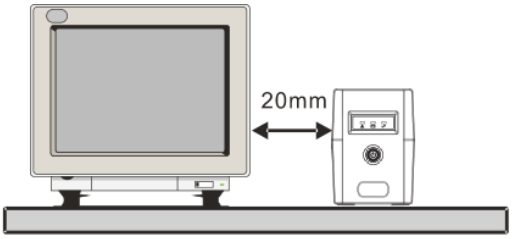
Although the battery is charged at the factory, it may discharge during shipment. Before first use, connect the UPS to mains power without any connected loads and leave it charging for 6 hours.

Location and ventilation

Install the UPS in a controlled, well-ventilated environment, free of excessive dust, corrosive fumes and other contaminants. Do not use it where temperature or humidity is high.



Place the UPS at least 20 cm away from the monitor to avoid interference, as stated in the source text.

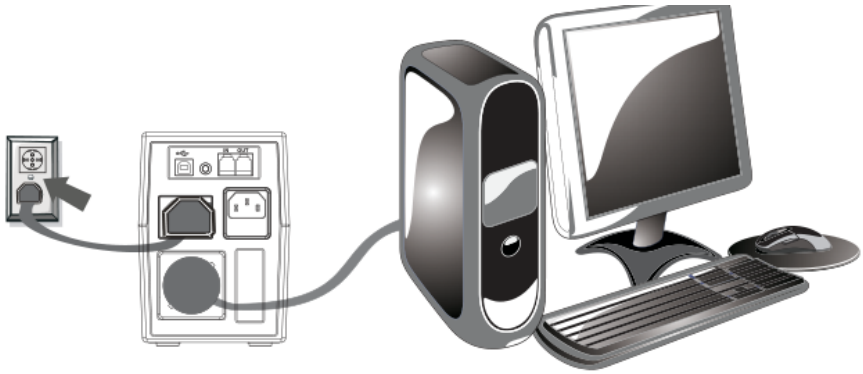


Source illustration note: the original drawing labels this distance “20 mm”, while its accompanying text states “20 centimetres”. This translation preserves that discrepancy.

Connection and Operation

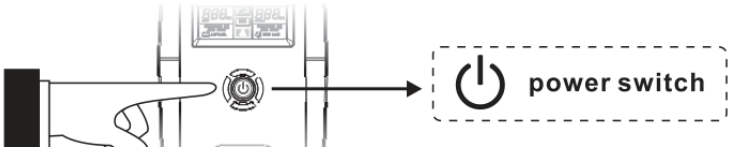
Connecting the UPS

Connect the UPS to a properly grounded, two-pole, three-wire mains outlet. Then connect the computer components to the output sockets on the rear of the UPS.



Switching On and Off

To switch the UPS on, press the power button on the front of the unit. Press the power button again to switch it off.



Battery Start (Cold Start)

All models in the series can start from battery power when the mains supply is unavailable. Press the power button to start the UPS in battery mode.

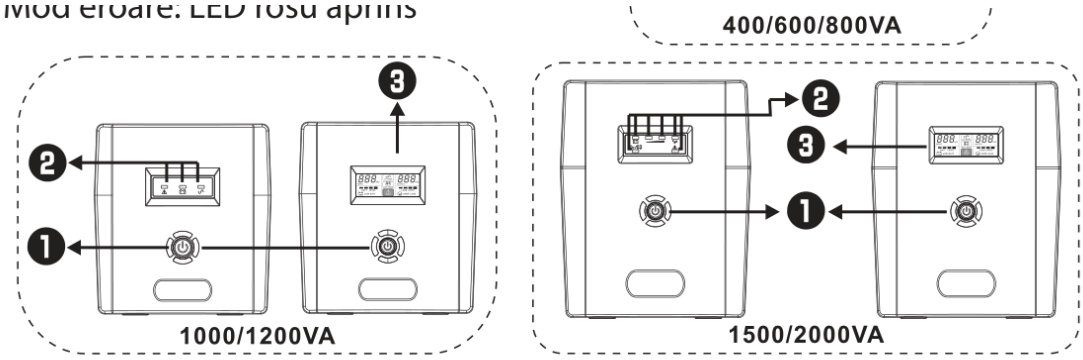
Additional installation warnings

- During installation, make sure the combined current of the UPS and connected equipment does not exceed 3.5 mA, as stated in the original manual.
- Electric-shock hazard remains after disconnection from the mains because batteries can retain dangerous voltages.
- During servicing, disconnect both the positive and negative battery terminals.

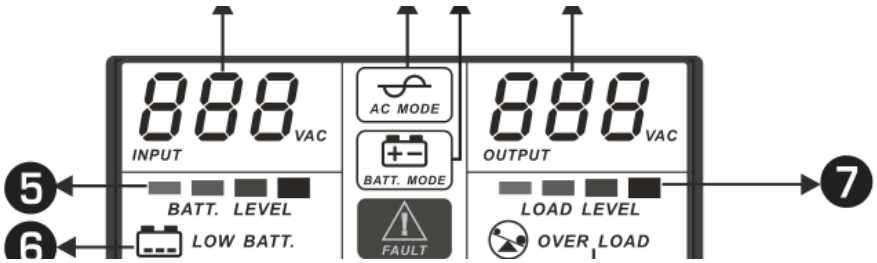
Front and Rear Panels

Front-panel controls and indicators

1. Power button. 2. Status LEDs (on LED-equipped versions): green = mains mode, yellow = battery mode, red = fault. 3. LCD display (on LCD-equipped versions).



