

MoviLift

BR400 V1.1

LIFT control board



Last release 05/02/2021

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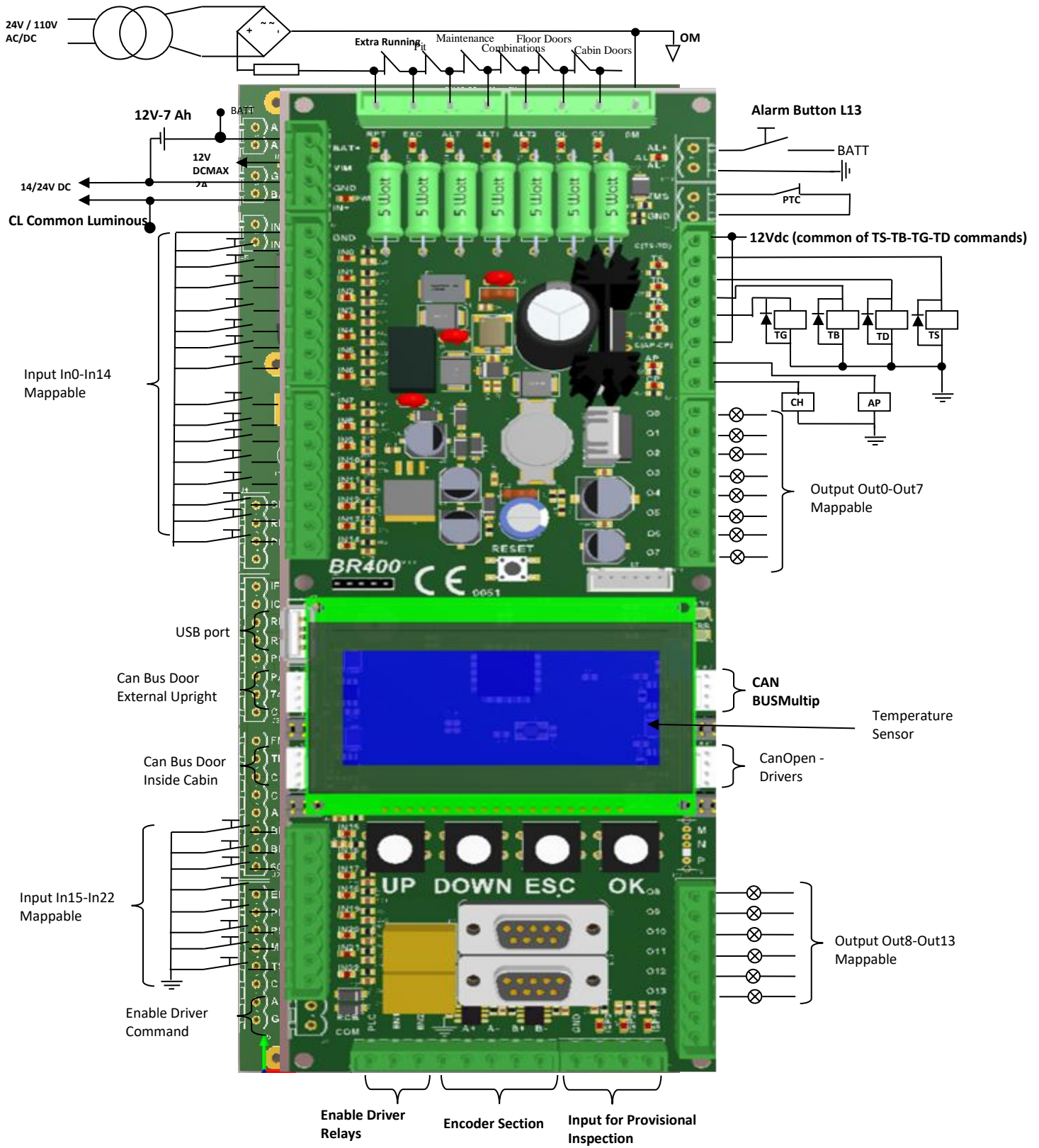
20 ANDROID APP107

Dear customer, we thank you for purchasing our lift board BR400 produced by us for the control of lift switchboards. Please read this manual carefully before installation and use.

5 Electrical Characteristics

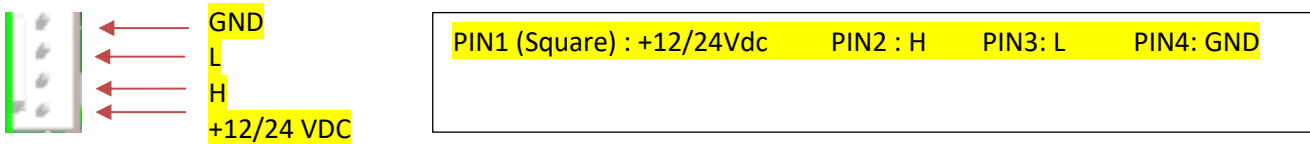
Feature	Description
Dimensions	90 x 250 mm
Weight	280g
Software	Contents in PIC 32Bit
Power supply voltage (IN+/IN-)	14-24 DC +/- 10%
Stabilized voltage output (+12-GND)	12VDC 2000mA
Battery charger 12V (BAT-GND)	13.8VDC 400mA
Overvoltage on inputs (MAX)	Up to 45VDC/AC
Safety series input (EXC/ ALT/ ALT1/ ALT2/ CS)	24-110VAC/DC
Load transistor outputs (MAX)	300mA
Configuration Parameters	The board is programmable via the keypad and via local software in RS232.
Compliance Standards	EN81.20 and EN81.50: 2014
Mass References	GND is the reference zero of the BR400 board. AL- is the reference zero of the Alarms circuit (Law13)
Operating temperature	From 0°C to +70°C

6 Summary Electrical Scheme BR400

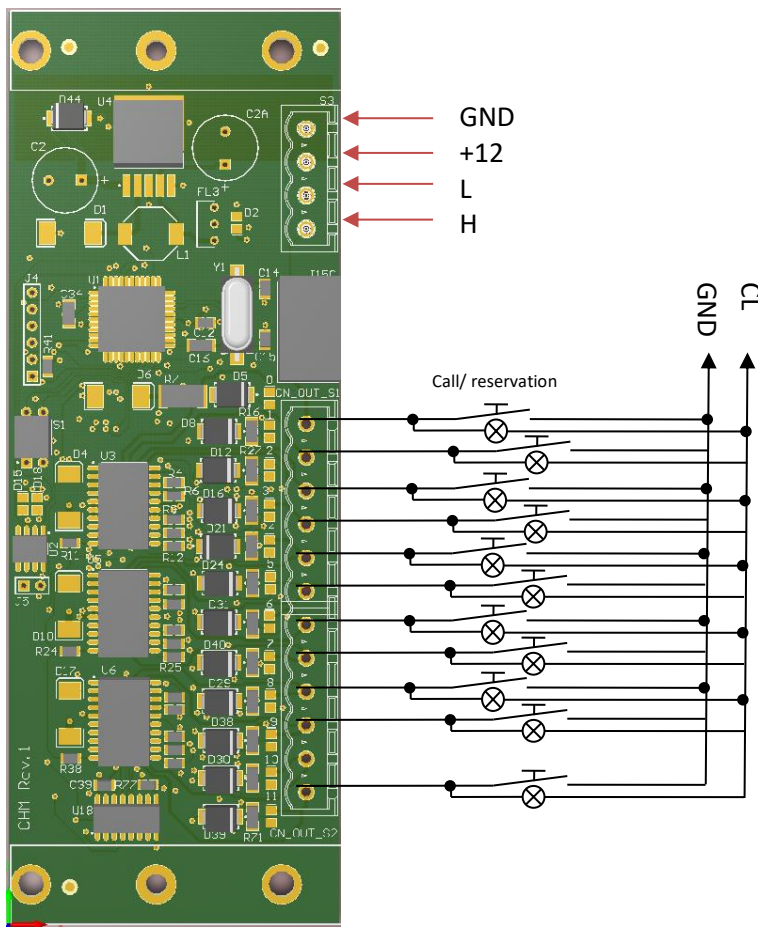


2.1 Mapping Port Can-bus

The CAN-bus port mapping is shown below: CAN1, CAN2 CAN3, CAN4



2.2 CHM Electrical Drawing



CHM board acquires floor or cabin calls in wiring mode. The configuration of these inputs / outputs varies according to the system configuration. Every single input/output is described at the “Serial boards chapter”.

This board must be powered by the BR400 CAN1 connector.

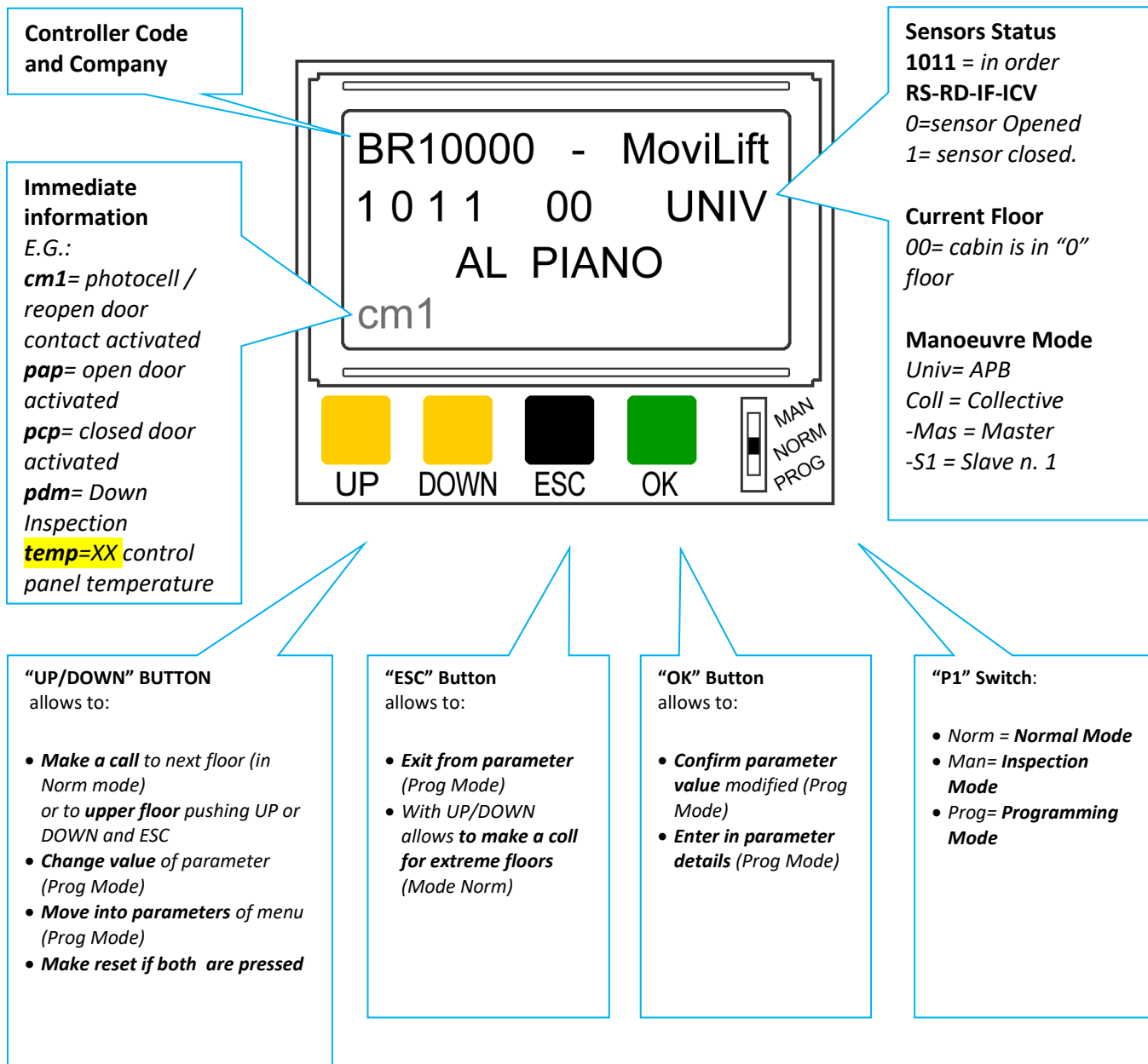
The supply voltage must not exceed 24VDC. Each input is protected for an overvoltage of 40Vcc.

1 Programming keypad and display

BR400 display gives access to parameters and allows board monitoring.

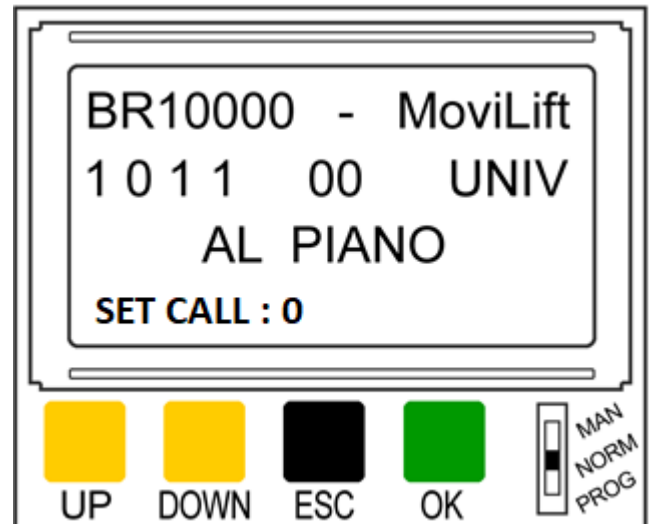
3.2 Programming keypad Description

For Normal mode move the cursor switch "P1" on **NORM** position.



By pressing the OK + UP keys at the same time for one second, you can select an intermediate floor call (useful function on serial systems, where calls on the CHM board cannot be performed because it is not available).

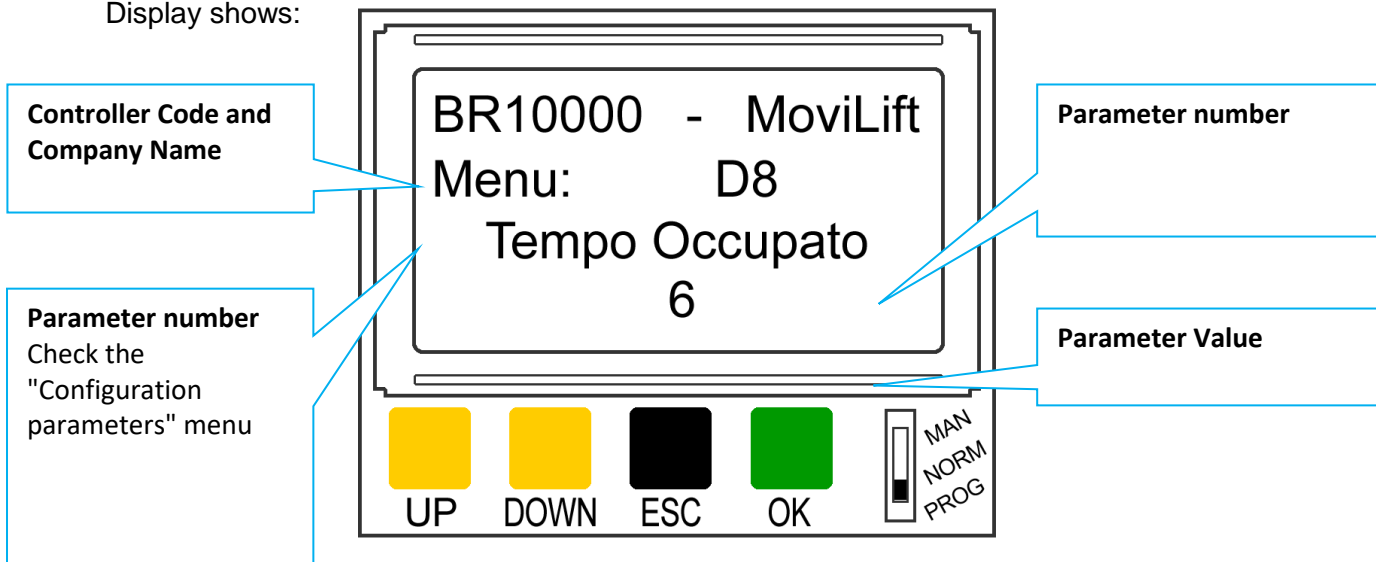
- 1- Press UP + OK for one second
- 2- SET CALL is going to be showed on the display
- 3- UP or DOWN allow to choose a call to the desired floor
- 4- Press the OK button to confirm or the ESC button to exit.



3.3 Programming Mode

To access the "Programming" mode, move the "P1" switch cursor to the PROG position.

Display shows:



UP/DOWN to select parameter to modify

ESC to exit from parameter

OK to enter in parameter

3.3.1 How to change a Parameter

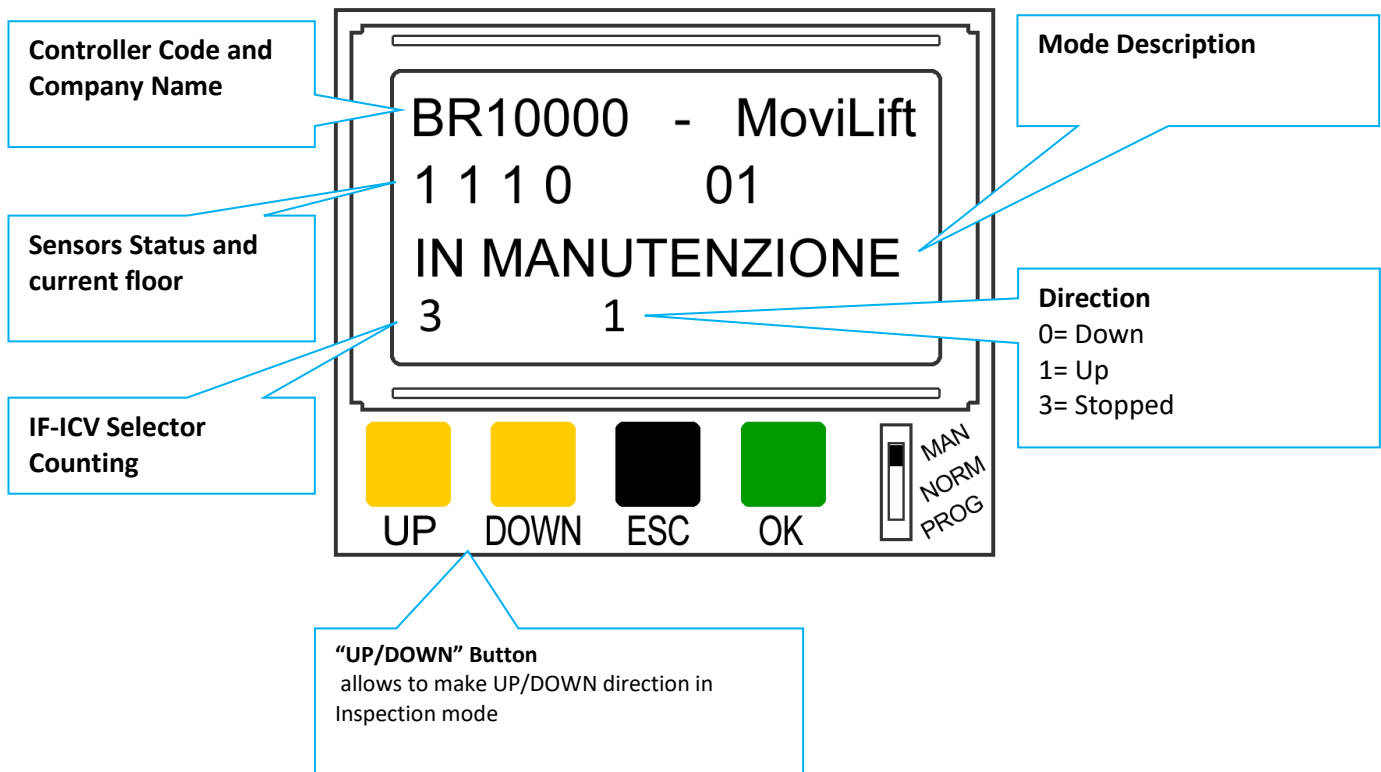
E.g. D8 parameter (busy time)

- 1- Move cursor on **PROG**
- 2- Push **UP** until "D" is showed (TIME).
- 3- Press **OK** and then **UP** until D8
- 4- Press **OK** and change value by **UP** or **DOWN**
- 5- Press **OK** to store the value

3.4 Inspection Mode

To access the "Maintenance" mode, move the "P1" switch cursor to MAN.

Display shows:



During the "Maintenance" mode the yellow LED with the word **MAN** remains on.

3.5 Monitoring Mode

To access the "Monitor" mode, press the ESC button for 6 seconds.

Display shows:

The diagram shows a rectangular display with a white background and a black border. The display is divided into two columns of text. The left column contains: IRS 1, IRD 0, IF 1, and ICV 1. The right column contains: APB, KP, ISP, and E90. To the right of the right column, the letters 'EP' are partially visible. Below the display are four colored buttons: a yellow button labeled 'UP', a yellow button labeled 'DOWN', a black button labeled 'ESC', and a green button labeled 'OK'. To the right of these buttons is a vertical slider switch with three positions: 'MAN' at the top, 'NORM' in the middle, and 'PROG' at the bottom. The slider is currently in the 'NORM' position. To the left of the display, a callout box titled 'Sensor Status' contains the text '1= On' and '0= Off'. To the right of the display, a callout box contains several sections: 'Manoeuvre:' with sub-items 'APB: standard', 'SD: simplex down', 'SF: Collective UP/Down', 'DS: Duplex Salve', and 'DM: Duplex Master'; 'Connections Description for internal and external calls:' with sub-items 'KP: Parallel in Cabin', 'KS: Serial in cabin', 'EP: Parallel Landings', and 'ES: Serial Landings'; 'Actual status:' with 'ISP: Inspection Activated'; and 'Error:' with 'Fault List'.

Sensor Status
1= On
0= Off

Manoeuvre:
APB: standard
SD: simplex down
SF: Collective UP/Down
DS: Duplex Salve
DM: Duplex Master

Connections Description for internal and external calls:
KP: Parallel in Cabin
KS: Serial in cabin
EP: Parallel Landings
ES: Serial Landings

Actual status:
ISP: Inspection Activated

Error:
Fault List

4 FAULTS

The presence of a fault on the system will be indicated by an error code on the display and the red LED ERR. The faults are listed in the table below in three categories:

Error: failure is self-restorable

Fault: not self-restorable need to reset or restart button board BR400

Blocking fault: not self-restorable and categorized like “important fault”, requires a manual reset required (“RESET” button) or a device reboot.

The board is capable of storing up to a maximum of 100 faults, and then continues by overwriting the oldest.

Faults will be stored also when BR400 is switched off.

4.1 Faults table

Fault Code	Type	Description	Cause / Solution
Err 0-31	Error	Locking contact error at indicated floor, after 4 attempts	Check CS locking contact
Err 32	Error	Locking contact error during the travel. "Withholding time RCB" expired after a restart attempt due to locking contact error.	Check safety series and CS led lighting. Check D9 parameter.
Err 33	Error	Bounce error of door circuit safety during run	Check led CS during run, it must be on. The control is activated after start in n seconds. The seconds can be edit in parameter D28. If D28=0, this control is disabled.
Err 36	Error	Missing (IF and ICV) sensors reading in the virtual zone.	Check the landing magnets position
Err 37	Error	Up pre-limit sensor error.RS input is not activated and selector is not at the upper floor	Check the up pre-limit sensor (RS) position and functioning
Err 38	Error	Down pre-limit sensor error.RS input is not activated and selector is not at the lowest floor	Check the down pre-limit sensor (RD) position and functioning
Err 39	Error	IF and ICV reversed sensors at the landing zone	Check IF and ICV position on floor is: IF at the highest and ICV at the lowest.
Err 40	Error	Missing IF sensor reading during the UP running	Check IF position and functioning
Err 41	Error	Missing IF sensor reading during the DOWN running	Check IF position and functioning
Err 42	Error	Missing ICV sensor reading during the UP running	Check ICV position and functioning
Err 43	Error	Missing ICV sensor reading during the DOWN running	Check ICV position and functioning

Err 44	Error	Up pre-limit sensor error.RS input is not activated before arriving at the upper floor	Check the number of stops at parameter A2 and check the position of the magnet or the correct operation of RS
Err 45	Error	Down pre-limit sensor error.RS input is not activated before arriving at the lower floor	Check the number of stops at parameter A2 and check the position of the magnet or the correct operation of RS
Err 46	Error	Down pre-limit sensor during the travel error.RS input is not activated after the lower floor zone	Check the magnet position or the RD functioning.
Err 47	Error	Up pre-limit sensor during the travel error.RS input is not activated after the upper floor zone	Check the magnet position or the RS functioning.
Err 48	Error	Down pre-limit sensor during the travel error. RD input does not deactivate at the lower zone.	Check the magnet position or the RD functioning.
Err 49	Error	Up pre-limit sensor during the travel error.RS input is not activated after the upper floor zone	Check the magnet position or the RS functioning.
Err 50	Locking fault	Lift at the end running. EXC LED off and safety circuit open	Locking error, resettable with voltage on EXC (safety series circuit) and by pressing the RESET button for 5 seconds.
Err 51	Fault	Travel time in UP direction.	Increase parameter D4 . Check cabin speed and magnets position
Err 52	Fault	Travel time in DOWN direction.	Increase parameter D4 . Check cabin speed and magnets position
Err 53	Error	Low speed time during UP direction.	Increase parameter D2 . Check cabin speed and magnets position
Err 54	Error	Low speed time during DOWN direction.	Increase parameter D2 . Check cabin speed and magnets position
Err 55	Error /Fault	High speed time during UP direction.	Increase parameter D3 . Check cabin speed and magnets position <i>Reset will be AUTOMATIC after 2mins. If it occurs 3 consecutive times it will be blocking fault</i>
Err 56	Error /Fault	Low speed time during DOWN direction.	Increase parameter D3 . Check cabin speed and magnets position <i>Reset will be AUTOMATIC after 2mins. If it occurs 3 consecutive times it will be blocking fault</i>
Err 57	Error	High speed contactor error.	APG always ON during high speed or Opening Door contactor always activated (Check Opening Limit and C1 and G5 parameters).
Err 58	Error	Low speed contactor error.	CPP always ON during high speed or Opening Door contactor always activated (Check Opening Limit and C1 and G5 parameters).

Err 59	Locking fault	CS input always activated during door opening.	Landing door and / or cabin doors contacts bridged
Err 60	Error	ALT input off	Check safety Circuit ALT
Err 61	Error	ALT1 input off	Check safety Circuit ALT1
Err 62	Error	ALT2 input off	Check safety Circuit ALT2
Err 63	Error	Photocell input always opened at floor	Check photocell functioning on CM1-CM2
Err 64	Error	PAP input always activated	Check button PAP .
Err 65	Error	Selector with encoder Error	When lift arrive at floor and levelling wronged about 1cm (tolerance can be regulated at parameter N11) for Auto learning quote.
Err 66	Error	Long stop Error. IF/ICV Sensor passed during the stop.	Check deceleration space (low speed) or correct switching High/Low speed.
Err 67	Error	Levelling error in lower floor	Levelling made for 6 consecutive times. Cabin will be redirect to GF floor.
Err 68	Error	Levelling error in intermediate floor	Levelling made for 6 consecutive times. Cabin will be redirect to GF floor.
Err 69	Error	Levelling Error	Board make levelling but cabin no reach the floor. Check parameter D15 or NC80 (safety module (magnets position SEM/IF/ICV) After this error, phasing in lower floor will be made.
Err 70	Error	Error phasing sensors reverse.	Check position and correct functioning of sensors RS and RD
Err 71	Error	Error phasing sensors opened.	Check position and correct functioning of sensors RS and RD
Err 72	Locking fault	Levelling error (time expired).	After 4 levelling trials in lower floor cabin not reach STOP zone.
Err 73	Locking fault	Shaft access happened	Only for low pit/headroom. To reset press RESET BUTTON for 5sec.
Err 74	Error	Pit access happened	IN7 input on CHM_MAN board isn't active. This error is generated if is activated the regulations EN81.20 (parameter C12). To reset the error the rescue key on the lower floor must be activated.
Err 75	Error	Error 60°oil temperature	Input 60 . Check probe working or parameter F1.
Err 76	Error	Motor Thermistor	Input TMS . Check thermistor working or parameter F5
Err 77	Error	Not start in Collective Mode	Cabin does not start after 1 minute. Check overload, safety circuits.
Err 78	Error	Missed start from UP Zone	Cabin not left STOP ZONE. Current Call will be deleted and new call will be waited.

