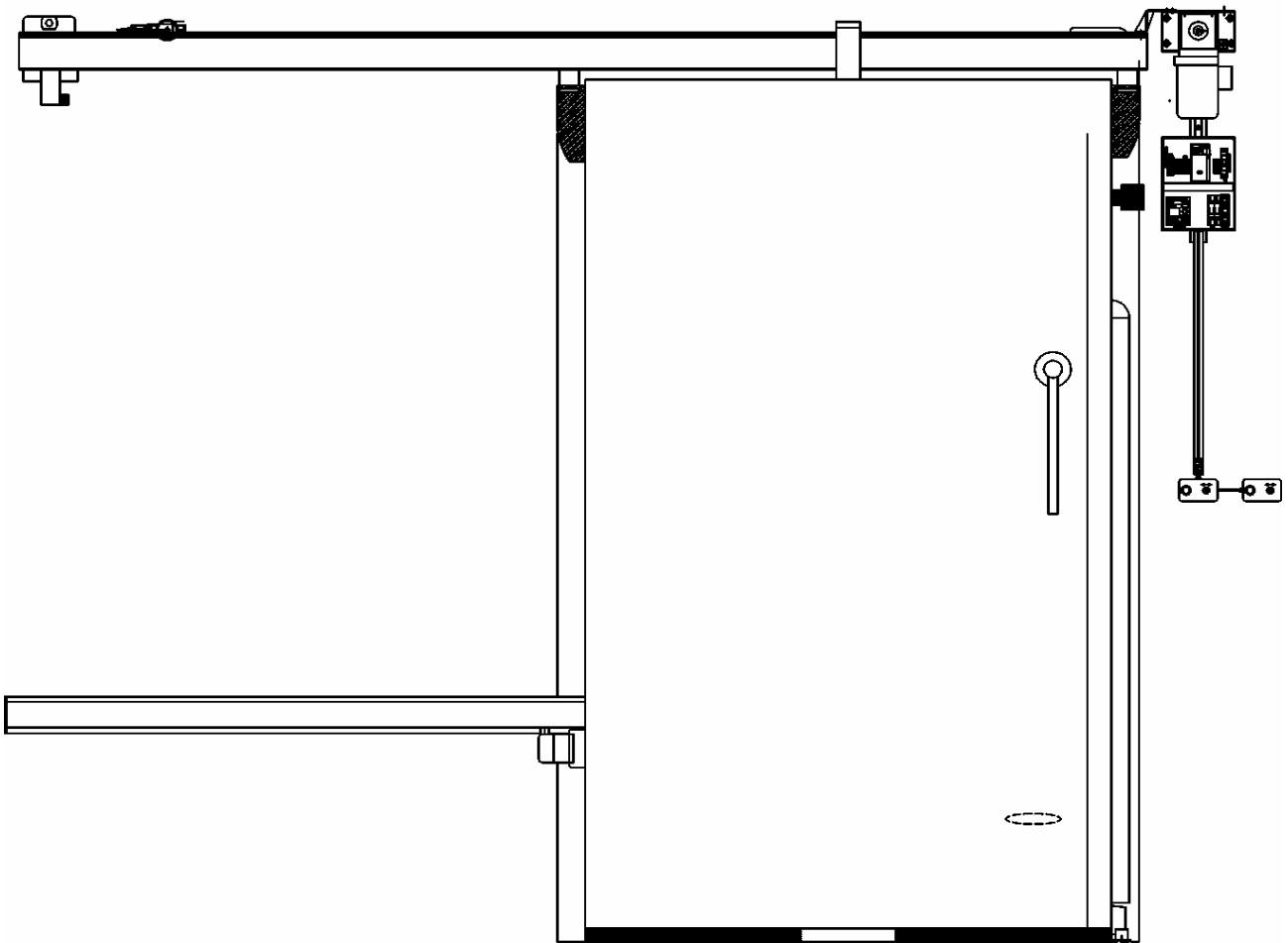


# USER AND MAINTENANCE MANUAL



## *POWERED SLIDING DOOR MODEL SC AUT09*



**FRIGO DOORS BY SEVENFRIGO SRL**

VIA DELLA TECNICA 44 Z.I. MOLINACCIO

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REV. 1.0 - 11/2009



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## ▣ FOREWORD

PARA	DESCRIPTION
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1	<b>THE SCOPE OF THE MANUAL</b>
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This instruction manual concerns:

- Information for operators on safety issues;
- Safe handling, packing and unpacking of the opening system;
- Correct installation of the opening system;
- Correct and safe use;
- Correct and safe maintenance;
- Safe dismantling of the door in accordance with the health and environmental regulations in force.



**The managers of the company departments where this product will be installed must, in accordance with the law, read this Instruction Manual carefully and ensure the operators and maintenance technicians concerned read the sections that apply to them.**

It goes without saying that the plants for which this product is intended must conform to the health and safety regulations in force.

The instructions, drawings and documentation in this Manual are technical in nature and the sole property of the Manufacturer. These must not be reproduced in any way, whether in part or in full.

The Manufacturer may amend this document at any time. It is the customer's responsibility to ensure he has the fully updated version.

## 0 FOREWORD

PARA	DESCRIPTION
2	<b>HOW TO CONSULT THE INSTRUCTION MANUAL</b>

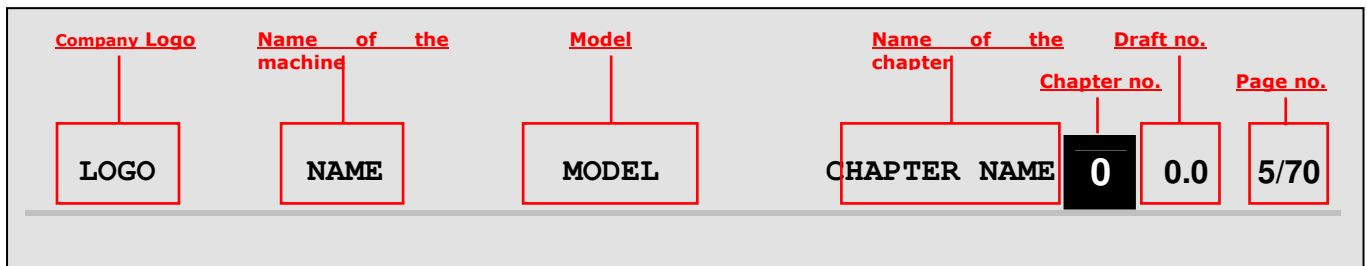
Each chapter in this manual addresses a specific operator (INSTALLER, USER and MAINTENANCE TECHNICIAN). We also state the skills each operator should have to use the product in question.

The chapters are in chronological order with respect to the product's lifespan.

Terms, abbreviations and pictograms are used in the interest of immediacy and clarity. Their meanings are given in paragraph 6.

There is a header table on each page of the Instruction manual from the Contents onwards. It states the draft number for the Manual, as well as the name and number of the chapter and page.

### PAGE NUMBERING

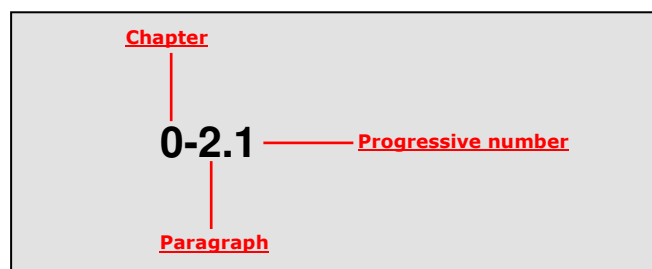


### TABLE NUMBERING

The tables are given progressive numbers.

Numbering starts at "1" in each new section.

The tables are numbered as follows:



## ABBREVIATIONS

Sec. = section

Chap. = chapter

Para. = paragraph

P. = page

Fig. = figure

Tab. = table

## UNITS OF MEASUREMENT

We use the International System of Units (SI)

## □ FOREWORD

PARA	DESCRIPTION
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3	<b>LOOKING AFTER YOUR INSTRUCTION MANUAL</b>
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You should take good care of the instruction manual and include it with the door when passing the latter on to another party.

Do not remove, tear or casually amend any part of the manual.

Keep the manual in a warm dry area within easy reach.

The Manufacturer reserves the right to make amendments and improvements without forewarning the Customer or updating the manual already delivered to the user.

The Manufacturer cannot be held responsible for the translation of the manual into foreign languages. In the event of inaccuracies you should refer to the original Italian version of this manual.

## □ FOREWORD

PARA	DESCRIPTION
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4	<b>RECIPIENTS</b>
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This Manual is intended for: the installer, the operator and the qualified maintenance technician.

The “**OPERATOR**” is responsible for operation, adjustment, cleaning and basic maintenance of the product.

A “**QUALIFIED WORKER** or **QUALIFIED OPERATOR**” must have taken a specialization or training course, or other, and have expertise in the installation, set-up, maintenance, repair and transport of the product.

An “**EXPOSED PERSON**” is anyone in an area in and/or near a machine whose health and safety could be at risk.

### **Worker requirements (see PARA. 0.6)**

The product is intended for professional, not general use. It should therefore be used by qualified workers who, in particular:

- Are of adult age;
- Are of sufficiently sound physical and mental health for executing work of particular technical difficulty;
- Are trained in the use and maintenance of the product;
- Have the employer’s approval for executing the work they have been assigned;
- Are able to understand and put into practice the instructions in the user manual and the safety rules;



## 0 FOREWORD

PARA	DESCRIPTION
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5	<b>GLOSSARY AND PICTOGRAMS</b>
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Any unusual terms that could be misinterpreted are explained below.

We describe the abbreviations and the meaning of the pictograms, indicating the worker requirements and the condition of the product in each case. The abbreviations are a quick and immediate way of stating information on safe and correct use of the product. They apply exclusively to the motorized "SC Aut" model.

### GLOSSARY:

**HAZARDOUS AREA:** An area in and/or near the product where an exposed person is at risk of compromising his health and safety (Annex I, 1.1.1 EC Directive 98/37);

**EXPOSED PERSON:** A person partly or fully in a hazardous area (Annex I, 1.1.1 EC Directive 98/37);

**OPERATOR:** A person who installs, operates, sets up, services, cleans, repairs and transports the machine (Annex I, 1.1.1 EC Directive 98/37);

**MAN-MACHINE INTERACTION:** Any situation in which an operator interacts with the machine during any work phase at any time in the life of the machine;

**WORKER REQUIREMENTS:** The worker's minimal requirements for executing the work concerned;

**NUMBER OF OPERATORS:** The number of operators required to do the stated work properly, as determined by the Manufacturer. Any other number may not be able to obtain the desired results, or could compromise their safety;

**PRODUCT CONDITION:** the condition of the product refers to its operating mode, e.g. automatic, jog, stop, etc. and the condition of the safety devices, such as disabled/enabled guards, pressed emergency stop button, type of power insulation, etc.





**RESIDUAL RISKS:** A risk that could not be eliminated or sufficiently reduced during design, and which the protective devices cannot (fully) protect against; any such risks are stated in this manual together with notes and instructions on how they can be avoided (see parts 5.4 and 6.5.1 of European standards EN 12100-1 and EN 121000-2 respectively);

**SAFETY COMPONENT:** A component that helps protect against risks and which, if broken or not working properly, could compromise the health and/or safety of any exposed people (e.g. lifting equipment; fixed, moveable or adjustable guards, and electrical, electronic, optical, pneumatic or hydraulic devices that aid or lock a guard, etc.).

**PICTOGRAMS**










**This symbol precedes:**

**extremely important information/instructions with particular regard to safety.**

**Failure to take this into account could:**

- **Compromise the operator’s safety;**
- **Forfeit the warranty;**
- **Forfeit the responsibility of the Manufacturer.**

**PICTOGRAMS ASSOCIATED WITH WORKER REQUIREMENTS**








Symbol	DESCRIPTION
	<b>General worker:</b> an operator without specific skills who can execute only simple tasks under the supervision of qualified technicians.
	<b>Lifting and handling operator:</b> an operator able to use equipment for the lifting and handling of materials and machinery (following the Manufacturer’s instructions) in accordance with the domestic law in force.
	<b>Level 1 machine operator:</b> an operator without specific skills who can execute only simple tasks such as operating the product by means of the buttons on the pushbutton terminal, loading and unloading materials during production with the protective devices enabled; he is not allowed to use the product in jog mode.
	<b>Level 2 machine operator:</b> an operator able to do the same tasks as the Level 1 machine operator and use the product in jog mode for simple tasks such as start-up and reset after a period of inactivity and adjustment.
	<b>Mechanical technician:</b> a qualified technician able to operate the machine in normal conditions and in jog mode with the protection devices disabled, as well as adjust, service and repair the mechanical components. <b>He is not qualified to service live electrical equipment.</b>
	<b>Electrical technician:</b> a qualified technician able to operate the machine in normal conditions and in jog mode with the protection devices disabled, as well as adjust, service and repair the electrical components. <b>He is qualified to service live cabinets and connecting boxes.</b>
	<b>The Manufacturer’s technician:</b> a qualified technician provided by the Manufacturer for executing complex work in particular situations or any work arranged with the user. He can be skilled in mechanical and/or electrical and/or electronic and/or software work, depending on the case in hand.

**Tab. 0-6.1**



PICTOGRAMS ASSOCIATED WITH CONDITIONS

Pictograms in squares/rectangles provide INFORMATION:

Symbol	Condition of the product
	<b>Equipment disconnected:</b> the electrical and pneumatic supplies are disconnected.
	<b>Equipment connected:</b> the electrical and pneumatic supplies are connected; the machine is safely at standstill with the mobile guards open (these are specified); JOG disabled; and the fixed guards closed.
	<b>Equipment connected:</b> the electrical and pneumatic supplies are connected; the machine has been stopped by pressing the emergency stop button or other similar component in the intervention area (the emergency device is specified).
	<b>Equipment running:</b> in automatic mode, with the moveable guard closed and their respective interlock devices enabled, and the fixed guards closed.
	<b>Equipment running:</b> in JOG mode, with the moveable guards closed and their respective interlock devices enabled, and the fixed guards closed.
	<b>Equipment running:</b> in JOG mode, with one or more deactivateable moveable guards open (specified) and their respective interlock devices disabled, and any other moveable guards closed with their respective interlock devices enabled and fixed guards closed.
	<b>Equipment connected:</b> in standby and ready to be started up with a functional command (e.g. presence of products). The moveable guards are closed with safety device (included) and the fixed guards are also closed.

Tab. 0-6.2



**PICTOGRAMS ASSOCIATED WITH SAFETY**

- Pictograms in a triangle indicate a **HAZARD**.
- Pictograms in a circle indicate an **OBLIGATION** or **PROHIBITION**.

Symbol	Name
	Risk of electrocution
	Crushing of upper limbs
	Trapping
	Dragging
	General danger
	Access forbidden to unauthorized people
	Do not remove the safety devices
	Forbidden to clean, oil, lubricate, repair or manually adjust moving parts
	Forbidden to work without first disconnecting the power supply
	Protective gloves obligatory
	Safety footwear obligatory
	Protective helmet obligatory

**Tab. 0-6.3**



# 1 GENERAL INFORMATION

PARA	DESCRIPTION
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1	<b>MANUFACTURER DETAILS</b>
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## MANUFACTURER

FRIGO DOORS by SEVEN FRIGO S.r.l.

## HEAD OFFICE

Via della Tecnica, 44 Z.I. Molinaccio

06135 loc. Ponte San Giovanni - Perugia - ITALY

## **POST-SALES/SPARE PARTS SERVICE**

**Tel.: +39 075 599 76 48**

**Fax: +39 075 39 59 36**

[www.sevenfrigo.com](http://www.sevenfrigo.com)

[info@sevenfrigo.com](mailto:info@sevenfrigo.com)



# 1 GENERAL INFORMATION

PARA	DESCRIPTION
2	PRODUCT DETAILS AND THE DATA PLATE

Each door has a CE plate stating its reference data.

Always quote this data in any communication with the Manufacturer or assistance centres.

### Example of a plate for an SC Aut door

 <b>FRIGO DOORS</b> by SEVEN frigo S.r.l. Via della Tecnica, 44 06135 PERUGIA (ITALY)	
<b>Porta frigorifera scorrevole          motorizzata mod. SC AUT</b>	
Numero di serie	
Anno di apposizione della marcatura	
Norma europea di riferimento: <b>EN 13241-1</b>	
Resistenza al carico del vento: <b>Classe 2</b>	
Dir. 89/106/CE Dir. 98/37/CE Dir. 2006/95/CE Dir. 2004/108/CE	



# 1 GENERAL INFORMATION

PARA | DESCRIPTION

## 3 | DECLARATIONS

The product is constructed in accordance with associated EC Directives in force at the time of going to market.

### CE DECLARATION OF CONFORMITY FOR THE MOTORIZED SLIDING DOOR

<b>CE DECLARATION OF CONFORMITY</b>	
<b>THE MANUFACTURER</b>	Frigo Doors by Seven Frigo S.r.l.
<b>ADDRESS</b>	Via della Tecnica 44
<b>DECLARES THAT</b>	
<b>THE PRODUCT</b>	Motorized sliding door
<b>MODEL</b>	<b>SC Aut09</b>
<b>SERIAL NUMBER</b>	
<b>CONFORMS TO THE FOLLOWING DIRECTIVES</b>	
0	<b>COUNCIL DIRECTIVE 89/106/EEC</b> <i>ON THE APPROXIMATION OF THE LAWS OF THE MEMBER STATES RELATING TO CONSTRUCTION PRODUCTS.</i>
0	<b>COUNCIL DIRECTIVE 98/37/EC</b> <i>ON THE APPROXIMATION OF THE LAWS OF THE MEMBER STATES RELATING TO MACHINERY.</i>
0	<b>COUNCIL DIRECTIVE 2004/108/EC</b> <i>ON THE APPROXIMATION OF THE LAWS OF THE MEMBER STATES RELATING TO ELECTROMAGNETIC COMPATIBILITY.</i>
0	<b>COUNCIL DIRECTIVE 2006/95/EC</b> <i>ON THE APPROXIMATION OF THE LAWS OF THE MEMBER STATES RELATING TO ELECTRICAL EQUIPMENT DESIGNED FOR USE WITHIN CERTAIN VOLTAGE LIMITS.</i>
0	<b>COUNCIL DIRECTIVE 1999/5/EC</b> (APPLICABLE ONLY TO REMOTE-CONTROLLED MODELS) <i>ON RADIO EQUIPMENT AND TELECOMMUNICATIONS TERMINAL EQUIPMENT AND THE MUTUAL RECOGNITION OF THE CONFORMITY.</i>
<b>AND CONFORMS TO THE FOLLOWING HARMONIZED TECHNICAL STANDARDS</b>	
<b>EN 13241-1</b>	INDUSTRIAL, COMMERCIAL AND GARAGE DOORS AND GATES. PRODUCT STANDARD. PRODUCTS WITHOUT FIRE RESISTANCE OR SMOKE CONTROL CHARACTERISTICS.
<b>EN 12604</b>	INDUSTRIAL, COMMERCIAL AND GARAGE DOORS AND GATES. MECHANICAL ASPECTS. REQUIREMENTS.
<b>EN 12605</b>	INDUSTRIAL, COMMERCIAL AND GARAGE DOORS AND GATES. MECHANICAL ASPECTS. TEST METHODS.
<b>EN 12100-1</b>	SAFETY OF MACHINERY. BASIC CONCEPTS, GENERAL PRINCIPLES FOR DESIGN. PART 1: BASIC TERMINOLOGY, METHODOLOGY.
<b>EN 12100-2</b>	SAFETY OF MACHINERY. BASIC CONCEPTS, GENERAL PRINCIPLES FOR DESIGN. PART 2: TECHNICAL PRINCIPLES.
<p>THE INITIAL PRODUCT TYPE TESTS WERE CARRIED OUT IN ACCORDANCE WITH TABLE ZA.3 OF STANDARD EN 13241-1 BY THE NOTIFIED BODY ISTITUTO GIORDANO S.P.A., DRAWING UP TEST REPORTS N° 252468/4059/CPD AND N° 252469/4060/CPD</p>	
<p><i>PERUGIA</i></p>	
<p><b>SEVENFRIGO SRL</b> THE TECHNICAL OFFICE PITTOLI OLIVIERO</p>	



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## **1 GENERAL INFORMATION**

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PARA	DESCRIPTION
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<b>4</b>	<b>ABOUT THE TECHNICAL ASSISTANCE SERVICE</b>
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The product is covered by a warranty, as stated in the contract. If any product defects or faults occur during the period of validity that match those stated on the warranty, the Manufacturer will take it upon himself to inspect and then repair or replace the defective parts.

Any attempts by the user to make repairs without the Manufacturer's written consent will forfeit the warranty and the Manufacturer will not assume any liability for damage attributable to the defective product.

The same applies to spare parts that are neither original nor recommended by the Manufacturer.

It is for these reasons that we advise our customers to always contact our Assistance Service.

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## **1 GENERAL INFORMATION**

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PARA	DESCRIPTION
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<b>5</b>	<b>PREPARATION BY THE CUSTOMER</b>
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Unless other contractual agreements are made, the Customer is normally expected to:

- Prepare the premises, including any required masonry and/or ducting work;
- Set up the electrical connection for the product, in conformity with the domestic law in force;

## 2 SAFETY

PARA	DESCRIPTION
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1	<b>GENERAL SAFETY INSTRUCTIONS</b>
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The Manufacturer has taken pains to design the product carefully and make it as **INTRINSICALLY SAFE** as possible.

The Manufacturer has also fitted the product with all the essential safety devices and drawn up all the information required to ensure safe and correct use.

Each chapter therefore includes a note on the staff and operators concerned, stating:

- The minimum skills required;
- Any residual risks;
- Any optional or mandatory personal protection equipment;
- How to avoid human error;
- Prohibitions/obligations regarding forbidden conduct.

 **This information must be followed carefully.**

The user may combine the information provided by the Manufacturer with additional workplace rules, providing of course that they do not conflict with those in this manual on safe use of the product.

