ELETTROQUADRI
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USER, MAINTENANCE AND INSTALLATION MANUAL

"SERIAL" CONNECTION

MP2

CE

TRANSLATION OF THE ORIGINAL INSTRUCTIONS

ENGLISH

2024- rev. 1.1

REVISION INDEX	REASON FOR REVISION	DATE OF REVISION
1.0	Manual creation of word version	21/11/2008
1.1	New layout and new logo	09/12/2024

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1 GENERAL INFORMATION

1.1. INSTALLATION MANUAL

The Installation manual is an integral part of the board and must be kept with care and accompany the board throughout its entire life cycle, right up to final scrapping.
The manual has been drawn up by the Manufacturer to provide all the necessary information to those authorized to interact with the machine during its expected service life: buyers, installers, expert operators and specialized technicians.

ELETTROQUADRI S.r.l. declines all liability for improper use of the board and for damages caused as a result of operations not considered in this manual or in any case unreasonable.

1.1.1. REPRODUCTION LIMITS AND COPYRIGHT

Reproduction of the manual, even partial, and distribution by any means, unless expressly authorized by the Manufacturer, is prohibited.
Any unauthorized reproduction will be prosecuted in the manner and times prescribed by the laws in force.

1.1.2. UPDATES

Illustrations of the board are provide for explanatory purposes only and are not binding for the Manufacturer. The manufacturer reserves the right to make any changes to components, parts and/or supplies for the purpose of making improvements or for any other reason, without having to update this manual unless said changes alter machine operation and/or safety.

IMPORTANT
The Manufacturer reserves the right to make changes without prior notice.

IMPORTANT
Any additions to the manual which the manufacturer deems appropriate to send to users must be kept together with the manual, becoming an integral part thereof.

1.1.3. CARE OF THE INSTRUCTIONS

The Installation manual must be kept by a person responsible for said task, in a suitable place, so that it is always available for consultation in optimum condition.
It must always be easy to find and consulted by the skilled operators and must always accompany the board in the case of transfer or resale.

CAUTION
The manual must be kept with care and replaced if it deteriorates and/or becomes illegible.

1.1.4. HOW TO PRINT THE INSTRUCTION MANUAL

CAUTION
ELETTROQUADRI S.r.l. ***shall not be held liable for any misinterpretation of the information contained herein if printing has not been executed correctly.***

