MoviLift

BRMUX V1.1

Control board for LIFT

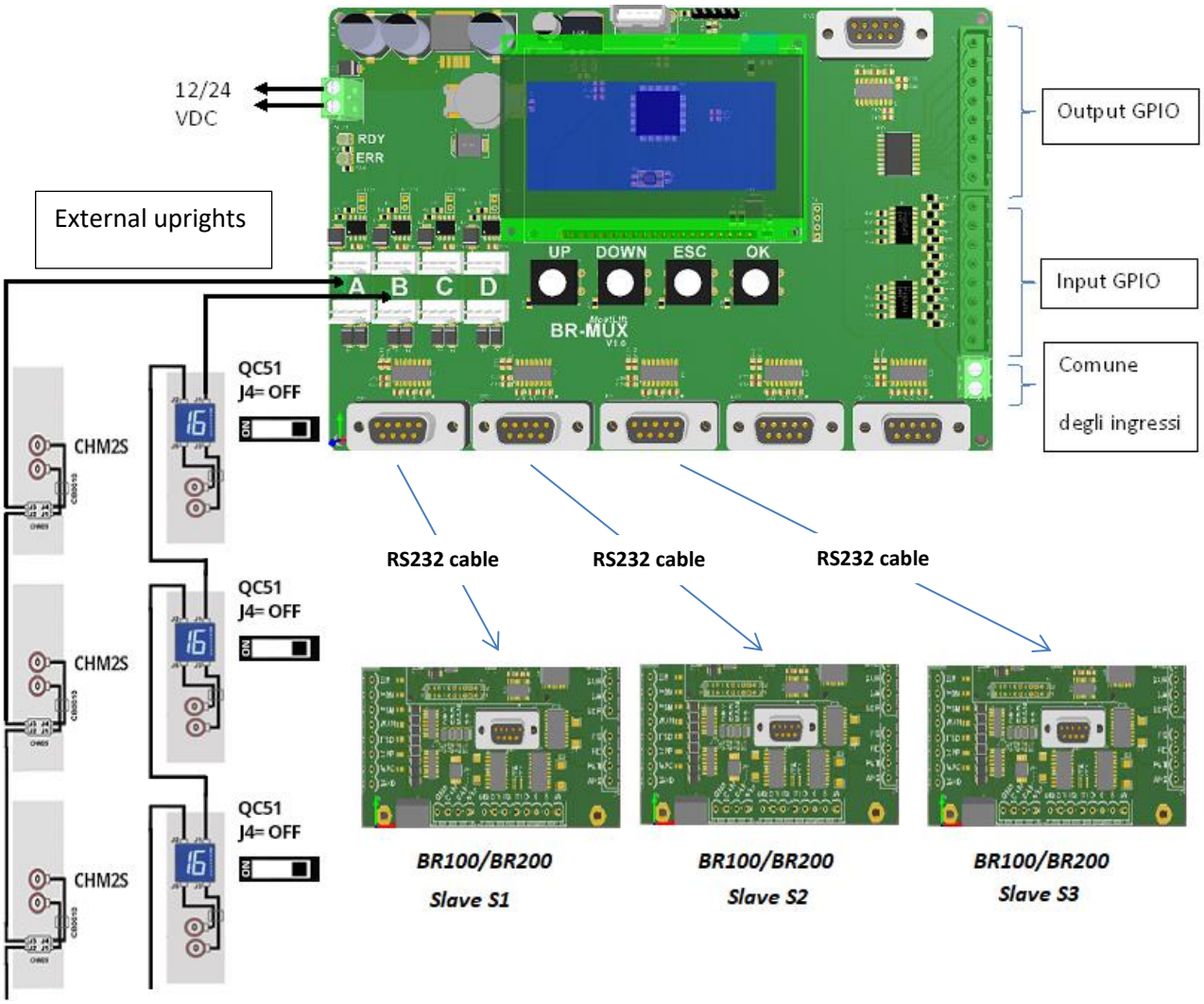
Last release 09/02/2021

Summary

1 Electrical features

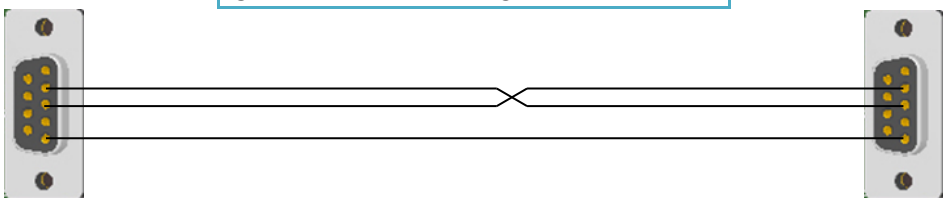
Characteristic	Description
Dimension	124 x 279 mm
Weight	180g
Software	PIC 32Bit
Voltage Power supply (IN+/IN-)	12-24 DC-AC +/- 10%
Overvoltage on inputs (MAX)	Up t o 90VDC/AC
Transistor output load (MAX)	250mA
Configuration parameters	The card can be programmed via keypad and locally by software in RS232
Compliance Standards	EN81.20 e EN81.50: 2014
Weight references	**GND** is the reference zero of the BR100 board. **IN-** is zero in case of DC power supply.
Operating temperature	From 0°C to +70°C

2 Summary electrical diagram BRMUX



RS232 Communication Cable Footing (COM) i sas follows:

