

# **LEHNER** **LIFTTECHNIK**

## Technical Manual



**Liftboy 5**  
*Vertical  
platformlift*

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## Introduction

The Liftboy 5 is a vertical platform lift designed for the transportation of wheelchair drivers. The driving mechanism is a double scissor driven by 2 x 24V actuators and powered by 2 x 12V batteries which are continuously charged (as long as the main power switch is switched ON).

The standard version of the Liftboy 5 is delivered with a manual gate for the upper level including a shear wall and with an automatic access ramp on the platform. The standard platform size is 900x1400mm.

### Technical specification

Loading capacity	300kg
Lifting speed	0,04m/s
Net weight	270 kg
Drive mechanism	Double scissor
Motors	2 x 24V actuators
Max power	300VA
Power supply	2 x 12V batteries
Power supply for battery charger	1 x 230V
Folded down height	120mm
Lifting travel	1180mm
Total unfolded lifting height	1300mm
Color standard	RAL 7035
Remote controls in landings	Radio frequency controlled
Duty cycle	10%, 6min./h
Standard lift size (outside dimension)	1150x1570mm

### Delivery

The unit is delivered preassembled in 2 main parts, packed on a wooden pallet:

1. Folded platform (270 kg)
2. Upper door wide shear wall (90kg)

When unpacking the lift, check all parts for potential visible damage during transportation. If damage is visible, please immediately take pictures and send those later to Lehner Lifttechnik GmbH for potential warranty claims.

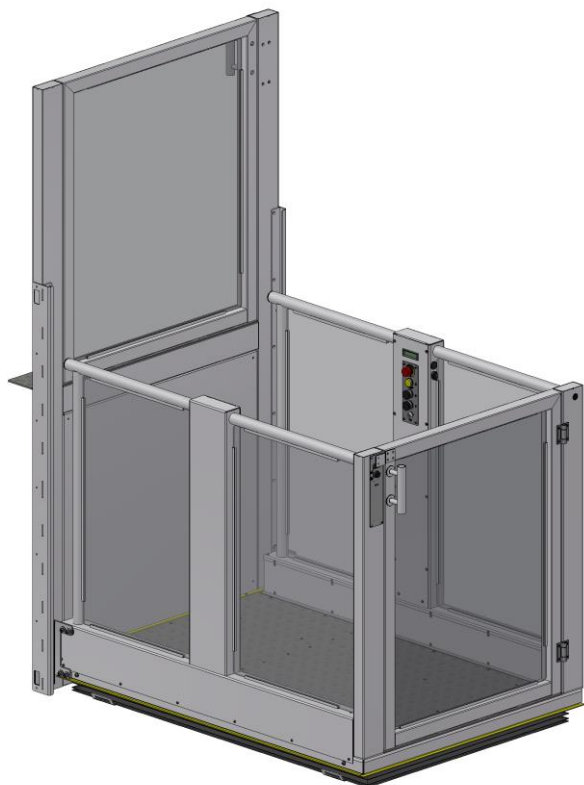
### Safety

- Read all instructions in this manual before installing or operating the lift.
- Do not exceed the maximum payload capacity of 300 kg.
- This product is designed only for lifting people and wheelchairs only.
- Do not disable any safety equipment or switches supplied with this lift.
- Stay away from all drive train components while the lift is operating.

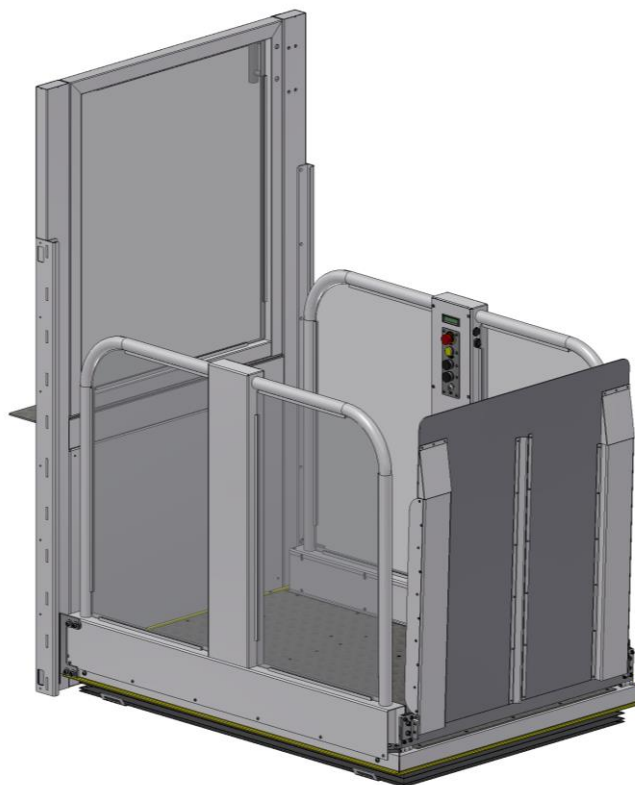
## **Overview platform mechanics and switch position:**

In the following various views of the Litboy 5 are presented in order to provide an overview of the main functions and components.

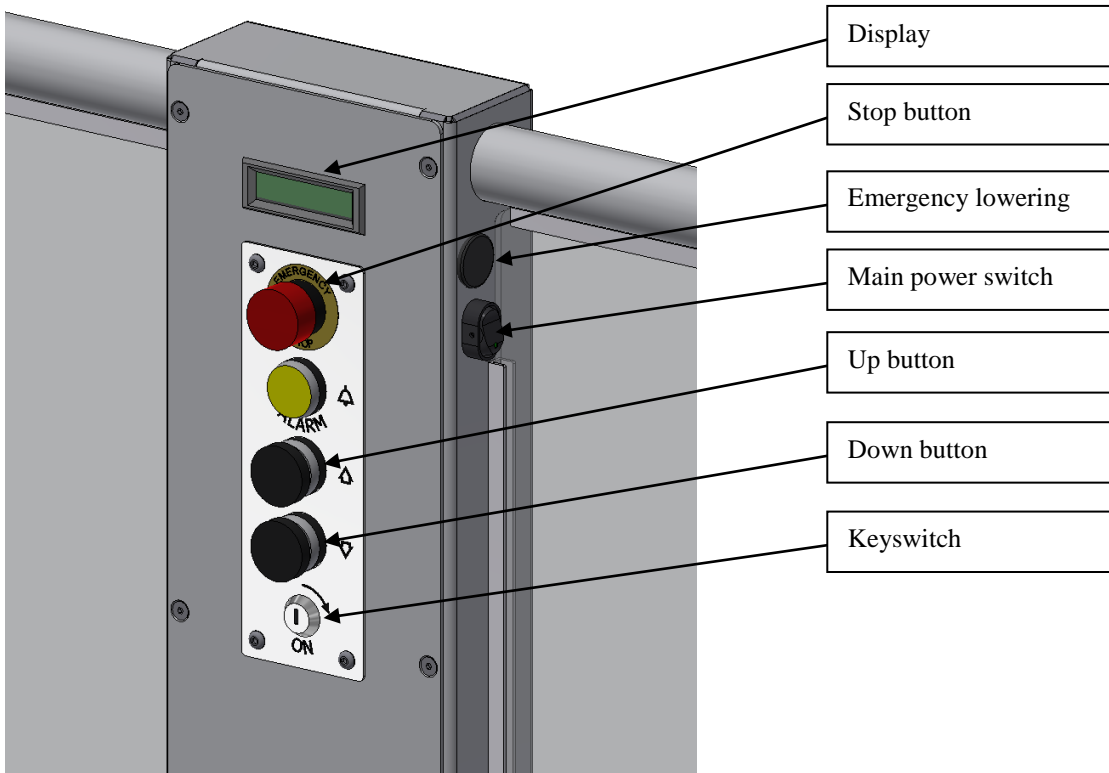
**With door on platform (manual or automatic)**



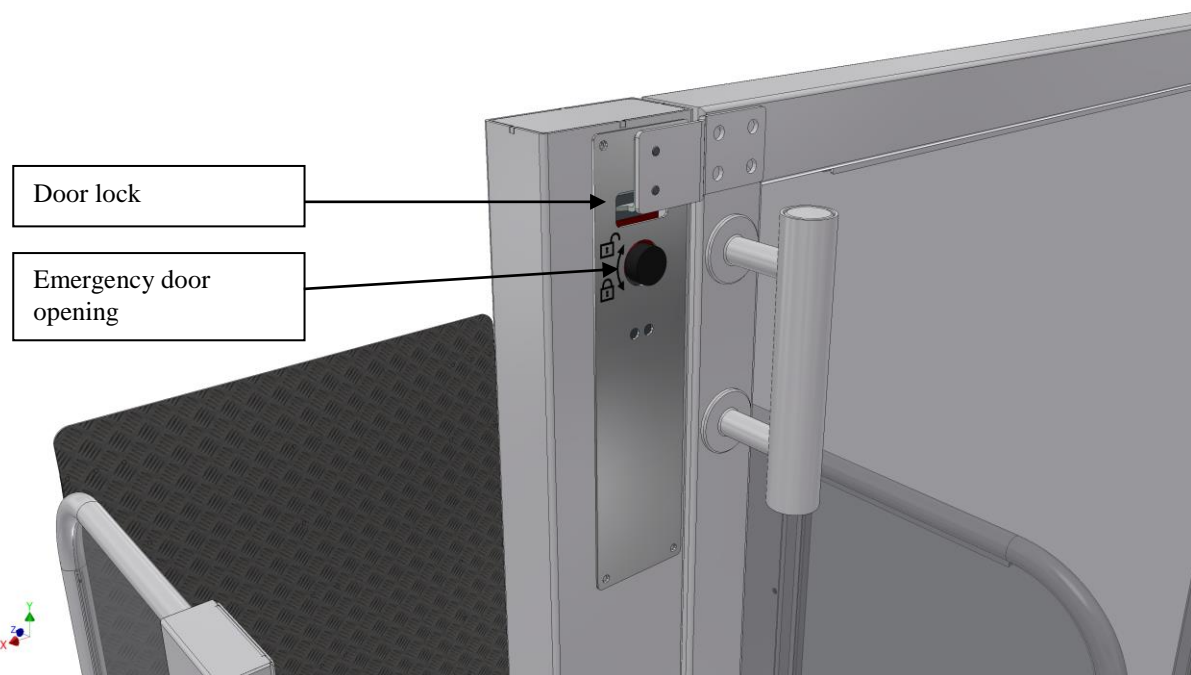
**With automatic access ramp on platform**



