

NetDialog

**Manuale d'uso / User's Manual / Bedienungsanleitung
Manuel d'utilisateur / Manual de Usuario**

NDG 800 – 1000 – 1500 – 2000

USER'S MANUAL

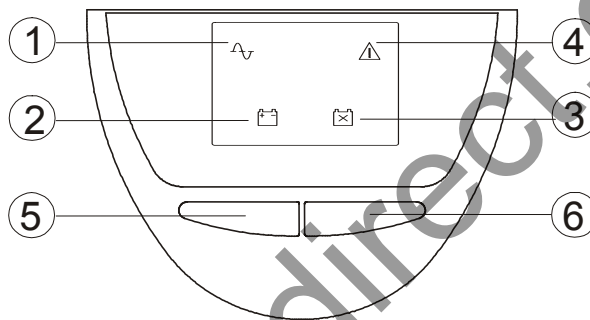
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CONTENTS OF THE PACKAGING

- UPS
- # 1 UPS IEC-Shuko power cable
- # 2 IEC-IEC output cables
- # 1 9 pin serial cable
- # 1 telephone extension cable
- # 1 software download card
- # 1 User Manual

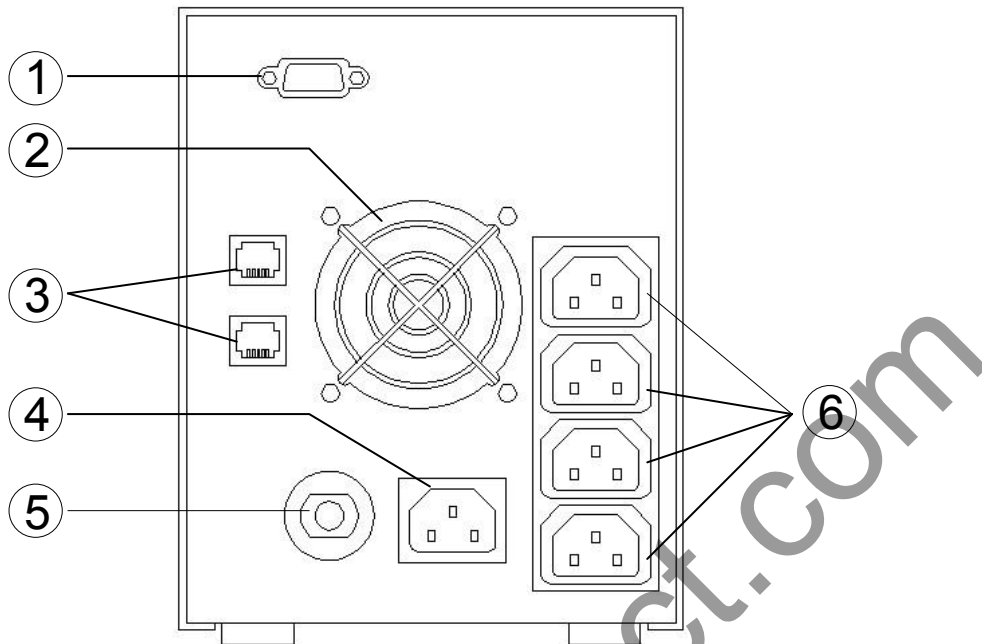
DESCRIPTION OF THE UPS

Front View



1. **“Line active” LED (green)**
steady light: the mains power is on (the UPS is operating off mains power supply)
2. **“Battery Mode” LED (yellow)**
flashing (5 second): the UPS is operating in battery mode.
flashing (1 second): the batteries are running low or the software shutdown command has been activated.
3. **“Battery failure” LED (red)**
flashing (1/2 second): the batteries must be replaced
4. **“Overload” LED (red)**
steady light: the UPS has failed
flashing (1 second): an overload has occurred
5. **“ON/OFF” Button**
Use this button to turn the UPS on and off.
N.B.: *The UPS can be switched on even if there is no power supply.*
6. **“Silence” Button**
When operating in battery mode, pressing this button for at least one second can silence the UPS alarms.