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

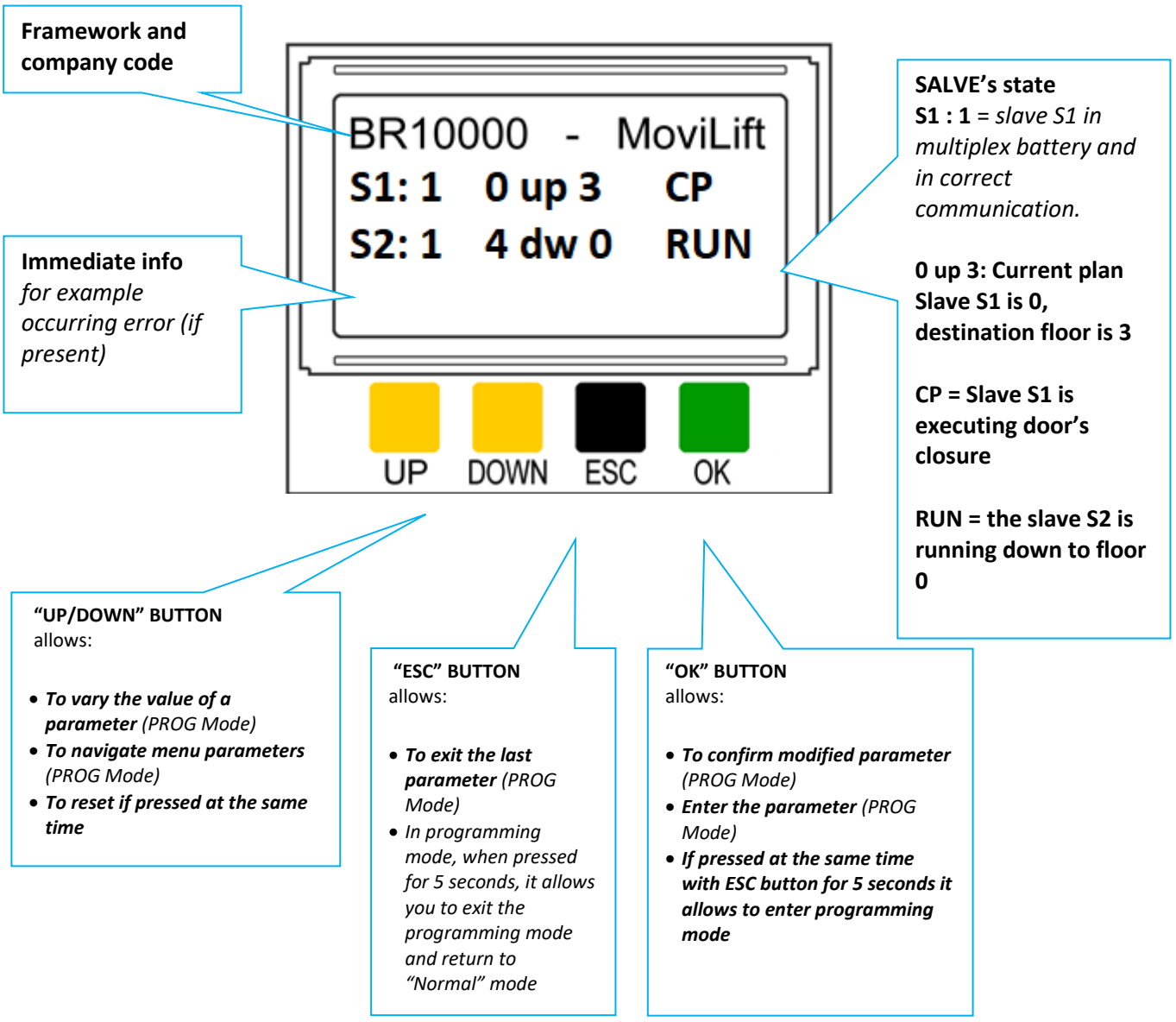


3 Programming Keyboard, Display and Programming

The display on BRMUX provides