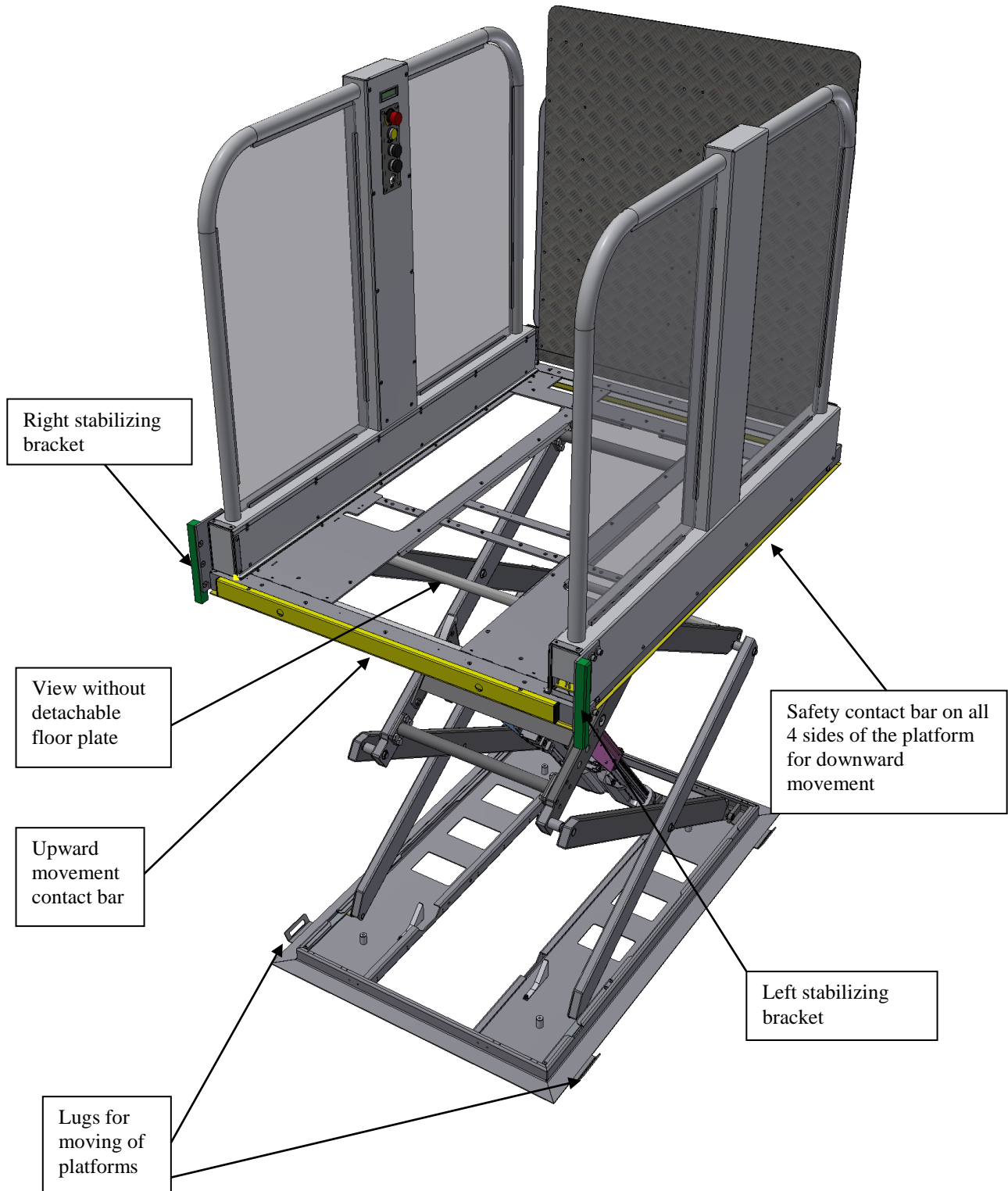
**Platform controls**



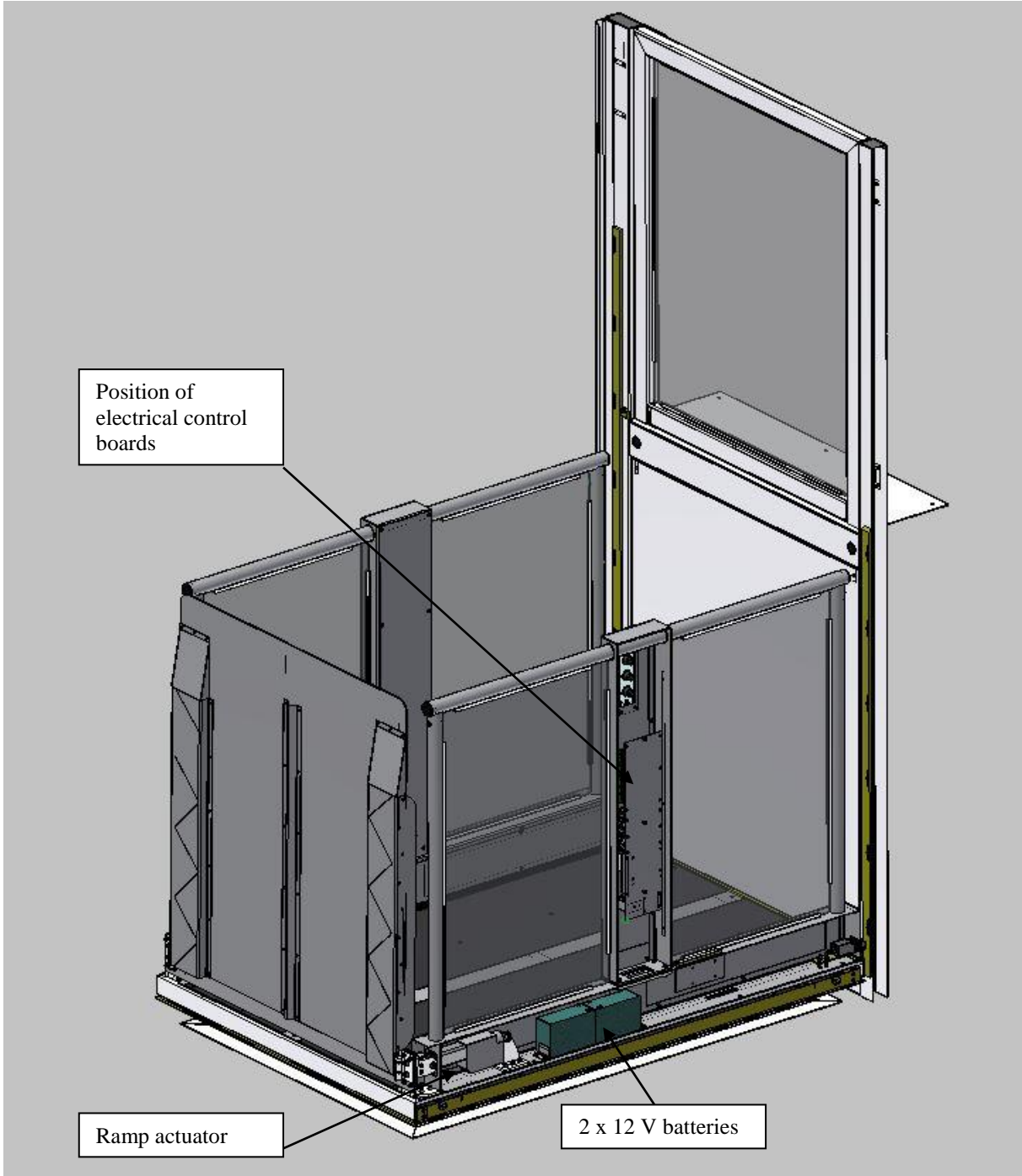
**Upper gate door lock**



Side view of unfolded platform without safety curtain



Side view of folded platform with battery and controller position

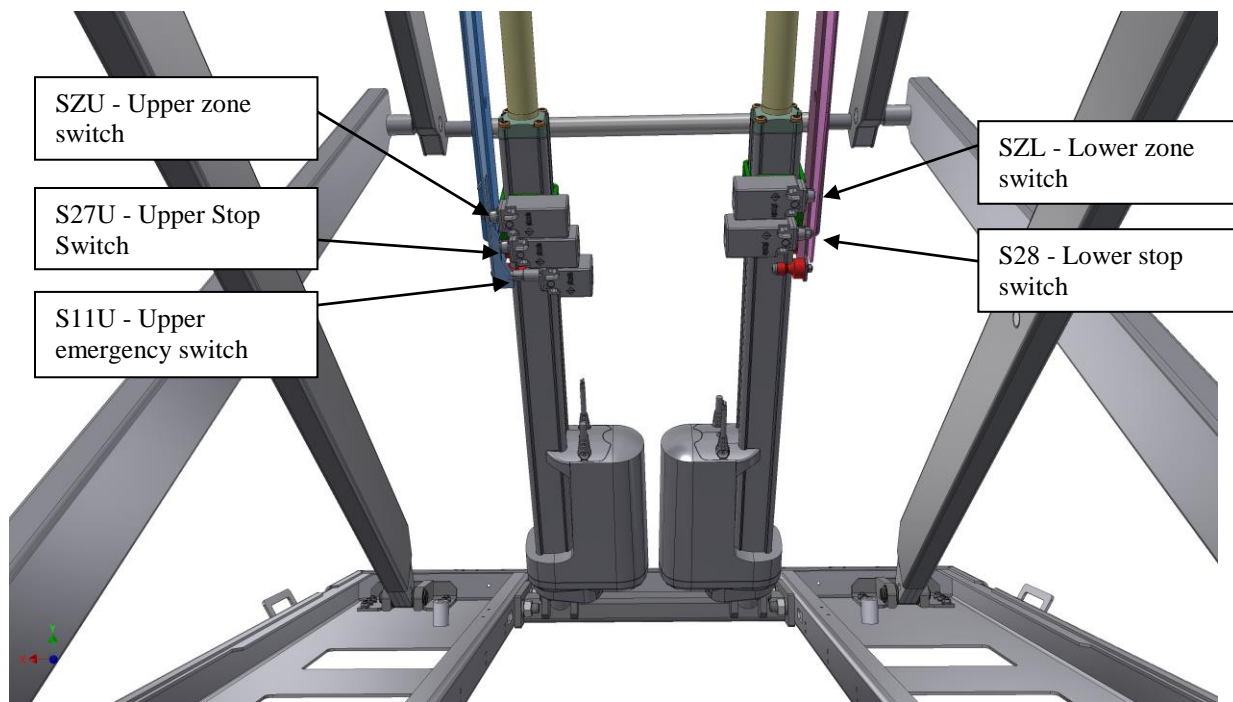




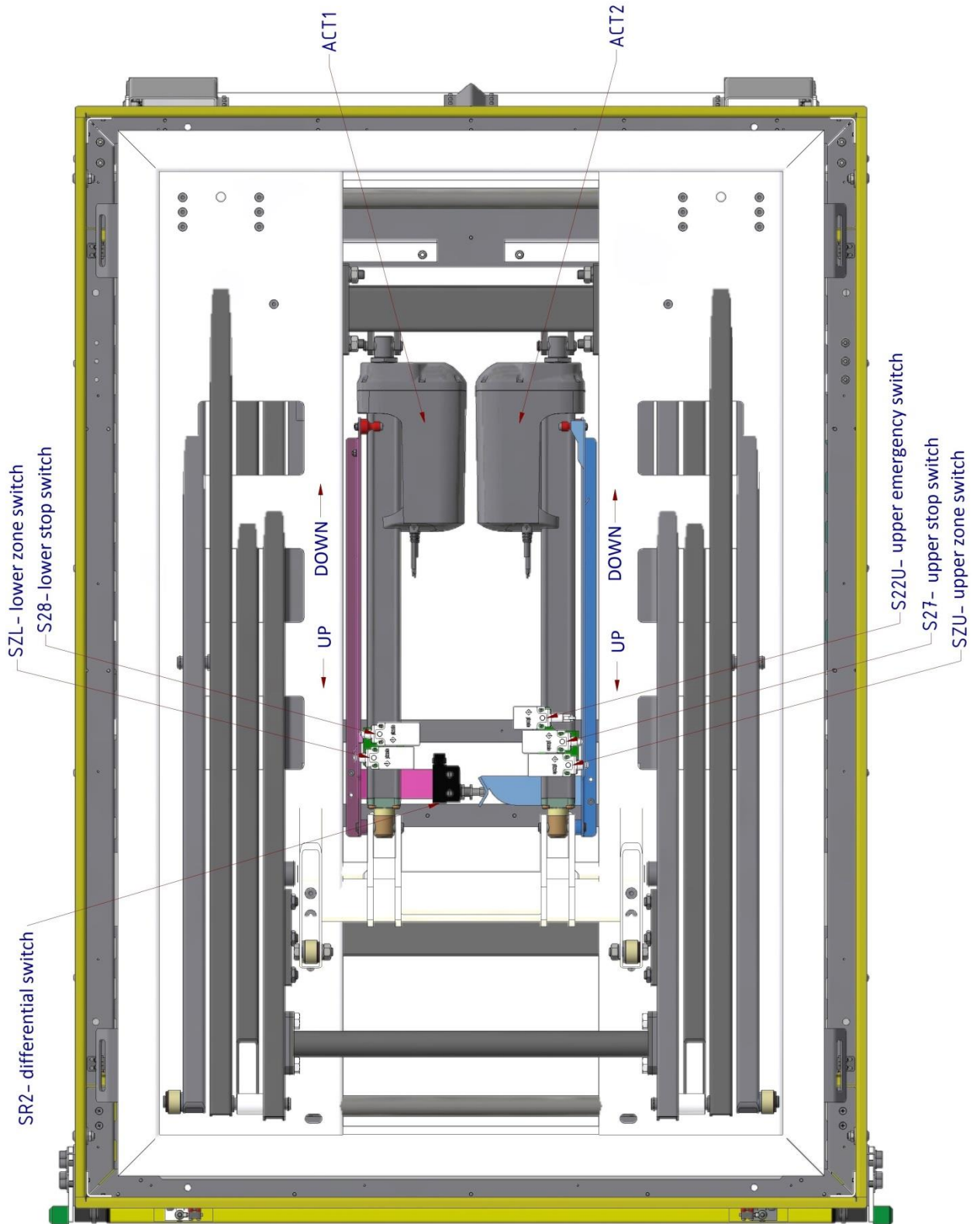
*View of platform switch positions*

Picture of all the limit switches placed on a platform. Limit switches are placed directly under the floor, right on motors. Switches for lower stop on a motor M1 which is placed on the left, limit switch of the upper stop on a motor M2 on the right.

Pic. 24 Display of limit switches (bottom view)



Switch position – view from below!!



## Installation

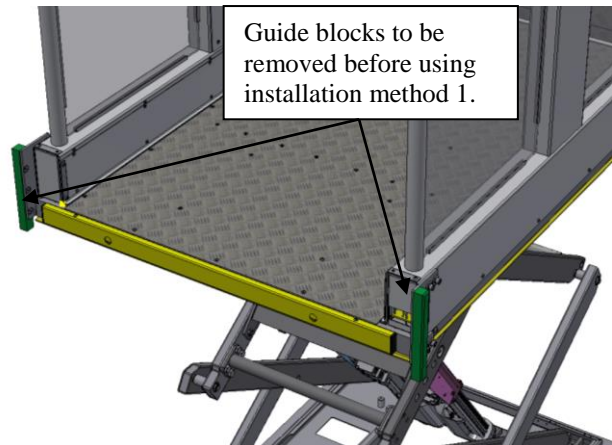
The folded platform has a net weight of 270kg. 4 people will be necessary to move the platform from the transport box to the installation location. Use belts that go under the whole structure to lift and move the platform.



Use belts to connect to the metal frame (2 connection points are given on each side). On each side of platform 2 people can pull on the belts to raise and move the platform.

There are 2 ways to install the platform on site:

1. Bring the platform in the correct position while assuring that there is the necessary space in front of the platform for entering the upper gate with the shear wall. When the platform is in place enter the upper gate with shear wall from above and make sure not to damage the guide blocks on each side of the platform. When in place fix the upper gate wall in place and run the platform up and down. If the run is smooth, then fix also the platform to the ground.

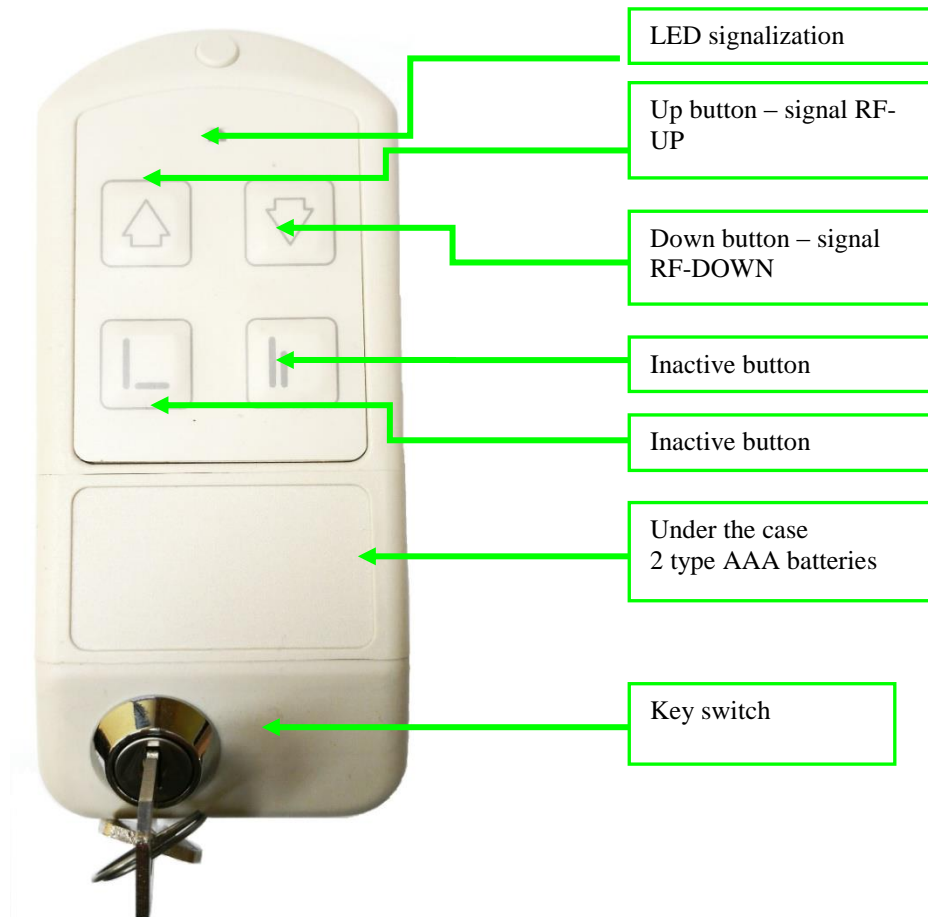


Guide blocks to be removed before using installation method 1.

2. First fix the upper gate with shear wall on the correct position on site. Then take off the guide blocks on both side of the platform. Move the platform in the correct position in front of the shear wall in such a way that the guide blocks can be put into the guide profile and fixed again on the platform sides. Run the platform up and down. If the run is smooth, then fix also the platform to the ground.

## Controls descriptions:

### Radio controls for landings stations:



Drive from external controllers can be set in a menu item “Options – Drive with permanently active buttons“, the directional drive button must be activated during the platform’s movement, respectively after the button is not pressed anymore, platform standardly stops immediately.

Other option is allowed after a function “Activated imp.“ is selected, afterwards control button can be just activated by a short press and the platform automatically drives all the way to the final stop in the chosen direction. **This function is only possible for the platform in a lift shaft.**

### Overload control

During motors activity, consumed current is monitored and after the set limit is exceeded, motors are stopped. If platform’s overload control is active and the overload occurs when the platform leaves the lower stop (shown on a display as „overload lift“) – the drive up is immediately interrupted and only drive down is allowed. The platform must drive back to the lower stop, where it is possible to open ramps, respectively open lower door. By doing so, platform returns to its standard mode and drive up is possible again.

Setting of the max motor current will be done in a menu digitally – setting in a range between 1 – 15 A (factory default  $I_n=13A$ ). Asymmetry of motors is also set in the menu in % of overcurrent threshold.

### **Control description of automatic access ramp**

The automatic ramp can be controlled by platform's controller or the radio controller. Commands from the platform's controller has priority over any other controllers.

Opening of the automatic ramp is possible only in the lower stop (signalized by closing of the lower zone switch of the ramp SZ=1, by activation of lower limit switch S28-2=0 and S28-3=1).

Movement of the ramp is blocked by any switch of a safety circuit, that means that power supply of relay KC1/K01 is interrupted.

During the actuator's movement, current is monitored and after exceeding set limit for more than 0,3 sec, the actuator's movement is stopped, overcurrent safety works as an electronic limit switch.

Setting of the max actuator's current is possible in menu – in between 0,5-6,9 A.

Exceeding of this limit is also shown on display.

### **Control description of manual and automatic door**

Doors can be manual (equipped with electric door lock to secure the door – door has to be opened/closed manually) or automatic (equipped with electric door lock and automatic door opener, usually NICE WALKY).

#### **Function description of manual door operation:**

In case of manual door the menu item „Config.door lck“ value is set to 0 (means 0 impulse for door opener).

Time of opened door lock, during which manual opening of the door after arrival in stop station is possible, can be set in menu item „Config.door lck - Time open.DL“.

The respective door will also lock when drive button on the platform in opposite down/up direction is pressed.

If the platform is controlled by wall mounted/radio controllers, ones has to wait until the timing of unlocking of the door lock is finished and after that to select drive down/up.

#### **Automatic door opener function description:**

The door opens automatically after reaching the stop position. The time for which the door lock stays unlocked and door stays opened, can be set in a menu item „Config. door lock“ „Time open. DL“. The factory setting is 30 seconds. This is also the minimal value for electric opener Nice WALKY!!

**If you make changes, do not set the time less than 30 seconds. It must be 30 seconds or more.**

The door will stay unlock for the set time, or until you press drive in down direction on the platform controls.

We have two setting versions for automatic opening of the door:

Version 1 – Standard – factory default

Version 2 - With blocking of door

**Standard version:** After the door opens it stays open for the set time or until you press drive in opposite direction on the platform controls. From the external controls the platform can only be called/sent after the set time passed and the platform closed automatically.

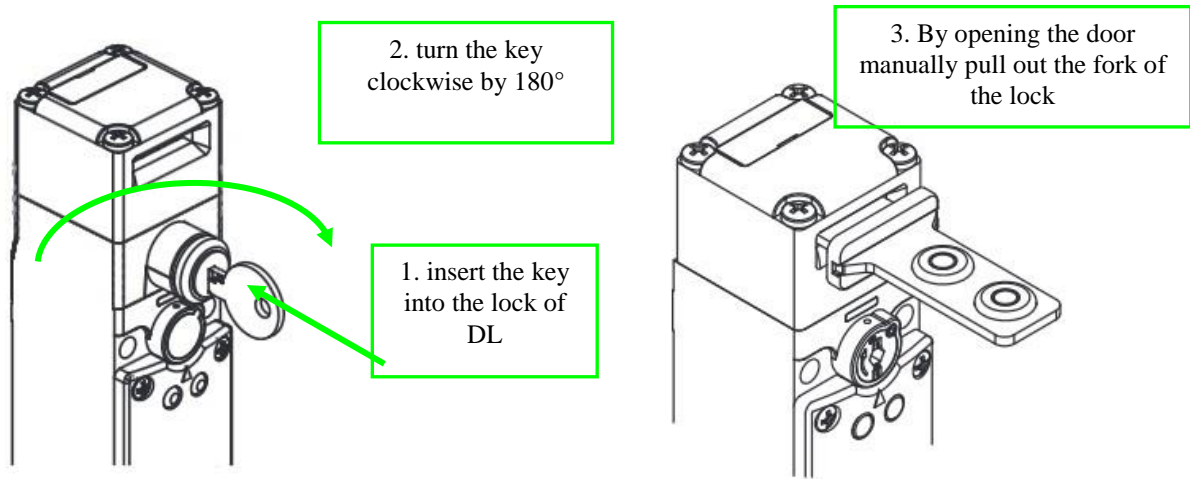
**Version with blocking of door:** This version allows the door to stay open permanently. It can be useful if the platform is used for loading to goods.