Rear View



1. RS232 Connector

This is for connecting the UPS to a computer via the RS232 serial interface. Use the serial cable included in the packaging.

2. Cooling Fan

This cools the internal circuits of the UPS.

3. Data transfer protection (only for telephone/modem surge protection)

Built-in protection device against overvoltages on telephone/modem lines to ensure a more safe connection to telephone and internet services.

4. Input Plug

This is used to connect the UPS to the mains using the IEC-Shuko cable supplied in the packaging.

5. Thermal Protection switch

In the event of an overload on the UPS or of an output short circuit, the thermal protection switch will disconnect the UPS. To restore normal operation, remove the cause of the overload or of the short circuit and press the protection switch. Then switch off and restart the UPS.

6. Output Plugs

These are used to connect the loads (Computer, monitor, printer, etc.), using the IEC-IEC output cables supplied in the packaging.

INSTALLATION REQUIREMENTS

Bear the following indications in mind when installing the UPS:

- The UPS must be placed on a flat and stable surface.
- Do not install the UPS in places exposed to direct sunlight or hot air.
- Ensure that the environmental temperature remains between 0°C and 40°C.
- Environmental humidity must not exceed 90%.
- Avoid dusty environments.
- Place the UPS at least 5cm from the surrounding walls so as to allow adequate air circulation.
- Ensure that the UPS or any other heavy object is not placed on the power cable.
- The cables that connect the loads to the UPS must be maximum 10 Mt long.

INSTALLING THE UPS

Inspection

Inspect the UPS on delivery. The packaging can be recycled and has been designed to guarantee safe transportation of the unit, so keep it for future use or dispose of it in the appropriate manner.

Installation

Install the UPS ensuring that all the installation requisites are respected.

Connection to the Mains

Connect the input power plug to the mains outlet using the IEC-Shuko power cable supplied in the packaging.

Battery Charge

The UPS will recharge the battery every time it is connected to the mains power supply. For optimum results, charge the battery for 6-8 hours before using it for the first time.

Connecting the Loads

Connect the loads (computer, monitor, etc.) to the output plugs on the rear of the UPS using the IEC-IEC cables supplied.

Warning: Do not connect laser printers or photocopiers to the UPS (on models with power rating lower than 1500VA). These units occasionally absorb a greater amount of power than when they are in stand-by mode, an event that could overload the UPS.

Connection to the computer interface

The UPS can be connected to the serial port on the computer so as to monitor and guarantee correct shutdown of the computer in cases of power failure.

N.B.: *Connection of the computer interface is optional. In fact, the UPS will operate even without this connection.*

Connection to the telephone/modem line protection jacks

A single telephone or modem line may be connected to the jacks that protect against overvoltage on the rear of the UPS. The modular RJ-45/RJ-11 jacks are compatible with standard single telephone connections. Connection to the line protection jacks requires a telephone extension cable (supplied).

N.B.: *The connection is optional. The telephone/modem line protection is effective even if the UPS is switched off or disconnected from the mains.*

Warning: *The overvoltage protection device for telephone lines may not work if it is not installed correctly. Make sure that the telephone wall cable is inserted in the connector marked “IN” and that the cable of the unit to be protected (telephone, modem, etc.) is inserted in the connector marked “OUT”.*

Warning: *The overvoltage protection device is only for use in closed environments; do not connect telephone wires during a storm*

N.B.: *The protection device limits the effects of overvoltage, but does not guarantee total protection.*

OPERATION

Switching On

After connecting the UPS to the mains outlet and the loads to the UPS, press the ON/OFF button to turn the UPS on. The green “Line Active” LED will come on.

The UPS can be switched on even in the event of a power failure with the same procedure, but instead of the green LED the yellow “Battery Mode” LED lights up and an intermittent audio signal sounds.