1.2. How to use this manual

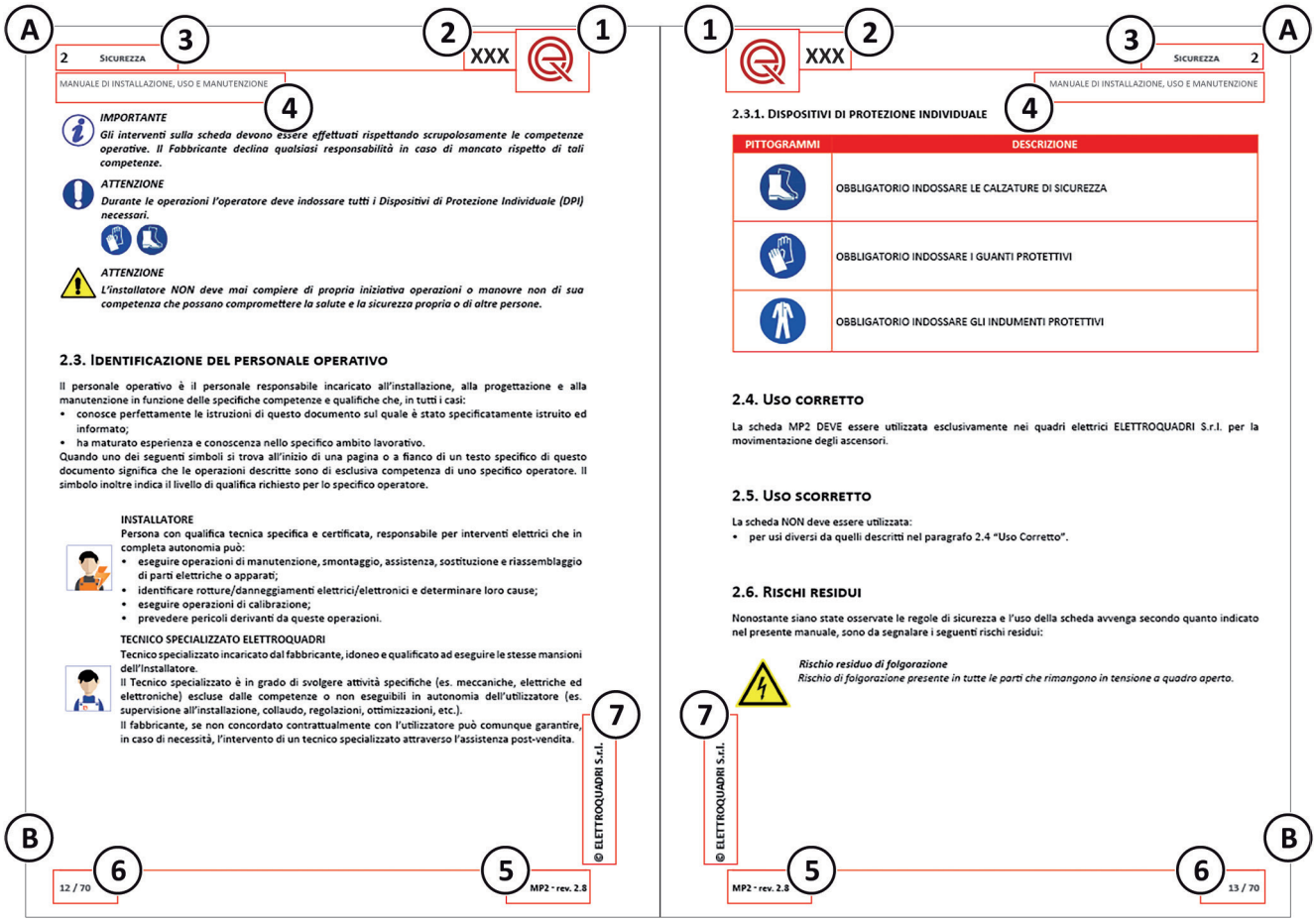
The encharged operators must, under their own responsibility, read this manual carefully before using and programming the board.

IMPORTANT

Keep this manual for the board's whole life cycle in a known and easily accessible place, so that it is always available when needed.

1.2.1. Page layout

The logic applied to the page layout of these instructions is presented and described below.



Key:

A. MANUAL HEADING
B. FOOTNOTES
1. Manufacturer's logo
2. Board model
3. CHAPTER of the Installation Manual section - NUMBER and NAME
4. Type of manual
5. Board model and manual revision index
6. Number corresponding to the current page and total number of pages in the whole manual
7. Manufacturer's name and copyright

1. Title	Chapter Title. (1.*"Chapter number"*)
1.1. Title	Heading. (1.*"Chap. No."* 1.*"Heading Number"*)
1.1.1. Title	Sub-heading. (1.*"Chap No."* 1.*"Heading no."* (1.*"Sub-heading number"*)
1. list	Numbered list, for identifying operations in succession.
• list	Bullet points, for general lists.

The references inside the figures may consist of letters (A, B, C ...) or sequential numbers (1, 2, 3 ...).
Each figure with a reference may be followed by a **Key** describing the indicated elements.

1.2.2. SYMBOLS

For the purpose of highlighting important parts of the text or important specifications, certain symbols have been adopted, the meaning of which is described below.

GENERIC HAZARD
Indicates situations of potential danger that, if overlooked, can seriously endanger people's health and safety.

GENERAL OBLIGATION
Indicates information or a precaution that must be observed to avoid operations that may damage the board, or in any case, a part of the text that deserves specific attention.

IMPORTANT
Indicates technical information of particular importance which should not to be overlooked.

ENVIRONMENTAL NOTE
Indicates the obligation to dispose of waste materials in an ecological manner.

ELECTROCUTION HAZARD
Indicates situations of potential danger that can seriously endanger people's health and safety.

