Emergency Inverter nUPS-M

Summary

Dear customer, we thank you for choosing our inverter nUPS-M produced by us to power the main moto during emergency maneuver for traditional traction elevators. Before the installation and use, we invite you to read accurately this manual.

General Description

The **Inverter nUPS-M** has been studied to action maneuver controllers in case of power failure (power cut single and three phase) or the missing of a single phase. The device gets in action after 8 – 16 seconds that power tension missing if the fourth pole of the general switch connected to the clamps 4P/4P is closed.

The automatic cycle has a maximum duration of 120 seconds. Once the emergency cycle, runs it will be completed even if, during its course, the power returns.
Once activated the emergency cycle, it is released from the network the primary winding of the transformer (Power supply), thus preventing a possible return of the main voltage may overlap with that of the emergency.

The inverter is connected in parallel to the control panel, therefore the operations required for its functioning are simple and limited.

The **device** consists of three-phase inverter protected by a fuse, a battery charger circuit electronically protected, and a circuit for detecting the absence of the phases , all made on the same printed circuit, contained in a plastic container with guide support DIN.

The very compact **dimensions** (113mm height, width 121 mm and 40 mm thickness) allow easy installation even in confined spaces.

The **power** available at the output (250 VA max with power supply 12VDC and 450 VA max with power supply 24VDC) enables the inverter is used for a very wide range of applications.

The **output** connected to the primary of a transformer of appropriate power, allows to feed the control panel.

The **charger** is connected to a transformer with secondary voltage suitable (8V / 18V), it allows you to charge the batteries to have on every occasion the maximum energy.

The **immunity to electrical noise** is to guarantee correct operation in the most varied conditions of use.

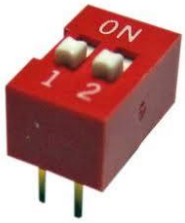
The **input "Quarto polo"** allows enabling the inverter with a closing contact of very limited features (1mA).

Mechanical Installation

The inverter can be placed anywhere inside the control panel.

Electrical connection

Before making the electrical connection is necessary to prepare the dip-switch with two positions (present on this unit) in order to set some parameters such as, the maximum time of intervention after the failure of power tension and whether to set the device single phase or three phase mode.
In particular:



- With the first switch SW1, it is possible to set the phase failure time before the inverter can be activated. By placing, the switch on the 'OFF' position it will be triggered an 8-second timer while the 'ON' position will activate a 16-second timer.
- With the switch SW2, you can set the system in single-phase mode (position 'ON') or three-phase ('OFF' position).

If the power of the control panel is less than or equal to 250VA, inverter can be operated with only one battery; while if the power is more than 250VA but less than 600VA it must run the inverter with two 12V-7Ah;

Connect the device as shown in figure 2 in the case you need a 250W system, or as shown in Figure 3 in the case of 450W.

Connect to the input "Ingresso Rete 380Vac" 380Vac three-phase power from the general switchboard.

Connect the battery or batteries to the input "Batterie" as shown in Figure 2 using 2.5-mmq conductors. Red color for positive and black for negative.

Connect to the input "Quarto Polo" a normally open contact that when will be closed will activate the inverter.

Ensure that in case of operation with one battery on the "Batterie" terminal is present voltage of 14VDC, with the polarity indicated in Figure 1, or that in the case of operation with two batteries is present a voltage of 28VDC.

Connect the output " Uscita Rete al Quadro" to the transformer of the control panel.

Connect the output "Uscita Inverter 8V" to the secondary of an appropriate power transformer.

Be very careful to follow the polarity as shown in the diagram and on the terminal block of the inverter: reverse polarity in the connection will damage the inverter permanently.

