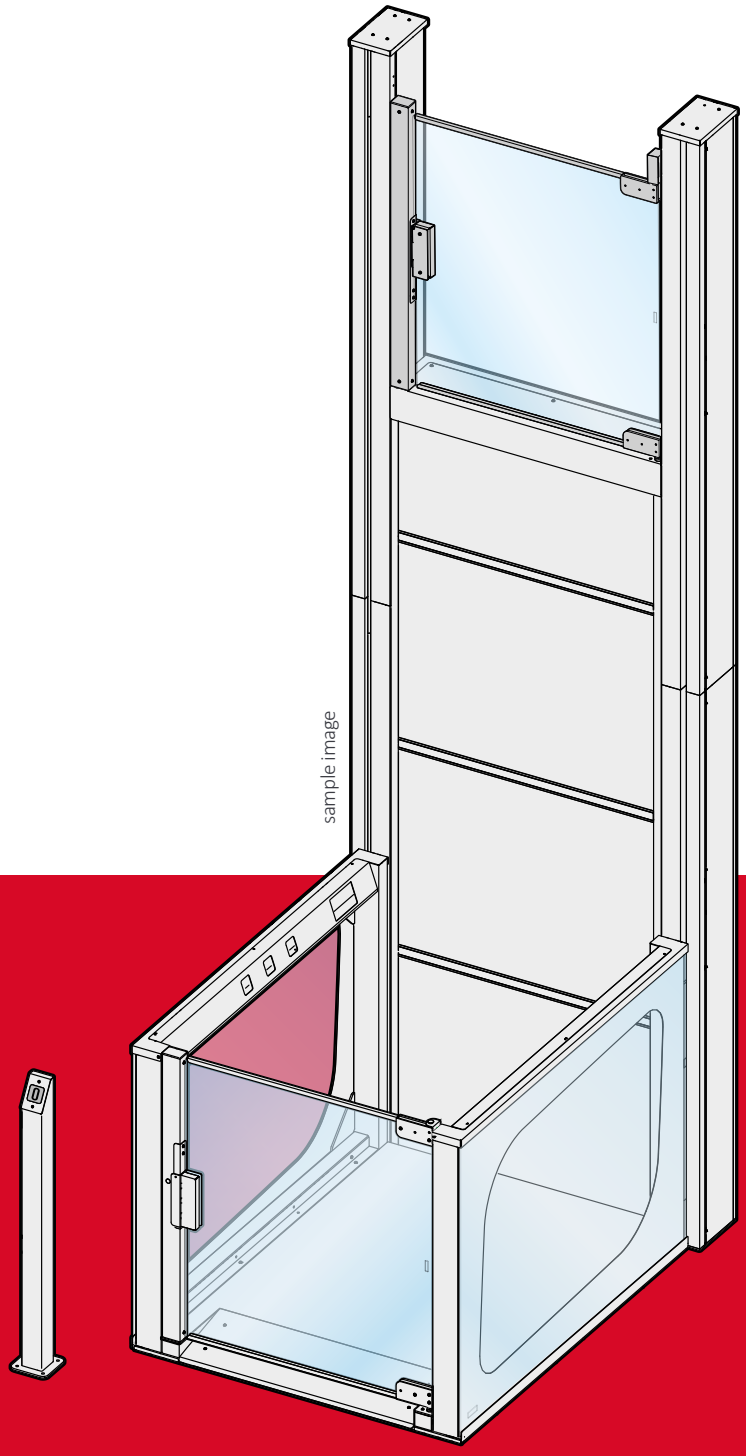
EN

LIFTINGITALIA®
COMFORTABLE HOMELIFTS

EasyPlat®

Electric belt driven low rise platform lift



ELECTRICAL EQUIPMENT INSTALLATION INSTRUCTIONS

AREALIFT LIFTINGITALIA

Table of contents

1. Manual reading guide

READ THIS MANUAL CAREFULLY
BEFORE INSTALLING AND USING THE PRODUCT
Keep the technical documentation near the lift system for the entire life of the product. In the event of a change of ownership, the manual must be provided to the new user as an integral part of the product.

1.01. Preliminary information

AVVISO	
	**This product must be installed and put into operation according to the provisions and regulations in force. Improper installation or improper use of the product can cause damage to people and property, as well as cause the warranty to lapse.**
	FOLLOW THE SUGGESTIONS AND RECOMMENDATIONS TO OPERATE IN SAFETY. Any unauthorised modification can compromise the safety of the system, as well as the correct operation and the life of the machine. If you have any doubts regarding the correct understanding of the information and contents contained in this manual, contact LIFTING ITALIA S.r.l. immediately.
	QUALIFIED PERSONNEL: The product covered by this documentation can only be installed by qualified personnel, in compliance with the attached technical documentation, above all in compliance with the safety warnings and the precautions contained therein.

1.02. Personal safety and risk recognition

This manual contains safety rules that must be observed to safeguard personal safety and to prevent damage to the property.

The indications to be followed to guarantee personal safety are highlighted by a triangle symbol while those to avoid material damage are not preceded by the triangle. The hazard warnings are shown as follows and indicate the different levels of risk in descending order.

RISK CLASSIFICATION AND RELATIVE GRAVITY OF DAMAGE		
⚠ DANGER	The symbol indicates that the failure to comply with appropriate safety measures **causes** death or serious physical injury.	RISK LEVELS
⚠ WARNING	The symbol indicates that the failure to observe the corresponding safety measures **can cause** death or serious personal injury.	
⚠ CAUTION	The symbol indicates that failure to observe the relevant safety measures **can cause** minor or moderate personal injury or damage to the device.	
NOTICE	It is not a symbol of security. It indicates that the failure to comply with relevant safety measures **can result** in property damage.	
INFORMATION	It is not a symbol of security. It indicates important information.	

If there are multiple levels of risk, the danger warning always indicates the highest one. If a warning is drawn with a triangle to warn to the risk of injury to persons, the risk of possible property damage may also be caused at the same time.rischio di possibili danni materiali.

⚠ CAUTION
During installation / maintenance of the platform, the safety functions are temporarily suspended. Therefore, all necessary precautions must be taken to avoid personal injury and / or damage to the product.

1.03. Hazard symbols

GENERAL DANGER	ELECTRICITY DANGER	DANGER FLAMMABLE MATERIAL
DANGER OF FALL BY A LEVEL	DANGER SUSPENDED LOADS	DANGER OF CRUSHING

1.04. Prohibition symbols

GENERIC PROHIBITION	FORBIDDEN TO STEP ON	PROHIBITED TO WALK ON OR STOP IN THIS AREA

1.05. Mandatory symbols

OBLIGATIORY TO WEAR THE PROTECTION HELMET	OBLIGATORY TO WEAR SAFETY SHOES	OBLIGATORY WEAR THE PROTECTIVE GLOVES
OBLIGATORY TO WEAR EYE PROTECTION	OBLIGATION TO WEAR THE AUDIO PROTECTION	OBLIGATORY TO WEAR THE MASK
OBLIGATORY TO WEAR PROTECTIVE CLOTHES	OBLIGATORY TO KEEP CLOSED	OBLIGATORY TO CHECK THE PROTECTIONS

EMERGENCY AND FIRST AID SIGNS	INFORMATION SYMBOLS	INDICATION SYMBOLS
FIRST AID	INFORMATION	NOTE WELL / KEEP DRY

1.06. Liability and warranty conditions

RESPONSIBILITY OF THE INSTALLER
Installers are responsible for ensuring compliance with safety procedures at work and any health and safety regulations in force in the country and on the site where the assembly is carried out.
The elevator / platform is produced and intended to be installed as described in the attached project drawing and in this manual; any divergence from the prescribed procedure may affect the operation and safety of the system and cause the immediate cancellation of the warranty.
Any modification or variation made to the project and the to the assembly Instructions must be documented in detail and referred to LIFTING ITALIA S.r.l., in order to allow the company an adequate assessment. Under no circumstances can a modified system be activated without the express authorization of LIFTING ITALIA S.r.l.
The elevator / platform must only be used in the way envisaged by the system and illustrated in the relative manuals (transportation of people and / or things, maximum loads, cycles of use, etc.). LIFTING ITALIA S.r.l. assumes no responsibility for damage to persons and property caused by improper use of the system.