1.2.3. GENERAL DEFINITIONS

Some recurring terms in the manual are described to ensure a more complete understanding of their meaning.

ELETTROQUADRI S.r.l., the manufacturer of the aforementioned board, will be referred to as the **Manufacturer.**

Danger zone:
any area inside and/or near the electric cabinet containing the board in which the presence of a person constitutes a risk for the health and safety of said person.

Exposed person:
any person who is completely or partially inside a danger zone.

Installer:
Skilled technician for board installing/programming.

Maintenance personnel:
Person responsible for servicing and repairing the board.

1.3. MANUFACTURER'S DATA

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21050 Bisuschio (VA) - Italy
Tel. +39 0332 470049 - Fax. + 39 0332 474032
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1.4. AFTER-SALES ASSISTANCE

For any assistance, contact the Manufacturer's Assistance Service.

CAUTION

The Manufacturer declines all liability for accidents involving persons or things caused by a failure to observe the instructions and regulations provided in this manual or the non-observance of the safety and accident prevention regulations in force in the country of machine use.

1.5. WARRANTY

The MP2 board warranty is valid for 1 year.

CAUTION

The Manufacturer declines all liability for accidents involving persons or things caused by a failure to observe the instructions and regulations provided in this manual or the non-observance of the safety and accident prevention regulations in force in the country of machine use.

1.6. TESTING

The board was tested during the production phases on the manufacturer's premises.

2 SAFETY

2.1. REFERENCE STANDARDS APPLIED

REFERENCE	TITLE
EN 81-20:2020	Safety rules for the construction and installation of lifts - Lifts for transporting persons and property - Part 20: Lifts for persons and property accompanied by persons
EN 81-50:2020	Safety rules for the construction and installation of lifts - Checks and testing - Part 50: Rules for the design, calculation, checking and testing of lift components
UNI 10411-1:2021	Modifications to electric lifts not conforming with Directive 95/16/EC
UNI 10411-2:2021	Modifications to hydraulic lifts not conforming with Directive 95/16/EC
UNI 10411-3:2016	Modifications to electric lifts installed in conformity with Directive 95/16/EC and UNI EN 81-1
UNI 10411-4:2016	Modifications to hydraulic lifts installed in conformity with Directive 95/16/EC and UNI EN 81-2
UNI 10411-5:2017	Modifications to electric lifts installed in conformity with Directive 95/16/EC or Directive 2014/33/EU and not conforming with UNI EN 81-1
UNI 10411-6:2017	Modifications to hydraulic lifts installed in conformity with Directive 95/16/EC or Directive 2014/33/EU and not conforming with UNI EN 81-2

2.2. SAFETY WARNINGS

2.2.1. GENERAL WARNINGS

CAUTION

Consequently, any intervention which alters board configuration shall automatically exonerate the manufacturer from all liability.

Consequently, any use other than those indicated in this manual shall exonerate **ELETTROQUADRI S.r.l.** from all liability for any risks which may occur.

2.2.2. WARNINGS FOR INSTALLER SAFETY

Before commencing work, the Installer must be fully knowledgeable of board function, configuration, and technical operating characteristics.

CAUTION

Any work to be performed on the board requires maximum caution from the Installer.

IMPORTANT

Works on the board must be performed in strict observance of operational competences. The Manufacturer declines all liability for any failure to observe said competences.

CAUTION

During operations the operator must wear all the necessary Personal Protective Equipment (PPE).

CAUTION

The Installer must NEVER perform operations or manoeuvres on his own initiative which are not within his sphere of competence and may jeopardize his own safety and that of others.

2.3. IDENTIFICATION OF OPERATING PERSONNEL

Operating personnel are the operators employed to perform installation, programming and maintenance activities depending on specific skills and qualifications, who, in all cases:

- are fully familiar with the instructions provided in this document on which they have been specifically trained and instructed;
- have gained sufficient experience and knowledge in the specific field of work.

When one of the following symbols is found at the start of a page or alongside a specific part of the text in this document, it means the operations described are the exclusive competence of a specific operator. The symbol also indicates the level of qualification required for the specific operator in question.