NOTE: In cases of blackout, the yellow “Battery Mode” LED comes on and at the same time the UPS sounds an audio signal. If the blackout persists, and the battery runs low, the audio signal will sound at a faster rate.

When battery power is down to a minimum, the UPS automatically disconnects the batteries and switches off.

Switching Off

To switch the UPS off, press the ON/OFF button. The “Line Active” or “Battery Mode” LED’s go off and the loads are disconnected.

Self diagnostic “Battery Test” (via software)

Use the self-diagnostic battery test (refer to the enclosed software guide) to test the battery conditions. In normal power supply status and with charged batteries, run the “Test Battery” command. The UPS will perform the self-diagnostic test. During the test, the UPS will run off the batteries for a few seconds.

N.B.: During the test, the UPS will briefly power the loads from the batteries.

If the self-diagnostic test is completed successfully, the UPS will return to mains power after a few seconds.

If the test fails, mains power is restored immediately to the UPS and the “Replace batteries” LED comes on. The loads are not affected. Charge the battery for 6-8 hours and repeat the test. If the “Replace batteries” LED remains on, call the nearest distributor for replacement batteries.

ALARMS

"BATTERY MODE" (Beep every 5 seconds)

In “Battery Mode”, the yellow LED comes on and the UPS sounds an audio signal. This stops when the UPS starts operating off mains power again. The alarm may be disabled using the “Silence” button located on the front panel of the UPS.

"BATTERY LOW" (Beep every second)

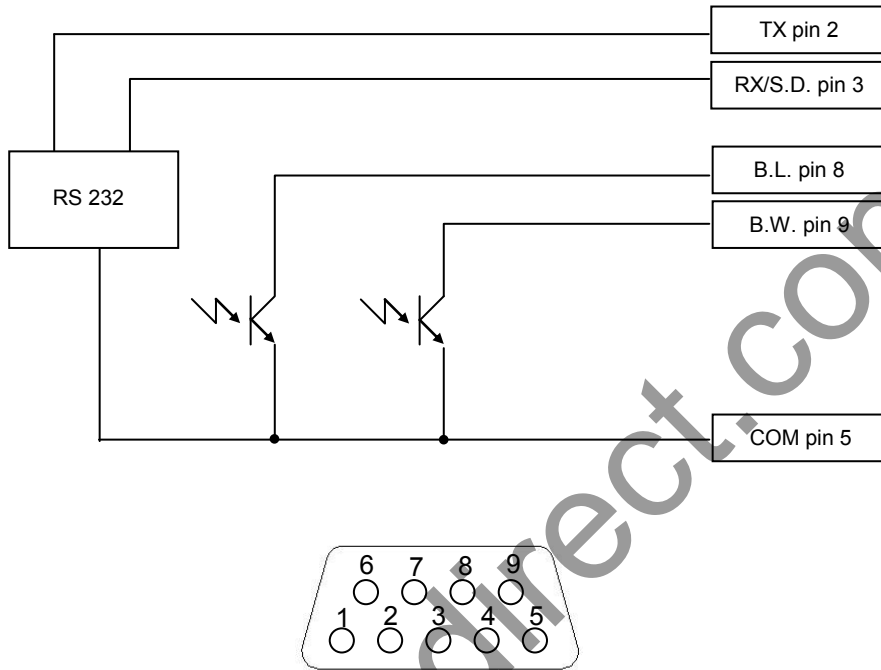
When the UPS is operating in “Battery Mode” and the batteries start getting low, a fast beep will be sounded until the unit stops due to battery failure or until the mains power supply is restored. The alarm may be disabled using the “Silence” button located on the front panel of the UPS.

"OVERLOAD" (Fast or continuous beep that cannot be disabled)

When an overload condition occurs on the UPS (when the connected loads exceed the maximum nominal capacity), a fast or continuous beep will sound. Disconnect any non-essential devices to reduce the load. This alarm cannot be disabled.