NOTE: Pictures and images on this manual are for illustration purposes only.

2. General requirements and installation site management.

2.01. General requirements

IMPORTANT!

For more information on safety, liability and warranty conditions, receipt and storage of material on site, packaging, waste disposal, cleaning and storage of the product; refer to the "**SAFETY INSTRUCTIONS AND SITE MANAGEMENT**" manual.

NOTICE

PRELIMINARY CHECKS: Once the packaging has been opened, check that the product is intact and has not been damaged during transport. Should any anomalies or damage be found, please dispatch them in writing on the transport document to the transport company, giving written notice to LIFTINGITALIA S.r.l.

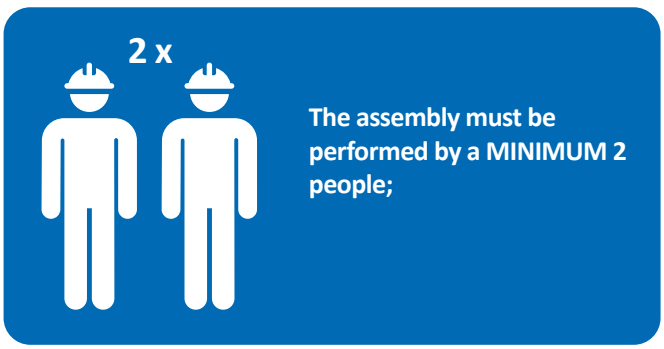
NOTE: In this manual, we will talk about "SHAFT" meaning for it the base slab, the slab of landing and the vertical wall that connects its slabs.

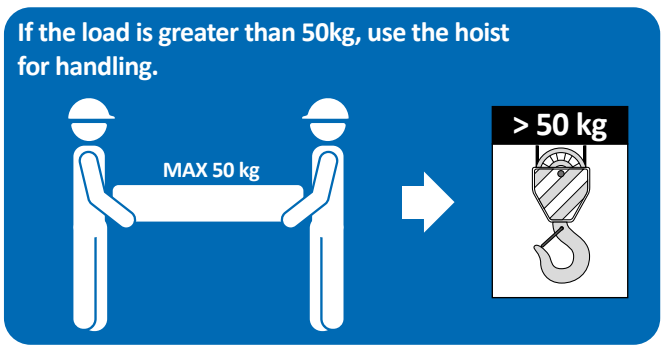
⚠ CAUTION

SAFETY AND SITE MANAGEMENT - OVERALL DISPOSITIONS:

1. Always secure tools and any objects against falling;
2. Pay the utmost attention to all the steps described in this;
3. While assembling the parts making up the system or after installation, be careful of any sharp burrs (machining residues);

- Before proceeding with the installation, it is necessary to remove any rubble and material deposited during the construction of the shaft.
- Only nuts and bolts included in the supply must be used.
- The bags containing the screws must be opened in correspondence with the respective operating phases indicated in this manual.
- The instructions described in this manual refer to a reinforced shaft, to a fastening with mechanical expansion plugs of the stud type. For the use of plugs in masonry other than the reinforced concrete see the attachment to this manual. For the shafts with metal framework, we proceed by replacing the plugs with normal screws.
- In these instructions and on the wiring diagram, the stops are indicated with 0, 1, (2, 3 etc.), meaning "0" the lowest stop: the numbers on the push-button panels may be different according to the user's needs (for example- 1, 0, etc.).





3. Overview.

The electrical equipment of EasyPlat consists of the following main components and connections:

(1) Main control panel integrated under the top floor threshold.

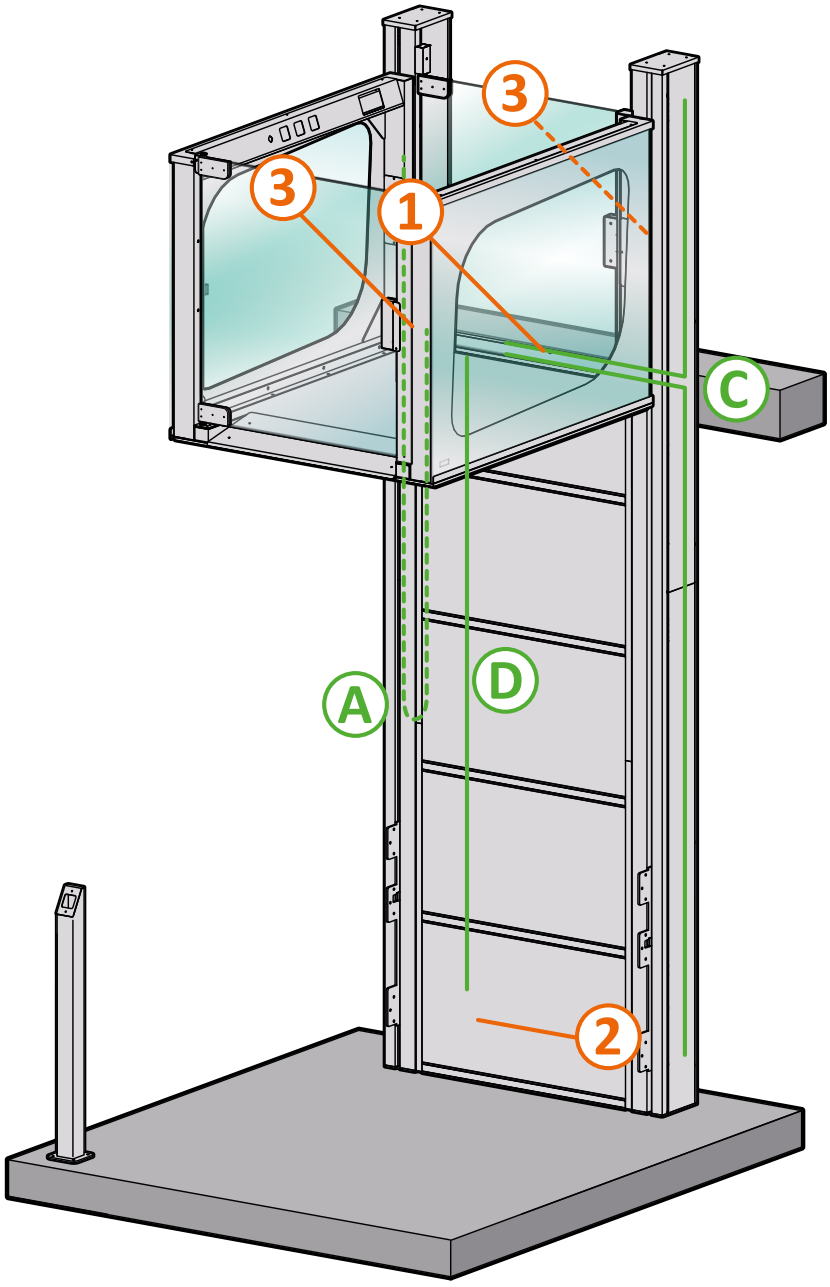
(2) Inverter panel located next to the motor.

(3) Door electronic boards located near the two gates.

(A) The platform is connected to the control panel by flexible cables guided by cable carriers (on both sides).

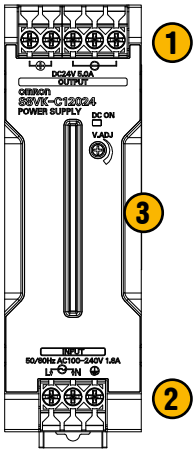
(B) The inverter panel is connected to the control panel inside the machine body.

(C) The limit and safety switches located on the machine body are connected by cables running in the machine guides.



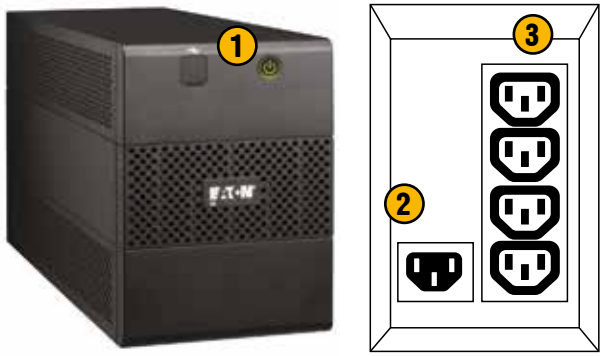
4. Main electronic devices.