Err 79	Error	Missed start from DOWN Zone	Cabin not left STOP ZONE. Current Call will be deleted and new call will be waited																		
Err 80	Error	HIGH speed contactor TS not activated during UP direction	Input TSD activated during UP direction. Check runs contactor.																		
Err 81	Error	LOW speed contactor TD not activated during DOWN direction.	Input TSD activated during UP direction. Check runs contactor.																		
Err 82	Error	speed contactors TS/TD blocked	Input TSD off when lift is stopped. Check runs contactor.																		
Err 83	Error	<i>Error on Car door operator with limit</i> CPP input always active during the door closing	CPP not turn off. Closing limit not works.																		
Err 84	Error	<i>Error on Car door operator with limit</i> APG always activated during the door opening	Faulty closing limit. If EN81-20/50 function is activated (C12 parameter) check the closed car door monitoring from the door operator																		
Err 85	Error	<i>Error on Car door operator with limits</i> During the closure , when CPP is not activated , C3 parameter expires	Increase parameter C3 or operator main supply. Door closing time is too low																		
Err 86	Error	<i>Error on Car door operator with limits</i> During the closure , when CPP is activated ,and CS is not activating after the end of door closure	Door closing contact from the door operator does not close. Check door operator CS contact (safety series)																		
Err 87	Error	<i>Error on Car door operator with limit</i> APG always is activated during the door opening and CS is always active	During the door opening safety series are still closed (CS active). Check the locking door or the door operator power supply.																		
Err 88	Error	<i>Error on Car door operator with limits</i> Door opening time is too low .When APG is not active during the opening, c2 parameter expires.	Increase the C2 parameter. Check the door operator power supply. Door opening time is too low																		
Err 89	Error	EEPROM error	<p>Data error in EEPROM the incongruent parameter:</p> <table border="1"> <thead> <tr> <th>SUB CODE</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Errore durante la scrittura dei dati in eeprom</td> </tr> <tr> <td>2</td> <td>Errore durante la lettura dei dati in eeprom</td> </tr> <tr> <td>3</td> <td>Errore durante un comando di scrittura in eeprom</td> </tr> <tr> <td>4</td> <td>Errore durante un comando di lettura in eeprom</td> </tr> <tr> <td>5</td> <td>Intervento Timeout in eeprom</td> </tr> <tr> <td>6</td> <td>Errore durante la scrittura degli errori in eeprom</td> </tr> <tr> <td>7</td> <td>Errore durante la lettura degli errori in eeprom</td> </tr> <tr> <td>8</td> <td>Errore durante la lettura dei parametri di defalut di fabbrica.</td> </tr> </tbody> </table>	SUB CODE	Description	1	Errore durante la scrittura dei dati in eeprom	2	Errore durante la lettura dei dati in eeprom	3	Errore durante un comando di scrittura in eeprom	4	Errore durante un comando di lettura in eeprom	5	Intervento Timeout in eeprom	6	Errore durante la scrittura degli errori in eeprom	7	Errore durante la lettura degli errori in eeprom	8	Errore durante la lettura dei parametri di defalut di fabbrica.
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Err 90	Error	Error in communication with CAN module CHM0	<i>First board damaged</i> , reverse connection of CAN or wronged setting of dip-switch on CHM
Err 91	Error	Error in communication with CAN module CHM1	<i>Second board damaged</i> , reverse connection of CAN or wronged setting of dip-switch on CHM
Err 92	Error	Error in communication with CAN module CHM2	<i>Third board damaged</i> , reverse connection of CAN or wronged setting of dip-switch on CHM
Err 93	Error	Error in communication with CAN module CHM3	<i>Fourth board damaged</i> , reverse connection of CAN or wronged setting of dip-switch on CHM
Err 94	Error	Error in communication with CAN module COP	<i>Cabin Serial board COP</i> damaged, reverse CAN connections
Err 95	Error	Error in communication with module CAN CHM2S	Serial board for landing calls damaged, reverse CAN connections or CHM2S Programming error
Err 96	Error	Error push button is stuck	Verify connections or call push button.
Err 97	Error	Can Bus error communication with nZEN device	Check connections
Err 98	Error	Selector with encoder Error	Error missed communication with BR_ENC.
Err 99	Error	No communication with CHM MAN board	Verify the connection with motherboard
Err 103	Locking fault	Relevelling error. AR input not active during the levelling phase. Active only with H9=1 parameter.	<ul style="list-style-type: none"> - Check the safety module functioning. AR needs to be active during the opened doors levelling.
Err 104	Error	Missed A3 test procedure	<ul style="list-style-type: none"> - Missed procedure during A3 test for hydraulic lift during 24h because missed contact CS.
Err 107	Locking fault	A3 Uncontrolled Movement Error. During the run inputs BR1 and BR2 must be active.	Check the operation of the brake switches. During the run inputs BR1 and BR2 must be active.
Err 108	Locking fault	A3 Uncontrolled Movement Error. Brake switch monitoring error on the traction lift	<ul style="list-style-type: none"> - Check the operation of the brake switches. It can occur in two cases: BR1 and BR2 inputs are not active during a not working lift.
Err 109	Locking fault	Error A3 Amendment on Hydraulic lift	Error valve 1 – levelling happened during power supplying valve V1
Err 110	Locking fault	Error A3 Amendment on Hydraulic lift	Error valve 2 – levelling happened during power supplying valve V2
Err 111	Error	Selector with encoder Error <i>Absolute encoder errors</i>	Auto learning failed. Incongruity during encoder reading (in up and down)
Err 112	Error	Selector with encoder Error <i>Absolute encoder errors</i>	Lift arrive at floor in Up direction but not respect acquired quote during Auto learning and missing sensor ZP

Err 113	Error	Selector with encoder Error <i>Absolute encoder errors</i>	Lift arrive at floor in Down direction but not respect acquired quote during Auto learning and missing sensor ZP
Err 114		Speed into the rephasing sensors <i>Absolute encoder errors</i>	Speed of entry into the rephasing sensors greater than the value of N17
Err 115	Error	Selector with encoder Error <i>Absolute encoder errors</i>	Synchronization Missed
Err 116	Error	Selector with encoder Error <i>Absolute encoder errors</i>	During travel, meets stop sensor (ZP) that control if pulses are congruent with acquired quote during Auto learning. If not congruent , in slow speed, lift stop at nearest floor.
Err 117	Error	Selector with encoder Error <i>Absolute encoder errors</i>	Failure to read the ZP sensor with respect to the height that the BR-ENC acquired during the learning of the shaft. ZP magnet missed.
Err 118	Error	Selector with encoder Error <i>Absolute encoder errors</i>	During travel meets stopping sensor (ZP) and checks if impulses and congruent with margin of error to acquired quotes. In case they are superior to the expected value and its tolerance set in parameter N10 the board works in low speed and stops at the first useful floor.
Err 120	Error	Stopped Encoder error Error created during the starting phase <i>Absolute encoder errors</i>	<ul style="list-style-type: none"> - Error created during the starting phase when: - The BR-ENC board does not receive feedback from the actual speed from the inverter (input IN0) - The BR-ENC board does not receive any encoder impulses. <p>In this case, board does not register any command and cancel the actual call</p>
Err 121	Error	UP direction Encoder error <i>Absolute encoder errors</i>	Board enables up direction but from encoder received down direction. Reverse encoder direction
Err 122	Error	UP direction Encoder error <i>Absolute encoder errors</i>	Board enables down direction but from encoder received down direction. Reverse encoder direction
Err 123	Error	Photocell intervention for 50 consecutive times during door closing	Check for any obstacles on the doors.
Err 124	Locking fault	Safety contact for landing doors. DL input doesn't turn off with the doors open.	Check that the landing doors safety contact works correctly.

Err 125	Error	Incremental pulse counting failure. Error generated during the start phase. (Active only if parameter N13 = 1). * absolute encoder errors	Error generated when starting: - The BR-ENC board receives feedback from the actual speed inverter (input IN0) - The BR-ENC board does not receive pulses from the encoder after the stop zone (ZP sensor not active). In this case the board forces the low speed and stops on the first useful plane.
Err 126	Error	Missing Cabin Movement. Error generated during the start phase. (Active only if parameter N13 = 1). * absolute encoder errors	Error generated when starting: - The BR-ENC board receives feedback from the actual speed inverter (input IN0) - The BR-ENC board does not receive pulses from the encoder. In this case, the board releases all the commands and cancels the current call.
Err 127	Error	Uneven movement of the cabin (Active only if parameter N13 = 1). * absolute encoder errors	Error generated when starting: - The BR-ENC board does not receive feedback from the actual speed inverter (input IN0) - The BR-ENC board does not receive pulses from the encoder - the car has passed the stop zone (ZP sensor) In this case, the board releases all the commands and cancels the current call.
Err 128	Error	Aladino device communication error	Damaged Aladino device, CAN reversed connections.
Err 130	Error	Watch-dog Error BR200	Board internal block so restarted
Err 131	Error	watch-dog Error COP	COP board internal block so restarted
Err 132	Error	CAN-BUS data slowdown error	<ul style="list-style-type: none"> - Checking the BUS-OFF event on the CAN-BUS network. Possible slowing down of data on the CAN-BUS. Check the following checks: <ul style="list-style-type: none"> - 60ohm line impedance - Eliminate mass rings - Perform a voltage measurement on the H and L signals of the canbus relative to GND. Verify that there is a voltage from 2V to 2.6V - Check that the TVS (transzorb) are not short-circuited - Make sure that the shield (shield) from the twisted cable is connected to the ground connection on one side only. - Check that the motor earth is connected correctly - Check all the lands of the plant.
Err 133	Locking fault	Error attempting to access an unused plan. Activated only with parameter C13.	Verify access denied to parameter C13
Err 134	Error	AR input during levelling with open doors isn't active.	Verify the functioning of the security form during leveling, placed in the control panel

Err 135	Error	Number of Lightcurtain interventions	Verify the right light curtain work and be sure that it isn't excluded.																																
Err 136	Error	Parameter incongruity	<p>This error is made when there are many parameters incongruent between them. It generates a subcode to identify the parameters</p> <table border="1"> <thead> <tr> <th>SUB CODE</th> <th>Parameter incongruity</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>B1 non match with ropes configuration</td> </tr> <tr> <td>2</td> <td>D3>30: not match with ropes configuration</td> </tr> <tr> <td>3</td> <td>G5 not match with ropes configuration</td> </tr> <tr> <td>4</td> <td>G5 not match with hydraulic configuration</td> </tr> <tr> <td>5</td> <td>B2 e D3 not match with hydraulic configuration</td> </tr> </tbody> </table>	SUB CODE	Parameter incongruity	1	B1 non match with ropes configuration	2	D3>30: not match with ropes configuration	3	G5 not match with ropes configuration	4	G5 not match with hydraulic configuration	5	B2 e D3 not match with hydraulic configuration																				
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Err 137	Error	Landing door contact monitoring error after 4 attempts DL input does not activate at the end of closing doors	Check safety circuit and working of DL input																																
Err 140	Error	Modem Error	Modem not found from Board																																
Err 150	Error	Communication error Master/Slave	Master board can't find Slave Board X																																
Err 151	Error	Communication error Master	Slave board can't find Master Board.																																
Err 160	Error	CAN OPEN communication error	<p>This error occurs when the second CAN2 port is used in CAN-Open mode. Below is the subcode for identifying the problem on the bus::</p> <table border="1"> <thead> <tr> <th>Sub Code</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Heart Beat</td> </tr> <tr> <td>2</td> <td>Expired window sync</td> </tr> <tr> <td>3</td> <td>Expired window sync PDO</td> </tr> <tr> <td>4</td> <td>SDO download Abort</td> </tr> <tr> <td>5</td> <td>SDO download Abort Index</td> </tr> <tr> <td>6</td> <td>SDO download Abort Retry</td> </tr> <tr> <td>7</td> <td>SDO download Index invalid</td> </tr> <tr> <td>8</td> <td>SDO download Comand Invalid</td> </tr> <tr> <td>9</td> <td>SDO download Time Out</td> </tr> <tr> <td>10</td> <td>SDO upload Abort</td> </tr> <tr> <td>11</td> <td>SDO upload Abort Index</td> </tr> <tr> <td>12</td> <td>SDO upload Abort Retry</td> </tr> <tr> <td>13</td> <td>SDO upload Index invalid</td> </tr> <tr> <td>14</td> <td>SDO upload Comand Invalid</td> </tr> <tr> <td>15</td> <td>SDO upload Time Out</td> </tr> </tbody> </table>	Sub Code	Description	1	Heart Beat	2	Expired window sync	3	Expired window sync PDO	4	SDO download Abort	5	SDO download Abort Index	6	SDO download Abort Retry	7	SDO download Index invalid	8	SDO download Comand Invalid	9	SDO download Time Out	10	SDO upload Abort	11	SDO upload Abort Index	12	SDO upload Abort Retry	13	SDO upload Index invalid	14	SDO upload Comand Invalid	15	SDO upload Time Out
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Err 200-231	Error	Landing locking contact error. It resulted during the first 4 attempts.	<p>Check doors safety contacts and locking contacts.</p> <p>Error generated during the first three attempts to close CS locking contacts, stationed or departing.</p> <p>E.g.: error 201 on the 1st floor</p>																																

Err 240-250	Error	Safety Module (Active only if parameter H9 = 1)	Error	During the releveling phase, if the safety module is not in order, the board does not relevel the floor but goes to re-phase generating an error. The AR input must be active during the releveling with the doors opened. This error is differentiated according to the floor where the event occurred (max 10 floors). Check the safety module operation.
Err 255	Null	Null		No error.

7 SETTING PARAMETERS

A= Settaggi Generali

A

PARAMETERS	DESCRIPTION	VALUE
A1	Language	1: Italian 2: English 3: Spanish 4: Romanian
A2	Stops	02 – 32 stops
A3	Selector	0: Normal 1: Reverse in each floor 2: Regular/Short/reverse Floor <i>* If speed is higher than 1.2m/s with option "short floor" or "reverse" selected please check that in lower and/or upper floor is installed phasing sensor to disable high speed.</i> 3: Selector with encoder (Check paragraph 6.5)
A4	Intermediate Speed	1: High Activity on A1 2: Intermediate Activated
A5	Typology of Lift	1: AC2 2: VVVF 3: Hydraulic 4: HOMELIFT
A6	Manoeuvres	1: APB (Universal) 2: APB (Universal) INT-EXT 3: By man 4: Down collective 5: UP/DOWN collective 6: DUPLO Check paragraph 16
A7	Levelling	1: Lower floor 2: Upper Floor
A8	Inspection Speed	0: Inspection in low speed / Stopped on Phasing Sensor 1: Inspection in High speed/ Stopped on Phasing Sensor 2: Inspection in low speed / Stop in Zone 3: Inspection in high speed / Stop in Zone
A9	Simplex or Duplex/Multiplex	0 : Simplex 1 : Duplex Master (via RS232) 2: Duplex Slave (via RS232) 11 : Duplex/Multiplex Master (via CAN bus) 12: Duplex/Multiplex Slave (via CAN bus) Check paragraph 16
A9 (Master)	Number of Slave	1 – 5: Number of slave that can be managed
A9 (Master)	Number of Floors	1 – 32: Number of floor to manage further actual floor in multiplex
A9 (Master)	Number of Reservations	1 – 32: Number of reservation to manage in multiplex
A9 (Slave)	Progressive Index	1 – 5: Progressive code of this Slave

A10	ARD Activation	1: ARD activated 2: ARD activation for MRL Controller Check paragraph Errore. L'origine riferimento non è stata trovata.
A11	Fireman floor	0 -33 Destination floor when Firemen switch activated (33 = not active). Chapter Errore. L'origine riferimento non è stata trovata.
A12	No-Fire Procedure	0 : Disabilitato 1 : Abilitato Chapter Errore. L'origine riferimento non è stata trovata.
A13	Down main floor	0-33 Chapter Errore. L'origine riferimento non è stata trovata.
A14	Lift Test	0: Disabled 1: Test function enabled. Allows you to make calls without opening or closing the doors. Useful when you have to test the performance of the system (various settings) without waiting for opening and closing times.
A15	Maintenance Management on Homelift platform	0 = Disabled 1 = Enabled. Direction commands are made directly by call buttons. Moreover on COP input X1 there are the downhill pre-phaser that allows to stop the run in maintenance.
A16	Platform management (HomeLift)	0 = Disabled (after the Over-run resetted, the board does a Rephasing call at the bottom floor) 1 = Enabled (after the Over-run resetted, the board doesn't a Rephasing call at the bottom floor)

B= A3 Amendment Settings

	PARAMETER	DESCRIPTION	VALUE
B	B1	A3 Amendment	0: Disabled 1: Activated control BR1-BR2 (Brake Switches) 2: Down valves activated control (DLV) 3: Activated control A3 for GMV power units
	B2	Timer 1 for A3	1 – 50 tenths of a second
	B3	Timer 2 for A3	1 – 50 tenths of a second

C= Doors

	PARAMETER	DESCRIPTION	VALUE
C	C1	Limits Management	0: Car door operator without limits 1: Car door operator with limits
	C2	Door Opening TIME	Max time for opening doors in sec (2 – 15s).
	C3	Door Closing TIME	Max time for closing doors in sec (2 – 15s).
	C4	Waiting time with opened door	Waiting time with opened door in sec (1 – 15s).
	C5	Door Opening Delay	Door Opening Delay in sec (0 - 5s).
	C6	Side Opening.	0: Not Activated

	Programmable in each floor	1: Side A 2: Side B 3: Opposite 4: Selected
C7	Parking	0: Parking with open door 1: Parking with closed door
C8	Operator powered during the travel	0: Not powered during the travel 1: Powered during the travel
C9	Door type	0 : Manual 1 : Automatic 2 : Semi-automatic Swing
C10	Reverse parking 1	0-33 : Setting 1 of the floor where to perform a door stationing opposite to parameter C7. Value 33 = deactivated
C11	Reverse parking 2	0-33: Setting 2 of the floor where to perform a door stationing opposite to parameter C7. Value 33 = deactivated
C12 (da v1.064)	Door closing limit monitoring, CPP input	0: Disabled 1: Enabled N.O. 2: Enabled N.C.
C13	Not served floor	0-33: denied floor access. On this floor the doors are not opened and lift goes out of service. Value 33 = deactivated
C14	DL input monitoring	0: Disabled 1: Enabled: input DL works as landing door contact monitoring
C15	Timer delay CP	0-50 tenths of a second
C16	Reset management after dopo access to the pit	0: To reset the error 74, turn the rescue key twice. (input IN7 on CHM_MAN) 1: To reset the error 74, turn the rescue key once. (input IN7 on CHM_MAN)
C17	Monitoring of the correct lightcurtain functioning	0-20 = Interventions number (how many times the lightcurtain doesn't work) 0 = Disabled. It is generated the error 135 and on the serial display will appear the Out of service and maintenance icons.
C18	operator a single command	0 = Disabled: door operator works with opening and closing commands 1 = Enabled: door operator works only with closing command
C19	Waiting time with opened door on IT1	0 – 60 waiting time with opened door upon activation of input IT1 0 function disabled.
C20	Retiring cam delay off	0 – 60 tenths of a second
C21	CM logic	0= activated n.o. 1= activated n.c.
C22	Door pre-opening	0= disable 1= enable see chapter 13.7 door pre-opening

D= Timings

	PARAMETER	DESCRIPTION	VALUE
D	D1	Max time with photocell activated.	Photocell Time. 1-255 sec.
	D2	Max time for low speed.	3-50 sec.
	D3	Max time for high speed.	3-80 sec.

D4	Travel time	1-255 sec.																		
D5	14 minutes time.	Time to return at lower floor after 14 min lift stopped in a floor. Only for hydraulic lift 0: Not activated 1: Activated																		
D6	Parking floor	0 – 33 (select parking floor, 33= not activated). <i>Chapter Errore. L'origine riferimento non è stata trovata.</i>																		
	Time to move lift in parking floor	1 – 30 min																		
D7	Deceleration delay time <i>(Delays the exchange from high speed to low speed)</i>	0 – 20 tenths of a second. This timer depends by selector set in Par A3 and enabled automatically with intermediate speed (Par. A).																		
		<table border="1"> <thead> <tr> <th>Parameter A3</th> <th>Parameter A4</th> <th>Activation Timer D7</th> </tr> </thead> <tbody> <tr> <td rowspan="2">0 – Normal Selector (Deceleration on ICV in UP and on IF in DOWN)</td> <td>2-Intermediate Speed enabled</td> <td>Timer D7 not considered. Deceleration will be regulated by magnets IF and ICV.</td> </tr> <tr> <td>1- Intermediate Speed disabled</td> <td>Timer D7 not considered. Deceleration will be regulated by magnets IF and ICV</td> </tr> <tr> <td rowspan="2">1 – Reverse Selector (Deceleration on IF in UP and on ICV in DOWN)</td> <td>2- Intermediate Speed enabled</td> <td>Timer D7 is considered only on nearer floor.</td> </tr> <tr> <td>1- Intermediate Speed disabled</td> <td>Timer D7 working. Speed change is delayed in each floor.</td> </tr> <tr> <td rowspan="2">2 – Normal Selector With one short floor or reversed floor.</td> <td>2- Intermediate Speed enabled</td> <td>Timer D7 will work only when lift reach short/revers floors and this floor are nearer floors.</td> </tr> <tr> <td>1- Intermediate Speed disabled</td> <td>Timer D7 will work only when lift reach short/revers floors</td> </tr> </tbody> </table>	Parameter A3	Parameter A4	Activation Timer D7	0 – Normal Selector (Deceleration on ICV in UP and on IF in DOWN)	2-Intermediate Speed enabled	Timer D7 not considered. Deceleration will be regulated by magnets IF and ICV.	1- Intermediate Speed disabled	Timer D7 not considered. Deceleration will be regulated by magnets IF and ICV	1 – Reverse Selector (Deceleration on IF in UP and on ICV in DOWN)	2- Intermediate Speed enabled	Timer D7 is considered only on nearer floor.	1- Intermediate Speed disabled	Timer D7 working. Speed change is delayed in each floor.	2 – Normal Selector With one short floor or reversed floor.	2- Intermediate Speed enabled	Timer D7 will work only when lift reach short/revers floors and this floor are nearer floors.	1- Intermediate Speed disabled	Timer D7 will work only when lift reach short/revers floors
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D8	Busy time	0 – 255 sec.																		
D9	Holding time RCB	Time in which the board does not lose the call after opening the safety series during travel. 1 – 5 sec.																		
D10	Delay stop time 1	0 - 20 tenths of a second. Added to Timer D26, the total delay time in the zone is obtained.																		
D11	Emergency cycle time	1 - 20 seconds.																		
D12	K96 Time	1 - 255 seconds.																		
D13	TSD time during travel	0 – 50 tenths of a second . <i>Chapter Errore. L'origine riferimento non è stata trovata..</i>																		
D14	TSD time at floor	0 – 50 tenths of a second . <i>Chapter Errore. L'origine riferimento</i>																		

		on è stata trovata..
D15	Levelling time	1-20 seconds
D16	Opening door time after photocell operation	0 – 20 sec. Delay time for door opening during door closing after photocell activation.
D17	Re-phase reboot time after maintenance	0 – 20 sec Time after which the power factor correction is performed, at the exit of the Maintenance manoeuvre. Set to 0, it does not perform re-phase. Time after which the lift exits the maintenance goes to Re-phase. If this time is set to 0, the system does not need to be re-phased after maintenance, but stores the current position.
D18	GONG time activation	0 – 20 Seconds (0= deactivated)
D19	Brake release Delay time	1 - 20 tenths of a second. Timer Activated only when F6 = 2 or 4. Chapter Errore. L'origine iferimento non è stata trovata.
D20	Travel contactors release delay time	1 - 20 tenths of a second. Timer Activated only when F6 = 2 or 4. Chapter Errore. L'origine iferimento non è stata trovata.
D21	Emergency Travel Time	0 – 180 seconds. Chapter Errore. L'origine riferimento non è stata trovata.
D22	Max Time Reservation	0 – 255 sec. Time during reservation is storage in memory. After this time reservation cancelled and error 77 appear. When D22 = 0 this function is disabled
D23	Encoder TIME check	1 – 100 tenths of a second. During this time is checked the correct rotation of encoder. Mainly is checked the direction read by encoder is the same BR100 is giving This gives errors 120, 121,122. These errors aren't blocking errors but cause immediately STOP and cancellation of all reservation;.
D24	Charger-battery Relay time	0 – 255 minutes In emergency, time reserved to relay of charger-battery
D25	Low Speed time delay Start speed	0 – 90 tenths of a second Time in which start in high speed to can commute in slow speed to can give more power in case of difficult start.
D26	Delay stop time 2	0 – 9 hundreds of a second. Added to TIMER D10 it is possible to get total delay time.
D27	Time Delay for reading IF and ICV inputs	0-50 thousandths of a second
D28	Timer error 33 Door safety circuit bouncing	0 – 100 tenths of a second 0: control disabled

E= Errors

E	PARAMETER	DESCRIPTION	VALUE
	E1	Fault List	Error code and how many hours before it happened
	E2	Reset Fault List	Note: reset is allowed only if there are no blocking faults (from v1.066)
	E3	Error frequency	Number of times errors occurred
	E4	Diagnostics Error 132	Number of times errors 132 occurred with the respective times (max 20 errors)

F= Input/output Activation

F	PARAMETER	DESCRIPTION	VALUE
	F1	Input 60 60° control, only on hydraulic lift.	0: Not Activated 1: Activated N.O. (stop on the first floor useful) 2: Activated N.C. (stop on the first floor useful) 3: Activated N.O. (immediate stop) 4: Activated N.C. (immediate stop)
	F2	Input 74 Overcharge	0: Not Activated 1: Activated N.O. Fixed Light 'SVC' 2: Activated N.C. Fixed Light 'SVC' 3: Activated N.O. Blinking Light 'SVC' 4: Activated N.C. Blinking Light 'SVC'
	F3	Input FM Movable Floor	0: Disabled 1: Activated N.O. 2: Activated N.C.
	F4	GONG Activation	0: GONG Activated during low speed change. 1: GONG Activated during door opening.
	F5	TMS input Motor Thermic control Activation	0: Not Activated 1: Activated N.O. (stop on the first floor useful) 2: Activated N.C. (stop on the first floor useful) 3: Activated N.O. (immediate stop) 4: Activated N.C. (immediate stop)
	F6	A-B-C-D configuration	0: Activation ABCD per binary code 1: Activation ABCD per Gray code 2: Activation ABCD per inverter driving (General Purpose) 3: Activation ABCD per prewired system 4: Activation ABCD per prewired system + inverter driving (General Purpose) 5: 1line/floor 6: Activation ABCD for inverted binary code. Chapter Errore. L'origine riferimento non è stata trovata.
	F7	OT1-OT2 activation	0: deactivated 1: output OT1 is used for fireman forced door closing manoeuvre Chapter 13.7 2: micro-leveling enable 3: output for brake activation (emergency PM motor) 4: output for star-delta timer hydraulic power units 5: timer for K380 contactor 6: OT2 output is on only when both sensors IF+ICV are activated. SCP replication 7: OT2 output is on only when one of sensors IF or ICV are activated. 8: OT1 output for emergency end.
	F8	IF-ICV sensors logic	0: IF-ICV sensors handled like N.O. 1: IF-ICV sensors handled like N.C.

G= External devices Activation

	PARAMETER	DESCRIPTION	VALUE
G	G1	Cod16 board Activation	0 : Not Activated 1 : Activated
	G2	CAN Display Activation	0 : Not Activated 1 : Activated
	G3	SMS Activation	0 : Not Activated 1 : Activated
	G4	Landing Serial Calls Activation (CHM2S)	0 : Not Activated 1 : Activated
	G5	High-low control Activation (APG/ CPP inputs)	0 : Not Activated 1 : Activated
	G6	Serial Cabin Activation (COP)	0 : Not Activated 1 : Activated
	G7	nZen board communication activation	0 : Not Activated 1 : Activated
	G8	Next direction arrows activation on CHM2S board	0 : Not Activated 1 : Activated
	G9	Gatebox Esse activation	0 : Not Activated 1 : Activated
	G10	Link-Lcd / Link- Board activation	0 : Not Activated 1 : Activated
	G11	Protocollo DaschBoard	0: disable 1: enable

H= Options

	PARAMETER	DESCRIPTION	VALUE
H	H1	Max reservation in cabin (only for FULL COLLECTIVE)	2 - 31 Reservations
	H2	Display Offset	from -10 to 10
	H3	PCP virtual activation on calls	0: Not Activated 1: Activated . <i>Chapter Errore. L'origine riferimento non è stata trovata.</i>
	H4	Simplified manoeuvre on reservation	0: Not Activated 1: Activated After a call will be cancelled both external reservation (UP and/or Down) at that floor
	H5	Photocell interventions number (CM1/CM2)	0 – 5 After this all saved calls will be cancelled

H6	Dynamo Hospital Manoeuvre	0: Not Activated. 1: Activated . <i>Chapter 17.7</i>
H7	Alarm activation on EXT serial line (chm2s or indicators)	0: Present Signal Enabled (Only for APB manoeuvre A6=2). 1: Alarm Signal Enabled (Only for APB manoeuvre A6=2).
H8	Gong Activation on COP board	0: Not Activated 1: Activated.
H9	Safety Switch Activation	0: Safety Switch disabled. 1: Safety Switch enabled.
H10	Priority Manoeuvre	0: Disabled. 1: Enabled. . <i>Chapter Errorre. L'origine riferimento non è stata trovata.</i>
H11	Landing Calls Disabled. IT1 input	0: landing calls always accepted. 1: landing calls disabled. They are accepted only if input is active . . <i>Chapter Errorre. L'origine riferimento non è stata trovata.</i>
H12	Reduced Pit/headroom	0 : Disabled 1: Once we are out from maintenance mode, if there is a reduced pit/headroom, lift is going to be out of order . <i>Chapter Errorre. L'origine iferimento non è stata trovata.</i>
H13	Call Out cancelation	0 : Not Activated 1: If PAP is hold more than 4 sec all cabin calls will be cancelled.
H14	Reversed floor on deceleration	50 – 83: E.g.: 51= deceleration on intermediate floor 1
H15	Double Click function	0: Disabled 1: Enabled It allows to cancel each cabin reservation activated pressing two times (quickly) on push button
H17	Block after floor arrival	0: Errors 46 and 47 are not blocking errors 1: Errors 46 and 47 are blocking errors when you reach the first available floor and doors were opened.
H18	Lower Offset Slave 1 (for Duplex)	0-10
H19	Lower Offset Slave 2 (for Duplex)	0-10
H20	Sensor Exclusion from serial	0: Disabled 1: Enabled
H21	Y floor at inverted logic on slowdown	50 – 83: For example 51= Inverted slowdown on interstorey 1
H22	Arrows functioning	0: Direction arrows 1:Next direction arrows
H23	MAN81.20 mask	0: disabled: MAN8120 board not connect 1: enabled: MAN8120 board connect

H24	DUPLO maneuver interlocked	0: disabled 1: enabled
H25	TELO maneuver	0: disabled 1: enabled
H26	Hospital maneuver with CHM2S-MULTI	0: disabled 1: enabled <i>chapter hospital maneuver</i>
H27	reliveling	0: disabled 1: enabled <i>chapter doors preopening</i>

I= Monitoring

PARAMETER	DESCRIPTION	VALUE
I1	Firmware Version	X.YY
I2	Monitor CHM	Parallel or serial calls Monitor
I3	Monitor ENC	Encoder monitoring
I4	Total Travel Counter	Number of travel of lift. No possible to reset it
I5	Partial travel counter	Number of travel made from last reset.
I6	Reset travel counter	Reset for partial travel counter.
I7	Slave mask	
I8	CHM Slave monitoring	
I9	CANopen monitoring	
I10	Input monitoring	
I11	Output monitoring	

L= Password

PARAMETER	DESCRIPTION	VALUE
L1	Password Recovery	encrypted
L2	Default reset	1: Recovery Activated from last date stored on pc

M= CANopen

PARAMETER	DESCRIPTION	VALUE
M1	Enabling CANopen port	0: disabled 1: enabled

M2	ID CANopen node	0-20
M3	CANopen logic	1: Fuji logic 2: Gefran logic
M4	Forward/Reverse	0 = Forward 1 = Reverse
M5	Door CanOpen	0: not activated 1: activated

N= Encoder

PARAMETER	DESCRIPTION	VALUE
N1	Pulley	1 – 1000 mm. Pulley diameter
N2	PPR Encoder	4 – 4096. Pulse number for each encoder rotation
N3	Roping	1= 1:1, 2=2:1, 4=4:1. Roping factor
N4	Reduction	1 – 50. On gearless motor = 1; on geared check reduction value (Ex: 1/37)
N5	Distance of deceleration	Distance of deceleration D2, D3, D4, D5, D6, D7 relative to speed V2, V3, V4, V5, V6, V7. Showed in cm.
N6	Distance of Creep less.	0 – 50 cm. Predisposition for "levelling without deceleration"
N7	Phasing level speed	It allows to choose one of 7 speeds available for phasing procedure
N8	Inspection speed	It allows choosing one of 7 speeds available for Inspection operations.
N9	Lift speed	10 - 1000 cm/s.
N10	Encoder Error tolerance	0 – 100 cm. Max waste values allowed from read point of ZP during travel.
N11	Encoder Error tolerance on stops	0 – 100 cm. Max waste value allowed on stop point
N12	Zp sensor sensibility	0-255. It allows you to enter the tolerance of the ZP sensor with respect to magnetic hysteresis and anti-rebound.
N13	Sole logic	0-1. Logic activation for inverter feedback control regarding the actual speed set achievement.
N14	Encoder self-learning speed	1 – 2. It allows you to choose the speed (1 or 2) or to perform the self-learning procedure (N99).
N15	Multispeed output	0: The speed output are managed on the output O0, O1, O2 of BR ENC 1: The speed output are managed on the output TB, TS, PAT of motherboard
N16	Emergency speed	0 - 0.6 m/s
N17	Max speed of entry into rephasing sensors	0.10 – 2.10 m/s
N99	Self-learning acquisition starting	Parameter to activate for getting the shaft encoder quotes.