parameters access and board monitoring.

3.2 Programming keypad description

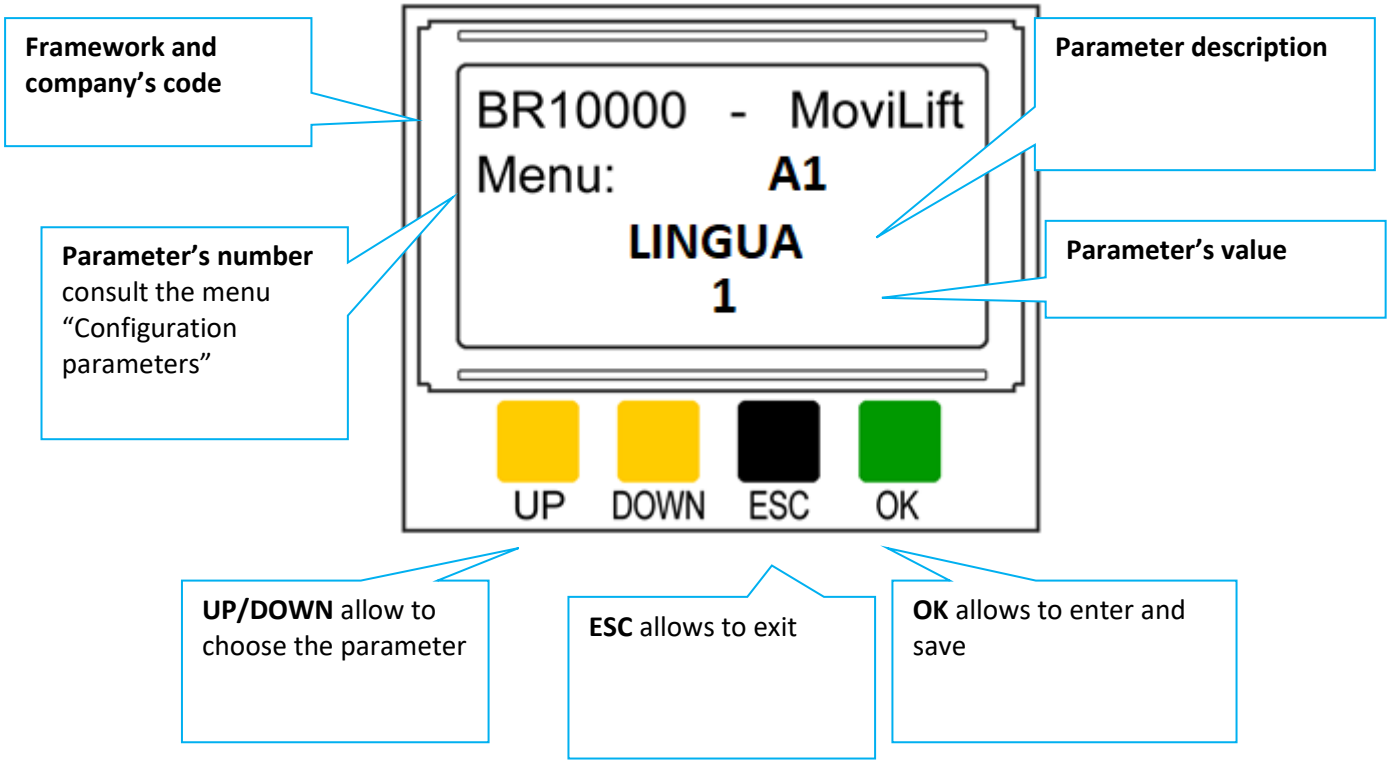
In “Normal” mode the display shows following information:



3.3 "Programming" mode

To access "Programming" mode, press buttons **ESC + OK** for 5 seconds

The screen shows:



3.3.1 How to change values of a parameter

Example: Parameter A2 (Number of external uprights):

1- To enter the programming, press and hold for 5 seconds **OK + ESC**
2- Press the **UP** button until seeing the letter A (General settings).
3- Press the **OK** button and then the **UP** button until seeing A2
4- Press the **OK** button and change the value using buttons **UP or DOWN**
5- Press the **OK** to save

4 Failures Allerts

Presence of a failure will be signalled with a relative error code showing on the display and red LED light **ERR**.
The faults are listed in the below table. Those are all considered errors, that is self – recoverable failures.

The board stores up to max 100 failures, after which it will continue overwriting the less recent. The failures remain in the storage even when the board is switched off.
Latest generated failures can be analysed on the page E1 of the menu.

4.1 Failures' Table

Error Code	Type	Descripton	Cause / Solution
Err 80	Error	Error watch-dog BRMUX	The board BRMUX was blocked and was restarted
Err 83	Error	Error of the command of EEPROM's reading regarding the error section	The EEPROM's section reserved for errors results to be damaged in reading
Err 84	Error	Error of the command of EEPROM's writing regarding the error section.	The EEPROM's section reserved for errors results to be damaged in writing.
Err 85	Error	Error Time-out of EEPROM	EEPROM's failure.
Err 86	Error	Error of the command of EEPROM's reading regarding the parameters/data section	The section of EEPROM reserved for parameters/data results to be damaged in reading
Err 87	Error	Error of the command of EEPROM's writing regarding the parameters/data section	The section of EEPROM reserved for parameters/data results to be damaged in writing
Err 88	Error	Error of EEPROM's reading.	EEPROM's data reading error. Try to switch the card off and on
Err 89	Error	Error of EEPROM's writing.	Error of storage of data in EEPROM. Try to switch the card off and on
Err 95	Error	Error of communicationa woth module CAN CHM2S	*External Calls Serial Adapter damaged*, inverted CAN connections of programming error **CHM2S.**
Err 96	Error	Error call stuck	Verify connections of call buttons
Err 150	Error	Error of communication Master e Slave	The Master board does not read communication with board Slave n. X
Err 151	Error	Error of communication Master	The Slave board does not read communication with Master board.

5 Configuration Parameters

A= General settings

A

PARAMETERS	DESCRIPTION	VALUE
A1	Language	1: Italian 2: English 3: Spanish 4: Romanian
A2	Number of external uprights	1 – 4 External uprights
A3	Slave's number	1 – 4 Number of Slaves to manage. See chapter **Errore. L'origine riferimento non è stata trovata.**
A4	Number of stops Slave S1	2 – 32 Stops on the floor for Slave S1
A5	Number of stops Slave S2	2 – 32 Stops on the floor for Slave S2
A6	Number of stops Slave S3	2 – 32 Stops on the floor for Slave S3
A7	Number of stops Slave S4	2 – 32 Stops on the floor for Slave S4
A8	Number of Reservations	1 – 32 Number of reservations to be served in multiplex. See chapter **Errore. L'origine riferimento non è stata trovata.**
A9	Number of floors	1 – 32 Number of floors to be served apart from actual multiplex plan. See chapter 6
A10	Maneuver	4: Collettive D 5: Collettive S/D 6: DUPLO
A11	External calls deatcivation	0: deactivated 1: activated