4.01.Auxiliary power supply (PS1)



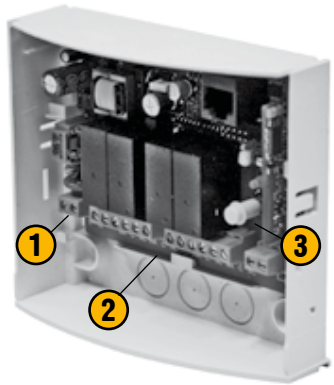
1. Input for 230V AC.
2. Output 24V DC for command and auxiliary devices.
3. Output voltage trimmer.

4.02. Power failure UPS



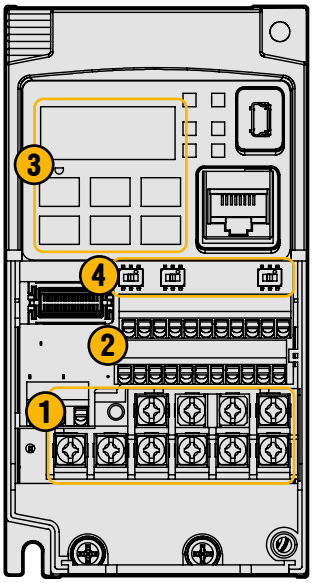
1. Control panel.
2. Inverter panel (INV, KA-EMG, KG-SEC1-2).
3. Landing door boards (UD0, UD1).

4.03. Remote receiver.



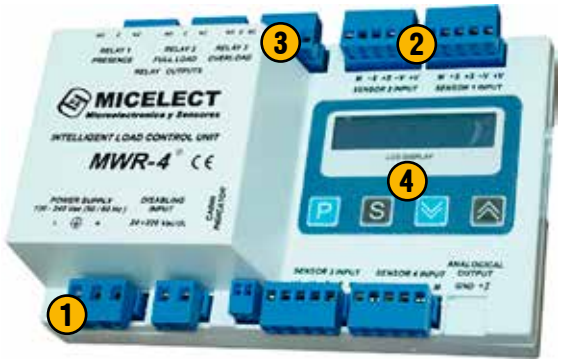
1. 230V AC supply.
2. Relay outputs with status LEDs.
3. Programming button and status LED (see specific manual).

4.04. Inverter MX2.



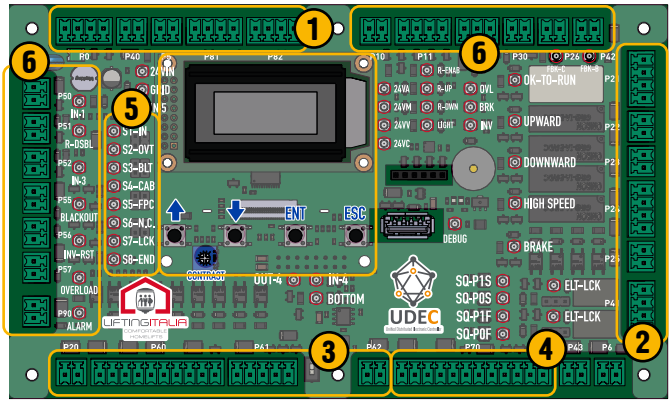
1. Power terminals.
2. Control terminals.
3. Display – buttons.
4. Configuration dipswitches.

4.05. Weighting unit (PS-CAB)



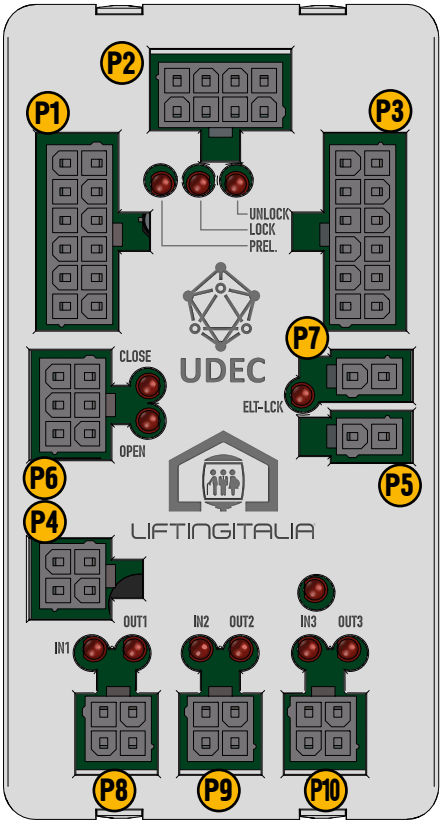
1. Power supply.
2. Sensor connections.
3. Relay outpu.
4. Programming interface (see specific manual).

4.06. Main board UDEC.M (see §14 for details)



1. Human-Machine-Interface (HMI).
2. Movement commands.
3. Connection to shaft.
4. Connectors to platform.
5. Safeties collector.
6. Auxiliary input/outputs.

4.07. Inverter MX2



P1 P3 Input / output connections to other landing door boards.

P2 Door lock contacts.

P4 Display.

P5 Electric lock output.

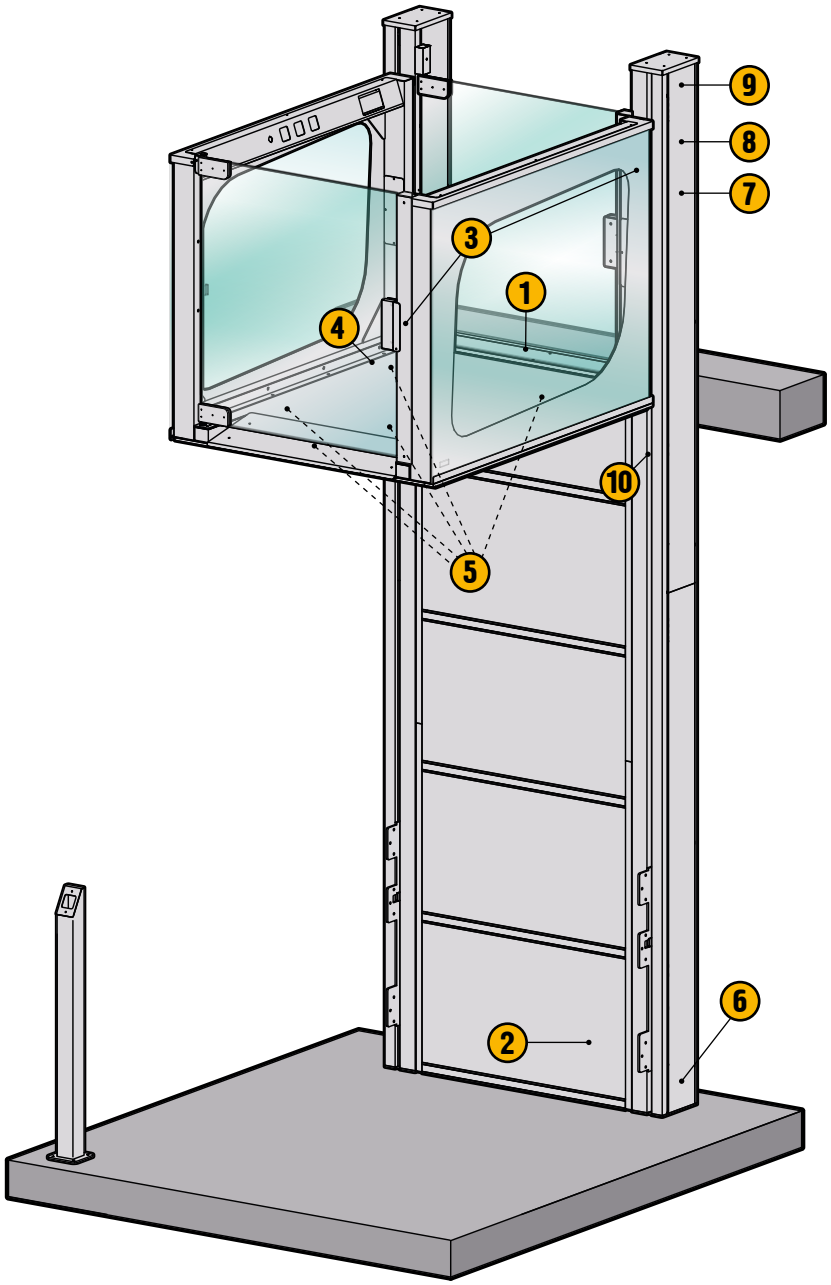
P6 Automatic door operator.