P= Input/Output mapping

	PARAMETER	DESCRIPTION	VALUE
P	P1	<p>Mapping Input IN0 – IN22</p> <p>See paragraph "Mappable Input Outputs"</p>	<p>0: No function activated</p> <p>1: Input SI_I</p> <p>2: Input RES</p> <p>3: Input POM</p> <p>4: Input IF</p> <p>5: Input ICV</p> <p>6: Input RD</p> <p>7: Input RS</p> <p>8: Input PCP</p> <p>9: Input PAP</p> <p>10: Input 74</p> <p>11: Input CC</p> <p>12: Input FM</p> <p>13: Input reserved</p> <p>14: Input CM2</p> <p>15: Input CM1</p> <p>16: Input AR</p> <p>17: Input BR2</p> <p>18: Input BR1</p> <p>19: Input 60</p> <p>20: Input EM</p> <p>21: Input PDM</p> <p>22: Input PSM</p> <p>23: Input MAN</p> <p>24: Input TSD</p> <p>25: Input CPP</p> <p>26: Input APG</p> <p>27: Input IT1</p> <p>28: Input IT2</p> <p>29: Input MAN CONTROLLER</p> <p>30: Input PDM CONTROLLER</p> <p>31: Input PSM CONTROLLER</p> <p>32: Input MAN CAR</p> <p>33: Input PDM CAR</p> <p>34: Input PSM CAR</p> <p>35: Input SHUNT</p> <p>36: Input KFR</p> <p>37: input POM B</p> <p>38: input PAP B</p>
	P2	<p>Mapping Output Out0 – Out13</p> <p>See paragraph "Mappable Input Outputs"</p>	<p>0: No function activated</p> <p>1: Output TG</p> <p>2: Output TB</p> <p>3: Output TS</p> <p>4: Output TD</p> <p>5: Output CP</p> <p>6: Output AP</p> <p>7: Output AP2</p> <p>8: Output PAT</p> <p>9: Output SVR</p> <p>10: Output OCC</p> <p>11: Output GNG</p> <p>12: Output SAR</p> <p>13: Output FS</p> <p>14: Output FD</p> <p>15: Output SA</p> <p>16: Output SCP</p> <p>17: Output OT1</p> <p>18: Output OT2</p> <p>19: Output OT3</p> <p>20: Output OT4</p> <p>21: Output OT5</p> <p>22: Output OT6</p> <p>23: Output RIF VELO</p> <p>24: Output RIF VEL1</p> <p>25: Output RIF VEL2</p>

			26: Output A 27: Output B 28: Output C 29: Output D 30: Output TEMP
	P3	Car serial mapping See paragraph "Mappable Input Outputs"	1: Cabin serial enabled on CAN port 1 2: Cabin serial enabled on CAN port 2
	P4	Landings serial mapping See paragraph "Mappable Input Outputs"	1: Landings serial enabled on CAN port 1 2: Landings serial enabled on CAN port 2

X= Reserved parameters

8 Serial boards

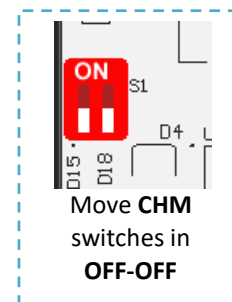
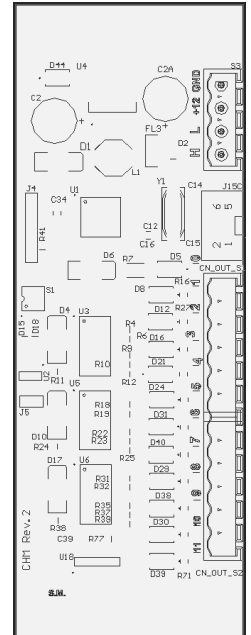
8.1 CHM Expansion Board Mapping without car and External Serial (COP and CHM2S)

The CHM Expansion boards allow you to connect floor and cabin calls.

8.1.1 Single expansion board configuration

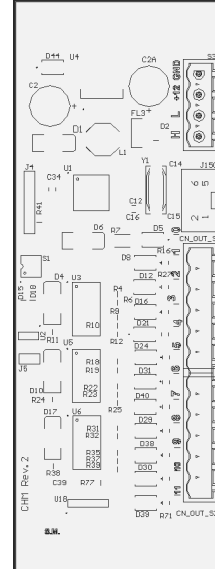
INPUTS	APB	APB <i>Cabin/Landing SEPARATED</i>	SIMPLEX DOWN	COLLECTIVE UP/DOWN
0	21	21I	21I	21I
1	22	22I	22I	22I
2	23	23I	23I	23I
3	24	24I	24I	24I
4	25	25I	25I	--
5	26	26I	26I	51S
6	27	21E	51S	62D
7	28	22E	62D	52S
8	29	23E	63D	63D
9	30	24E	64D	53S
10	31	25E	65D	64D
11	32	26E	66D	--

N° stops	12	6	6	4
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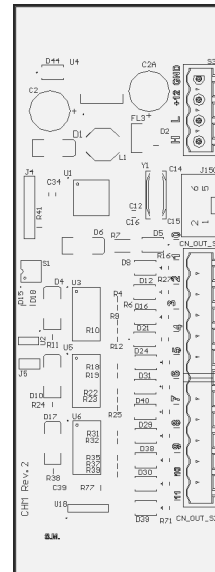


8.1.2 Double expansion boards configuration CHM

CHM1	INPUT	APB	APB <i>Cabin/Landing SEPARATED</i>	SIMPLEX DOWN	COLLECTIVE UP/DOWN
	0	21I	21I	21I	21I
1	22I	22I	22I	22I	22I
2	23I	23I	23I	23I	23I
3	24I	24I	24I	24I	24I
4	25I	25I	25I	25I	25I
5	26I	26I	26I	26I	26I
6	27I	27I	27I	27I	27I
7	28I	28I	28I	28I	--
8	29I	29I	29I	29I	--
9	30I	30I	30I	30I	--
10	31I	31I	31I	31I	--
11	32I	32I	32I	32I	--



0	33I	21E	51S	51S
1	34I	22E	62D	62D
2	35I	23E	63D	52S
3	36I	24E	64D	63D
4	37I	25E	65D	53S
5	38I	26E	66D	64D
6	39I	27E	67D	54S
7	40I	28E	68D	65D
8	41I	29E	69D	55S
9	42I	30E	70D	66D
10	43I	31E	71D	56S
11	44I	32E	72D	67D



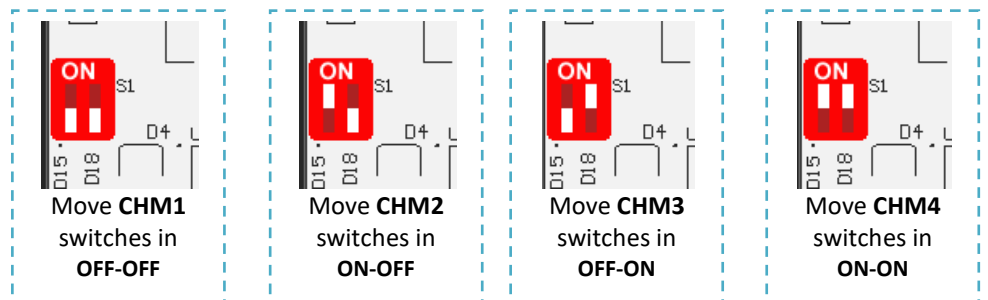
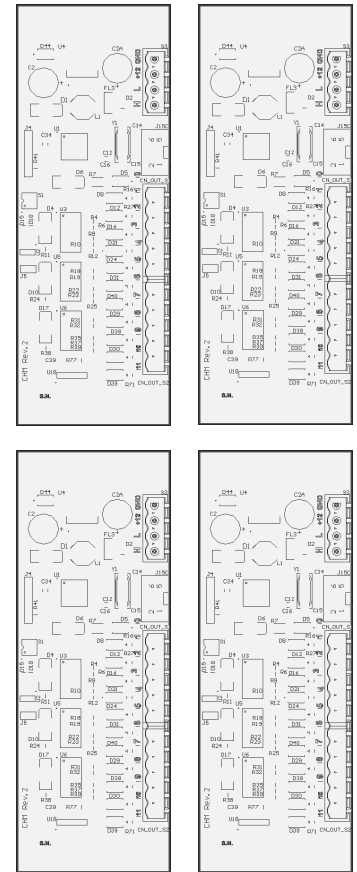
N° stops	24	12	12	7
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8.1.3 FOUR expansion boards configuration CHM

CHM 1	INP UT	SIMPLEX DOWN / APB <i>Cabin/Landing SEPARATED</i>	COLLECTIVE UP/DOWN	CHM 3	INP UT	SIMPLEX DOWN / APB <i>Cabin/Landing SEPARATED</i>	COLLECTIVE UP/DOWN
	0	21I	21I		21I	0	21E
1	22I	22I	22I	1	22E	62D	
2	23I	23I	23I	2	23E	52S	
3	24I	24I	24I	3	24E	63D	
4	25I	25I	25I	4	25E	53S	
5	26I	26I	26I	5	26E	64D	
6	27I	27I	27I	6	27E	54S	
7	28I	28I	28I	7	28E	65D	
8	29I	29I	29I	8	29E	55S	
9	30I	30I	30I	9	30E	66D	
10	31I	31I	31I	10	31E	56S	
11	32I	32I	32I	11	32E	67D	

CHM 2	INP UT	SIMPLEX DOWN / APB <i>Cabin/Landing SEPARATED</i>	COLLECTIVE UP/DOWN	CHM 4	INP UT	SIMPLEX DOWN / APB <i>Cabin/Landing SEPARATED</i>	COLLECTIVE UP/DOWN
	0	33I	--		--	0	33E
1	34I	--	--	1	34E	68D	
2	35I	--	--	2	35E	58S	
3	36I	--	--	3	36E	69D	
4	37I	--	--	4	37E	59S	
5	38I	--	--	5	38E	70D	
6	39I	--	--	6	39E	60S	
7	40I	--	--	7	40E	71D	
8	41I	--	--	8	41E	61S	
9	42I	--	--	9	42E	72D	
10	43I	--	--	10	43E	62S	
11	44I	--	--	11	44E	--	

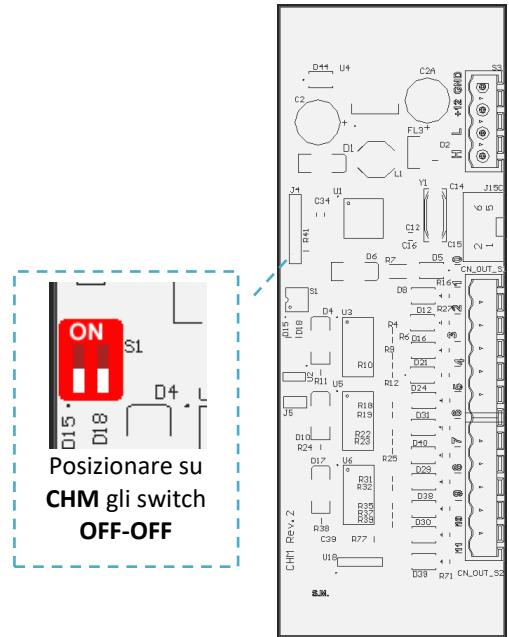
	N° stops	24	12
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8.1.4 CHM serial expansion board mapping with serial calls for cabin (COP) and without serial for landing (CHM2S)

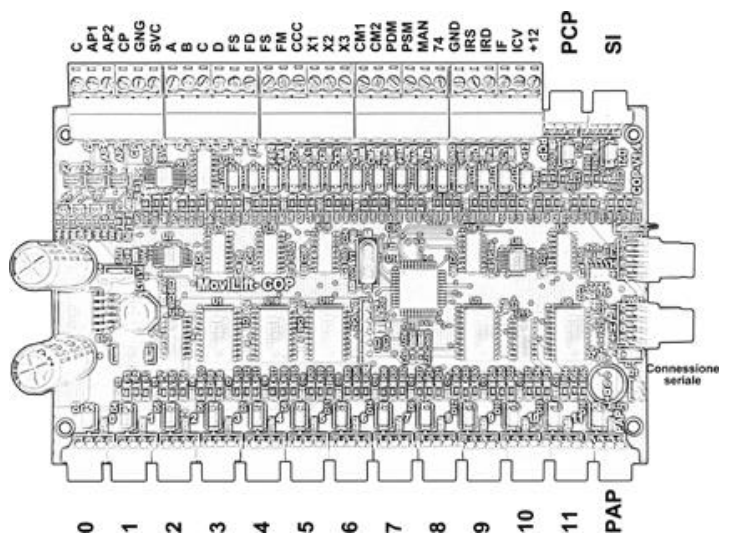
8.1.5 Controller configuration with one serial expansion board CHM

INPUTS	APB <i>Cabin/Landing SEPARATED</i>	SIMPLEX DOWN	COLLECTIVE UP/DOWN
0	21E	51S	51S
1	22E	62D	62D
2	23E	63D	52S
3	24E	64D	63D
4	25E	65D	53S
5	26E	66D	64D
6	27E	67D	54S
7	28E	68D	65D
8	29E	69D	55S
9	30E	70D	66D
10	31E	71D	56S
11	32E	72D	67D
N° stops	12	12	7



8.1.6 Cabin configuration

Connectors	Calls
0	21
1	22
2	23
3	24
4	25
5	26
6	27
7	28
8	29
9	30
10	31
11	32
N° stops	12



8.1.1 Controller configuration with double expansion boards CHM

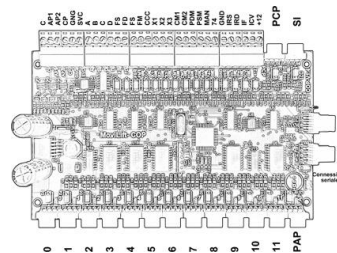
CHM2	INPUT	APB / SIMPLEX DOWN	COLLECTIVE UP/DOWN
	0	51S	51S
	1	62D	62D
	2	63D	52S
	3	64D	63D
	4	65D	53S
	5	66D	64D
	6	67D	54S
	7	68D	65D
	8	69D	55S
	9	70D	66D
	10	71D	56S
11	72D	67D	

CHM3	0	73S	57S
	1	74D	68D
	2	75D	58S
	3	76D	69D
	4	77D	59S
	5	78D	70D
	6	79D	60S
	7	80D	71D
	8	81D	61S
	9	82D	72D
	10	83D	62S
	11	84D	73D

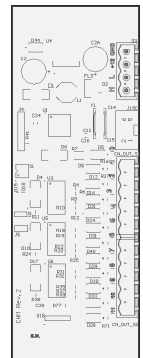
N° Stops	24	13
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8.1.2 Cabin configuration

Connectors COP	Calls	CHM1 INPUT	
0	21	0	33
1	22	1	34
2	23	2	35
3	24	3	36
4	25	4	37
5	26	5	38
6	27	6	39
7	28	7	40
8	29	8	41
9	30	9	42
10	31	10	43
11	32	11	44



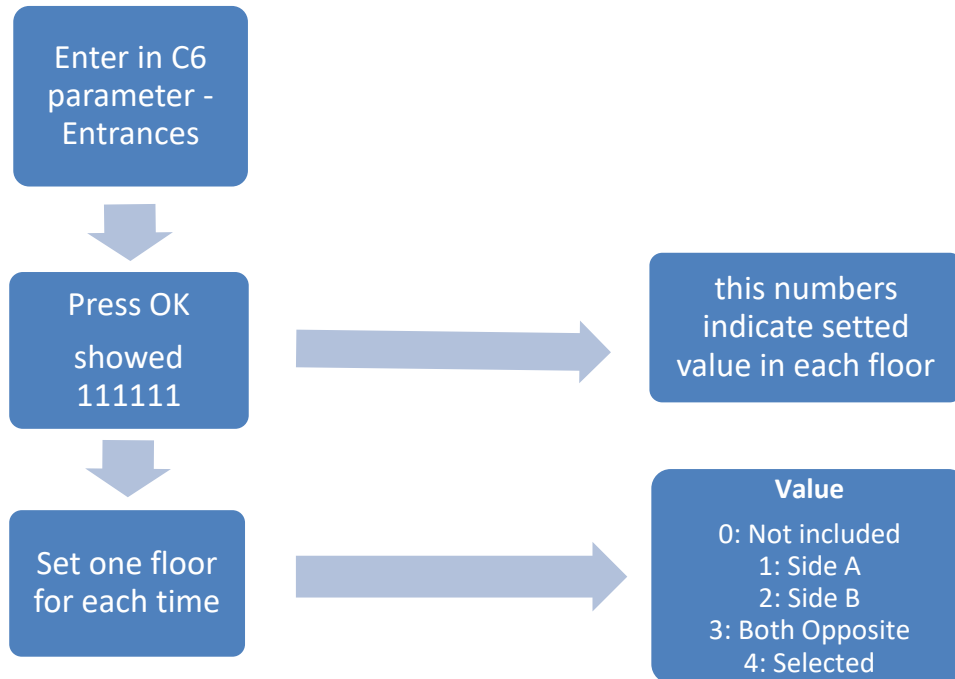
+



8.2 Selected floor configuration

Entrances are selective if lift has two or three entrances in same floor totally independent. In this case each selective door is a single stop so number of call (number of call push button) is higher than lift floors.

SETUP:



Example: how to parameter the floor 2 selection

1. Set Parameter C6

Floor 0:	Side A Opening	(Value 1)
Floor 1:	Side A Opening	(Value 1)
Floor 2A:	Selective Side A Opening	(Value 1)
Floor 2B:	Selective Side A Opening	(Value 2)
Floor 3:	Side A Opening	(Value 1)
Floor 4:	Side A Opening	(Value 1)
Floor 5:	Side A Opening	(Value 1)

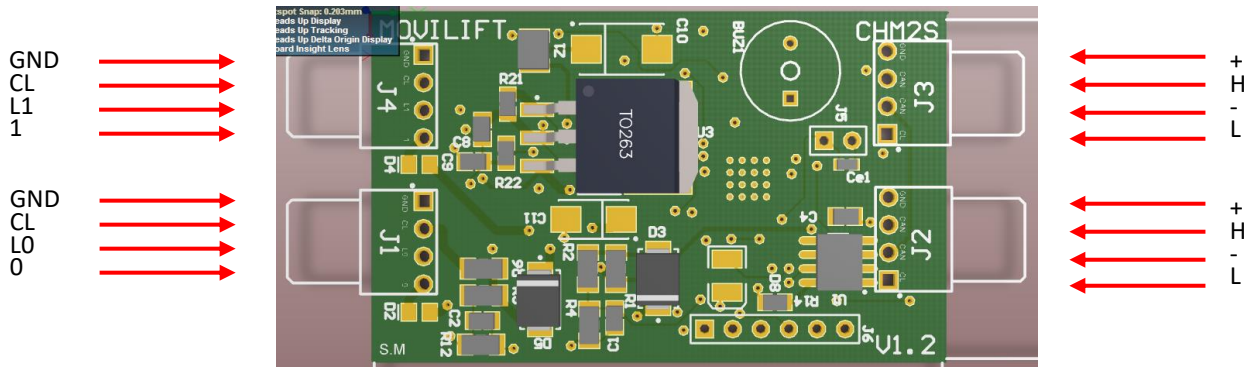
1. Mapping configuration on CHM board

INPUT	APB	APB <i>INT/EST SEPARATE</i>	SIMPLEX DOWN	COLLECTIVE UP/DOWN
0	21	21I	21I	21I
1	22	22I	22I	22I
2	23A	23I A	23I A	23I A
3	23B	23I B	23I B	23I B
4	24	24I	24I	--
5	25	25I	25I	51S
6	26	21E	51S	62D
7	27	22E	62D A	52S
8	28	23E A	62D B	63D A
9	29	23E B	63D	53S A
10	30	24E	64D	63D B
11	31	25E	65D	53S B
N° stops	11	5	5	3

In according to configuration, with double CHM board on BR400 for parallel calls or serial (internal and external), call sequence will change like in previous example).

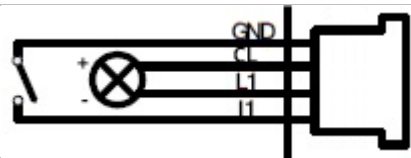
8.3 CHM2S board (serial external device)

Diagram



Wiring description

Call / indicator button connection to J1 and J4 connectors



Connector	Description
J1 = call pushbutton connection	GND= Negative CL= Positive L1= Call light output 1= Call input
J4 = call pushbutton/indicator button connection	GND= Negative CL= Positive L0= Call light output 0= Call input
J2 = serial power supply connector	+ = Light positive input H = CanH serial input - = Light negative input L = CanL serial input
J3 = serial power supply connector	+ = Light positive input H = CanH serial input - = Light negative input L = CanL serial input

J2/ J3 = call pushbutton connection on obsolete version (not @)	+ = Light positive input H = CanH serial input L = CanL serial input - = Light negative input
------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------

The call is connected to the J1 connector (if collective U / D is the drop call) and to the J4 the Alarm signal activated or Present (see parameter H7) or the up call (if collective U / D) is connected.

Setting steps:

- 1- Close the J5 jumper
- 2- Press the Call button (J1) N times to program the desired floor. (For example with one pressure the lowest floor is programmed, with two, the second stop, etc.).
- 3- Remove the J5 jumper
- 4- Check if the call is performed

Programmed floor can be checked as follows:

- 1- Disconnect power to the CHM2s board (disconnect J2 and J3 plugs)
- 2- Close the J5 jumper
- 3- Reconnect the power supply with J2 and J3 plugs (LED D8 flashes one second)
- 4- Check the number of sound beeps emanating from the board (for example two beeps = programmed at the second floor)

N.B.: if you close the jumper without even pressing the down button once, the board does not lose the previous programmed floor.

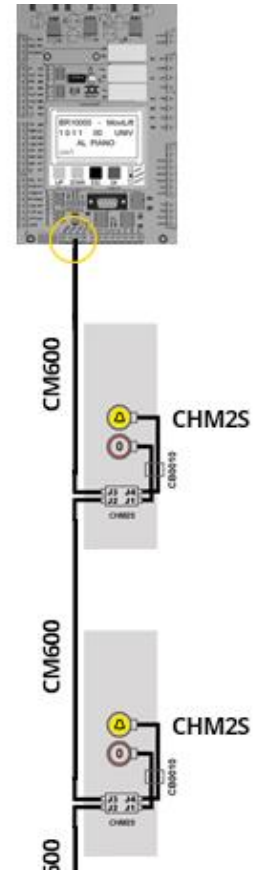
Diagnosis led (D8 led):

One second flash = good serial communication

Speedy flashing = wrong serial communication or interferences

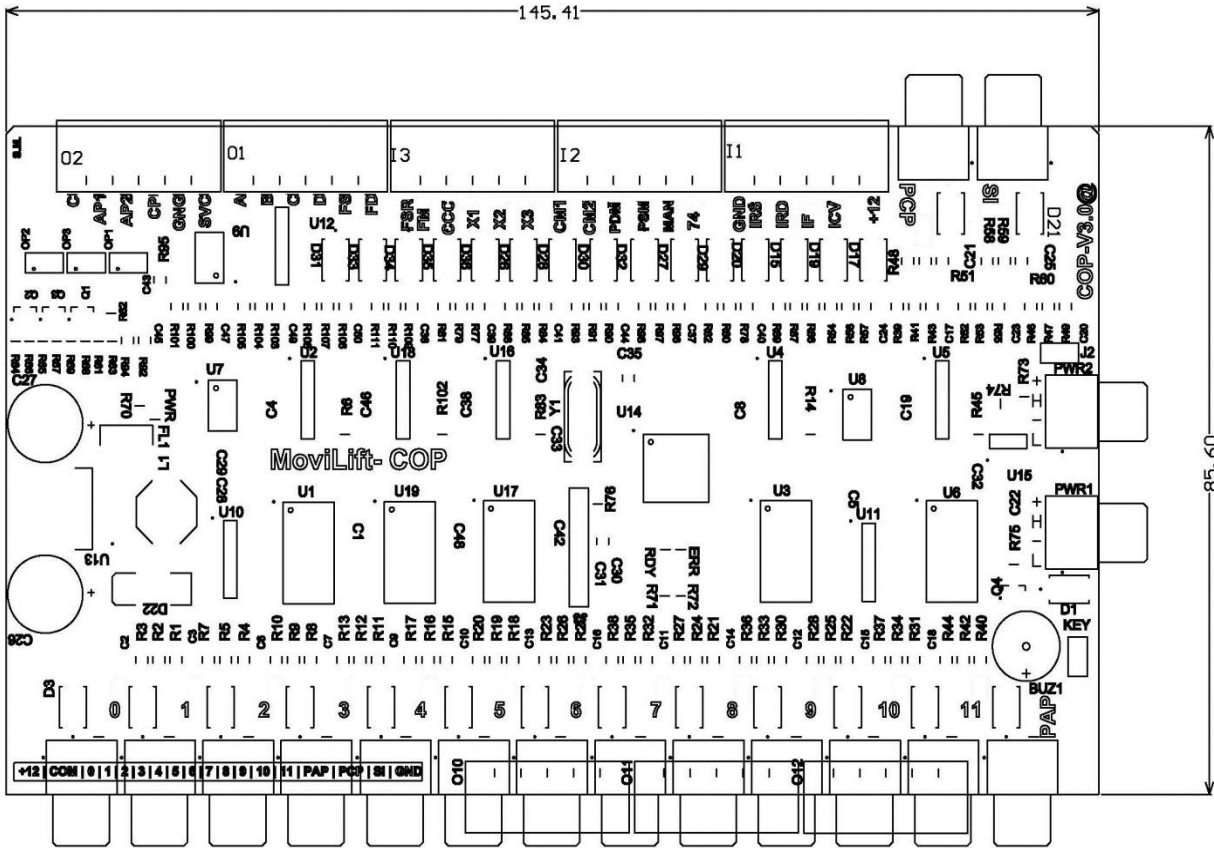
Fixed led = communication is down

Wiring example



8.4 COP serial board

The **COP** board collects all the information from the TOC (calls, sensors, photocells, overload, door operator commands, etc.). Connected to the motherboard via the CAN bus via 4-wire cable with EXCON connector (named CM600 or CM100 cable with 2 wires for data + 2 for power supply).



TECHNICAL DATASHEET

BOARD DIMENSION	145 x 85mm
POWER SUPPLY	12-24 VDC ± 10%
INPUT OVERVOLTAGE	30 V
MAX LOAD CURRENT	250 mA
CODING	CAN bus Movilift
PROGRAMMING	No programming necessary
WORKING TEMPERATURE	0°C - +50°C
EARTH	GND on COP has to be the same of BR200

PWR1 - PWR2 connectors

Connector	Description
PWR1 = serial/power connector	+= Light positive input H= CanH serial input -= Light negative input L= CanL serial input

PWR2 = serial/power connector	+= Light positive input H= CanH serial input - = Light negative input L= CanL serial input
--------------------------------------	-----------------------------------------------------------------------------------------------------

J2/ J3= call pushbutton connection on obsolete version (not @)	+= Light positive input H = CanH serial input L = CanL serial input - = Light negative input
----------------------------------------------------------------	-------------------------------------------------------------------------------------------------------

INPUT-OUTPUT description

0-11 INPUT: The twelve cabin call inputs are set on 4-pin JST connectors, described as follows:

	GND = Call negative common
	CL = Light positive common
	L1 = Call light negative output
	I1 = Call negative input

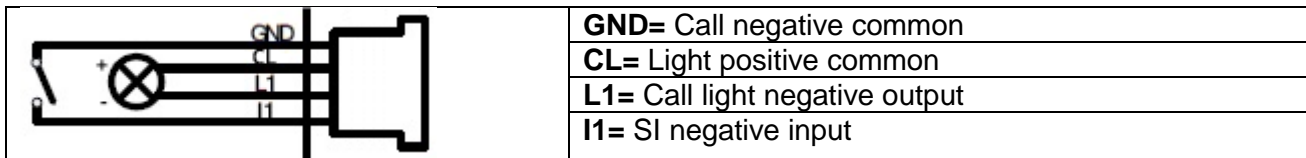
PAP INPUT: Closed to GND activates the "Door Opening" command. It allows to enable the door opening command when the cabin is on the floor or to cancel the call made while closing the doors.