In this version the door can be blocked in open position if you press the up button more then 3 seconds after the door is fully opened. If you then want to unblock it again you have to press again the up button for more then 3 seconds and it will return to normal mode and close after the set time or when down button is pressed.

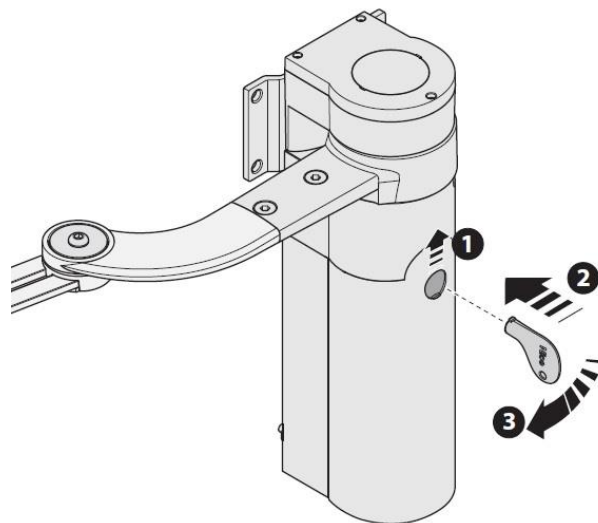
To set this version in the menu it is necessary to set the menu item „Config. door lck“ - „Impulse for DO“ on value 1, the opened door time in parameter „Time open. DL“ on min 30 sec the menu item „Config. door lck“ - „Version DO“ - „With blocking“.

### Manual unblocking of door lock and automatic door opener

Door lock is equipped with mechanic system, which enables to manually open the electric lock. This is necessary in emergency state, when you can not unlock the lock electronically via controllers. In this case, proceed accordingly to following description and suggested error removal F 303.



Manual release of an automatic opener works on similar principle. If the platform has an opener NICE Walky, it is necessary to not only unlock the door lock, but also the opener (accordingly to the description below). This is necessary in emergency state, when the door lock or the door opener can not be unblocked electronically via the controllers. See below description of how unlock the door opener.

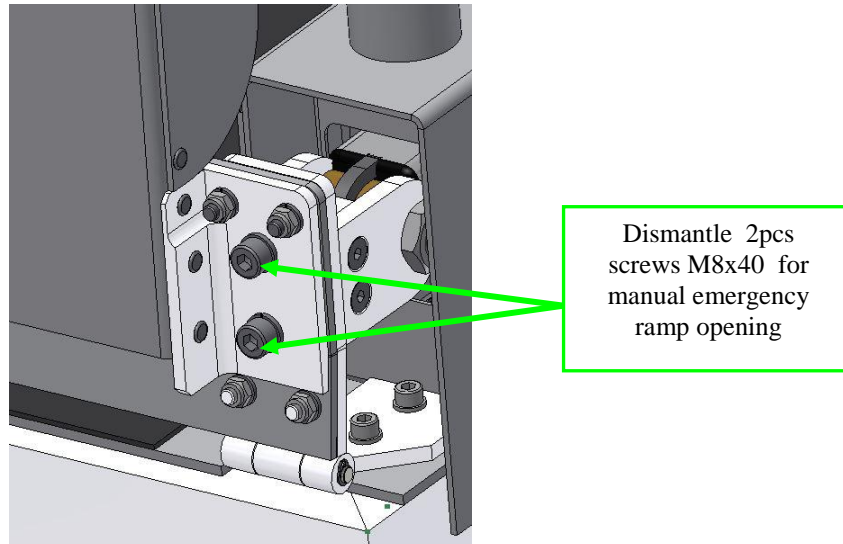


After leaving the lift in the landing station close the door, manually lock the door lock with the key again and activate the automatic opener

**Emergency opening of the automatic access ramp:**

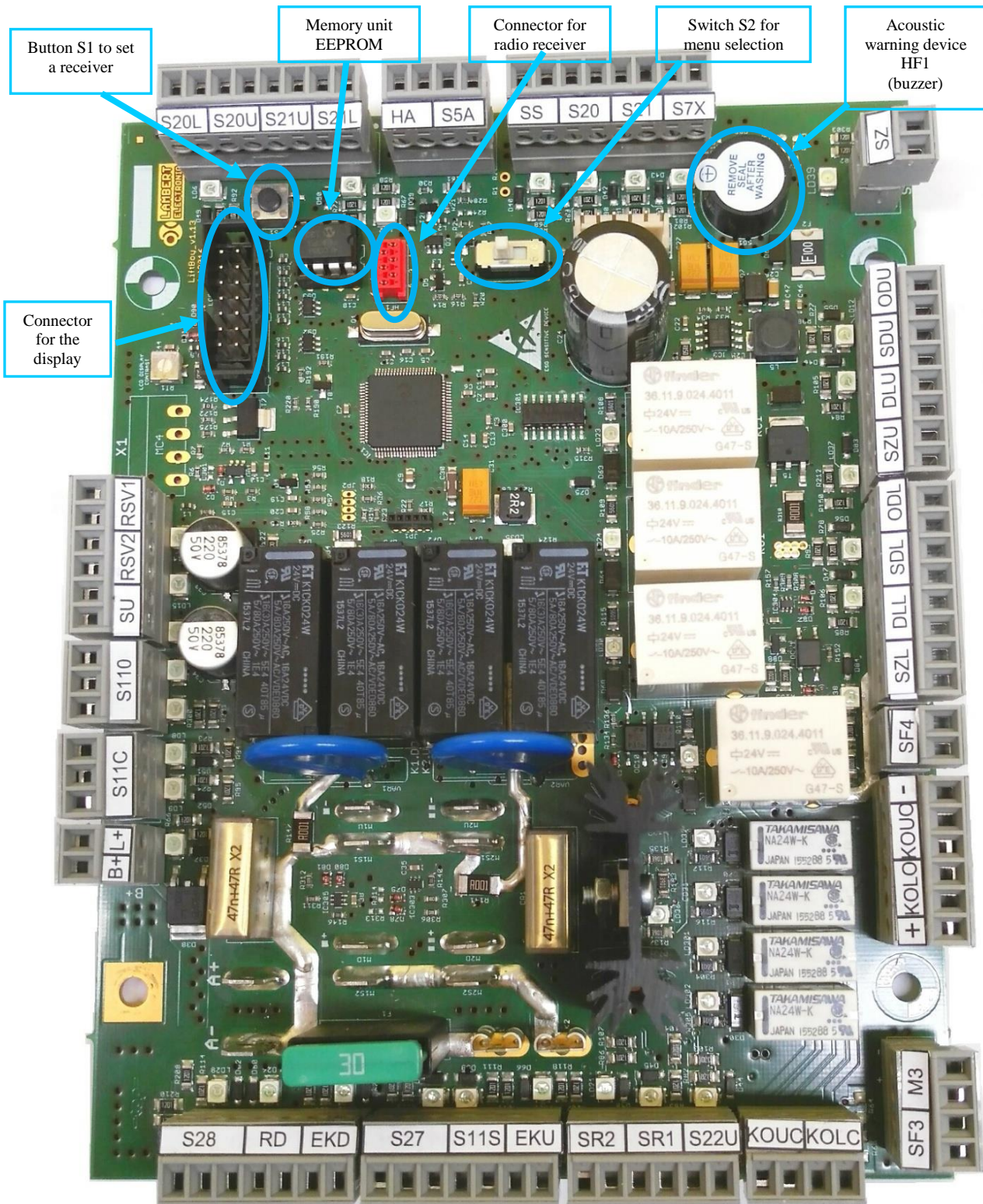
In a case that electric opening of the ramp does not work, it can be opened manually in the lower stop in order to release a passenger.

Dismantle 2 screws M8x40 DIN912, secure the loosen ramp and slowly lower it down manually towards the ground.



### Switches and connectors on the control unit

In this chapter, function and activity of each switch on the main control board will be described.

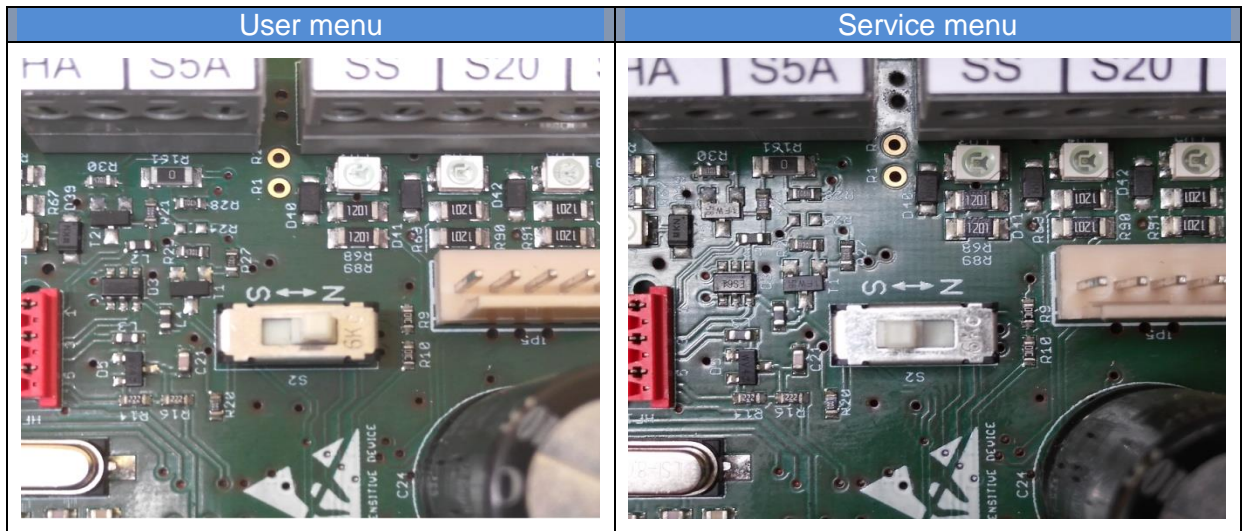




## Switch S2

This switch selects between user/service menu types. For the detailed description see chapter 0

Menu.



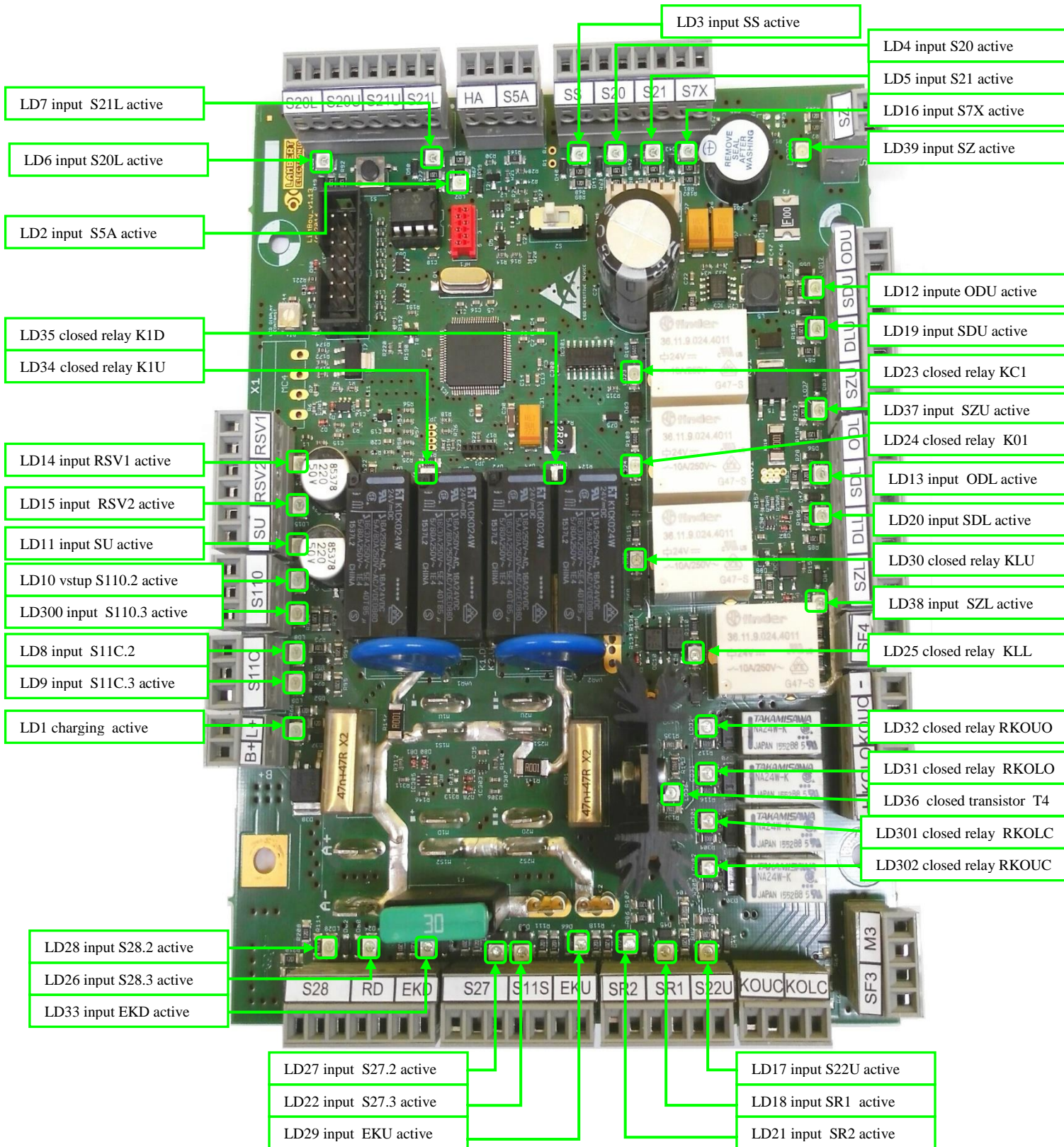
PIC. 11 Detailed look at the switch S2 on Liftboy CU

**WARNING:** After the platform installation and setting all service menu parameters, push the switch S2 to the position for user menu!!!.

### Button S1

This button serves for pairing/programming the attached RF receiver with the RF transmitters (RF wall-mount controllers). See overview of main board for button location.

LED signalization on platform's control unit



**Description of LED signalization of platform's control unit**

Name	Colour	Function
LD1	green	Lights when battery charging is active
LD2	green	Lights when alarm input is activated
LD3	green	SS; Lights when the control key is active
LD4	green	S20; drive up button is pressed on the platform
LD5	green	S21; drive down button is pressed on the platform
LD6	green	S20L; drive up button is pressed on one of the wall mounted controllers
LD7	green	S21L; drive down button is pressed on one of the wall mounted controllers
LD8	green	S11C.2 reserve input for ramp
LD9	green	S11C.3; Lights when the ramp is fully closed
LD10	green	S110.2 reserve input for ramp
LD11	green	SU; Overload control (not used)
LD12	green	ODU; Lights if upper door is open
LD13	green	ODL; Lights if lower door is open
LD14	green	RSV1; reserve input of control unit
LD15	green	RSV2; reserve input of control unit
LD16	green	S7X; turns on after STOP-button is pressed
LD17	green	S22U; turns off when the upper emergency switch is activated
LD18	green	SR1; reserve input of an safety circuit
LD19	green	SDU; turns off if the upper door is open
LD20	green	SDL; turns off if the lower door is open
LD21	green	SR2; Turns off if the motor synchronization switch is activated
LD22	green	S27.3; Lights if the upper stop limit switch was activated
LD23	green	Relay KC1; Lights if the ramp is closing
LD24	green	Relay K01; Lights if the ramp is opening
LD25	green	Relay KLL; Lights if coil of the upper electronic lock is activated, that means lock is in the timing regime
LD26	green	S28.3 Lights if the lower stop limit switch was activated
LD27	green	S27.2; Lights if the platform is outside the upper stop
LD28	green	S28.2; Lights if the platform is outside the lower stop
LD29	green	EKU; Turns off when the upper safety bottom is activated (pressed)
LD30	green	Relay KLU; Lights if coil of the lower electronic lock is activated, that means lock is in the timing regime
LD31	green	Relay RKOLO; Lights if the relay, which sends impulses to the lower automatic door opener, is activated
LD32	green	Relay RKOUO; Lights if the relay, which sends impulses to the upper automatic door opener, is activated
LD33	green	EKD; Turns off when the lower safety bottom is activated (pressed)
LD34	green	Relay K1U; Light if the main drive up relays are activated
LD35	green	Relay K1D; Light if the main drive down relays are activated
LD36	green	T4; Light if the main control transistor T4 is activated
LD37	green	SZU; Lights if the upper limit switch is released (platform is in the upper zone)
LD38	green	SZL; Lights if the lower limit switch is released (platform is in the lower zone)

Name	Colour	Function
LD39	green	SZ; Lights if the lower limit switch is released (platform is in the lower zone)
LD300	green	S110.3; Lights if the ramp is fully opened
LD301	green	Relay RKOLC; spare relay for an opener
LD302	green	Relay RKOUC; spare relay for an opener

Note: If some of the previous switches in the line of the safety circuit (eventually switches in the drive direction) opens, not only does the appropriate LED turns off, but also LEDs for all the other following inputs, see the schema in chapter 0 Schematics

### Emergency drive control unit

CU of emergency drive is an optional item of platform's equipment. This unit allows the user to drive to lower station in a case of main CU failure or other unexpected failure.

