

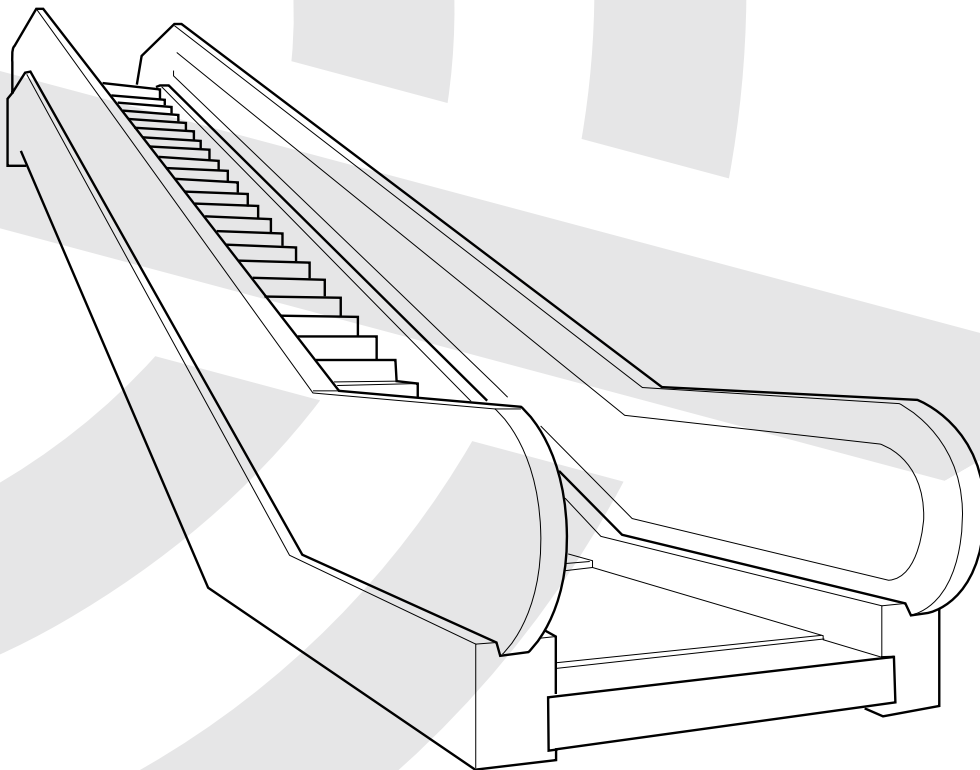


ELETTROQUADRI
move the excellence

MICROPROCESSOR SYSTEM

MP3

FOR MOVING WALKWAYS / ELEVATORS



TRANSLATION OF THE ORIGINAL INSTRUCTIONS

ENGLISH

2024- rev. 1.8

REVISION INDEX	REASON FOR REVISION	DATE OF REVISION
1.6	Graphical update	28/06/2022
1.7	Graphical update	19/04/2023
1.8	New logo	03/12/2024



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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.

© ALL RIGHTS RESERVED: copyright on this manual belongs to **ELETTROQUADRI S.r.l.**

Reprinting, reproduction and translation, even partial, are prohibited without the written authorization of **ELETTROQUADRI S.r.l.**

The manual cannot be transferred to third parties for viewing without the written authorization of **ELETTROQUADRI S.r.l.**

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. CHAPTER of the Installation Manual section - NUMBER and NAME
- 2. Board model
- 3. Manufacturer's logo
- 4. Type of manual
- 5. Number corresponding to the current page and total number of pages in the whole manual
- 6. 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.

SM-SIL board:

safety board.

1.3. MANUFACTURER'S DATA

ELETTROQUADRI S.r.l.

Via Puccini, 1
21050 Bisuschio (VA) - Italy
Tel. +39 0332 470049 - Fax. + 39 0332 474032
www.elettroquadri.net



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 MP3 and INSER boards 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	
EN 115-1:2017	for new installations
UNI 10411-15 April 2015	for upgrades/rebuilds

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 MP3 board may ONLY be used in walkway/elevator control enclosures ELETTRQUADRI 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 CONSIGNMENT

3.1. INSTALLATION



IMPORTANT

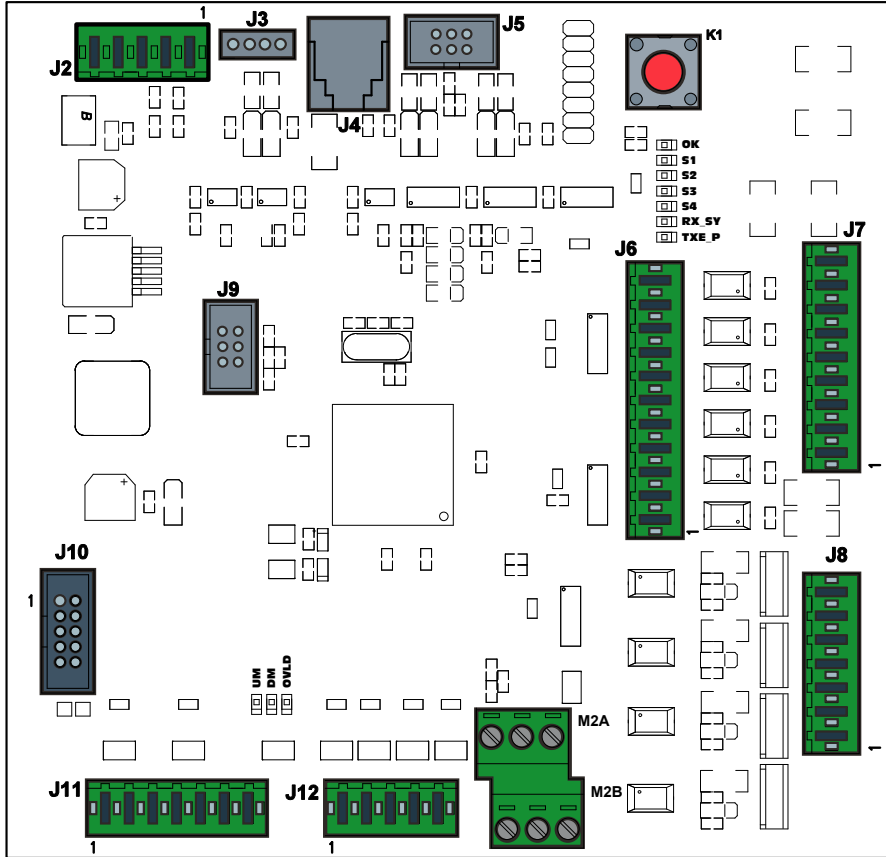
To allow the walkway/elevator to be operated during installation, the control enclosure is supplied with the SM-SIL safety board controls DEACTIVATED (dipswitches set to ON).