	GND = Call negative common
	CL = Light positive common
	L1 = Call light negative output
	I1 = PAP negative input

PCP INPUT: Closed to GND activates the "Door Closing" command, only on systems with collective manoeuvre resets the waiting time with doors open during reservations.

	GND = Call negative common
	CL = Light positive common
	L1 = Call light negative output
	I1 = PCP negative input

SI INPUT: SI input closed at GND activates the "Independent Service", only on lift with collective manoeuvre, during the activation of this entrance; the external calls will be cancelled in order to serve the service inside the cabin in a priority mode.



Warning! To activate the inputs you have to close them with at GND.

+12 INPUTS: Auxiliary power input - positive +12/24Vdc.

ICV-IF INPUTS: Inputs of speed change sensors and stop zone.

IRD-IRS INPUTS: Down relevelling sensor (IRD) up relevelling sensor (IRS).

GND INPUTS: Auxiliary power supply input - positive -12/24Vdc.

74 INPUT, Overload input: The contact can be programmed normally open or closed NC / NO via F2 parameter. When the entrance is active, the cabin remains on the floor with the doors open and occupied switched on and a light signal is activated (SVC on the motherboard or displays in serial communication). Cabin calls remain disabled.

MAN INPUT: "Car maintenance" input. Internal/external calls are disabled and busy light is on.

PSM-PDM INPUTS: Up command (PSM) and down command (PDM) to be connected to the maintenance box on the car roof.

CM2-CM1 INPUTS: Photocells / Door operator switch inputs of the first access to the cabin doors (CM1) and the second access to the cabin doors (CM2). These inputs when they are not activated must be closed.

X3-X2-X1 INPUTS: Check paragraph **Errore. L'origine riferimento non è stata trovata.** Connections escription

CCC INPUT: "Full Load" input. On collective lifts it excludes external calls.

FM INPUT: "Movable floor" input. Settable to parameter F3 can be active NC or NO. When the entrance is active, the cabin remains on the floor with the doors open and occupied until the input status is restored. Cabin calls remain enabled.

Warning! The outputs are transistor with negative voltages (GND) and with a maximum load of 250mA.

FSR OUTPUT: "Out of Service" signal output.

FD-FS OUTPUTS: Light outputs of "Up Direction (FS)" and "Down Direction (FD)". In lifts with universal manoeuvre indicate the actual movement of the car; in the reserved call lifts indicate the next direction.

D-C-B-A OUTPUTS: "Binary Code" outputs to indicate the floor. In the event that parameter F6 is set to 3 or 4, output A reports the status of the occupied while the outputs B-C-D have no functionality.

SVC OUTPUT: "Overload signalization" output. It is active when input "74" on the motherboard is activated and it is possible to set the NC or NO contact to parameter F2

GNG OUTPUT: "Gong" output. It is possible to set:

- if it is activated when the cabin doors are opened or on the low speed exchange at parameter F4.
- Whether to deactivate or activate the output to parameter H8
- the duration of activation at parameter D18.

CP OUTPUT: "Door closure" command output. It can be connected directly to the electronic operator board and the common is the output C. Being a transistor output, if the absorptions are high, we suggest interfacing a 12V relay.

AP2 OUTPUT: Command output "Door opening on second access". It can be connected directly to the electronic door operator board and the common is the output C. Being a transistor output, if the absorptions are high, we suggest interfacing a 12V relay.

AP1 OUTPUT: Command output "Door opening on first access". It can be connected directly to the electronic door operator board and the common is the output C. Being a transistor output, if the absorptions are high, we suggest interfacing a 12V relay.

C OUTPUT: Common command "Opening / closing doors".

KEY – J2 jumpers' description

The two jumpers **J2** and **KEY** are on the cop board.

The KEY Jumper, if it is open, cuts the common of the cabin calls.

Jumper J2 activates the required 120ohm impedance on CAN-BUS serial communication.

Diagnostics

RDY LED and the ERR LED allow monitoring the board status.

In case of normal operation:

RDY led= Short flashing once per second

ERR led= Off

In case of incorrect or missing H and L serial connections:

RDY Led = quick flashing

ERR Led = On

In case of inverted H or L serial connections or interferences:

RDY Led = Quick flashing

ERR Led = Slow flashing

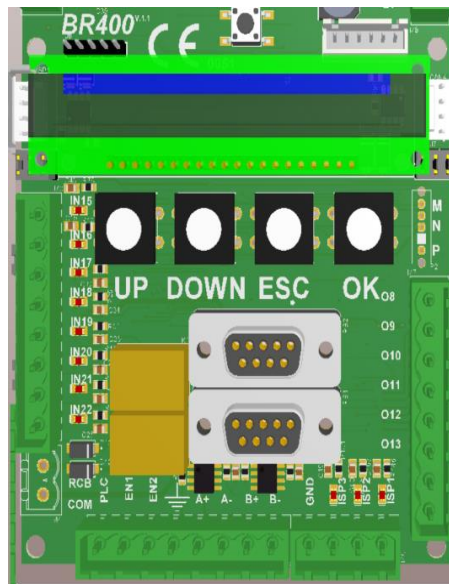
8.1 Absolute selector configuration with BR-ENC

WIRING CONFIGURATION FROM INVERTER ENCODER TO BR400

Connection LINE-DRIVE

Connect to repetition signals of inverter encoder board

(check on inverter or controller manual)



RIF VELO
RIF VEL1
RIF VEL2

A+ A- B+ B-

Outputs

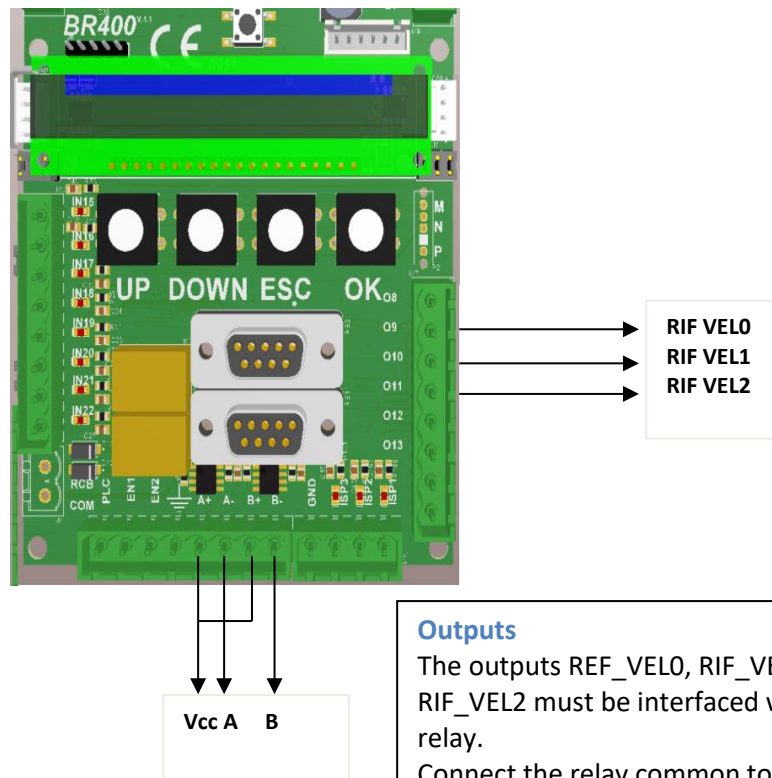
The outputs REF_VELO, RIF_VEL1 and RIF_VEL2 must be interfaced with a relay.

Connect the relay common to the inverter signal common (PLC-Fuji)
REF_VELO = inverter input (X1- Fuji)
REF_VEL1 = inverter input (X2- Fuji)
REF_VELO = inverter input (X3- Fuji)

Connection PUSH-PULL

Connect to signals **A-** and **B-** of inverter encoder board.
+Vcc connect to positive of encoder board.

(Check on inverter and controller user manual)



Outputs

The outputs REF_VELO, RIF_VEL1 and RIF_VEL2 must be interfaced with a relay.

Connect the relay common to the inverter signal common (PLC-Fuji)

REF_VELO = inverter input (X1- Fuji)

REF_VEL1 = inverter input (X2- Fuji)

REF_VELO = inverter input (X3- Fuji)

8.2 MOTOR POLETUNING FOR GEARLESS

On Gearless lifts with permanent magnet motors, before starting the configuration with BR400, it is important to carry out POLETUNING.

Poletuning is essential for the operation of this type of engine and, not performing it, causes errors when the engine starts (ERE, ER5 on FUJI FRENIC ... PGO on L1000A).

To carry out the Poletuning you must:

- Insert the two power factor correctors RS and RD on the BR400 board (common GND).

- Set parameter A3 = 0 (normal selector).
 - Start the Poletuning procedure by giving Ascent or Descent gear on BR400 and setting the necessary parameters in the inverter.
- (Follow the Inverter installation guide to carry out the Poletuning procedure)

PARAMETERS TO INSERT

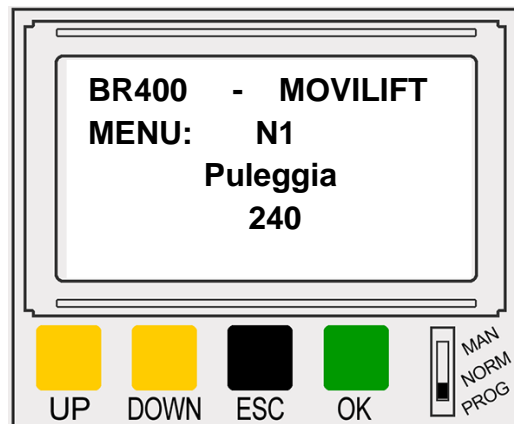
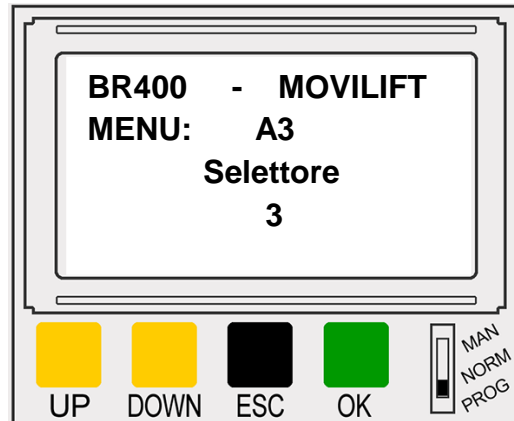
- Set A3=3 (*encoder board activation*)
- **N1** : Pulley(mm) *
- **N2** : PPR Encoder **
- **N3** : Roping ***
- **N4** : Reduction ****
- **N9** : Lift speed in cm/s.*****

* *Check Pulley dimension*

** *Check data PulsePerRound on encoder plate (512, 1024, 2048)*

*** *1= 1:1 , 2=2:1, 4=4:1*

**** *On gearless è 1; on Geared check reduction value (Ex: 1/37)*



8.3 FIRST START

When all connections made, parameters setted and phasing sensors inserted it is possible to make first start.

WARNING

If, at first start, inverter shows encoder error (PG, ERE, ER5) and board shows error (121 o 122) change motor phases V with W.

Instead, if only board BR100 shows error (121 o 122), change connection from encoder on BR-ENC: change A+ with B+ and A- with B-.

CAUTION

During installation, place the ZP magnet perfectly in the center of the stop area with the cab perfectly on the floor. (see figure 2).

Then check:

- If parameter A8 is set to 2 or 3 (Stop in Zone during maintenance).
- If the maintenance speed is such as to allow the perfect stop on the floor: If too high, decrease the value to parameter N8. Example: value 4 points to speed V4.

FLOOR MAGNET POSITIONING

When inverter and board not give any error during start and normal travel it is possible magnets positioning. This system provides a magnet n.o. at each floor called ZP and bistable magnets IRS IRD.

- Floor Magnet Positioning

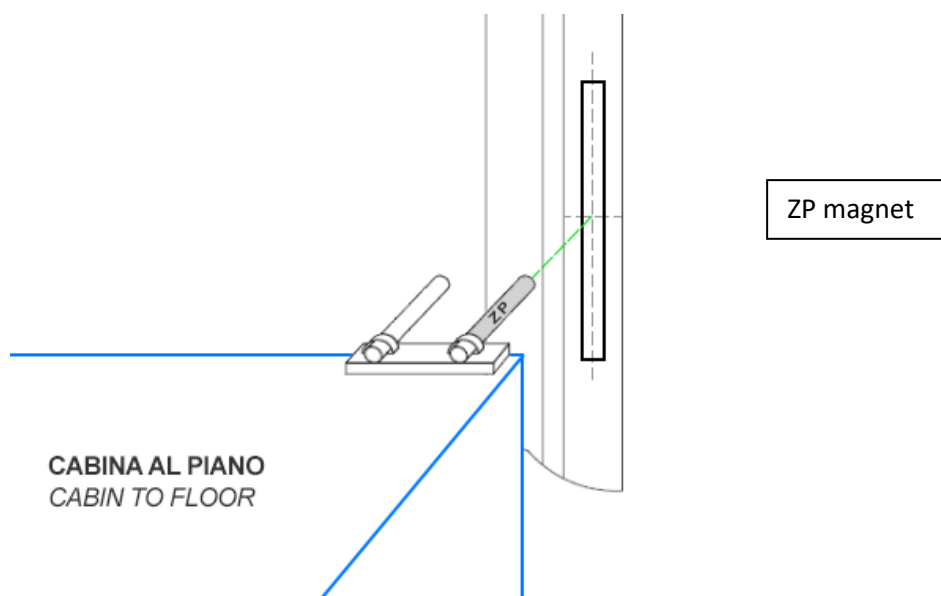
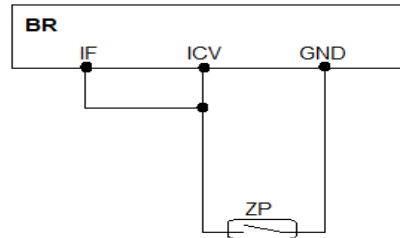


Figura 2

Magnetic pencil switch ZP must be positioned in front of ZP magnet to have a correct reading of signal. On BR board must be connected to inputs IF and ICV as following drawing shows:



WARNING

During installation it is necessary to place ZP magnet in center of STOP ZONE (precisely) when cabin is PERFECTLY on floor. (figure 2).

Also check

- Parameter A8 is setted 2 or 3 (Stop in Zone during inspection).
- Inspection speed is enough to allow perfect stop on floor:
If too high reduce parameter N8.

AUTOLEARNING

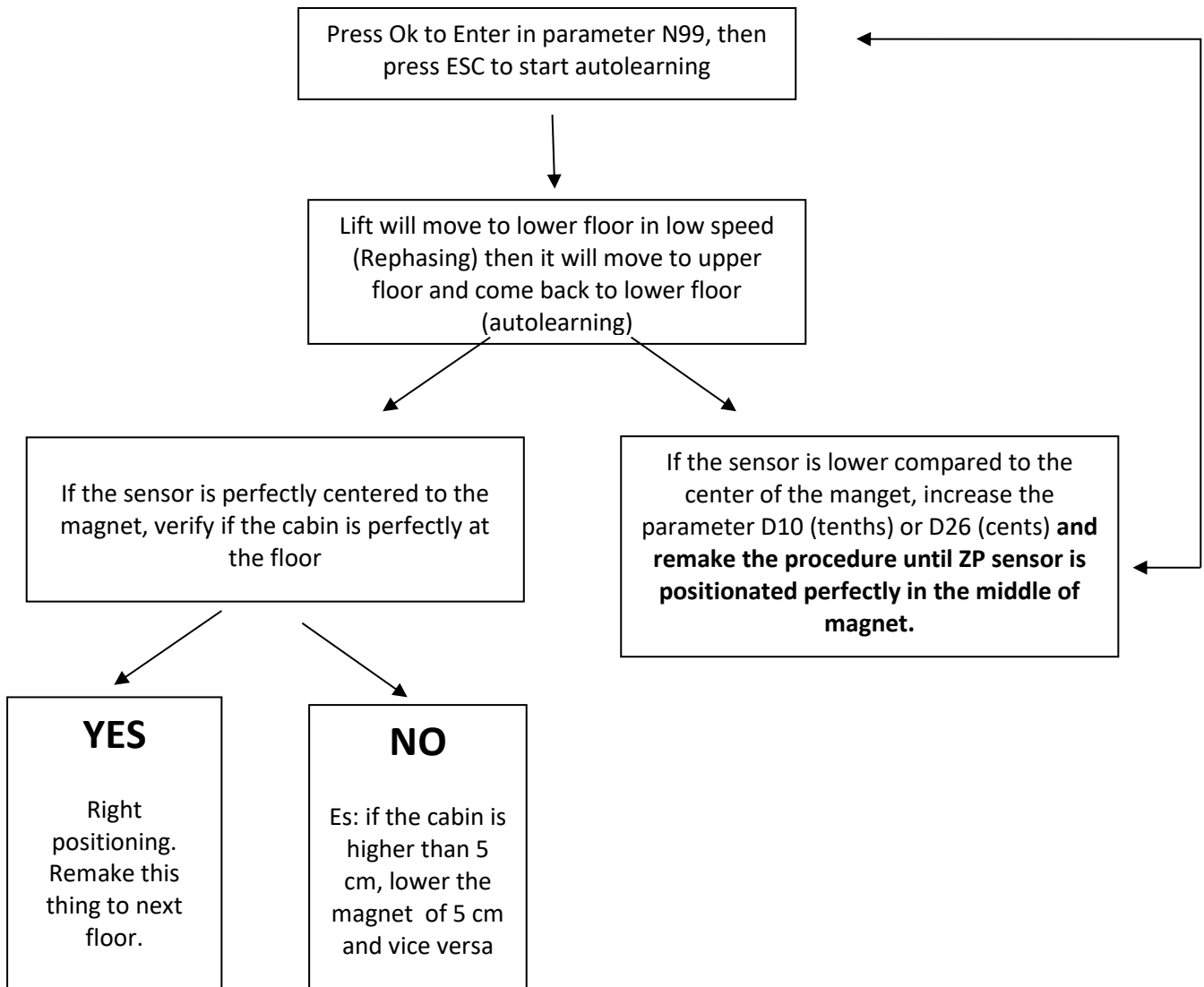
- Put the **center** of ZP magnet exactly at **floor levels**.
- Enter in parameter N99 and press ESC to start autolearning procedure and wait. Don't exit from programming mode!

WARNING

The cabin will move in low speed V1 and BR-ENC learns the shaft quotations in up and down directions.

if shaft autolearning will not complete the main board will show error 111. It's possible to increase the autolearning speed at parameter N14

STOP REGULATION



SPEED REGULATION AND DECELERATION SPACES

BR ENC board has on outputs O0, O1, O2 7 speed ramps Multi step

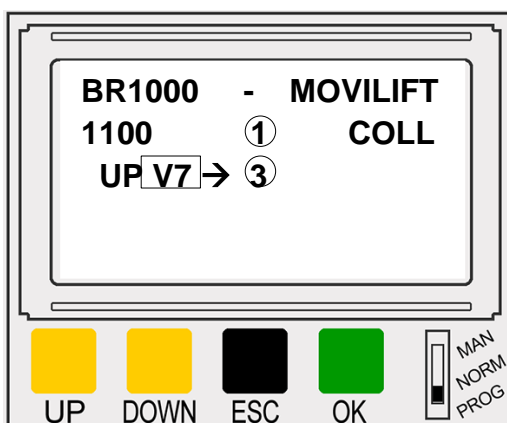
Every speed has its DECELERATION DISTANCE that can be changed at the parameter **N5** → **D2,D3,D4,D5,D6,D7**.

SPEED	O2 OUTPUT	O1 OUTPUT	O0 OUTPUT	SPEED IN Hz	DECELERATION DISTANCE IN CM
NAME	OUTPUT	OUTPUT	OUTPUT	INVERTER PARAMETERS	BR400 PARAMETERS
V1	0	0	1	5 Hz (C5)	--
V2	0	1	0	15 Hz (C6)	D2
V3	0	1	1	20 Hz (C7)	D3
V4	1	0	0	25 Hz (C8)	D4
V5	1	0	1	33 Hz (C9)	D5
V6	1	1	0	43 Hz (C10)	D6
V7	1	1	1	50 Hz (C11)	D7

At the start, the BR400 board will try to achieve at V7 speed (high speed) but, if the travel distance is lower than 2.5 times x D7 it will try at lower speed (V6).

Example: if the travel distance is lower than 2.5 times x D6 it will try at V5 (33 Hz in tabella) until the algorithm will calculate the right deal between speed and distance to reach the floor.

The speed will be visualized on display:

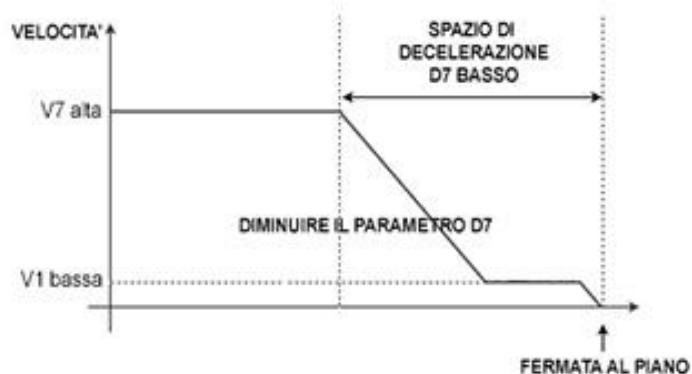
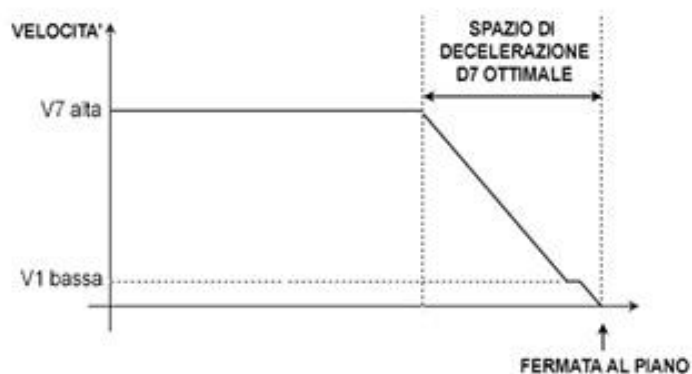


This example shows the cabin is at **1st** floor, moving to **3th** floor, with speed **V7**. So cabin will change the speed from high to low at distance **D7** set on parameter N5-D7.

EXAMPLES OF SLOWDOWN SPACES ADJUSTMENT

The deceleration spaces can be adjusted at the parameter N5 (centimeters).

*This example is referred to V7 speed:
if the board will try to achieve V7 speed (high speed) and the deceleration, until the stop floor, is too fast, you need to decrease the parameter D10 on BR400. If it is too slow, it need to be increased.*



ERRORS

The errors introduced with this selector are:

Error 65 -> The lift arrived to floor but get wrong of 1cm (adjustable tolerance at Par. N10) to the quote earned in Autolearning.

Error 98 -> Error for no communication with BR_ENC board.

Error 111 -> Autolearning failure. Discrepancy of encoder reading during ascent and descent of Autolearning.

Error 112 -> The lift arrived to the target floor in ascent and exceeds the autolearnig quote without finding ZP sensor.

- **Error 113** -> The lift arrived to the target floor in descent and exceeds the autolearnig quote without finding ZP sensor.

- **Error 114** -> Speed of entry into the rephrasing sensors greater than the value of N17

- **Error 115** -> Synchronization Missed

Errore 116 During operation, the lift meet ZP sensor and check if the pulses are congruent with the error tolerance. If they are lower than the expected value, the board will go in low speed and stops at the first useful floor.

- **Error 117** -> Failure to read the ZP sensor with respect to the height of the BR-ENC acquired during the shaft autolearning. ZP magnet missed.

- **Error 118** -> during the travel meets a stop sensor (ZP) and checks if the pulses are congruent with a margin of error referring to the obtained values and its tolerance (par. N10). If pulses are higher than the expected board sets into low speed and stops on the first available floor.

Error 120 -> Error in start when:

- BR-ENC board not receives the inverter feedback about speed (input IN0)
- BR-ENC board not receives pulses by encoder.

For this error the board quit all instruction and delete the current call.

Error 121-> The board make an ascent call but the encoder is opposite. Increase the parameter D23 and invert A and B channel on encoder.

Error 122 The board make a descent call but the encoder is opposite. Increase the parameter D23 and invert A and B channel on encoder.

Error 125 -> Error generated at the start when:

- BR-ENC board receives the feedback by inverter of actual speed (input IN0)
- BR-ENC board doesn't receive the encoder pulses after stop zone (ZP sensor not activated).

In this case the board force the low speed and stops on first floor available.

Error 126 -> Error generated at the start when:

- BR-ENC board receives the feedback by inverter of actual speed (input IN0)
- BR-ENC board doesn't receive the encoder pulses

In this case the board force the low speed and stops on first floor available.

Error 127-> Error generated at the start when:

- BR-ENC board receives the feedback by inverter of actual speed (input IN0)
- BR-ENC board doesn't receive the encoder pulses
- The cabin passed the stop zone (ZP sensor)

For this error the board quit all instruction and delete the current call. The cabin did an uneven movement.

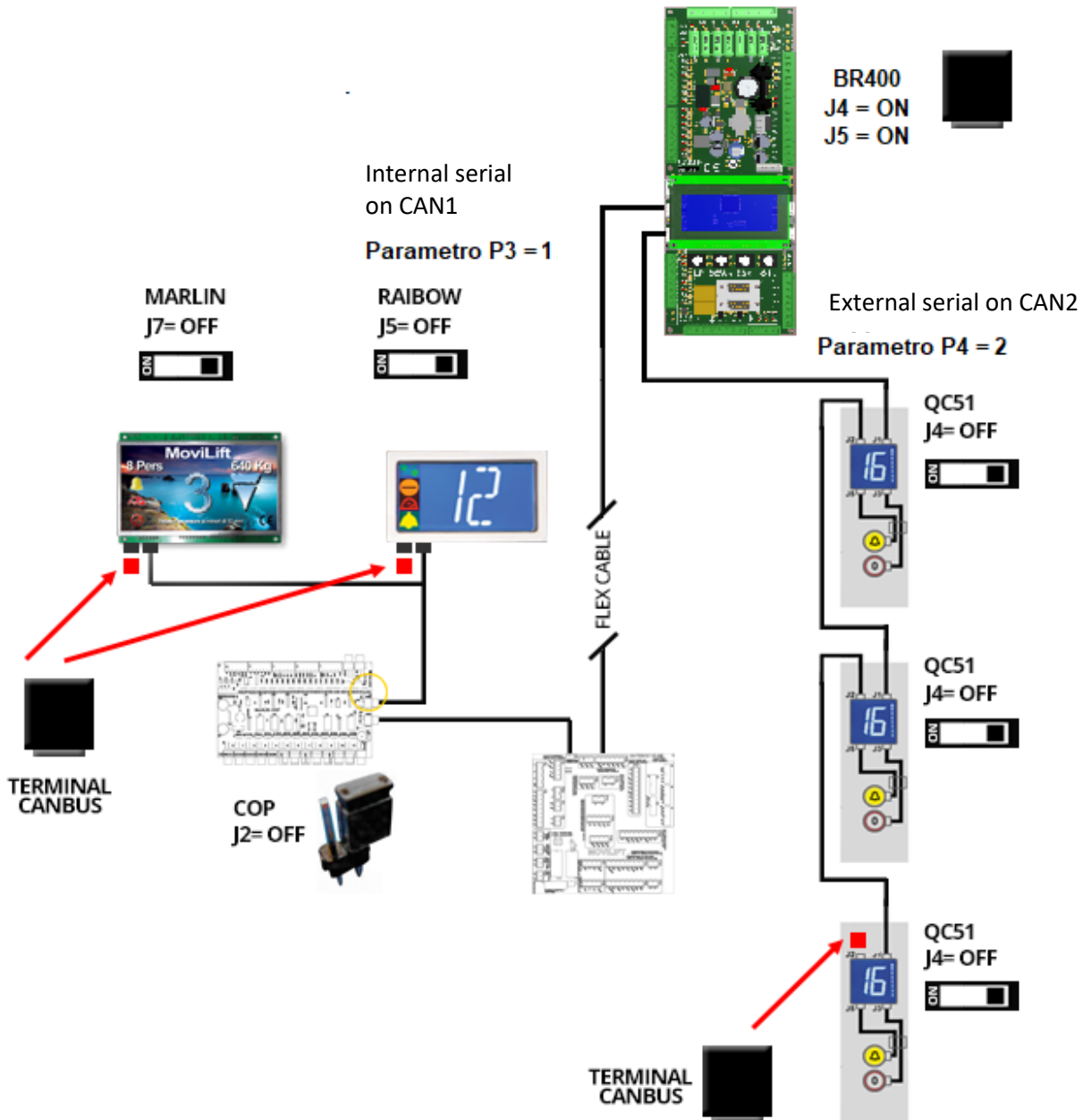
These errors aren't blockers but they drop the maneuver and delete all call in memory.