P7 Electric lock input.

P8 P9 P10 Pushbuttons / key-switches.

5. Electric devices position

1. Control panel.
2. Inverter panel (INV, KA-EMG, KG-SEC1-2).
3. Landing door boards (UD0, UD1).
4. Weighting unit (SP-CAB).
5. Safe bottom switches (SQ-FON1...5).
6. Bottom floor limit switches (SQ-P0S, SQ-P0F).
7. Top floor limit switches (SQ-P1S, SQ-P1F).
8. Overtravel limit switches (SQ-EXC-DX / SX).
9. Belt loosening switches (SQ-AC-DX / SX).
10. Safety gear switches (SQ-PAR-DX / SX.



6. Position switches.

The travel limit switches are located on the left guide and are pre-set in the factory.
In case of adjustment on the installation, read the following notes:

- **SQ-PoF** is the stop limit switch for the bottom floor.
- **SQ-PoS** is the unlock enable and low speed switch for the bottom floor.
- **SQ-P1S** is the unlock enable and low speed switch for the top floor.
- **SQ-P1F** is the stop limit switch for the top floor.
- **The low-speed/unlock switches (SQ-PoS and SQ-P1S) must be completely engaged (rotation >41°) to unlock the gate.**
- **When adjusting the limit switches, be aware that the platform may move slightly (<20mm) from the stop position due to the elasticity of the belts.**

The following table represent the correct sequence of the limit switches LEDs for a movement of the platform from the bottom to the top floor:

Limit switch	Bottom floor	Bottom low-speed zone	Intermediate position	Top low-speed zone	Top floor
SQ-P1S	■	■	■	□	□
SQ-PoS	□	□	■	■	■
SQ-P1F	■	■	■	■	□
SQ-PoF	□	■	■	■	■

All the other configuration of the LEDs are not permitted.

7. Enable / disable the platform.

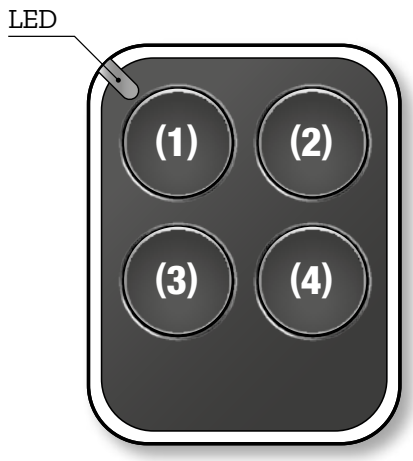
The travel limit switches are located on the left guide and are pre-set in the factory.
In case of adjustment on the installation, read the following notes:

At start-up the enable status of the commands is determined by the status of the key-switch on the top floor: if the LED IN2 on the door board is off the platform is enabled.

NOTICE
The key-switch has higher priority on the remote commands: if it disables the platform the remotes will not work. To use the enable/disable commands on the remote, the key-switch must be left in ON position (IN2 LED off).

NOTE: the key-switch has higher priority on the remote commands: if it disables the platform the remotes will not work. To use the enable/disable commands on the remote, the key-switch must be left in ON position (IN2 LED off).
After a successful **enable** command, the platform lights and buzzer will blink **twice**.
After a successful **disable** command, the platform lights and buzzer will blink **once**.
The platform commands can be disabled only when the cabin is at one of the limit positions.
Even if the commands are disabled it is always possible to unlock the door using the COPs push buttons

8. Remote commands.



(1) - DOWN
(2) - UP
(3) - ENABLE
(4) - DISABLE

NOTICE

If the LED does not blink after pressing any pushbutton replace the remote battery.

9. Acoustic signal.

During the operation the platform may emit some acoustic signals to warn the user:

CONTINOUS	The safe bottom has been engaged during a downward movement.
CONTINOUS BEEPS	Overload.
2 BEEPS	The user is trying to move the platform but one of the doors is not closed.
3 BEEPS	The user is trying to move the platform but one of the emergency stops is engaged.

10. Reset & soft reset.

During the operation the platform may emit some acoustic signals to warn the user:

RESET	press both the arrow buttons on the HMI inside the control panel for more than three seconds. The display will show a message to confirm that the operation is running ("RESET RUNNING"). See §16 to check what errors must be reset by this command
SOFT RESET	press both call buttons on one of the COPs for more than five seconds. The maximum number of soft resets is three; once this number is reached a standard reset is required. See §16 to check what errors can be reset by this command.

11. Insulation tests.

A. Place the platform between two floors and check if the safety chain is closed.
B. Disconnect the control panel from the mains supply by opening the power switchgears QF-2.
C. Turn off the UPS.
D. To avoid a wrong result or the damaging of the equipment, disconnect the power supply from the devices that are connected to PE: inverter filter, LEDs supply units, etc.
E. Disconnect the "-" conductor from the PE terminal on PS-1; the terminal is shown on the electrical drawings.
F. Make sure that all the low voltage switchgears inside the cabinet are closed (QF-24 and QF-SER).
G. Measure the resistance values between PE and the terminals indicated in the below table. The table shows the test voltage (V) and the minimum resistance of the insulation between the circuits (MΩ).

	1L and 1N	11L and 11N	+24VF	+24VA +24VM +24VV +24VC
PE	500V > 1MΩ	500V > 1MΩ	250V > 0.5MΩ	250V > 0.5MΩ

H. Restore all the connections.

12. Operating modes.

The technician can switch between the different operating modes using the HMI (see §17).
The switch between normal and blackout mode is automatic, depending on the grid and platform status.

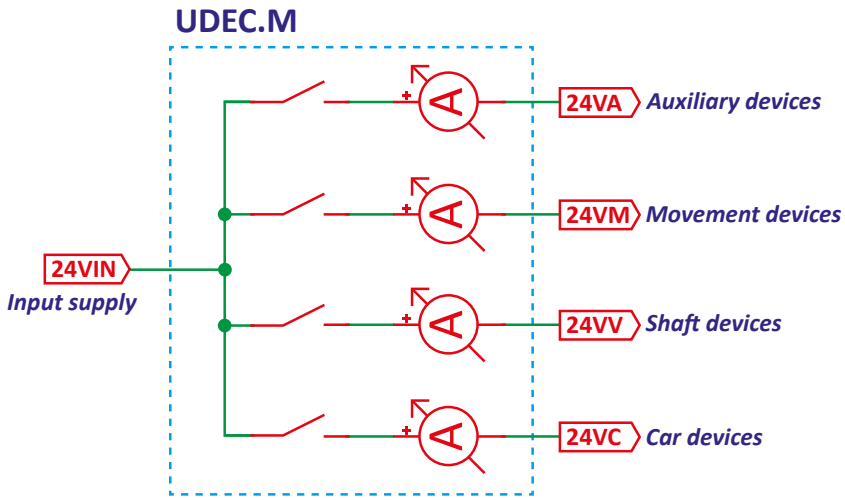
NORMAL	If the platform commands are enabled and no error is present, the local and remote commands can be used to move the platform.
POWER FAILURE	During a power failure the behaviour of the platform depends on its position: - ***at the floor***: the platform will stay at the floor until the main supply is restored. All the commands will unlock the landing door. - ***not at the floor***: after few seconds the supply of the inverter will be switched on the UPS and all the commands will move the platform to the bottom stop in low speed. Once at the floor or in case of power restore the UPS supply will be switched back on the grid.
MAINTENANCE	Once in this mode, all local and remote commands are disabled, and the platform can be operated only using the arrow buttons on the HMI (press ESC until the display shows MAINTENANCE ACTIVE). The platform will move between the limit positions in the same way as in normal mode. Ex.: use this mode if the remote/local commands are not working or to test the platform while monitoring the main board.