B= Display Management

B

PARAMETERS	DESCRIPTION	VALUE
B1	Enabling serial displays	0: Disabled 1: Serial display enabled
B2	Offset floor Display Slave S1	From -5 to 10.
B3	Offset floor Display Slave S2	From -5 to 10.
B4	Offset floor Display Slave S3	From -5 to 10.
B5	Offset floor Display Slave S4	From -5 to 10.

C= Floors Managment

	PARAMETERS	DESCRIPTION	VALUE
C	C1	Landings managed by individual Slave. Programmable for singular floor	0 – 15. See chapter **Errore. L'origine riferimento non è stata trovata.**.
	C2	Offset Inferior Slave S1	0 – 5. . See chapter 7.
	C3	Offset Inferior Slave S2	0 – 5. . See chapter 7.
	C4	Offset Inferior Slave S3	0 – 5. . See chapter 7.
	C5	Offset Inferior Slave S4	0 – 5. . See chapter 7.
	C6	Offset Superior Slave S1	0 – 5. . See chapter 7.
	C7	Offset Superior Slave S2	0 – 5. . See chapter 7.
	C8	Offset Superior Slave S3	0 – 5. . See chapter 7.
	C9	Offset Superior Slave S4	0 – 5. . See chapter 7.

E= Failures

	PARAMETERS	DESCRIPTION	VALUE
E	E1	Errors' history	Error's code
	E2	Reset of errors' history	Note: the reset is allowed only if there aren't any blocking failures in progress

I= Monitor

	PARAMETERS	DESCRIPTION	VALUE
I	I1	Firmware Version	X.YY
	I2	Monitor CHM	Monitor present calls from Master
	I3	Monitor SLAVE	Monitor calls present from Master and dispatched to slave.
	I4	Mask SLAVE	Mask of disabled floors with respective slaves
	I5	Monitor IO	Monitor of inputs and outputs for BRMUX board.
	I6	Monitor Mask - callS	Monitor of Up call present on the BRMUX board.

	I7	Monitor Mask - callD	Monitor of Down call present on the BRMUX board.

6 Multiplex Manouver

The Multiplex Manoeuvre allows BRMUX board's communication with two or more frames in collective manoeuvre (Descent, Ascent/Descent). In order to exchange information between the manoeuvre frame and the BRMUX, they have to be connected by means of COM ports as shown in Chapter 2.

The boards BR100/BR200 present in manoeuvre frames have to be programmed as SLAVE. The external calls and uprights have to connected to the BRMUX board as shown in Chapter 2.

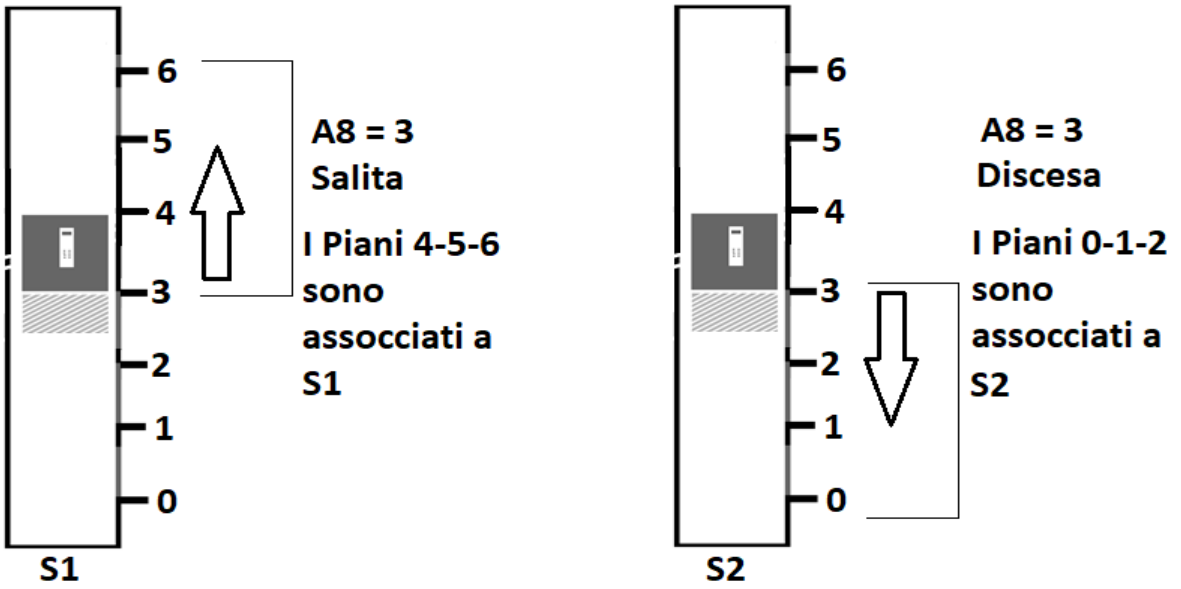
The cabin's call won't behave like a multiplex, while the external calls will be stored and executed according to an algorithm in memory as to make reservation and dispatch traffic flow.