Important: the operator must not wear long loose-fitting clothes that could be caught or snagged on parts of the product.

The user can also, if necessary, add notes on prevention measures, personal protection equipment, information on how to avoid human error and prohibited conduct.

The following instructions must therefore be followed:

- It is strictly forbidden to operate the motorized opening system with the fixed guards removed;
- It is strictly forbidden to block the installed safety devices;
- Any operations that involve an element of risk should be executed in accordance with the respective instructions;
- Any safety devices must be restored as soon as an operation involving an element of risk has been completed;
- Before cleaning, disconnect the system from the mains and check that the environmental temperature does not pose added risk such as ice and frost;





- Do not for any reason modify parts of the opening system; the Manufacturer cannot assume any liability for malfunctions due to non-compliance with the above. You are advised to contact the Manufacturer directly for repairs;
- Install the doors according to the Manufacturer's instructions and diagrams. We cannot assume any liability for failure to do this.



**IMPORTANT!**

**The Manufacturer cannot assume any liability for harm to people and animals or damage to objects in the event of:**

- **Improper use of the product;**
- **Faulty connection to the mains;**
- **Incorrect installation;**
- **Maintenance other than that stated by the Manufacturer;**
- **Unauthorized changes or repairs;**
- **Use of spare parts that are not original or are incompatible with the model;**
- **Failure to comply with associated domestic regulations;**
- **Disasters and events outside of one's control.**

### General rules

The moveable components must always be used according to the Manufacturer's instructions stated in this manual, which must be kept readily available at the workplace at all times.

All the safety and accident prevention devices on the moveable components must never be tampered with or removed, but be properly looked after.

The user must inform the employer or his direct superior immediately of any faults or defects associated with the moveable components.

### Checks and inspections

The Manufacturer cannot assume liability for damage due to worn or defective components not replaced immediately.

An experienced person should give the system visual and functional inspections to ensure the product's safety.

These are:

- An inspection of all the supporting structures to make sure these are not cracked, broken, damaged, warped, corroded, worn or differ in any way from their original characteristics;
- An inspection of all the mechanical components;
- An inspection of all the safety devices;
- An inspection of all the connections with pins and screws;
- A functional inspection.

Take the product out of service whenever there is an operating error, inspecting and/or repairing it as necessary.

To ensure safe handling of this product, it is FORBIDDEN to:

- Tamper with any part of the product;
- Use the closing system when it is not in perfect working order.



## 2 SAFETY

PARA	DESCRIPTION
2	<b>INTENDED USE</b>



**Level 1 machine operator:** an operator without specific skills who can execute only simple tasks such as operating the product by means of the buttons on the pushbutton terminal, loading and unloading materials during production with the protective devices enabled; he is not allowed to use the product in jog mode.

The closing systems for refrigerating rooms with sliding doors ensure excellent heat insulation when closed and can open quickly allowing people to pass through with minimal heat dispersion.

## 2 SAFETY

PARA	DESCRIPTION
3	<b>CONTRA-INDICATIONS</b>

The product must not be used:

- In any way not stated in this manual;
- In an environment that is explosive, corrosive or with a high concentration of dust or oily substances suspended in the air;
- In an atmosphere posing the risk of fire;
- Exposed to the elements;
- With the safety devices disabled or not operational.

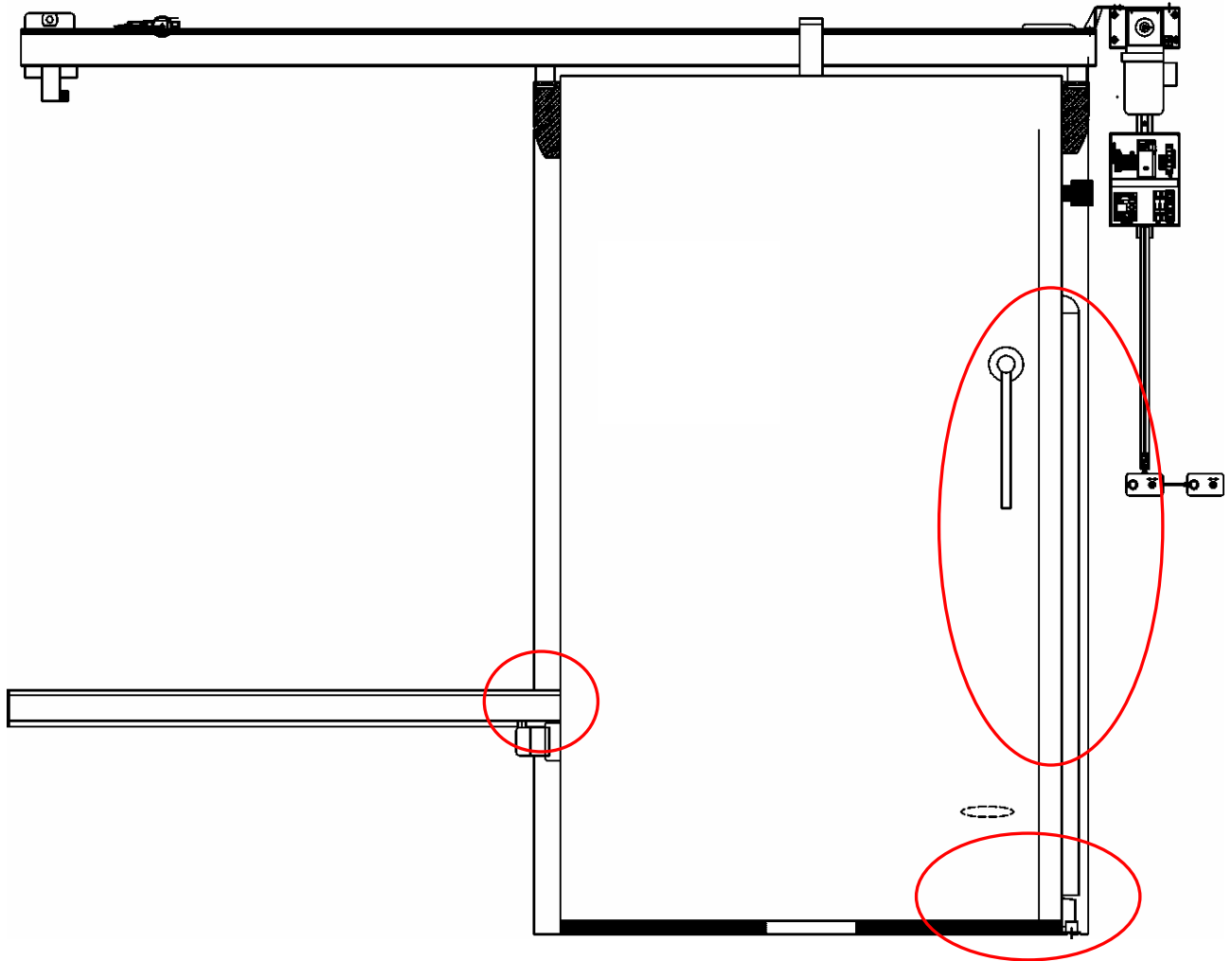


## 2 SAFETY

PARA	DESCRIPTION
4	HAZARDOUS AREAS

Potentially hazardous areas:

- The closing area which could crush feet between the closing presser and its respective stop;
- The area between the leaf and door stop with lower side guide support which poses a risk of crushing lower limbs;
- The area between the leaf and secondary frame which poses a risk of crushing and cutting when the door closes.



## 2 SAFETY

PARA	DESCRIPTION
5	<b>SAFETY DEVICES</b>

The product is supplied with the following safety devices:

1. Emergency stop on the control board.
2. Sensitive edge on the leaf protecting the area that can cause crushing and cutting on the closing secondary frame.

## 2 SAFETY

PARA	DESCRIPTION
6	<b>SIGNS</b>

Signs to be installed near the product and in the respective work area:

### Prohibition signs:

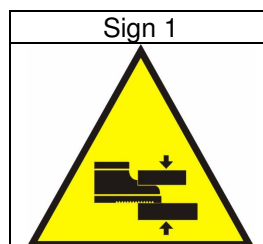
- Access forbidden to unauthorized people



Tab. 3-6.1

### Danger signs:

- Crushing of lower limbs



Tab. 3-6.2

## 2 SAFETY

PARA	DESCRIPTION
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7	RESIDUAL RISKS
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### DEFINITION OF A RESIDUAL RISK:

"It is a risk that cannot be fully eliminated during design and with protection technology; it is a potential risk not immediately apparent."

You should take into account the following residual risks associated with use of the product that cannot be eliminated.

#### WARNING: DANGEROUS MOVEMENT



There must be no obstacles or people in the way when the door is moving. Check the area is clear before operating the opening system.

#### WARNING: RISK OF ELECTROCUTION



The main control board should only ever be serviced by a qualified technician with the power disconnected.



### 3 INSTALLATION

PARA	DESCRIPTION
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1	TRANSPORT AND HANDLING
---	------------------------



**Lifting and handling operator:** an operator able to use equipment for the lifting and handling of materials and machinery (following the Manufacturer's instructions) in accordance with the domestic law in force.

The product can be transported using normal equipment with a weight-bearing capacity of no less than 1500 kg and of appropriate size. The product must be unloaded and handled in its original packaging. After placing the product in the area of use, you can remove the packaging and assemble the closing system.

We advise you to lift the product using a fork-lift truck, making sure the product is perfectly balanced – otherwise it could move or tip over unexpectedly.



**N.B.**

**The Manufacturer cannot be held liable for harm to people or objects due to use of lifting systems not meeting the above requirements.**

### 3 INSTALLATION

PARA	DESCRIPTION
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2	STORAGE
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If the closing system is not assembled immediately after receipt, it should be stored as follows:

- Store the fully packaged product in a closed area;
- Protect the components against knocks and stress;
- Prevent it from coming in contact with corrosive substances.

### 3 INSTALLATION

PARA	DESCRIPTION
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3	PREPARATION
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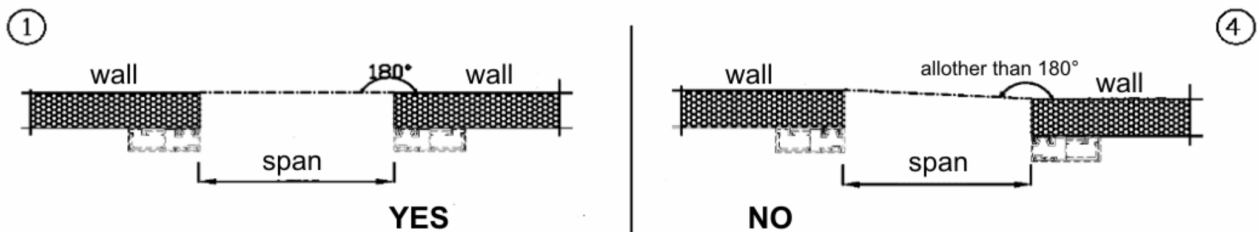
#### Installation setup

You need to set aside an area of sufficient size for installing and moving the product easily with the required lifting equipment.

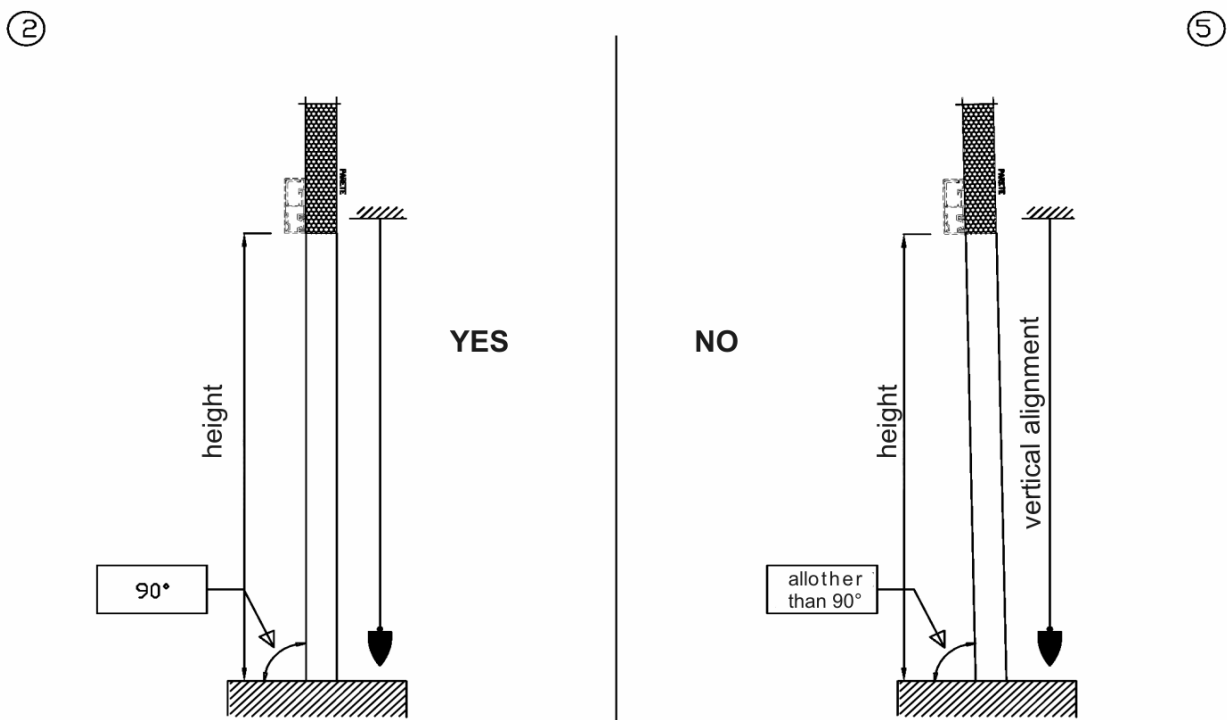
The product should be installed in such a way as to ensure optimal ergonomics and safety at the workplace: leave a sufficient gap around the product to enable easy use and handling of the material involved and for maintenance and adjustment. The door should be installed in such a way as to prevent the risk of crushing when it is opened.

These are the conditions for correct assembly of doors:

#### - ALIGNMENT OF VERTICAL DOORS AGAINST DOOR

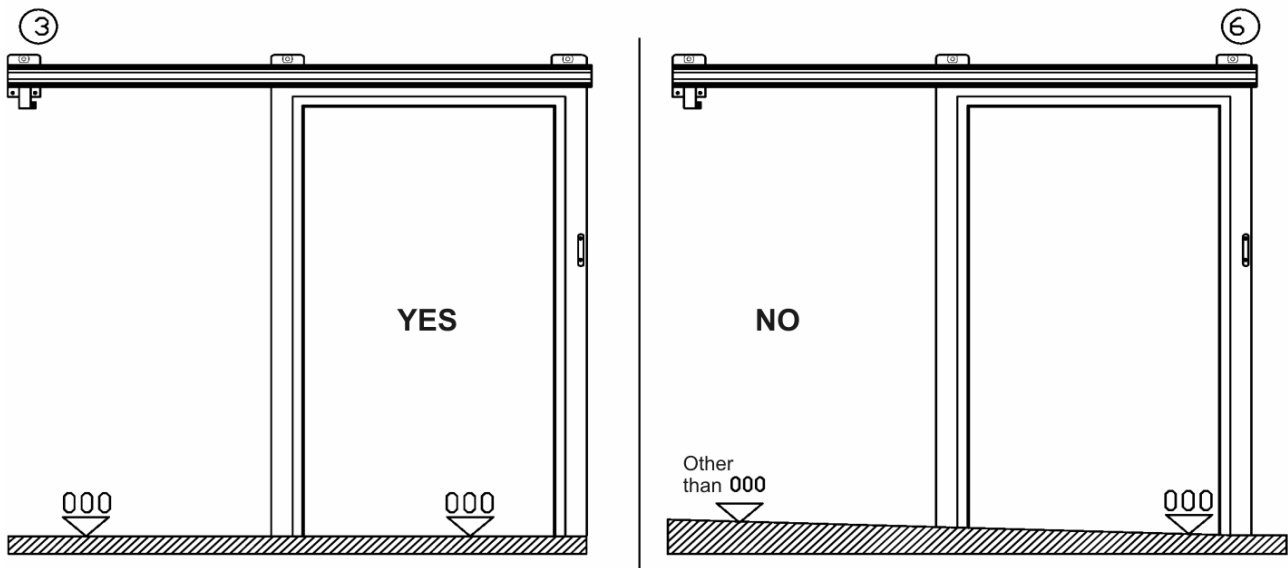


#### - PERPENDICULAR SETUP OF VERTICAL DOORS AGAINST DOOR





- *ALIGNED FLOORS*



FRIGO DOORS cannot be held liable for any door malfunctioning if technical conditions of items 1-2-3 are not complied with.


**Installation of the electrical system** (only for motorized models)



**Electrical technician:** a qualified technician able to operate the machine in normal conditions and in jog mode with the protection devices disabled, as well as adjust, service and repair the electrical components. **He is qualified to service live cabinets and connecting boxes.**

The motors should be connected to the mains by a specialized and qualified technician, following the wiring diagram and rules set down by the law and/or technical rules in force on safety at the workplace and that of electrical systems.

Suitable safety devices should be installed in accordance with safety regulations at the workplace.

 **The company cannot be held liable for damage to objects or harm to people and animals due to non-compliance with the above.**

To ensure a **good level of protection**, the user should connect the opening/closing system to an electrical installation that is properly earthed according to domestic law and carefully executed in conformity with technical rules and/or laws on safety at the workplace and electrical installations.

Earth the body of the product.

 **WARNING!**

**These preparations must be carried out by and under the sole responsibility of the user. The Manufacturer cannot assume liability for damage to objects or harm to people and/or animals due to an improper electrical connection.**

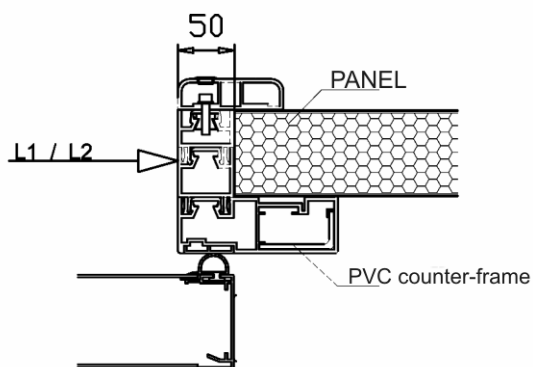
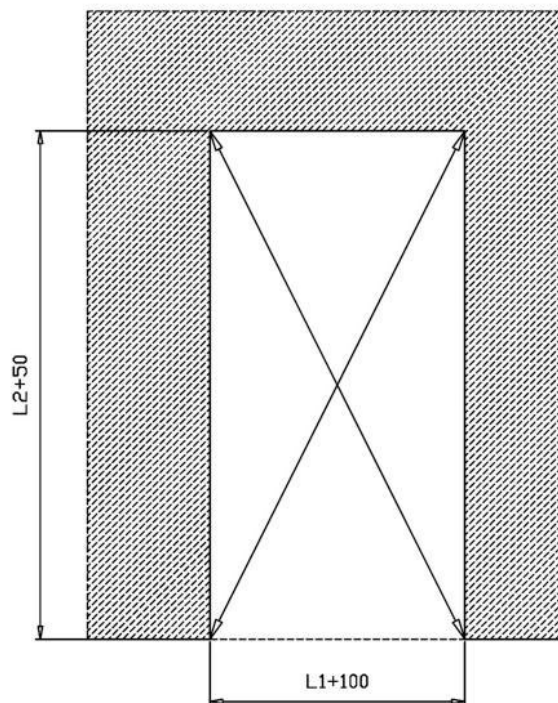
### 3 INSTALLATION

PARA	DESCRIPTION
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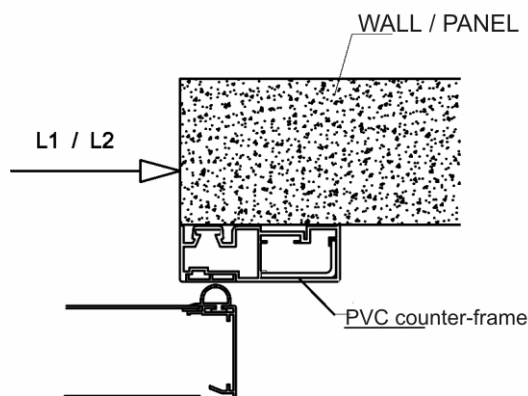
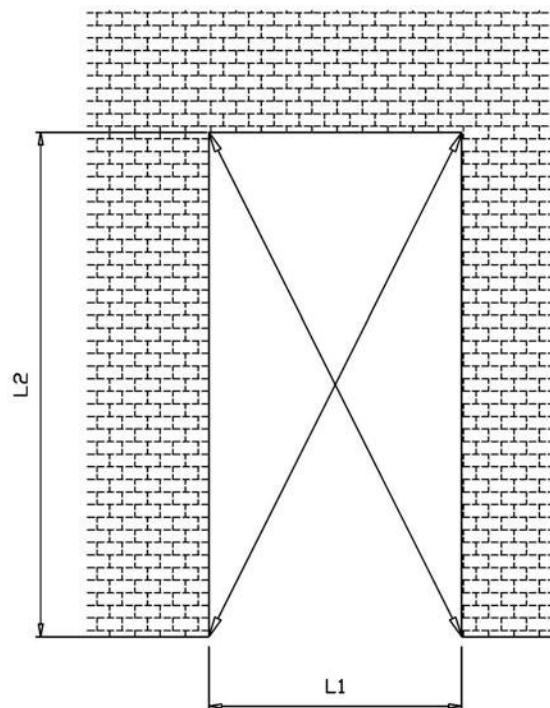
4	<b>Step 1 - Construction Of Door Case</b>
---	---

The sliding leaf opening/closing system can be installed either in panelled and brick walls or on heat insulated fridge panels of less structural performance using an additional PSP element. The size of the opening obviously depends on the width  $L1$  and length  $L2$ , and whether or not a PSP element will be used. You can check the correct execution of the opening by comparing the two diagonals.