INSTALLER

Person with specific and certified technical qualifications responsible for electrical work on the machine who can, in complete autonomy:

- perform maintenance, disassembly, assistance, replacement and reassembly operations on electrical parts and equipment;
- pinpoint failures/electrical damage and determine the cause;
- perform calibration operations;
- envisage hazards deriving from these operations.

ELETTROQUADRI's QUALIFIED TECHNICIAN

Expert technician employed by the manufacturer who is suitable and qualified to perform the same tasks as the Installer.

The Expert Technician is able to perform specific activities (e.g. mechanical, electrical and electronic) not covered by the user's sphere of competence and which therefore cannot be executed autonomously (e.g. supervision of installation, testing, adjustments, optimization, etc.).

The Manufacturer, if stipulated in the contract with the user, may in any case guarantee, if needed, expert technical intervention via the after-sales assistance service.

2.3.1. PERSONAL PROTECTIVE EQUIPMENT

PICTOGRAMS	DESCRIPTION
	SAFETY FOOTWEAR MUST BE WORN
	PROTECTIVE GLOVES MUST BE WORN
	PROTECTIVE CLOTHING MUST BE WORN

2.4. CORRECT USE

The MP2 board may ONLY be used in electrical lift control cabinetsELETTROQUADRI S.r.l..

2.5. INCORRECT USE

The board MUST NOT be used:

- for any uses other than those described in heading 2.4 "Correct use".

2.6. RESIDUAL RISKS

Even when the safety regulations and rules of board use are observed as indicated in this manual, the following residual risks need to be noted:

Residual risk of electrocution
Risk of electrocution relating to all parts which remain live when the cabinet is opened.

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3 INSTALLATION

3.1. FIRST CONNECTION (TENSIONING THE INSTALLATION)

IMPORTANT

This is a generic manual, consequently, to proceed with installation always refer to the specifications and wiring diagram of the actual system.

This is an appendix to the MP2 manual to which reference must be made for everything not concerning the "serial connection".

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4 PROGRAMMING

4.1. GENERAL WARNINGS

INSTALLER

CAUTION

During operations the operator must wear all the necessary Personal Protective Equipment (PPE).

RESIDUAL RISK OF ELECTROCUTION

Risk of electrocution relating to all parts which remain live when the cabinet is opened.

IMPORTANT

The Manufacturer declines all liability for operations performed:

- ***by inadequate personnel;***
- ***without observing the health and safety regulations in force;***
- ***without observing the procedures provided in these instructions***

4.2. BOARD TECHNICAL SPECIFICATIONS

4.2.1. MP2 BASE BOARD

There are three versions:

MP2 - R **MP2 - C** **MP2 - D**	This is the motherboard, located in the control cabinet, responsible for serial communications, via inputs J3/2-3, with the “car and floor serial boards”.

4.2.2. CAR "SERIAL" BOARDS

These boards are set up for serial connection between the cabinet and car for:
- car calls;
- position indicator;
- direction indicator;
- photocells / safety edges;
- door operators and relative limit switches;
- gong/buzzer/overload signal;

The following versions are available

CABSER-R	SAPB single call manoeuvre (12 stops)
CABSER-C	Reservation manoeuvre (12 stops)
CABEXT-C	Expansion (12 stops) for both SAPB and car reservation

4.2.3. “SERIAL” BOARDS AT THE FLOOR LANDINGS

FLSER	Manages the call buttons, signalling, special manoeuvres
POSER	Handles the position and direction indicators

4.3. LEDs ON CABSER BOARD

FAA	J22/1 input presence signal	Front operator opening limit switch check
FCA	J22/2 input presence signal	Front operator closure limit switch check
CMA	J22/3 input presence signal	Front operator safety edge check (NC)
FAB	J22/4 input presence signal	Rear operator opening limit switch check
FCB	J22/5 input presence signal	Rear operator closure limit switch check
CMB	J22/6 input presence signal	Rear operator safety edge check (NC)
FTB	J22/7 input presence signal	Rear photocell check (NC)
FTA	J22/8 input presence signal	Front photocell check (NC)
DOB	J21/1 input presence signal	Open doors button check (NO)
DCB	J21/2 input presence signal	Close doors button check (NO)
FRM	J21/3 input presence signal	Fire services manoeuvre key check (NO)
SRV	J21/4 input presence signal	"Independent service" manoeuvre key check (NO)
FM	J21/5 input presence signal	"1 passenger present in car" check (NO)
NF	J21/6 input presence signal	"80% load present in car" check (NO)
OK	Board/program active indication	
TX	Serial communications active indication	
0….11	Car reservation made signal on M10/M11 terminal block (*)	