*Once installation is completed, and before commissioning, the safety controls on the SM-SIL board **MUST BE REACTIVATED.***

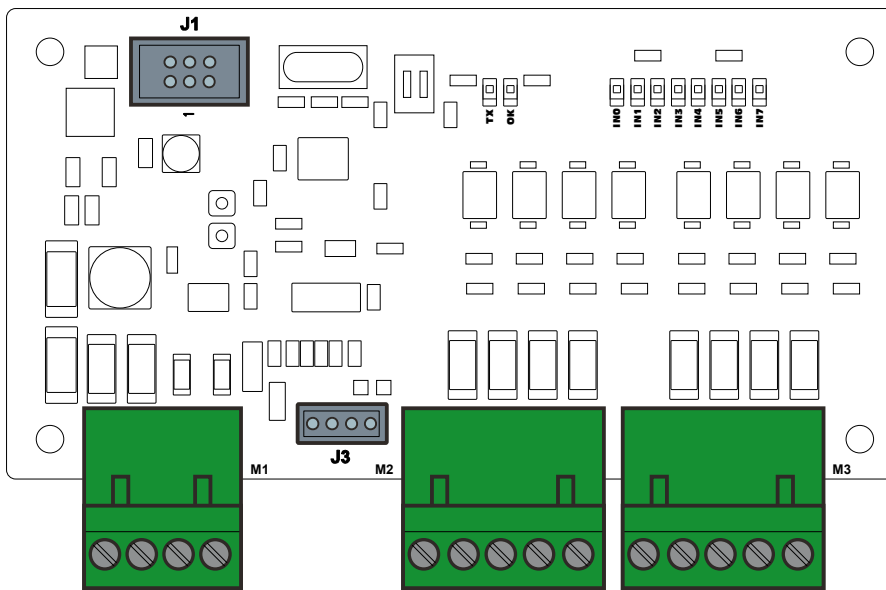
Set the dipswitches to OFF and run the SM-SIL board calibration procedure (see par. 5.1 - Preparatory operations).