If necessary, service person can change the direction of drive from emergency button by switching the conductors on connectors for connection of main motors M1U/1 for M1D/1 and M2U/1 for M2D/1.

Pic. 13 Emergency drive CU



## Menu

Following pictures show examples of standard information shown on a display in both USER and SERVICE modes.

**User menu with help hints during the fully opened ramp:**



Shown hints on the display for in the lower stop

**Example of an user menu when the platform is outside the landing stations:**



Shown hints on the display for drive options in both directions

**Service menu with info about voltage on the accumulators and current taken by active motors:**



Display during the service mode drive

### General info

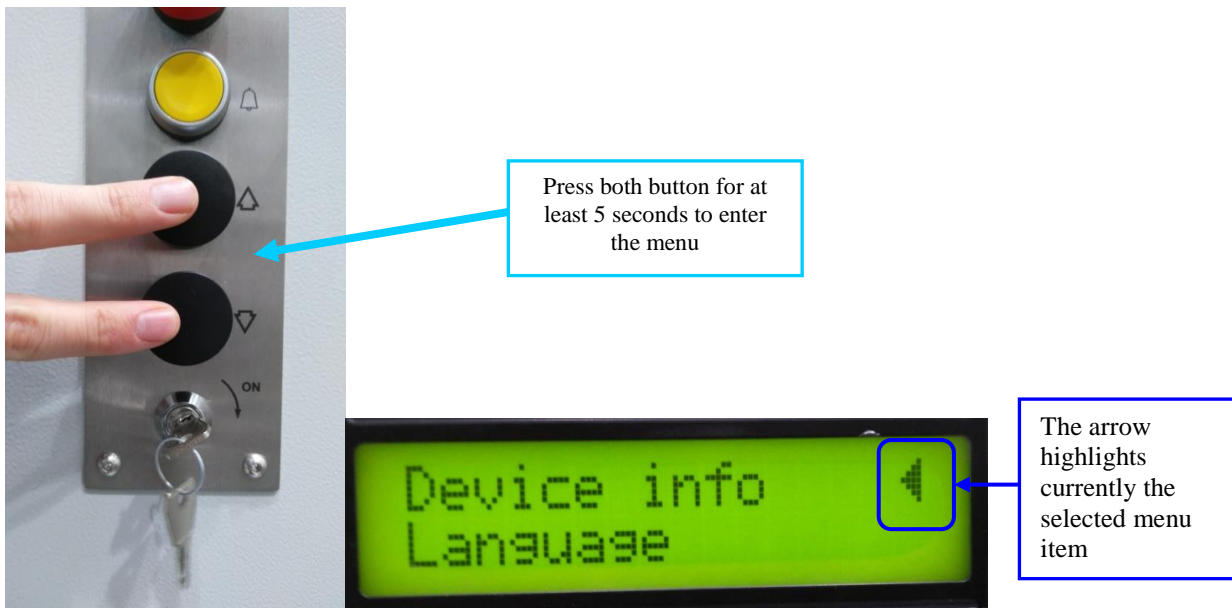
Menu can be used to analyse errors, for the maintenance or the system configuration. Following chapters illustrate and describe functions individually.

Menu has two scopes:

1. First one is limited (user menu) which is intended for end users and a technical support. Via this user menu error list can be read and also basic system settings are allowed.
2. Second scope is full view (service menu) which is intended ONLY for technicians and service workers. Via this service menu advanced parameter, behavior etc. settings can be done.

## Menu activation

You can enter the menu by pressing both buttons for drive up and drive down on a platform controller for time longer than 5 sec. Another way to enter the menu is by pressing the emergency STOP-button on a platform while at the same time pressing any drive button on a platform controller for time longer than 5 sec. To navigate between different menu items use drive up button (S20) on a platform controller, to enter an appropriate item use drive down button (S21) on a platform controller. To change the parameter of the item use the drive up button, to confirm the changed parameter and to exit from this parameter use drive down button (ENTER function). The active parameter is highlighted by an arrow on a display. To exit the menu it is necessary to select and confirm the parameter. (According to a position in the menu you might have to repeat this step few times).



### Note:

Default display language is english; in menu item "Language" other language can be selected.

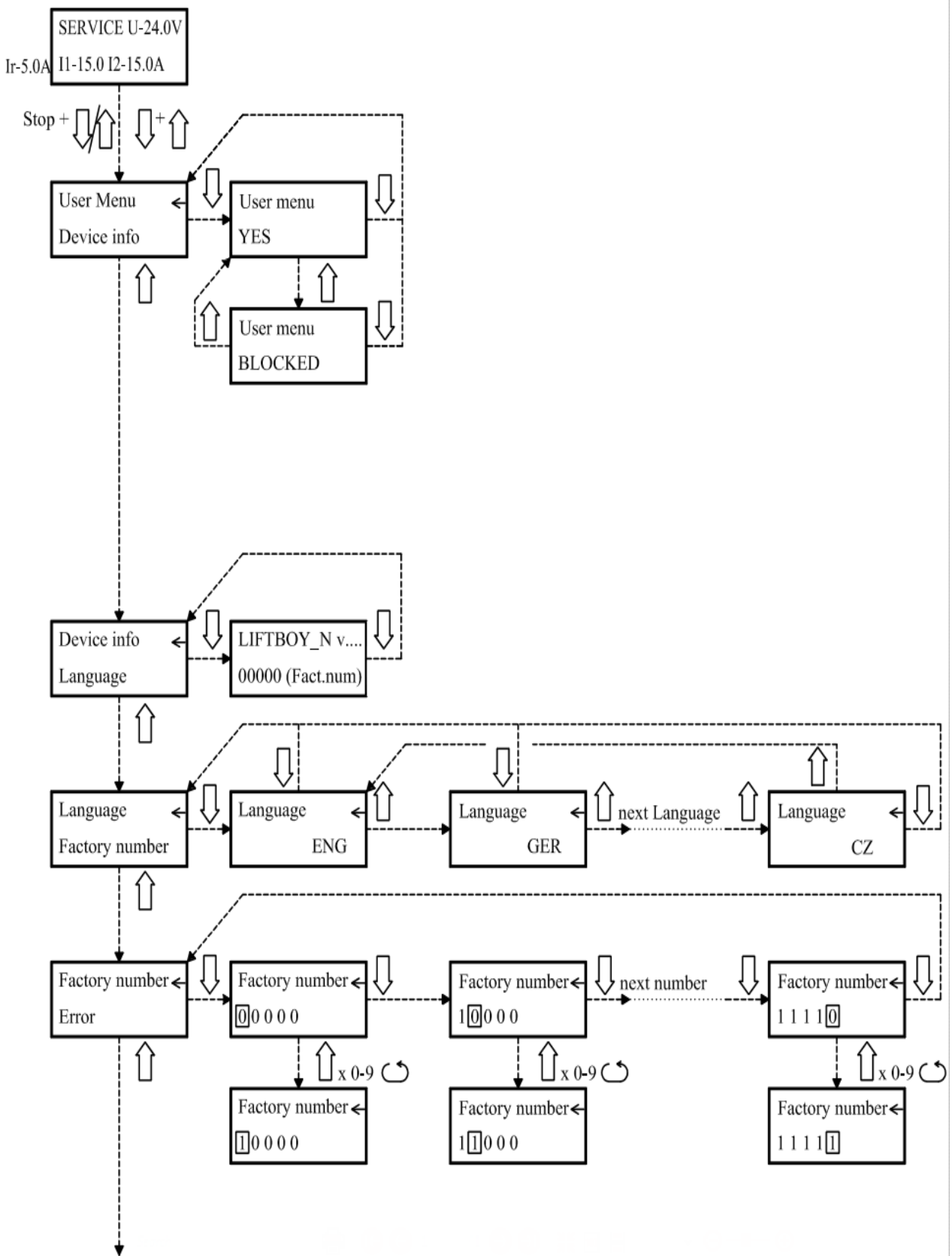
To enter the service menu, switch S2 on the main control board has to be in a correct position (switch on the left side).

## Menu structure

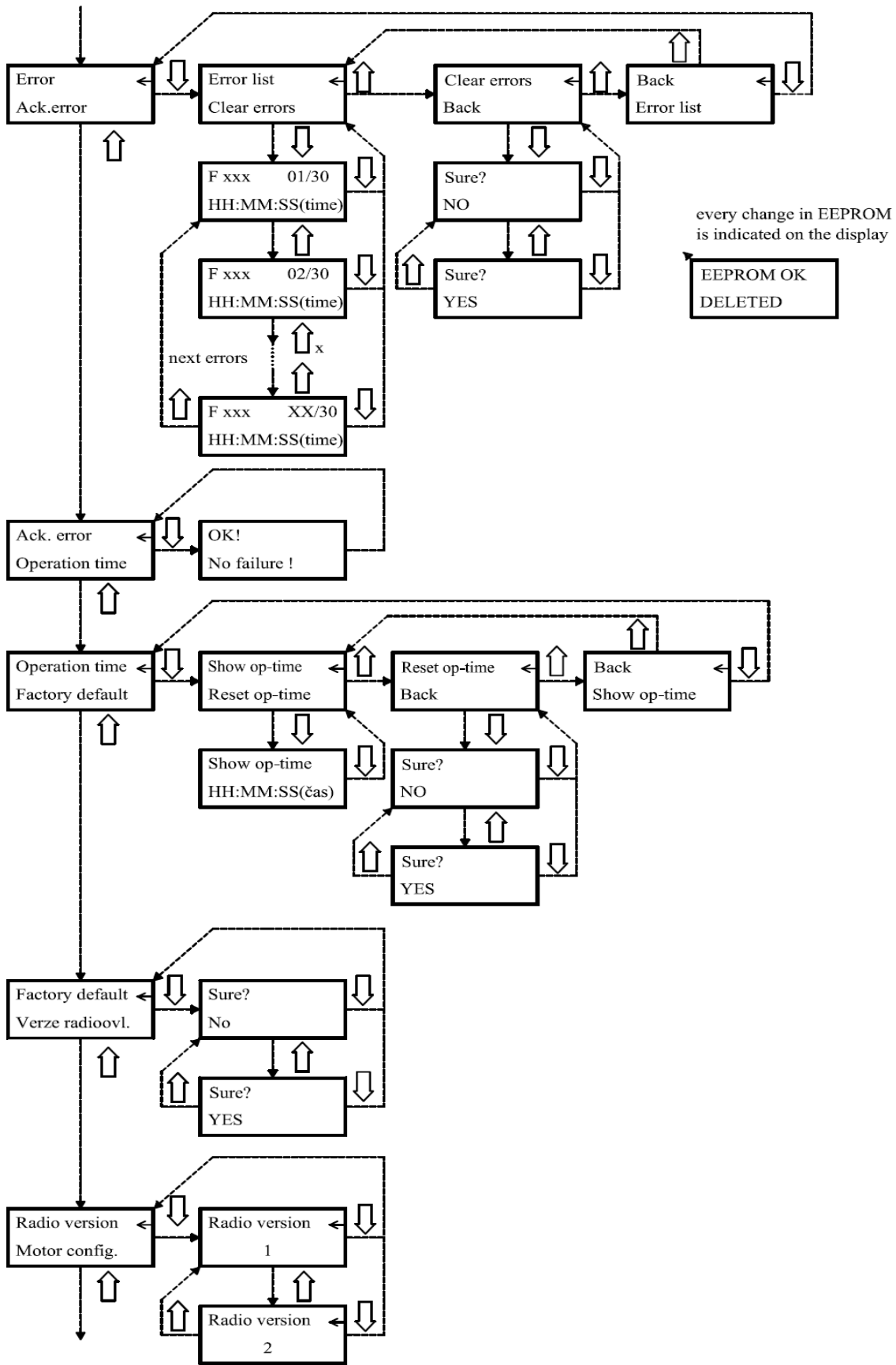
Menu is built from several items in the rotating list. Currently selected item is highlighted by the arrow on the right side of the item. The active item is always on the first row of the display. On the second row is the following item.

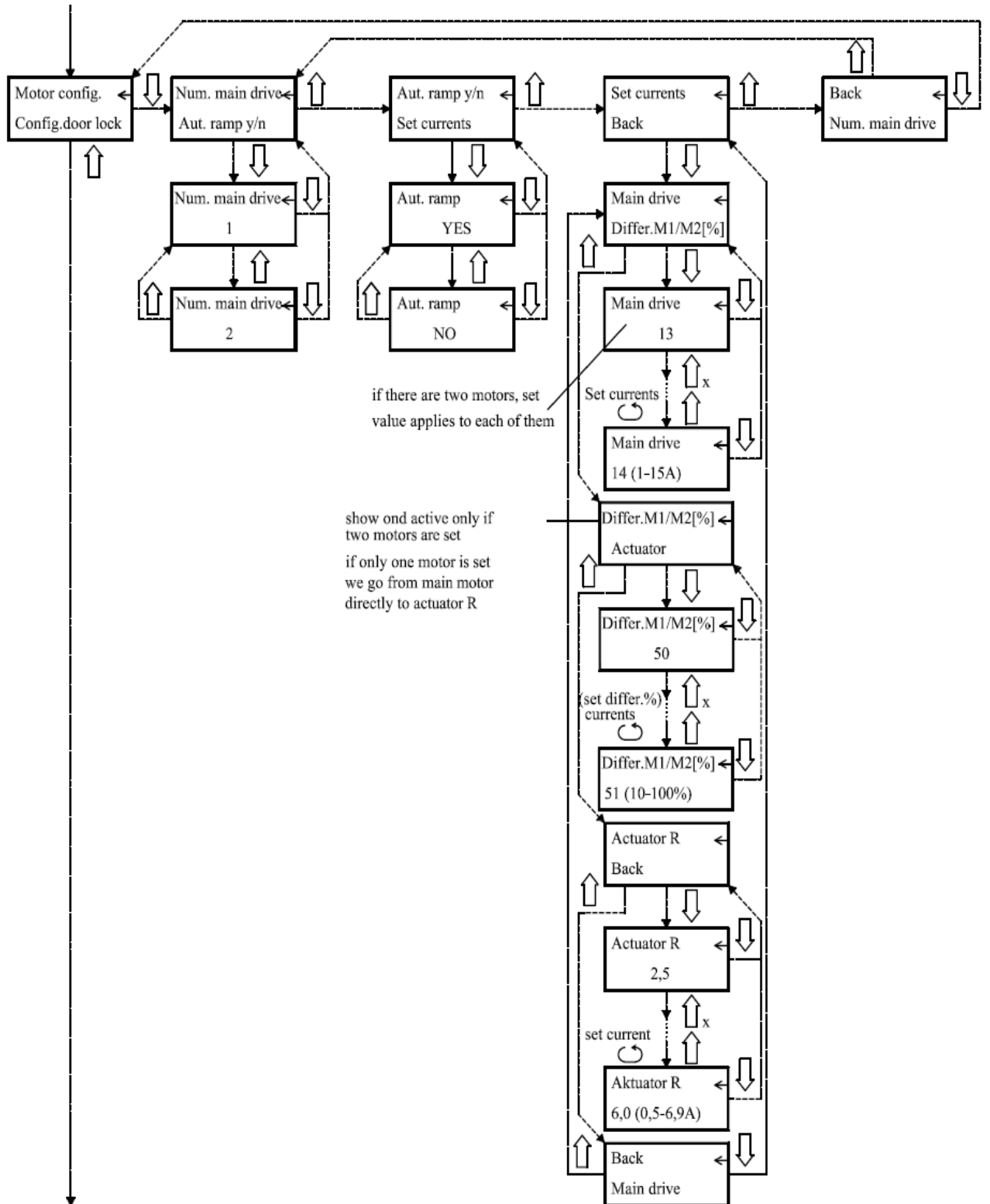
To navigate thru the menu and to change parameters, use drive up and drive down buttons on a platform controller. Use drive up button to navigate between different menu items. To activate current menu item press drive down button once. After activation, depending on the selected menu item, you can either change the parameter right away via drive up button or you can continue onto other items on this or lower menu level. You can easily change the value of the parameter of a selected menu item via drive up button. If the value is on a required level, it is necessary to confirm the change by pressing drive down button, which will also exit you from this menu item.