(*) For “selective” accesses, i.e. with two doors on a single floor which do not open at the same time, a specific connection table for the system will be provided.

4.4. MAXIMUM OUTPUT POWER FOR CABSER AND CABEXT EXPANSION BOARDS

The maximum permitted power per output is:
- 5 Watt for the car call reserve indication (24 VDC).
- 5 Watt for the “arriving” indication

4.5. TERMINAL BLOCKS AND CONNECTORS

4.5.1. INPUTS / OUTPUTS ON CABSER BASIC BOARD

I = **I**nput	**U** = **O**utput

Connector J20		*(Numbering from right to left)*
I – 1	**SER+**	Serial line +
I – 2	**SER-**	Serial line -
I – 3	**+24**	Board +24 power supply
I – 4	**GND**	GND board power supply

Connector J21		*(Numbering from right to left)*
I – 1	**DOB**	Open doors button (N.O.)
I – 2	**DCB**	Close doors button (N.O.)
I – 3	**FRM**	Fire services manoeuvre key (NO)
I – 4	**SRV**	"Independent service" manoeuvre key (NO)
I – 5	**FM**	"1 passenger present in car" contact (NO)
I – 6	**NF**	"80% load present in car" contact (NO)

Connector J22		*(Numbering from right to left)*
I – 1	**FAA**	Front opening limit switch
I – 2	**FCA**	Front closure limit switch
I – 3	**CMA**	Front safety edge (NC)
I – 4	**FAB**	Rear opening limit switch
I – 5	**FCB**	Rear closure limit switch
I – 6	**CMB**	Rear safety edge (NC)
I – 7	**FTB**	Rear photocell (NC)
I – 8	**FTA**	Front photocell check (NC)

Connector J23	*CABEXT expansion board connection*

Connector J26		*(Numbering from bottom to top)*
U – 1	**APA**	Front door opening command
I – 2	**COM-A**	APA/CPA common
U – 3	**CPA**	Front door closing command
U – 4	**NUD-A**	Front forced door closing command
U – 5	**APB**	Rear door opening command
I – 6	**COM-B**	APB/CPB common
U – 7	**CPB**	Rear door closing command
U – 8	**NUD-B**	Rear door forced closure command

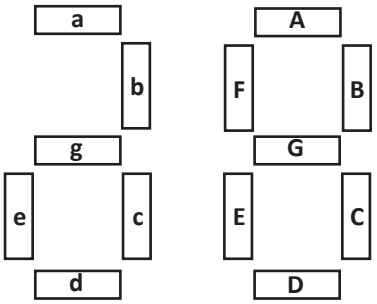
Connector J27		*(Numbering from left to right)*
I – 1	**COM**	CDU/CDD common
U – 2	**CDU**	Ascent direction signalling command
U – 3	**CDD**	Descent direction signalling command
U – 4	**BIP**	Car button press audible confirmation
U – 5	**BZ**	Overload warning buzzer/lamp control signal
U – 6	**GNG**	Gong control signal (open doors/slowdown)

Connector M10		*(Numbering from left to right)*
I/U – 1	**0C**	Car call/reserve
I/U – 2	**1C**	Car call/reserve
I/U – 3	**2C**	Car call/reserve
I/U – 4	**3C**	Car call/reserve
I/U – 5	**4C**	Car call/reserve
I/U – 6	**5C**	Car call/reserve