In STAND – BY condition the cabins will:

- Cabins stopped at the same floor: the cabin Slave S1 will serve the external call;
- Cabins stopped at staggered floors: the closest cabin will serve the external call;
- Cabins moving: the external call will be associated to a cabin with moving towards same direction as reserved and that closest.

With the group of parameters A3-A8-A9 following information are inserted:

- **A3 :** number of Slave boards to be managed
- **A8 :** maximum number of floors following the one which cabin will serve in its travel direction.
  Example: if the lift Slave S1 is stopped at 3rd floor and the value A8 = 3, the next three floors in ascend or descent (depending from travel's direction) will be associated to this elevator, according to external calls.
  In case there are two elevators within the same range, the closest one will run.



- **A9 :** the maximum number of managed calls.

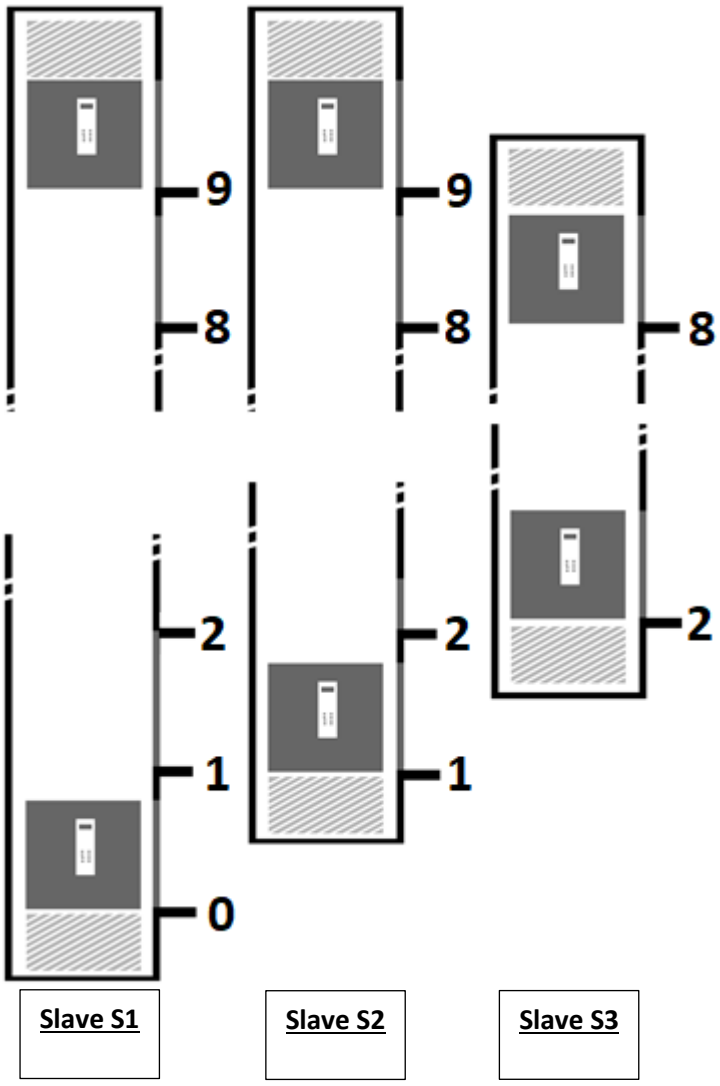
These last two values are important and must be set in accordance with traffic and number of stops. In general, the lower the parameters, the more reservations will be assigned to cabins free of reservations. If the values are too low, the cabins might not pick-up reservations which they could easily serve. To be taken into account, the number of set value obviously has to be lower than that of number of stops.