PARAMETERS

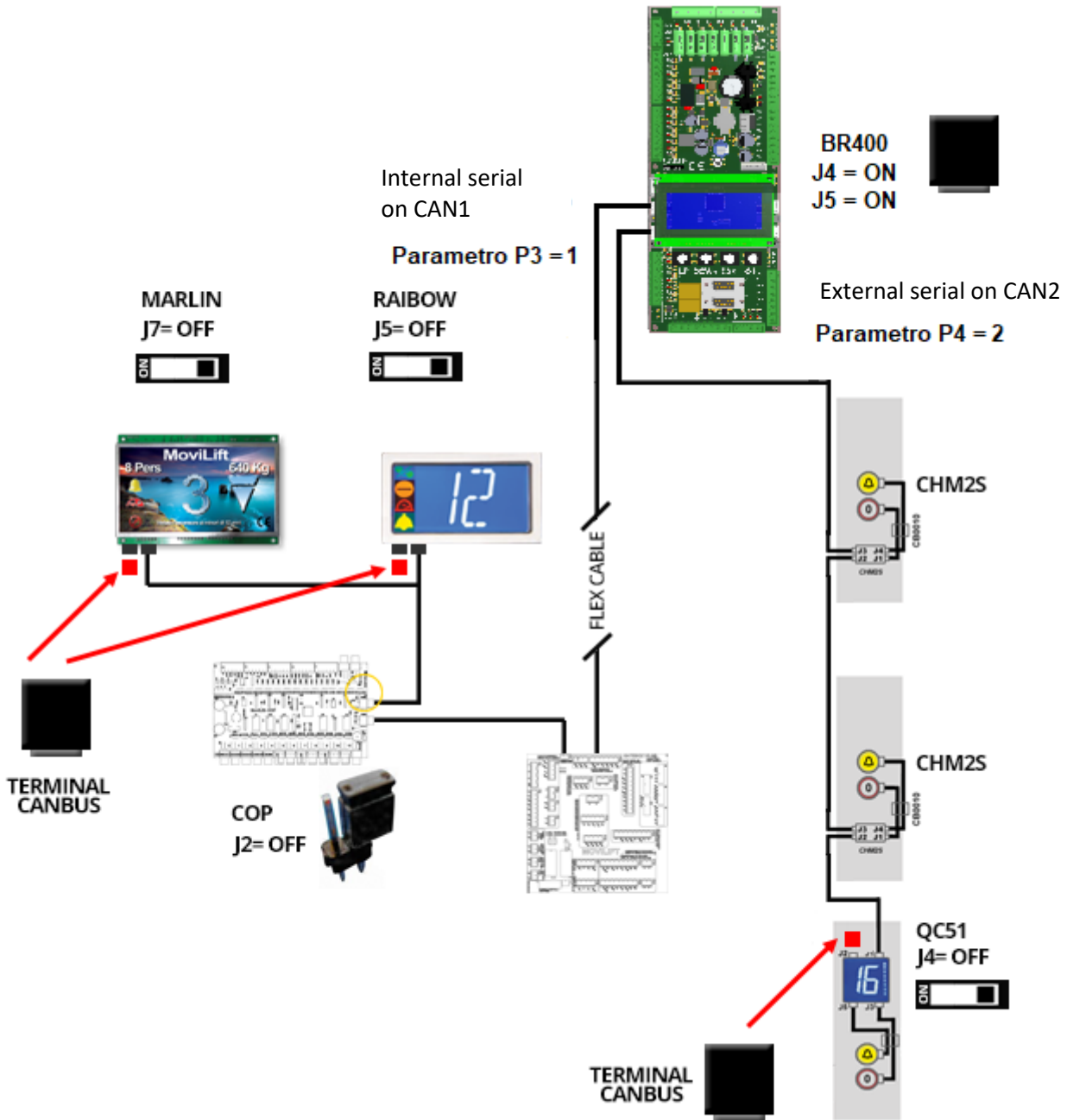
The Encoder parameters are 'N'.

8.4 Jumper/switch configuration on serial devices

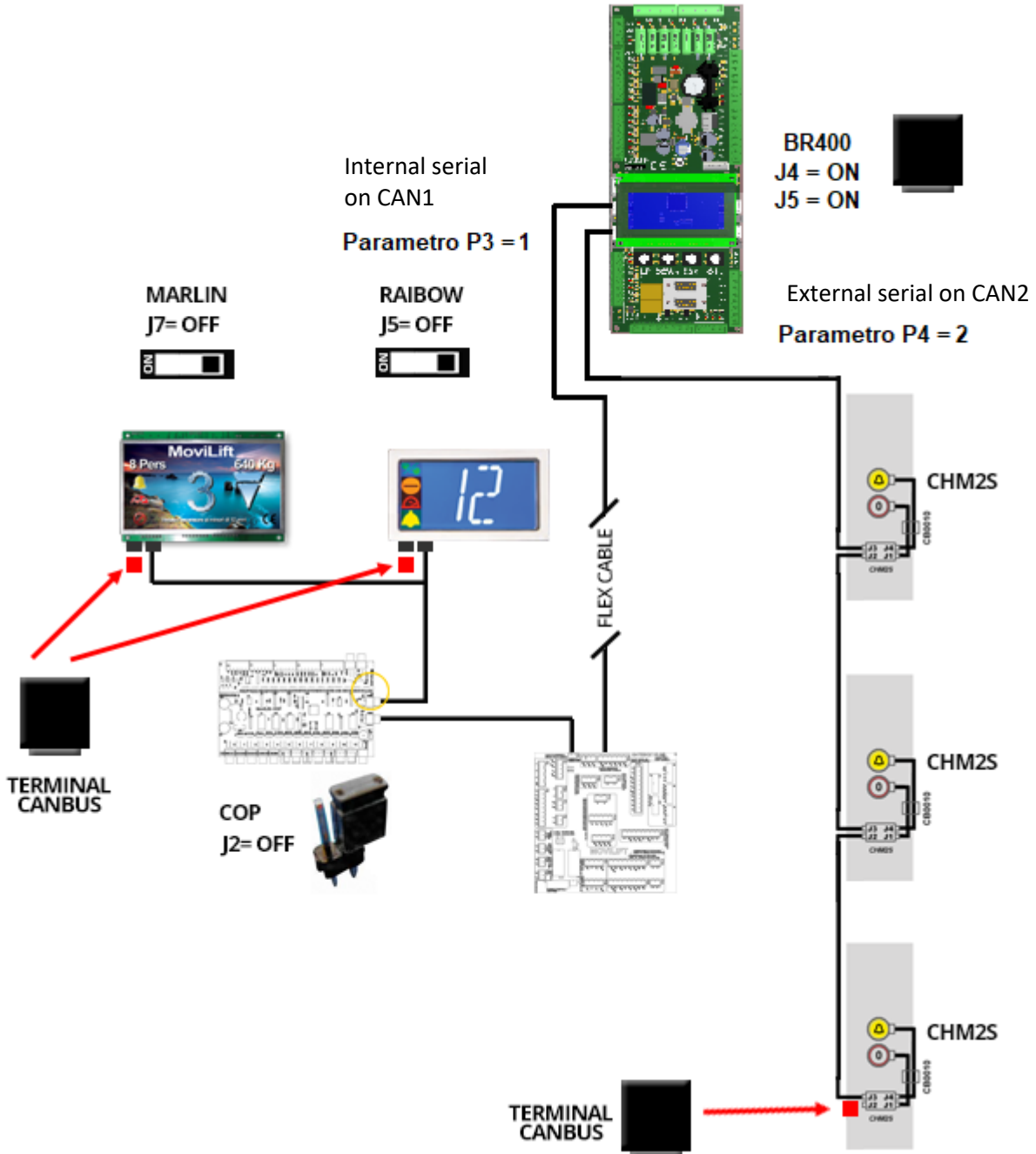
8.4.1 Example of configuration 1 (display on every floor)



8.4.2 Example of configuration 2 (display only at ground floor)



8.4.3 Example of configuration 3 (without display)



9 European legislation EN81.20

The european legislation EN81.20 provides checks on security series and on maintenance. To active the european legislation you need to set the parameter C12=1 e C14=1.

Inputs used on motherboard for EN81.20

CPP = monitoring input "Cabin door closed" (parameter C12=1)
RES= monitoring input "Cabin door contact" (parameter C14=1)
Input MAN_QUADRO + SI= activation inputs for Bypass switch
MAN= input pit maintenance
PSM= input ascent direction (pit maintenance)
PDM= input descent direction (pit maintenance)
***CS**= input end of security series

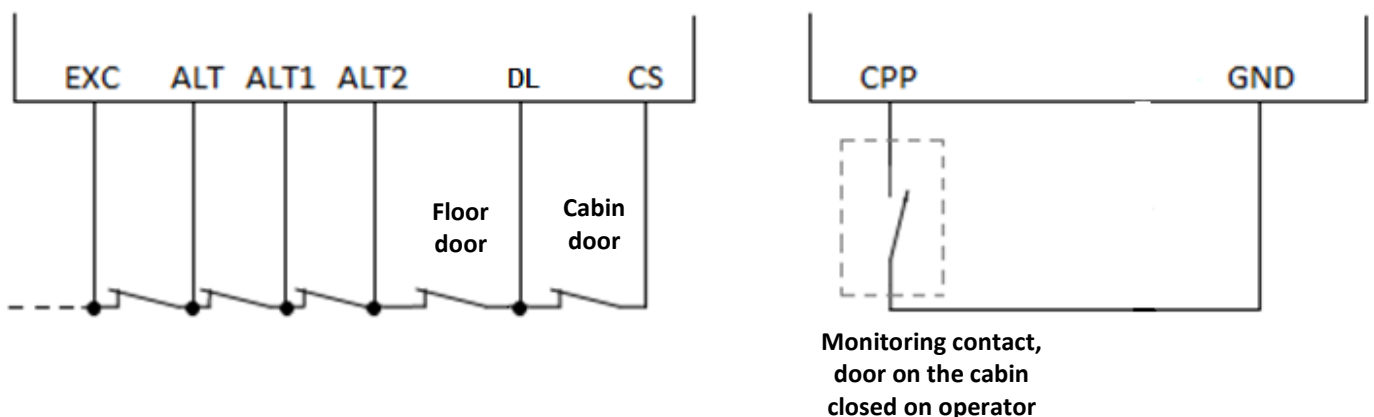
Inputs used on motherboard BR400 for EN81.20

MAN_QUADRO = Maintenance input of cabin
PSM_QUADRO = input ascent direction (control panel maintenance) *
PDM_QUADRO = input descent direction (control panel maintenance) *
MAN_CABINA= input cabin maintenance **
PSM_CABINA = input ascent direction (cabin maintenance)**
PDM_CABINA = input descent direction (cabin maintenance)**
SHUNT=input key "security shunt" activated

*= Input used to management of control panel maintenance with a maintenance pushbutton.

**=Input used when it is not used a COP. On serial lift is possible to use input MAN, PSM e PDM of COP board.

Connection of input CPP, RES e CS for legislation EN81.20



Warning! When the pit and cabin maintenance are active, the legislation obliges the movement only if are activated the same directions. Example: to move uphill you need to press at the same time the ascent direction on cabin maintenance pushbutton and the ascent direction on pit pushbutton.

If cabin serial communication is active (G6=1), use the commands of top car maintenance of additional serial boards.

Bypass switch

According to the law En81.20 the lift needs a "Bypass" switch that allows to exclude the "Cabin door contact" or the "Floor door contact" or the "Combinations" (if semiautomatic), only in maintenance. When the Bypass switch is activated (situated in the control panel):

- You need to activate the Control board input Maintenance of motherboard BR400 + SI. The motherboard is in Maintenance mode and the door movement is canceled.
- The key positioning indicates if is closed the "Cabin door contact" or the "floor door contact" or "Combinations" and on motherboard's display will appear "**MAINTENANCE SI**"
- The lift will can move only if the input "Contact of close cabin door monitoring" will be closed on the operator (**input CPP activated**). If this is open on the motherboard will appear the word **NO_CPP**.
- The lift will move only in maintenance mode or during the emergency electric maneuver.

Doors contacts state

INPUT	OPEN DOORS	CLOSED DOORS
CS	0	1 (input can turn off again when doors are closed)
CPP	0	1 (input can turn off again when doors are closed)
DL	0	1 (input can turn off again when doors are closed)

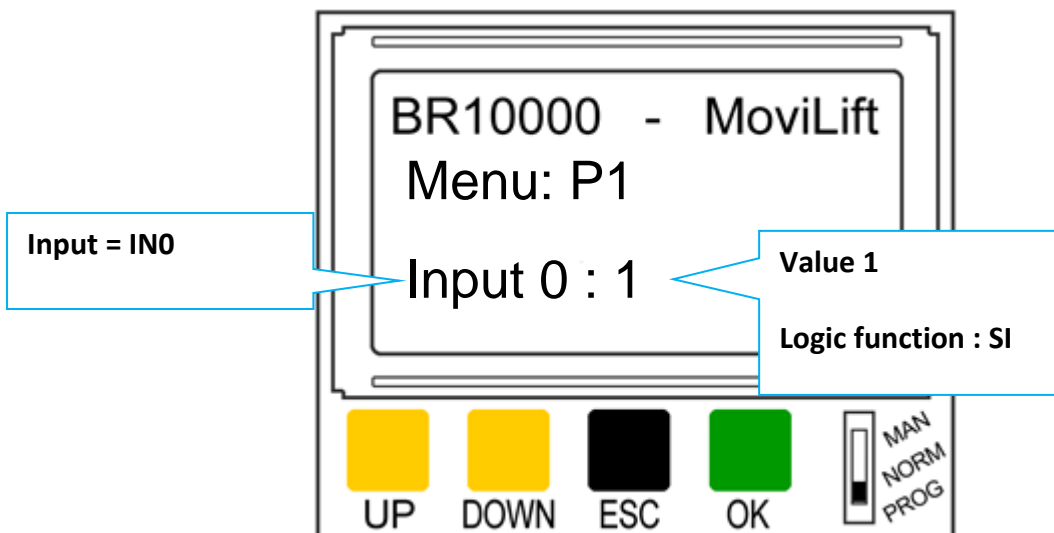
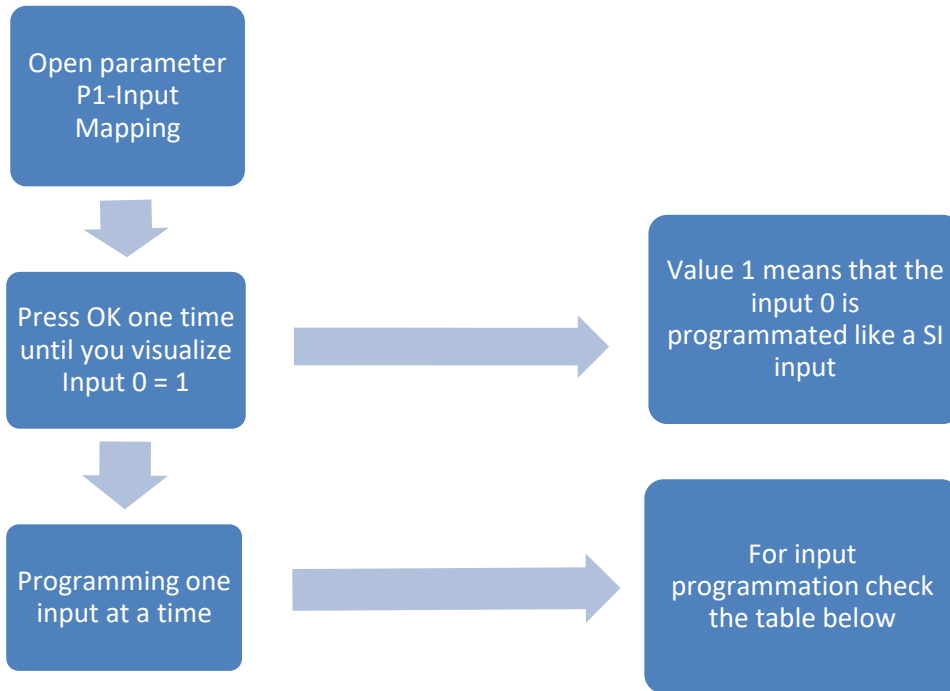
Lista errori contatti porte

INGRESSO	ERRORE IN APERTURA	ERRORE IN CHIUSURA	ERRORE IN CORSA
CS	59 (blocking error)	200-231 (advise if input turn on within 4 attempts) 0-31 (after 4 tentativi)	32 (if input not turn on within time set in D9 of board) 33 (safety circuit bouncing, tolerance at parameter D28)
CPP		83 (after 4 attempts)	
DL	124 (blocking error)	137 (after 4 attempts)	

10 Mapping physical Input/Output

Input IN0-IN22 are mappable inputs: their logic functioning can be decided and set by parameter P1.

Example of programming input IN0.



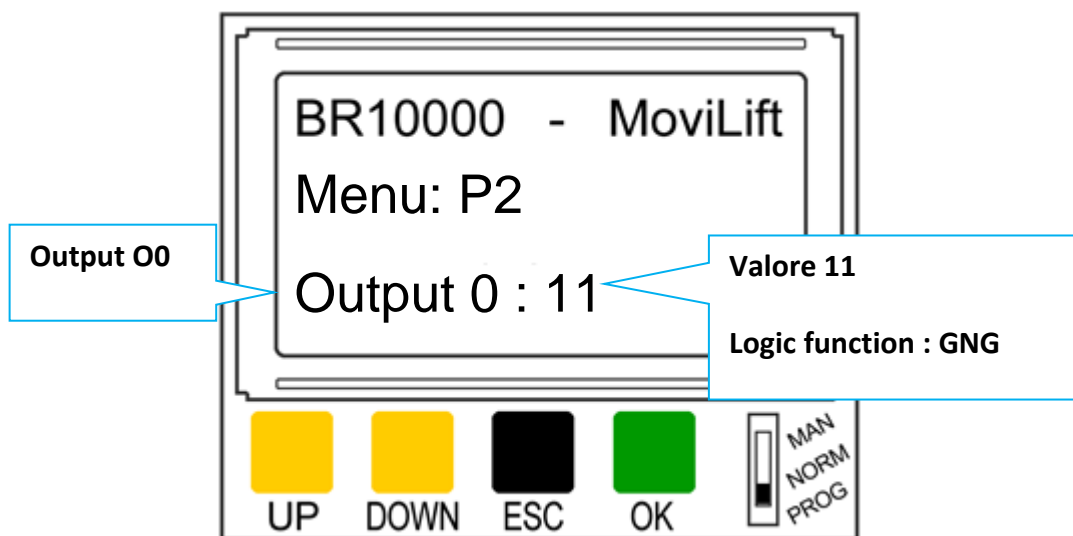
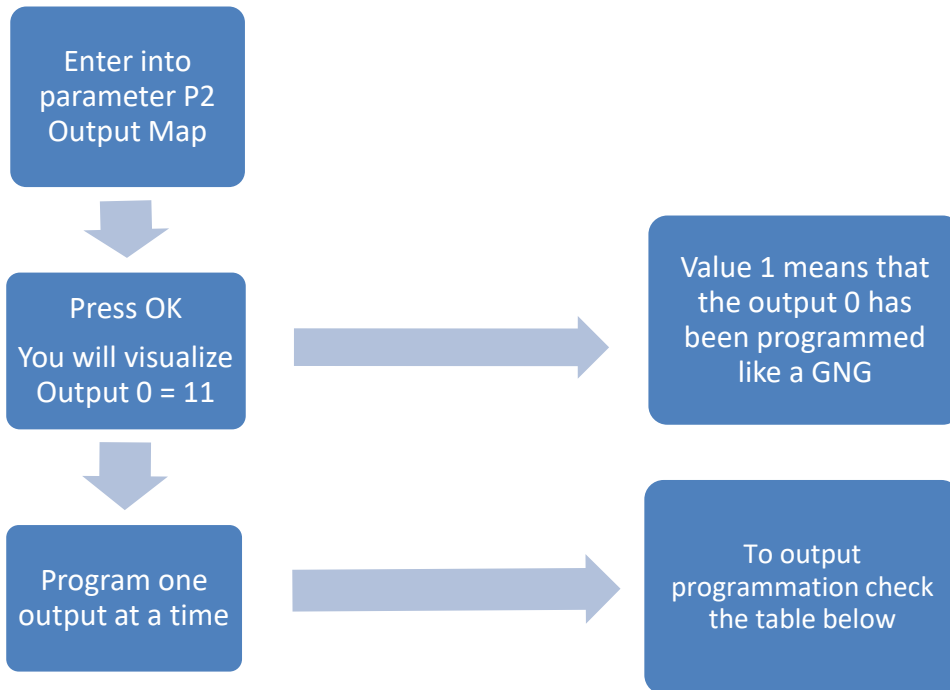
Value	Logic input
0	No function
1	SI – Independent Service
2	RES – Alarm Reset
3	POM – Input Firefighter maneuver
4	IF – Selector pulser
5	ICV – Selector pulser
6	RD – Selector pulser
7	RS – Selector pulser
8	PCP – Door closing Button
9	PAP – Door opening Button
10	74 – Overload
11	CC – Full load
12	FM – Fondo Mobile
13	- (Reserved)
14	CM2 – costola mobile lato B
15	CM1 – costola mobile lato A
16	AR – Alarm Received
17	BR2 – brake microswitch
18	BR1 – brake microswitch
19	60 – Thermal oil
20	EM - Emergency
21	PDM – Descent button maintenance pit
22	PSM - Ascent button maintenance pit
23	MAN - Pit maintenance
24	TSD – Contactors control Ascent/Descent
25	CPP
26	APG
27	IT1
28	IT2
29	MAN_CONTROL PANEL
30	PSM_CONTROL PANEL
31	PDM_CONTROL PANEL
32	MAN_CABIN
33	PSM_CABIN
34	PDM_CABIN
35	SHUNT
36	KFR

N.B. Don't associate the same logic functioning with two physical inputs.

Outputs O0-O13 are mappable outputs. Their logic functioning isn't univocal but can be decided and set by programming parameter P2.

All outputs returns a GND contact. It is recommend to interface a relè.

Example of programming output O0:



Value	Logic input
0	No function
1	TG – High speed command
2	TB – Low speed command
3	TS – Ascent direction command
4	TD – Descent direction command
5	CP – Closing door command
6	AP – Opening Door Command Side A
7	AP2 – Opening Door Command Side B
8	PAT – PAT Output
9	SVR – Overload output
10	OCC – Occupied Output
11	GNG – Gong Output
12	SAR – Out of Service Output
13	FS – Ascent arrow Output
14	FD – Descent arrow Output
15	SA
16	SCP – Cabin at the floor sensor Output
17	OT1 – Programmable Output
18	OT2 – Programmable Output
19	OT3 – Programmable Output
20	OT4 – Programmable Output
21	OT5 – Programmable Output
22	OT6 – Programmable Output
23	RIF_VEL0 – Speed Reference VEL0(Encoder)
24	RIF_VEL1 – Speed Reference VEL1(Encoder)
25	RIF_VEL2 – Speed Reference VEL2(Encoder)
26	A – Binary Output A
27	B – Binary Output B
28	C – Binary Output C
29	D – Binary Output D

N.B. Don't associate the same logic functioning with two physical inputs.

11 Connections description

A/B/C/D

They can make different functions. It can be programmed with F6 parameter.

NOTE: In the presence of a hydraulic system (A5 = 3) and activated the amendment A3 for hydraulics (B1 = 2), the **output D** does not perform any of the following functions, but is used as a second descent valve. See Chapter 13.13.1

On fast lifts (speed > 1.6 m / s), where the inter-floor does not guarantee the space required for proper slowing down from high speed, parameter A4 = 2 can be set. Output D will take on the function of enabling intermediate speed: by making a call to a nearby floor, output D is activated and an intermediate speed input in the frequency converter must be enabled with an interface relay.

F6 = 0: A-B-C-D is binary code for landing indication like in table:

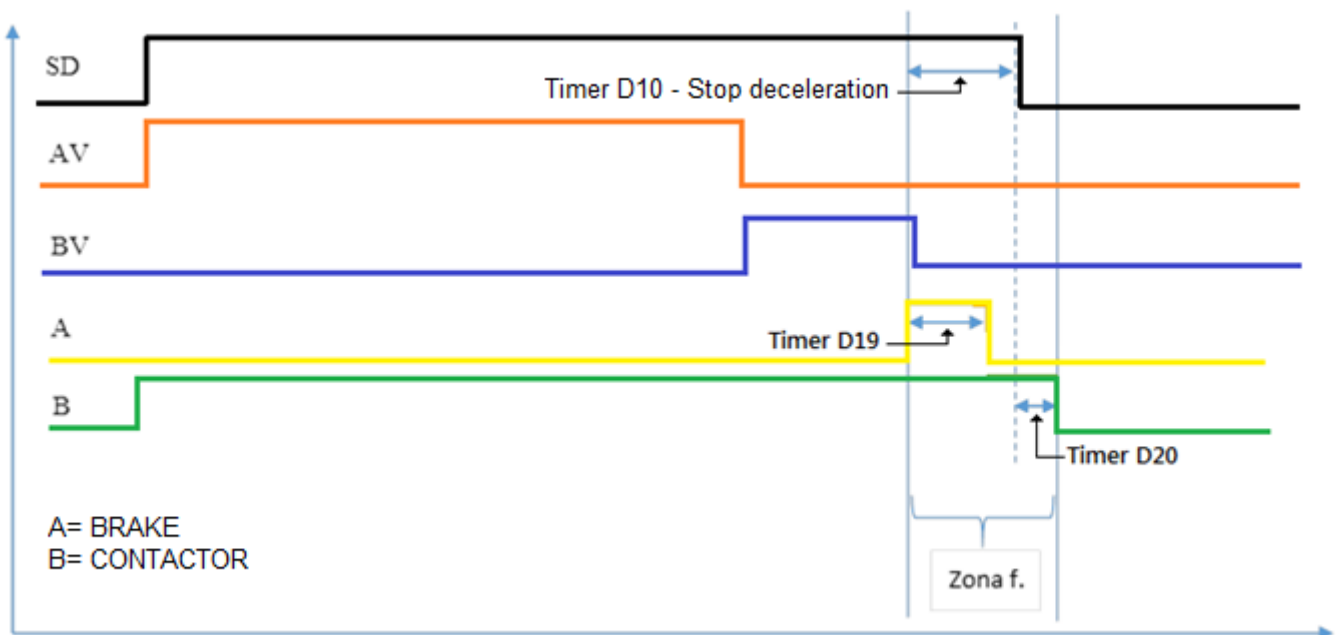
Floor	D	C	B	A
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

F6 = 1: A-B-C-D out puts corresponds to GREY code for landing indication as in table:

Floor	D	C	B	A
0	0	0	0	0
1	0	0	0	1
2	0	0	1	1
3	0	0	1	0
4	0	1	1	0
5	0	1	1	1
6	0	1	0	1
7	0	1	0	0
8	1	1	0	0
9	1	1	0	1
10	1	1	1	1

11	1	1	1	0
12	1	0	1	0
13	1	0	1	1
14	1	0	0	1
15	1	0	0	0

F6 = 2: A-B-C-D outputs are used to drive inverter in a GENERAL PURPOSE. General Purpose inverter does not manage travel and brake contactors. So Output A and B will be used for necessary delays to drive travel contactors and execute the holding of brake contactor.



While **output D** is used as RSS output so it is activated in stop zone during delay stopping timer activity (parameter D10 and D26). It is suggested to use relay interface on outputs A and B.

F6 = 3: A-B outputs are not used while C gives input status X3 on COP, C = X3 (cop) and output SA on BR200 gives X2 output status on COP, SA=X2 (cop).

The status of the following inputs is shown:

X3 = 0	C = 0
X3 = 1	C = 1
X2 = 0	SA = 0
X2 = 1	SA = 1

Input X1 of the COP is a free **fast** input. If parameters A15 = 1 and A16 = 0 on the BR (homelift management), this input assumes the function of enabling the lowering maintenance maneuver. If active it

enables the downward maneuver, if deactivated it inhibits it.

F6 = 4: The functions of the settings F6 = 2 and F6 = 3 will be executed.

F6 = 5: A-B-C-D outputs as signal 1 line/floor till 4 floors maximum like in table:

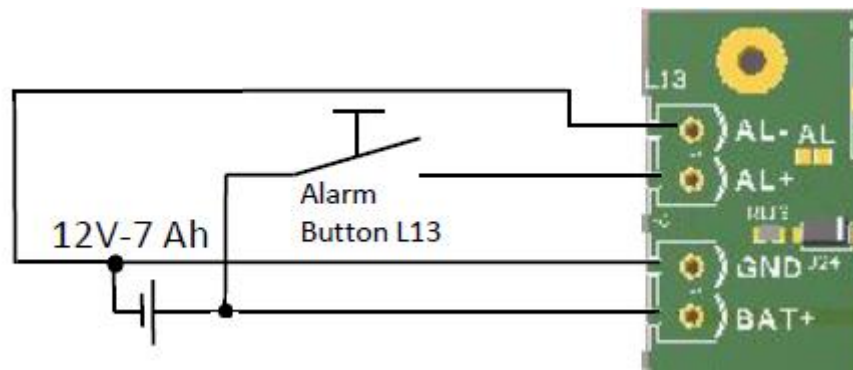
Floor	D	C	B	A
0	0	0	0	1
1	0	0	1	0
2	0	1	0	0
3	1	0	0	0

F6 = 6: The outputs A-B-C-D correspond to Binary Code inverted for the indication of the floor. As reported in the following table:

Floor	D	C	B	A
0	1	1	1	1
1	1	1	1	0
2	1	1	0	1
3	1	1	0	0
4	1	0	1	1
5	1	0	1	0
6	1	0	0	1
7	1	0	0	0
8	0	1	1	1
9	0	1	1	0
10	0	1	0	1
11	0	1	0	0
12	0	0	1	1
13	0	0	1	0
14	0	0	0	1
15	0	0	0	0

AL+ / AL-

Giving power to AL+/AL- (12Vcc by battery) Alarm Law 13 is activated. Alarm will be showed on the indicators in case of serial mode connection.



ALT/ALT1/ALT2

Voltage to identify ALT= PIT, ALT2= CABIN, ALT2= DOOR LOOK. It can be variable from 24 to 110 V DC-AC.