Connector M11		*(Numbering from left to right)*
I/U – 7	**6C**	Car call/reserve
I/U – 8	**7C**	Car call/reserve
I/U – 9	**8C**	Car call/reserve
I/U –10	**9C**	Car call/reserve – coded keyboard / channel 5
I/U -11	**10C**	Car call/reserve – coded keyboard / channel 3
I/U -12	**11C**	Car call/reserve – coded keyboard / channel 4

Connector M12		*(Numbering from left to right)*
U – 1	**P0 / a / BN1 / GN1**	Car position (decimal code) / 7 segments / binary / gray
U – 2	**P1 / b / BN2 / GN2**	Car position (decimal code) / 7 segments / binary / gray
U – 3	**P2 / c / BN3 / GN3**	Car position (decimal code) / 7 segments / binary / gray
U – 4	**P3 / d / BN4 / GN4**	Car position (decimal code) / 7 segments / binary / gray
U – 5	**P4 / e / BN5 / GN5**	Car position (decimal code) / 7 segments / binary / gray
U – 6	**P5 / g / (-)**	Car position (decimal code) / 7 segments / binary / gray (-)

Connector M13		*(Numbering from left to right)*
U – 7	**P6 / A**	Car position (decimal code) / 7 segments
U – 8	**P7 / B**	Car position (decimal code) / 7 segments
U – 9	**P8 / C**	Car position (decimal code) / 7 segments
U – 10	**P9 / D**	Car position (decimal code) / 7 segments
U – 11	**P10 / E**	Car position (decimal code) / 7 segments
U – 12	**P11 / F**	Car position (decimal code) / 7 segments
U – 13	**--- / G**	7-Segment position



Connector M14		*(Numbering from right to left)*
I – 7	-------	Programmable
I – 8	-------	Programmable
I – 9	-------	Programmable
I – 10	-------	Programmable
I – 11	-------	Programmable
I – 12	-------	Programmable – (+24 to enable coded keyboard on M11/10-11-12)

Connector M15		*(Numbering from right to left)*
I – 1	-------	Programmable – (coded keyboard / channel 1)
I – 2	-------	Programmable – (coded keyboard / channel 2)
I – 3	-------	Programmable – (coded keyboard / channel 8)
I – 4	-------	Programmable – (coded keyboard / channel 7)
I – 5	-------	Programmable
I – 6	-------	Programmable

4.5.2. INPUTS / OUTPUTS ON CABEXT EXPANSION BOARD

I = **I**nput	**U** = **O**utput

Connector J1	*Connection to the CABSER board or preceding CABEXT expansion board*

Connector J2	*Next CABEXT expansion board connection*

Connector M1		*(Numbering from left to right)*
I/U – 1	**0C**	Car call/reserve
I/U – 2	**1C**	Car call/reserve
I/U – 3	**2C**	Car call/reserve
I/U – 4	**3C**	Car call/reserve
I/U – 5	**4C**	Car call/reserve
I/U – 6	**5C**	Car call/reserve
I/U – 7	**6C**	Car call/reserve
I/U – 8	**7C**	Car call/reserve
I/U – 9	**8C**	Car call/reserve
I/U –10	**9C**	Car call/reserve
I/U -11	**10C**	Car call/reserve
I/U -12	**11C**	Car call/reserve

Connector M2		*(Numbering from right to left)*
U – 1	**P12**	Car position (decimal code)
U – 2	**P13**	Car position (decimal code)
U – 3	**P14**	Car position (decimal code)
U – 4	**P15**	Car position (decimal code)
U – 5	**P16**	Car position (decimal code)
U – 6	**P17**	Car position (decimal code)
U – 7	**P18**	Car position (decimal code)
U – 8	**P19**	Car position (decimal code)
U – 9	**P20**	Car position (decimal code)
U – 10	**P21**	Car position (decimal code)
U – 11	**P22**	Car position (decimal code)
U – 12	**P23**	Car position (decimal code)

4.5.3. INPUTS/OUTPUTS ON FLSER FLOOR BOARD

I = **I**nput	**U** = **O**utput

Connector J5		*(Numbering from bottom to top)*
I – 1	**Serial -**	
I – 2	**Serial +**	
I – 3	**+ 24**	
I – 4	**GND**	