DOOR OPENING WITH PSP



DOOR OPENING WITHOUT PSP





### 3 INSTALLATION

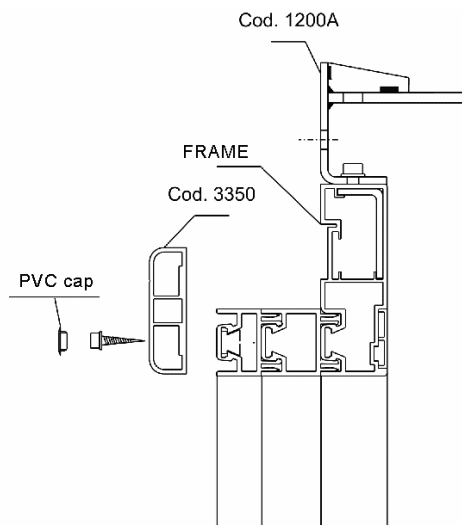
PAR	DESCRIPTION
-----	-------------

5	Step 2 - Assembly Of Frame On Panel (with PSP)
---	--

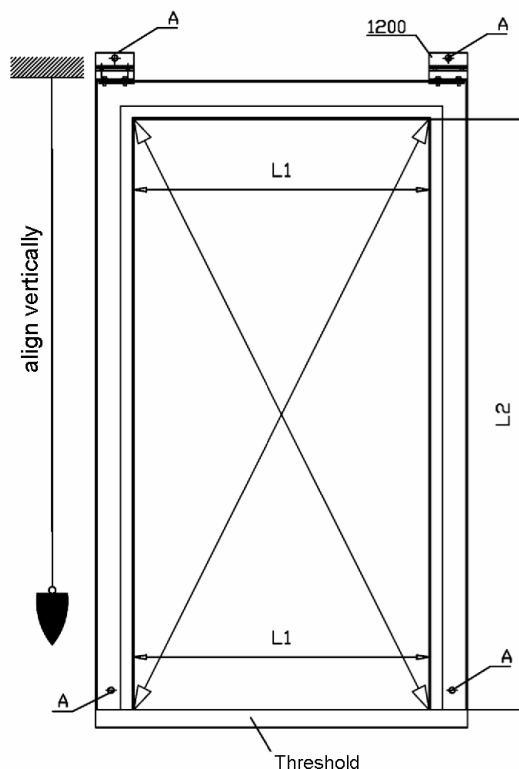
Remove the PVC frame from its packaging and proceed as follows:

ASSEMBLY OF THE SECONDARY FRAME WITH PSP

1. Remove the secondary frame (code 3350) from the frame by undoing the respective screws

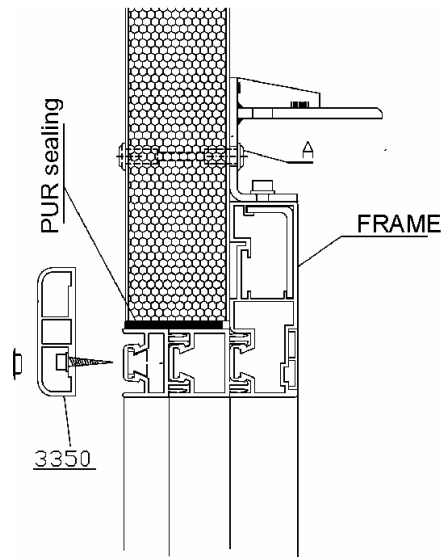


2. Insert the frame in the door opening
3. Check the vertical struts of the frame with a plumb line
4. Check the diagonals



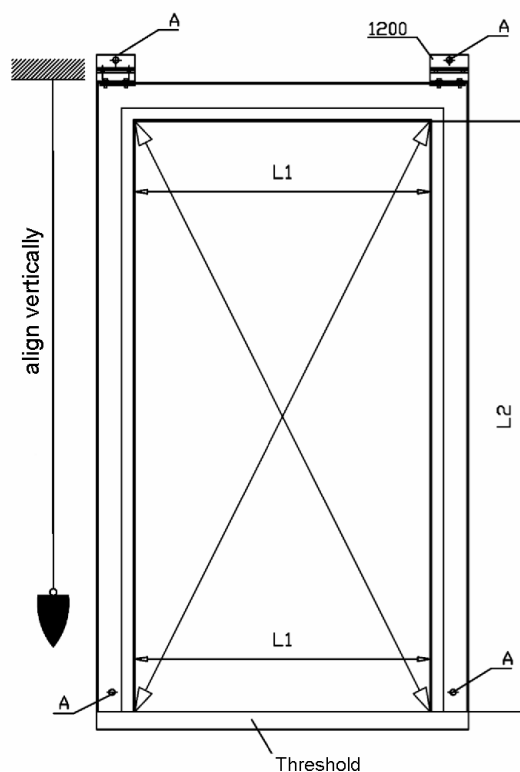


5. Attach the frame to the panel by inserting the two tie rods (A) in the holes of the brackets (code 1200). If the frame does not have a threshold, insert the two tie rods (A) in the holes at the base of the struts and affix them to the panel.
6. Seal the gap around the edge of the frame and panel with polyurethane foam (PUR).
7. Attach the secondary frame (code 3350) to the frame using the respective screws.



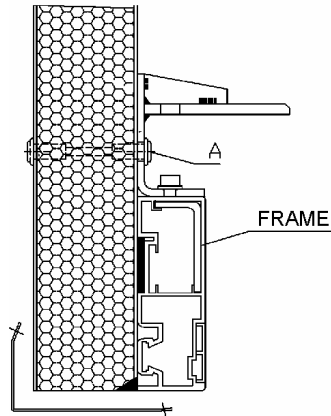
#### ASSEMBLY OF THE SECONDARY FRAME WITHOUT PSP

1. Apply sealant or a gasket in the frame (seal M)
2. Put the frame in the hole in the wall.
3. Check the vertical struts of the frame with a plumb line.
4. Check the diagonals.

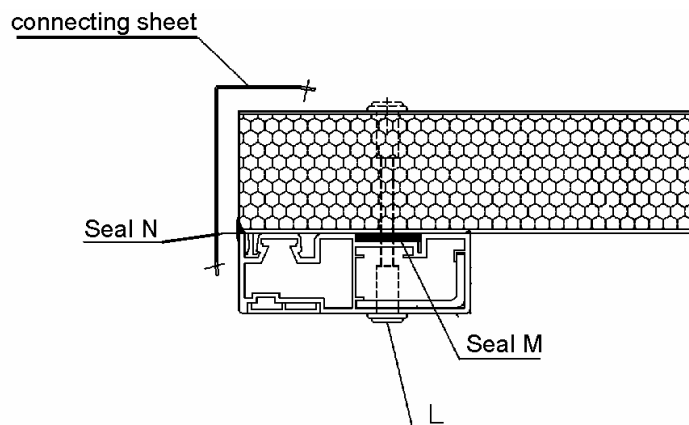




- Attach the frame to the panel by inserting the two tie rods (A) in the holes of the brackets (code 1200).



- Attach the two struts of the frame by inserting the tie rods (L) in the respective holes.
- Seal the gap around the edge of the frame and panel (seal N).
- Put in the connecting sheets, if available.

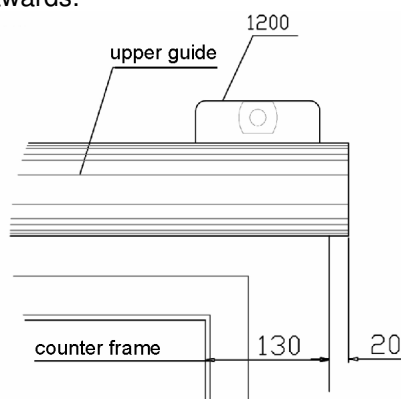


### 3 INSTALLATION

PARA	DESCRIPTION
6	ASSEMBLY OF TOP GUIDE

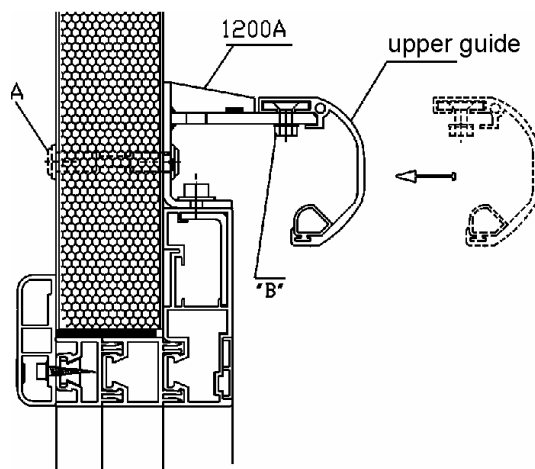
The next step

- Insert the top guide on the brackets (code 1200A) of the secondary frame. The guide should protrude 20 mm outwards.

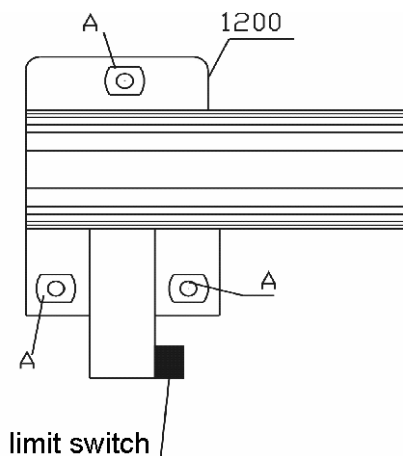


**IMPORTANT**  
Check the top guide protrudes 20 mm outwards

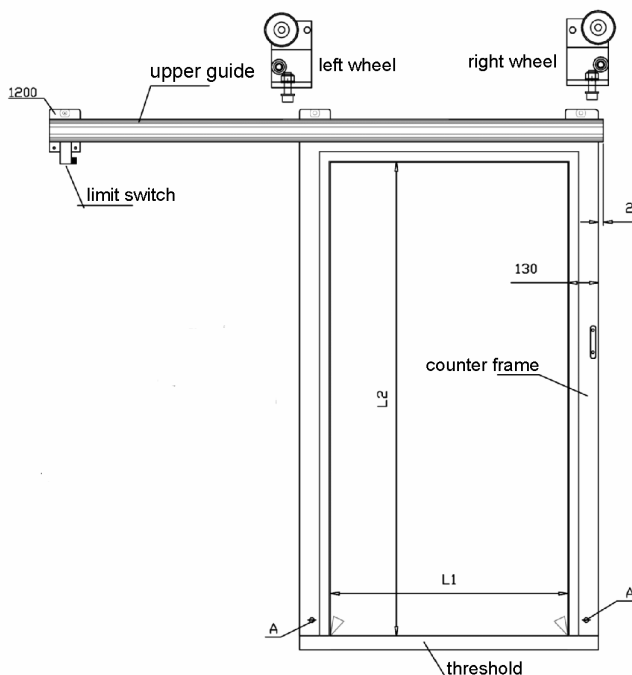
- Tighten the nuts (B) onto the bracket (code 1200A).



- Attach the end of the top guide to the panel by inserting the three tie rods (A) in the respective holes on the bracket (code 1200) and on the end stop for opening the door.



- Check the top guide with a spirit level.
- Insert the two LH and RH wheel locks in their respective housings on the top guide



**IMPORTANT**  
Check the top guide protrudes 20 mm outwards

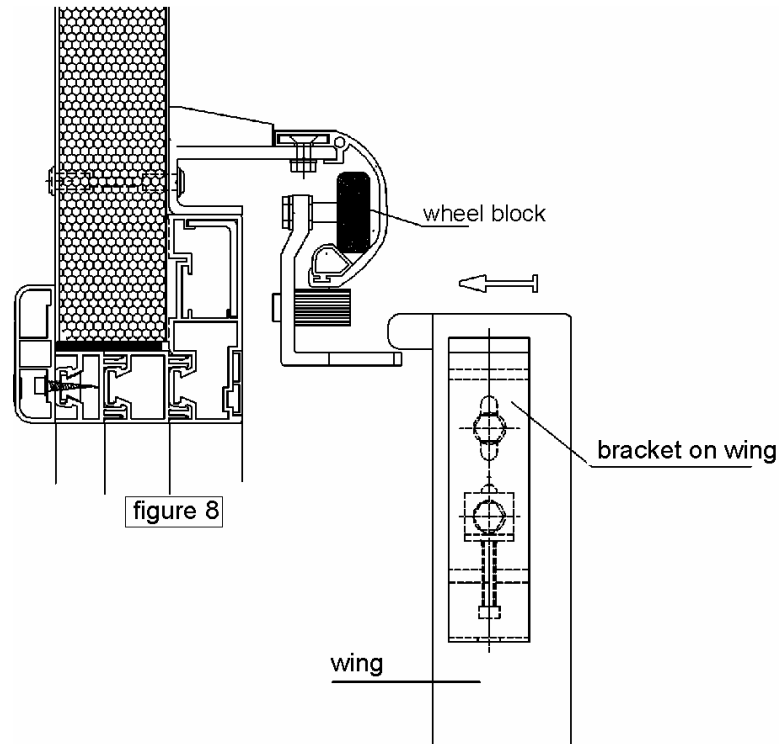


### 3 INSTALLATION

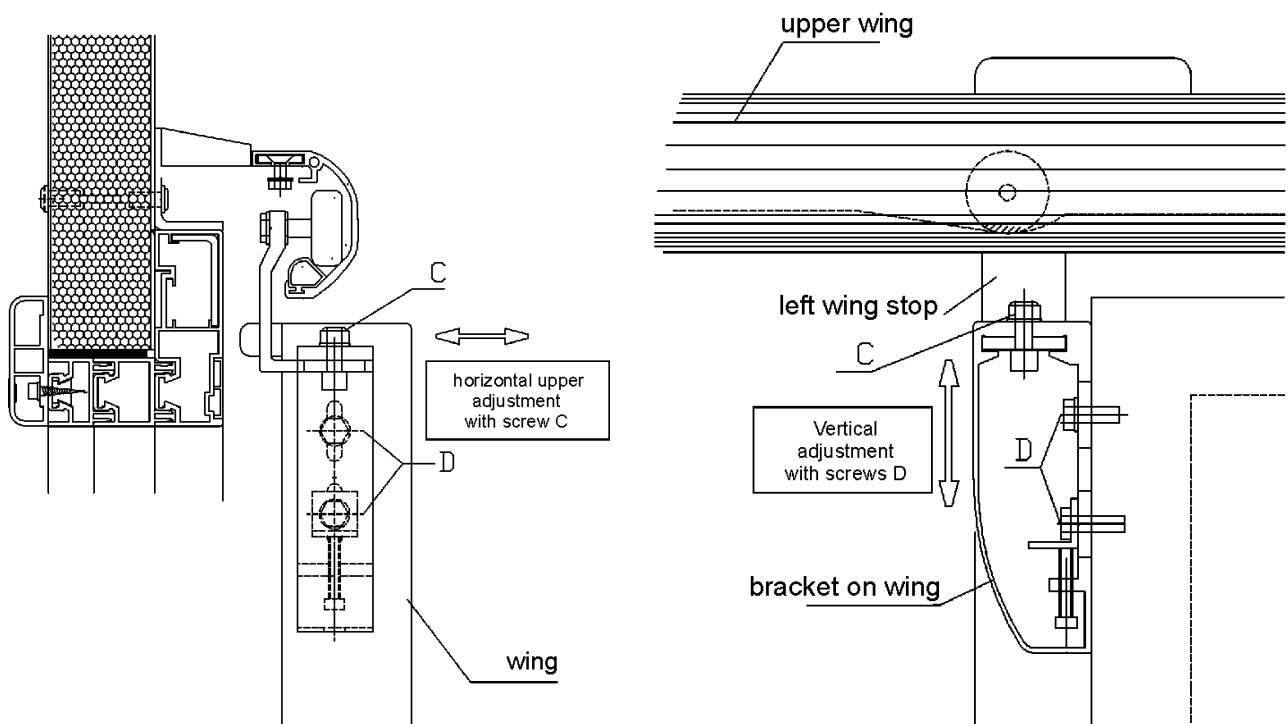
PARA | DESCRIPTION

#### 7 ASSEMBLY OF THE LEAF ON THE SECONDARY FRAME

1. Place the leaf against the frame and insert the wheel bracket in its respective place on the leaf bracket



2. Compress the gaskets with care
  - Turn screw "C" for horizontal adjustment
  - Turn screw "D" for vertical adjustment



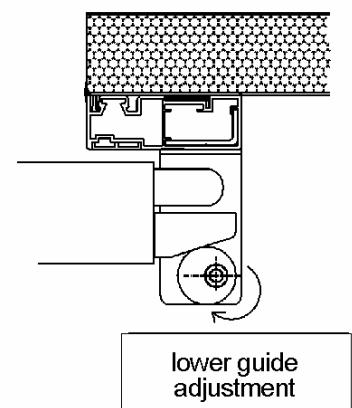
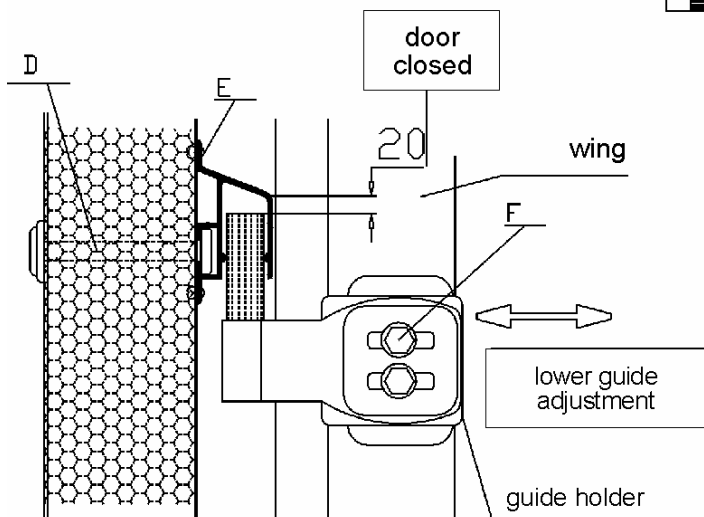
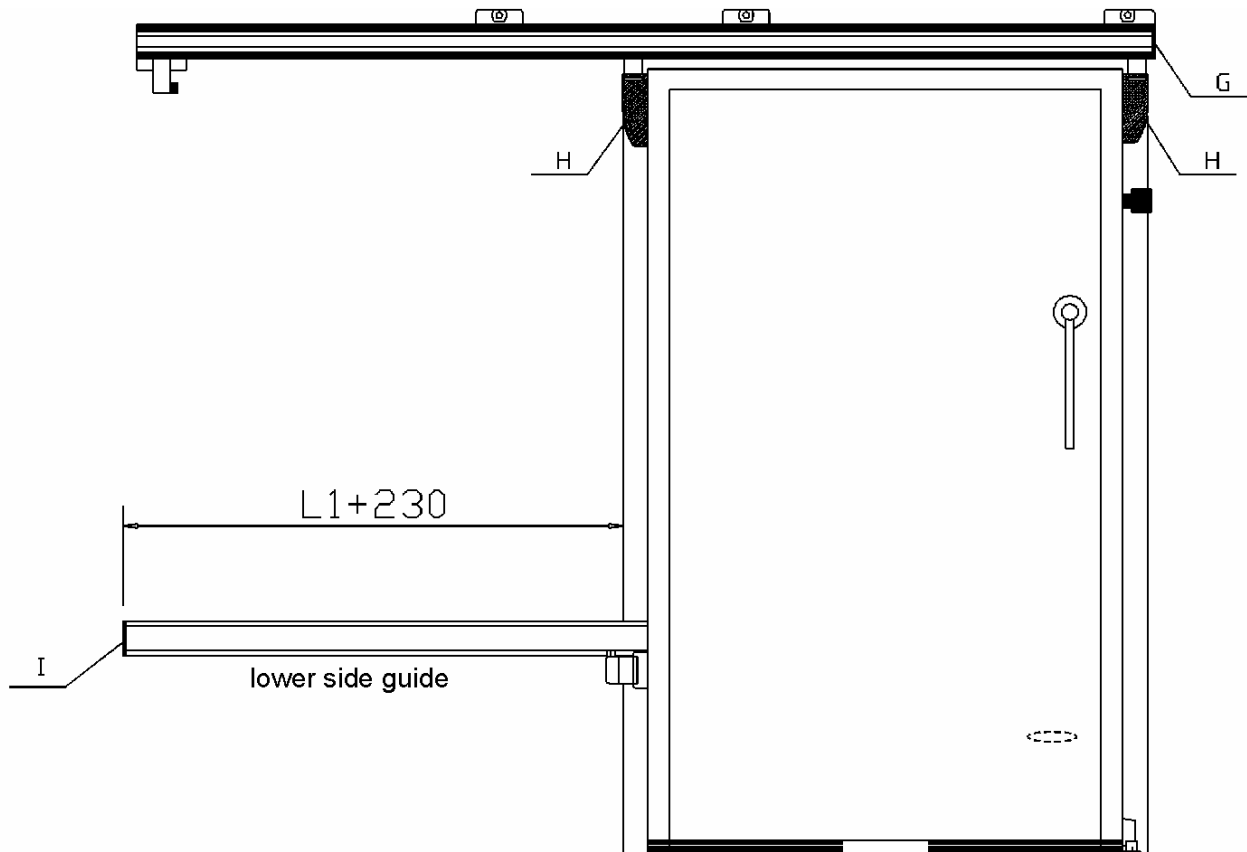


### 3 INSTALLATION

PARA | DESCRIPTION

#### 8 ASSEMBLY OF THE BOTTOM GUIDE

1. Position the bottom guide. Before attaching it with the tie rods (D), rivets (E) or anchor bolts, check:
  - The guide is perfectly level (use a spirit level)
  - The guide is 20 mm above the pin of the presser.
2. Adjust horizontal compression on the opening side by turning the screws (F).
3. Insert the PVC caps.
  - "G" leaf guide cap
  - "H" leaf bracket caps
  - "I" bottom guide cap
4. Check the door slides along easily.