APG

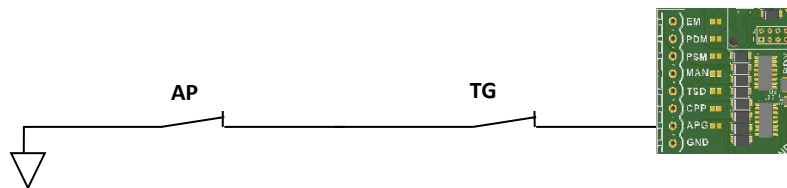
High Speed Monitoring / Door Opening Input. If parameter G5 = 1, the input monitors the operation of the high-speed contactor, instead if parameter C1 = 1, the input also monitors the operation of the gate-opening contactor. Errors generated 57 and 84; verify that the opening time, at parameter C2, is sufficient.
Operation:

During high speed: **APG= OFF**

During low speed: **APG= ON**

During door opening: **APG= OFF**

With stationary lift and without door movement: **APG= ON**



AP

Command output Opening Doors (first access). The output is a clean relay contact whose common is CRP. The output can command a protected contactor with a recirculation diode.

AP2

Command output Opening Doors (second access). It is preferable to interface to this output a 12Vdc relay (connected between +12 and AP2) with a recirculation diode and a relay or contactor in the free contact. The output has a maximum load of 400mA. See paragraph 11

AR

Input that can have the function of "Alarm Received" or on hydraulic "Safety module control".

By setting Parameter H9 = 1 to the AR input, we monitor the status of the safety module on hydraulic systems.

During the hydraulic repeating procedure with the open doors CS = OFF, the board checks if the safety module is in order through the input AR = ON.

If the safety module is not in order AR = OFF, the card does not execute the relevelling but goes to reconfigure in order to unlock the safety module and generates a 240-250 error depending on the plane it is in. (Max 10 floors)

BAT+

Emergency battery charger output. During the absence of the power supply, the board remains on and performs the emergency procedure (See Emergency Cycle Time at parameter D11, Emergency Run Time at parameter D21 and Emergency Activation at parameter A10). The battery recommended for the emergency phase and Law 13 is a 12V 7 Ah.

BR1/BR2

Inputs monitoring amendment A3. In the case of GEARLESS engines, in order to comply with EN81.20 and EN81.50 AMENDMENT A3, it will be possible to monitor the opening of the brake shoes at each start / end of the floor. Failure to close the jaw or fail to reopen the jaw will result in a resettable lockout error only by pressing the RESET button on the motherboard. It will not be recoverable even by restarting the

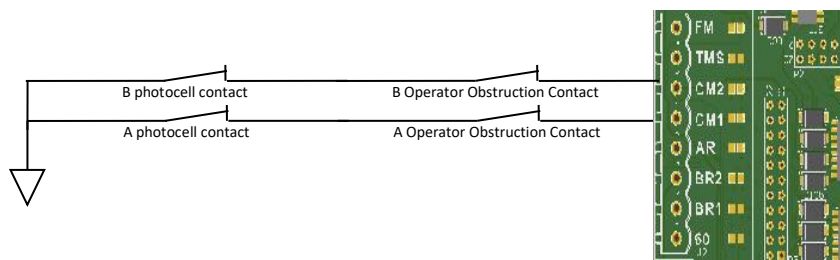
motherboard.

CC

"Full Load" input. On systems with collective manoeuvre it excludes the execution of external calls until the contact is restored.

CM1/CM2

Photocell and Door operator contact. The contacts, normally closed N.C., must be connected to these inputs. In series, first access photocell and Door operator contact (CM1) and second access photocell and Door operator contact (CM2). It is possible to set the D1 time after which the fault 63 is generated.



CRP

Input common for door operator relay (AP/CP outputs)

CP

Command output CLOSING DOORS (single for first and second access). It is a clean relay contact whose common is CRP. The output can control a contactor load protected by a recirculation diode.

CPP

Low Speed Monitoring Input / Door Closure. If parameter G5 = 1, the input monitors the operation of the low-speed contactor, instead if parameter C1 = 1, the input also monitors the operation of the door-closing contactor. Errors generated 58 and 83, verify that the closing time, at parameter C3, is sufficient. Operation:

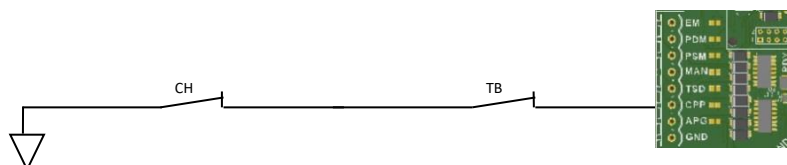
During high speed: CPP= ON

During low speed: CPP= OFF

During door opening: CPP= OFF

With stationary lift and without door movement: CPP= ON

Furthermore, if EN81-20 / 50 function is enabled (parameter C12 = 1), this input is used to monitor the "Closed Car Door Monitoring Contact" of the electronic operators. If it is not connected it generates error 83.



CS

It is taken at the end of safety circuits to check landing door and landing contact. Application voltage is from 24 to 110V DC-AC. Check chapter **Errore. L'origine riferimento non è stata trovata..**

CT

Contactors common (TS, TD, TG, TB). Usually it is wired with CS. If Automatic doors with cam, it will be better separate CS like cabin door contact and CT connected to landing door contact.

EM

Emergency input, (power cut)

FD "Down arrow direction" output. In **APB** manoeuvre, the light indicates the actual movement of the car. In **Reserved** manoeuvres the light is also interpreted for indication of the next down direction.

FS

"Up arrow direction" output. In **APB** manoeuvre, the light indicates the actual movement of the car. In **Reserved** manoeuvres the light is also interpreted for indication of the next up direction.

EXC

Input that picks up the voltage at the beginning of the safety chain, for example, from the limit switches from the contacts of the doors and bolts. The input can vary from 24-110 V DC-AC. The intervention of this safety system permanently blocks the system until it is reset with the **RESET** key.

FM

"Movable floor" input. Input is settable N.C. or N.O. using the parameter F3. When the entrance is active, the cabin remains on the floor with the doors open and occupied until the input status is restored. Cabin calls remain enabled.

GND

It is the mass reference (common negative) of all the logic inputs. This clamp must be returned to a ground connection point.

GNG

"Gong" output. It is commanded at each command of the door opening or on the exchange of speed (Parameter F4) for a maximum of 4 seconds (Parameter D18).

It is advisable to interface a relay to this output.

H/L

These are terminals for controlling the serial CAN bus for serial boards (COP, CHM, CHM2S and BR_ENC).

IN+/IN-

Are the clamps for the power supply of the control board. (12/24Vdc/ac). Use protection by FUSE 2Amp-60VA.

IF/ICV

Input signals of stopping and speed change/landing counter sensors.

IT1/IT2**IT1 input can perform two functions:**

- Dinamo hospital manoeuvre activation. Activating the parameter H6 = 1 and H11 = 0. Check chapter 17.7
- Landing calls activation. Activating parameters H6 = 0 e H11 = 1, landing calls will be accepted only when IT1 input is active.

IT2 input:

- Fireman manoeuvre activation using parameter A12 =1. *Check chapter 17.7*

IT3/IT4:

Two free inputs for programming

MAN

"Maintenance" input. On lifts complying with the EN81.20 standard this input is dedicated to "Pit" maintenance. When activated, internal and external calls are excluded when the busy part is switched on and the car is switched off. When driving, it can stop in the Up/Down pre-limit sensor area or on the floor in the extreme stop area, in HIGH or LOW speed. See parameter A8.

MAN Control panel

Maintenance Input. On lift with regulations EN81.20 this input is dedicated to Control panel maintenance. When it is activated internal and external call are excluded with occupied always on. Marching it can stop in Ascent/Descent Rephasing zone or at the extreme floor, high or low speed. Check the parameter A8.

MAN Cabin

Maintenance Input. On lift with regulations EN81.20 this input is dedicated to Control panel maintenance. When it is activated internal and external call are excluded with occupied always on. Marching it can stop in Ascent/Descent Rephasing zone or at the extreme floor, high or low speed. Check the parameter A8.

OCC

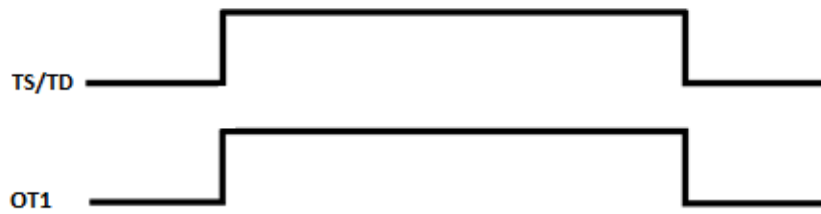
it manages BUSY signal. Output is enabled when Faults or Safety error happens. It is used to turn off delayed signals (APB manoeuvre). Turn off delay settable with parameter D8.

OT1/OT2/OT3/OT4/OT5/OT6

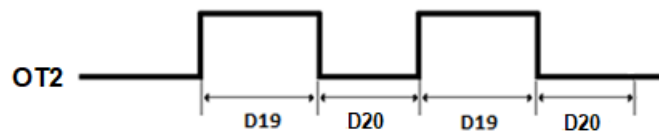
Output for free programming.

If you set the parameter F7=1, the output uses the forced door closing command for fire maneuver.

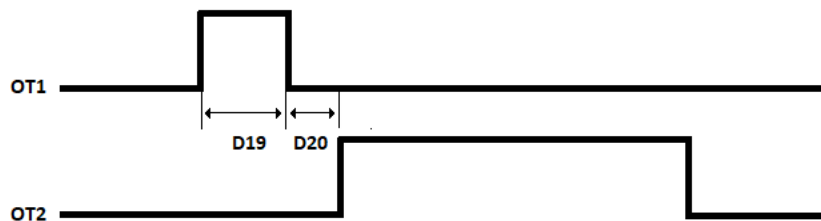
If you set the parameter F7=2, the output is used to control the micro pump on an hydraulic system. The output is activated during the leveling.



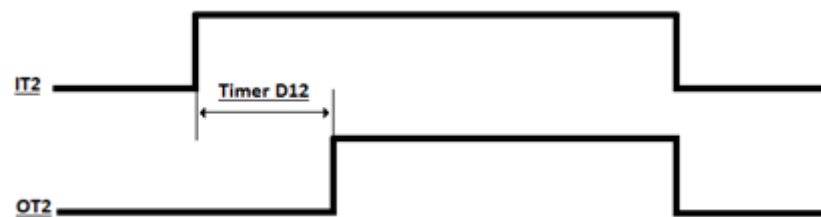
If you set the parameter F7=3, the output OT2 is used to control the emergency brake on PM gearless motors.



If you set the parameter F7=4, outputs OT1/OT2 are used to power on the star/delta contactors on hydraulic system. OT1 is used for Star and OT2 is used for Delta. On outputs you need to connect two interface relay.



If you program the parameter F7=5, OT2 is delayed upon activation after that IT2 is activated. It can be used to power on the presence network control switch in a cabinet with the return to the emergency floor. (K380).



Programming the parameter F7=6 the output OT2 turns on only when sensor inputs IF+ICV are on. Replica of output SCP:

IF	ICV	OT2
0	0	0
0	1	0
1	0	0
1	1	1

Programming the parameter F7=7 the output OT2 turns on only when one of the sensor inputs IF or ICV is on:

IF	ICV	OT2
0	0	0
0	1	1
1	0	1
1	1	1

Programming the parameter F7=8 the output OT1 turns on only when rescue operation is complete and doors open:

EM = 1			
IF	ICV	CS	OT1
1	1	1	1

PAP

"Door Opening" command input. Upon activation it enables the door opening command when the cabin is at the floor or allows cancelling the call in progress while closing the doors.

PDM/PSM

Control inputs UP or DOWN. On systems complying with the EN81.20 standard, these inputs are dedicated to "Pit" maintenance.

PDM/PSM Cabin

Command input Ascent and Descent. On lift with regulations EN81.20 this inputs are dedicated to Cabin Maintenance.

PDM/PSM Control Panel

Command input Ascent and Descent. On lift with regulations EN81.20 this inputs are dedicated to Control Panel Maintenance.

PCP

Advanced "Door Closure" command input. Upon activation, only on collective manoeuvre lifts, the waiting time with open doors during reservations is reset.

If the door closure button is not present in the cabin, the virtual PCP function can be activated by programming the following parameters:

- H3 = 1
- H15 = 0

This function will simulate door closing button by pressing any previously activated call again.

POM

"Firefighters" input. Parameter A11 can be used to program the destination floor and time. Check chapter 13.6

PAT

It is the output signal for the retiring cam. It is better to use mini-relay 12v connected to +12 and PAT with a diode and in a free contact apply mini-contactor. Output MAX load is 400mA.

RD/RS

Input signals for lower and upper landing phasing sensors. RD always active when cabin is not in lower floor. In opposite way always active when cabin is not in upper floor. Check paragraph SHAFT INFORMATION. Wronged -positioning of magnets or wronged working of these sensor will give many errors (paragraph 0 for fault 44-45-46-47-48-49-71).

RES

Reset input can be used for:

- Law 13 reset.
- Landing door contact, if parameters C12 and C14 are set at 1. On lifts complying with the EN81.20 standard this input is dedicated to monitoring the "door contacts". See section 13.6

SA

It manages landing signal LAW 13, to indicate "ALARM" usually indicated by BELL. This signal gives GND only if AL+/AL- are powered. While if parameter F6 = 3 or 4, output SA become the same of input X2 on COP.

SAR

Out of service output, Activated during the maintenance and with an occurred fault.

If there is an hydraulic lift (parameter A5=3) and the high speed time ≥ 35 , the output SAR are activated only when Extra-Corsa (EXC) intervenes.

SCP

This Output has different working in according to value in parameter A5.

A5 = 1 (AC2) or A5=2 (VVVF), output SCP gives GND only in door zone with lift stopped or in movement. When lift reach ZONE IF+ICV:

IF	ICV	SCP
0	0	0
0	1	0
1	0	0
1	1	1

A5 = 3 (Hydraulic) or A5=4 (Home Lift) or if D3 > 45, output SCP gives GND on activation of one input IF or

ICV like in table with input EM = 0:

EM = 0		
IF	ICV	SCP
0	0	0
0	1	1
1	0	1
1	1	1

When EM = 1 and A5=3 or 4, output SCP is given only in stop zone IF+ICV, like in table:

EM = 1		
IF	ICV	SCP
0	0	0
0	1	0
1	0	0
1	1	1

SI_I

Closed to GND it enable INDIPENDENT SERVICE for collective manoeuvre. All landing call will be cancelled so cabin calls will have priority. Chapter 15.10. Furthermore, if parameter C12 = 1 is active, this input will also take on the function of activating the light/sound device under the cabin during maintenance movement with bypass key on. Chapter 8.0

SVC

Alarm overload sound's output signal (Activated when the input 74 is On). This output can be programmed for blinking or fixed work to parameter F2. It gives GND till max current 400mA.

TB

Output for LOW speed. It is a relay with common in CT. For AC2 lift it manages low speed contactor. This contactor has to be protected by diode. For Hydraulic lift it manages line contactor TL. This output is monitoring by CPP.

TD

It is down direction. It is a relay with common in CT. For AC1/2 /HYDRAULIC lift contactor is protected by diode. This output is monitoring by TSD.

TG

"High speed" command output. It is a clean relay contact and can be monitored by the APG input. See paragraph 2

TMS

"Motor thermistor" input. Upon activation, if in motion, it continues the march until it reaches the next floor and opens the doors with the occupied switched on. The contact can be programmed N.C. or not. F5

parameter.

TS

"Ascent" command output. It is a clean relay contact and can be monitored by the TSD input. See paragraph 2

TSD

"Run control" input on Climb and Descent outputs (TS / TD). Errors generated 81 and 82.

During Ascent: TSD = OFF

During Descent: TSD = OFF

With stop lift: **TSD= ON**

0M

It is the ground reference (common) of the safety circuits ALT, ALT1, ALT2, EXC, CS. This clamp must be connected to Earth (PE). Check note in INSULATING TEST paragraph.

+12/GND

Output Voltage 12v – 2Ampere (max value) to make connection in controller like COD16, CHM, Voice synthesizer etc. Protect this output with appropriate fuse MAX 1, 5 A.

60

Closed to GND, it check oil temperature on Hydraulic lifts; Fault isn't blocking but when lift arrive to floor open will be opened and BUSY signal turn ON; any calls will be accepted; it is settable in parameter F1.

74

It is activated by cabin overload; this input is settable in parameter F2. It can be NC or NO. When it is activated, cabin stop to the floor with door opened and BUSY signal turn ON until it is reset; SVC led signal will be on; cabin calls disabled.

SHUNT

Shunt input. When it is activated means that there is a shunt on security series. It permits the maintenance and delete all the active reservations.

KFR

Input of emergency key at the floor. On lift with regulations EN81.20 this input is dedicated to pit access. At the activation, internal and external calls are excluded with occupied always on. It needs the motherboard reset or double click to return to normal functioning. (Check the parameter C16).

ISP1

Maintenance Inputs dedicated to provisional maintenance cable

ISP2

Inputs of Ascent command dedicated to provisional maintenance cable

ISP3

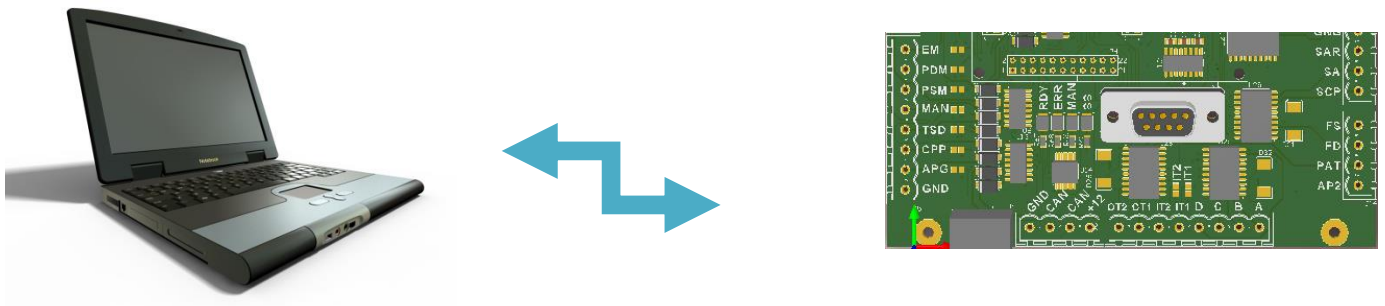
Inputs of Descent command dedicated to provisional maintenance cable

12 THE COM port

RS232 I/O (COM) is used to manage by PC in local or remote mode the BR200;

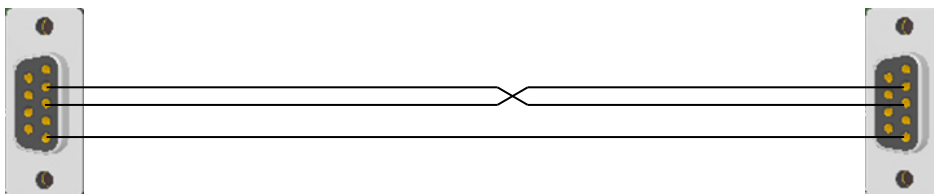
By software, it is possible to configure the board quickly; it will be possible to print parameters list and save the file;

Further by COM is possible remote control by GSM/GPRS devices.



RS232 communication pin cable (COM). This cable can also be used for the connection between two boards in Duplex (see parameter A9).

(PIN) COM (male)	(PIN) COM(Female)
2	3
3	2
5	5



13 USB port

USB port is used to make software updates on motherboard.

The procedure to follow is this one:


1. Download the update (file .hex) and copy it on a USB memory (FAT32).

Procedures for updating software BR boards

1 Download the update and put the file in a USB pendrive formatted FAT32

by phone with OTG cable

by PC



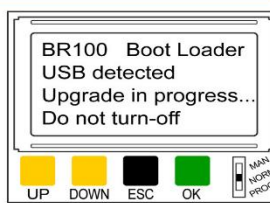
2 Turn off the board



3 Connect the USB disk to board



4 Turn On the board
During this message does not remove the USB disk



5 When the download is finished turn off the BR100, then remove the USB disk



14 Lift first start

The board manages REED type sensors with clean contact NO. Or Bistable. Pre-limit sensors (RS, RD) will have a bistable behaviour, while the counter and gate area sensors (IF / ICV) will have a Monostable behaviour.

Magnets and sensor readings can be configured in different ways depending on the speed of the installation or the inter-floor distances.

14.1 How to calculate the deceleration magnets positioning

Speed (m/s)	Deceleration in meters													Deceleration time
	1,8	1,8	1,9	1,9	2,0	2,0	2,1	2,1	2,2	2,2	2,3	2,3	2,4	
1,6	1,8	1,8	1,9	1,9	2,0	2,0	2,1	2,1	2,2	2,2	2,3	2,3	2,4	Deceleration in meters
1,5	1,7	1,7	1,8	1,8	1,9	1,9	2	2	2,1	2,1	2,2	2,2	2,3	
1,4	1,6	1,6	1,7	1,7	1,8	1,8	1,9	1,9	2	2	2,1	2,1	2,2	
1,3	1,5	1,5	1,6	1,6	1,7	1,7	1,8	1,8	1,9	1,9	2	2	2,1	
1,2	1,4	1,4	1,5	1,5	1,6	1,6	1,7	1,7	1,8	1,8	1,9	1,9	2	
1,1	1,3	1,3	1,4	1,4	1,5	1,5	1,6	1,6	1,7	1,7	1,8	1,8	1,9	
1	1,2	1,2	1,3	1,3	1,4	1,4	1,5	1,5	1,6	1,6	1,7	1,7	1,8	
0,9	1,1	1,1	1,2	1,2	1,3	1,3	1,4	1,4	1,5	1,5	1,6	1,6	1,7	
0,8	1	1	1,1	1,1	1,2	1,2	1,3	1,3	1,4	1,4	1,5	1,5	1,6	
0,7	0,9	0,9	1	1	1,1	1,1	1,2	1,2	1,3	1,3	1,4	1,4	1,5	
0,6	0,8	0,8	0,9	0,9	1	1	1,1	1,1	1,2	1,2	1,3	1,3	1,4	
	1,3	1,4	1,5	1,6	1,7	1,8	1,9	2	2,1	2,2	2,3	2,4	2,5	

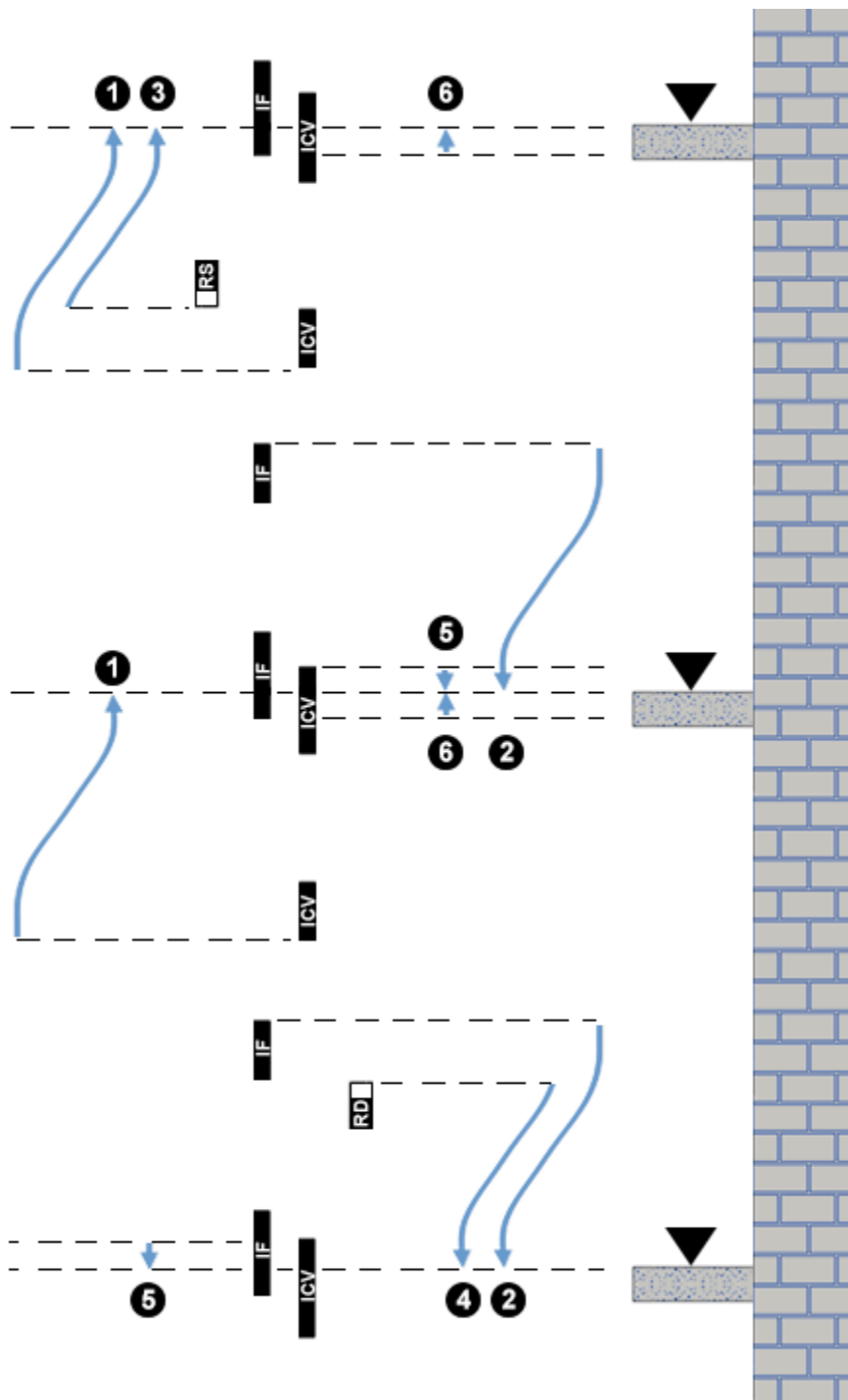
* The highlighted line is the one that is taken into account in most cases.

E.g.: With a lift speed at 0.7m / s and a deceleration at 1.8sec, the deceleration magnets should be positioned 1.1 meters from the floor.

Warning: these are values that may change depending on the type of system!

14.2 Sensors and magnets placement with regular interfloors and speed < 1m/s

The configuration shown in the figure may be ideal for a system that has **regular distances** (minimum 290mm) with car travel speed **less than** of 1m / s. To configure this type of selector, you need to program the parameter A3 = 0: Normal.



1= up deceleration space

2= down deceleration space

3= up deceleration space during re-phase

WARNING: during the power factor correction, the board decelerates only on the counter-phase, therefore, the magnet RS must be positioned just after the deceleration magnet!

4=down deceleration space during rephrasing

WARNING: during the power factor correction, the board decelerates only on the counter-phase, therefore, the magnet RD must be positioned just after the deceleration magnet!

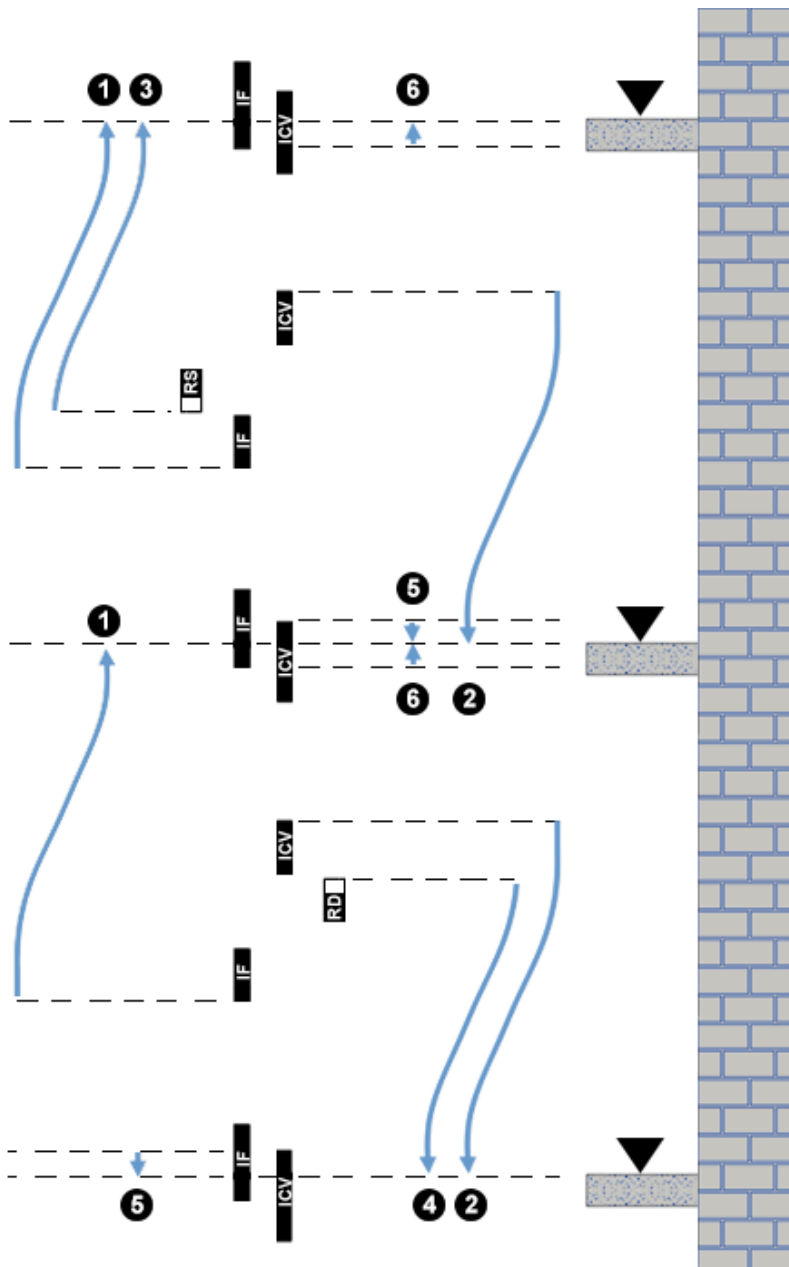
5= Down direction stop space. It varies depending on the lift.

