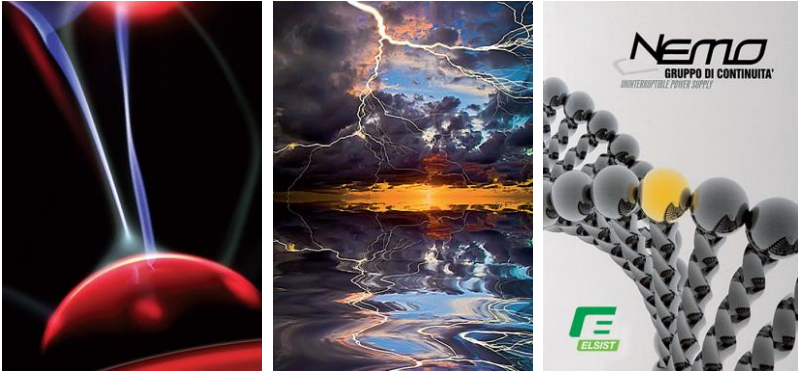


# Nemo2.0

65 • 80 • 120 • 160 • 200 • 300 • 400

*Single-phase Line Interactive series*



*Uninterruptible Power Supplies*

# 1 – SAFETY INSTRUCTIONS

This section includes important information about Safety. Please, read it carefully before installing and operating the UPS.

- When opening the box, if UPS is damaged or dented don't connect it to electrical network. Please call your reseller for product's replacement
- Check the electrical rating written on the label on the rear of UPS, for being sure that input voltage rating is correctly set and in compliance with local Mains rating.
- UPS must be connected to an accessible and near plug.
- UPS is designed for supplying equipment such as computer, monitor, cash register, telephone system or similar. To supply any equipment different than above mentioned, please refer to your reseller or to call Naicon Service assistance for information
- Before cleaning the UPS, disconnect it from the Mains. To clean external surface, please use only a dry cloth. Don't use any liquid cleanser, spray or chemical solvent, which may damage the electrical circuits of the device.
- This UPS operates at dangerous voltages. Don't open the device. The UPS doesn't include circuits or components accessible or repairable by the user. ONLY authorized personnel may access to the unit.
- Connection to a plug without Ground connection may cause electrical shock, and is not in compliance with Law regulation.
- Don't connect UPS input to its own output.
- Don't connect a multiple plug system or an overvoltage suppression system to the UPS.
- In case of emergency, immediately push ON/OFF switch, disconnect the power cable from the wall plug to correctly shutdown the UPS.
- Don't cover device's air inlet, avoid direct exposure to direct sunlight or install it close to heating sources, in order to avoid any overheating of the unit.
- This equipment is intended to be used in interior. Avoid installing the UPS in locations where water or excessive moisture are present.
- Do not allow liquids or foreign bodies to penetrate the UPS. Do not place any drinks or any other liquid container on top or near the unit.
- Battery maintenance must be carried out by experienced personnel.
- Replace the batteries with the same type.
- The voltage of internal battery is set at 12/24Vcc, battery is sealed and contains acid. Do not open or damage the battery. Released electrolyte is harmful to the skin and to the eyes. It can be toxic, too.
- Handling batteries may result in electric shock and short circuit. Observe the following precautions when working with batteries:
  - 1) Don't wear metallic objects
  - 2) Use tools with isolated handles
  - 3) Wear gloves and boots with rubber sole
  - 4) Do not place tools or metal objects on the batteries
  - 5) Disconnect the UPS before battery replacement.
- Do not throw the batteries in the fire as they may explode.
- This UPS does not have to work either reversed or lying down.
- Batteries are already connected.
- Make sure that the sum of the leakage currents of the UPS and the loads connected to it does not exceed 3.5 mA before connecting the equipment.
- Be careful when disconnecting the equipment, there may be still residual voltages on the output sockets due to the battery voltage. Battery cables must be disconnected if you need to access the UPS.
- UPS is equipped with sealed lead-acid batteries. They are harmful if throw in the environment, so they must be disposed of in compliance with the relevant Community directives. To dispose of the UPS, you must contact the appropriate authorized sites in your area, due to the electronic components and the plastic material of which the unit is made up.