⚠ CAUTION

- This operating mode can cause physical damage to the user / technician or damage the machine.
- Be extremely careful when using these functions.

COMMISSIONING	As in maintenance mode, all local and remote commands are disabled. - ***Overtravel commissioning***: the platform can be operated using the HMI arrow buttons; it will move only in low speed ignoring the state of the limit switches and safe bottom. During the movement the platform will emit an acoustic signal to warn the technicians. Use this mode to test the safety switch for overtravel or if there are problems related to the limit switches / safe bottom. - ***Safety gear (belt safe) commissioning***: in this mode, pressing the down arrow will release (open) the brake causing the platform to fall without control. Releasing the down arrow button will activate (close) the brake stopping the platform. When the brake is released, the platform will emit an acoustic signal to warn the technicians. **Use this mode only to test the safety gear** (belt safe).

13. Power supply management.



The main board UDEC.M receives the 24V DC voltage supply and distributes it to the other electronic devices monitoring the voltage outputs to detect short circuits or overloads:

If any fault is detected the main board turns off one or more outputs, depending on the fault (see §16 ERR_A00x) At the sturt-up the main board turns on in sequence the four supply outputs to test for possible short circuits. The other electronic boards (door and cabin) have intrinsic mechanisms for the power supply management. In case of errors these boards are automatically reset by the main board for a limited number of times. Once the maximum number of automatic resets is exceeded the main board needs a reset (see §16 ERR_Dn05).

This is the quick procedure for troubleshooting in case of errors related to the power supply:

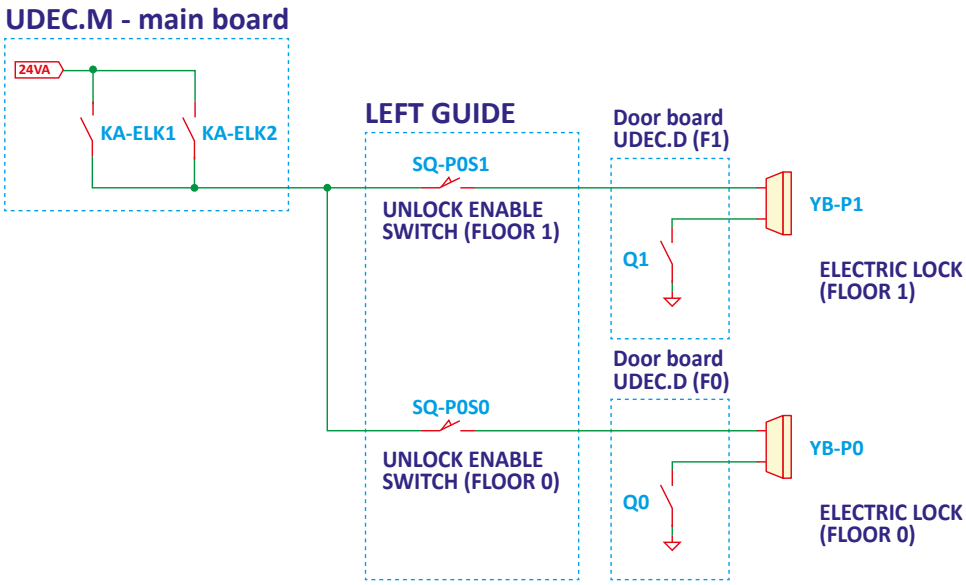
a. disconnect all the plugs from the board,
b. reset the board,
c. connect the plugs one at a time and wait for the error to occur,
d. when the error occurs check the devices and cables connected to that plug.

14. CAN communication management.

The intelligent boards communicate on a CAN bus network exchanging messages related to the IOs state, commands, diagnostics etc.
The protocol has intrinsic mechanisms to automatically detect and recover from communication errors. In case of temporary disconnection of a remote board (UDEC.D or UDEC.C) from the bus the main board UDEC.M can inhibit some functionalities, but these are automatically restored when the remote board returns alive.
If the number of communication anomalies detected exceeds a defined threshold, the main board requests a reset (see §16 ERR_Dn11).

15. Unlock circuit for landing doors.

The following picture represent a simplified view of the unlock circuit for the landing doors.



For increased safety the main board checks if the enabling contacts (SQ-P0S, SQ-P1S) are glued or stuck. These are the steps of the test:

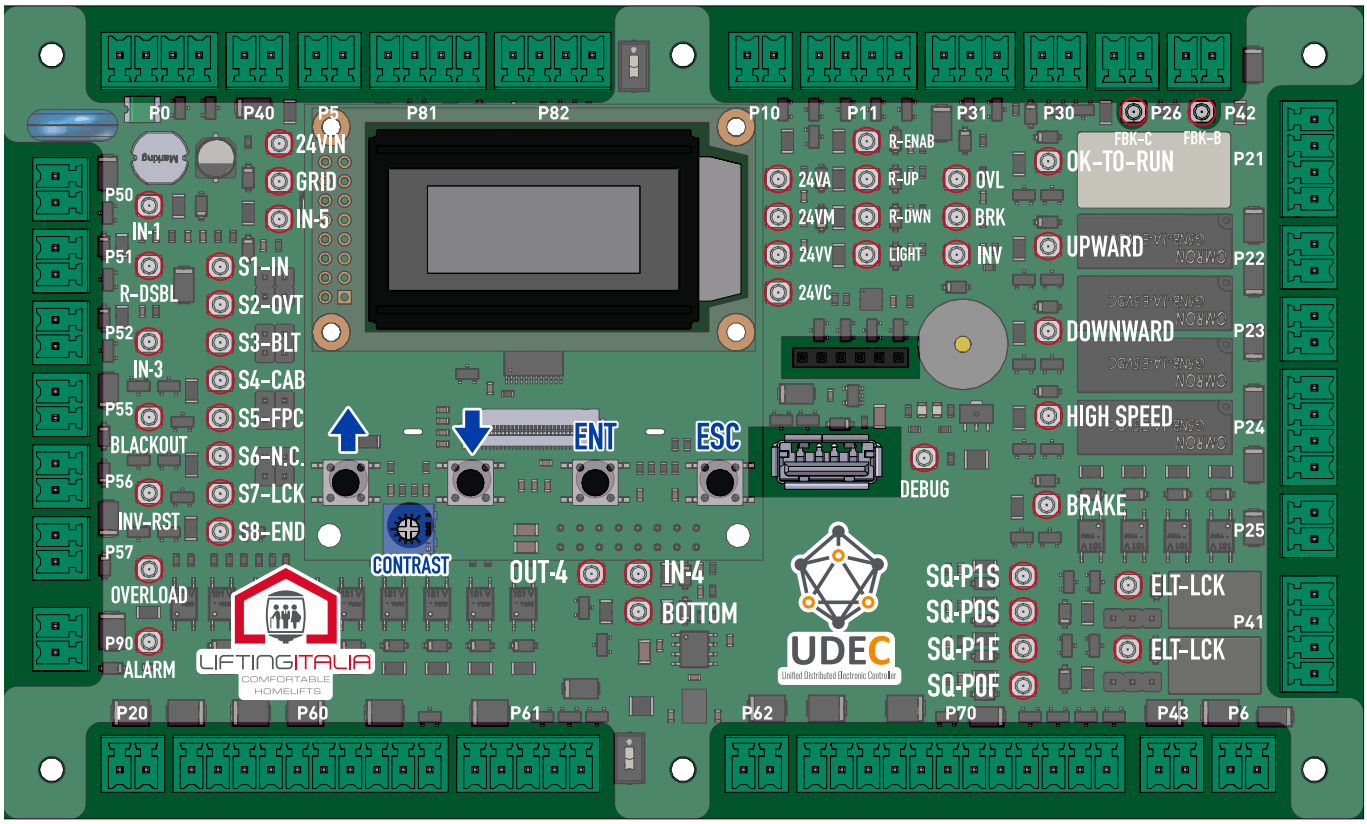
A. Each time the platform leaves the unlocking zone the main board closes the contacts KA-ELK1 / 2 and the transistors Q0 / 1.
B. In this situation the unlock enable switch should be open. If the switch is closed (stuck or glued) the electric lock is powered, the door unlocks and causes the opening of the lock safety contact.
C. The safety chain opens, and the platform stops: the board detects the error and stores it in the error log (ERR_B020 LimSwit1 or LimSwit2). The board resets the movement commands and allows only the return to the starting floor.
D. Once at the floor the machine does not accept new commands until the reset.