6= Up direction stop space. It varies depending on the lift.

14.3 Sensors and magnets placement with regular interfloors and speed > 1 m/s

The configuration shown in the figure may be ideal for a system that has **regular distances** (minimum 290mm) with car travel speed **more than** of 1m / s. To configure this type of selector, you need to program the parameter A3 = 1: Reverse.

Furthermore, it is possible to set a programmable delay at parameter D7 to delay the insertion of the low speed. This parameter is used when the low speed space is too long until it reaches the stop area.



1= up deceleration space

2= down deceleration space

3= up deceleration space during re-phase

WARNING: during the power factor correction, the board decelerates only on the counter-phase, therefore, the magnet RS must be positioned just after the deceleration magnet!

4=down deceleration space during rephrasing

WARNING: during the power factor correction, the board decelerates only on the counter-phase, therefore, the magnet RD must be positioned just after the deceleration magnet!

5= Down direction stop space. It varies depending on the lift.

6= Up direction stop space. It varies depending on the lift

14.4 Sensors and magnets placement with Irregular interfloors and speed < 1 m/s

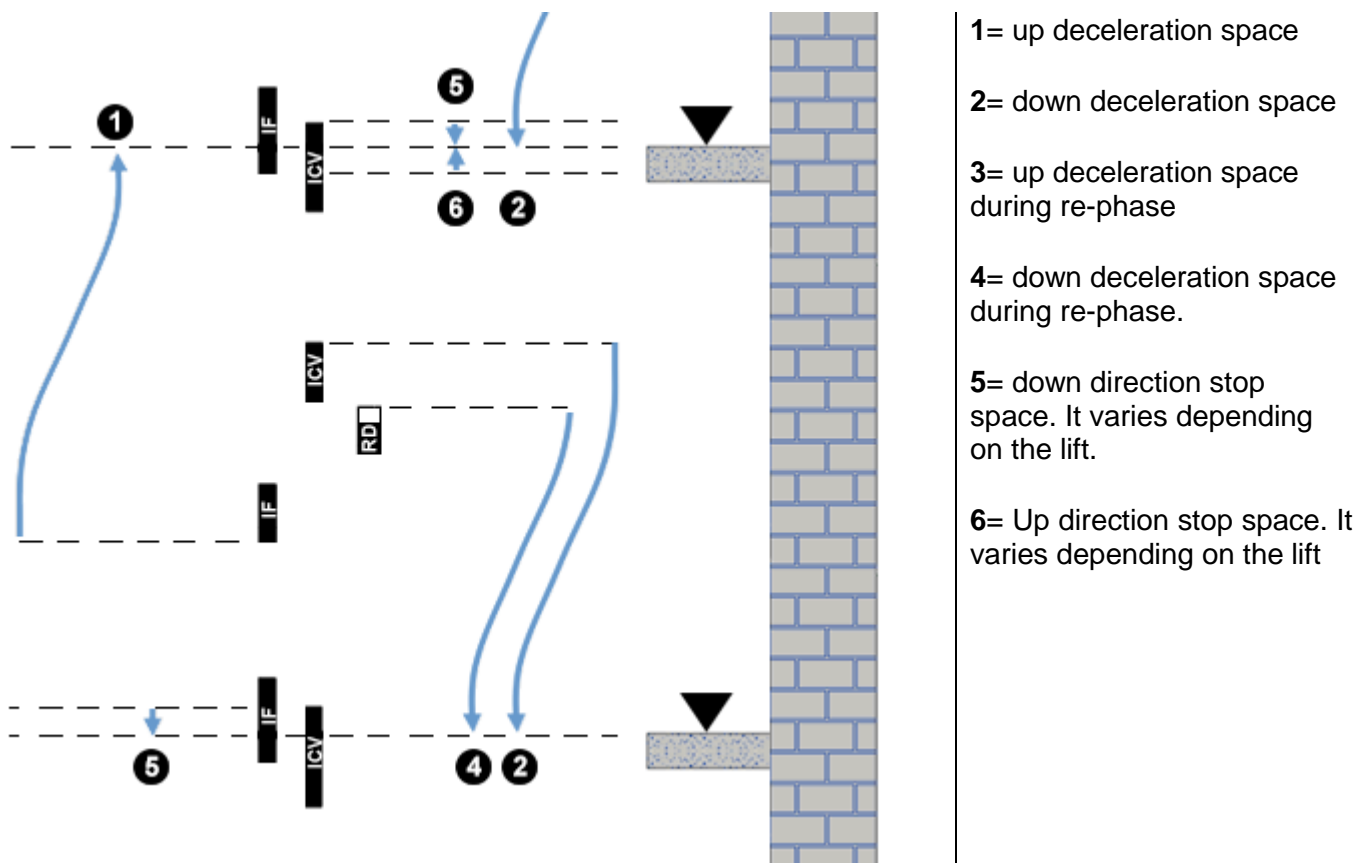
The figure at the side indicates a lift that has irregular distances on some floors (minimum 290mm) with a cabin travel speed **LOWER** than 1m / s.

If the DECELERATION DISTANCES are not sufficient due to a shorter floor or a high speed, it is possible to set a single inter-floor as:

- **Interfloors reversed deceleration**
- **Short interfloors**

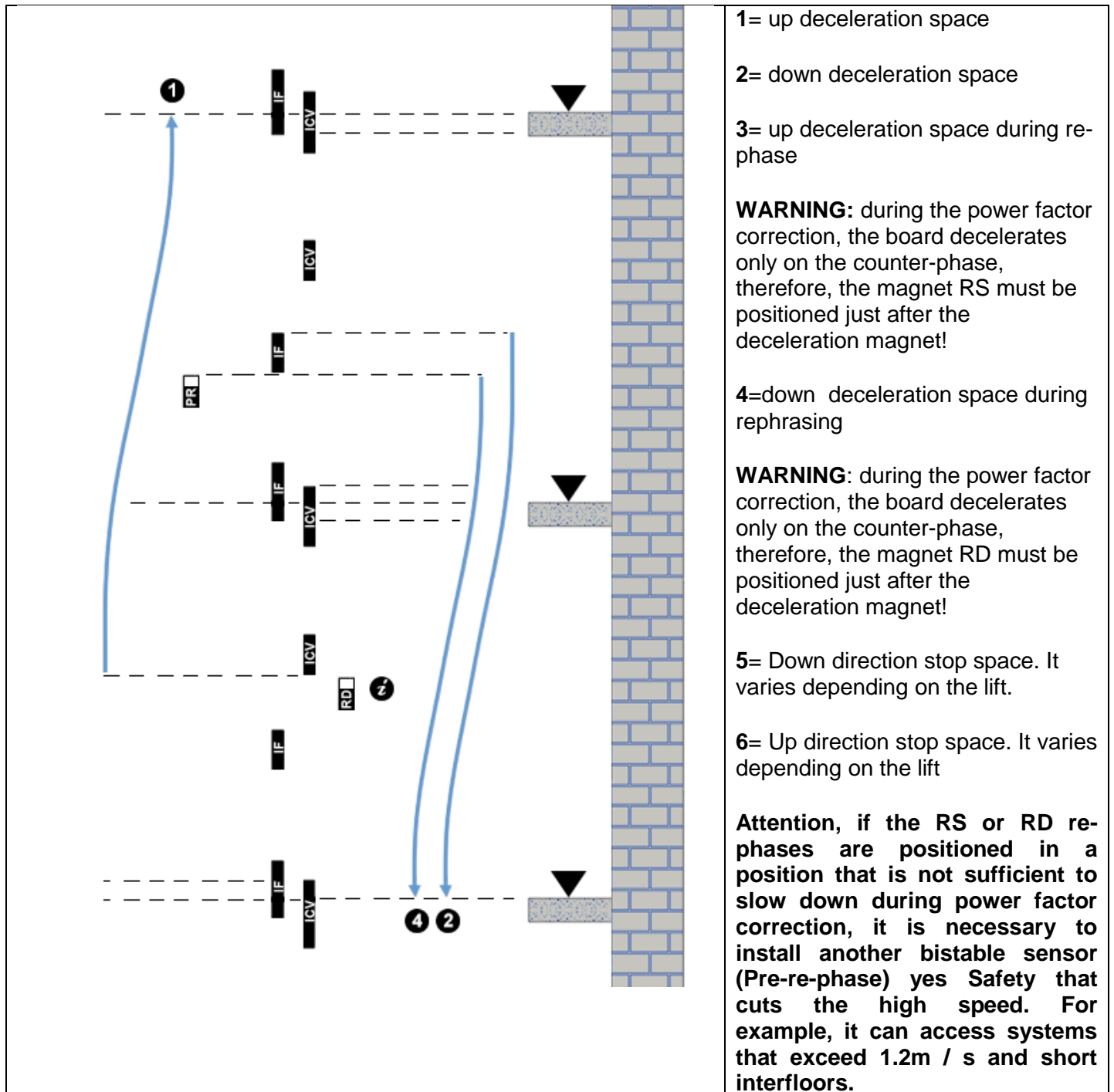
14.4.1 Reversed deceleration

By programming the Long-time deceleration function to parameter A3 = 2 -> reserved deceleration, car decelerates along a larger space towards the destination floor. It is possible to program up to 4 deceleration floors, via parameter A3 = 2.



14.4.2 SHORT Interfloors

By programming the SHORT intermediate floor function to parameter A3 = 2 -> SHORT Floor, the car decelerates along the entire intermediate floor. It is possible to program up to 4 floors in SHORT interfloors, at parameter A3 = 2. The reference floor will always be the lowest between the two interfloors.



15 DOORS

The card can manage traditional doors with opening / closing and electronic limits. In the C parameters it is possible to set the type of operator / s in use.

Doors are opened only if the car is in a stopped area and when the doors are closed or when a call is made.

15.1 Door opening / closing times

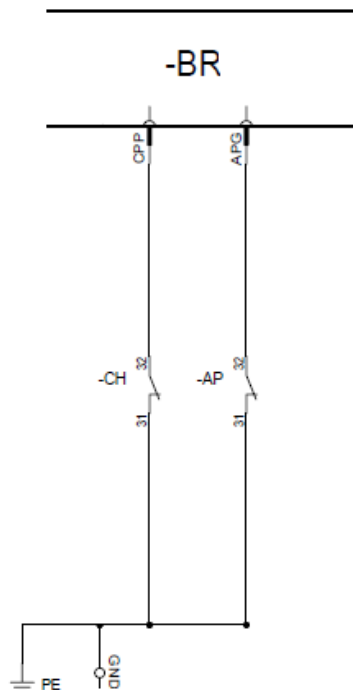
In order to protect the operator, it is possible to set the maximum opening and closing time of the doors to parameters C2 and C3. The Doors Opening (AP) can be delayed on arrival at the floor at parameter C5 and an Open Door Wait time can be set at parameter C4.

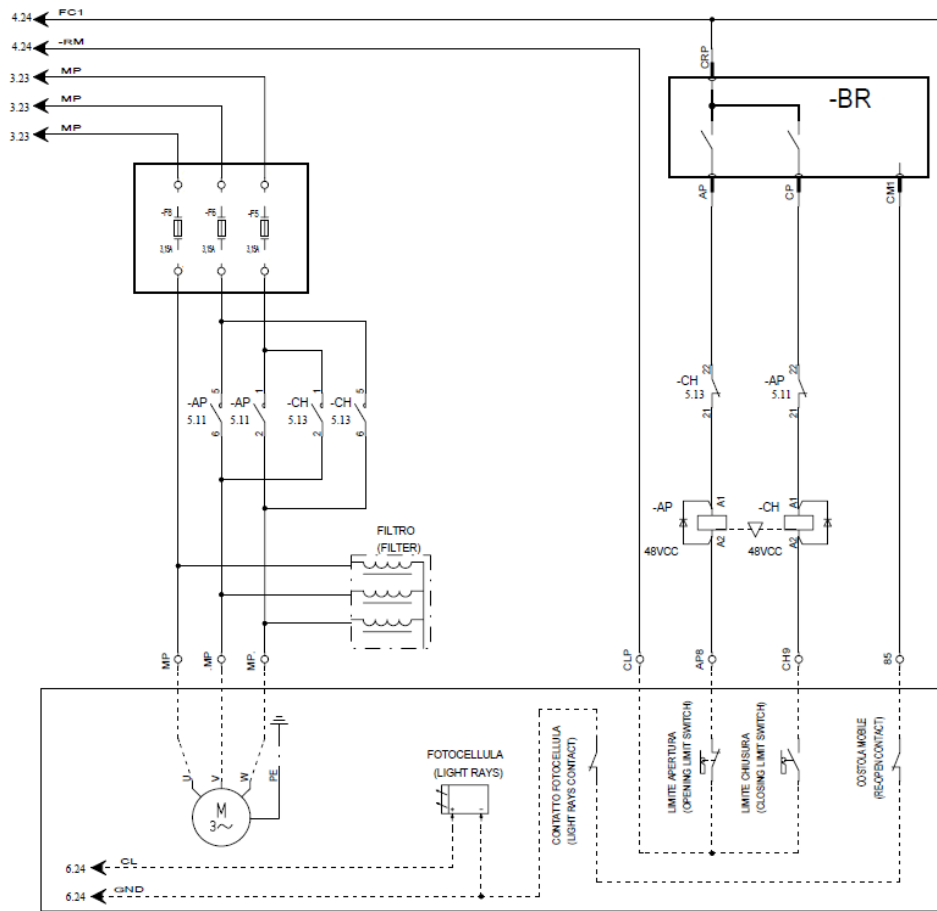
15.2 Automatic doors

Parameter C1 can be used to set the type of operator, with limits or without (electronic) and the type of ports to parameter C9 (Manual, Automatic, Semiautomatic Ports).

Parameter C1 = 1 allows operator management with limits.

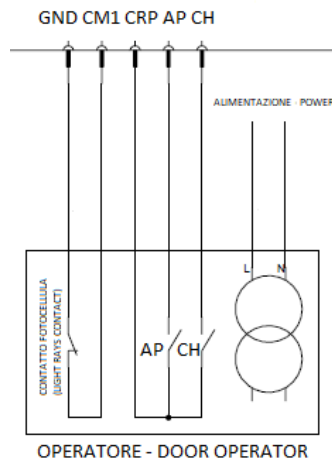
The contacts of the opening / closing limits allow the management of the opening and door closing contactors (AP and CH). On the contactors, monitoring contacts must be connected to the CPP and APG inputs.





Parameter C1 = 0 allows operator management WITHOUT limits (Electronic).

The commands to the operator card are managed directly from the motherboard and the management of the CPP and APG inputs is not necessary.



In some cases the operators need the closure always active during the race. Settable to parameter C8.

15.3 Parking

Elevators with AUTOMATIC cabin doors have the obligation to be stationary behind closed doors. This option can be set in parameter C7. The closing phase of the doors for parking takes place with the cabin on the floor, security closed and no alarm or fault in progress after the expiry of the time "WAITING TO OPEN DOORS" set to parameter C4.

In case of folding doors, C7 = 0 and moreover, by using parameters C10 and C11, it is possible to choose two planes where to perform a door stationing opposite to that programmed in parameter C7.

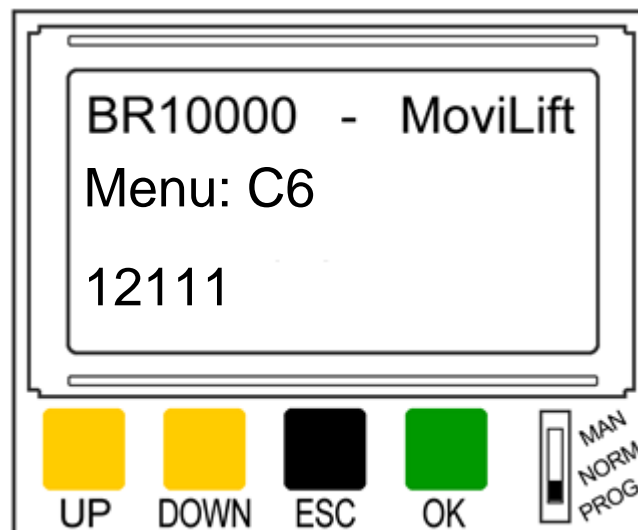
15.4 Multiple entrances (car single / double entrance)

The card can manage two separate accesses using parameter C6. The outputs that control the ports are AP (relay output) and the output AP2 (transistor output is recommended to use a mini-relay in support). It is possible to have various landings configurations according to the requirements required by the system:

15.4.1 Double entrance access

It is possible to set opening side for each floor in parameter C6 value "1" is SIDE A (output AP), value "2" is SIDE B (output AP2);

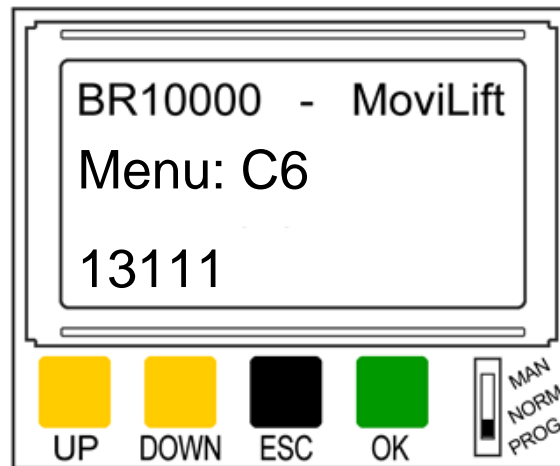
For example the parameter C6 = 12111 corresponds to a 5 stops lift with second floor on the B side and the rest on the A side.



15.4.2 Opposite aisle double entrance

It is used when is necessary to open both doors like a corridor. You can set it in each floor by parameter C6 = 3.

For example, parameter C6 = 13111 corresponds to a 5 stops lift with a second floor opening sides A and B and the rest side A.



15.4.3 Selected double entrance

In according to cabin call made you can decide what door is necessary to open; you can set this function by parameter C6 = 4 in each floor where it is requested.

In the call mapping (see paragraph 6) a stop will be scaled, considering the access on the B side.

E.g.:

Standard Floor	Standard Mapping (input CHM)	Floor with two selective entrances
0	CHM - 0	0
1	CHM - 1	1A
2	CHM - 2	1B
3	CHM - 3	2
4	CHM - 4	3
5	CHM - 5	4
6	CHM - 6	5

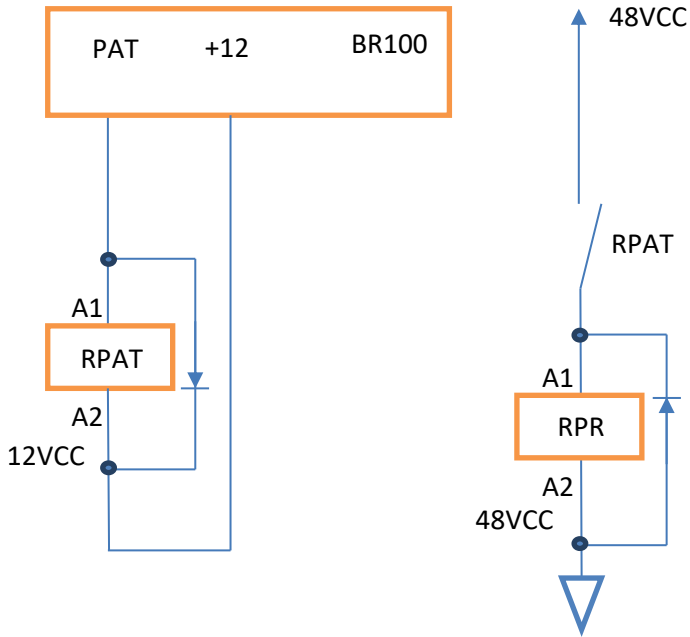
15.5 Manual doors (or semi-automatic)

If lift has car door operator with swing door on landings you have to set parameter C9=2 to avoid any fault

message "SAFETY CIRCUITS OPENED".

15.6 Retractable shoes

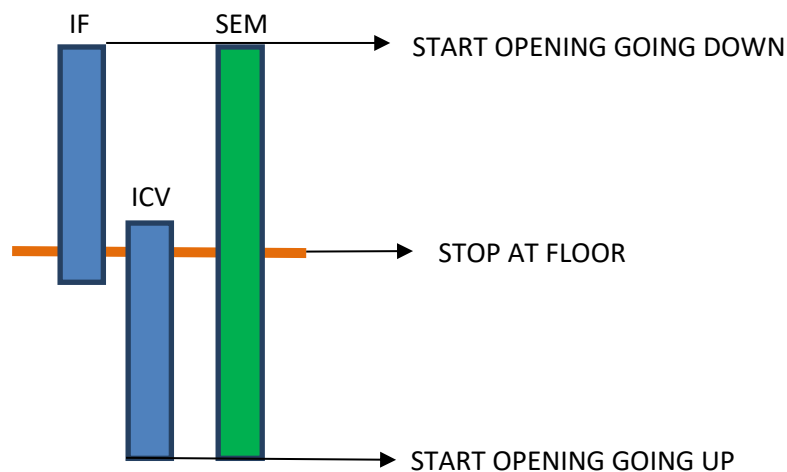
To can manage a cam you have to use output "PAT. It is better to use mini-relay interface on PAT output to avoid overload.



PAT signal will be enabled every manoeuvre activation, together with closing door command and it will be active until lift arrived at floor.

15.7 Door pre-opening

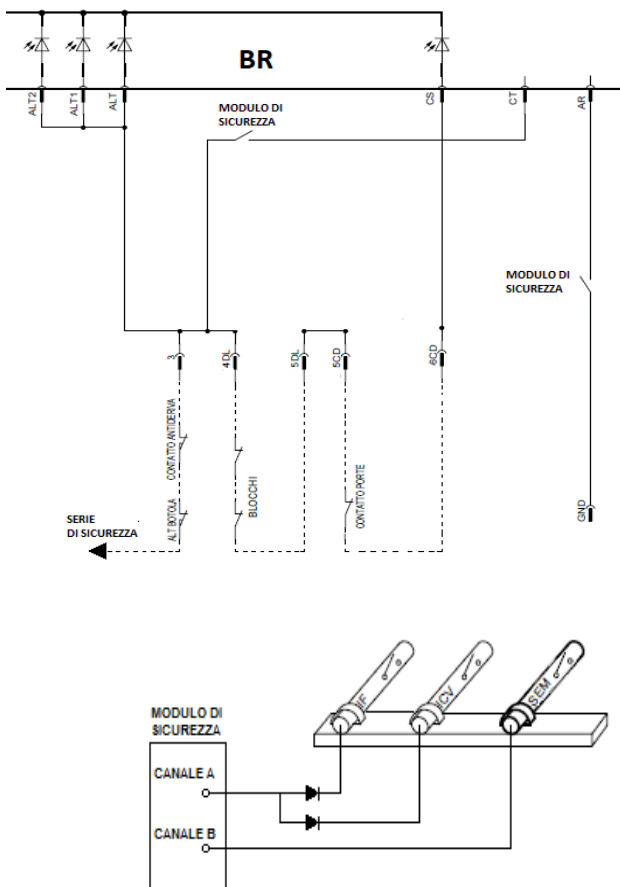
The door pre-opening function is to anticipate the start of door opening before stopping at the floor. This procedure takes place only in the safety zone with the addition of a magnetic door zone sensor (**SEM**) positioned as follows:



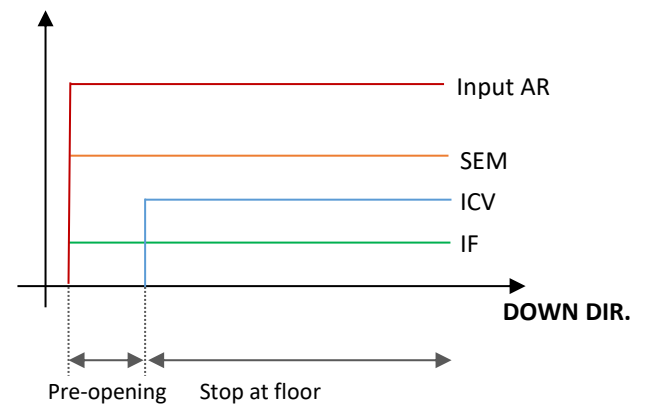
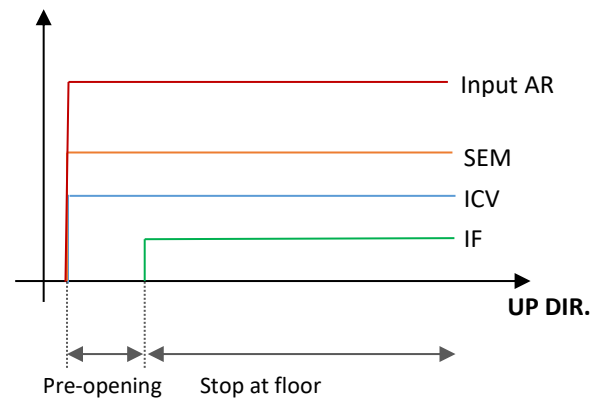
As shown in the previous diagram the card will control the door opening when the SEM sensor and one of the two stop magnets (IF or ICV) are on the track.

To prevent the motherboard commands from dropping during door pre-opening, a **safety device** (monitored from the motherboard **AR** input) is required to bypass the car and landing door contact. If the sensor sequence is correct the safety module will close the contacts and bypass the door contacts. In addition, the motherboard controls pre-opening only if the monitoring input of the AR safety device is active.

Wiring example:



Working diagram:



To enable door preopening it need to set following parameter on main board:

- C22 = 1
- D28 = 0
- H9 = 1
- H27 = 1
- F7 = 7

16 LIFT TYPES

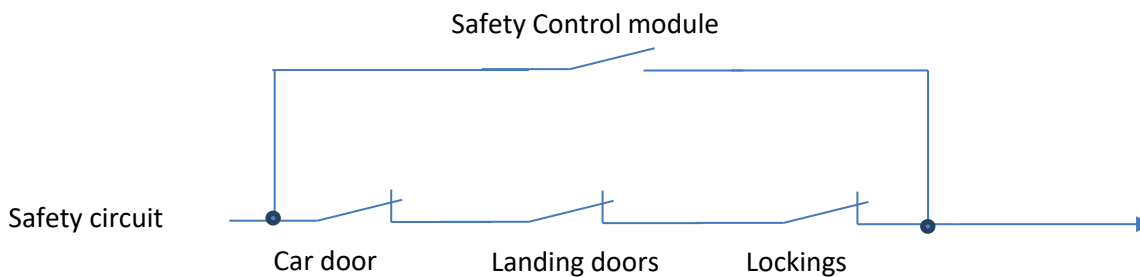
16.1 Hydraulic lift

To set Hydraulic lift parameter A5=3. In this way all typical parameters for hydraulic lift are set under the standard EN81.20 and EN81.50.

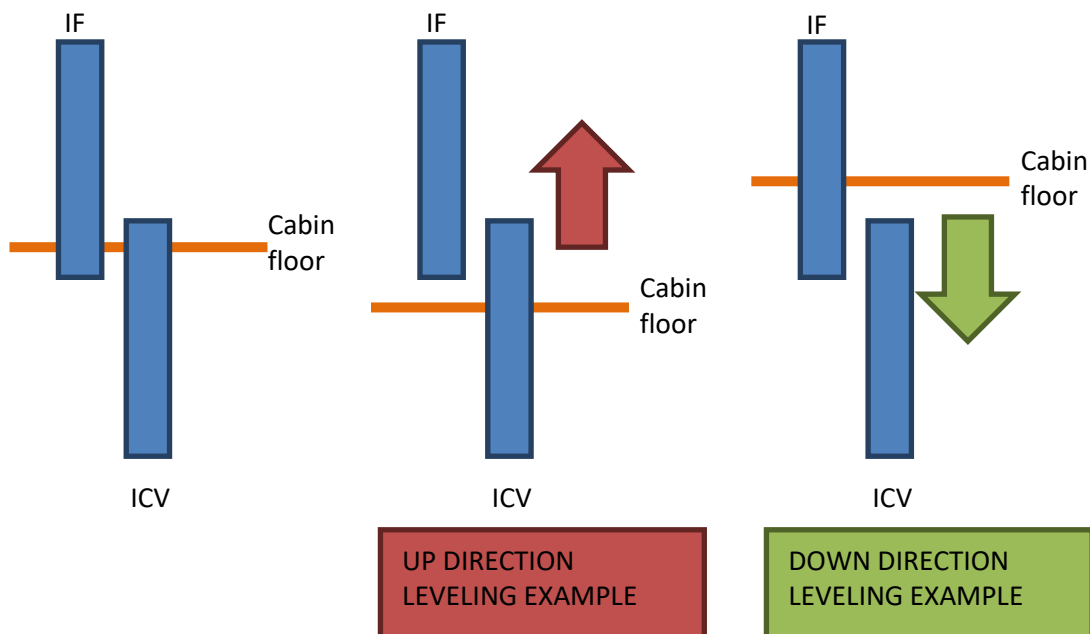
16.1.1 Self-levelling

After we set Hydraulic lift by parameter A5, auto-levelling will be enabled. By this option, cabin will be put perfectly at level after stop to any floor.

To perform the movement of the cabin with open doors, it is advisable to use a certified safety module to bypass / exclude approaches and blocks. See the diagram below.



Example of auto-levelling and placement in the magnets:



N.B.: The safety control is external component to the BR200; check the user manual for the used component.

If auto-levelling procedure is repeated more than 6 times (consecutive) fault 67 and 68 will showed; Error 69, means that cabin, during levelling, hasn't reach the floor (time D15 expired).

16.1.2 Parking at ground floor

When we set Hydraulic lift, parameter A5=3, it will be set also parking floor 0 after 14min as stated in the norm EN81.20 and EN81.50; To can disable this function set parameter D5. During this step, cabin will be reach bottom floor without stops and without opening doors.

When this function is disabled it is possible to set another floor and another time; floor is settable in parameter D6 editing the floor number and then ENTER; after this you can set time before activate this function.