## WARNING

IN COMPLIANCE WITH THIS INSTRUCTIONS, ANY NON AUTHORIZED ASSISTANCE TO THE UPS  
LEAD TO CANCELLATION OF THE WARRANTY,

## 2 – PRODUCT INTRODUCTION

Thanks for having purchased an ups of NEMO2.0 series. The ups is designed to give you maximum protection and is an easy to use device. This UPS is specially designed for PCs or similar equipment. Thanks to its light weight and compact design, it fits perfectly into small working environments. NEMO2.0 series is equipped with the AVR function to stabilize the input voltage. It is also integrated with the DC start function (Cold start).

Main characteristics:

- **Full power protection.**  
Electrical noise suppression, voltage and overvoltage peak suppression, autonomy, are common requirements to many UPS types. This UPS provides a wider voltage range capability, in addition to the aforementioned characteristics. Within this wide voltage range, the load is supplied without any support from the battery. This feature not only protects your computer, but also improve and increases battery lifetime.
- **Cold start function (DC Start).**  
All NEMO2.0 models are equipped with cold start function, which means that even if the power supply is unplugged, the UPS can be activated simply by pushing the ON / OFF switch and will operated supplied by the battery.
- **Autorestart.**  
Upon returning the Mains, the UPS will restart automatically.
- **Overload protection.**  
The internal microprocessor controls the load status in any operating conditions. In the event of overload or short circuit, your UPS will beep or will automatically turn off to avoid undesired damage to the load.
- **Modem connection and protection.**  
Two special connectors RJ45/RJ11, will protect your Modem or your LAN 10Base-T network from any noise generated by the phone line.
- **Power Management software.**  
NEMO2.0 series includes UPSilon software that enables communication between the UPS and a PC. By connecting the USB port of the UPS to a corresponding PC port, you can either check or do the following:
  - a) to control UPS and battery status.
  - b) to save vital files during unattended shutdown.
  - c) to plan Turn off and Turn on of the UPS for energy saving.
  - d) to Log the UPS activities and status for checking them over the time.
- **All controls are performed and guaranteed by a high reliability microprocessor.**
- **“Green Power” function for energy saving.**
- **Light weight and compact dimensions.**

## 3 - INSTALLATION AND OPERATION INSTRUCTIONS

**WARNING:** The unit is shipped from the factory with a fully charged internal battery, however, it could be discharged during transportation, so it has to be recharged before use. To do this, connect the unit to an appropriate power outlet and let the battery recharge for at least 6 hours without any load connected.

Install the UPS according to the following items:

- Install the UPS in an environment that is free of excessive dust, corrosive gas and conductive contaminants and where there is adequate air circulation around the unit.
- To place the UPS in ideal location that allow you to check visual alarms and sound indicators.
- To place the UPS at least 20cm far from any monitor or screen in order to avoid interference.
- Connect the power cord to an earthed power outlet.
- Connect your computer and its devices to the UPS output outlets.
- Don't connect laser printers to UPS output.
- To turn on the UPS press the start button located on the UPS front panel and wait for the test completion until the beep ends and the blue display lights up. Your UPS is now working.
- From now on your computer and its connected devices are protected by the UPS.
- Before turning off your UPS, make sure that your computer or any other electronic equipment has been turned off completely.
- To turn off the UPS, press the button on front panel, the blue display will turn off, then your UPS will be switched off.

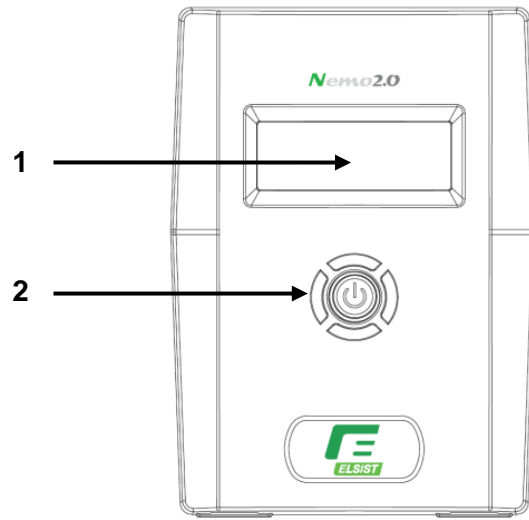
**IMPORTANT:** The total power consumption of the load must not exceed the maximum power rating of the UPS, specified on UPS label.