COMPUTER INTERFACE PORT

The computer interface port has the following technical characteristics and provides both the RS-232 interface and signals to contacts. The UPS can send power failure and battery failure signals and receive the shutdown signal.



Sub D 9 female pin (computer interface connector)

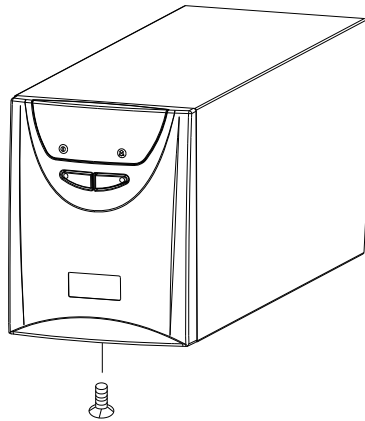
- S.D.** = Input shutdown signal: when the UPS is operating in Battery Mode, apply a positive signal (+5÷15VDC) between this input (pin 3) and the common input (pin 5) for at least 20sec in order to shutdown the unit.
- B.W.** = Contact closed when the UPS is operating in battery mode (max +30Vdc 10mA).
- B.L.** = Contact closed when the UPS is operating off low batteries (max +30Vdc 10mA).
- COM** = Common

WARNING: only use the UPS monitoring system provided or systems recommended by the manufacturer.

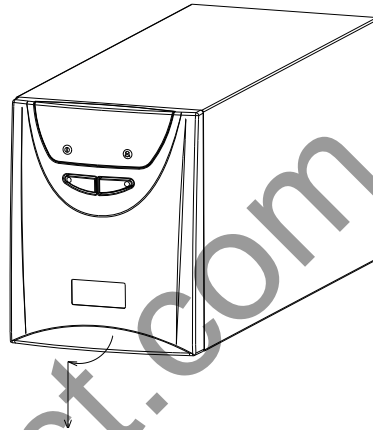
BATTERIES REPLACEMENT

CAUTION: The models require replacement by qualified service personnel.

Models: *NDG 800 / 1000 / 1500*



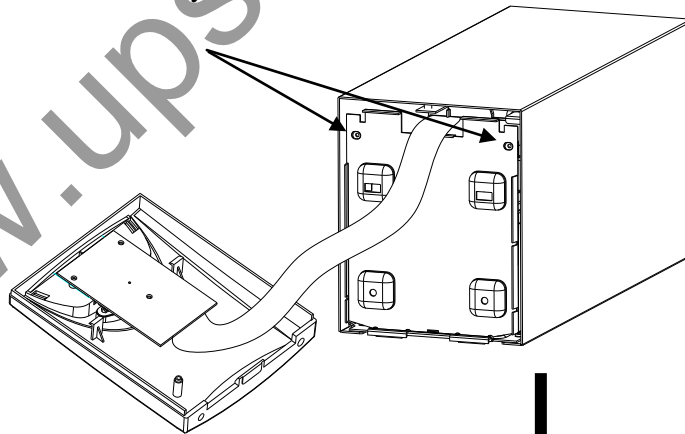
- 1) Remove the screw fixing the panel at the bottom of unit



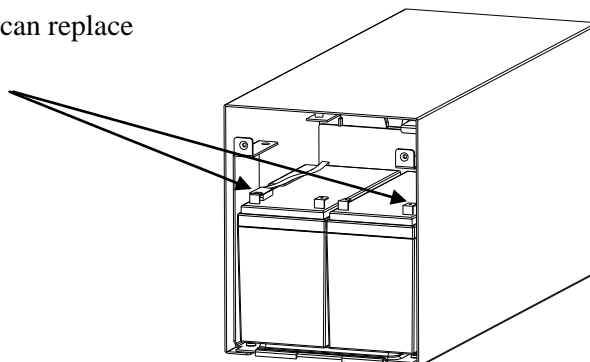
- 2) First rotate to small angle, then pull down. You can disassemble the panel