16. Safe bottom.

For functional reasons the safe bottom switches are not connected to the safety chain but are connected to the main board via a logic input. To increase the level of safety, the safe bottom input is doubled (connector P61 pins 3 and 4) on inputs BOTTOM and IN4. The board monitors the state of both inputs applying this policy:

BOTTOM	IN4	POLICY
OFF	ON	Redundancy error detected (ERR_A040). **Only upward** movement is allowed; once at the floor the machine does not accept new commands until the reset.
OFF	OFF	Safe bottom engaged; only upward movement is allowed.
ON	ON	Safe bottom not engaged; all movements are allowed.
ON	OFF	Redundancy error detected (ERR_A040). **Only upward** movement is allowed; once at the floor the machine does not accept new commands until the reset

17. Mainboard UDEC.M input / output diagnostic.



The standby status refers to platform at the bottom floor ready to serve a call.
In case of incorrect status, for all the inputs/outputs:

- Check the voltage directly on the connector pin.
- Check if the connector / wire is properly inserted in the plug.
- Try to make a temporary bridge or to remove the wire to check if the LED status changes.
-

17.01. INPUTS.

P0.4	Label	**24VIN**
	Description	Grid 230V AC detected
	Standby status	**OFF**
	If status is not correct	A. Check the protection / breaking devices (QF-2, UPS, QF-24). B. Check the power supply PS1. C. Check the platform power supply
P0.2	Label	**GRID**
	Description	24V DC input voltage supply
	Standby status	**ON**
	If status is not correct	A. Check the platform power supply. B. Check the relay KA-RET.
P0.1	Label	**IN-5**
	Description	Not used
	Standby status	**OFF**
	If status is not correct	A. Check the connections inside the control panel.
P20.1	Label	**S1-IN**
	Description	Safety chain – INPUT
	Standby status	**ON**
	If status is not correct	A. Check the circuit breaker QF-SER.
P60.1	Label	**S2-OVT**
	Description	Safety chain – OVERTRAVEL
	Standby status	**ON**
	If status is not correct	A. Check the status of input S1-IN. B. Check the safety switches SQ-EXC-DX / SX. C. Check the connections between the control panel and the switches.
P61.2	Label	**S2-OVT**
	Description	Safety chain – OVERTRAVEL
	Standby status	**ON**
	If status is not correct	A. Check the status of input S1-IN. B. Check the safety switches SQ-EXC-DX / SX. C. Check the connections between the control panel and the switches.

P70.2	Label	**S4-CAB**
	Description	Safety chain – CABIN emergency buttons
	Standby status	**ON**
	If status is not correct	A. Check the status of input S4-CAB. B. Check the safety contacts SQ-APP-Po / 1. C. Check the connections between the control panel and the contacts.

P60.5	Label	**S5-FPC**
	Description	Safety chain – Floor gates Preliminary Contact
	Standby status	**ON**
	If status is not correct	A. Check the status of input S4-CAB. B. Check the safety contacts SQ-APP-Po / 1. C. Check the connections between the control panel and the contacts.

P70.4	Label	**S6-N.C.**
	Description	Safety chain – Not Connected
	Standby status	**ON**
	If status is not correct	A. Check the status of input S5-FPC. B. Check the bridge between P70.3-4.

P60.3	Label	**S7-LCK**
	Description	Safety chain – Floor gates LOCKS
	Standby status	**ON**
	If status is not correct	A. Check the status of input S6-N.C. B. Check the safety contacts SQ-BLO-Po / 1. C. Check the connections between the control panel and the contacts

P43.2	Label	**S8-END**
	Description	Safety chain – END
	Standby status	**ON**
	If status is not correct	A. Check the status of input S7-LCK

P61.3	Label	**BOTTOM**
	Description	Safe bottom
	Standby status	**ON**
	If status is not correct	A. Check the status of the safe bottom. B. Check the switches SQ-FON1...5. C. Check the connections between the control panel and the contacts

P61.4	Label	**IN-4**
	Description	Safe bottom – redundant input (same status of BOTTOM)
	Standby status	**ON**
	If status is not correct	A. See BOTTOM

P70.9	Label	**SQ-P0F**
	Description	Stop limit switch for the bottom floor
	Standby status	**OFF**
	If status is not correct	A. Check if the limit switch SQ-P0F is engaged. B. Check the connections between the control panel and the switch

P70.10	Label	**SQ-P1F**
	Description	Stop limit switch for the top floor
	Standby status	**ON**
	If status is not correct	A. Check if the limit switch SQ-P1F is not engaged. B. Check the status of 24VA. C. Check the connections between the control panel and the switch.

P70.11	Label	**SQ-P0F**
	Description	Stop limit switch for the bottom floor
	Standby status	**OFF**
	If status is not correct	A. Check if the limit switch SQ-P0F is engaged. B. Check the connections between the control panel and the switch

P70.12	Label	**SQ-P1S**
	Description	Low speed / unlock switch for the top floor
	Standby status	**ON**
	If status is not correct	A. Check if the limit switch SQ-P1S is not engaged. B. Check the status of 24VA. C. Check the connections between the control panel and the switch.

P30.2	Label	**OVL**
	Description	Overload
	Standby status	**ON**
	If status is not correct	A. Check the platform load. B. Check the status of 24VA. C. Check the connections between the control panel and the weighting unit. D. Check if the weighting unit is working properly (specific manual).

P31.2	Label	**BRK**
	Description	Brake input from the inverter (ON during the movement)
	Standby status	**OFF**
	If status is not correct	A. Check if there is any command running. B. Check the connections between the control panel and the inverter.

P31.1	Label	**INV**
	Description	Inverter status
	Standby status	**ON**
	If status is not correct	C. Check the inverter status accessing to its display. D. Check the connections between the control panel and the inverter.

P26.2	Label	**FBK-C**
	Description	Feedback from the contactors (OFF when OK-TO-RUN is ON)
	Standby status	**ON**
	If status is not correct	A. Check if any of the contactors is glued. B. Check the status of 24VA. C. Check the connections between the control panel and the contactors..

P42.2	Label	**FBK-B**
	Description	Not used
	Standby status	**OFF**
	If status is not correct	A. Check the connections inside the control panel.

P11.2	Label	**R-ENAB**
	Description	Remote command – ENABLE
	Standby status	**OFF**
	If status is not correct	A. Check if any of the remote button is pressed. B. Check the connections between the control panel and the remote receiver.

P11.3	Label	**R-UP**
	Description	Remote command – UPWARD
	Standby status	**OFF**
	If status is not correct	A. Check if any of the remote button is pressed. B. Check the connections between the control panel and the remote receiver.

P11.4	Label	**R-DWN**
	Description	Remote command – DOWNWARD
	Standby status	**OFF**
	If status is not correct	A. Check if any of the remote button is pressed. B. Check the connections between the control panel and the remote receiver.

P51.2	Label	**IN-1**
	Description	Not used
	Standby status	**OFF**
	If status is not correct	A. Check if any of the remote button is pressed. B. Check the connections between the control panel and the remote receiver.

P50.2	Label	**R-DSBL**
	Description	Remote command – DISABLE
	Standby status	**OFF**
	If status is not correct	A. Check the connections inside the control panel.

P52.2	Label	**IN-3**
	Description	Not used
	Standby status	**OFF**
	If status is not correct	A. Check if any alarm button on the COPs is pressed. B. Check the connections between the control panel and the COPs.