## 4 – UPS TEST

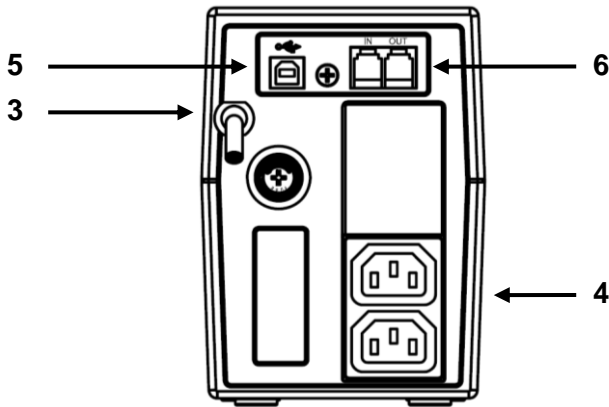
If you want to simulate a network failure, then proceed by unplugging the UPS power cord from the mains socket. Don't turn off the UPS.

"Batt. Mode" signal will appear on the display and the buzzer will beep every 10 seconds (with fully charged battery). To resume normal operation with electrical network, simply reconnect the UPS power cord to the mains socket. After a certain delay (intentional delay in order to protect the load from surges that may occur when re-connecting the power cord or when the voltage is back after a power outage), the "Batt. Mode " icon will be off, the buzzer will stop beeping and the " AC Mode "icon will be displayed.