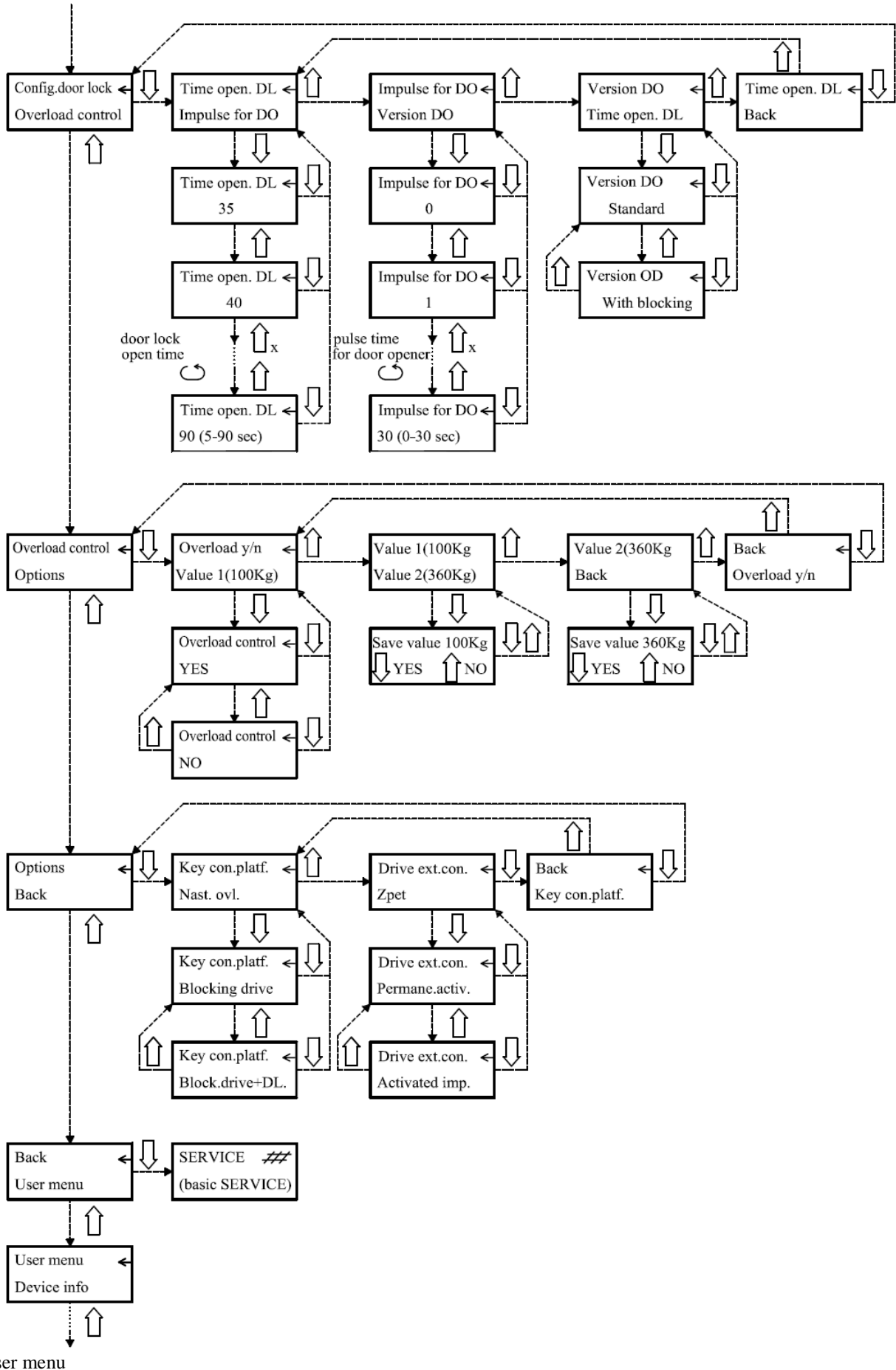
Service menu

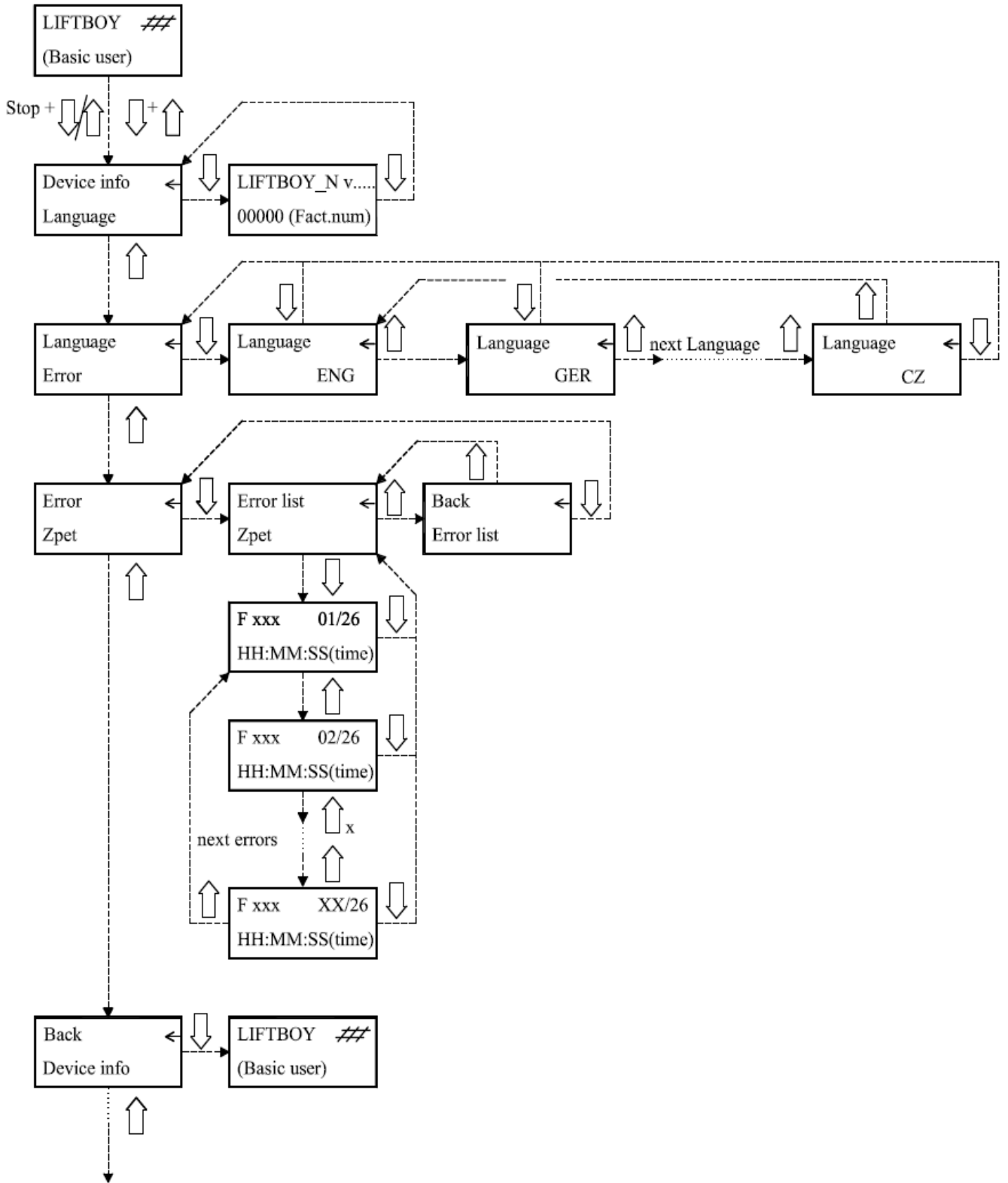












## Menu items

In the following table there are all main menu items listed. Also it shows if the item is in user menu or in service menu. This table also shows brief description of options, which are after main menu items.

Menu item	User menu	Service menu	Description
User menu		X	In this item you can set, if you can enter the menu in user regime
Device info	X	X	This item shows basic device info – HW and SW version, serial number
Language	X	X	Display language can be set via this item
Factory number		X	This item can store custom factory number.
Error	X	X	Shows list of recorded errors, also allows to delete this list.
Ack. Error		X	If activated, this item acknowledges found errors.
Operation time		X	This item shows operation time and also allows to clear it.
Factory default		X	Activation of this item restores all parameters to factory default.
Radio version		X	Allows radio module version setting.
Motor config.		X	Allows to select the number of main motors if the platform has an automatic ramp and set the value of current of all motors
Config. door lock		X	Allows to set a time needed to open door lock and a version of an automatic opening
Overload control		X	Allows to activate/deactivate overload control, this item can also change basic overload setting
Options		X	Allows to set platform's special functions

In the following paragraphs some of menu items will be described. Descriptions are structured as based in main menu. Factory default settings are underlined in following lists. These settings can be restored by resetting system to factory default settings.

## User menu

Menu item	Value	Name	Description
User menu	<u>YES</u>		Allows the user to enter the user menu
	Blocked		Blocks the user from entering the user menu

## Device info

First row shows the type of device LIFTBOY, the version of HW and SW of CU. Second row shows factory number.

## Language

Menu item	Value	Name	Description
Language	CZE	Czech	One of these can be selected
	<u>ENG</u>	<u>English</u>	
	GER	German	
	ESP	Spanish	
	FRA	French	
	PL	Polish	

## Factory number

A factory or identification number can be set by this menu item (5 digits). Command for the movement up can change current digit. The currently edited digit is underlined. Command for the movement down can move onto the next digit.

## Errors

Menu item	Value	Name	Description
Error list	Fxxx n/30 h:m:s	-	Shows list of stored errors, saved in menu. First row shows code number of error Fxxx (see table of errors) and order of error item in the error list (max 30 items). Second row shows current operation time when error appeared.
Clear errors	Sure? YES	-	By activation and selecting YES all stored errors will be purged from the list.

**CAUTION:** List of errors can be deleted by the authorized technician only.

## Acknowledge error

If the menu item is active, all errors that occurred are acknowledged. Which means that an attempt for a deletion of the wrong code occurs so the normal function of the platform can be restored. Errors which must be acknowledged are mentioned in the table of errors. Platform's behavior during errors is described in the table of errors in chapter **Fehler! Verweisquelle konnte nicht gefunden werden.** By acknowledging error item is not removed from the error list. If you want to do so, you need to clear whole list as was described before.

## Operation time

Menu item	Value	Name	Description
-----------	-------	------	-------------

Show op-time	h:m:s	-	This item shows current operation time in hrs:min:sec format
Reset op-time	Sure? YES	-	By activation and selecting YES operation time counter is cleared.

**CAUTION:** Operation time counter can be cleared by the authorized technician only.

### Factory default

Activation of this item restores all parameters to factory default. Factory default settings are underlined in lists.

### Radio controller version

Menu item	Value	Name	Description
Radio version	<u>1</u>	<u>TX-OMDE-V-01</u> <u>(Schmidiger)</u>	Allows radio module version setting
	2	Reserve for other type of radio controller	

## Motor configuration

Menu item	Value	Name	Description
<b>Number of main motors</b>			
Number of main motors 1	1		Allows to set a number of main motors on exactly one motor. This is used on platforms ZP1 and ZP2
Number of main motors 2	<u>2</u>		Allows to set a number of main motors on two motors. This is used on this platform ZP 5
<b>El ramp:</b>			
Aut. ramp	<u>YES</u>	Platform has an automatic ramp	If this parameter is active, platform has an automatically tilted ramp. You have to adjust wiring of the lower zone switch on the CU
Aut. ramp	NO	Platform has a lower door	If this parameter is active, platform has a door in lower station. You have to adjust wiring of the lower zone switch on the CU

## Current setting

Main drive	5-15 <u>13</u>	A	Sets the current setting of the main motor, if there are two motors, this value applies to each one.  After exceeding this threshold, motor stops and „DRIVE MOTOR CURRENT LIMIT“ error is shown on the display
Differ. M1/M2	10-100% <u>50</u>	%	Determines a possible percentage difference in current taken by each motor. If the taken current on one of the mottors differs from the other by more than the set percentage, motors stop and a „LOAD DIFFERENCE M1/M2“ error is shown on the display
Actuator R	0,5-6,9 <u>2,5</u>	A	Sets overcurrent threshold for ramp motor.  After exceeding this level, motor stops and an error message “ CURRENT LIMIT ACT – RAMP“ is shown on the display



## Door lock configuration

Menu item	Value	Name	Description
Time open. DL	5-90	sec.	Allows to set the necessary time to open the door.
	<u>35</u>		If an automatic door opener WALKY is in use, it is necessary to set this time to min 30 sec.
Impulse for DO	0-30	sec.	Allows to set impulse length for an automatic door opener.
	<u>0</u> (=manual opening of the door)		Factory default 0 is used for manual opening of the door.  If the platform has an automatic door opener WALKY, it is necessary to set this value on 1.
Version DO	<u>Standard</u>		Allows to set appropriate version of the door opener. For detailed description see chapter 1.1.3
	With blocking		

## Overload control

Menu item	Value	Name	Description
Overload y/n	<u>YES</u>		Activation of this menu item and selecting YES activates platform's overload watch
	NO		Activation of this menu item and selecting NO deactivates platform's overload watch
Value 1 (100Kg)	Save value 100Kg		By activation of this menu item and selecting YES, we save a corresponding load of 100kg on a CU memory.
	YES		This menu item is usually used for factory setting of a platform.
Value 2 (350Kg)	Save value 350Kg		By activation of this menu item and selecting YES, we save a corresponding load of 350kg on a CU memory.
	YES		This menu item is usually used for factory setting of a platform.
	NO		

## Options

Menu item	Value	Name	Description
Key con. platf.	<u>Blocking drive</u>		Activation of this menu item selects function of the key switch placed on platform's control panel in off position. In this case, the platform can not be moved up nor down by platform controller (S20/S21), but if the platform stays in the landig station, appropriate drive button on the platform can unlock the door lock and afterwards open the door, eventually open/close the ramp.
	Block. Drive+DL		Activation of this menu item selects function of the key switch placed on platform's control panel in off position. In this case, platform can not drive up nor down and it is not possible to cause an action of door lock and ramp's actuator(= drive buttons on the platform are blocked ).
Drive ext. con.	<u>Permane. activ.</u>		Activation of this menu item selects function of directional buttons on external controllers. In this case, the drive button has to be permanently activated in order to move the platform
	Activated imp.		Activation of this menu item selects function of directional buttons on external controllers. In this case we can activate the motion of the platform by just pressing drive button. Then we can release it and platform drives to landing station.

**WARNING:** this option can be activated only for platforms in the lift shaft.

### Radio wall mounted controllers

External wall mounted controllers communicate with the platform via radio signal. Standardly there is one in each station.

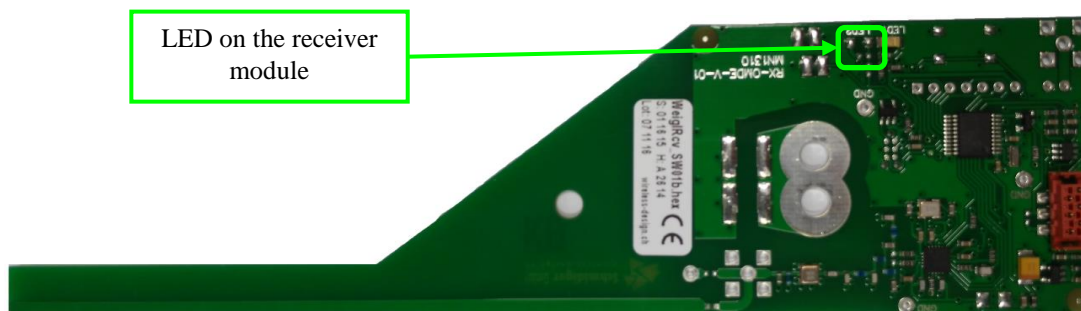
Each wall mounted RF controller is supplied by 2 pcs ob batteries type AAA.

Following table describes all used colours and blinking combinations of signalization on TX-OMDE-V-01 (Schmidiger) controller type :

State LED	Description
Blinks in green	Connection is established and control messages are passed to CU – normal condition.
Blinks in orange	Connection is lost. Keep button pressed – system will try to find not jammed signal and reconnect.
Blinks in red	Batteries in this controller are low. Replacing is necessary.
Lights in green	Radio transmitter was succesfully connected to receiver during the programming
Lights in orange	Connection is established but the platform is not moving. Possible causes: <ul style="list-style-type: none"> <li>• Safety circuit is opened</li> <li>• Error states e.i. motor overload, switch failure etc.</li> <li>• Error messages are shown on the display.</li> </ul>
Lights in red	Connection is established but there is no answer from the platform. Platform is operated either from the platform controller or other remote RF controller..

#### Pairing of Radio module Schmidiger: (if more or new radio controls have to be connected)

To start pairing press the button S1 on the main control board for at least 3 seconds and release it. LED is regularly blinking faster when the module is active for pairing.

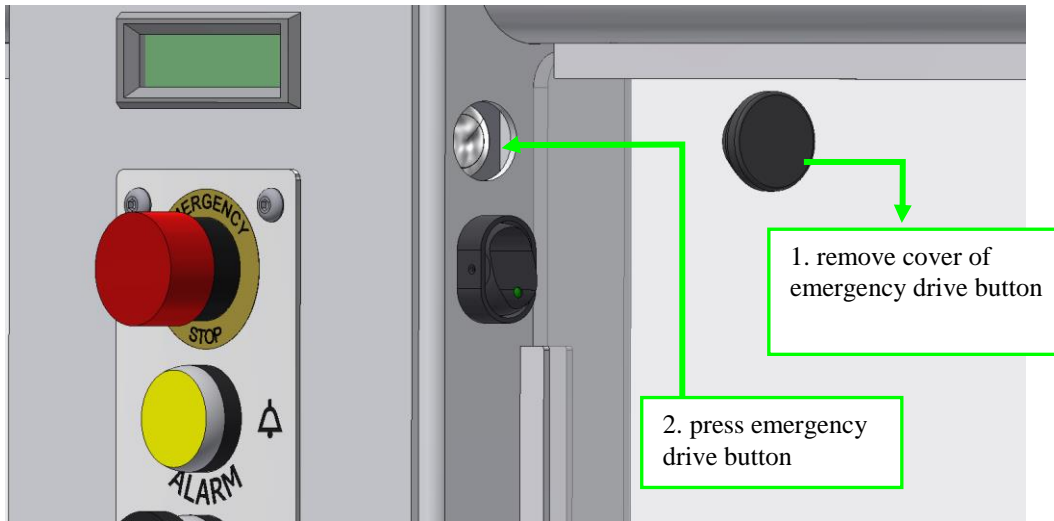


Pic. 20 Radio module Schmidiger

Then the appropriate external controller can be programmed. To do this push simultaneously the buttons for drive directions up and down. LED on the controller starts blinking with an orange color. After approx. 2.5 seconds LED stops blinking and lights in green. If this happens, the controller is programmed. Another controllers could be programmed same way. Or programming can be terminated. For the termination of programming push S1 button again (for at least 3 seconds). The termination of programming is acknowledged by fast blinking of LED on the radio module and returning to regular blinking on slow intervals.