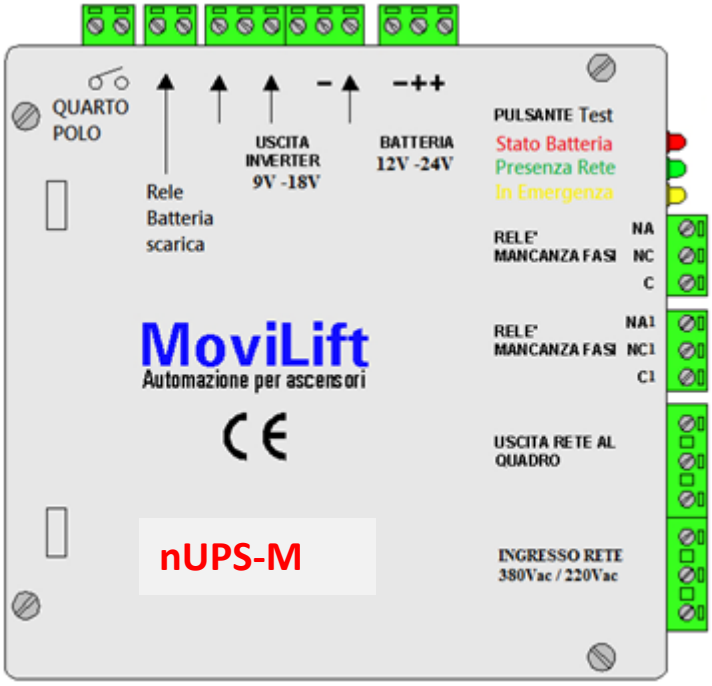


Figure 1

Test

Enable the inverter by closing the contact connected to the terminal "Fourth Pole".
Power on the drive and see if it lights the LED "**Presenza Rete**"
Remove the main power 380Vac and verify that:

1) The LED "Presenza Rete" will blink for a period equal to the one set on the SW1 button.
2) After this time the led "Presenza Rete" it turns off and the led "In Emergenza" turns on.
3) On terminals “USCITA INVERTER” is present a voltage of about 8/18 Vac. Check that after 2 minutes (maximum duration of the emergency cycle), turns off the LED "In Emergenza" and that on the terminals “USCITA INVERTER” is no longer present the 8/18 Vac voltage.

If during the emergency cycle there is a power requirement greater than that expected, the cycle stops and the LED "In Emergenza" starts to flash for 5 times after which the inverter re-executes the emergency cycle for a maximum of 3 attempts.

If, instead, during the emergency cycle occurs a temperature increase of the MOS exceeding 70 ° C, the cycle stops and the LED "In Emergenza" starts to flash for 10 times after which the inverter re-run the cycle of emergency for a maximum of 3 attempts.

The red LED "Stato Batteria" indicates the current battery status, particularly if it is ON indicates that the batteries are low and even if there is no main power supply, the inverter will not run any emergency cycle returning closed the contact **batteria scarica**.

Check number of interventions done by the device

When the device is powered, it is possible at any time (except during the emergency cycle) verify the number of emergency cycles performed.
• Press the **PROG** button and release.
• The number of flashes of the yellow LED "In emergenza" refers to the number of emergency cycles followed by the inverter.
• To delete the events in memory just hold down the button for 5 seconds.

Diagnosis

LED Presenza Rete (ON) LED In Emergenza (OFF)	Main power present, device powered
LED Presenza Rete (flashing) LED In Emergenza (OFF)	Missing main power and preparing the emergency cycle
LED Presenza Rete(OFF) LED In Emergenza (ON)	Emergency cycle is running
LED PRESENZA Rete (OFF) LED In Emergenza (flashing)	Number of emergency cycles done
LED PRESENZA Rete (OFF) LED In Emergenza (lflashing for 5 times)	Interruption of the emergency cycle due to a higher current absorption than expected
LED PRESENZA Rete (OFF) LED In Emergenza (flashing for 10 times)	Interruption of the emergency cycle due to a rise in temperature higher than 70° C
LED Stato Batteria (ON)	Low batteries charge
LED Stato Batteria (OFF)	Batteries charged

Electrical Features

Electrical Features	1 Battery	2 Batteries
Section of the connection cables	Battery cables 2.5 mm Cables inverter output 2.5 mm Cable terminals 0.75 -2.5 mm	
Mounting position	On the vertical plane	
Operating temperature	From 0°C to 70°C	
Emergency power	1 Battery of 12V 7Ah	2 Batteries of 12V 7Ah
Batteries charging time	About 10 hours	
Maximum three-phase power output ***	250W	450W
Voltage Inverter Output	3x8V 50Hz	3x18V 50Hz
Relay output	Contact NC 1A 12V Contact NO 1A 12V	
Maximum capacity Switching of three-phase line	420 Vac 1A	
Protections	Overcurrent, Temperature	
Intervention time	8 – 16 seconds from main power missing (settable parameter by switch SW1).	