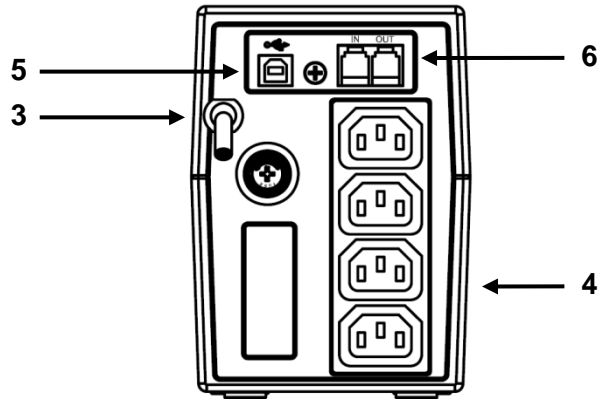
## 5 – LAYOUT AND DESCRIPTION



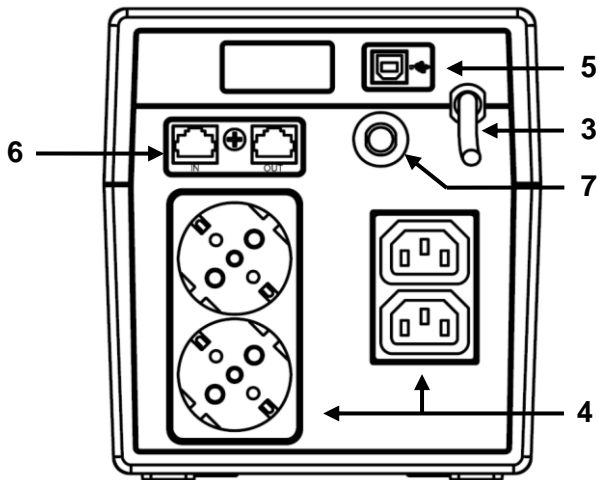
**UPS FRONT VIEW**



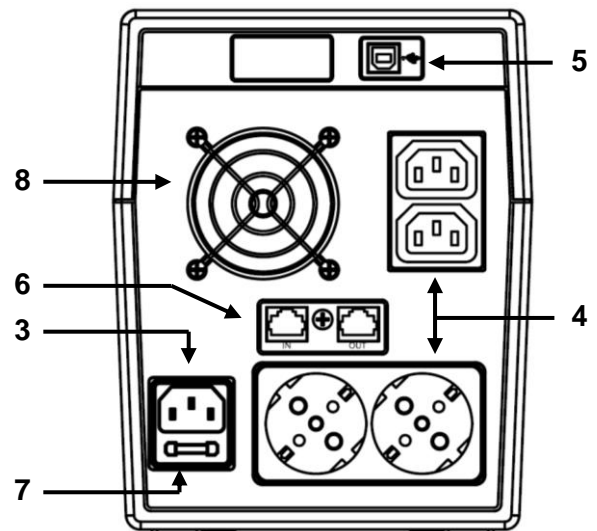
**Rear view Nemo2.0 65-80**



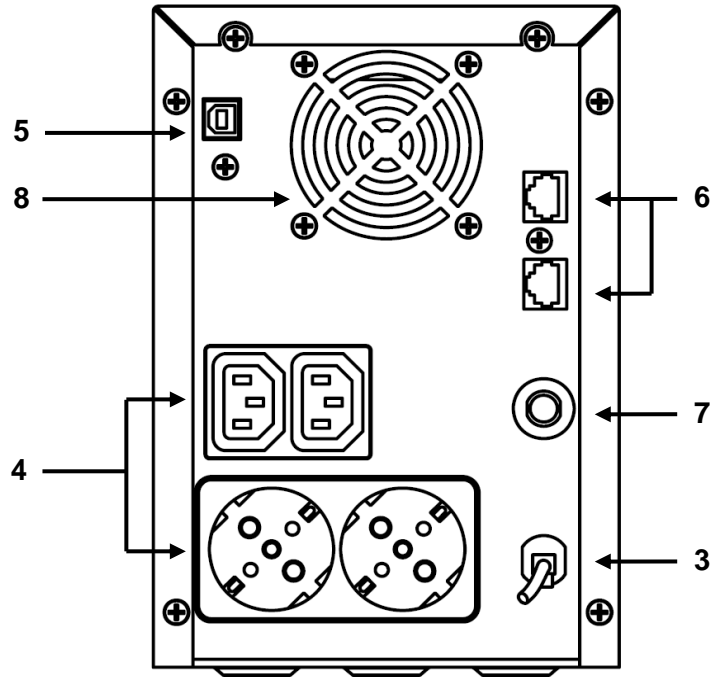
**Rear view Nemo2.0 120**



**Rear view Nemo2.0 160**



**Rear view Nemo2.0 200-300**



Rear view Nemo2.0 400

**1. LCD Display**

Please refer to Section 6

**2. Power On/Off Switch**

Push to switch On or switch Off the UPS.

**3. Mains input**

Nemo2.0 65-80-120-160-400 models are equipped with a power cord to plug directly into the outlet. Nemo2.0 200-300 is equipped with a male IEC plug. Insert the UPS power cord female plug into this socket and the other to the power outlet. A fuse in the housing protects against overload

**4. Output outlets**

Connect your loads to these outlets to be protected by the UPS.

**5. USB Communication ports**

For remote communication. By installing the supplied software via the USB cable, you can manage the UPS and monitor its signals (Network status, UPS & Batteries, On/Off Scheduling, automatic File back-up after a network outage, etc.).

**6. RJ45/RJ11 connection**

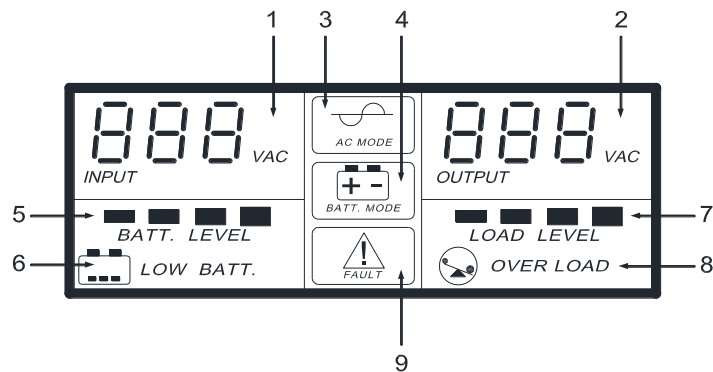
These two modular sockets protect the ISDN connection to the Modem or LAN 10 Base-T from interference of power network.