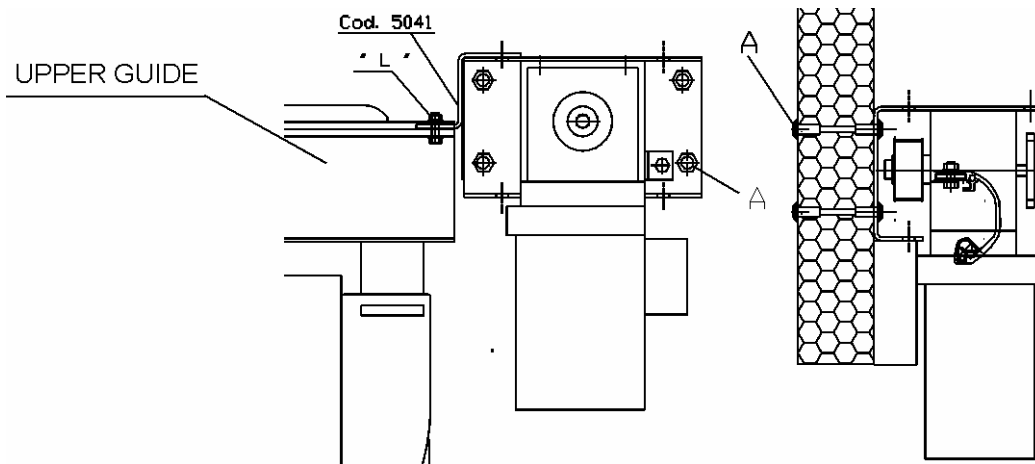


### 3 INSTALLATION

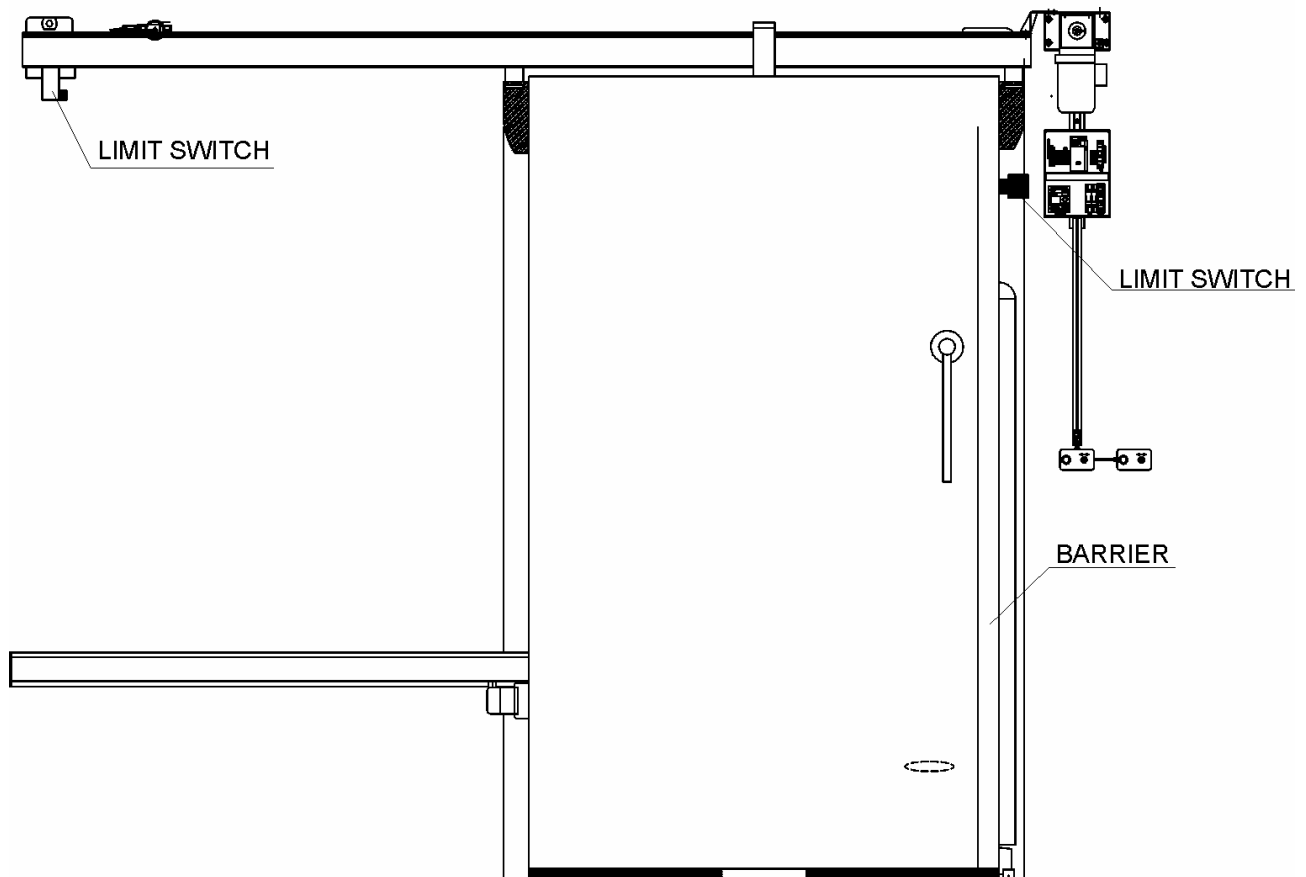
PARA	DESCRIPTION
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9 ASSEMBLY OF THE MOTOR

1. Install the motor, inserting the alignment bracket (code 5041) in its respective housing on the top guide and do up screw (L).
2. Attach the motor plate by inserting the 4 tie rods (A) in their respective holes.



3. Check the motor is perfectly level.

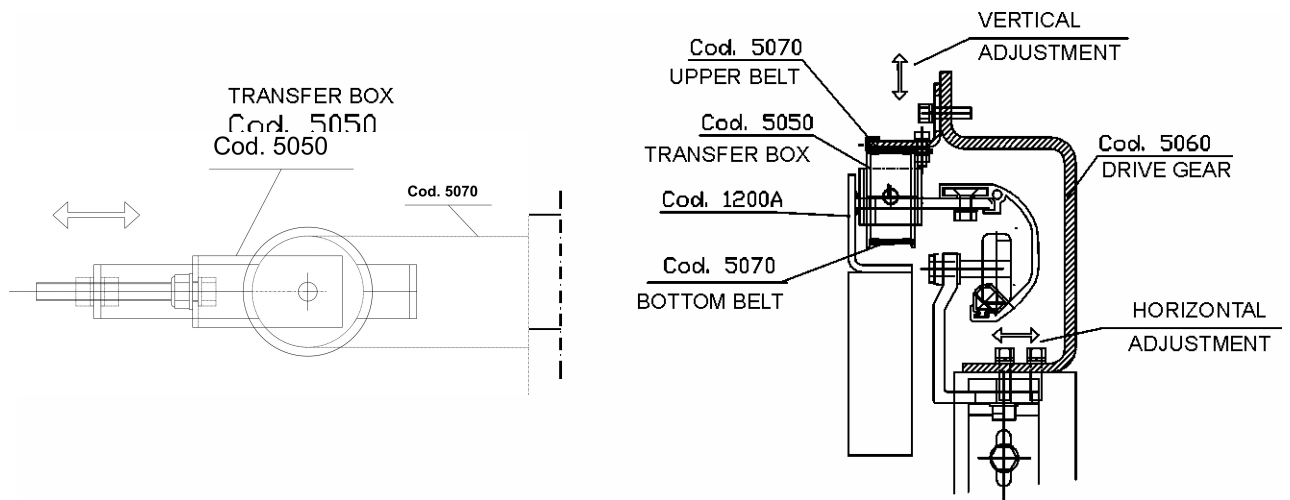




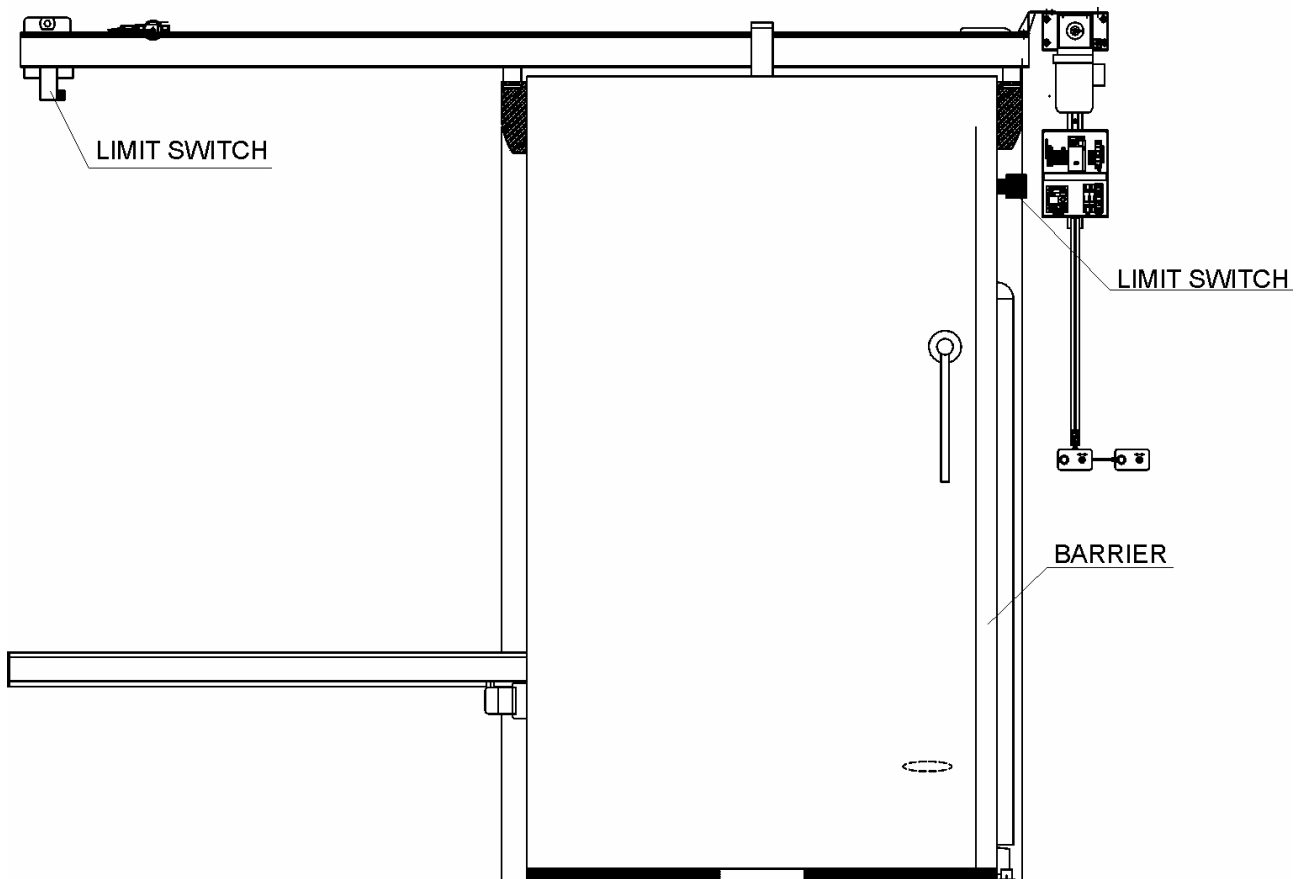
### 3 INSTALLATION

PARA	DESCRIPTION
10	ASSEMBLY OF THE TOOTHED BELT

1. Connect the toothed belt (code 5070) between the pulley of the transfer box (code 5050) and the motor pulley.
2. Attach the belt with the respective rack on the conveyor unit (code 5060).



3. Make sure the belt is perfectly aligned. Adjust the conveyor bracket if necessary.



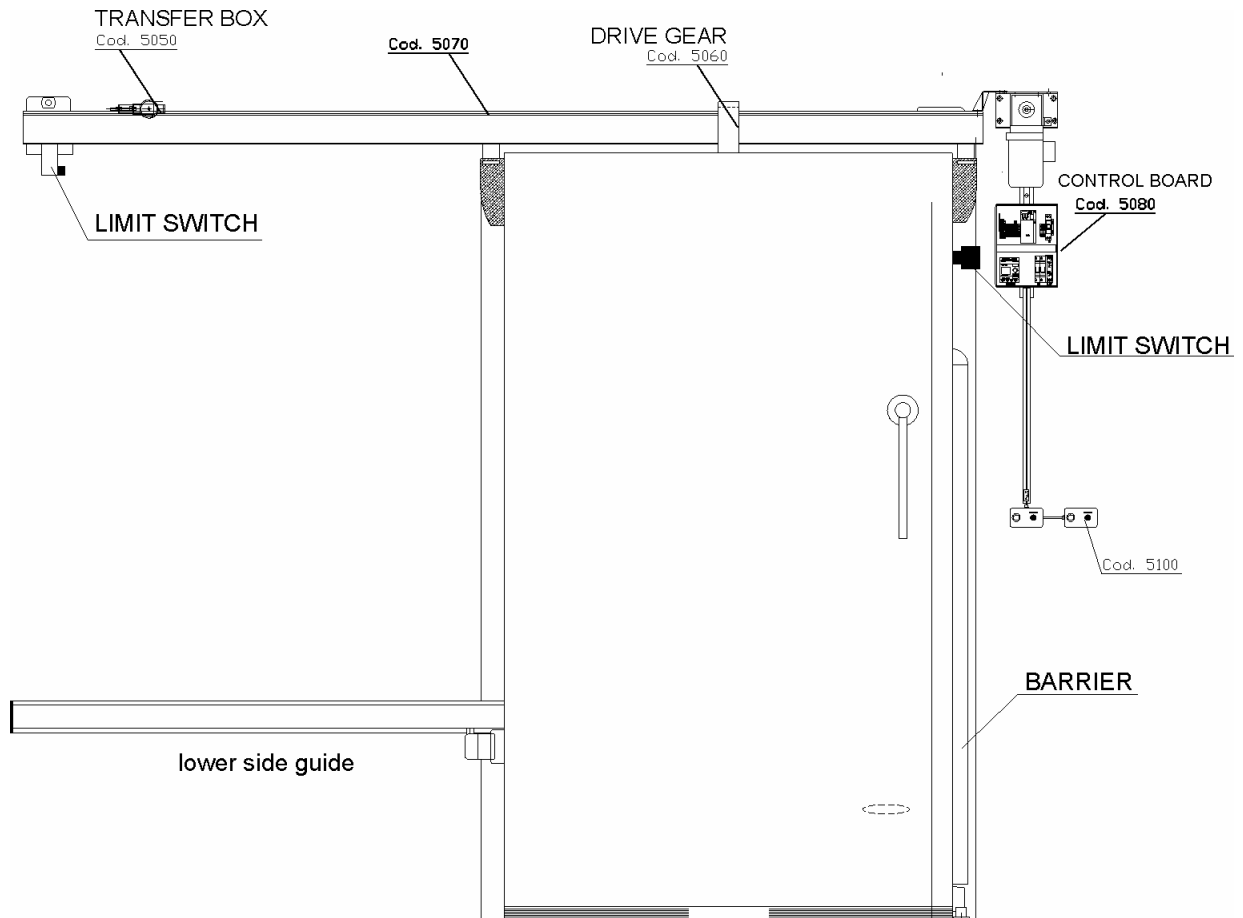


### 3 INSTALLATION

PAR	DESCRIPTION
11	ASSEMBLY OF THE CONTROL BOARDS

These assembly and electrical installation instructions apply only to the SC Aut models.

1. Mount the main control board (code 5080) on the wall
2. Mount the cell board (code 5100)
3. Mount the barrier cable connecting box (code 5300)



### 3 INSTALLATION

PARA	DESCRIPTION
12	ELECTRICAL CONNECTIONS

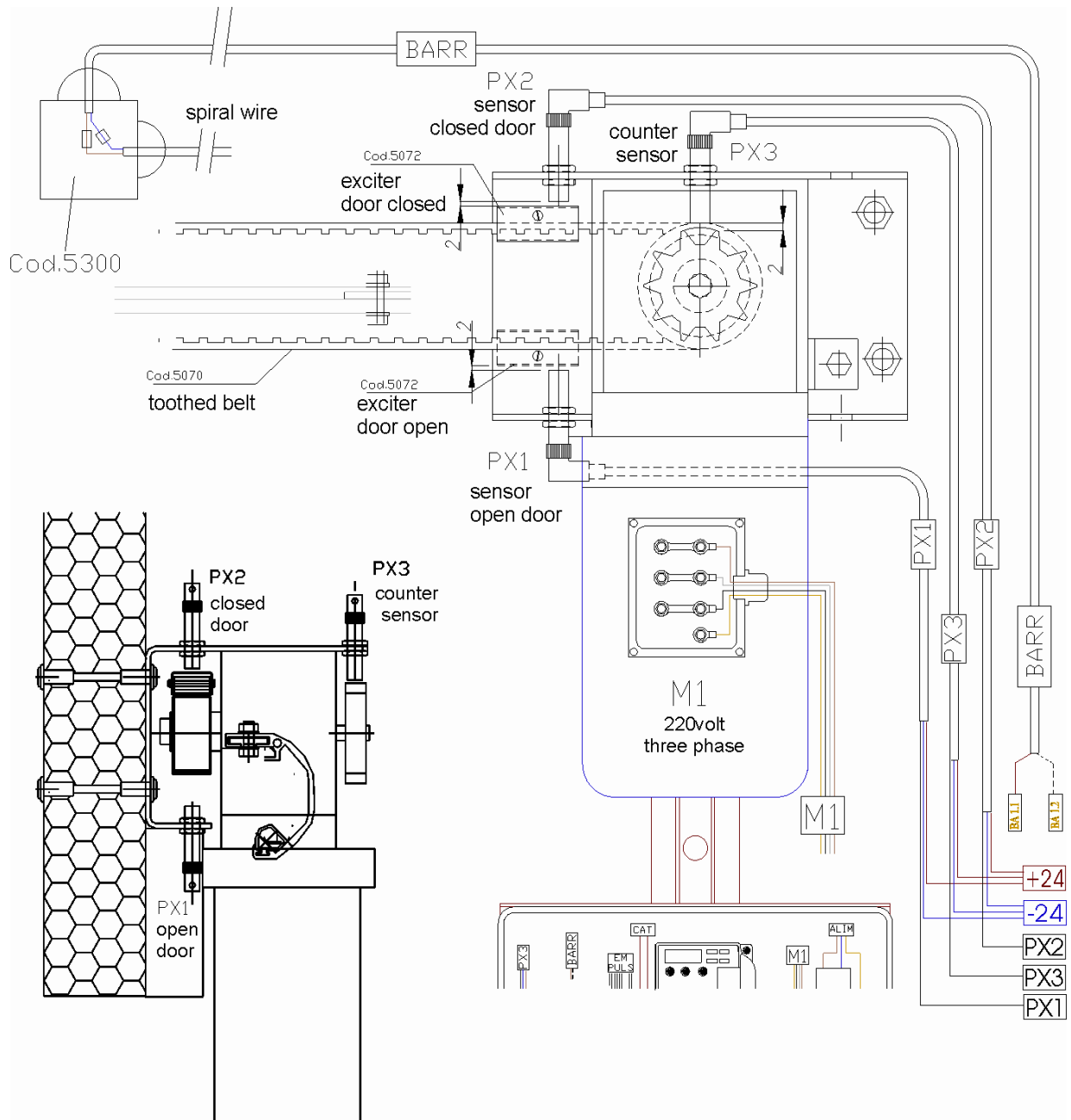
The connections in the product and to the power supply at the customer's premises must be executed by a qualified technician hired.



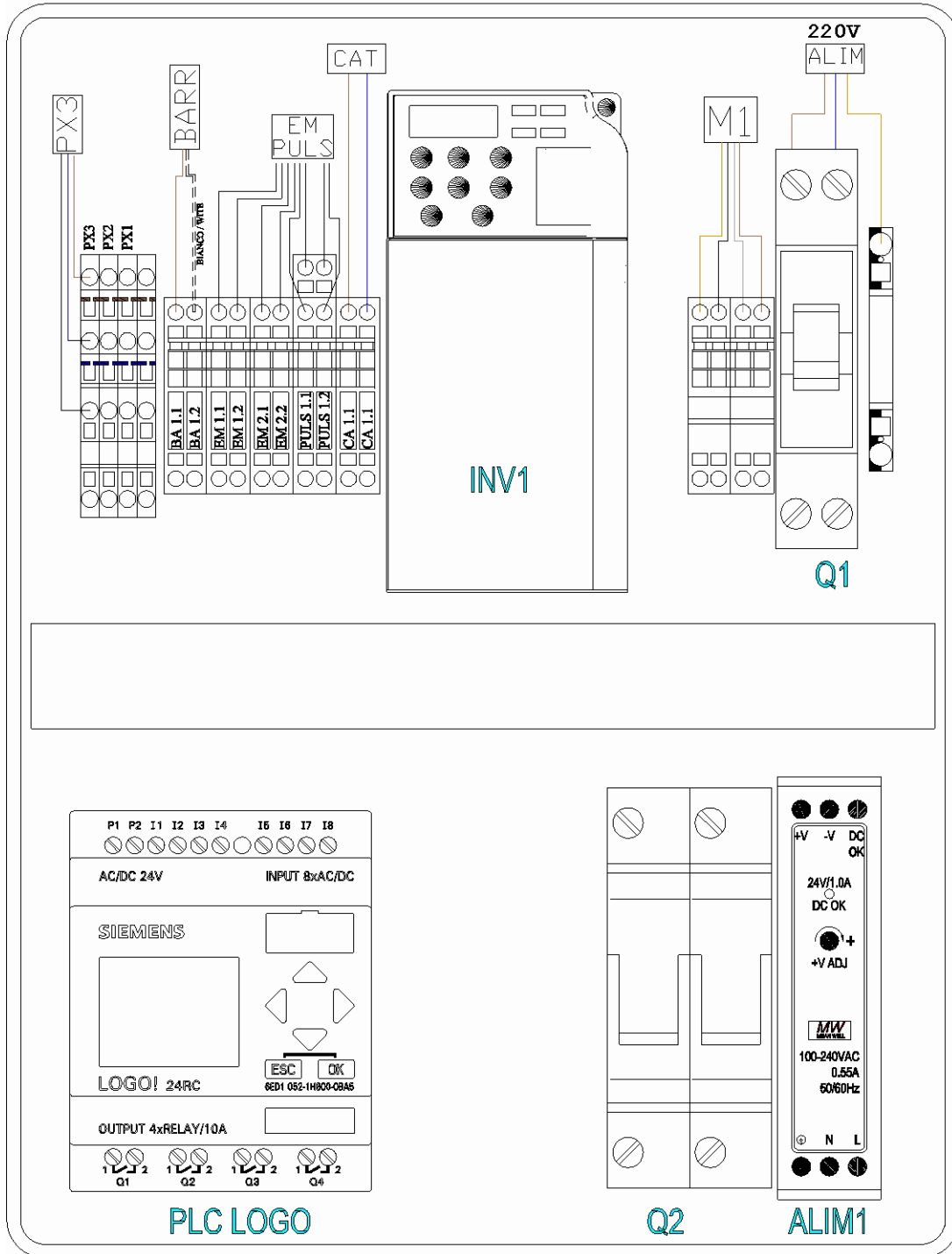
**The Manufacturer's technician:** a qualified technician provided by the Manufacturer for executing complex work in particular situations or any work arranged with the user. He can be skilled in mechanical and/or electrical and/or electronic and/or software work, depending on the case in hand.