3.2. BOARD LAYOUT

3.2.1. COMPOSITION OF THE MP3 BOARD (ON THE CONTROL PANEL)



3.2.2. COMPOSITION OF THE INSER BOARD (IN THE TOP AND BOTTOM ENCLOSURES)





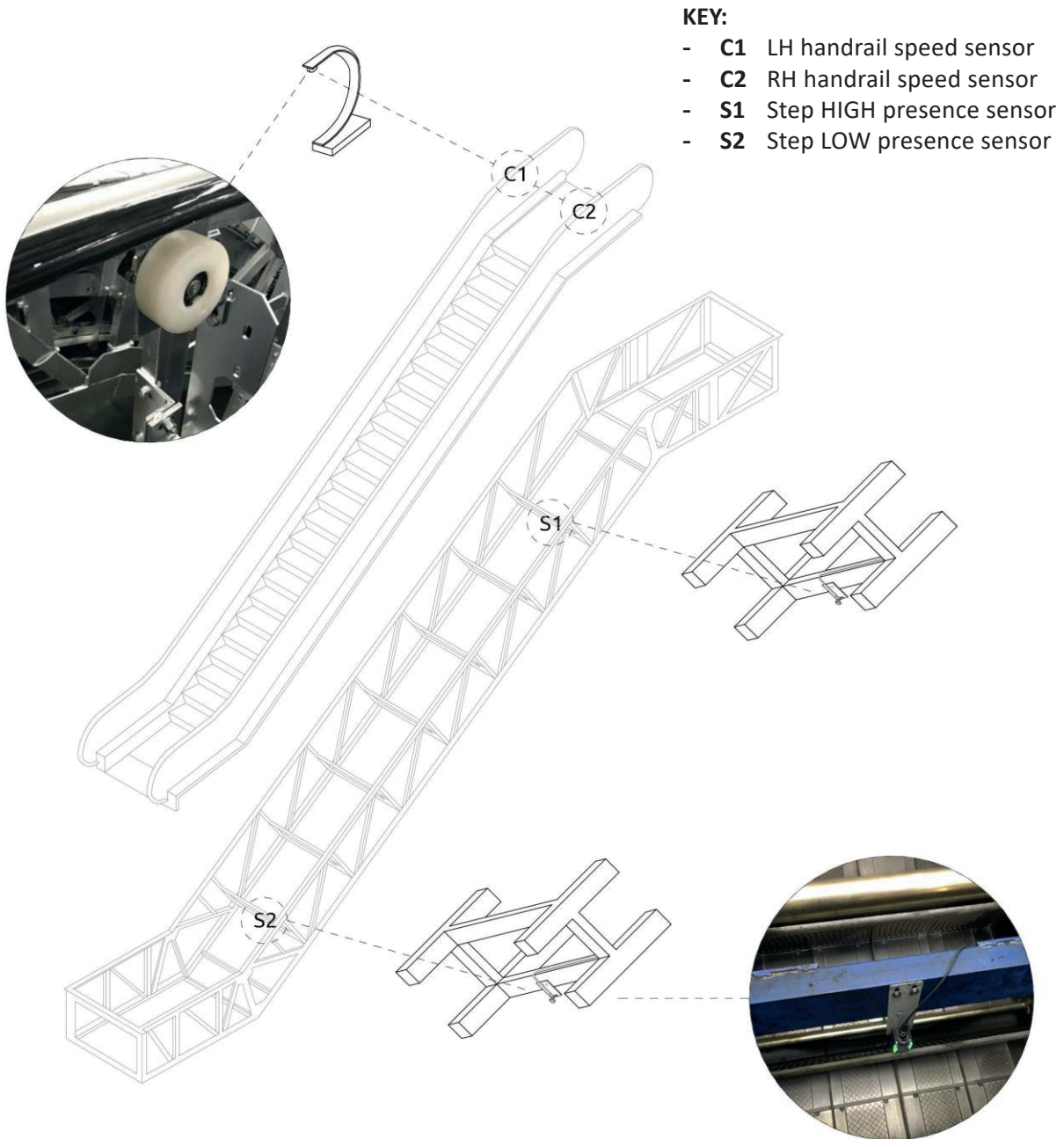
3.3. TYPES AND LOCATION OF ENCLOSURES

Enclosure	Panel	Material	Position	
			Inside pit	Outside pit
Single	Manoeuvre	Fire services, power contactors, MP3 and SM_SIL boards, auxiliary contactors, transformer, fuses, etc.		X
Separate	Manoeuvre	MP3 and SM_SIL boards, auxiliary contactors, transformer, fuses, etc.	X	
	Fire services panel	Fire services, power contactors	X	

3.4. COMPLEMENTARY MATERIAL

Material	Supply	