## Emergency drive

The emergency drive is an optional equipment of platform. This unit allows the user to drive to lower stop in a case of main board failure or other unexpected failures.



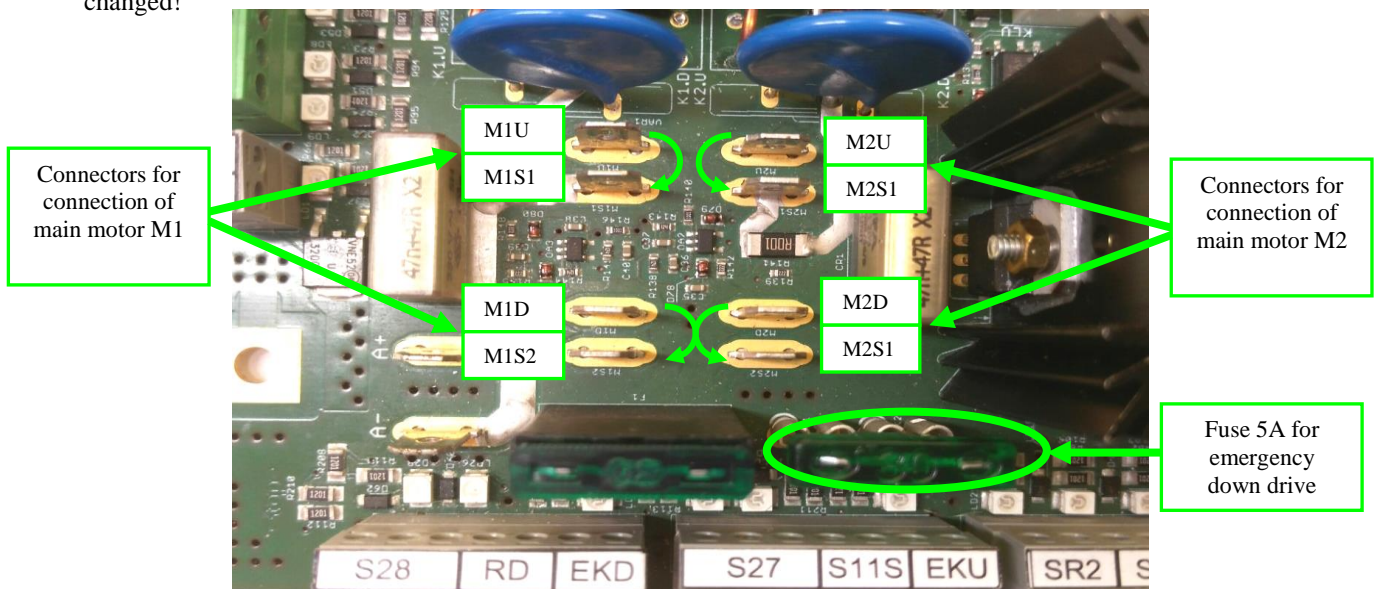
Control of platform via emergency drive button S1 is allowed only if platform can not be controlled in any standard way and it is necessary to extricate the user. Button S1 can not be used for ordinary use of platform! To use emergency drive it is necessary to firstly remove the cover of button S1 (which is placed above the main switch) and then press the button S1. After selecting this button the platform starts to move downwards. During the emergency drive all safety and control systems are out of function.

After reaching lower station it is necessary to release the emergency drive button and **manually open** the door or the platform ramp.

In a case of necessity, service worker can change the direction of movement of the platform from emergency drive by switching the conductors on connectors for connection of main motors M1U/1 for M1D/1 and M2U/1 for M2D/1 on the emergency drive CU. It will be necessary to change the fuse on connectors K1 and K2 on value 30A.

1. Turn off main switch SK1.
2. Switch connectors of motor M1 from M1U to M1S1, from M1D to M1S2 and motor M2 from M2U to M2S1, from M2D to M2S2. Power supply of both motors must be changed!
3. Between connectors K1 and K2 insert fuse 5A.
4. Turn on main switch SK1 and platform immediately starts moving downwards.

For drive up (because of service reasons) it is necessary to switch M1S1 for M1S2 and M2S1 for M2S2 (for motor M1: M1U to M1S2, M1D to M1S1 etc. for M2), use fuse 30A. Power supply of both motors must be changed!



## Error and operating messages on display

It is necessary to acknowledge (reset) errors F1xx after removal of their cause.

Acknowledging them doesn't mean automatic deletion. Deletion must be done separately. If the error can not be acknowledged the reason is that the root cause of this error is still present and was not repaired.

Errors F1xx shown below must be reset in the menu after they have been repaired. Reset can be done even by turning off via the main switch.

Error ID	Shown on display	Description	How to repair
F101	TRANSISTOR SHORT. T4	Faulty transistor– there is voltage on its output although it should not (faulty control, punctured transistor and so on)	Try to reset the error message by switching off (for at least 2 sec) and then turning on the main switch. Afterwards, give a command for movement and if this error shows up again, it is necessary to replace the whole CU Try to reset the error message by switching off (for at least 2 sec) and then turning on the main switch. Afterwards, give a command for movement and if this error shows up again, it is necessary to replace the whole CU
F102	TRANSISTOR FAILURE T4	Transistor failure – did not close (faulty control, transistor failure and so on)	Try to reset the error message by switching off (for at least 2 sec) and then turning on the main switch, remove uneven load on the platform, select drive up on any controller, motors should level it; manually level different height of motors, read the current taken by motors during the drive and check the setting of difference of main motors M1 and M2, and then check setting the difference in current taken
F103	LOAD DIFFERENCE M1/M2	Exceeding the set difference in current of main motors M1 and M2	Try to reset the error message by switching off (for at least 2 sec) and then turning on the main switch, measure the voltage on motors terminals, on directional relays of appropriate motor; check the cable connection between motor and CU, replace the CU, replace the motor
F104	ACTUATOR FAILURE M1	Motor M1 is not active (current on the motor M1= 0A)	Try to reset the error message by switching off (for at least 2 sec) and then turning on the main switch, measure the voltage on motors terminals, on directional relays of appropriate motor; check the cable connection between motor and CU, replace the CU, replace the motor
F105	ACTUATOR FAILURE M2	Motor M2 is not active (current on the motor M2= 0A)	Try to reset the error message by switching off (for at least 2 sec) and then turning on the main switch, measure the voltage on motors terminals, on directional relays of appropriate motor; check the cable connection between motor and CU, replace the CU, replace the motor

Error ID	Shown on display	Description	How to repair
F106	EEPROM FAILURE	Nonfunctional EEPROM memory	Try to reset the error message by switching off (for at least 2 sec) and then turning on the main switch. Afterwards, give a command for movement and if this error shows up again, it is necessary to replace the whole CU

Following errors are recorded in EEPROM but they don't block operation of platform – don't need acknowledgement. They're shown as long as the error is present or/and corresponding control buttons activated.

Error ID	Shown display text	Description	How to repair
F201	EMERGENCY STOP SI: S7X	STOP button pressed, emergency input open S7X=0	Deactivate STOP button by turning it in the direction of arrows, if the STOP button is not pressed, Check NC-contact by STOP button, connecting cable towards the CU, emergency input S7X
F202	UP SAF.LIMIT SW SI: S22U	Active upper safety limit switch S22U=0	By movement of the platform with emergency drive in the direction down release the safety switch S22U, check the adjusting of the upper stop, limit switch S27 and safety limit switch S22U, stop element on a motor ACT2 has to firstly press the limit switch S27 and by doing so to stop the motion of the platform; If the emergency switch is not activated, check NC-contacts of the switch S22U, connecting cables towards CU, emergency input S22U
F203	RESERVE SAF.C.SW SI: SR1	Contact of the main safety circuit is open, emergency input SR1=0	Check the input bridge connection on terminals SR1 on CU
F204	ASYNCHR. ACTUAT. SI: SR2, M1, M2	asynchronous movement of main motors, contact SR2= 0 open. (standardly this switch is not used, emergency input SR2 has to be bridged)	If SR is used: check the even reaction of main motors, check the setting of differential switch SR 2; if the switch is not activated, check NC-contact of the switch SR2, connecting cables towards the CU, emergency input SR2

Error ID	Shown display text	Description	How to repair
F205	FAILURE ZON. SW. SI: SZU, SZ/SZL	One or both zone switches are in incorrect position With no regard towards the setting in the menu El. ramp - YES/NO $SZU=1 \wedge SZL=1$ $\vee SZU=1 \wedge SZ=1$	In this error state, the drive is allowed in both directions if the platform is outside the station, after it reaches the station it is prevented from leaving and it is not allowed to automatically lower the ramp or to open the door; check the setting of zone switches, if the platform is in one of the stops, the contacts of the zone switch has to be in closed position and contacts of the other one in permanently opened position; if the setting of the zone switches is correct, check NC-contact of the switches and connecting cables towards the CU on inputs SZU, ZL/SZ Check the setting of limit switches, check the mechanical function of limit switches, check inner wiring S27/S28, check cable connection of the switches with CU, check the wiring in CU
F206	UNDEF.STATION SW SI: S27, S28	One of limit switches is in incorrect position (for example, both limit switches are active at the same time) $(S27-2=0 \wedge S28-2=0)$ $\vee (S27-3=1 \wedge S28-3=1)$	
F301	STOP $\vee$ DOWN SI: EKD, RD	Safety edges hit an obstacle in the drive direction down, this message shows up only in combination with the drive down command $Ctrl\ DOWN=1 \vee Wall\ ctrl\ DOWN=1 \vee RF- DOWN=1$ $\wedge SENS\ EDGE\ DOWN=0$	Remove obstacle that prevents the platform from movement down, if necessary release the obstacle by driving up, check the setting of appropriate limit switches of lower safety edges; if the emergency switches are not active, check the NC-contacts of switches EKD 1 till 4 and their serial connection, check connecting cables on an input EKD and a bridge-connection on terminals RD
F302	STOP $\wedge$ UP SI: EKU, S11S	Safety edges hit an obstacle in the drive direction up, this message shows up only in combination with the drive up command $Ctrl\ UP=1 \vee Wall\ ctrl\ UP=1 \vee RF-UP=1$ $\wedge SENS\ EDGE\ UP=0$	Remove the obstacle that prevents the platform from movement up, check the setting of appropriate limit switches of upper safety edges; if the emergency switches are not active, check the NC-contacts of switches EKU 1 and 2 and their serial connection, check the connecting cables on an input EKU and a bridge-connection on terminals S11S

Error ID	Shown display text	Description	How to repair
F303	FAILURE UP. LOCK SI: 0/SDU	While giving command for drive up in upper station, the activation of coil and unlocking of the door lock did not occur or control contacts of the lock did not switch - (ODU=1, SDU=0) Ctrl UP=1 ∨ Wall ctrl UP=1 ∨ RF-UP=1 for more than 1sec. $\wedge S27-3=1 \wedge S27-2=0 \wedge SZU=1$ $\wedge (ODU=0 \vee SDU=1)$	Check the wiring and mechanical function of door lock, check the connection cables of the door lock, correct function of the coil of door lock DLU and appropriate contacts SDU,ODU <b>When this error is present on a platform with automatic door opener NICE WALKY, the impulse for door opener is not coming, the door has to be opened manually!</b>
F304	FAIL: UP.ZON./SW PRESS∨ SI:SZU/S27	Upper limit switch S27 is actuated, but upper zone switch SZU is open and drive up is selected (example: after reaching the upper stop, the zone switch SZU remains open) $S27-3=1 \wedge S27-2=0 \wedge SZU=0$ $\wedge Ctrl UP=1 \vee Wall ctrl UP=1 \vee RF-UP=1$	Check the setting of upper stop, stop element on motor ACT2 has to firstly release the zone switch SZU= 1 and then actuate the limit switch S27-3=1 and S27-2=0, check the switching functionality of S27 and SZU, check contacts of switches S27 and SZU, connecting cables on inputs S27, SZU in the CU
F305	FAILURE UP. SW. PRESS∨ SI: S27	Contacts of the upper limit switch are not in its usual position (S27-3=0 $\wedge$ S27-2=0) $\vee (S27-3=1 \wedge S27-2=1)$ Displays during drive up command, that is Ctrl UP=1 ∨ Wall ctrl UP=1 ∨ RF-UP=1	Check the function, setting and connection of the limit switch S27, check the contact system in this switch, check connecting cable on the input S27
F306	FAIL. LOWER LOCK SI: 0/SDL	While giving command for drive down in lower stop, the activation of coil and unlocking of the door lock did not occur, or contacts of the door lock did not switch (ODL=1, SDL=0) Ctrl DOWN=1 ∨ Wall ctrl DOWN=1 ∨ RF-DOWN=1 for more than 1sec.  $\wedge S28-3=1 \wedge S28-2=0$ $\wedge SZL=1$ $\wedge (ODL=0 \vee SDL=1)$	Check the wiring and mechanical function of door lock, check the connection cables of the door lock, correct function of the coil of door lock DLL and appropriate contacts SDL,ODL <b>When this error is present on a platform with automatic door opener NICE WALKY, the impulse for door opener is not coming, the door has to be opened manually!</b>
F307	F.LOWER ZON/SP PRESS^ SI: SZL/S28	Lower limit switch S28 is actuated, but lower zone switch SZL is open and drive down is selected (example: after reaching the lower stop, the zone switch SZL remains open) $S28-3=1 \wedge S28-2=0 \wedge SZL=0$ $\wedge Ctrl DOWN=1 \vee Wall ctrl DOWN=1 \vee RF- DOWN=1$	Check the setting of the lower stop, stop element on the motor ACT1 has to firstly release the zone switch SZL= 1 and then actuate the limit switch S28-3=1 and S28-2= 0, check the switching functionality of S28 and SZL,check the contacts of switches S28 and SZL, connecting cables on inputs S28,



Error ID	Shown display text	Description	How to repair
		while the setting in the menu is el.ramp – NO	SZL in the CU
F308	F.LOWER ZON/SP PRESS^ SI: SZ/S28	Lower limit switch S28 is actuated, lower zone switch SZ is open and drive down is selected (example: after reaching the lower stop, zone switch SZ did not open S28-3=1 $\wedge$ S28-2=0 $\wedge$ SZ=0 $\wedge$ Ctrl DOWN=1 $\vee$ Wall ctrl DOWN=1 $\vee$ RF- DOWN=1 while the setting in the menu is el. ramp – YES	Check the setting of the lower stop, stop element on the motor ACT1 has to firstly release the zone switch SZ= 1 and then actuate the limit switch S28-3=1 and S28-2= 0, check the switching functionality of S28 and SZ, check the contacts of switches S28 and SZ, connecting cables on inputs S28, SZ in the CU
F309	FAILURE LOWER SW. PRESS^ SI: S28	Contacts of upper limit switch are not in its standard position (S28-3=0 $\wedge$ S28-2=0) $\vee$ (S28-3=1 $\wedge$ S28-2=1), Displays during drive down command, that is Ctrl DOWN=1 $\vee$ Wall ctrl DOWN=1 $\vee$ RF- DOWN=1	Check the function, setting and wiring of the limit switch S28, check the contact system in this switch, check connecting cable and on the input S28

Error ID	Shown display text	Description	How to repair
F401	CURRENT LIMIT DRIVE MOTOR M1	Overcurrent of the main drive motor M1	Main motor M1 takes more current than is allowed (set), remove uneven load on platform, decrease the load, read the taken current of the motor during the drive and compare it with set nominal current in menu item „Set currents“ – „Main drive“, check mechanical functions, replace CU, replace the motor
F402	CURRENT LIMIT DRIVE MOTOR M2	Overcurrent of the main drive motor M2	Main motor M2 takes more current than is allowed (set), remove uneven load on platform, decrease the load, read the taken current of the motor during the drive and compare it with set nominal current in menu item „Set currents“ – „Main drive“, check mechanical functions, replace CU, replace the motor
F403	CURRENT LIMIT ACT - RAMP	Overcurrent of the ramp's actuator	Ramp's actuator takes more current than is allowed (set), remove obstacle/load from the ramp, read the taken current of the motor during the closing of the platform ramp and compare them with set nominal current in „Set current“ – „Actuator R“, check mechanical functions, replace CU, replace the motor

F412	EMPTY BATTERY STOP	Voltage on the batteries dropped under 19,4V, the drive up is blocked	Reach the lower landing station and let the batteries to charge properly; if the batteries can not be fully charged, it is necessary to replace them, (note:all the batteries have to be replaced) Movement is allowed only in the down direction. After overload detection, it is necessary to drive to lower stop and reduce the load on the platform; if it does not exceed the allowed load, it is necessary to check mechanical functions and current taken by motors, or perform new overload calibration (see chap. <b>Fehler! Verweisquelle konnte nicht gefunden werden.</b> )
F413	OVERLOAD LIFT SI: SU, TENS. INPUT	CU evaluated overload of the platform via start-off current	

Following errors are not recorded in the error message list and it is not necessary to reset them in menu. They are shown only during the command from platform or radio controller.