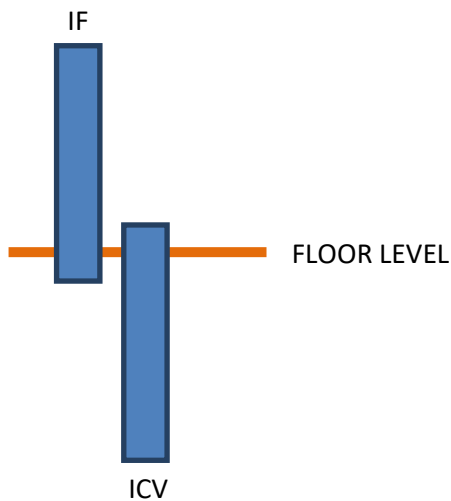
16.1.3 Oil Temperature

The hydraulic systems need to control the temperature of the oil circulating in the control unit up to the piston. The friction of the flow causes the temperature to increase, to prevent the oil losing its viscosity; a temperature probe with a temperature of ° C is installed. The contact returned NC or NA by the probe is interpreted by the BR100 board at the "60" input. This input can be activated and optionally set to parameter F1.

16.2 Electric lift system

If it's request a controller for electric lift set parameter A5=2. This function enable typical controls for electric lifts following european normative EN81.20 and EN81.50

Example of standard magnets position at floor



This function allows to manage lifts with one or two speeds (AC1/2), with or without variable frequency drive (VVVF) for synchronous and asynchronous motors

The main board can be combined to *general purpose VVVF*, drivers not dedicated to the lift section, managing independently brake and line contactor sequences.

Setting the parameter B1=1 brake switches monitoring for incontrollated movement (*emendament A3*) is enable.

If motor has a thermal contact you can active parameter F5 choosing between n.o. and n.c. logic.

For more informations about this options read reference chapters in this book.

17 Manoeuvres Typology

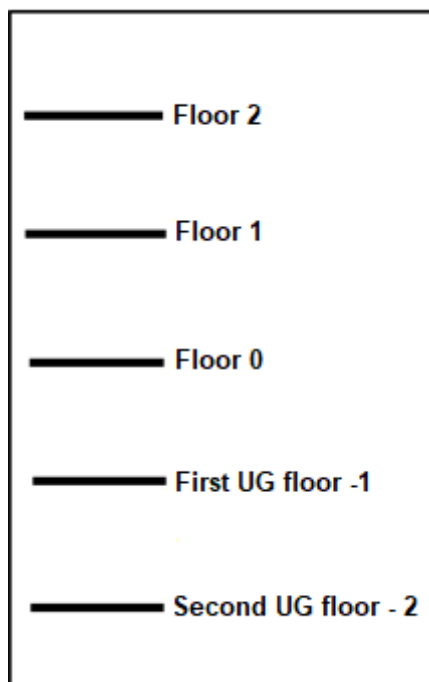
17.1 Single push button manoeuvre (APB)

It is also called APB. By setting parameter A6 = 1 or 2, the external signal, during busy status, is always on and the board no longer accepts calls until it is switched off. It executes one call at a time. No other calls are going to be accepted, neither internal nor external. The manoeuvre can be applied to Hydraulic systems, Traction AC1 / 2 and VVVF.

17.2 Down collective manoeuvre

It is also called “down reservation” and it is the most used manoeuvre in elevators with many stops or for many users. It is possible reservation from cabin or from floors. From cabin are prevailing. Floor reservations are made only in down direction

In some cases, it is possible to define an offset of the main floor (parameter A13) where below this floor the external calls are served as booked uphill and above that floor as booked down. Useful function especially when there are underground floors, where the collecting calls is useless in the descent, but it is important to collect the calls in the direction of ascent, as shown in the figure below.



Eg:

Setting the parameters A6 = 4 and A13 = 3 (as offset of the Main plane).

Calls outside the floors -2, -1 and floor 0 will be executed and served as up collective, if the system is making a call in the direction of ascent will serve these floors. While other floors will remain all unchanged.

By activating this function, the mapping of the call inputs will not change as expected for the collective descent maneuver.

17.3 Full collective manoeuvre (up/down collective)

It is the maximum manoeuvre in collective for an elevator. It is possible reservation from cabin and from landing. Cabin reservations are prevailing. Landing reservations are made in according with cabin movement (up or down). On LOPs are two separated push buttons UP and DOWN. Reservations will be execute and then cancelled only if the cabin reaches the reserved floor and move after in direction indicated

by the external push button

If, on the other hand, there is only one external button, the Full-Collective manoeuvre can be enabled by activating the following parameters:

- A6 = 4
- H4 = 1

In this case the external calls will be executed and serviced in both directions.

17.4 MULTIPLEX manoeuvre

It allows communication between two or more controllers working in collective manoeuvre (Down, up/down). To allow this communication, two boards have to be connected by CAN2 door. One of this MASTER while the other boards programmed SLAVE.

In cabin not work MULTIPLEX mode, only on landings this manoeuvre is possible, in according to a particular algorithm to can avoid traffic troubles.

In STAND-BY the two cabins will works so:

- Cabins stopped in the same floor: landing call will be served by MASTER;
- Cabins stopped in different floors: The nearest cabin will serve the landing call;
- Both Cabins in movement: landing call will be served by cabins that have same direction and if both cabins have same direction, the nearest cabin will serve the landing call.

In parameter A9 is possible to configure boards where landing calls are connected like MASTER. After other operations will be executed:

- Number of Slave Board to manage
- Max number of following floor that cabin in movement cab be serve during travel;
- Max number of call to manage.

Last 2 values are very important and it is necessary to set it in according to traffic and number of stops. If their value is low then will be higher number of reservation assigned to free cabins. If these value too low, cabins not get reservation. Naturally value has to be lower than number of stops;

In Parameter A9 it is possible to configure SLAVE boards, each one with its index (starting from 1).

17.5 Duplo Manoeuvre

Duplo manoeuvre permits the communication between two controllers in universal manoeuvre (Parameter A6 = 6). It is possible to have an information exchange between the two boards. Those have different jobs and must be connected between each other by CAN2 port. One board will be set as Master ones, and the other as slave. Master's external calls will connected to the Master, while Slave's external calls will be

connected to Slave, for that LOPs are independent between each other.

Cabin call will not have Duplo attitude, while landing calls are stored and then executed as per the following algorithm:

- In the case of two free elevators, the external call will be given to the closest elevators;
- If one of both elevators is busy the call will be automatically given to the other;
- Busy signal on floors is activated only if both elevators are busy.
- Both elevators must be programmed for Duplo manoeuvre (Parameter A6 = 6).

By A9 parameters group we set the board to which external calls are connected as Master. Then will come up the following information:

- The number of Slave boards to manage. Insert value 1.
- The maximum number of following floors compared the actual one that the cabin will serve in its direction sense. Insert the same number programmed at parameter A2.
- The maximum number of managed calls. Insert the number of floors. Insert the same number programmed at parameter A2.

Always by the group of parameter A9, we configure the Slave's boards, taking care to assign to it a value equal to 1.

17.6 Fireman manoeuvre

BR200 can make Fireman manoeuvre in according to EN81.72 by parameter A11. In the same parameter, it is necessary to indicate what the Fireman floor is. By input "POM" activated by GND directly by key switch this happen:

- **Cabin in movements:** cabin will serve the present landing call, without opening the door at floor. In case of COLLECTIVE manoeuvre, all reservation will be cancelled and lift will leave to arrive in FIREMAN Floor. Any calls will be accepted, doors will be opened
- **Cabin stopped at floor:** Any calls will be accepted, doors will be opened

17.7 Fire-Fighter Manoeuvre

Lift Working during FIRE EN81-73

It is enabled when parameter A11 is different from 33; If A11=33 it is disabled; It is necessary to use input POM on BR200 for the permission:

When POM signal is activated:

- All calls reservation cancelled;
- Open door button PAP activated;
- If automatic doors, they will be closed and lift come to assigned floor (by parameter A11)

- If manual door
 - o opened, lift will remain stopped to floor
 - o closed, lift will go to assigned floor (by parameter A11)
- lift are going away from assigned floor, stop is movement on nearer floor and come back to assigned floor (without opening doors)
- lift are going in same direction of assigned floor continue is movement till reach assigned floor without any stop;
- Lift blocked by safety device will remain blocked;
- When cabin reach assigned floor, will open doors and it will be out of normal service
- Manual doors need to be unblocked and lift must be removed from normal working.

Lift works during fire (EN81-72)

To enable FIRE FIGHTER manoeuvre parameter A12 must be = 1. This manoeuvre is enabled only when parameter A11 <'33'.

If A11 = 33 or A12 not equal '1' FIRE fighters is disabled. This manoeuvre, in according to EN 81-72 July 2003, is divided in two phases: first phase assure minimum time for cabin to reach assigned floor (indicated in parameter A11) to be at disposal of FIREMEN.

Second phase is when cabin is under FIREMEN control:

Setting A11 = 1:

- **Forced Closing enabled. To active OT1 like a nudge output, set parameter P7 to 1.**
- FIREMAN manoeuvre activated (*phase 1*) by **POM input**.
- FIREMAN manoeuvre activated (*phase 1*) by **POM + IT2 input**.
- Cabin key switch control by **IT2**.

We can summarize like:

Phase 1 assure lift move to assign floor (FIREMEN floor). SO if cabin is in movement in opposite direction, it will be stopped and start again in correct direction (without opening door and without any stop).

Phase 2: cabin is under control of FIREMEN. This phase is activated when cabin reach assigned floor, POM+IT both activated and cabin is parked with door opened. Phase 2 needs a particular manage about keys like indicated in table.

IT2 Cabin Key (optional)	POM Landing Key (FIREMAN FLOOR)	Description
0	0	Lift blocked with opened doors, if it is on assigned floor. If this combination will be for more than 2 seconds, lift will be again in normal MODE.

0	1	Lift blocked with opened doors if it is on assigned floor, otherwise door will be closed and lift go to Assigned floor (set in parameter A11)
1	1	FIREFIGHETR manoeuvre 'normal' (opening door with MEN inside), parking with closed doors

If cabin key is disabled, lift will be blocked at floor with opened doors, while if this key is enabled (1) lift will work in according to EN Standard... opened door with man inside.

As internal key is optional, it is possible to have lift with ONE key (on landing), so it will be necessary to connect together **POM and IT2**; basically possible combinations will be 00 and 11.

Arrived to landing where called made door remain closed. Only pressing PAP door will be opened but if button released before complete door opening then doors will be closed again. When door will be opened completely, they will be opened till next cabin call.

17.8 Dinamo Hospital Manoeuvre

This manoeuvre needs a physical person inside cabin always present, whom will take complete control of the elevator using an external key.

This key allows to not taking landing calls but these calls will be only visible by led in cabin and on landings. Only the person in cabin can make calls.

When landing key disabled lift will work normally.

To allow this by BR200:

- Enable this manoeuvre (parameter H6)
- Landing Key (when closed) active input CCC and IT1 on BR100; while, when key opened, these input must be free and complete load has to work normally; when it occurs IT1 hasn't be insert. So IT1 and CCC have to be connected by diode.

17.9 Landing Priority Call

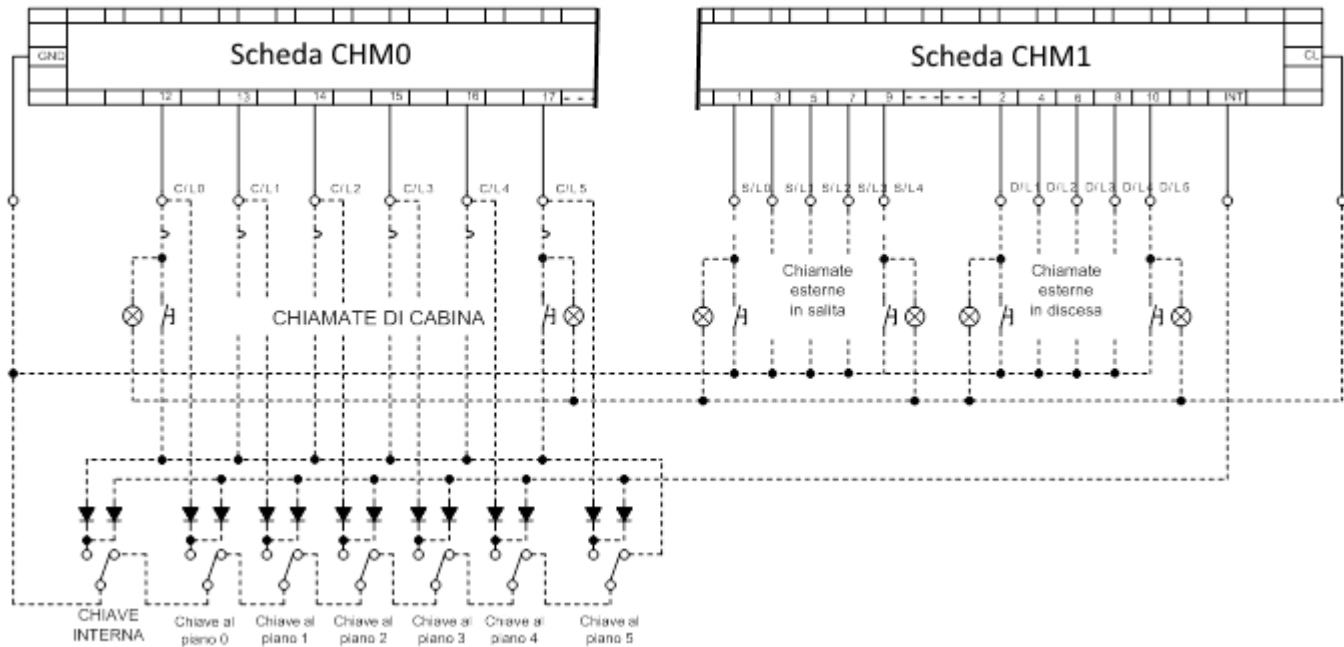
A landing Priority call if possible from landings predisposed for this typology of call, closing the apposite key on landing. It is possible to make priority calls in each floor using SI input.

When Priority call is made all landing calls will be cancelled and some checking will be made;

- If cabin movement is opposite to priority call direction, it will be made a stop to first reserved floor and then cabin go to priority floor.
- If cabin movement is same direction of priority floor call, lift will reach it without any stop.
- If cabin is stopped it will be start immediately.

When cabin reach floor, after key removing, it possible to close internal key and move cabin like described in next paragraph.

Note: check this wiring example:



To simplify the wiring of this type of manoeuvre we recommend the use of **CHM2S MULTI** boards which must be connected in serial to the control panel. In this way it will be sufficient only to provide a key (2 positions, 1 extraction) on the landing push-buttons to let the input **J9** of CHM2S MULTI enter and enable the parameter **H26=1** on the motherboard.

17.10 Cabin Priority call

Cabin Priority call is made closing SI to GND.

It means:

- Landings and cabin calls will be cancelled;
- Cabin will be in BUSY with opened doors;
It is possible to make only ONE cabin call for each time

17.11 Emergency Manoeuvre

In case of Power failure, BR200 will work in emergency. EM input active this manoeuvre. It is necessary to close "EM" with GND when we have power failure. If safety circuits, powered by UPS or similar device, are closed and correctly powered lift will be work so:

- **"Hydraulic"**: cabin will move in down direction to reach the lower floor and then doors will be opened (AP). Any calls will be accepted, doors always opened, until input EM will be restored.
- **"TRACTION"**: cabin will move in up direction. If safety circuits are, opened (ALT) it means

Emergency device are working. In this case, Emergency procedure starts again, when safety circuits restored, but cabin will move in opposite direction (DOWN) and stop in nearest floor (by AP). At this point cabin will not accept any calls and doors will be opened until "EM" will be restored.

During Emergency is excluded errors show out.

17.12 Low Pit and Overhead Management

When building has problem with low space (pit/headroom) it is possible to install special lift in according to EN standards.

It is necessary to set parameter H12 = 1.

To can make maintenance into shaft:

- Enter in INSPECTION mode (activing MAN input)
- Move lift with inspection button PSM and PDM
- Push STOP button (in pit or headroom) and insert safety bollards
- Make necessary maintenance works
- Remove bollards and active again STOP button
- Exit from INSPECTION mode (by MAN input). Board will show error "73". Only in door zone (IF+ICV) it is possible to open doors by PAP button
- to restore lift press RESET button on BR200 at least 2 sec

17.13 A3 Amendment

EN81.20 e EN81.50: 2014 standard indicates lift block when uncontrolled movement of cabin happen. To assure this, BR200 uses two different ways to monitor uncontrolled movements. For gearless lift, with brake certified A3, BR200 check jaws brake micro switch. For hydraulic, with both DOWN coils activated at same time, BR200 check them periodically.

It is possible to enable A3 function by parameter B1=1 for brake control (traction/MRL) and B1=2 for coils control (Hydraulic) with DLV.

17.14 A3 Monitoring on Hydraulic Lift

Hydraulic power unite with redundant valves (DLV) for the controlled movements, they are those power unites that have the downhill circuit with 2 valves connected in serial between us.

The command of both valves concurrently permits the descending of the cabin.

During the normal working the BR200 board commands 2 outputs correspondent to TD = descending valve 1, D = descending valve 2.

Obviously, the output D with is interfaced by a small relay 12V since it is an output with transistor.

During the CHECK for the amendment, the norm invites to check the correct closing of this valve within 24 hours.

This CHECK to be done in this way:

- At the starting of the processor: once on the lift the power supply is cut off then restarted BR200 board, there will be a RE-PHASE call. At the arrival to floor, doors will not be open and the busy lamp will remain ON until the test is complete.
- Within 24 hours when the car parks on the lowest floor, favourite condition since the norm provides the return to the floor within 14 minutes maximum;

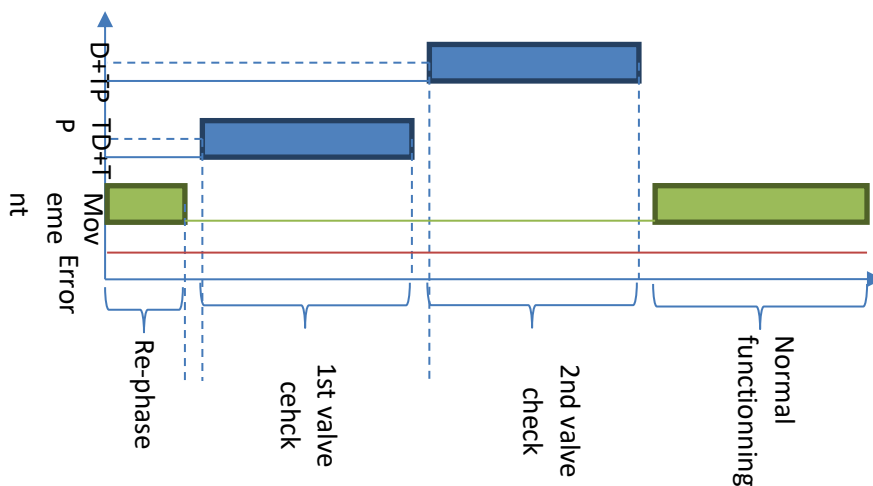
What happens during the CHECK:

- A. Elevators remains with closed doors and busy lamp ON, does not accept ant call Internal/External.
- B. Within a time, the outputs TD + TP will be managed for 10 seconds.
- C. At the expiration of those 10 seconds if levelling did not happen, so pass to CHEKC for the second valve;
- D. Within a time, the outputs D + TP will be managed for 10 seconds;
- E. At the expiration of those 10 seconds if levelling did not happen, the lift comes back to the Free State.

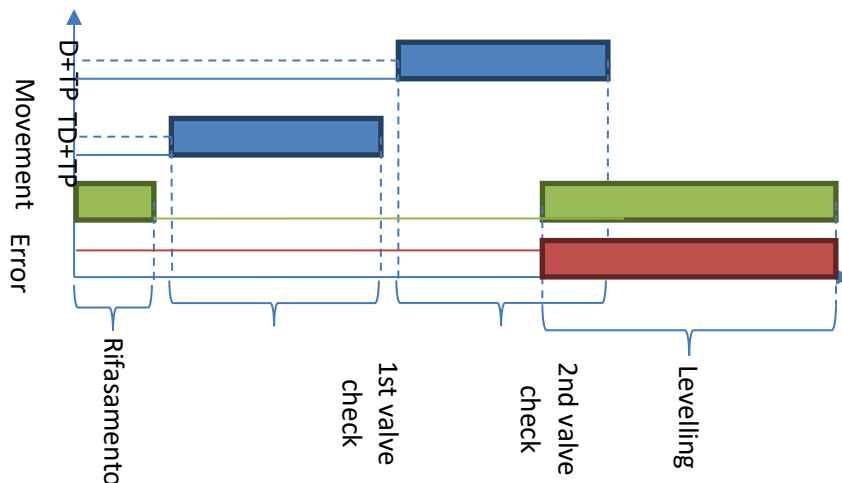
What happens in case of FAULT CHECK:

- In case, of error in phase B, means that the car moved in down direction and has been levelled activating the relevelling, even if it has only one valve is commanded (while the other is supposed to be closed).
- Repeat the attempt of CHECK on the same valve for a second attempt of CHECK.
- If the levelling repeats, so the fault will be blocking, will not commanded the opening of doors and will be possible to restore only by manual manoeuvre (press and hold RESET for more than 5 sec);
- The fault will be different if the cause of error is the valve D;
- Fault is going to be different if test is not performed within the 24 hours (e.g.: cabin has never be parked at the floor 0 within 24 hours... this condition is allowed if user deactivate the floor returning within 14 minutes.

Here below a drawing where check is performed:



Here below a drawing where a Check has caused an uncontrolled movement alarm



17.14.1.1 A3 manual activation on hydraulics

Press 10 seconds the OK button for activating the A3 procedure for hydraulic lifts. Display will show “press ESC for activating”

17.14.1.2 A3 on GMV hydraulic power unit

The GMV hydraulic power units with amendment A3 provide the monitoring on the floor with two switches n.c. that will activate the inputs BR1 and BR2 on the board. To activate this function the parameter B2=3 must be set.

If with the cabin stopped at the landing one of the two, or both BR1 and BR2 inputs are off the board will show a blocking error, resettable directly from the board, whose code changes according to the input that

does not work correctly:

INPUT SET AS:	ERROR
BR1	105
BR2	106
BR1+BR2	107

17.14.1.3 A3 ropes monitoring (Gearless)

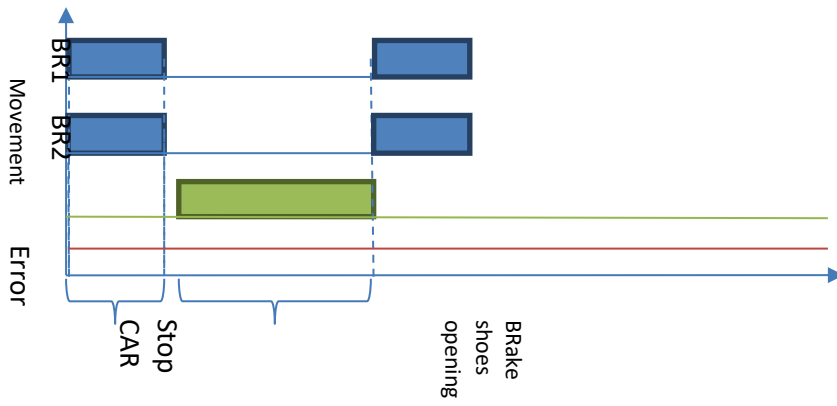
The new generation of gearless motors, the brake shoes have certified as a control body for the uncontrolled movements. These jaws are controlled by means of micro switches which are activated when the jaw is supplied.

The BR200 board monitors the status of these inputs, via the BR1-BR2 control inputs. These inputs when they are closed to GND return the status of the jaws rest, respectively for the first jaw BR1 and BR2 for the second.

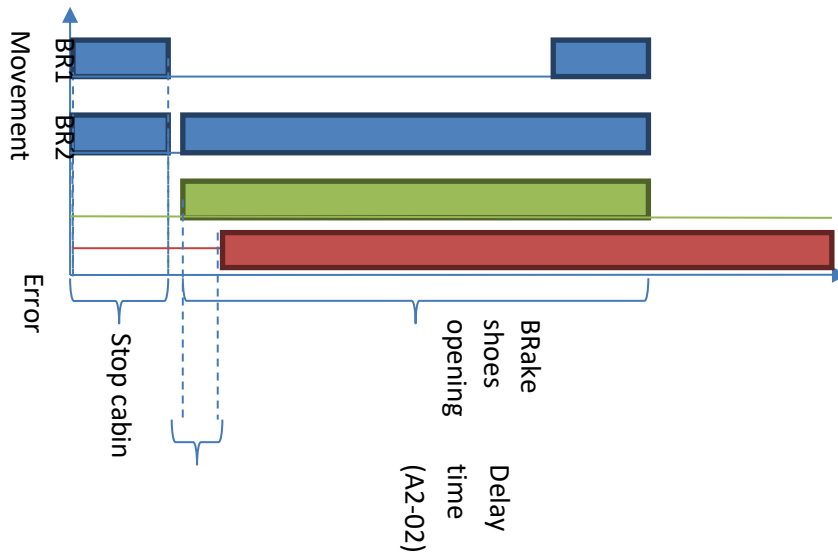
The CHECK to the uncontrolled movement occurs, as for the hydraulic system, by monitoring the state of these inputs. To satisfy the requirement required by the standard, the integrity occurs within 24 hours of the closing of the jaws, occurs at every call start and at every arrival at the bus stop at the floor; then at each opening or closing of the jaws. If during the opening / closing phases inputs do not respect the behaviour generated faults are as follows:

INPUT	FAULT
BR1	105
BR2	106
BR1+BR2	107
BR1+BR2	(NONE)
BR1	

Here below a graphic regarding a normal functioning:



Here below a graphic regarding an error:



18 Safety Circuits

BR200 check if safety series closed by INPUT EXC, ALT, ALT1, ALT2, and CS.

If one of this INPUT opened cabin will be stopped. Particularly EXC allows, in according to Standards, to restore normal MODE only by manual reset. On display is showed FINECORSA.

On safety called CS is applied a further control:

- IF on closing door CS isn't closed, BR100 open again the door and then try to close again;
- This procedure is made for 4 times. If CS will be closed in these trials, cabin will move in normal mode but a Fault will be saved in registry. This Fault code is "200" if lower floor has problem, "201" for first floor and so on;
- If after 4 times CS will be not closed will be generated a fault form 0 to 32 in according to floor where fault happened. For example, if fault in 5th floor it will be generated "ERR 05".

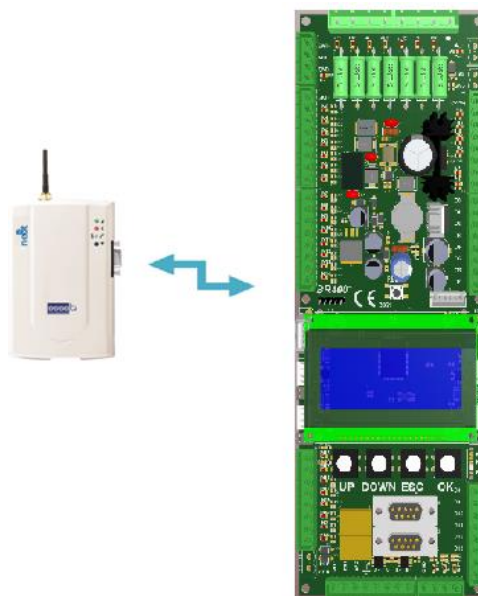
19 SMS remote control

BR200 board can be managed by SMS with a simply mobile or GSM device.

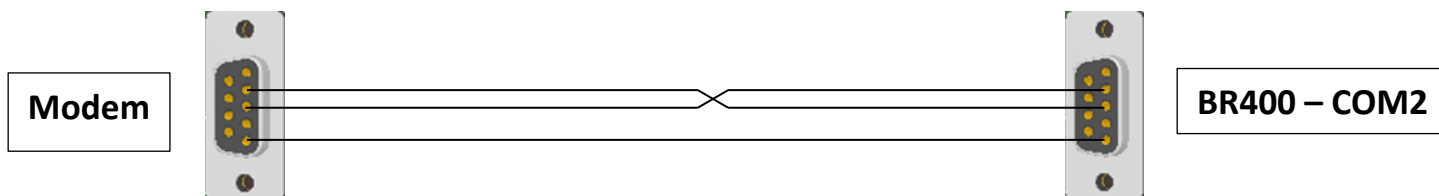
The maintainer has the possibility of execute these functions:

- Monitoring all inputs and outputs on motherboard
- Monitoring security series
- Remoting motherboard's display
- Reading and writing parameters set on motherboard
- Reset the error in memory.
- Insert a call in cabin and send the cabin on a certain floor.

This application requires the installation of a GPRS/GSM modem in the control panel connected to the board by RS232(COM2) port, like shown below.



Communication cable RS232 (COM) pin:

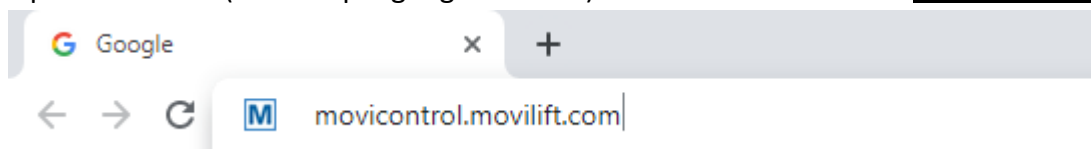


Modem must have a telephone sim enabled for data and voice traffic.

After this installation, you need to communicate the SIM number to your web domain manager (Movilift), he will register a new account on the server and enable the SIM.

To access to the service make these step:

- 1) Open a browser (ad esempio google chrome) and write this address : movicontrol.movilift.com



- 2) Write username and password given by manager (Movilift).

The screenshot shows the login form on the website. It includes fields for 'Username' and 'Password', a checkbox for 'Ricordami', and a blue 'ACCEDI' button.

19.1 Once you enter, you can check only lifts registered for this username. To connect to a lift, click on its SIM number.

20 Android app

Is available a smartphone app where you can manage you lifts¹. The APP will analyze the messages received by lift and will store it into database. You can send the configuration and check the lift status sendind CHECK.

¹ La gestione del APP gestisce massimo 5 impianti

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