	standard	optional
Bottom enclosure (bottom safety chain contact terminals)	X	
Top enclosure (top safety chain contact terminals)	X	
RH/LH handrail monitoring sensors + shielded cable	X	
Step/segment, speed, direction sensors + shielded cables	X	
Miscellaneous equipment cables	X	
Drive force enclosure		X
Error code display		X
Photocells/radar for up/down travel start		X
No access/permitted direction display		X
Manoeuvre panel/fire services panel connection cables		X

3.5. SENSOR LAYOUT

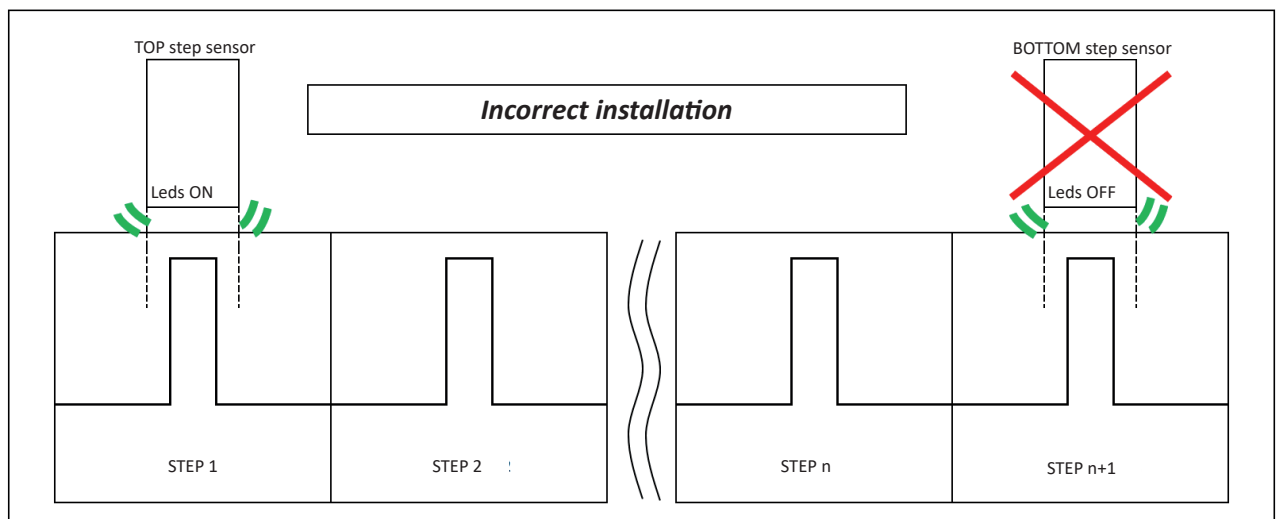
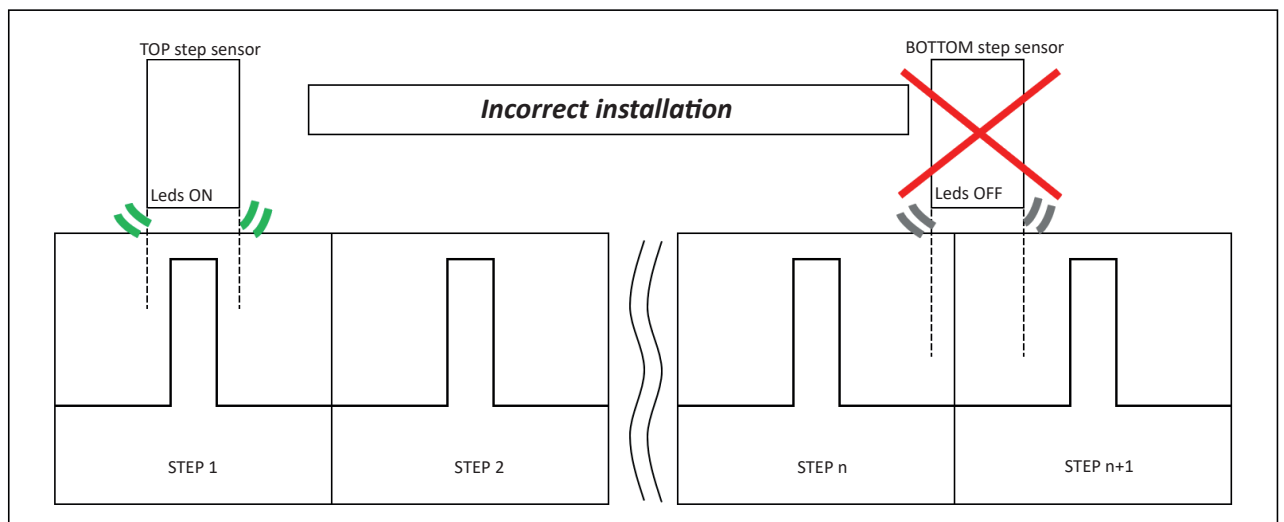
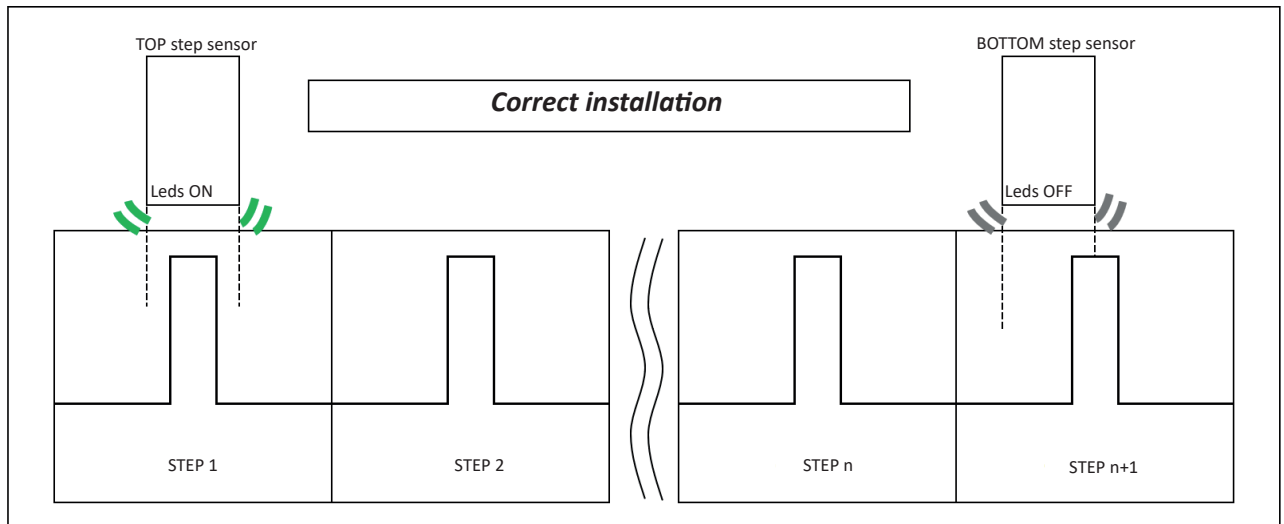