Connector J6		*(Numbering from left to right)*
I/U – 1	**+ 24**	
I/U – 2	**GND**	
U – 3	**"Busy" / "Going up" signal**	
I – 4	**not used**	

Connector J7	*(Numbering from left to right)*
I/U – 1	**+ 24**
I/U – 2	**GND**
U – 3	**"Going down" signal**
I – 4	**Not used**

Connector J8	*(Numbering from left to right)*
I/U – 1	**+ 24**
I/U – 2	**GND**
U – 3	**"Present" / "ascent reservation accepted" signal**
I – 4	**Ascent reservation button**

Connector J9	*(Numbering from left to right)*
I/U – 1	**+ 24**
I/U – 2	**GND**
U – 3	**"Arriving" / "descent reservation accepted" signal**
I – 4	**Call button (SAPB) / Descent reservation button**

4.5.4. DIP SWITCHES ON FLSER BOARD

These are for identifying the individual boards located on each floor. The coding is in binary code (see table). The maximum number envisaged is 64 (the following examples are based on 8 stops).

Single system:
0 – 1 – 2 – 3 – 4 – 5 – 6 – 7

Duplo / duplex system

0 – 1 – 2 – 3 – 4 – 5 – 6 – 7	(1st floor landing control panel)
8 – 9 – 10 – 11 – 12 – 13 – 14 – 15	(2nd floor landing control panel)

Triplex system

0 – 1 – 2 – 3 – 4 – 5 – 6 – 7	(1st floor landing control panel)
8 – 9 – 10 – 11 – 12 – 13 – 14 – 15	(2nd floor landing control panel)
16 – 17 – 18 – 19 – 20 – 21 – 22 – 23	(3rd floor landing control panel)

Quadruplex system

0 – 1 – 2 – 3 – 4 – 5 – 6 – 7	(1st floor landing control panel)
8 – 9 – 10 – 11 – 12 – 13 – 14 – 15	(2nd floor landing control panel)
16 – 17 – 18 – 19 – 20 – 21 – 22 – 23	(3rd floor landing control panel)
24 – 25 – 26 – 27 – 28 – 29 – 30 – 31	(4th floor landing control panel)

4.6. How to Address FLSER Floor Cards

In order for it to be recognized and identified by the MP2 motherboard, each FLSER serial board must be "coded" by positioning the DIP switches according to the following table:
0 = OFF (DIP switch down) **1 = ON** (DIP switch up)

DIP-SWITCHES	"1"	"2"	"3"	"4"	"5"	"6"
Control panel n° 0	0	0	0	0	0	0
Control panel n° 1	1	0	0	0	0	0
Control panel n° 2	0	1	0	0	0	0
Control panel n° 3	1	1	0	0	0	0
Control panel n° 4	0	0	1	0	0	0
Control panel n° 5	1	0	1	0	0	0
Control panel n° 6	0	1	1	0	0	0
Control panel n° 7	1	1	1	0	0	0
Control panel n° 8	0	0	0	1	0	0
Control panel n° 9	1	0	0	1	0	0
Control panel n° 10	0	1	0	1	0	0
Control panel n° 11	1	1	0	1	0	0
Control panel n° 12	0	0	1	1	0	0
Control panel n° 13	1	0	1	1	0	0
Control panel n° 14	0	1	1	1	0	0
Control panel n° 15	1	1	1	1	0	0
Control panel n° 16	0	0	0	0	1	0
Control panel n° 17	1	0	0	0	1	0
Control panel n° 18	0	1	0	0	1	0
Control panel n° 19	1	1	0	0	1	0
Control panel n° 20	0	0	1	0	1	0
Control panel n° 21	1	0	1	0	1	0
Control panel n° 22	0	1	1	0	1	0
Control panel n° 23	1	1	1	0	1	0
Control panel n° 24	0	0	0	1	1	0
Control panel n° 25	1	0	0	1	1	0
Control panel n° 26	0	1	0	1	1	0
Control panel n° 27	1	1	0	1	1	0
Control panel n° 28	0	0	1	1	1	0
Control panel n° 29	1	0	1	1	1	0
Control panel n° 30	0	1	1	1	1	0
Control panel n° 31	1	1	1	1	1	0
Control panel n° 32	0	0	0	0	0	1
Control panel n° 33	1	0	0	0	0	1
Control panel n° 34	0	1	0	0	0	1
Control panel n° 35	1	1	0	0	0	1
Control panel n° 36	0	0	1	0	0	1