Shown display text	Description	How to repair
DOOR OPEN FAULT OPENER	<p>Message is shown after the third (last) automatic impulse for door opener and the door remains open. This means  <math>ODU = 1 \vee ODL = 1</math>            Impulses are always sent after the time, that is set in parameter Time open. DL, if the door is not closed.</p> <hr/> <p>Manual opening of the door:            Message is shown in upper landing station if the door is open and any drive down button is activated. Serves as a warning that upper door is not closed and to enable drive down the door has to be closed and locked (secured?)</p> <hr/> <p>Ctrl DOWN=1 <math>\vee</math> Wall ctrl DOWN=1V            RF- DOWN=1 <math>\wedge</math>            S27-3=1 <math>\wedge</math> S27-2=0 <math>\wedge</math> SZU=1 <math>\wedge</math>            ODU=1 <math>\wedge</math> SDU=0</p> <hr/> <p>Automatic opening of the door (both versions):</p> <p>Message is shown in upper landing station if the door is not fully closed and drive down button is pressed.</p> <hr/> <p>Ctrl DOWN=1 <math>\vee</math> Wall ctrl DOWN=1V            RF- DOWN=1 <math>\wedge</math>            S27-3=1 <math>\wedge</math> S27-2=0 <math>\wedge</math> SZU=1 <math>\wedge</math></p>	<p>Remove obstacles that could obstruct door to close automatically. Check the wiring of el. opener and function of relay RKOOU or relay RKOLO on CU, release opener WALKY with a key and close the door manually, check if the fork on the door correctly falls into door lock, check the wiring of el. door lock and its connection to the CU, check if contacts (ODU, SDU) and (ODL, SDL) switched into a position allowing the movement (<math>ODU=0 \wedge SDU=1</math> or <math>ODL=0 \wedge SDL=1</math>).</p> <p>The door has to be closed manually, see chap. 0 Pic.1 Manual unlocking of an automatic opener NICE walky            Manually close door, when the door is closed manually check if the fork on the door fits correctly into door lock, check the wiring of el.lock, its connection towards the CU. Check if contacts ODU and SDU switched into a position that allows movement (<math>ODU= 0 \wedge SDU= 1</math>)</p> <p>If automatic door is not closing, it is necessary to wait for automatically generated impulse, which is sent max 3 times in a row, always with time delay that was set as „Time open. DL“, if the door did not close even after the third (last) automatic impulse, proceed accordingly to description above, see :            DOOR OPEN FAULT            OPENER</p>

Shown display text	Description	How to repair
	<p>ODU=1 <math>\wedge</math> SDU=0</p> <hr/> <p>Manual opening of the door:</p> <p>Message is shown in lower landing station if the door is open and any drive up button is activated. Serves as a warning that lower door is not closed and to enable drive up the door has to be closed and locked. (secured?)</p>	<p>Manually close door, when the door is closed manually check if the fork on the door fits correctly into door lock, check the wiring of el.lock, its connection towards the CU. Check if contacts ODL and SDL switched into a position that allows movement (ODL= 0 <math>\wedge</math> SDL= 1)</p>
<p>LOWER DOOR OPEN CLO.DO/ <math>\wedge</math> UP</p>	<p>Ctrl UP=1 <math>\vee</math> Wall ctrl UP=1<math>\vee</math> RF- UP=1 <math>\wedge</math> S28-3=1 <math>\wedge</math> S28-2=0 <math>\wedge</math> SZL=1 <math>\wedge</math> ODL=1 <math>\wedge</math> SDL=0</p> <hr/> <p>Automatic opening of the door (both versions):</p> <p>Message is shown in lower landing station if the door is not fully closed and drive up button is pressed.</p> <p>Ctrl UP=1 <math>\vee</math> Wall ctrl UP=1<math>\vee</math> RF- UP=1 <math>\wedge</math> S28-3=1 <math>\wedge</math> S28-2=0 <math>\wedge</math> SZL=1 <math>\wedge</math> ODL=1 <math>\wedge</math> SDL=0</p>	<p>If automatic door is not closing, it is necessary to wait for automatically generated impulses, which are sent max 3x in a row with a time delay that was set in Time open.DL. If the door did not close after the third impulse, proceed accordingly to description above, see: DOOR OPEN FAULT OPENER</p>
	<p>Manual opening of the door:</p> <p>Message is shown in upper landing station after selecting any drive up button. Serves as a warning that upper lock is unlocked and we can open the door. This message also shows up when the door is already open, in this case drive up button has no function.</p> <p>Ctrl UP=1 <math>\vee</math> Wall ctrl UP=1<math>\vee</math> RF- UP=1 <math>\wedge</math> S27-3=1 <math>\wedge</math> S27-2=0 <math>\wedge</math> SZU=1 <math>\wedge</math> ODU=1 <math>\wedge</math> SDU=0</p>	<p>If the lock is not unlocked and the door can not be opened manually, check the wiring of el.lock, see Error F307</p>
<p>UP. ST. LOCK - OPEN SI: S27, SZU/SDU</p>	<p>Automatic opening of the door, version 1 - Standard:</p> <p>Message is shown in upper landing station after selecting any drive up button, door unlocks, automatic opening of the door is happening. For version 1 „Standard“: This message also shows up if the door is open, in this case drive up button has no function.</p> <p>Ctrl UP=1 <math>\vee</math> Wall ctrl UP=1<math>\vee</math> RF- UP=1 <math>\wedge</math> S27-3=1 <math>\wedge</math> S27-2=0 <math>\wedge</math> SZU=1 <math>\wedge</math> ODU=1 <math>\wedge</math> SDU=0</p>	<p>If the lock is not unlocked or if the door is not opening, check the wiring of el.lock (see Error F307) and check the circuit of automatic door opener control (see chapter 0 Control description of manual and automatic door</p>

Shown display text	Description	How to repair
LO. ST. LOCK - OPEN SI:S28 SZL/SDL	<p>Manual opening of the door,</p> <p>Message is shown in the lower landing station after selecting any drive down button. Serves as a warning that lower lock is unlocked and we can open the door. This message also shows up when the door is already open. In this case drive down button has no function.</p> <p>Ctrl down=1 ∨ Wall ctrl down=1 ∨ RF-down=1   ∧ S28-3=1 ∧ S28-2=0 ∧ SZL=1   ∧ ODL=1 ∧ SDL=0</p>	<p>If the lock is not unlocked and the door can not be opened manually, check the wiring of el.lock, see Error F307</p>
^CLOSED RAMP √CLOSED RAMP	<p>Automatic opening of the door version 1 - Standard:</p> <p>Message is shown in lower landing station after selecting any drive down button, the door lock unlocks and automatic opening of the door is happening. For version 1 „Standard“: This message also shows up if the door is open, in this case drive down button has no function.</p> <p>Ctrl UP=1 ∨ Wall ctrl UP=1 ∨ RF- UP=1 ∧ S27-3=1 ∧ S27-2=0 ∧ SZU=1   ∧ ODU=1 ∧ SDU=0</p> <p>Message that shows up outside the lower landing station and informs that actuator/ramp is not fully closed (Ramp closed act=1 ∧ ramp closed sig=1). When found out that ramp's actuator is not fully closed, by pressing any drive button the ramp closes and by doing so the platform returns to its standard regime.</p> <p>S28-3=0 ∧ S28-2=1 ∧ Ramp closed act=1 ∧ ramp closed sig=0</p>	<p>If the lock is not unlocked or if the door is not opening, check the wiring of el.lock (see Error F307) and check the circuit of automatic door opener control (see chapter 0 Control description of manual and automatic door</p> <p>Try to close the ramp by pressing any drive button. If the ramp does not close, check connecting cable towards the ramp's actuator, its wiring into CU, switching contact of appropriate drive button and switching of relay KC1AK01</p> <p>If the ramp is in its closed position, check the setting and signal contacts of the actuator.</p>

Note: SI: Sxxx ... indicates switches which can be damaged or badly adjusted, if the situation described on the first row on the (for example IN THE LOWER STAT.) did not occur, (resp. In the description for error message in the above table). In these cases it is necessary to check the adjustment of the appropriate position switch, its contact system, connection cables and connection in a terminal of CU. If the check up goes right and the appropriate input is still not active, it is necessary to check appropriate inputs in CU, or replace the CU. If more inputs of safety circuit do open, accordingly to the order in the scheme the shown and saved error will be the one listed first.

## Operation message list – help hints on display

In the following table there are helpful hints for the user of the platform.

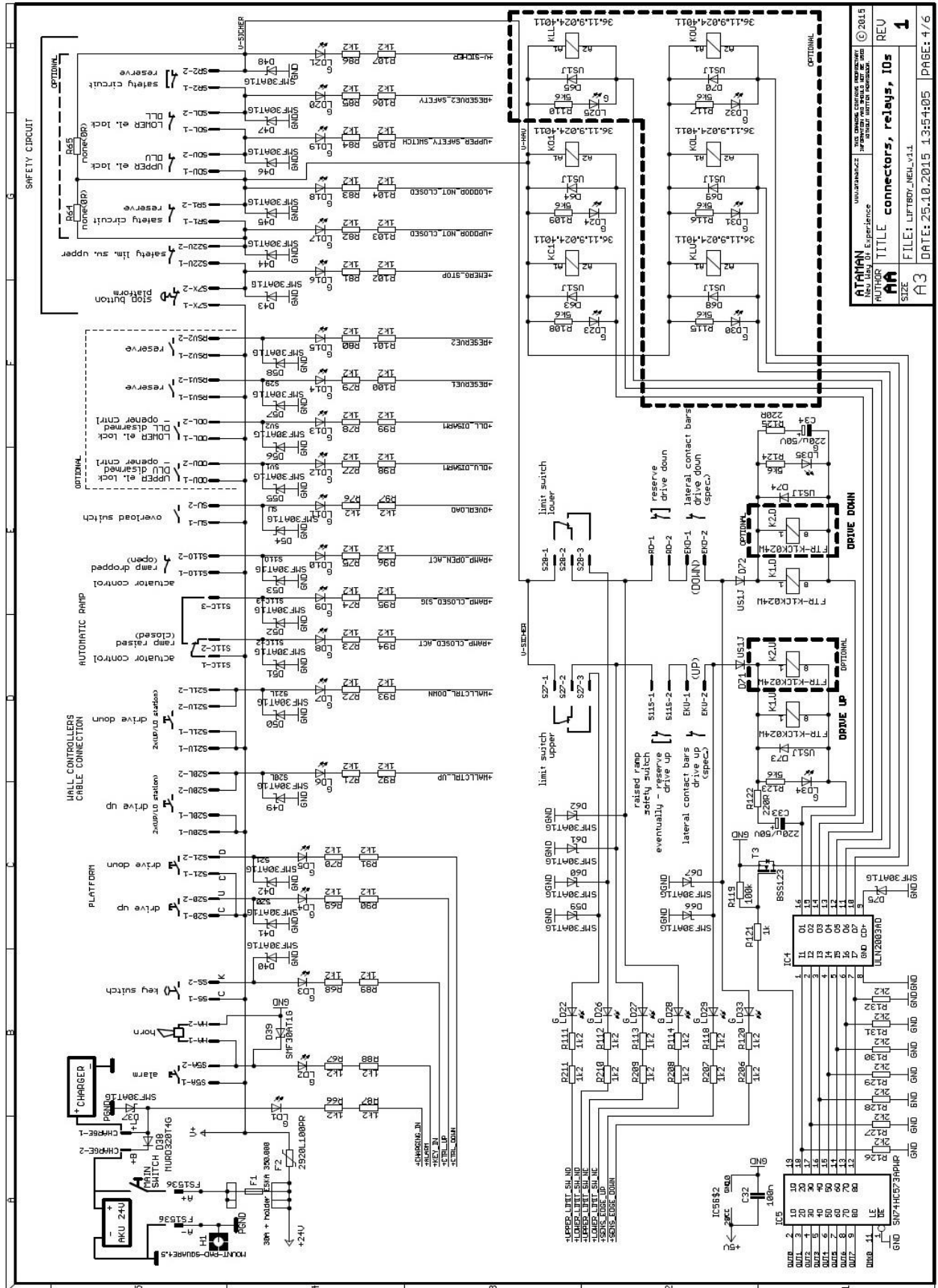
HELP HINT	
DRIVE DOWN EXTERNAL CONTROL	Signalization during the drive down from wall mounted controllers WALL CTRL DOWN, or radio controllers – signal RF-D.
DRIVE UP EXTERNAL CONTROL	Signalization during the drive up from wall mounted controllers WALL CTRL UP or radio controllers - signal RF-N.
^DRIVE UP √DRIVE DOWN	Signalization on the display when the platform stands outside the stop; by pressing the drive up resp. drive down button on any controller, it is possible to continue the movement in the selected direction.

HELP HINT	
LOW BATTERY	Signalization when the voltage on batteries drops below 20,4V; decrease in voltage is also signalized by quick interrupted acoustic signal.
BATTERY IS NOT CHARGING	There is no signal from the input of charging accumulator, charger is disconnected or damaged, this state is also signalized by interrupted acoustic signal. In this case it is necessary to immediately restore the charging of batteries or to switch off the main switch and make sure that the main switch is accessible afterwards. Otherwise the batteries would become fully discharged and damaged.
^UNLOCK DOOR vDRIVE DOWN	Message shown in upper landing station when the door is closed and locked (ODU=0 $\wedge$ SDU=1), when KLU=0 and no drive button is activated. Serves as a hint for a possibility to unlock the door lock or in a case of automatic version to open the door by pressing the drive up button or by drive down button to leave the upper landing station.  Ctrl up=0 $\wedge$ Ctrl down = 0 $\wedge$ Wall ctrl up=0 $\wedge$ Wall ctrl down=0 $\wedge$ RF- UP=0 $\wedge$ RF down 0 $\wedge$ S27-3=1 $\wedge$ S27-2=0 $\wedge$ SZU =1 $\wedge$ ODU=0 $\wedge$ SDU=1
^DRIVE UP vUNLOCK DOOR	Message shown in lower landing station when the door is closed and locked (ODL=0 $\wedge$ SDL=1), when KLL=0 and no drive button is activated. Serves as a hint for a possibility to unlock the door lock or in a case of automatic version to open the door by pressing the drive down button or by drive up button to leave the lower landing station.  Ctrl up=0 $\wedge$ Ctrl down = 0 $\wedge$ Wall ctrl up=0 $\wedge$ Wall ctrl down=0 $\wedge$ RF- UP=0 $\wedge$ RF down 0 $\wedge$ S28-3=1 $\wedge$ S28-2=0 $\wedge$ SZL =1 $\wedge$ ODL=0 $\wedge$ SDL=1
UP. DOOR OPEN SI: 0/SDU	Message shown in upper landing station when the door is open (ODU=1 $\wedge$ SDU=0), relay KLU=0 which means that door lock is not active anymore and no drive button is pressed. In a case of manual version this serves as a warning that upper door is open. In a case of automatic version the door should automatically close, be fully opened or blocked by an obstacle. <b>If the automatic opener did not start to move with the door, check the functionality of relay KRKOUO and wiring of el. opener.</b> Ctrl up=0 $\wedge$ Ctrl down = 0 $\wedge$ Wall ctrl up=0 $\wedge$ Wall ctrl down=0 $\wedge$ RF- UP=0 $\wedge$ RF down 0 $\wedge$ S27-3=1 $\wedge$ S27-2=0 $\wedge$ SZU =1 $\wedge$ ODU=1 $\wedge$ SDU=0
LOW. DOOR OPEN SI: 0/SDL	Message shown in lower landing station when the door is open (ODL=1 $\wedge$ SDL=0), relay KLL=0 which means that door lock is not active anymore and no drive button is pressed. In a case of manual version this serves as a warning that lower door is open. In a case of automatic version the door should automatically close, be fully opened or blocked by an obstacle.. <b>If the automatic opener did not start to move with the door, check the functionality of relay KRKOLO and wiring of el. opener.</b> Ctrl up=0 $\wedge$ Ctrl down = 0 $\wedge$ Wall ctrl up=0 $\wedge$ Wall ctrl down=0 $\wedge$ RF- UP=0 $\wedge$ RF down 0 $\wedge$ S28-3=1 $\wedge$ S28-2=0 $\wedge$ SZL =1 $\wedge$ ODL=1 $\wedge$ SDL=0
UP. ST. LOCK-OPEN vDRIVE DOWN	Message shown in upper landing station when the door is closed (or in a case of automatic version the door is opening) ODU=1 $\wedge$ SDU=0, relay KLU=1 which means door lock is unlocked and no drive command was given. In a case of manual version this serves as a warning that upper door is unlocked and we can open the door. In a case of automatic version 1 „Standard“ the door should automatically open or be fully opened. Serves as a hint for a possibility to speed up the closing of the door by pressing drive down button S21 on the platform. <b>If the automatic opener did not start to move with the door, check the functionality of relay KRKOUO and wiring of el. opener.</b> Ctrl up=0 $\wedge$ Ctrl down = 0 $\wedge$ Wall ctrl up=0 $\wedge$ Wall ctrl down=0 $\wedge$ RF- UP=0 $\wedge$ RF down 0 $\wedge$ S27-3=1 $\wedge$ S27-2=0 $\wedge$ SZU=1 $\wedge$ ODU=1 $\wedge$ SDU=0
LO. ST. LOCK-OPEN ^DRIVE UP	Message shown in lower landing station when the door is closed (or in a case of automatic version the door is opening) ODL=1 $\wedge$ SDL=0, relay KLL=1 which means door lock is unlocked and no drive command was given. In a case of manual version this serves as a warning that lower door is unlocked and we can open the door.