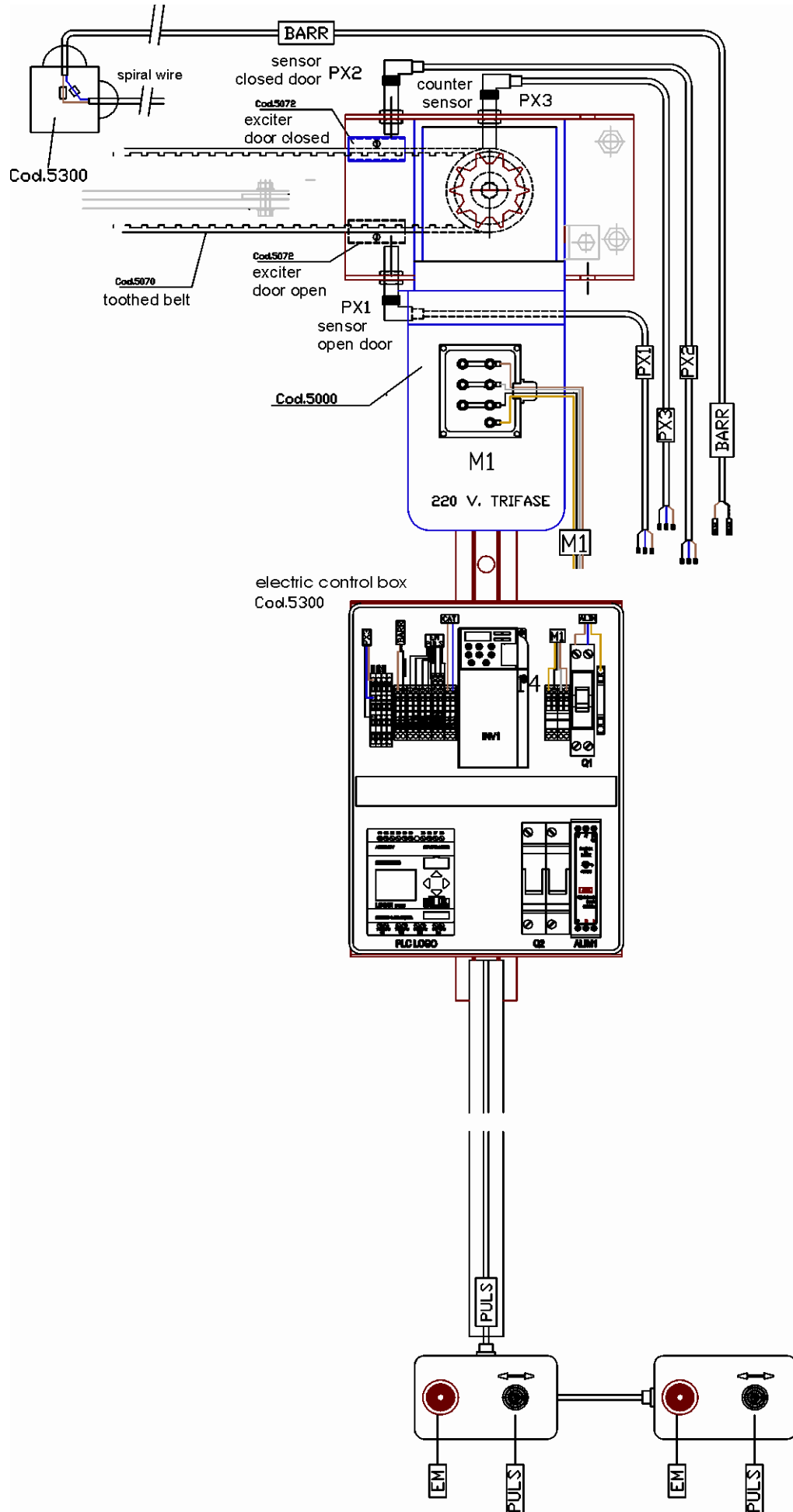


1. Connect the PX1, PX2 and PX3 cables to their respective connectors
2. Assembly on the belt of the closed door actuator (code 5072)  
Close the door. The leaf should touch the closed door end stop.  
Install the actuator under the PX2 sensor, as illustrated, 2 mm underneath and 12-15 mm away from the axis of the sensor.
3. Assembly on the belt of the open door actuator (code 5072)  
Open the door. The leaf should touch the open door end stop.  
Install the actuator under the PX2 sensor, as illustrated, 2 mm underneath and 12-15 mm away from the axis of the sensor.
4. Install the PX3 sensor 2 mm from the outmost point of the toothed rim.
5. Connect the BARR cable between the small box (code 5300) and the respective terminal block at the main control board
6. optional assembly of the lord control "CA"
7. connect the cable to the main control board in the terminal block "CA".



electric control box Cod.5300







### 3 INSTALLATION

PARA	DESCRIPTION
13	PRELIMINARY CHECKS



**Level 1 machine operator:** an operator without specific skills who can execute only simple tasks such as operating the product by means of the buttons on the pushbutton terminal, loading and unloading materials during production with the protective devices enabled; he is not allowed to use the product in jog mode.

The following checks and inspections should be carried out before starting up the product. These will help prevent errors or accidents during start-up:

- Make sure the structure is firmly attached to the wall.
- Open and close the door manually a couple of times, to check it slides smoothly.
- Make sure there are no obstacles in the way.
- Check the door and its accessories were not damaged during assembly.
- Carefully check the condition of the control boards, control panels, cables and connectors and the safety devices.
- Check the controls and safety devices work properly according to the configured times and operating methods.

### 3 INSTALLATION

PARA	DESCRIPTION
14	ADJUSTMENTS



**Electrical technician:** a qualified technician able to operate the machine in normal conditions and in jog mode with the protection devices disabled, as well as adjust, service and repair the electrical components. **He is qualified to service live cabinets and connecting boxes.**

The “SC Aut” fridge doors allow the operator to enable automatic closing of the door. Automatic closing of the door is configured in the control board, with the “LOGO!” PLC in RUN mode.

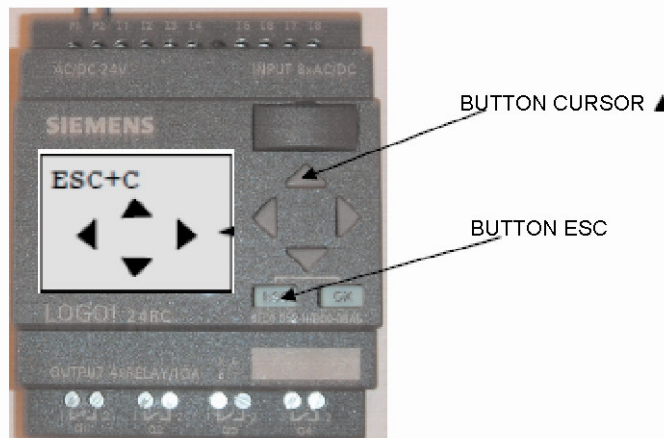


In this mode, the initial page displays the time and date:



**Proceed as follows:**

- Press either one of the cursor buttons ◀ ▶ on the LOGO! until the page with the four cursor buttons appears.



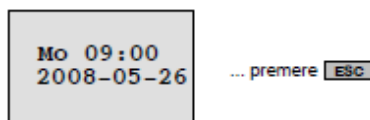
- Press and hold both the ESC button and the ▲ cursor button until you see the message CHIUSURA AUTOMATICA ABILITATA (AUTOMATIC CLOSING ENABLED).

To disable automatic closing:

- Press either one of the cursor buttons ◀ ▶ on the LOGO! until the page with the four cursor buttons appears.
- Press and hold both the ESC button and the ▼ cursor button until you see the message CHIUSURA AUTOMATICA DISABILITATA (AUTOMATIC CLOSING DISABLED)

**Self closing time set**

To set the self closing time of the door enter in the parameter mode of LOGO PLC. Press the button ESC.







The display shows the parameters list:

```
>stop  
Imp param  
Imposta..  
Nome prg
```

Press one of the button ▲ ▼ and choose the row Set param:

```
stop  
>Imp param  
Imposta..  
Nome prg
```

Push button OK. LOGO! Shows you the parameter to modify.  
The time value you are going to modify is shown by T.  
Press again OK. The first number will begin to **flash**.

```
T-CHIUDI  
T = 05:00s ← Valore di tempo da modificare  
  
Ta = 00:00s
```

Using the buttons ◀ ▶ is possible to modify the number is flashing.

The last letter shows the time you are modifying (**s=seconds, m=minutes, h=hours**).

In the moment you have chosen the number you can modify it pressing the buttons ▲ ▼.

To confirm the number press OK.

Press two times ESC to return to the mode RUN.



## 3 INSTALLATION

PARA	DESCRIPTION
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15	<b>INITIAL START UP</b>
----	-------------------------

The door must be half-way along its stroke. The operator must give the command to open the door and check the door opens properly.

If the door **moves** in the correct direction it should stop when it meets the PX2 open door end stop.

If the door **does NOT move** in the correct direction, the operator needs to stop the door and check the wiring (**invert the cables on the M1 motor terminal block**).

If the door **does NOT move** in the correct direction and the operator does not stop the door, over-torque is determined at the end stop and the door is stopped.

### DOOR SPEED CONTROL

The door operates at two speeds:

- Slow safety speed
- Fast speed

When it is started up, the door always moves at the slow safety speed. Initial opening and closing of the door is always at the slow safety speed.

The open and closed door end stops have to be detected before fast speed can be enabled.

Fast speed is disabled however in any of the following cases:

- An alarm is activated
- There is over-torque
- The door's phase sensor emits signals when you do not want the door to move (manual door operation)
- The phase sensor does not emit signals when the door is moving

Fast speed is re-enabled when the open and closed door end stops are detected.



### 3 INSTALLATION

PARA	DESCRIPTION
16	DIAGNOSTICS AND TROUBLESHOOTING

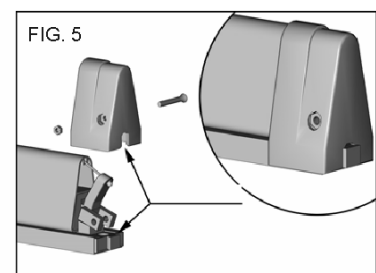
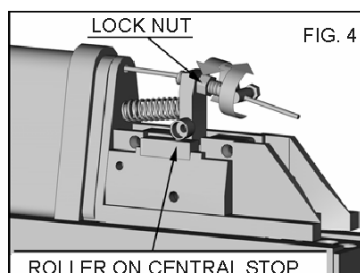
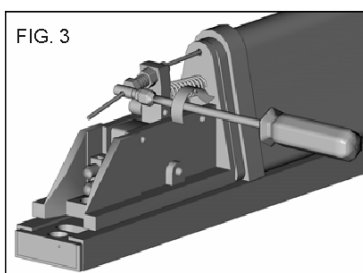
Please contact the Manufacturer for information on any product defects or malfunctions not described in this Manual.

Problem	Check	Cause	Solution
The door does not move	The <b>HBB</b> message appears on the inverter	BARRIER pos. 11	Inspect the barrier. Remove the cover. The roller should be on the central stop. Pressing the rubber should cut out the electrical circuit. Check all the connections.
The door does not move	The <b>HBB</b> message appears on the inverter	EMERGENCY BUTTON pos. 1C	Reset the emergency button and check all the connections.
The door stops	The <b>DETECTED OVERTORQUE</b> message appears on the PLC	Overtorque	Remove any obstacles. Check the working order of the mechanical components.
The door moves slowly	The <b>DETECTED OVERTORQUE</b> message appears on the PLC	Overtorque	Check the PX1 and PX2 sensors and the position of the actuators (code 5072).
The door moves slowly	The <b>TIMEOUT PULSE</b> message appears on the PLC	PX3 SENSOR	Check the working order of the PX3 sensor and its position on the toothed rim.

### 3 INSTALLATION

PARA	DESCRIPTION
17	BARRIER ADJUSTMENT

1. Check the steel cable blocking clamp screw is tightly fastened (Fig. 3).
2. Check the roller on the lever is positioned on the central stop. If it is not, undo the lock nut and move the roller to the required position (Fig. 4).
3. Connect a tester to the two terminals and make sure there is electrical continuity.
4. Apply pressure on the rubber profile and check the electrical circuit is opened. Disconnect the tester.
5. Insert the lower cover and screw it down (Fig. 5).





## **4 PRODUCT DESCRIPTION**

PARA	DESCRIPTION
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<b>1</b>	<b>OPERATING PRINCIPLE</b>
----------	----------------------------

The closing systems with sliding fridge doors guarantee excellent heat insulation and an optimal seal when the door is closed. They also open quickly to let staff through, keeping heat dispersion down to a minimum. The door can, depending on the model, be opened manually using the handle or automatically by means of the pushbutton terminal or remote control.

## **4 PRODUCT DESCRIPTION**

PARA	DESCRIPTION
------	-------------

<b>2</b>	<b>ENVIRONMENTAL CONDITIONS</b>
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The opening system does not require any particular environmental conditions. We recommend you install it in a well-lit and ventilated industrial building at a temperature between -10° and 40° C.

Please note however that the opening system is not suited to environments with an explosive or corrosive atmosphere or where there is an excessive amount of dust.

## **4 PRODUCT DESCRIPTION**

PARA	DESCRIPTION
------	-------------

<b>3</b>	<b>LIGHTING</b>
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The installation area must be properly lit in accordance with domestic law. The lighting should ensure good overall visibility, not cause glare and allow you to read the control panels and find the emergency buttons quickly and easily.

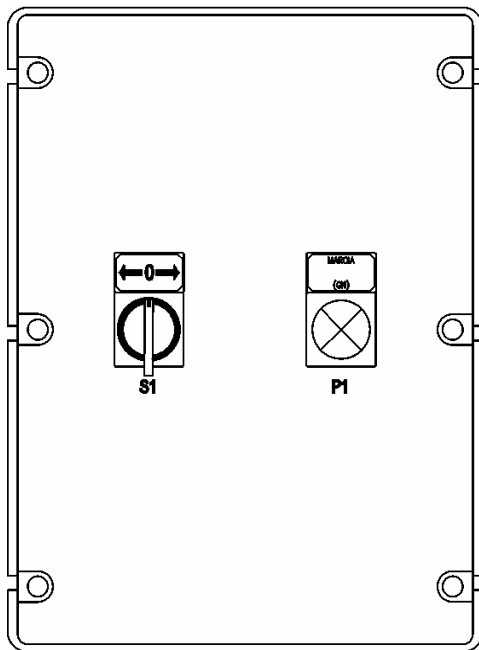
The overall lighting in the work area must ensure light of between 200 and 300 lux at all points of the product.

## 4 PRODUCT DESCRIPTION

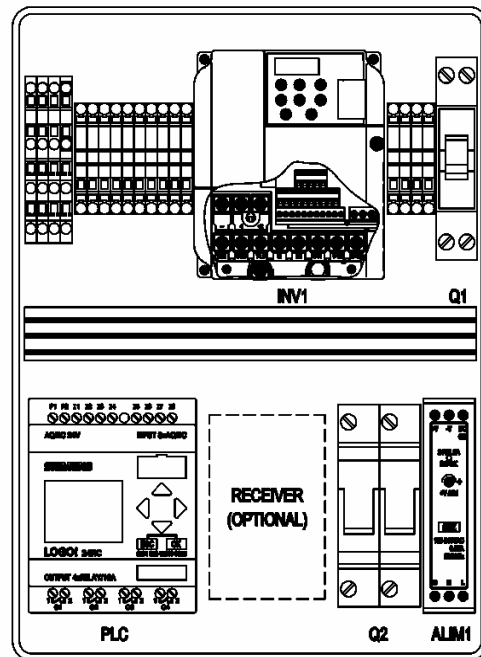
PARA	DESCRIPTION
4	<b>BOARDS AND BUTTONS</b>

The SC Aut models come with a control board and one or more pushbutton terminals.

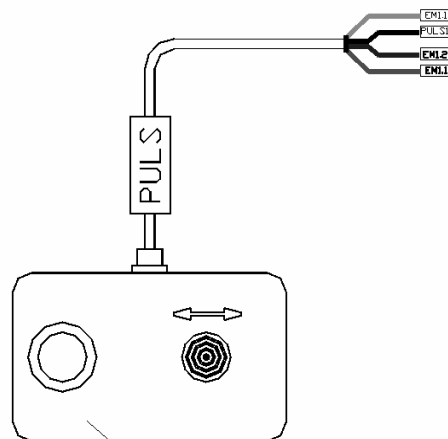
**BOARD AND MAIN CONTROLS**  
**Cod. 5080**



**INTERNAL CONTROL BOARD**  
**Cod. 5080**



**SEPARATE PUSHBUTTON TERMINAL**



**CODE 5100**  
**CONTROL BOX IN THE COLD ROOM**



## 4 PRODUCT DESCRIPTION

PARA	DESCRIPTION
5	<b>STANDARD SUPPLY</b>

The closing system and fridge door comes with:

- User and maintenance instructions;
- CE plate;
- CE declaration of conformity.

## 4 PRODUCT DESCRIPTION

PARA	DESCRIPTION
6	<b>ELECTROMAGNETIC ENVIRONMENT</b>

The SC Aut closing system with sliding fridge door is designed to work correctly in an industrial electromagnetic environment, within the emission and immunity limits set down by the following harmonized standards:

- CEI EN 61000-6-2** Electromagnetic Compatibility (EMC)  
Generic standards – Immunity for industrial environments (2006)
- CEI EN 61000-6-4** Electromagnetic Compatibility (EMC)  
Generic standards – Emissions for industrial environments

## 4 PRODUCT DESCRIPTION

PARA	DESCRIPTION
7	<b>REMOTE CONTROLLED OPENING</b>

The SC Aut models can, on request, be supplied with a portable remote control and receiver connected to the control board for opening the door. Other remote controls can also be provided on request. Refer to the respective technical sheet (annexed) on how to configure the remote controls.



## 5 USE OF THE PRODUCT

PARA	DESCRIPTION
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1	THE CONTROL PANEL
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Opening and closing of the SC Aut fridge doors is controlled by means of the control board, the pushbutton terminals and, if available, the portable remote control. There is a timer for configuring the closing command in automatic mode (see the instructions in chapter 3.14 of this manual).

## 5 USE OF THE PRODUCT

PARA	DESCRIPTION
------	-------------

2	START-UP
---	----------



**Level 1 machine operator:** an operator without specific skills who can execute only simple tasks such as operating the product by means of the buttons on the pushbutton terminal, loading and unloading materials during production with the protective devices enabled; he is not allowed to use the product in jog mode.

In the case of the SC Aut models, power the control board and then look around to make sure there are no people or materials that could obstruct normal operation.

Make sure all the safety devices are enabled, re-enabling any that are not. In particular:

- The emergency stops must be released;
- The safety bumper (if available) must work properly;
- The guards must be fitted.

## 5 USE OF THE PRODUCT

PARA	DESCRIPTION
------	-------------

3	EMERGENCY STOP
---	----------------

The product's emergency stop is activated by pressing the red mushroom-shaped "Emergency" button. This stops all the moving parts immediately.





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## **5 USE OF THE PRODUCT**

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PARA	DESCRIPTION
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4	<b>RESET</b>
---	--------------

### **Resetting the emergency button**

Reset the mushroom-shaped emergency button manually by turning it 30 degree clockwise. The closing system can then be used again as normal.

---

## **5 USE OF THE PRODUCT**

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PARA	DESCRIPTION
------	-------------

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5	<b>PUTTING OUT OF SERVICE</b>
---	-------------------------------

You should disconnect the product from the main control board if it is to be out of service for a long period of time.





## 6 MAINTENANCE

PARA	DESCRIPTION
1	DISCONNECTING THE PRODUCT FROM THE MAINS



**General worker:** an operator without specific skills who can execute only simple tasks under the supervision of qualified technicians.

Disconnect the opening system from the mains before executing any maintenance or repairs.

## 6 MAINTENANCE

PARA	DESCRIPTION
2	SPECIAL PRECAUTIONS

Important notes on maintenance and repairs:

- Never use inflammable materials and solvents;
- Do not dispose of special lubricant fluids in the environment;
- Use suitable equipment for reaching the higher points of the products;
- Do not climb onto the product as it is not designed to bear weight;
- When you have finished, make sure all the protective devices and guards are properly fitted.



The Manufacturer assumes no liability for non-compliance with the above, or for any use that deviate from the above or is not mentioned in the manual.