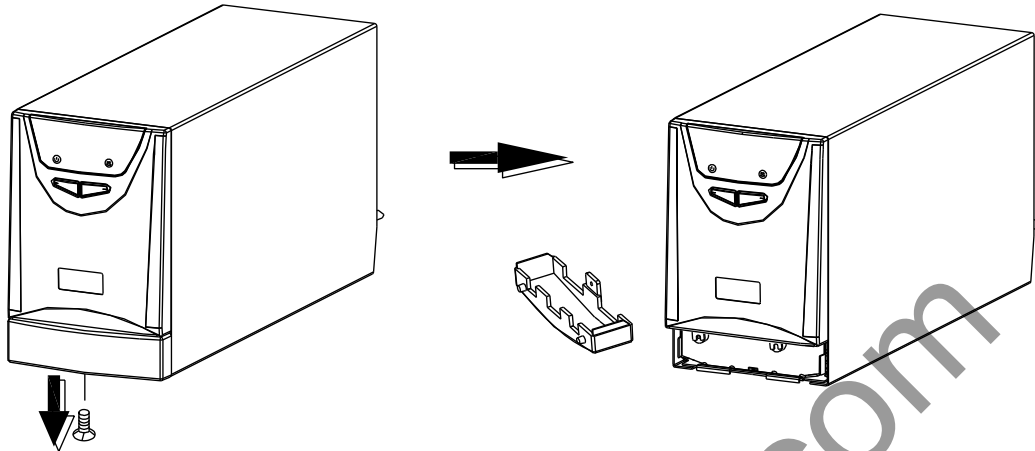
- 3) Remove screw and remove the battery cover