**7. Fuse**

To protect input.

**8. Fan**

## 6 – LCD DISPLAY



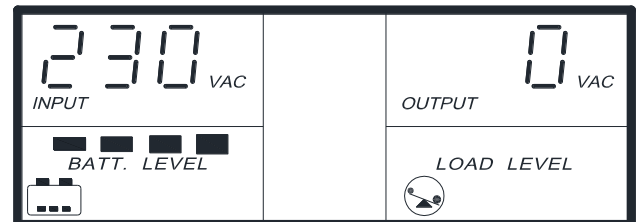
1. Input Voltage
2. Output Voltage
3. Operation from Mains icon
4. Operation from Battery icon
5. Battery level
6. Low battery
7. Load level
8. Overload
9. Error icon

## 7 – VISUAL/AUDIBLE SIGNALS

Signals and Alarms on LCD display:

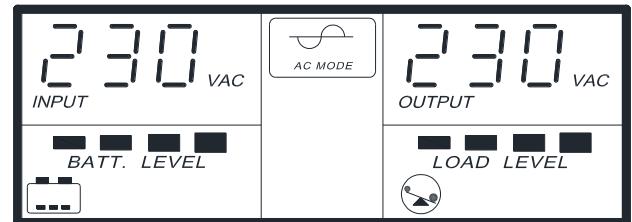
### 1. Mains ON - UPS OFF

Situation that occurs when the UPS is connected to the mains but is not switched on. The LCD shows information but is not backlit. In this situation, the batteries are in charging mode.



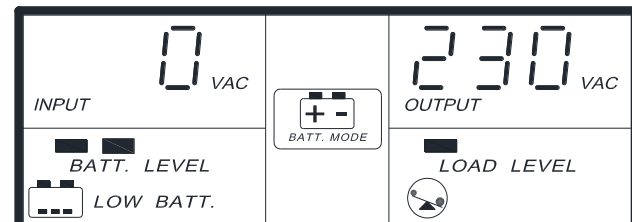
### 2. Mains ON - UPS ON

Situation that occurs when the UPS is connected to the power supply and is switched on via the front panel button. After the end of the beep the LCD will turn on and the icon "3" will appear to indicate the operation of the power supply. The UPS is in normal mode, the load is protected and the batteries are being recharged.



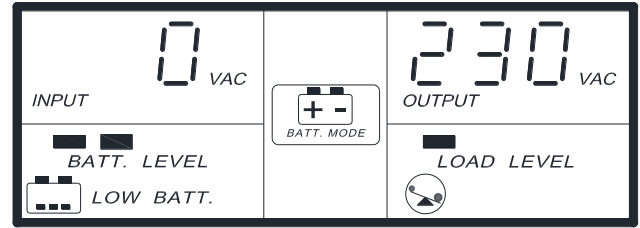
### 3. Mains OFF - UPS ON (Network failure/ Battery Test)

Situation that occurs when the UPS is switched on and there is an outage (or want to simulate it to perform the Battery Test). The icon "4" lights up to indicate battery operation. The batteries are now feeding the load and are discharging. A beep indicates the remaining autonomy, the more the beep's frequency is higher the less the autonomy time will be. When the battery reaches the end of discharge level, then "6" icon will also start blinking.



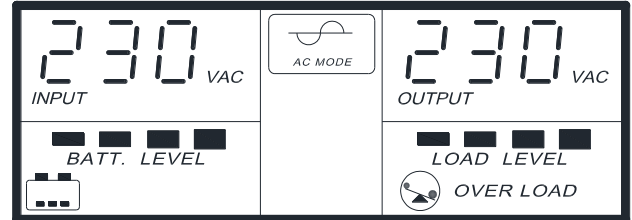
#### 4. Mains OFF - UPS ON (DC Start)

Situation that occurs when the UPS is switched on via the button on the front panel. After a long and continuous beep, the display lights up as shown. The batteries are feeding the load and are discharging. A beep indicates the remaining autonomy, the more the beep's frequency is higher the less the autonomy time will be. When the battery reaches the end of discharge level, then "6" icon will also start blinking.