## 6 MAINTENANCE

PARA	DESCRIPTION
3	ROUTINE MAINTENANCE



**Electrical technician:** a qualified technician able to operate the machine in normal conditions and in jog mode with the protection devices disabled, as well as adjust, service and repair the electrical components. **He is qualified to service live cabinets and connecting boxes.**



**Mechanical technician:** a qualified technician able to operate the machine in normal conditions and in jog mode with the protection devices disabled, as well as adjust, service and repair the mechanical components. **He is not qualified to service live electrical equipment.**

### General rules

Check the working order of the emergency stops once a month, running the motors on empty and checking correct operation (stopping movement of the door) of the same emergency stops.

If these malfunction, turn to a specialized technician or contact the technical assistance service of the firm that manufactured the control board.

Check the continuity of the earthing system once every two years, executing the continuity test according to the provisions of CEI 44 - 5 III art. 19.

The closing system is designed to ensure minimal routine maintenance and the operator should always check it is in good condition for use.

It is good practice to put the door out of service and repair it as soon a fault occurs. This helps to maintain its maximum efficiency.

Give all the components a look-over to ensure they have not bent or warped in any way.

Before servicing, turn off the power supply at the main control board by turning the main switch to "O" (unless the power supply is strictly necessary).



**WARNING!**

The maintenance technician must turn off the power supply at the main switch before servicing the product in any way.

Personal protection equipment is not required for using the closing system with sliding fridge doors, although some may be required in the workplace.

**Routine maintenance**

The following maintenance should be carried out at the stated frequency.



**N.B.**

The warranty will be forfeited if the maintenance schedule is not followed.

The following operations are fairly straightforward but must be executed by a qualified technician.

Scheduled routine maintenance involves inspections, checks and preventative action for keeping the entire system under control:

- The lubrication of the product;
- The condition of parts prone to wear and tear.

**Table of scheduled maintenance:**

MAINTENANCE	FREQUENCY	CONDITION OF THE PRODUCT	SYMBOL
Check efficiency of the stop commands	Every 6 months	Disconnected from the mains	
Check components moved by traction	Every 6 months	Disconnected from the mains	
Check transmission components	Every 6 months	Disconnected from the mains	
Check power supply system	Every 6 months	Disconnected from the mains	
Check active and passive safety devices	Every 6 months	Powered	
Check operation	Every 6 months	Powered	

**Tab. 6-6.1**



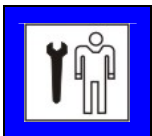
## 6 MAINTENANCE

PARA	DESCRIPTION
4	<b>SUPPLEMENTARY MAINTENANCE</b>

Supplementary maintenance must be executed by a qualified technician hired by the customer.



**Electrical technician:** a qualified technician able to operate the machine in normal conditions and in jog mode with the protection devices disabled, as well as adjust, service and repair the electrical components. **He is qualified to service live cabinets and connecting boxes.**



**Mechanical technician:** a qualified technician able to operate the machine in normal conditions and in jog mode with the protection devices disabled, as well as adjust, service and repair the mechanical components. **He is not qualified to service live electrical equipment.**

Note down all maintenance in the form below.

DATE	INSTALLATION AND INSPECTION	TECHNICIAN	USER
DATE	INSTALLATION AND INSPECTION	TECHNICIAN	USER
DATE	INSTALLATION AND INSPECTION	TECHNICIAN	USER
DATE	INSTALLATION AND INSPECTION	TECHNICIAN	USER



## **7 SPARE PARTS AND ACCESSORIES**

PARA	DESCRIPTION
1	ASSISTANCE

Please contact the Manufacturer if you require any information on how to use, service and install the product. The Customer is kindly requested to make his questions as clear as possible, referring to the relevant section in this Manual and respective instructions.

## **7 SPARE PARTS AND ACCESSORIES**

PARA	DESCRIPTION
2	SPARE PARTS

**Please contact the Manufacturer to request any spare parts.**

ALWAYS USE ORIGINAL SPARE PARTS



**N.B.**

**FRIGO DOORS cannot assume any liability for breakage, malfunctioning or harm to people or objects due to use of non-original parts.**

Below is a list of available spare parts for FRIGO DOORS. You are advised to use only original spare parts, otherwise the warranty will be forfeited (if still applicable) and the Manufacturer will not assume any responsibility for use of the product and any harm to people and/or objects. To request spare parts, compile the form on the next page, following all the instructions.



**WARNING!**

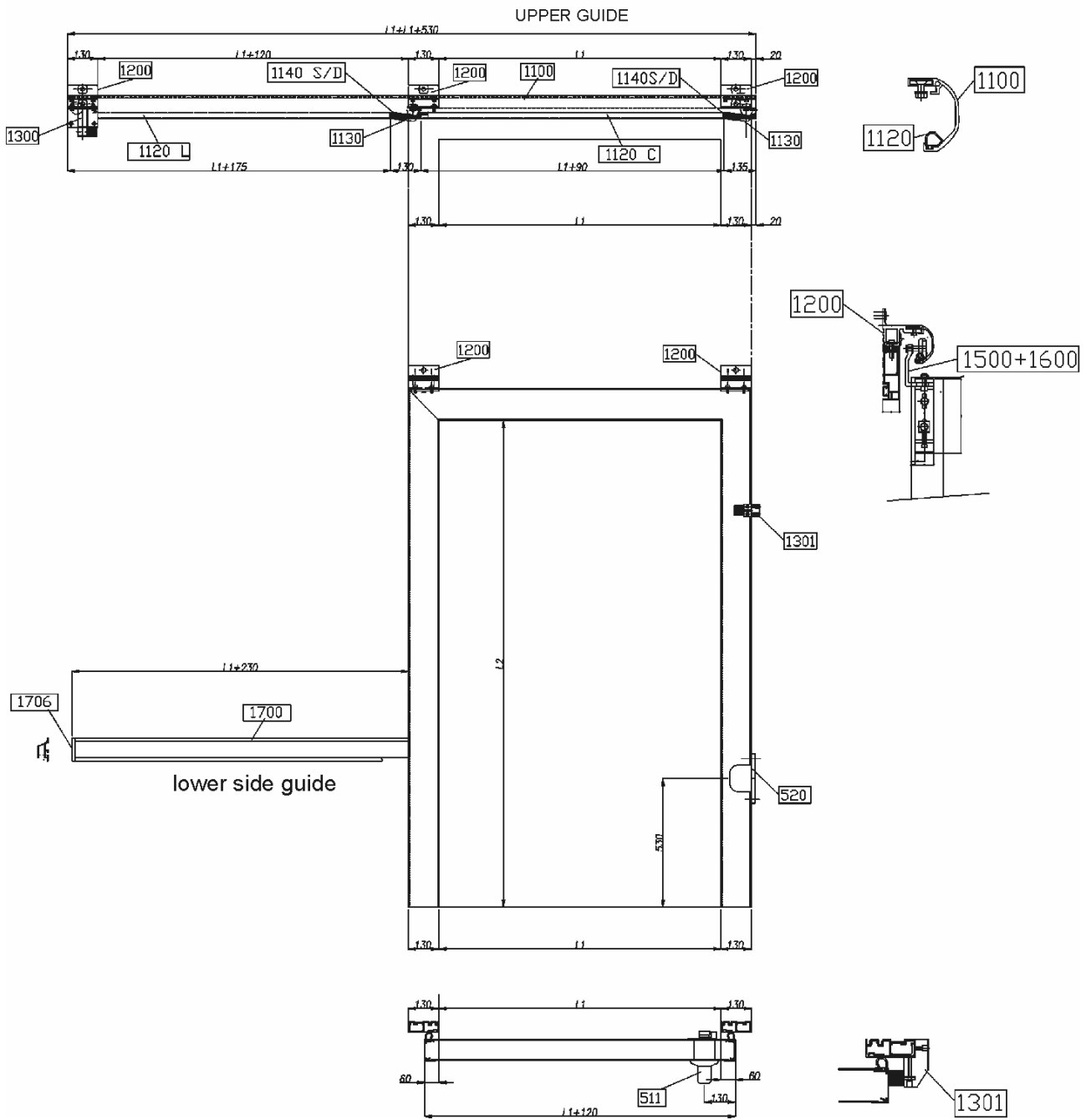
**You are advised to make a true copy of the form (even a photocopy) to avoid any errors.**

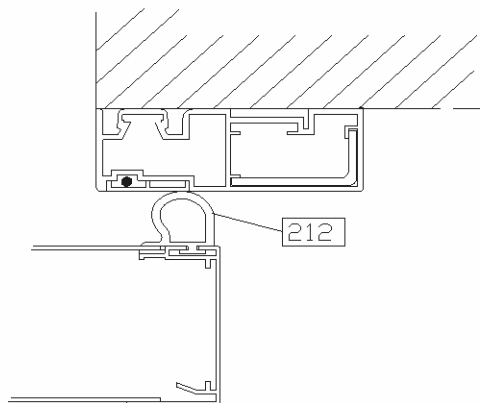
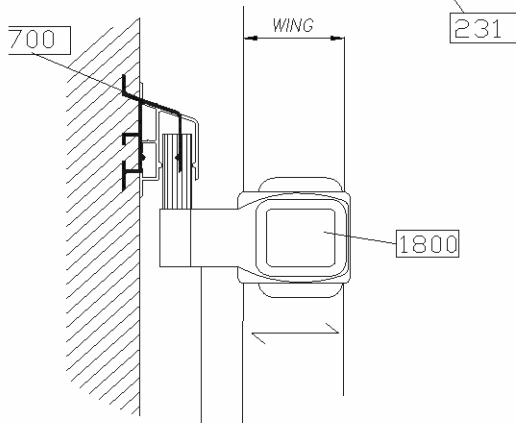
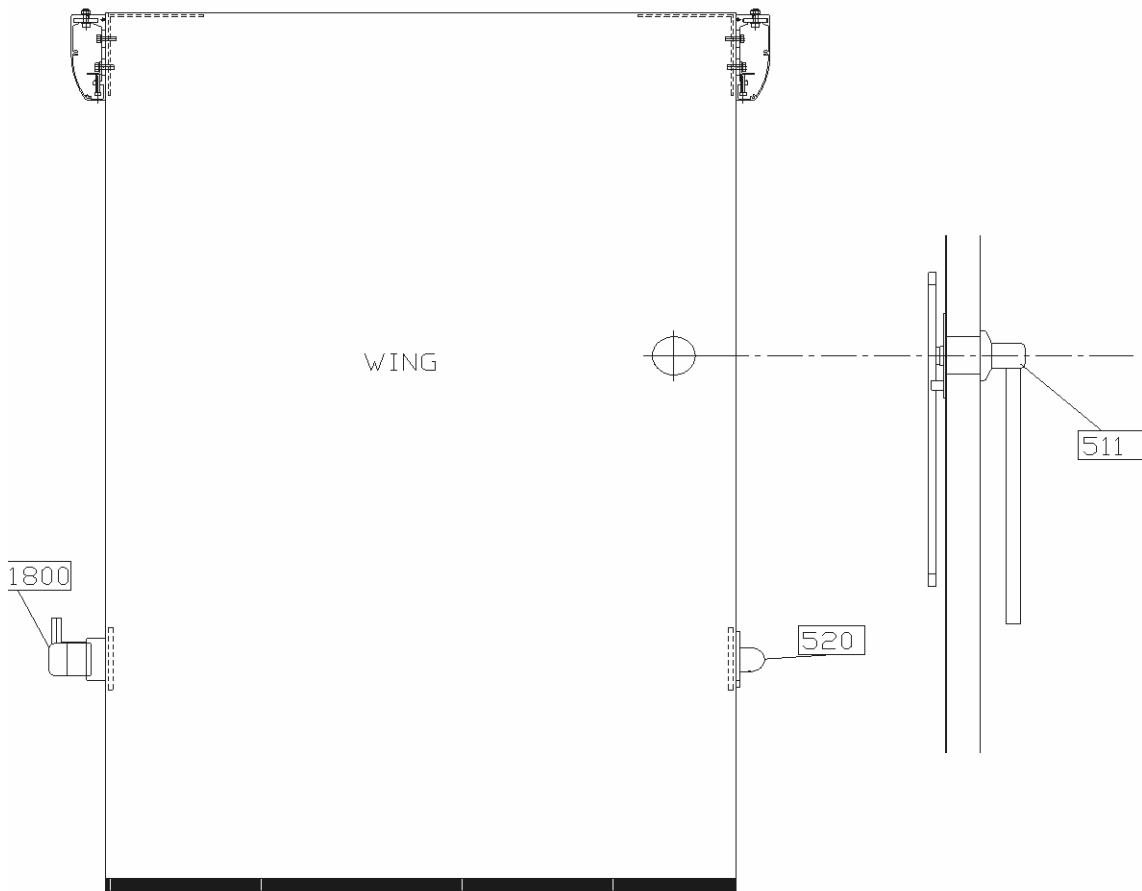
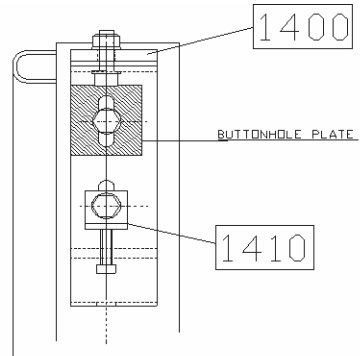
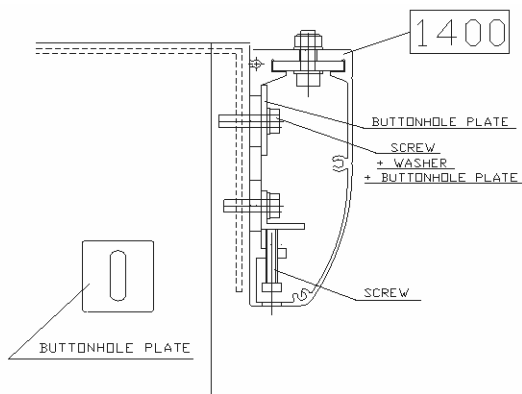
Please follow the following instructions as this will make it easier for our technicians to process your order:

- a) Call the Firm's spare parts service and describe the type of fault concerned;**
- b) Describe any parts that are not working;**
- c) State where the parts are situated on the product;**
- d) Order the required part by compiling the Order Form on the next page.**



Drawing of a sliding door with codes for the spare parts:











## **8 OTHER INSTRUCTIONS**

PARA	DESCRIPTION
------	-------------

1	<b>PUTTING OUT OF SERVICE AND DISMANTLING</b>
---	---

When dismantling the product make sure to separate the parts according to their constituent material – plastic, metal and electrical – for segregated disposal in accordance with regulations in force.

As for the metal structure of the product, you need only divide the parts up between iron and other metals or alloys, for melting down and re-use.



# 9 ANNEXES

PARA	DESCRIPTION
------	-------------

1 DRAWINGS and SPARE PARTS

## Diagram of a 09 powered sliding door

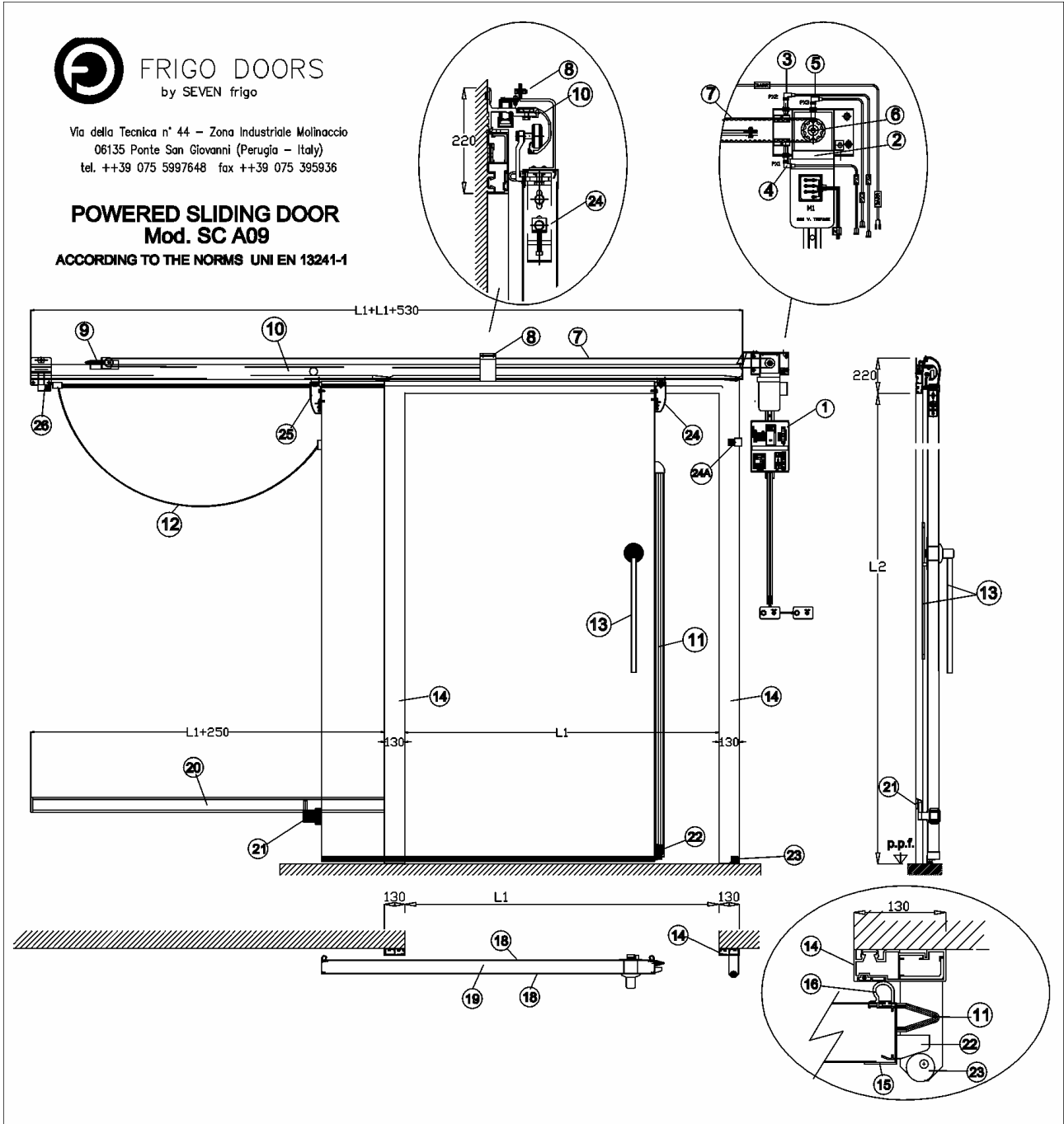
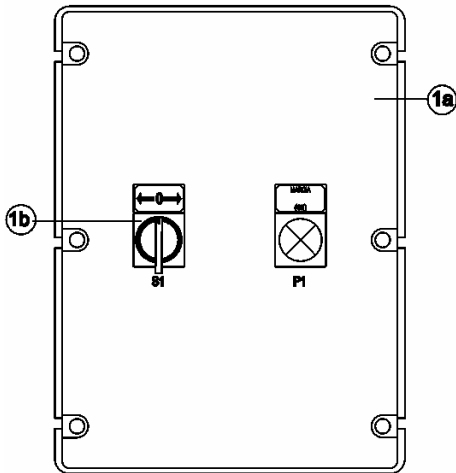


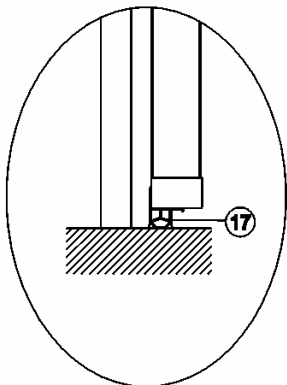
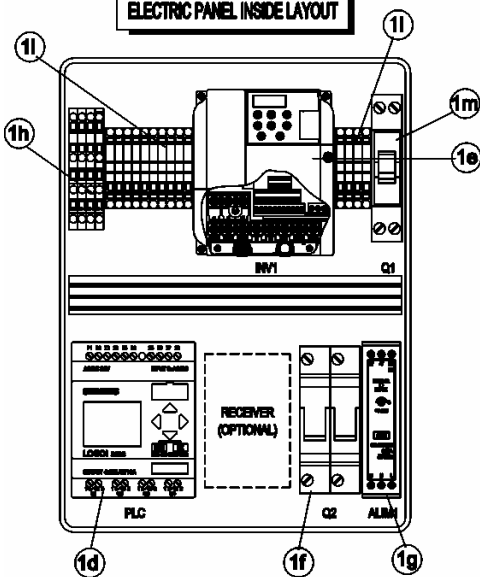
Diagram of a 09 powered sliding door

**ELECTRIC PANEL FACE LAYOUT**

Cod. 5080



**ELECTRIC PANEL INSIDE LAYOUT**



Via della Tecnica n° 44 – Zona Industriale Molinaccio  
06135 Ponte San Giovanni (Perugia – Italy)  
tel. ++39 075 5997648 fax ++39 075 395936

Pos.	Code	Description
1-	5080	Control box MOD. FD/09/00
1a	5081	Box ( protection IP 55)
1b	5082	Push button closing/opening
1d	5088	Plc logo Siemens
1e	5085	Inverter INV1
1f	5087	Fuse holder Q2
1g	5089	Feeder
1h	5090	Electrical junction PX1/PX2/PX3
1l	5091	Electrical junction Barr / puls
1l	5092	Electrical junction feeder/ M1
1m	5093	Feeder switch/electrical junction
2-	5000	Speed reducer
3-	5090	Inductor closing sensor
4-	5090	Inductor opening sensor
5-	5090	Inductor speed reducer sensor
6-	5020	Drive shaft
6a	5020	Tooth belt pulley Z24 d=70
6b	5030	Crown wheel 3/4 Z17
7-	5070	toothed belt 25T10
8-	5060	drive gear
9-	5050	Belt return and tension gear
10-	1100	Top sliding guide
11-	5600	Safety barrier
12-	5500	Spiral wire
13-	511	Inner/outer handle
14-	3100	Counter frame
15-	100/101/102	Wing edge border
16-	212	Edge gasket
17-	231	Bottom gasket
18-	7141/42/43	Stainless steel/pre painted/fiberglass facing
19-	7144	Rigid Polyurethane insulation
20-	1700	Bottom sliding guide
21-	1800	Bottom guide holder
22-	5040	Closing pusher
23-	5041	Bumper closing pusher
24-	1600-1600	Wheel holder
24a	1400	Closing switch limit
25-	1301	Wing bracket
26-	1300	Opening switch limit



# 9 ANNEXES

PARA DESCRIPTION

## 2 TECHNICAL SHEET FOR THE RADIO RECEIVER



RADIOCOMANDI | RADIO CONTROLS | RADIOCOMMANDES | FUNKSTEUERUNGEN | RADIOMANDOS | ONTVANGER



Documentazione  
Tecnica  
**S37**  
rev. 2.1  
01/2006  
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CANCELLI AUTOMATICI  
119RS37

**RICEVITORE  
RECEIVER  
RECEPTEUR  
EMPFÄNGER  
RECEPTOR  
ONTVANGER**

# RE432

**I** Ricevitore universale bicanale a frequenza AM 433.92 MHz, alloggiato su contenitore con grado di protezione IP54.

Funziona con tutti i trasmettitori CAME della serie TOP/TAM a 433.92 MHz.