N.B. - Sensors S1 and S2 must never be engaged:

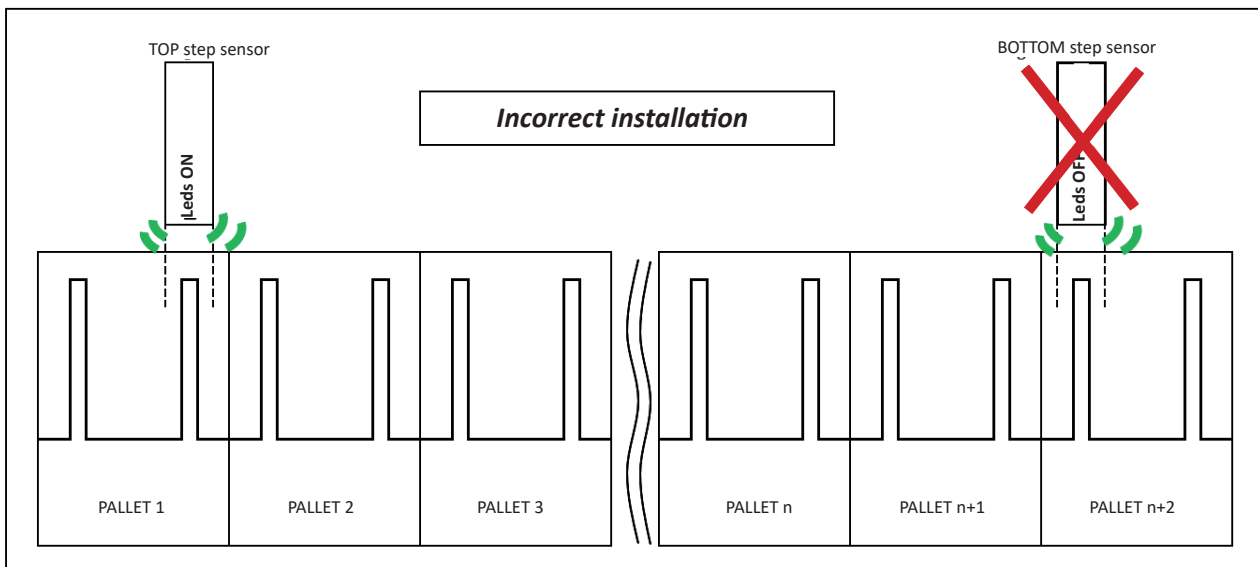
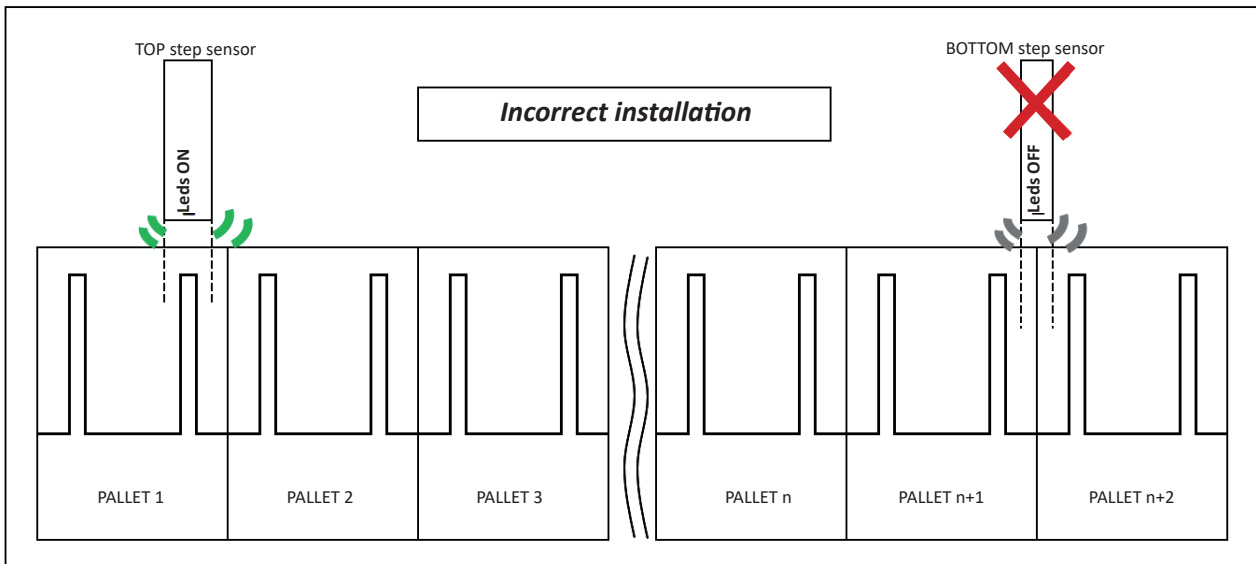
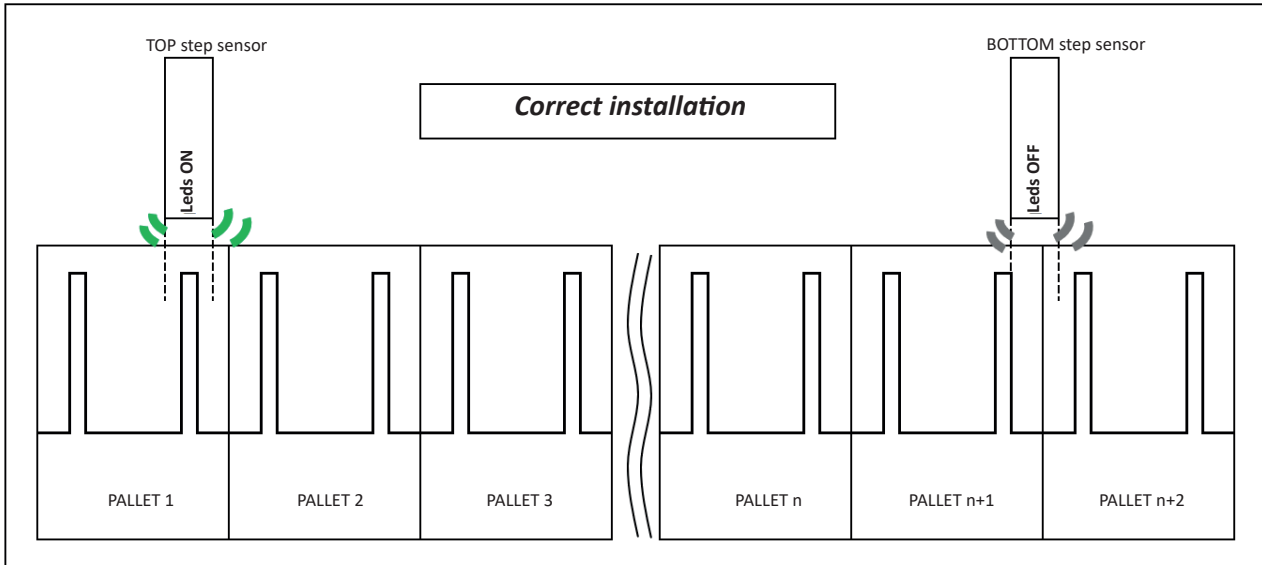
- at the same time
- at 50%

3.6. SENSOR INSTALLATION

Installation of step sensors for escalators for step presence control and direction control in ENCODER mode



Installation of pallet sensors for moving walkways for pallet presence control and direction control in ENCODER mode





3.7. UTILITY ADDED FOR STEP SENSOR POSITIONING

To help with the installation of step presence sensors, for their use as direction reversal detectors, this function has been added so the installer can tell whether or not the sensors have been installed correctly.

On the home page, with the system in motion, press the DOWN ARROW key.

```
ESCALATOR ASCENDING
Nominal speed:      0:59
```

A new line appears displaying Mn and Mx.

```
Nominal speed:      0:59
Mn      50      Mx 1200
```

These indications provide the minimum (Mn) and maximum (Mx) number of the percentage deviation between the position of the upper and lower sensor.

As the escalator moves, the distance between the rising edges of the signals of the two step sensors is measured and the minimum and maximum deviation detected up to that moment is shown.

To reset these values, press the ESC or SET KEY. At this point the system restarts the calculation.

It is important that these values are measured as the escalator completes at least two revolutions at nominal speed.

For correct functioning of wrong direction detection in ENCODER mode (SM-SIL board) the Mn and Mx numbers must be between 10 and 90. If one of the numbers indicated is higher or lower, the sensor is not positioned correctly.

Press the UP ARROW key to go back to the home page.



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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.*



IMPORTANT

Before performing any procedure make sure you have read and understood all the various steps, seen all the relative images and adopted the safety and protection measures described.