7 Generic configuration and/with Staggered Floors

In case of a configuration of a duplex or triplex in presence of staggered floors, it is necessary to configure and set the following parameters of BRMUX:

- A4, A5, A6, A7, C2, C3, C4, C5

As an example, lets considerate the following triplex configuration:



Slave S1 = 10 stops from 0 to 9

Slave S2 = 9 stops from 1 to 9

Slave S3 = 7 stops from 2 to 8

I parametri devono essere impostati nel seguente modo:

- A4 = 10; Number of stops of Slave S1
- A5 = 9; Number of stops of Slave S2
- A6 = 7; Number of stops of Slave S3
- C2 = 0; Offset of extreme inferior floor for Slave S1
- C3 = 1; Offset of extreme inferior floor for Slave S2
- C4 = 2; Offset of extreme inferior floor for Slave S3

8 Configuration of floors with their respective Slaves

The board BRMUX allows to choose and select for each floor which of the present Slaves can served the particular floor.

This configuration is possible trough the C1.

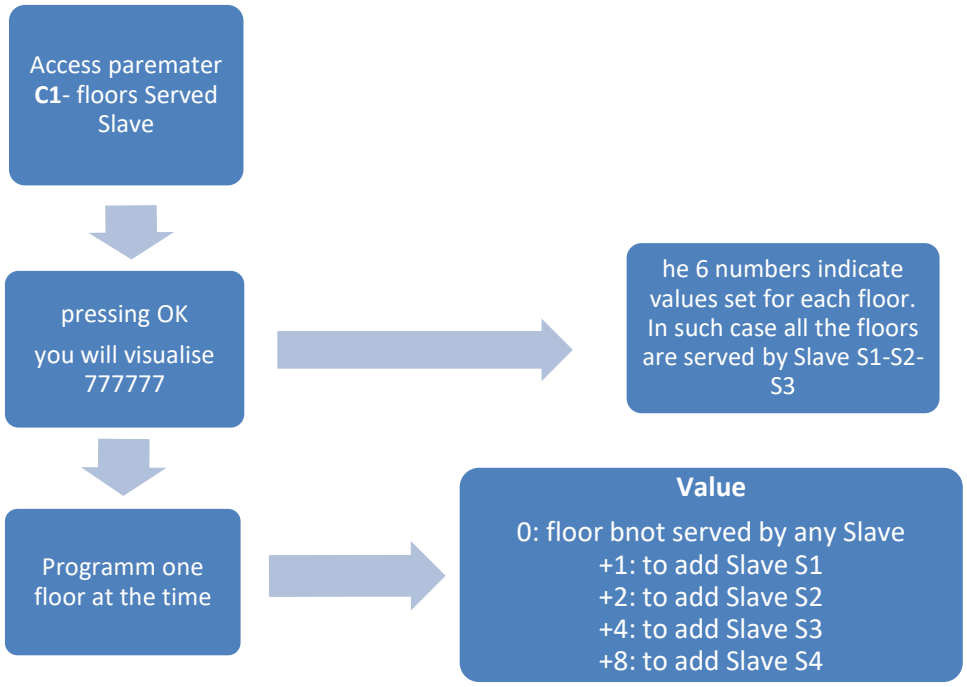
For example, if you wish that:

- *The third floor is only served by Slave S2*
- *The sixth floor is only served by Slave S1*
- *The ground floor must be served by Slaves S1 e S3.*
- *All the other floors can instead, be served by all the Slaves.*

It is necessary to set parameter C1 to 5772771, that is:

Floor 0 :	Slave S1 + Slave S3	**(Value 5)**
Floor 1 :	Slave S1 + Slave S2 + Slave S3	**(Value 7)**
Floor 2:	Slave S1 + Slave S2 + Slave S3	**(Value 7)**
Floor 3:	Slave S2	**(Value 2)**
Floor 4 :	Slave S1 + Slave S2 + Slave S3	**(Value 7)**
Floor 5 :	Slave S1 + Slave S2 + Slave S3	**(Value 7)**
Floor 6 :	Slave S1	**(Value 1)**

The C1 parameter has to be programmed as shown in the following flow:



9 Firmware update with USB

The USB stick is used to allow you updating the Board's software.

The procedure as follows:

1. Download the update (file.hex) and copy in on the USB stick
2. Turn off the BR400 Board

Spegni la scheda

Turn off the board

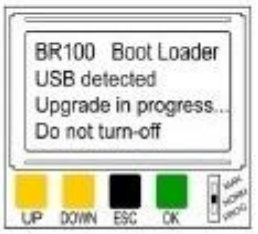
3.Insert the USB stick in the slot

Collega la penna USB alla scheda

Connect the USB disk to board

4. Turn on the board

Accendere la scheda
Durante questa schermata non rimuovere la penna USB
Turn On the board
During this message does not remove the USB disk



5. Wait until the file downloads

Alla fine del download spegnere la BR100 e poi rimuovere la penna USB

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

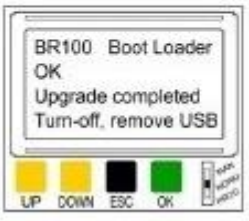


Figura 1

IT *Gentile cliente, La ringraziamo per aver acquistato i nostri prodotti. Prima dell'installazione e dell'utilizzo La preghiamo di leggere attentamente questo manuale.*

EN *Dear customer, Thank you for purchasing our products. Before installation and use, please read this manual carefully.*

FR *Cher client, merci d'avoir acheté nos produits. Avant l'installation et l'utilisation, veuillez lire attentivement ce manuel.*

ES *Estimado cliente, Gracias por adquirir nuestros productos. Antes de la instalación y el uso, lea este manual detenidamente.*

PT *Prezado cliente, Obrigado por adquirir nossos produtos. Antes da instalação e uso, leia este manual cuidadosamente.*

DE *Sehr geehrter Kunde, vielen Dank für den Kauf unserer Produkte. Lesen Sie dieses Handbuch vor der Installation und Verwendung sorgfältig durch.*

CS *Vážený zákazníku, děkujeme vám za zakoupení našich produktů. Před instalací a použitím si prosím pečlivě přečtěte tento návod.*

SK *Vážený zákazník, ďakujeme vám za zakúpenie našich výrobkov. Pred inštaláciou a použitím si pozorne prečítajte tento návod.*

RU *Уважаемый покупатель! Благодарим вас за покупку нашей продукции. Перед установкой и использованием внимательно прочтите это руководство.*

RO *Stimate client, Vă mulțumim că ați cumpărat produsele noastre. Înainte de instalare și utilizare, vă rugăm să citiți cu atenție acest manual.*

HU *Kedves vásárló, köszönjük, hogy megvásárolta termékeinket. Telepítés és használat előtt olvassa el figyelmesen ezt a kézikönyvet.*

NL *Beste klant, Bedankt voor het aanschaffen van onze producten. Lees deze handleiding aandachtig voor installatie en gebruik.*

PL *Szanowny Kliencie, dziękujemy za zakup naszych produktów. Przed przystąpieniem do instalacji i użytkowania należy uważnie przeczytać niniejszą instrukcję.*

AR *عزيزي العميل، شكرًا لك على شراء منتجاتنا. قبل التثبيت والاستخدام، يرجى قراءة هذا الدليل بعناية.*

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electronic for elevators

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