- 4) Remove the wire, then you can replace the battery

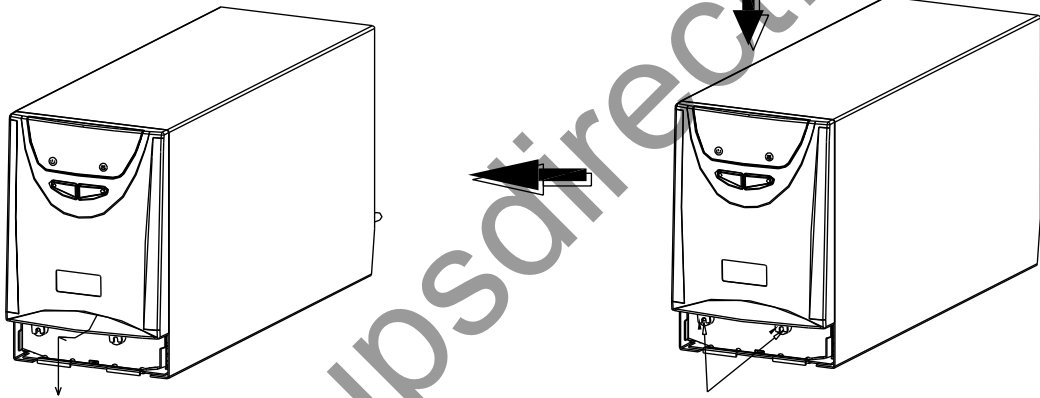


Model: *NDG 2000*



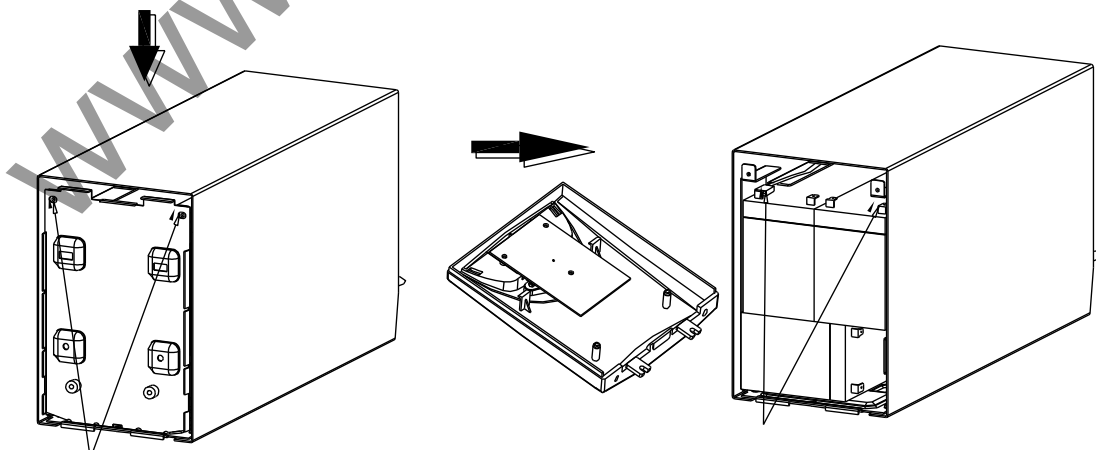
- 1) Remove the screw fixing the little panel at the bottom of unit
- 2) Pull down to the limits, then pull forward

- 3) Disassemble the little panel



- 5) First rotate to small angle, then pull down. You can disassemble the panel

- 4) Remove the screw



- 6) Remove screw and remove the battery cover

- 7) Remove the wire, then you can replace the batteries

LOCATING FAULTS

PROBLEM	POSSIBLE CAUSE	WHAT TO DO
The UPS will not switch on	The ON/OFF button was not pressed right down.	Press the ON/OFF button correctly.
	UPS failure	Call technical support
UPS constantly operating in Battery Mode	Loose power cable	Check that the power cable is firmly connected to the mains outlet
	The thermal protection switch has been activated.	Press the thermal protection switch to restore UPS operation
	Line voltage too high, too low or power black-out	Restore mains power supply
	UPS failure	Call technical support
Duration of the back-up battery too short	Batteries not fully charged	Charge the UPS for at least 6 hours
	Batteries are damaged	Replace the batteries
Continuous audio signal	Overload	Disconnect non-essential loads
Red Battery Failure LED on	Battery failure	Replace the batteries

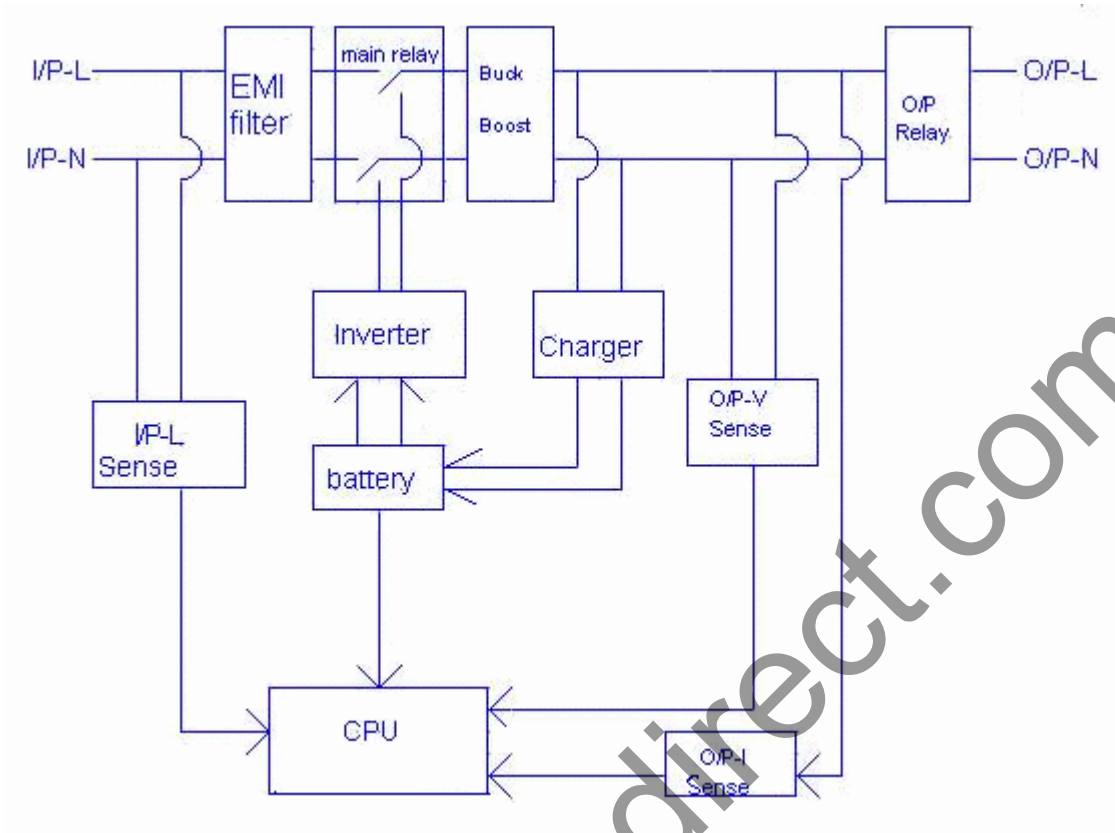
Should problems or malfunctions occur that are not listed above, or if the above operations cannot be performed, call technical support giving full details of any problems.