4.2. WALKWAY/ESCALATOR OPERATING MODE

- **Continuous:** the walkway/Escalator runs continuously in the selected direction.
- **On request (discontinuous or stop&go):** the walkway/Escalator stops after a set period of time if it does not detect a passenger, and starts again when a passenger steps on the footplate.
- **Standby speed:** the walkway/Escalator slows down after a set period of time if it does not detect a passenger, and starts running at normal speed again when a passenger steps on the footplate.



4.3. TSM REMOTE TERMINAL (PROGRAMMER)

The **TSM** remote terminal is an external programmer which connects to the **MP3** board (connector J4). It has four buttons, as follows:

ESC	Returns to the previous menu
SET	Enters programming and confirms a setting
▲	Scrolls up
▼	Scrolls down

4.4. ENTERING PROGRAMMING

To enter programming mode (on the **TSM**), hold down the **▲** key and press the **▼** key 4 times.

PROGRAMMING Basic parameters

Scroll **▲** and **▼** to view the following sequence of options:

PROGRAMMING Miscellaneous times

PROGRAMMING Options

PROGRAMMING Automatic configuration
--

PROGRAMMING Set input name	(see par. 4.9)
-------------------------------	----------------

PROGRAMMING Create input name	(see par. 4.10)
----------------------------------	-----------------

PROGRAMMING Language	(see par. 4.11)
-------------------------	-----------------

PROGRAMMING Mode	(see par. 4.12)
---------------------	-----------------

Press **SET** in the current position to enter the function.



4.5. BASIC PARAMETERS

4.5.1. TYPE OF MOTOR

Each parameter displays its current setting; scroll through the available options with ▲ and ▼:

MOTOR TYPE Direct

MOTOR TYPE Star/delta

MOTOR TYPE Inverter

Press **SET** to select the type of motor and move to the next setting.

4.5.2. TYPE OF MANOEUVRE

The current setting displays; scroll through the available options with ▲ and ▼:

TYPE OF MANOEUVRE Escalator runs continuously	(continuous operation)
--	------------------------

Once the walkway/Escalator is active, it operates until the emergency stop is pressed.

TYPE OF MANOEUVRE Photocell and stop	(discontinuous operation)
---	---------------------------

The walkway/Escalator is activated by the photocell, selected according to the direction setting, and stops after a set time (see "Normal travel time").

TYPE OF MANOEUVRE Photocell, slow down and stop	(discontinuous operation)
--	---------------------------

The walkway/Escalator is activated by the photocell selected according to the direction setting, slows down after a set time (see "Normal travel time") and stops completely after another time (see "Slow travel time").

TYPE OF MANOEUVRE Photocell, slow down and continues	(discontinuous operation)
---	---------------------------

The walkway/Escalator is activated by the photocell selected according to the direction setting, slows down after a set time (see "Normal travel time") and keeps running at slow speed until the photocell is activated, at which time it accelerates and the cycle starts again.

Press **SET** to select the type of manoeuvre and return to the main menu.



4.6. MISCELLANEOUS TIMES

Press **SET** to scroll through the menu. Modify the setting with ▲ and ▼ and press **SET** to confirm. To go back, press **ESC**.

NORMAL TRAVEL TIME	
Minutes	20

Determines the time for which the walkway/elevator continues running after the photocell is tripped.

SLOW TRAVEL TIME	
Minutes	20

Determines the time for which the walkway/Escalator continues running at slow speed before it stops completely.

SPIKE DELAY	
Seconds	2.0

Determines the emergency brake (spike) activation delay.

SAVING RESISTANCE	
Seconds	2.0

Determines the brake saving resistance activation delay at start.

BUZZER DURATION	
Seconds	1.0

Determines the start warning buzzer duration, during which the walkway/Escalator remains stationary.

INVERSION LATENCY	
Seconds	60

Determines the time you must wait before you can invert the direction of the walkway/Escalator. No commands are accepted during this delay.

CONTACTOR CLOSURE	
Seconds	4.0

Determines the run contactor closure delay (safety check).

START - DELTA	
Seconds	2.5

Determines the time required to switch the motor between STAR and DELTA winding.



STATIONARY LUBRICATION	
Hours	30

Determines the interval at which the oiling system will run with the walkway/Escalator stationary. The lubrication system starts when the walkway/Escalator is first started up, after this delay has expired.

MOVING LUBRICATION	
Hours	15

Determines the interval at which the oiling system will run with the walkway/Escalator running. The lubrication system starts when the delay has expired.

LUBRICATION TIME	
Minutes	30

Determines the time for which the oiling system will run with the walkway/Escalator running.

You are returned to the main menu on completion.

4.7. OPTIONS

Press **SET** to scroll through the menu. Modify the setting with **▲** and **▼** and press **SET** to confirm and go to the next option. To quit the options function, press **ESC** to the end of the menu.

SMOKE DETECTION	
Enabled?	No(Yes)

Smoke detection

SMOKE NORM. OPEN (only visible if smoke detection is active)	
Enabled?	No(Yes)

The smoke signal is considered normally closed: this can be changed with this option.

PIT H2O MONITORING	
Enabled?	No(Yes)

H2O NORM. OPEN (only visible if PIT H2O monitoring is active)	
Enabled?	No(Yes)

The water in pit signal is considered normally closed: this can be changed with this option.

STEP LOWERING BLOCK	
Enabled?	No(Yes)

Step lowering control.

PHOTOCELLS NORMALLY ON	
Enabled?	No(Yes)

The photocell signals are considered normally OFF: this can be changed with this option.

ESC KEY RESET ALL	
Enabled?	No(Yes)

EXTERNAL RESET	
Enabled?	No(Yes)

ESC KEY FAULT NR		(cannot be reset)
Enabled?	No(Yes)	

INVERSION ATTEMPT	
Enabled?	No(Yes)

IMA RELAY CONTROL	
Enabled?	No(Yes)

Reverse run relay control.