DIP-SWITCHES	"1"	"2"	"3"	"4"	"5"	"6"
Control panel n° 37	1	0	1	0	0	1
Control panel n° 38	0	1	1	0	0	1
Control panel n° 39	1	1	1	0	0	1
Control panel n° 40	0	0	0	1	0	1
Control panel n° 41	1	0	0	1	0	1
Control panel n° 42	0	1	0	1	0	1
Control panel n° 43	1	1	0	1	0	1
Control panel n° 44	0	0	1	1	0	1
Control panel n° 45	1	0	1	1	0	1
Control panel n° 46	0	1	1	1	0	1
Control panel n° 47	1	1	1	1	0	1
Control panel n° 48	0	0	0	0	1	1
Control panel n° 49	1	0	0	0	1	1
Control panel n° 50	0	1	0	0	1	1
Control panel n° 51	1	1	0	0	1	1
Control panel n° 52	0	0	1	0	1	1
Control panel n° 53	1	0	1	0	1	1
Control panel n° 54	0	1	1	0	1	1
Control panel n° 55	1	1	1	0	1	1
Control panel n° 56	0	0	0	1	1	1
Control panel n° 57	1	0	0	1	1	1
Control panel n° 58	0	1	0	1	1	1
Control panel n° 59	1	1	0	1	1	1
Control panel n° 60	0	0	1	1	1	1
Control panel n° 61	1	0	1	1	1	1
Control panel n° 62	0	1	1	1	1	1
Control panel n° 63	1	1	1	1	1	1

5 DIAGNOSTICS

5.1. GENERAL WARNINGS

It is assumed, for the safe use of the board, that the reader of this chapter is already familiar with the contents of heading 2.2 "Safety Warnings".

INSTALLER

IMPORTANT

Any anomalies are detected and managed by the MP2 board.

They are indicated on the board display which alternates the text "Er" and the "number" of the fault. For help in identifying possible causes, see the "Troubleshooting" section in both this manual and the MP2 manual.

5.2. FAULT TABLE AND FAULT FINDING

The faults are shown on the display **alternating** the error message "ER" with the **code of the identified fault**.
These can be:

- **(R) Recoverable faults**: the lift is still operative and restarts with next call.
- **(NR) Non recoverable faults**: the lift goes out of order and the MP2 board must be reset; the error is deleted in case of power failure, (faults Er - 23/25/27 are kept in memory).

Error code ***Fault origin and actions to be taken***

Er-43	**Serial communications to car error**
The check is performed by the MP2 board which, on the J9/2-3 connector, sends/receives the S+/S- signals in the connection with the CABSER board.	
Verify: • That the TX LED on the CABSER board is "on". • Exchange the two channels S+ and S- on the cabinet terminal block or on the car roof. • That S+ and S- are connected. • Problems	

Er-44	**Serial communications to the floors error**
The check is performed by the MP2 board which, on the J9/2-3 connector, sends/receives the S+/S- signals in the connection with the FLSER boards at the floor landings.	
Verify: **If there are problems with all floor landing boards** • Exchange the two channels S+ and S- on the cabinet terminal block. • That the TX LED on the FLSER boards is "on". • That S+ and S- are connected. **If there are problems with one or more floor landing boards** • Press button A on the MP2 board; the display will indicate the code of the faulty board/s. • That the TX LED on the FLSER boards is "on". • That S+ and S- are connected to the J5/1-2 connector.	

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6 BOARD FUNCTIONS AND LAYOUT

6.1. GENERAL WARNINGS

It is assumed, for the safe use of the board, that the reader of this chapter is already familiar with the contents of heading 2.2 "Safety Warnings".

INSTALLER

6.2. CABSER BOARD LAY-OUT

IMPORTANT

The layout below is subject to change without prior notice from the manufacturer.