TECHNICAL SPECIFICATIONS

MODEL		NDG 800	NDG 1000	NDG 1500	NDG 2000
INPUT	Capacity	230Vac -25% / +20%			
	Frequency	50 o 60Hz +/-5% (auto sensing)			
	Maximum Current	5 A	6.3 A	9.4 A	10 A
OUTPUT	Voltage (on battery)	Simulated sinus wave 230Vac +/- 5%			
	Frequency (on battery)	50 or 60Hz +/-0.5% (auto sensing)			
	Voltage Regulator AVR	AVR automatically increases the output voltage by 17% if the input voltage drops by -10%-26% below nominal. AVR decreases the output voltage by 15% if the input voltage increases by +9% -+20% above nominal			
	Transfer time	Typically 6-8 ms			
	Nominal power VA	800	1000	1500	2000
	Nominal power W	480	600	900	1200
	Current	3.48A	4.35A	6.52A	8.70A
PROTECTION AND FILTERS	EMI/RFI Filter	10dB at 15MHz, 50dB at 30MHz			
	Protection against overloads and short circuits	Mains: thermal protection switch for overloads and short circuits Battery: the UPS shuts down after 30 seconds if the load is between 100 ~ 110% of the nominal, after 5 seconds if it exceeds 110%, or immediately in the event of a short circuit.			
BATTERY	Type	Lead acid, sealed, maintenance free			
	Model	2x12V 7Ah	2x12V 7Ah	2x12V 9Ah	3x12V 9Ah
	Typical recharge time	6-8 hours			
	Protection	Protection against battery failure, battery replacement indicator			
PHYSICAL CHARACTERISTICS	Net weight (Kg)	13,5	13,5	14,7	20,3
	Dimensions(mm) WxDxH	140x370x180			140x400x217
	Input plug	IEC 320-10A			
	Output plug	N°4 x IEC 320-10A			
ALARMS	Battery Mode	Slow beep (approx. 0.20Hz)			
	Battery Failure	Fast beep (approx. 1Hz)			
	Overload <110%	Fast beep (approx. 1Hz)			
	Overload >110%	Continuous beep			
	Disable buzzer	YES			
INTERFACE	RS-232 Interface	Bi-directional communication port			
	RS-232 protocol	PSGPSE-0103			
ENVIRONMENTAL CONDITIONS (1)	Environmental Conditions	max. altitude: 6,000 metres, 0-90% non condensing humidity 0-40°C			
OTHERS	Noise Level	<50dBA (1m from source)			

- (1) In order to prolong battery life, make sure that the UPS is used/stored at a temperature of 20-25°C and keep it connected to the mains to preserve the battery charge.

MAIN BLOCK DIAGRAM



www.upsdirect.com