4.8. AUTOMATIC CONFIGURATION OF THE SAFETY CHAIN WITH THE INSER BOARDS

This is used to automatically teach the configuration of the auxiliary safety chain management system.

AUTOMATIC CONFIGURATION
SET to continue

Before you launch the procedure, make sure the safety chain is **COMPLETELY CLOSED**. Press **SET** to launch the procedure.

Self-configuration PROCEDURE
COMPLETED

The system has read and saved the current configuration. Repeat the operation whenever the safety chain is modified.

4.9. SET INPUT NAME

This function assigns specific names to each of the 24 INSER inputs to facilitate identification of open contacts.

PROGRAMMING
Set input name



NAME SC 0 INPUT M2/2
BOTTOM STOP

Press **SET** to enter the menu.
Press **▲** and **▼** to scroll through the list of available names.
Press **SET** to confirm the setting.
Press **ESC** to go back to the previous input.



NAME SC 0 INPUT M2/3
BOTTOM HANDRAIL ENTRANCE



Press **SET** until you reach the last input to quit the procedure.

NAME SC 0 INPUT M2/5
Not programmed



4.10. CREATE INPUT NAME

PROGRAMMING Create input name

Press **SET** to enter the menu.

ENTER NAME 1 <div style="display: flex; align-items: center;"> <div style="width: 40px; height: 20px; background-color: #ccc; margin-right: 10px;"></div> Name 1 string </div>

A flashing box displays: use ▲ and ▼ to enter the digit/letter.

ENTER NAME 1 <div style="display: flex; align-items: center;"> <div style="width: 40px; height: 20px; background-color: #ccc; display: flex; align-items: center; justify-content: center;">A</div> <div style="margin-left: 10px;">Name 1 string</div> </div>

Press **SET** to confirm the entry and go to the next box.

ENTER NAME 1 <div style="display: flex; align-items: center;"> <div style="width: 40px; height: 20px; background-color: #ccc; display: flex; align-items: center; justify-content: center;">A</div> <div style="width: 40px; height: 20px; background-color: #ccc; margin-left: 5px;"></div> <div style="margin-left: 10px;">Name 1 string</div> </div>
--

To go back, press **ESC**.

To delete a digit/letter, press ▲ and ▼ until you reach the white flashing box.

Use ▲ and ▼ to enter the digit/letter.

ENTER NAME 1 <div style="display: flex; align-items: center;"> <div style="width: 40px; height: 20px; background-color: #ccc; display: flex; align-items: center; justify-content: center;">A</div> <div style="width: 40px; height: 20px; background-color: #ccc; margin-left: 5px; display: flex; align-items: center; justify-content: center;">B</div> <div style="margin-left: 10px;">Name 1 string</div> </div>
--

Once you have completed the name, press **SET** until you reach the end of the boxes. The name is now confirmed and will display in:

PROGRAMMING Set input name

4.11. LANGUAGE

PROGRAMMING Language

Press **SET** to enter the menu.

LANGUAGE English

Use ▲ and ▼ to select the language.



4.12. MODE

PROGRAMMING Mode

Press **SET** to enter the menu.

REMOTE CONTR. TYPE Code: 0 (1 active)
--

Select 1 to activate remote control function.
Confirm by pressing **SET**.

CLIENT MODE Code: 0

Selectable code types:

Code **0**: Not utilised

Code **1**: FNM Milan (Railway Station)

Code **2**: GTT Turin (Metro)

Code **3**: RFI Turin (Porta Susa Railway Station)



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5 COMMISSIONING

5.1. PREPARATORY OPERATIONS

5.1.1. SM-SIL BOARD CALIBRATION

**GENERIC HAZARD**

The walkway/Escalator must be FULLY ASSEMBLED for this procedure.

Procedure:

With the walkway/Escalator stationary:

1. **KPT** key set to 0 (no 24VDC to input J6/2).
2. On the SM-SIL board, set dipswitches 1 to 8 to **OFF**. Safety equipment controls on the SM-SIL board enabled (refer to the SM-SIL board manual, par. 4.5).
3. Turn the **KPT** key to 1 (24VDC present at input J6/2), the **SM-SIL** board display will read **STATIONARY ESCALATOR CALIBRATION**.
4. Set the **KPT** to 0 again (no 24VDC to input J6/2).
5. Start the walkway/Escalator running up or down.
6. Extract the **BY** connector from the **BYN** terminal block.
7. Insert the **BY** connector into the **BYS** terminals to bypass the safety contact on the SM-SIL board.
8. When the walkway/Escalator reaches nominal speed, turn the **KPT** key to 1 (24VDC present at input J6/2), the **SM-SIL** board display will read **MOVING ESCALATOR CALIBRATION**.
9. Set the **KPT** to 0 again (no 24VDC to input J6/2).
10. Restore the **BY** connector to terminals **BYN** to resume normal operation.



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6 DIAGNOSTICS

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. TABLE OF ERRORS

(opt.) with error code display	MP3 board on TSM remote terminal	
Error code	FAULT	Error cause
ER 01	MOTOR CUTOOUT	It is signalled when on board terminal M2A/1, a resistance value greater than 2000 ohm as to GND is detected.
ER 02	NO TL1/2 CLOSING	At start up the board does not measure 24 VDC on input J11/1 (FCS) to confirm excitation of the power contactors (TL1 and TL2).
ER 03	NO S/D/SD CLOSING	At start up the board does not measure 24 VDC on input J11/2 (UD) to confirm excitation of the up (S) or down (D) contactors.
ER 04	TF CONTACTOR OPEN FAULT	At start up the board does not measure 24 VDC on input J11/3 (CCS) to confirm excitation of the contactor (TF).
ER 05	--- not used	
ER 06	--- not used	
ER 07	--- not used	
ER 08	D1 OPEN IN RUN	When the moving walkway / escalator is moving, no signal to the board at input J7/4 (D1).
ER 09	D2 OPEN IN RUN	When the moving walkway / escalator is moving, no signal to the board at input J7/6 (D2).
ER 10	D3 OPEN IN RUN	When the moving walkway / escalator is moving, no signal to the board at input J7/8 (D3).
ER 11	--- not used	
ER 12	--- not used	
ER 13	--- not used	
ER 14	NO PV CLOSURE	At start up the board does not measure 24 VDC on input J12/1 to confirm excitation of the low speed contactor (PV).
ER 15	NO PV OPENING	Before starting, or for more than 20 seconds on arrival at the floor, the board detects 24 VDC at input J12/1, the low speed contactor (PV) remains attracted.
ER 16	--- not used	