****Only for the model 1 Battery 250W is possible to amplify the power in output for further 50W (tot. 300W) when it is necessary. The long press on the button TEST further than 30s activates this amplification, which will be confirmed by a double beep on the buzzer.*

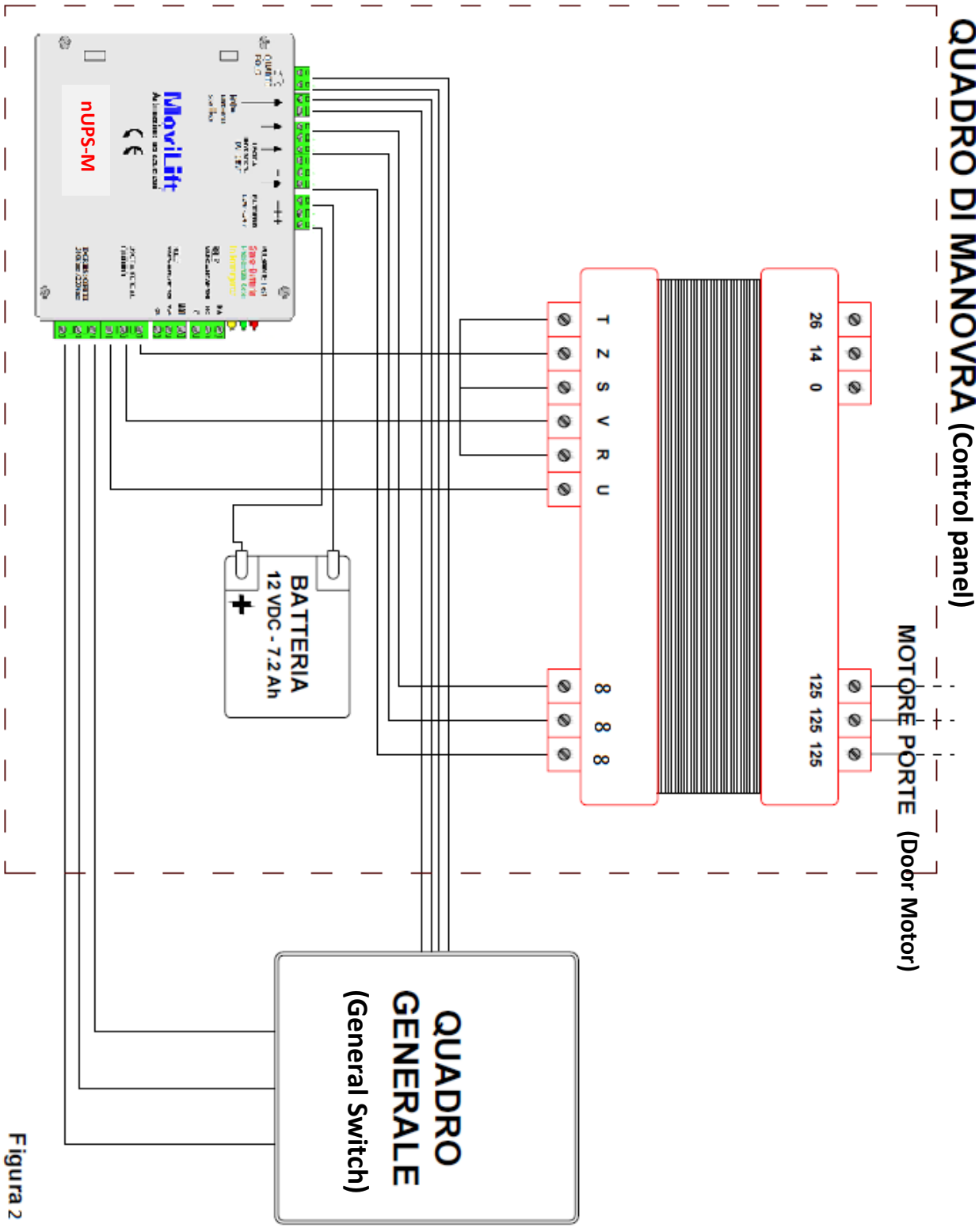
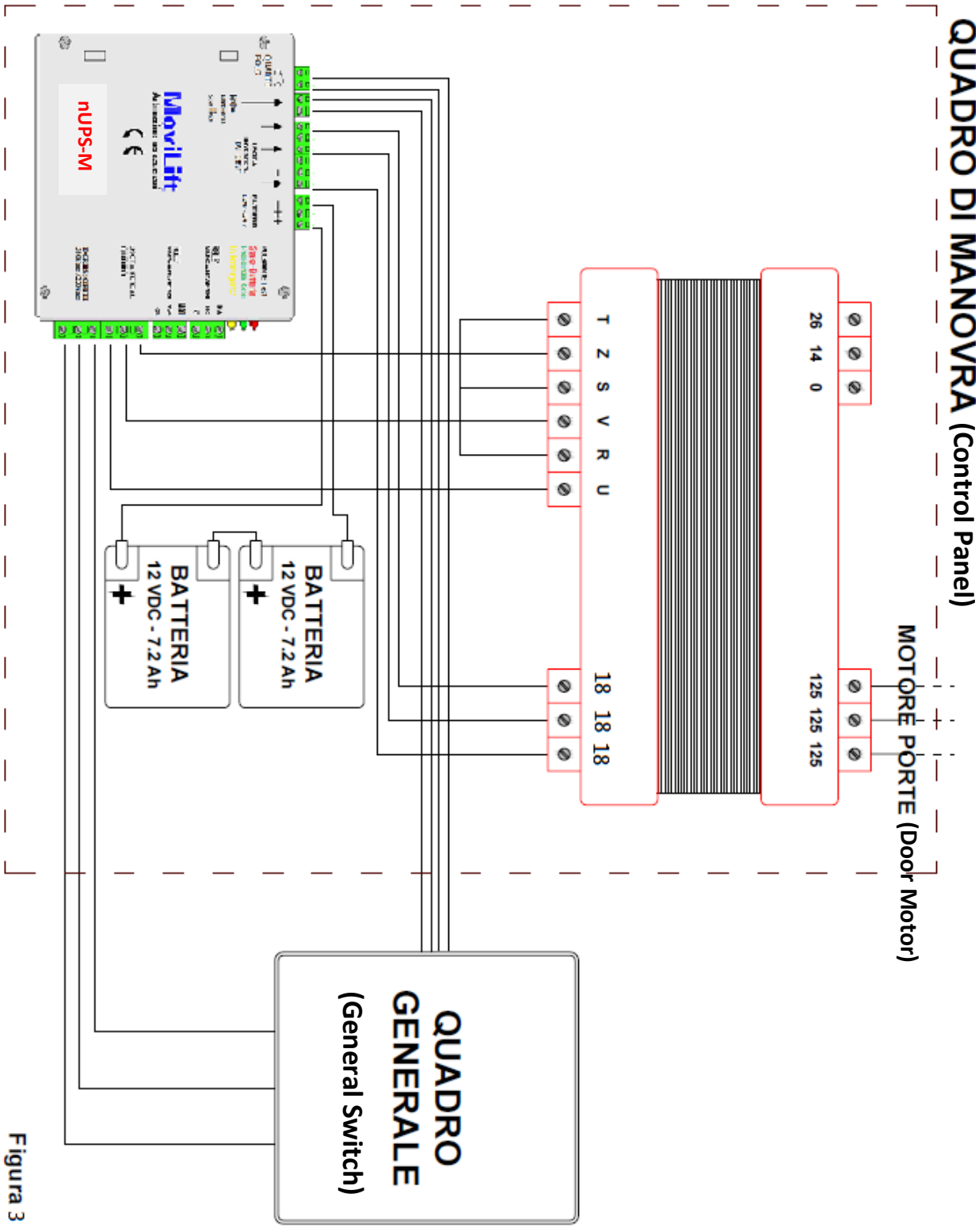