Entrambi i canali funzionano normalmente in modalità "monostabile" ma sul 2° canale è possibile scegliere, in alternativa, la modalità "bistabile" (interruttore).

- 1 Morsettiera
- 2 Dip-switch
- 3 Tasto memorizzazione codice 1° canale
- 4 Tasto memorizzazione codice 2° canale
- 5 LED funzionamento

**GB** Two-channel AM 433.92 MHz universal receiver, housed in an IP54-level protective case.

It functions with all TOP/TAM series 40.685 MHz CAME transmitters.

Both channels function normally in "monostable" mode, but it is possible to select the "bistable" (switch) mode for the 2nd channel.

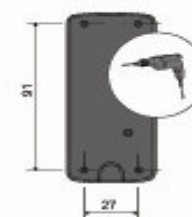
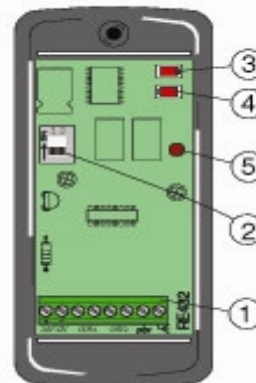
- 1 Terminal block
- 2 Dip switch
- 3 1st channel code memorisation key
- 4 2nd channel code memorisation key
- 5 Signal LED

**F** Récepteur universelle bicanal à fréquence AM 433.92 MHz, placé dans le boîtier avec degré de protection IP54.

Il fonctionne avec tous les émetteurs CAME de la série TOP/TAM à 433.92 MHz.

Les deux canaux fonctionnent normalement en mode "monostable" mais on peut également choisir le mode "bistable" (interrupteur) sur le 2e canal.

- 1 Plaque à borne
- 2 Dip-switch
- 3 Touche de mémorisation code 1° canal
- 4 Touche de mémorisation code 2° canal
- 5 LED de fonctionnement



**D** Universalempfänger, Doppelkanal, Frequenz AM 433.92 MHz. Gehäuse mit Schutzklasse IP54.

Funktioniert mit allen CAME-Sendern der Serie TOP/TAM, 433.92 MHz.

Beide Kanäle funktionieren normal in der Betriebsart "monostabil". Mit dem Schalter kann der 2. Kanal bei Bedarf auf die Betriebsart "bistabil" umgeschaltet werden.

- 1 Klemmbrett
- 2 Dip-Switch
- 3 Speicherungstaste für Code Kanal 1
- 4 Speicherungstaste für Code Kanal 2
- 5 LED Funktionskontrolle

**E** Receptor universal de dos canales de frecuencia AM 433.92 MHz, montado en una caja con grado de protección IP54.

Funciona con todos los transmisores CAME de la serie TOP/TAM de 433.92 MHz.

Ambos canales funcionan normalmente en modo "monostable", pero en el 2º canal se puede elegir, como alternativa, el modo "bistable" (interruptor).

- 1 Caja de bornes
- 2 Dip-switch
- 3 Tecla de memorización código 1º canal
- 4 Tecla de memorización código 2º canal
- 5 LED de funcionamiento

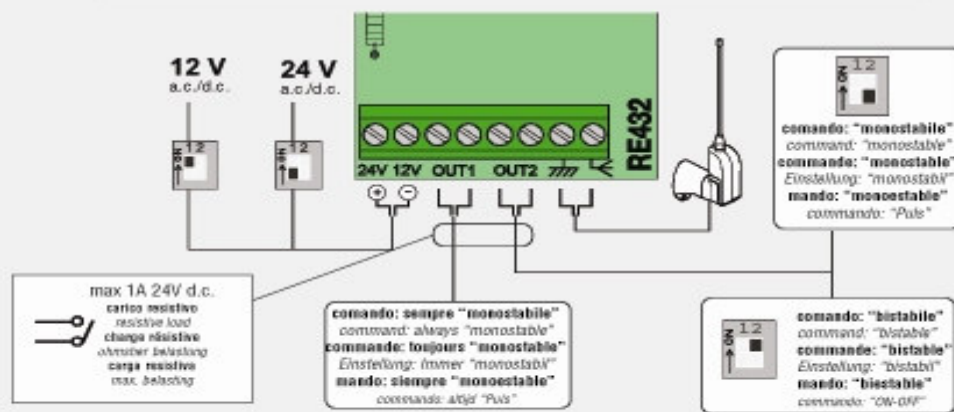
**NL** Tweekanaals universele ontvanger op AM 433.92 MHz, in behuizing met beschermingsgraad IP54.

Deze ontvanger functioneert met de CAME-zenders van de serie TOP/TAM op 433.92 MHz.

De twee kanalen werken normaal "monostabiel". Op het tweede kanaal kan men ook kiezen voor "bistabiel".

- 1 Aansluitklemmen
- 2 Dip-switch
- 3 Programmeertoets eerste kanaal
- 4 Programmeertoets tweede kanaal
- 5 Controleled.

### COLLEGAMENTI E SELEZIONI - CONNECTIONS AND SELECTIONS - BRANCHEMENTS ET SELECTIONS - ANSCHLÜSSE UND FUNKTIONSWAHL - CONEXIONES Y SELECCIONES - AANSLUITINGEN EN INSTELLINGEN





I PROGRAMMAZIONE RADIOCOMANDO

- A) Codificare il trasmettitore; B) Alimentare il ricevitore; C) Tenere premuto un tasto di memorizzazione (Fig. 1: il led di segnalazione lampeggia) e inviare il codice premendo un tasto del trasmettitore (Fig. 2: il led rimarrà acceso a segnalare l'avvenuta memorizzazione).

Eseguire la stessa procedura per l'altro tasto di memorizzazione.

N.B.: se in seguito si vuol cambiare codice, ripetere la sequenza descritta.

D PROGRAMMIERUNG DER FUNKFERNSTEUERUNG

- A) Codierung des Senders; B) Speisung des Empfängers; C) Eine der Speichertasten gedrückt halten (Abb. 1: das LED blinkt) und den Code durch Drücken einer Taste vom Funksender übertragen (Abb. 2: das LED leuchtet auf, sobald das Abspeichern vom Code erfolgt ist).

Den gleichen Vorgang für die andere Speicherstaste vornehmen.

Bitte beachten: für eine Änderung des Codes wie oben beschrieben, vorgehen.

GB PROGRAMMING THE RADIO CONTROL

- A) Codify the transmitter; B) Power up the receiver; C) Keep the code-saving key pressed (Fig. 1: the LED indicator will flash) and send the code by pressing any transmitter key (Fig. 2: the LED indicator will remain on to indicate that the code has been saved).

Carry out the same procedure for the other memorisation key.

N.B.: if the code needs to be changed, repeat the sequence described

F PROGRAMMATION RADIOCOMMANDE

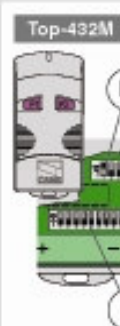
- A) Codifier l'émetteur; B) Alimenter le récepteur; C) Appuyer sur une touche de mémorisation (Fig. 1: le voyant de signalisation clignote) et enregistrer le code en appuyant sur une touche de l'émetteur (Fig. 2: le voyant reste allumé pour signaler que la mémorisation a été effectuée).

Procéder de la même façon pour l'autre touche de mémorisation.

N.B.: répéter cette séquence pour changer éventuellement de code par la suite.

CODIFICA TRASMETTITORI - TRANSMITTER ENCODING

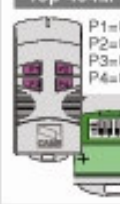
TOP



impostare il codice sul dip-switch C e il canale su D (P1=CH1 e P2=CH2, impostazione di default) set the code to dip-switch C and channel to D (P1=CH1 and P2=CH2, default setting) saisir le code sur le commutateur dip C et le canal sur D (P1=CH1 et P2=CH2, saisie de défaut) Stellen Sie den Code auf den Dip-Switch C und den Kanal auf D (P1=CH1 und P2=CH2; Grundeinstellung) plantear el código en el dip-switch C y el canal en D (P1=CH1 y P2=CH2, planteamiento por defecto) stel de code in via de dipswitches C en het gewenste kanaal via dipswitches D (P1=CH1 en P2=CH2, originele instelling)



Top-434M



impostare solo il codice set code only ne saisir que le code Stellen Sie nur den Code ein plantear sólo el código Stel enkel de code in

Top-434NA



vedi istruzioni su confezione see instructions on pack voir instructions sur l'emballage Siehe Anleitungen auf der Packung ver instructies on de verpakking

TAM



vedi foglio istruzioni inserito nella confezione see instruction sheet inside the pack voir les instructions qui se trouve dans l'emballage Siehe Anleitungen, die der Packung beiliegen ver hoja de instrucciones adjunta en el embalaje Ze instructies op de verpakking

Fig./Abb. 1

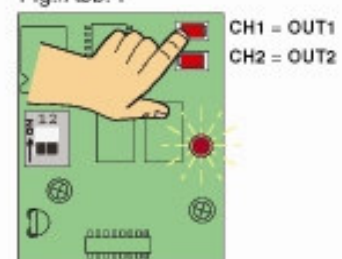


Fig./Abb. 2



CE - I - Con la presente Came Cancelli Automatici SpA dichiara che questa apparecchiatura è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE

GB - Herby, Came Cancelli Automatici SpA, declares that this equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/CE.

F - Par la présente Came Cancelli Automatici SpA déclare que cette appareil est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

T432 T434 T438

Tutti i dati sono stati controllati con la massima cura. Non si accetterà nessuna altra responsabilità per eventuali errori o omissioni.

All data checked with the greatest care. No other liability is accepted for any error or omission.

Tous les données ont été contrôlées avec la plus grande attention. Toute autre responsabilité sera refusée en cas d'erreurs ou omissions.

Alle Daten sind mit größter Sorgfalt geprüft. Für eventuelle Fehler oder Auslassungen übernehmen wir keine Haftung.

CAME logo, Assistenza Tecnica Numero Verde 800 295830, WWW.CAME.IT, info@came.it, CAME CANCELLI AUTOMATICI S.P.A. DIVISIONE DI CASIER (TREVISO) (+39) 0422 4940 (+39) 0422 4941

TDV logo, CAME LOMBARDIA S.R.L. COLOGNO M. (MI) (+39) 02 26708293 (+39) 02 25490288, CAME SUD S.R.L. NAPOLI (+39) 081 7524455 (+39) 081 7529109, CAME (AMERICA) L.L.C. MIAMI (FL) (+1) 305 5930227 (+1) 305 5939823, CAME AUTOMATISMOS S.A. MADRID (+34) 091 5285009 (+34) 091 4685442, CAME BELGIUM LESSINES (+32) 068 333014 (+32) 068 338019

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Elaborazione Certifico S.r.l.



## 9 ANNEXES

PARA	DESCRIPTION
32	WIRING DIAGRAMS

In collaboration with **UMBRA QUADRI snc**

via O. Tramontani, 52 loc. Ponte San Giovanni – 06135 PERUGIA –ITALY

LEGEND	
SYMBOL	DESCRIPTION
	AUTOMATIC RETURN
	OUTPUT MODULE
	INPUT MODULE
	EMERGENCY PUSHBUTTON
	SENSOR
	FUSED DISCONNECT SWITCH 2P
	INVERTER OMRON V1000
	SWITCHING POWER
	THERMAL MAGNETIC CIRCUIT BREAKER 1P+N
	WAGO TERMINAL
	POWER'S TERMINAL
	POWER'S TERMINAL
	WAGO TERMINAL
	PUSH BUTTON PANEL
	IDENTIFY PLATE
	SELECTOR AT 3 POSITIONS WITH AUTOMATIC RECOVERY
	IDENTIFY PLATE
	LAMP
	12mm INDUCTIVE SENSOR
	MOTOR
	NO CONTACT
	NC CONTACT
	INVERTER
	LIGHT, SIGNAL LIGHT
	TRANSITION/SECTIONING SWITCH ( FUSE INCLUDED)
	AUTOMATIC OPENING POWER SWITCH FOR MAGN. CURRENT
	ROTARY CONTROL SWITCH
	CLOSE CONTACT, WITH AUTO. RETURN SWITCH CONTROL
	OPENING CONTACT
	CLOSING CONTACT
	POWER
	THREE-PHASE INDUCTION MOTOR WITH SHORT-CIRCUIT ROTOR
	TERMINAL
	TERMINAL
	TERMINAL
	ROTARY CONTROL
	CONTROL WITH PULL CORD

SUMMARY TABLE OF PANEL:	
NOMINAL VOLTAGE (V):	230
FREQUENCY (Hz) :	50
PHASE :	1+N
NOMINAL CURRENT In (A):	3
C.to-C.to CURRENT (kA) :	4,5
PROTECTION DEGREE:	IP 55
ELECTRIC PANEL STRUCTURE:	/

COLOR ID KEY CEI 16-8, IEC 757, CEI-UNEL 00722	
■ BK	BLACK
■ BU	BLUE
■ BN	BROWN
■ GN	GREEN
■ GNYE	GREEN/YELLOW
■ GY	GRAY
■ OG	ORANGE
■ PK	PINK
■ RD	RED
■ TQ	TURQUOISE
■ VT	PURPLE
■ WH	WHITE
■ YE	YELLOW

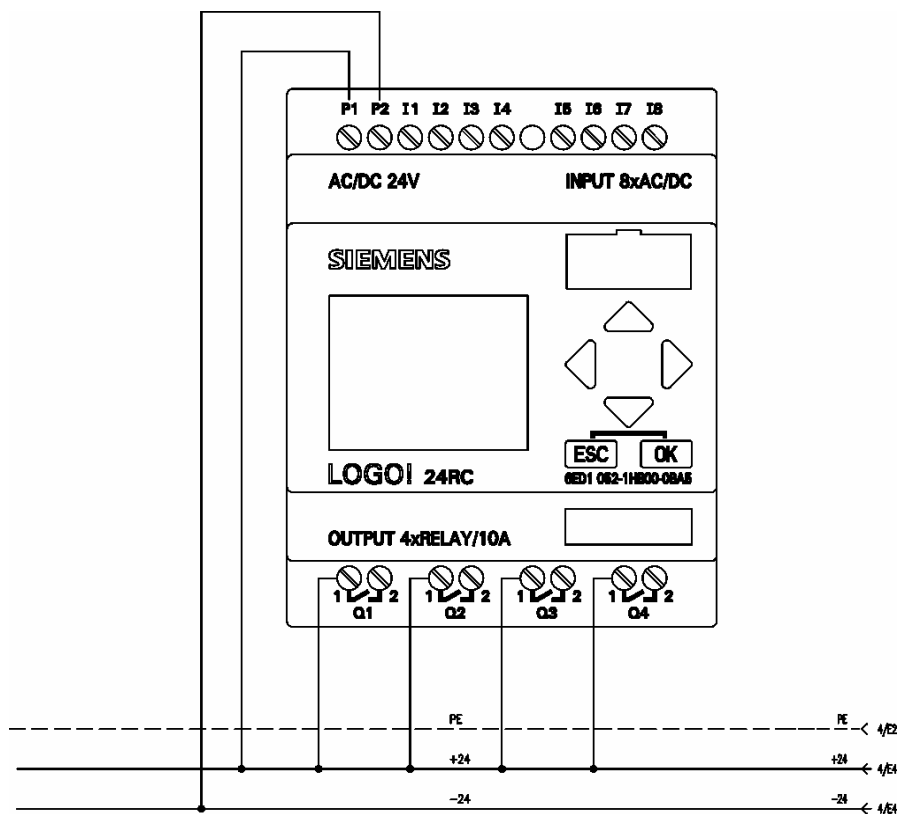
NUMBER PAGE	TITLE
1	ELECTRIC PANEL FACE AND INSIDE LAYOUT
2	PLC LAYOUT
3	PLC CHANNELS LIST
4	MULTIWIRE POWER DIAGRAM
5	MULTIWIRE POWER DIAGRAM
6	LOW VOLTAGE DEVICE FRONT PANEL
7	REMOTE CONTROLS
8	SENSORS
9	INVERTER COMMANDS/CONTROL
10	TERMINALS
11	CONNECTION DIAGRAM
12	CONNECTION DIAGRAM
13	CONNECTION DIAGRAM
14	CABLE LIST
15	SYSTEM LAYOUT
16	LEGEND
17	INDEX



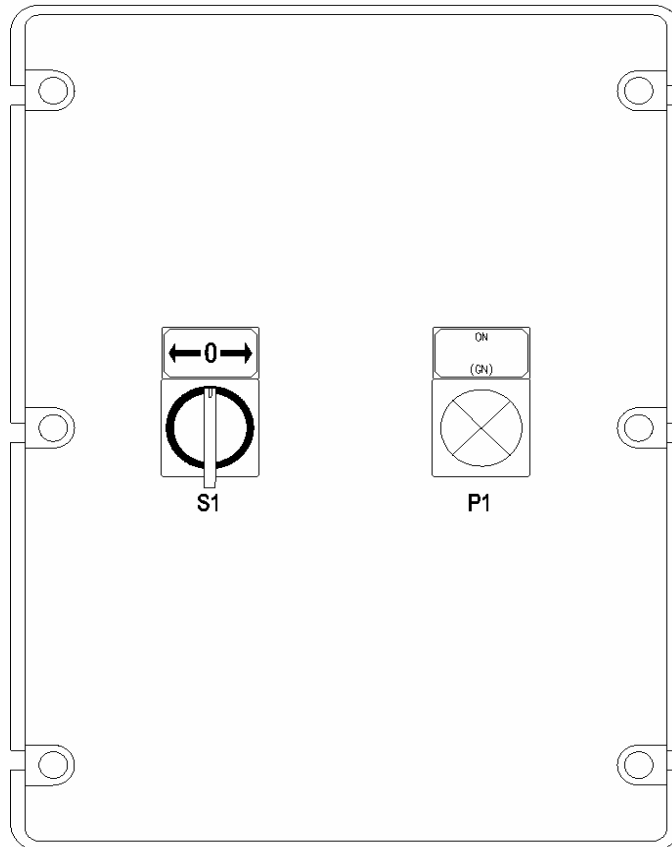
CARD	TYPE	ADDRESS	DESCRIPTION 1	DESCRIPTION 2	NOTES	PIN	POSITION
LOGO	I	1	SELECTOR SWITCH	OPENING REQUEST		I1	6/D3
	I	2	LIMIT SWITCH	OPENED DOOR		I2	8/D2
	I	3	OVERTORQUE	MOTOR		I3	9/D2
	I	4	PUSH BUTTON/MICRO/TELECONTROL	GATE OPENING/CLOSING REQUEST		I4	7/D3
	I	5	LIMIT SWITCH	CLOSED DOOR		I5	8/D3
	I	6	SENSOR	PULSE METER		I6	8/D4
	I	7	SELECTOR SWITCH	CLOSING REQUEST		I7	6/D3
	I	8	ALARM	INVERTER THERMOSTATIC RELAY		I8	9/D2
Q	1	SIGNAL	RUNNING		Q1	6/B4	
Q	2	CONTROL	GATE SHUTTING		Q2	9/B5	
Q	3	CONTROL	OPENING DOOR		Q3	9/B6	
Q	4	CONTROL	INVERTER CHANGE SPEED		Q4	9/B6	

SIGNATURE	TYPE	DESTINATION	LENGTH	ARTICLE CODE
ALJM	FROR 450/750V 3G1,5	FITTINGS POINT/Q1 POWER SWITCH	3 m	
BARR	FROR 450/750V 2x0,5	SIGNALS TERMINALS/ANTIACCIDENT BARRIER	7,5 m	
M1	FROR 450/750V 4G1,5 SCHERMATO	TERMINALS M1/MOTOR M1	0,55 m	
PLTR	FROR 450/750V 2x0,5	SIGNALS TERMINALS/PULL CORD PUSH-BUTTON	T.B.D.	
PULS1	FROR 450/750V 8x0,5	SIGNALS TERMINALS/PUSH BUTTON PANEL PULS1	3 m	
PULS2	FROR 450/750V 4x0,5	PUSH BUTTON PANEL PULS1/PUSH BUTTON PANEL PULS2	0,8 m	
Px1	PRECABLATO	Px1 TERMINAL/Px1 SENSOR	3 m	
Px2	PRECABLATO	Px2 TERMINAL/Px2 SENSOR	3 m	
Px3	PRECABLATO	Px3 TERMINAL/Px3 SENSOR	3 m	