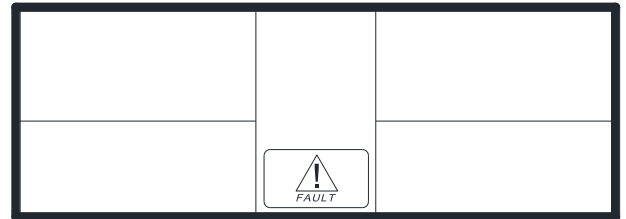
#### 5. Main ON - UPS ON (Overload)

Situation that occurs when a load higher than its capability is connected to the UPS working in normal mode. The icon "7" lights up until the load is above the limits, and the two "7-8" icons blink simultaneously with a continuous beep. After a few seconds, the UPS move to protection mode and switches off. The load is not supplied.



#### 6. UPS error

Situation that occurs when the UPS detects a fault such as a short circuit or a very high overload at the output. The UPS switches off and the display shows the icon "9" as in the figure, moreover you will hear a continuous beep. To reset the beep, turn off the UPS with the On/Off button on the front panel.



## 8 – TROUBLESHOOTING





STATUS	CAUSE	SOLUTION
LCD display is Off	• Discharged battery	• Recharge the battery for at least 8hr
	• Battery failed	• Replace the battery with the same type of product
	• On/Off button is not switched On	• Push ON/OFF button on front panel
Continuous beep when Mains is present	Overload on UPS	Verify that load doesn't exceed the rating of the UPS
Battery autonomy time in back-up mode is short	• Overload on UPS	• Partially remove the load
	• Battery voltage is very low <ul style="list-style-type: none"> <li>• Battery failure due to high ambient temperatures or improper operation of the battery</li> </ul>	• Recharge the battery for at least 8hr • Replace the battery with the same type of product
Battery mode icon is On but Mains is present	• Power cord is not connected	• Check that power cord is correctly plugged in.
	• Input fuse is blown	• Check the fuse in its housing on the rear of UPS and replace it if blown.
Battery is not recharged	Input fuse is blown	Check the fuse in its housing on the rear of UPS and replace it if blown.

NOTE: If there are other conditions not listed, then contact our service center.



## 9 – ACCESSORIES

Within the package are the following accessories, please check their presence.

MODEL	Input Power Cord	Input power cord IEC320 	Output power cord IEC320 	Software 	Manual 
NEMO2.0 65	•	-	1	•	•
NEMO2.0 80	•	-		•	•
NEMO2.0 120	•	-		•	•
NEMO2.0 160	•	-		•	•
NEMO2.0 200	-	1		•	•
NEMO2.0 300	-	-		•	•
NEMO2.0 400	•	-		•	•