P90.1	Label	**ALARM**
	Description	Alarm button status
	Standby status	**OFF**
	If status is not correct	A. Check if any alarm button on the COPs is pressed. B. Check the connections between the control panel and the COPs.

17.02. OUTPUTS.

P40.1	Label	**24VA**
	Description	24V DC Auxiliary output
	Standby status	**ON**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel..

P5.1	Label	**24VM**
	Description	24V DC Movement output
	Standby status	**ON**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel.

P60.7	Label	**24VV**
	Description	24V DC Shaft output
	Standby status	**ON**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel.

P70.5	Label	**24VC**
	Description	24V DC Car output
	Standby status	**ON**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel.

P22.2	Label	**OK-TO-RUN**
	Description	Command for the power contactors and brake enable. ON during the movement or if the platform is not at the floor.
	Standby status	**OFF**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel. C. Check the connection of P21.4 and P20.2.

P22.4	Label	**UPWARD**
	Description	Command for the inverter - UPWARD. ON during the movement upward.
	Standby status	**OFF**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel. C. Check the status of 24VM and the connection of P20.2.

P24.3	Label	**DOWNWARD**
	Description	Command for the inverter - DOWNWARD. ON during the movement downward.
	Standby status	**OFF**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel. C. Check the status of 24VM and the connection of P20.2.

P24.2	Label	**HIGH SPEED**
	Description	Command for the inverter – HIGH SPEED. ON during the movement in high speed.
	Standby status	**OFF**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel. C. Check the status of 24VM and the connection of P20.2.

P25.2	Label	**BRAKE**
	Description	Command for the BRAKE release. ON during the movement.
	Standby status	**OFF**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel. C. Check the status of 24VM and the connection of P20.2.

P41.3	Label	**ELT-LCK**
	Description	Enable for the gate ELECTRIC-LOCK.
	Standby status	**OFF**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel. C. Check the status of 24VA.

P10.1	Label	**LIGHT**
	Description	Command for the COPs light. ON during the movement or in error state.
	Standby status	**OFF**
	If status is not correct	D. Check the inputs status starting from the safety chain. E. Check the connections inside the control panel. F. Check the status of 24VA.

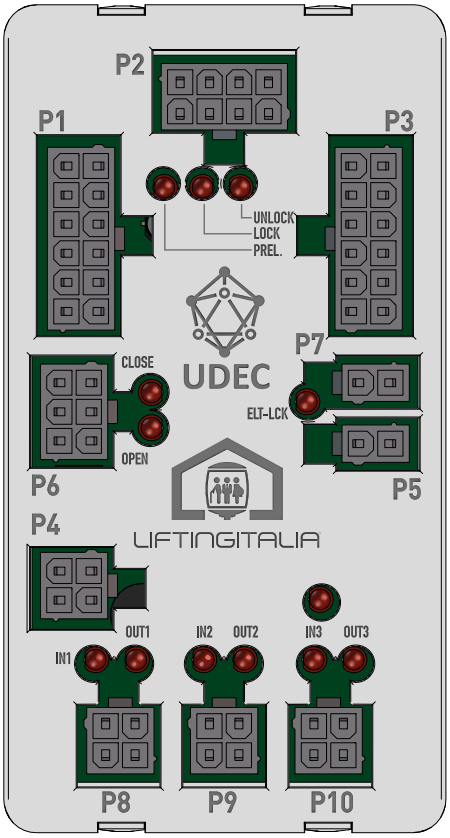
P55.1	Label	**BLACKOUT**
	Description	Command for BLACKOUT relay (KA-EMG). ON during a blackout and if the platform is not at the floor.
	Standby status	**OFF**
	If status is not correct	A. Check the GRID input. B. Check the status of the 230V AC power supply. C. Check the connections inside the control panel. D. Check the status of 24VA

P56.1	Label	**INV-RST**
	Description	Command for inverter RESET. ON when operating a reset from HMI or platform.
	Standby status	**OFF**
	If status is not correct	A. Check the connections inside the control panel. B. Check the status of 24VA

P57.1	Label	**OVERLOAD**
	Description	Command for OVERLOAD light and buzzer. ON (blinking) during overload or another signal (see §7).
	Standby status	**OFF**
	If status is not correct	A. Check the connections inside the control panel. B. Check the status of 24VA

P61.5	Label	**OUT-4**
	Description	Not used.
	Standby status	**OFF**
	If status is not correct	A. Check the connections inside the control panel.

18. Mainboard UDEC.C input / output diagnostic.



Before checking the LEDs check that the board is properly connected and powered.

18.01. INPUTS.

P2.5	Label	**PREL.**
	Description	Safety chain – Landing door PRELIMINARY contact. ON with gate closed.
	Standby status	**ON**
	If status is not correct	A. Check the status of input S4-CAB (UDEC.M). B. Check the safety contact SQ-APP-Px. C. Check the connections between the board and the contact. D. Check that the board is connected and powered.

P2.8	Label	**LOCK**
	Description	Safety chain – Landing door LOCK contact. ON with gate locked.
	Standby status	**ON**
	If status is not correct	A. Check the status of input S6. (UDEC.M). B. Check the safety contact SQ-BLO-Px. C. Check the connections between the board and the contact. D. Check that the board is connected and powered.

P2.4	Label	**UNLOCK**
	Description	Landing door UNLOCK contact. ON with gate unlocked.
	Standby status	**OFF**
	If status is not correct	A. Check the contact SQ-PR-Px. B. Check the connections between the board and the contact. C. Check that the board is connected and powered.

P8.1	Label	**IN1**
	Description	Call pushbutton input. ON with button pressed.
	Standby status	**OFF**
	If status is not correct	A. Check if the button is pressed / stuck. B. Check the connections between the board and the button. C. Check that the board is connected and powered.

P9.1	Label	**IN2**
	Description	Call pushbutton input or key switch input. ON with button pressed. For key switch: ON = platform disabled, OFF = platform enabled.
	Standby status	**OFF**
	If status is not correct	A. Check if the button/key switch is activated / stuck. B. Check the connections between the board and the device.

P10.1	Label	**IN3**
	Description	Not used.
	Standby status	**OFF**
	If status is not correct	A. Check the connections on the board.

18.02. OUPUTS.

P2.4	Label	**ELT-LCK**
	Description	Command for the landing door ELECTRIC-LOCK. ON with car at floor and when the control panel unlocks the door.
	Standby status	**OFF**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel. C. Check the connections on the board

P6.1		
	Label	**OPEN**
	Description	Command for the landing door operator – OPEN.
	Standby status	**OFF**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel. C. Check the connections on the board.

P6.2		
	Label	**CLOSE**
	Description	Command for the landing door operator – CLOSE.
	Standby status	**OFF**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel. C. Check the connections on the board

P8.2		
	Label	**OUT1**
	Description	Call button light. ON with button pressed.
	Standby status	**OFF**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel. C. Check the connections between the board and the button.

P9.2		
	Label	**OUT2**
	Description	Call button light. ON with button pressed.
	Standby status	**OFF**
	If status is not correct	A. Look for any short-circuit outside the control panel. B. Look for any short-circuit inside the control panel. C. Check the connections between the board and the button.

P10.2		
	Label	**OUT3**
	Description	Not used.
	Standby status	**OFF**
	If status is not correct	A. Check the connections on the board.

19. Error codes and troubleshooting.

The error codes are divided in families. In order of error severity

ERROR CODES	
ERR_0xxx	Related to UDEC.M firmware.
ERR_Axxx	Related to UDEC.M board hardware.
ERR_Bxxx	Related to the main control panel / main components / electric safeties.
ERR_Cxxx	Related to the car / platform.
ERR_Dxxx	**Related to the door boards UDEC.D.**

SCREEN TEXT LEGEND	
X	= Specific kind of error.
n	= Number of UDEC.D board.
...	= Label assigned to the service (ex. -1C, 3, B, etc.).

RESET / SOFT RESET / LOG COLUMNS	
Reset	= Specific kind of error.
Soft reset	= Number of UDEC.D board.
Log	= Label assigned to the service (ex. -1C, 3, B, etc.).