LCD indicator legend



1. Input voltage; 2. Output voltage; 3. Mains mode (symbol flashes in AVR mode);

4. Battery mode (symbol flashes if input voltage fluctuates greatly); 5. Battery level;

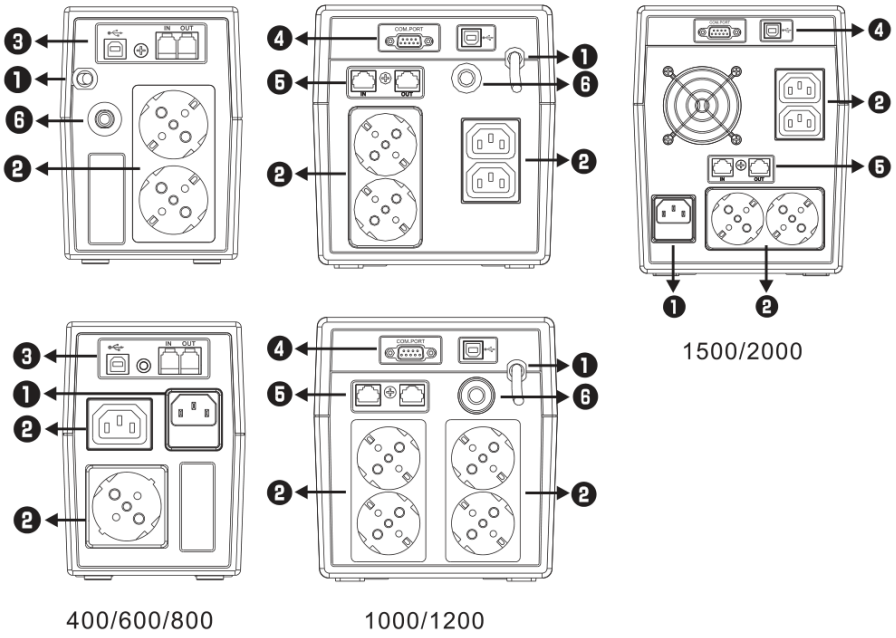
6. Low battery level (flashing symbol); 7. Load level; 8. Overload (flashing symbol);

9. Fault mode (flashing symbol for fault, output short circuit or overload).

Rear Connections and Fault Finding

Rear-panel connections

1. AC input 2. AC outputs 3. USB and RJ11 (optional) 4. USB and RS232 (optional) 5. RJ45 (optional) 6. Fuse.



The rear-panel drawings show several UPS capacities and optional interfaces. Use the connections fitted to your particular unit.

Troubleshooting

Symptom	Possible cause	Suggested action
LCD off (LCD model) or LEDs off (LED model)	Low battery	Charge the batteries for 8 hours.
LCD off / LEDs off	Defective battery	Replace the battery with the same model.
LCD off / LEDs off	Power button not pressed	Press the power button.
Continuous audible alarm	UPS is overloaded	Check the connected load against the model rating.
Short backup time during power failure	UPS overload	Remove some non-critical loads.
Short backup time during power failure	Low battery voltage	Charge the battery for 8 hours or longer.
Short backup time during power failure	Battery damaged by high temperature or improper operation	Replace the battery with the same model.
Battery mode shown on LCD / yellow LED flashing	Power cable disconnected	Reconnect the power cable.

If the problem is not listed above, contact the service department.

Technical Specifications

The original manual covers multiple capacities and configurations. The specifications below reproduce the source table in English.

Parameter	Specification
Rated capacities	400 / 600 / 800 / 1000 / 1200 / 1500 / 2000 VA
Input voltage	110 / 120 V AC or 220 / 230 / 240 V AC
Input voltage range	81–145 V AC or 162–290 V AC
Output voltage regulation (battery mode)	±10%
Output frequency	50 Hz or 60 Hz
Frequency regulation (battery mode)	±1 Hz
Output waveform	Modified sine wave
Recharge time	6–8 hours to 90% after complete discharge
Typical transfer time	2–6 ms
Operating temperature	0°C to 40°C
Noise level	Less than 40 dB
Protection	Discharge, overcharge and overload protection

Battery, dimensions and weight by capacity

Capacity	Battery configuration	Dimensions (mm), L×W×H	Net weight
400 VA	12 V / 4.5 Ah × 1	298 × 101 × 142	3.85 kg
600 VA	12 V / 7.0 Ah × 1	298 × 101 × 142	4.35 kg
800 VA	12 V / 9.0 Ah × 1	298 × 101 × 142	4.7 kg
1000 VA	12 V / 7.0 Ah × 2	353 × 149.3 × 162	7.8 kg
1200 VA	12 V / 7.0 Ah × 2	353 × 149.3 × 162	8.4 kg
1500 VA	12 V / 9.0 Ah × 2	380 × 158 × 198	10.1 kg
2000 VA	12 V / 9.0 Ah × 2	380 × 158 × 198	10.5 kg

Audible alarms

Condition	Audible alert
Backup / battery mode	One beep every 10 seconds
Low battery	One beep every second
Overload	One beep every 0.5 seconds
Fault	Continuous beep

Indicator behavior in the source table

For LED-equipped versions: green indicates mains mode; flashing yellow indicates battery mode; red indicates an error. LCD-equipped versions show input voltage and battery level on the right, and output voltage and load level on the left. The source presents both LED and LCD variants within the same series.