ER 17	---	not used	
ER 18	---	not used	
ER 19	NO TL1/2 OPENING		Before starting, or for more than 20 seconds on arrival at the floor, the board reads 24 VDC at input J11/1 (FCS): the power (TL1/TL2) contactors are still attracted.
ER 20	NO S/D/SD OPENING		Before starting, or for more than 20 seconds on arrival at the floor, the board reads 24 VDC at input J11/2 (UD): the up (S) or down (D) contactors are still attracted.
ER 21	---	not used	
ER 22	LONG BRAKING		
ER 23	SMOKE ALARM FAULT		Check contact setting and input to board J12/4 (CF1).
ER 24	---	not used	
ER 25	---	not used	
ER 26	D3 OPEN IN RUN		When the moving walkway / escalator is moving, no signal to the board at input J7/8 (D3).
ER 27	BOARD SERIAL LINE FAULT: 2		No input to board J3/3 (S+) and J3/4 (S-).
ER 28	SIL BOARD FAULT		Refer to the SM-SIL BOARD manual.
ER 29	---	not used	
ER 30	PIT WATER ALARM FAULT		Check contact setting and input to board J12/3 (CF5).
ER 31	DIR SELECTOR STUCK		The direction selector is stuck at the set direction.
ER 32	ATTEMPTED REVERSE		The direction selector is set to one direction and then turned to the opposite direction.

		board	terminal block	led	no input
ER 09 / ER 33	BOTTOM EMERGENCY BUTTON	INSERO (on bottom enclosure)	M2/2	IN0	N.C. stop button at bottom pit emergency button
ER 09 / ER 34	BOTTOM EMERGENCY STOP		M2/3	IN1	N.C. bottom emergency stop button
ER 09 / ER 35	LH BOTTOM HANDRAIL ENTRANCE		M2/4	IN2	LH bottom handrail entrance
ER 09 / ER 36	RH BOTTOM HANDRAIL ENTRANCE		M2/5	IN3	RH bottom handrail entrance
ER 09 / ER 37	LH BOTTOM COMB FOOTPLATE		M3/2	IN4	LH bottom comb footplate
ER 09 / ER 38	RH BOTTOM COMB FOOTPLATE		M3/3	IN5	RH bottom comb footplate
ER 09 / ER 39	LH BOTTOM CHAIN TENSION		M3/4	IN6	LH bottom step/segment chain tension
ER 09 / ER 40	RH BOTTOM CHAIN TENSION		M3/5	IN7	RH bottom step/segment chain tension



ER 09 / ER 41	LH BOTTOM PLINTH	INSER1 (on bottom enclosure)	M2/2	IN0	LH bottom plinth
ER 09 / ER 42	RH BOTTOM PLINTH		M2/3	IN1	RH bottom plinth
ER 09 / ER 43	BOTTOM STEP LOWERING		M2/4	IN2	Bottom step/segment lowering
ER 44			M2/5	IN3	--- not used
ER 45			M3/2	IN4	--- not used
ER 46			M3/3	IN5	--- not used
ER 47			M3/4	IN6	--- not used
ER 49			M3/5	IN7	--- not used
ER 09 / ER 49	TOP EMERGENCY BUTTON	INSER2 (on top enclosure)	M2/2	IN0	N.C. stop button at top pit emergency button
ER 09 / ER 50	TOP EMERGENCY STOP		M2/3	IN1	N.C. top emergency stop button
ER 09 / ER 51	LH TOP HANDRAIL ENTRANCE		M2/4	IN2	LH top handrail entrance
ER 09 / ER 52	RH TOP HANDRAIL ENTRANCE		M2/5	IN3	RH top handrail entrance
ER 09 / ER 53	LH TOP COMB FOOTPLATE		M3/2	IN4	LH top comb footplate
ER 09 / ER 54	RH TOP COMB FOOTPLATE		M3/3	IN5	RH top comb footplate
ER 09 / ER 55	LH TOP CHAIN TENSION		M3/4	IN6	LH top step/segment chain tension
ER 09 / ER 56	RH TOP CHAIN TENSION		M3/5	IN7	RH top step/segment chain tension
ER 09 / ER 57	LH TOP PLINTH	INSER3 (on top enclosure)	M2/2	IN0	LH top plinth
ER 09 / ER 58	RH TOP PLINTH		M2/3	IN1	RH top plinth
ER 09 / ER 59	TOP STEP LOWERING		M2/4	IN2	Top step/segment lowering
ER 09 / ER 60	TRACTION CHAIN FAILURE		M2/5	IN3	Traction chain broken
ER 09 / ER 61	HOIST STOP		M3/2	IN4	N.C. hoist stop button
ER 10 / ER 62	BOTTOM HATCH		M3/3	IN5	Bottom hatch
ER 10 / ER 63	TOP HATCH		M3/4	IN6	Top hatch
ER 10 / ER 64	- NO AUXILIARY BRAKE CLOSURE - INTERMEDIATE STOPS		M3/5	IN7	- Auxiliary brake contact closure - Intermediate stop buttons



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