HELP HINT	
	<p>In a case of automatic version 1 „Standard“ the door should automatically open or be fully opened. Serves as a hint for a possibility to speed up the closing of the door by pressing drive up button S20 on the platform.</p> <p><b>If the automatic opener did not start to move with the door, check the functionality of relay KRKOLO and wiring of el. opener.</b></p> <p>Ctrl up=0 <math>\wedge</math> Ctrl down = 0 <math>\wedge</math> Wall ctrl up=0 <math>\wedge</math> Wall ctrl down=0 <math>\wedge</math> RF- UP=0 <math>\wedge</math> RF down 0 <math>\wedge</math> S28-3=1 <math>\wedge</math> S28-2=0 <math>\wedge</math> SZL=1 <math>\wedge</math> ODL=1 <math>\wedge</math> SDL=0</p>
LOWER STATION $\wedge$ DRIVE UP	<p>Message shown in the lower stop if the ramp is fully open. Serves as a hint for a user to safely leave the platform or as an option for closing of the ramp by any drive up button.</p> <p>Ctrl UP=0 <math>\vee</math> Wall ctrl UP=0 <math>\vee</math> RF- UP=0 S28-3=1 <math>\wedge</math> S28-2=0 <math>\wedge</math> SZL=1 Ramp closed act=1 <math>\wedge</math> ramp closed sig=0 <math>\wedge</math> ramp open= 1</p>
$\wedge$ DRIVE UP OPEN RAMP	<p>Message shown in the lower stop. Serves as a hint for leaving the platform by opening the ramp via any drive down button or to drive up after selecting any drive up button.</p> <p><math>\vee</math> S28-3=1 <math>\wedge</math> S28-2=0 <math>\wedge</math> SZL=1</p> <p>Ramp closed act=1 <math>\wedge</math> ramp closed sig=1 <math>\vee</math> 0 Shown until the ramp is fully opened</p>
$\wedge$ BLOCK. DOOR $\vee$ DRIVE DOWN	<p><b>Message shows only if the menu item „Version DO“ is set to „With blocking“.</b></p> <p>Message shown in upper landing station when the door/lock is unlocked (ODU=1 <math>\wedge</math> SDU=0), relay KLU=1 and no drive command was given. Door should automatically open or be fully opened.</p> <p>Serves as a hint for a possibility to speed up the closing of the door by pressing drive down button S21 on the platform or to keep the door in its fully opened position by pressing drive up button S20 on the platform for time longer than 3 sec.</p> <p>For more see the process and message in help <math>\wedge</math> ACTIV. DOOR</p> <p>Ctrl up=0 <math>\wedge</math> Ctrl down = 0 <math>\wedge</math> Wall ctrl up=0 <math>\wedge</math> Wall ctrl down=0 <math>\wedge</math> RF- UP=0 <math>\wedge</math> RF down 0 <math>\wedge</math> S27-3=1 <math>\wedge</math> S27-2=0 <math>\wedge</math> SZU=1 <math>\wedge</math> ODU=1 <math>\wedge</math> SDU=0</p>
$\wedge$ DRIVE UP $\vee$ BLOCK. DOOR	<p><b>Message shows only if the menu item „Version DO“ is set to „With blocking“.</b></p> <p>Message shown in lower landing station when the door/lock is unlocked (ODL=1 <math>\wedge</math> SDL=0), relay KLL=1 and no drive command was given. Door should automatically open or be fully opened.</p> <p>Serves as a hint for a possibility to speed up the closing of the door by pressing drive up button S20 on the platform or to keep the door in its fully opened position by pressing drive down button S21 on the platform for time longer than 3 sec.</p> <p>For more see the process and message in help <math>\wedge</math> ACTIV. DOOR</p> <p>Ctrl up=0 <math>\wedge</math> Ctrl down = 0 <math>\wedge</math> Wall ctrl up=0 <math>\wedge</math> Wall ctrl down=0 <math>\wedge</math> RF- UP=0 <math>\wedge</math> RF down 0 <math>\wedge</math> S28-3=1 <math>\wedge</math> S28-2=0 <math>\wedge</math> SZL=1 <math>\wedge</math> ODL=1 <math>\wedge</math> SDL=0</p>
$\wedge$ ACTIVE DOOR	<p><b>Message shows only if the menu item „Version DO“ is set to „With blocking“.</b></p> <p>If any of these three options is fulfilled:</p> <ol style="list-style-type: none"> <li>1. After reaching upper landing station, during the opening of the door or if the door is open, drive up button S20 was activated for time longer than 3 sec and this blocked upper door in opened position (see description above <math>\wedge</math>BLOCK. DOOR) Unblocking followed by closing of the door is possible after pressing drive up button S20 on the platform for time longer than 3 sec.</li> <li>2. By pressing drive down button S21 on the platform the unlocking of the door lock ended, this sped up the closing of the door. If during the closing of the door drive up button S20 was activated on the platform for time longer than 3 sec, the door starts to open again. Then after another press of the button it starts to close and so on.</li> <li>3. After the time for opening of the door runs out and automatic command for closing of the door is given (function of the door opener switched into „Standard version“) and the door did not close even after third automatically generated impulse, it is possible to try (if the opener’s CU is alright) to open/close the door by pressing drive up button S20 on the platform for time longer than 3 sec.</li> </ol>

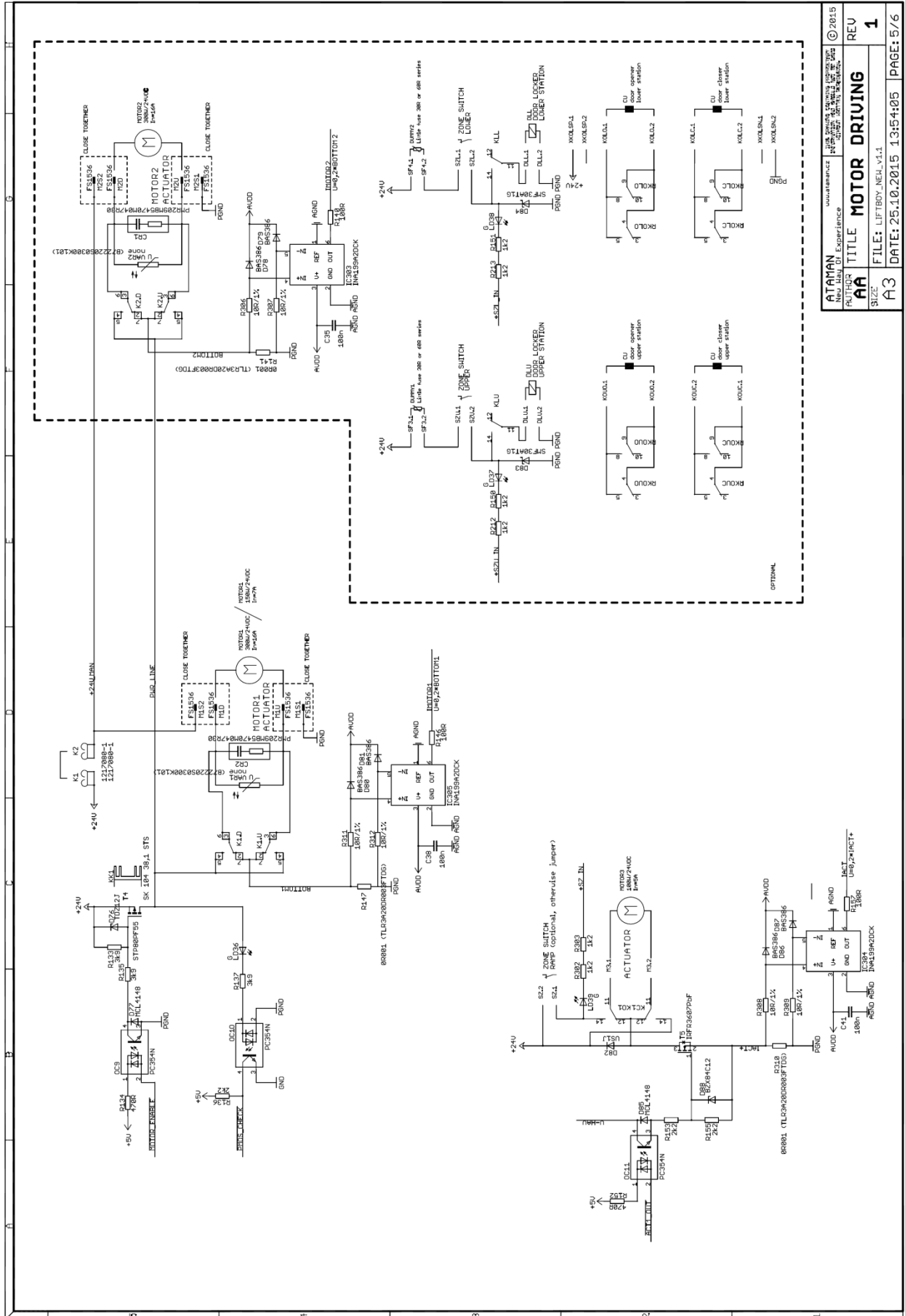
HELP HINT	
	<p>During the time when the opener is in „Standard version“, you also get corresponding messages on the display, such as UP. DOOR OPEN/SI: 0/SDU.</p> <p>Generally, this message serves as a hint for a possibility to activate the movement of the door in any direction and ,if the door is already moving, to change the direction of the movement.</p> <p>Note: if we choose the direction for the opening, the door stays in its fully opened position until next command from button S20 on the platform is given. Relay KLU=0 (not active)</p> <p>Ctrl up=0 ∨ Ctrl up=1 ∨ Ctrl down = 0 ∨ Wall ctrl up=0 ∨ Wall ctrl up=1 ∨ Wall ctrl down=0 ∨ RF- UP=0 ∨ RF- UP=1 ∨ RF down 0 ∧ S27-3=1 ∧ S27-2=0 ∧ SZU=1 ∧ ODU=1 ∧ SDU=0</p>
∨ ACTIVE DOOR	<p><b>Message shows only if the menu item „Version DO“ is set to „With blocking“.</b> If any of these three options is fulfilled:</p> <ol style="list-style-type: none"> <li>1. After reaching lower landing station, during the opening of the door or if the door is open, drive down button S21 was activated for time longer than 3 sec and this blocked lower door in opened position (see description above ^BLOCK. DOOR) Unblocking followed by closing of the door is possible after pressing drive down button S21 on the platform for time longer than 3 sec.</li> <li>2. By pressing drive up button S20 on the platform the unlocking of the door lock ended, this sped up the closing of the door. If during the closing of the door drive down button S21 was activated on the platform for time longer than 3 sec, the door starts to open again. Then after another press of the button it starts to close and so on.</li> <li>3. After the time for opening of the door runs out and automatic command for closing of the door is given (function of the door opener switched into „Standard version“) and the door did not close even after third automatically generated impulse, it is possible to try (if the opener’s CU is alright) to open/close the door by pressing drive down button S21 on the platform for time longer than 3 sec.</li> </ol> <p>During the time when the opener is in „Standard version“, you also get corresponding messages on the display, such as UP. DOOR OPEN/SI: 0/SDU.</p> <p>Generally, this message serves as a hint for a possibility to activate the movement of the door in any direction and ,if the door is already moving, to change the direction of the movement.</p> <p>Note: if we choose the direction for the opening, the door stays in its fully opened position until next command from button S21 on the platform is given. Relay KLL=0 (not active)</p> <p>Ctrl up=0 ∨ Ctrl down = 1 ∨ Ctrl down = 0 ∨ Wall ctrl up=0 ∨ Wall ctrl down=1 ∨ Wall ctrl down=0 ∨ RF- UP=0 ∨ RF down 1 ∨ RF down 0 ∧ S27-3=1 ∧ S27-2=0 ∧ SZU=1 ∧ ODU=1 ∧ SDU=0</p>

Schematics



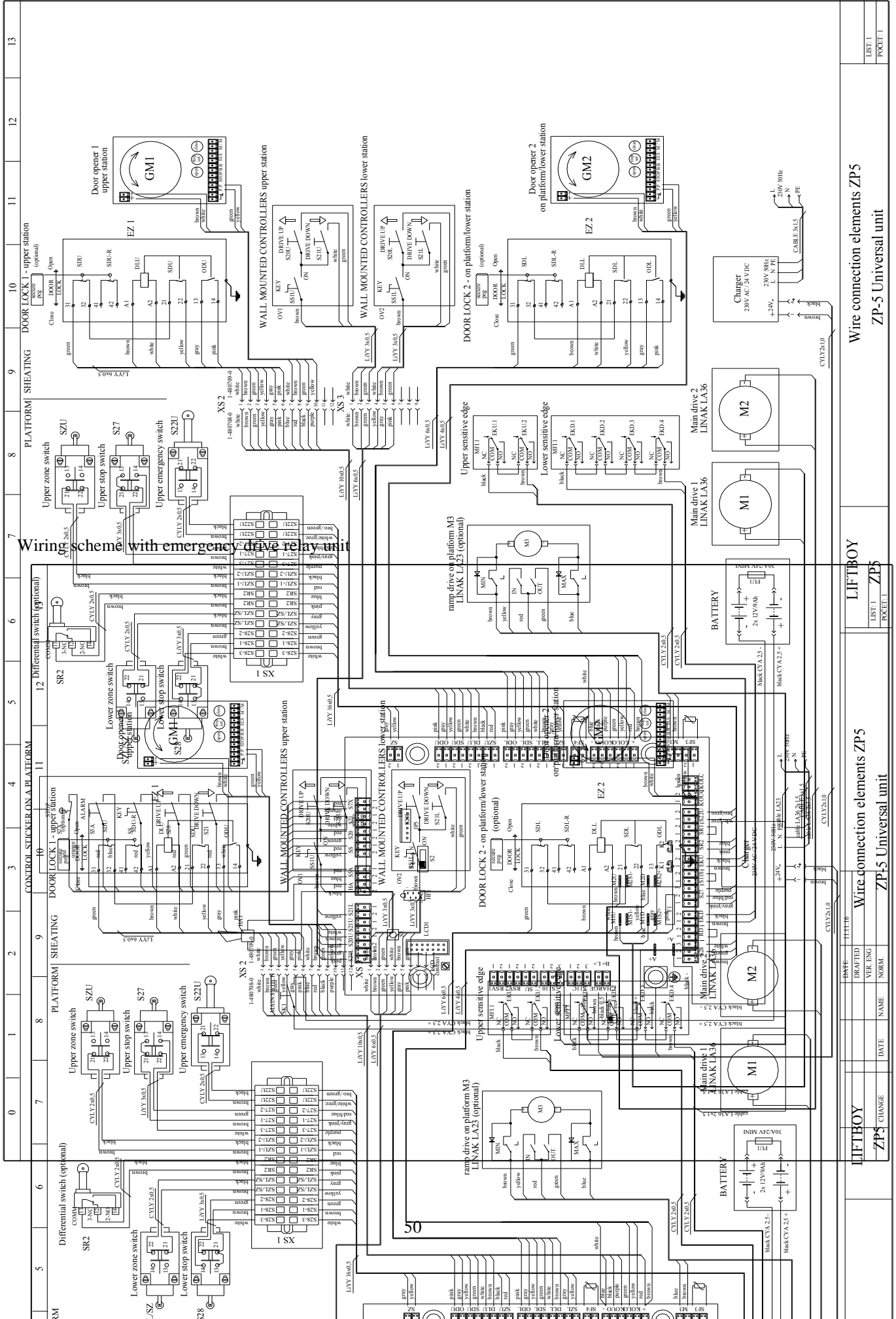
ATMAN Experience  
 AUTHORITY TITLE connectors, relays, I/Os  
 SIZE A3 DATE: 25.10.2015 13:54:05 PAGE: 4/6  
 FILE: LIFTBOY\_NEW\_V.1.1





ATAMAN AUTHOR	YILDIZLAR MAKINA VE OTOMASYON NEW HAVELI EXPERIENCE	© 2015
AA	TITLE	MOTOR DRIVING
A3	FILE:	LIFTBOY_NEL_V1.1
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	REV	1
	PAGE:	5/6

Wiring scheme without emergency drive relay unit



Wiring scheme with emergency drive relay unit

Wire connection elements ZP5  
ZP-5 Universal unit

LIFTBOY

Wire connection elements ZP5  
ZP-5 Universal unit

LIFTBOY

DATE	NAME	STATUS
		DRAWN
		VER. ENG
		NORM.