SCREEN [ENG]	Description	Action #1	Action #2	Action #3	Reset	Soft reset	Log
ERR_0000 FW X	Firmware error. X = 0...4: hard error. X = 6...10: initialization error. X = 11...14: application error. X = 15...16: peripheral error. X = 17...18: log error. X = 19...20: parameter error.	If the error occurs frequently take note of the error history and report to LiftingItalia. The board reboots automatically.	-	-	NO	NO	YES
ERR_A000 24V	Undervoltage error at input of UDEC.M.	See IO diagnostic of input 24VIN.	-	-	YES	YES	YES
ERR_A001 24V-AUX	Short circuit / heavy overload detected on auxiliary 24V.	See IO diagnostic of output 24VA.	-	-	YES	YES	YES
ERR_A002 24V-MOV	Short circuit / heavy overload detected on motion 24V.	See IO diagnostic of output 24VM.	-	-	YES	YES	YES
ERR_A003 24V-VAN	Short circuit / heavy overload detected on shaft 24V.	See IO diagnostic of output 24VV.	-	-	YES	YES	YES
ERR_A004 24V-CAB	Short circuit / heavy overload detected on cabin 24V.	See IO diagnostic of output 24VC.	-	-	YES	YES	YES
ERR_A010 CAN FW X	CAN firmware error. X = 0: RX buffer overrun. X = 1: TX buffer overrun.	If the error occurs frequently take note of the error history and report to LiftingItalia. The board recovers automatically.	-	-	NO	NO	YES
ERR_A020 CAN HL X	CAN hardware error. X = specific error.	If the error occurs frequently take note of the error history and report to LiftingItalia. The board recovers automatically.	-	-	NO	NO	YES
ERR_A030 RelXClos	UDEC.M internal relay glued in closed position. X = 1: feedback OTR-1 / 2. X = 2: feedback DNW and BRK.	If there are errors related to 24V solve them and make a reset.	Check for possible errors in wirings of P22, P23, P24, P25. Disconnect P22, P23, P24, P25 and check if the error occurs again.	Replace the board.	YES	NO	YES
ERR_A031 RelXOpen	UDEC.M internal relay glued in open position. X = 1: feedback OTR-1 / 2. X = 2: feedback DNW and BRK.	If there are errors related to 24V solve them and make a reset.	Replace the board.	-	YES	NO	YES
ERR_A040 RedBotto	Redundancy checks on safe bottom inputs failed.	See IO diagnostic for LEDs BOTTOM and IN-4. The two inputs must switch in synchro.	Test the single inputs with a piece of wire connected to 24V.	Replace the board.	YES	NO	YES
ERR_B010 ContClos	Safety contactor KG-SEC1 / 2 glued in closed position	See IO diagnostic of input FBC.	Replace both contactors.	-	YES	NO	YES
ERR_B011 ContOpen	Safety contactor KG-SEC1 / 2 glued in open position	See IO diagnostic of input FBC.	Replace both contactors.	-	YES	NO	YES
ERR_B020 LimSwitX	Anomaly detected on the limit switches status (see §4). X = 1: SQ-P0S (NO) glued. X = 2: SQ-P1S (NO) glued. X = 3: SQ-P0F and P1F both open. X = 4: SQ-P0S and P1S (NC) both open. X = 5: SQ-P0F open and SQ-P0S (NC) closed. X = 6: SQ-P1F open and SQ-P1S (NC) closed	See IO diagnostic of inputs SQ-P0F, SQ-P0S SQ-P1F, SQ-P1S.	-	-	YES	NO	YES

ERR_B030 Inverter	Inverter fault	See IO diagnostic of input INV.	Take note of the error code shown on the inverter display and contact LiftingItalia.	-	YES	YES	YES
ERR_B040 SafChain	Anomaly detected on the safety chain inputs of UDEC.M (ex. hole in the series).	See IO diagnostic from input S1-IN to S8-END.	Check the wirings looking for short circuits between the safety chain and other circuits.	Replace the board.	YES	NO	YES
ERR_B041 QF-SER	Magnetic circuit breaker QF-SER open.	See IO diagnostic of input S1-IN.	Check for short circuits on the safety chain.	-	YES	NO	YES
ERR_B042 Overtrav	Overtravel switch open (SQ-EXC1 / 2).	See IO diagnostic of input S2-OVT.	-	-	YES	NO	YES
ERR_B043 Belts	Belts' safety contacts open (belt loosening SQ-AC-DX / SX or safety gear SQ-PAR-DX / SX).	See IO diagnostic of input S3-BLT.	-	-	YES	NO	YES
ERR_B044 SafCha 4	Movement interruption due to safety chain opening (S4-CAB - cabin safeties).	See IO diagnostic of input S4-CAR.	-	-	NO	NO	YES
ERR_B045 SafCha 5	Movement interruption due to safety chain opening (S5-APP – landing door preliminary).	See IO diagnostic of input S5-APP.	-	-	NO	NO	YES
ERR_B047 SafCha 7	Movement interruption due to safety chain opening (S7-BLK - landing door locks).	See IO diagnostic of input S7-BLK.	-	-	NO	NO	YES
ERR_B050 t-traveX	Travel timeout (travel time + 5s). X = D: downward. X = A: upward.	Check that the travel parameter is properly set (see §17).	Check the speed of the cabin and that its movement is free from obstacles.	Check the connections between the control panel and the inverter.	YES	NO	YES
ERR_B060 Blackout	Blackout – absence of 230V AC supply.	See IO diagnostic of input GRID.	-	-	NO	NO	NO
ERR_C020 SensBott	Safe bottom engaged (SQ-FON1…5).	See IO diagnostic of input BOTTOM and IN-4.	-	-	NO	NO	NO
ERR_C030 Overload	Overload detected by the weighting unit.	See IO diagnostic of input OVL.	-	-	NO	NO	NO
ERR_Dn05 R24V "…"	Exceeded the maximum number of automatic resets for door board UDEC.D – 24V faults.	Check for short circuits / overload of the devices connected to the door board.	Check the connections of the door board to the shaft backbone cable.	-	YES	YES	YES
ERR_Dn10 CAND "…"	Door board UDEC.D not alive on CAN bus.	Check the connections of the door board to the shaft backbone cable. The board recovers automatically.	Check for short circuits / overload of the devices connected to the door board.	-	NO	NO	YES
ERR_Dn11 RCAN "…"	Exceeded the maximum number of automatic resets for door board UDEC.D – CAN faults.	Take note of the error history and report to LiftingItalia if the error occurs frequently.	Check the connections of the door board to the shaft backbone cable.	Check for short circuits / overload of the devices connected to the door board.	YES	YES	YES
ERR_Dn20 SWX "…"	Status word notification of door board UDEC.D. X = 0: board reboot. X = 1: undervoltage. X = 2: overcurrent on electric lock output. X = 3…12: CAN error.	Take note of the error history and report to LiftingItalia if the error occurs frequently. The board recovers automatically.	-	-	NO	NO	YES

20. HMI menu and parameters.

1	**OperMode** *(Operating Mode)*	
	Normal	> set normal mode (see §9)
	Mainten	> set maintenance mode (see §9)
2	**Commissi** *(Commissioning)*	
	Overtrav	> overtravel commissioning (see §9)
	BeltSafe	> belt safe commissioning (see §9)
3	**Paramete** *(Parameters)*	
	PMT_ A000 Language	> 0=ITA, 1=ENG
	PMT_ A001 DateForm	> 0=DD/MM/YY, 1=MM/DD/YY
	PMT_ B000 Travel	> xxxx [mm]
4	**Statist** *(Statistics)*	
	STA_000 CAN.M	> Shows CAN error statistics for UDEC.M
5	**ErrorLog** *(Error Log)*	
	Read	> the display shows three screens: date&time of error, error code and the system dump. Use the arrows to scroll the log (max 10 records).
	Clear	> clear the error log
6	**Date&Tim** *(Date and Time)*	
	> Change date & time	
7	**FW Vers** *(Firmware version)*	
	> Shows firmware version	

*** The changes to these parameters need a board restart (turn off - turn on) to be effective.**

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