## 10 – TECHNICAL CHARACTERISTICS

MODEL NEMO2.0	65	80	120	160	200	300	400
<b>INPUT</b>							
Input Voltage	220-230-240Vac						
Input voltage range	162-290Vac						
Frequency	50/60Hz (auto selection)						
<b>OUTPUT</b>							
Output Voltage	230Vac						
Voltage tolerance	± 10%						
Frequency	50/60Hz (following input frequency)						
Power	650VA	800VA	1200VA	1600VA	2000VA	3000VA	4000VA
Active Power	330W	400W	600W	800W	1000W	1500W	2000W
Switching time	2-6 mS tpc						
IEC outlet	2	2	4	2	2	2	2
Schuko outlet	-	-	-	2	2	2	2
<b>NOISE FILTERING</b>							
Modem / T port (10BaseT/100baseT)	RJ11/RJ45 (network compatible)						
<b>BATTERY</b>							
Typ. Autonomy time	10 min						
Battery capacity	1x4,5Ah	1x7Ah	1x9Ah	2x7Ah	2x9Ah	2x9Ah	4x9Ah
Type	Maintenance-free, sealed lead-acid						
Recharging time	6-8 hr at 90% after a deep discharge						
<b>PROTECTION</b>							
Overvoltage/Undervoltage	Switch to "Battery mode"						
Overload/Shortcircuit	Fuse and Electronic threshold (both on "Mains mode" and on "Battery mode").						
<b>MECHANICAL CHARACTERISTICS</b>							
Dimensions (WxDxH) mm	101x298x142			149x353x162	158x380x198		145x436x213
Weight (Kg)	3,9	4,4	4,7	8,4	10	10,5	23
<b>ENVIROMENT</b>							
Ambient	Temperature 0-40°C ,Humidity 0-90% without condensation, altitude max. 3000 mt.						
Audible noise	< 40dbA (measured at 1mt.) both on "Mains mode" and on "Battery mode".						
<b>STANDARD</b>							
IEC/EN62040-1 IEC/EN62040-2 IEC/EN62040-3 IEC/EN60950-1							

## 11 – WARRANTY

Dear Customer,

Thank you for purchasing a NAICON product. We hope that you be satisfied. If the product fails in warranty period, please contact your dealer or call +39 02 950031 or go to [www.naicon.com/elsist](http://www.naicon.com/elsist). Before contacting your dealer or authorized service network, we recommend that you read the operating and maintenance manual carefully.

With this warranty, NAICON warrants the product to be defective in materials or workmanship for 2 years, as of the original delivery date.

If there are material or manufacturing defects during the warranty period, ELSIST affiliates, Authorized Service Centers or authorized resellers located in the EEC will repair or (at ELSIST discretion) replace the defective product or components under the terms and conditions below, without any charge for labor or spare parts costs. ELSIST reserves the right (in its sole discretion) to replace the components of defective products or low cost products with assembled parts or new or refurbished products.

Conditions.

1. This warranty will only be valid if the defective product is returned together with the sales invoice. ELSIST reserves the right to refuse warranty service in the absence of such documents or if the information contained therein is incomplete or illegible.
2. This warranty does not cover the costs and / or any damages and / or defects resulting from any modifications or adjustments made to the product, without prior written permission from ELSIST, in order to adapt the product to local technical or safety standards in countries other than those for which the product was originally designed and manufactured.
3. This warranty will be void if the model or serial number indicated on the product has been modified, deleted, removed or otherwise illegible.
4. Are excluded by the warranty:
  - Periodic maintenance and repair or replacement of parts subject to normal wear and tear.
  - Any modification or modification to the product, without prior written permission from ELSIST to enhance performance than those described in the User and Maintenance Manual
  - All costs of technical staff support and any transport from the customer's adress to Assistance Center and vice versa as well as all the risks involved.
  - Damages due to:
    - a. Improper use, including but not limited to: (a) the use of the product for any purpose other than the intended use or failure to observe the ELSIST instructions for correct use and maintenance of the product, (b) installation or use of the product not complying with the Technical or Safety standards in the country in which it is used.
    - b. Repairs by unauthorized personnel or by the Customer himself.
    - c. Accidental events, lightning, floods, fires, incorrect ventilation or other causes not attributable to ELSIST.
    - d. Defects of the equipment or equipment to which the product was connected.
5. This warranty does not affect the buyer's rights established by applicable national laws nor the Customer's rights to the reseller arising out of the sales contract.

Unless authorized by the manufacturer, reproduction of any part of this manual is prohibited. Our equipment, built with the utmost care and with selected components, is controlled by ELSIST Quality Services. However, if you notice any anomalies, please inform us by calling 02-950031 specifying serial number and model of the devide, which are printed on the identification plate at the rear side of the UPS. ELSIST Assistance Service is also available to collect requests, comments, suggestions, if any.

In case of failure:

Contact our Customer Service Center at +39 02 95 0031, and verify the UPS malfunction.

If the products returned to NAICON were OPERATING or if they were delivered without our permission or for out-of-warranty products, they will be returned to the customer by charging a cost that will depend on the country where will be shipped.

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