QUADRO DI MANOVRA (Control panel)
nUPS-M
MoviLift
T Z S V R U
8 8 8
26 14 0
125 125 125
MOTORE PORTE (Door Motor)
BATTERIA
12 VDC - 7.2 Ah
QUADRO GENERALE
(General Switch)

Figura 2


QUADRO DI MANOVRA (Control Panel)
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12 VDC - 7.2 Ah
BATTERIA
12 VDC - 7.2 Ah
QUADRO GENERALE
(General Switch)

Figura 3

WARRANTY CONDITIONS AND POLICY MANAGEMENT OF COMPLAINTS

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And 'it provided the repair and / or replacement, at our option MOVILIFT, products that within 12 months from the date of sale were found malfunctioning due to defects in design, materials or workmanship; They exclude malfunctions due to tampering or by incorrect installation, use, storage, modification or repair without the prior written consent of MOVILIFT.

The warranty excludes the use of the product in conditions not complying with these technical details, in the voltage irregularities conditions power, use other than that intended or any other cause not attributable to MOVILIFT.

The verification of malfunctions competes MOVILIFT and its technicians. Except in cases of willful misconduct, MOVILIFT not liable for any direct, indirect and / or consequential damages arising from the supplied product buyer.

Physical damage on the product must be reported no later than 3 working days from the arrival of the goods.

The guarantee of this product replaces all legal warranties for defects and conformity and excludes any other possible liability of MOVILIFT however originated by the supplied goods (including claims for damages).

If any defect or any complaint, please inform us immediately by using the means best suited to you and describing, in as completely as possible so that your problem can be resolved promptly and with His full satisfaction.

In the trust that even the slightest complaint contact us. MOVILIFT Srl signals the address to which you can refer:

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