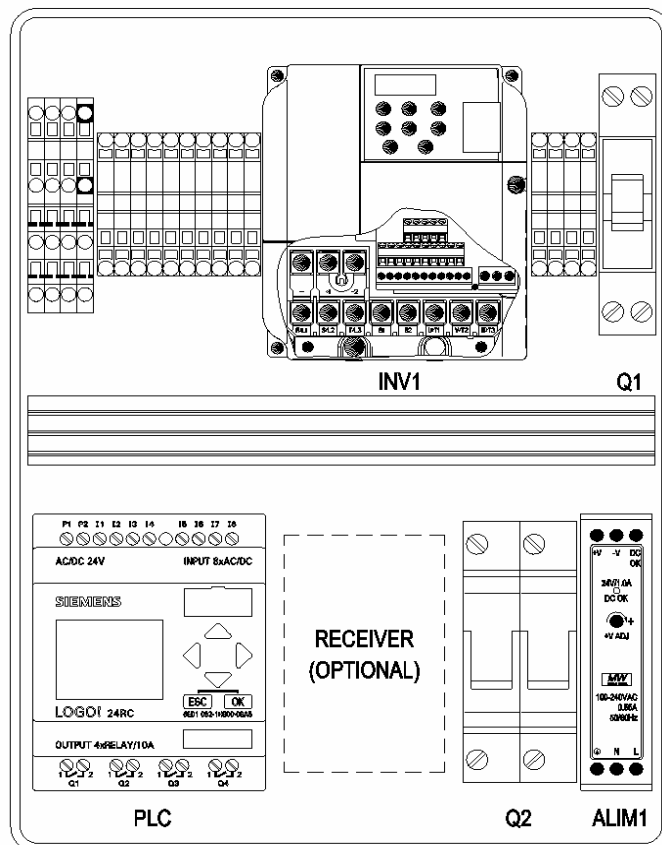
### PLC layout



**ELECTRIC PANEL FACE LAYOUT**

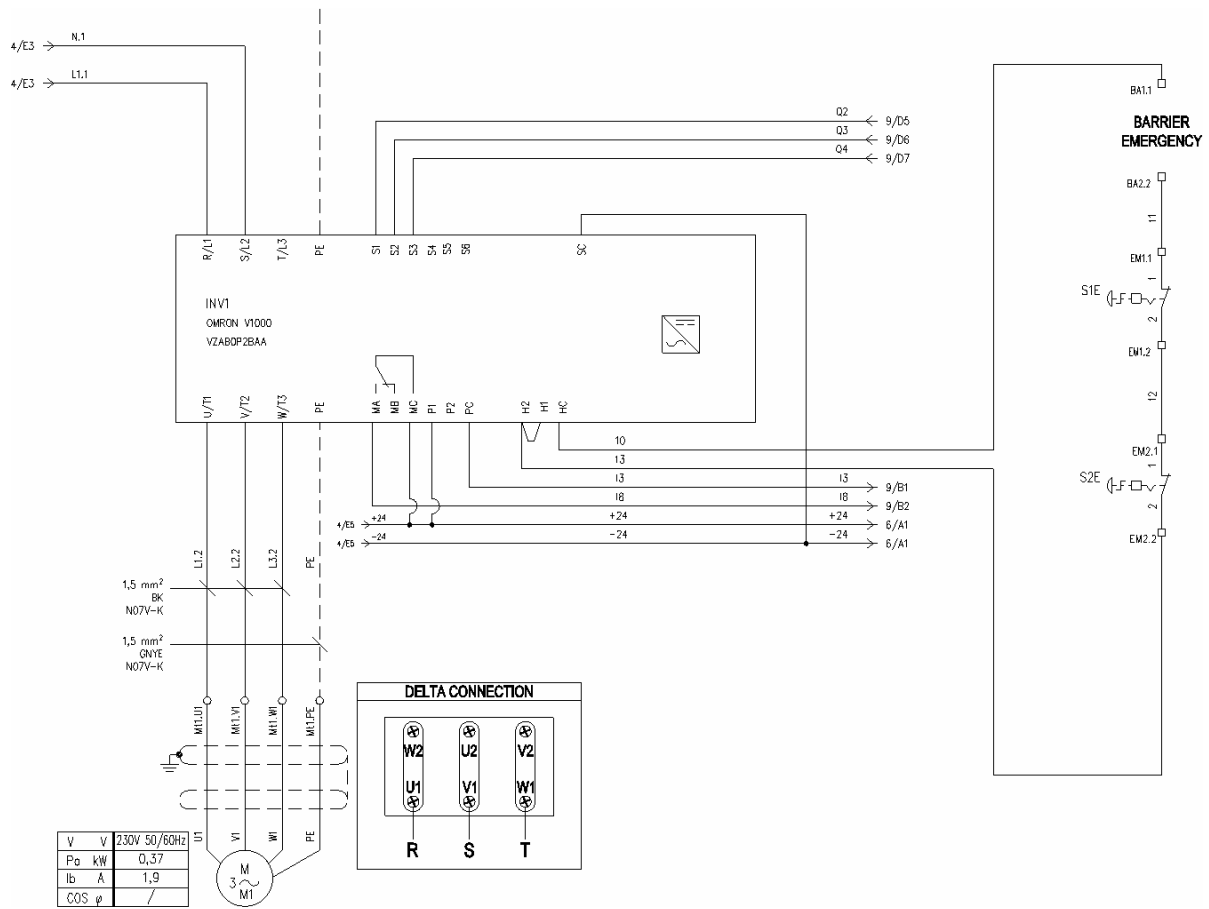


**ELECTRIC PANEL INSIDE LAYOUT**

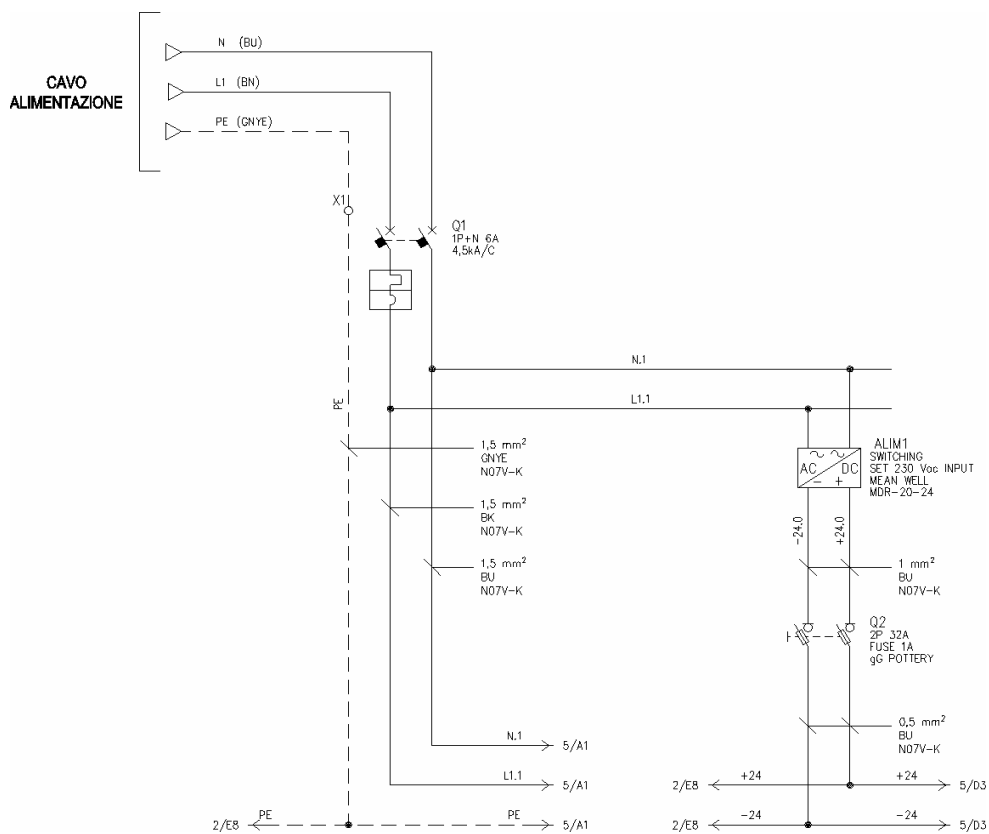




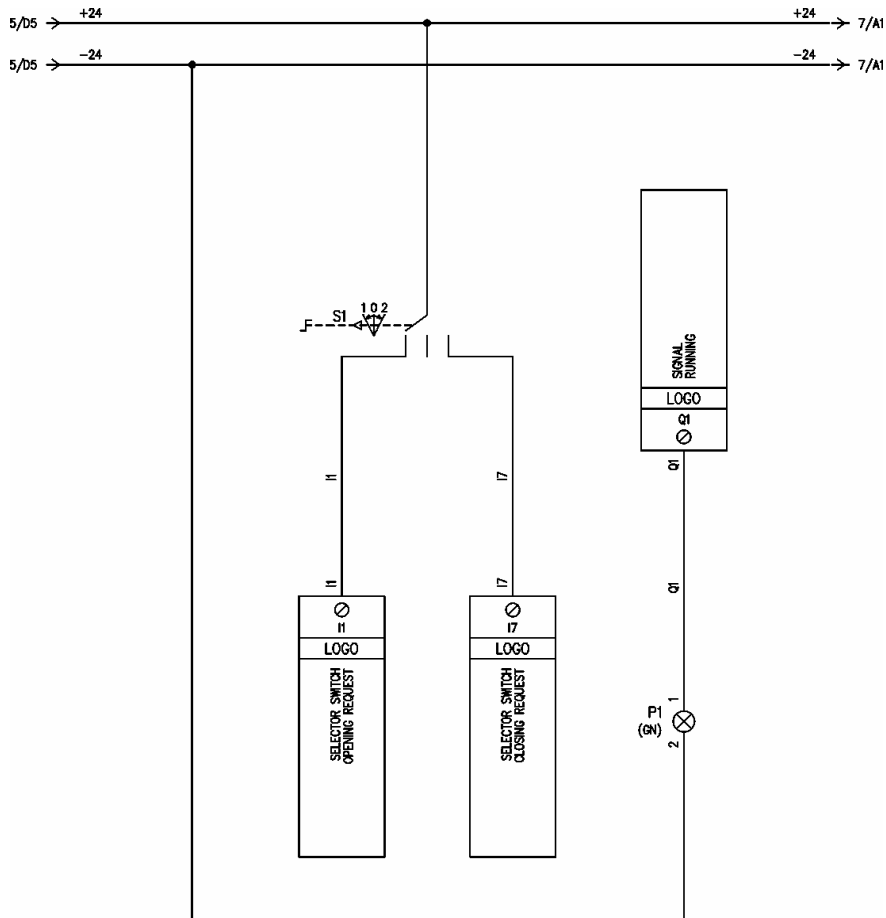
**Multipole diagram**



**Multipole diagram**



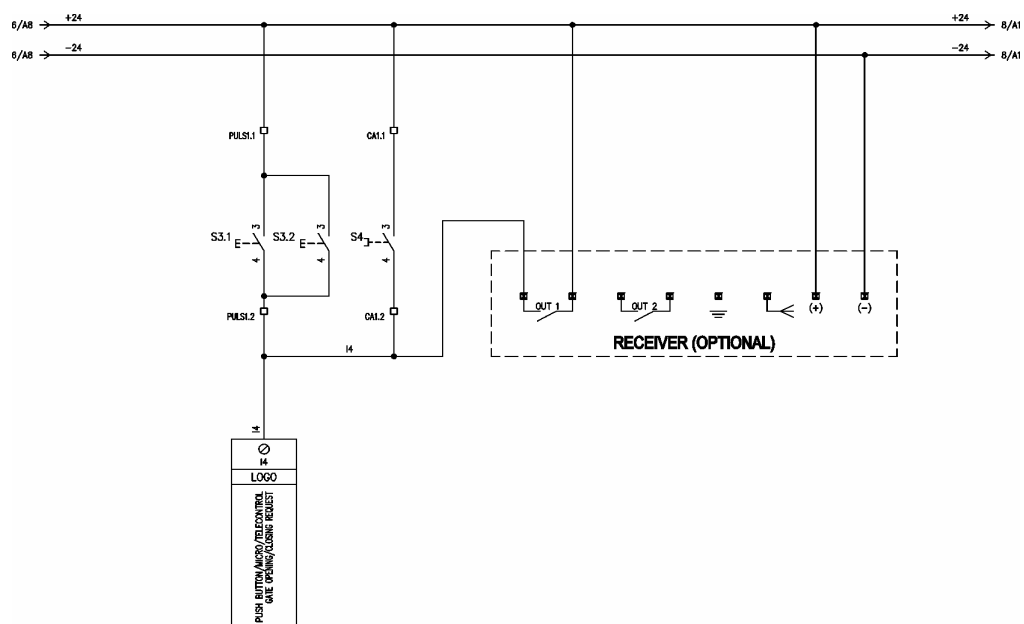
### Low voltage equipment at front of board



**NOTES:**

0.5 mm<sup>2</sup> blue N=/V-K cables

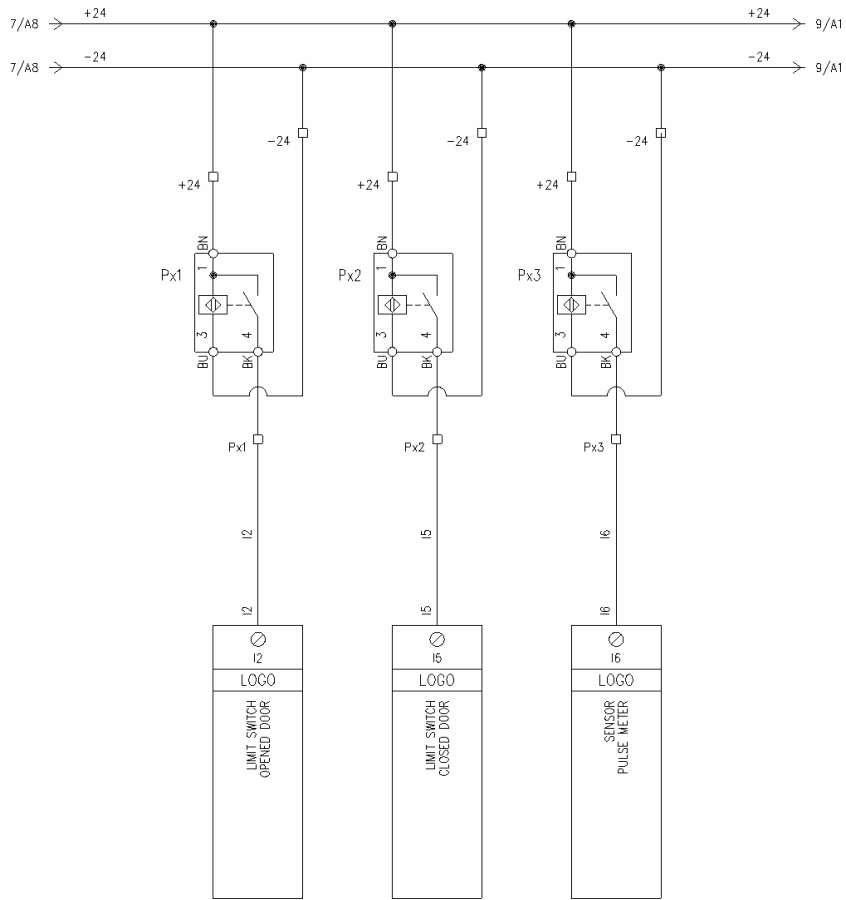
### Remote controls



**NOTES:**

0.5 mm<sup>2</sup> blue N=/V-K cables

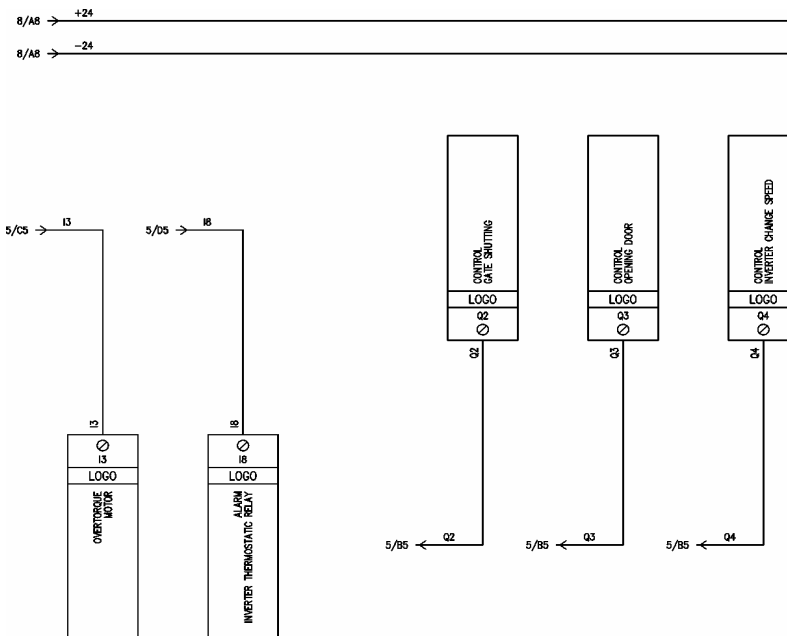
**Sensors**



**NOTES:**

0.5 mm<sup>2</sup> blue N=/V-K cables

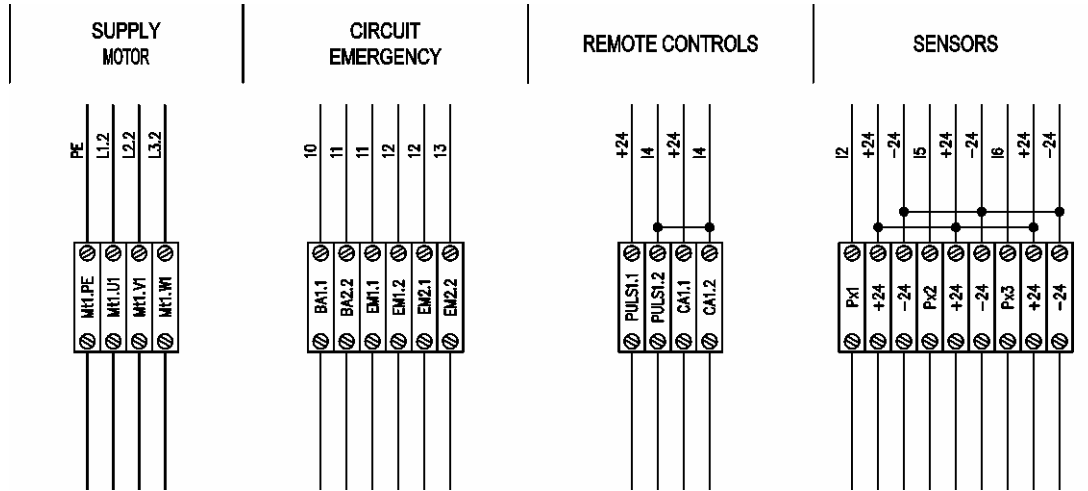
**Inverter control commands**



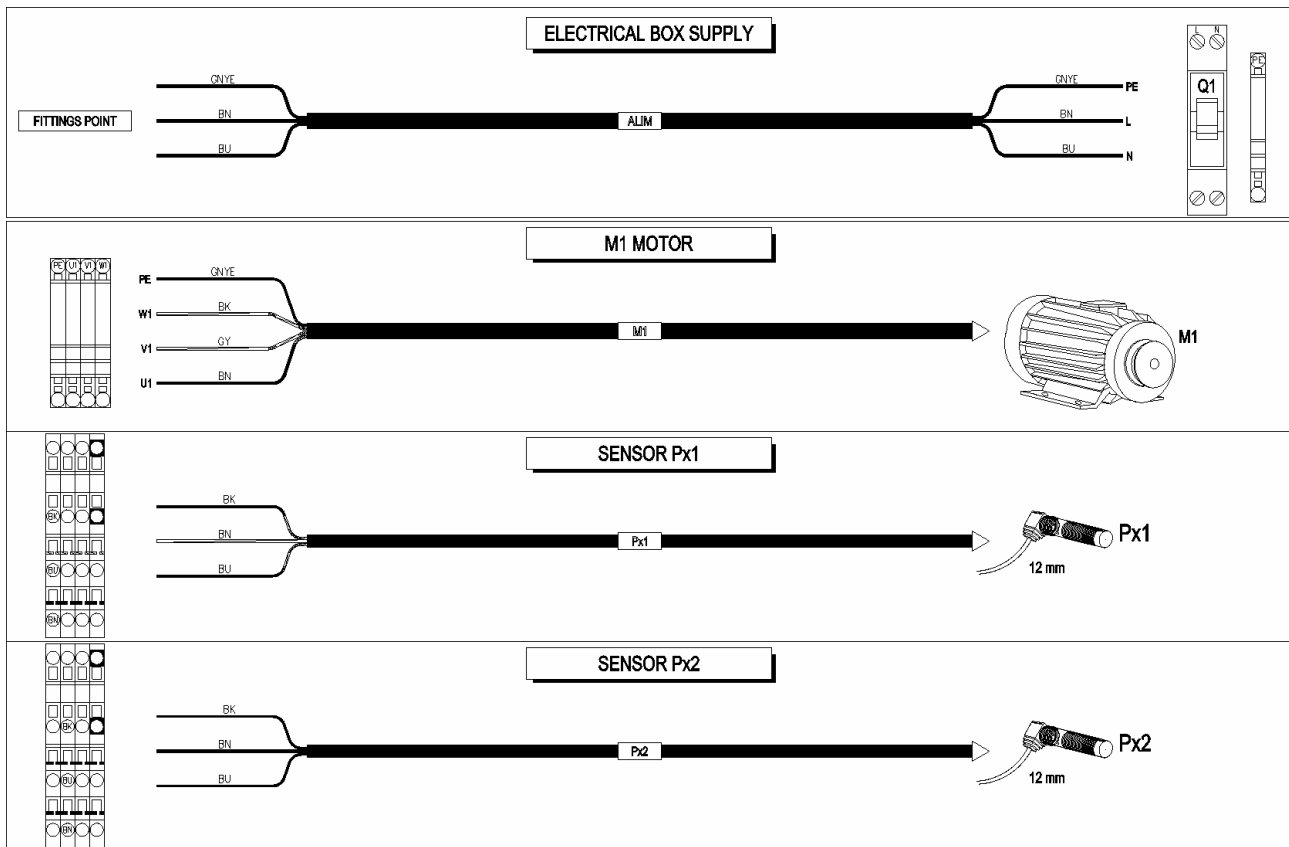
**NOTES:**

0.5 mm<sup>2</sup> blue N=/V-K cables

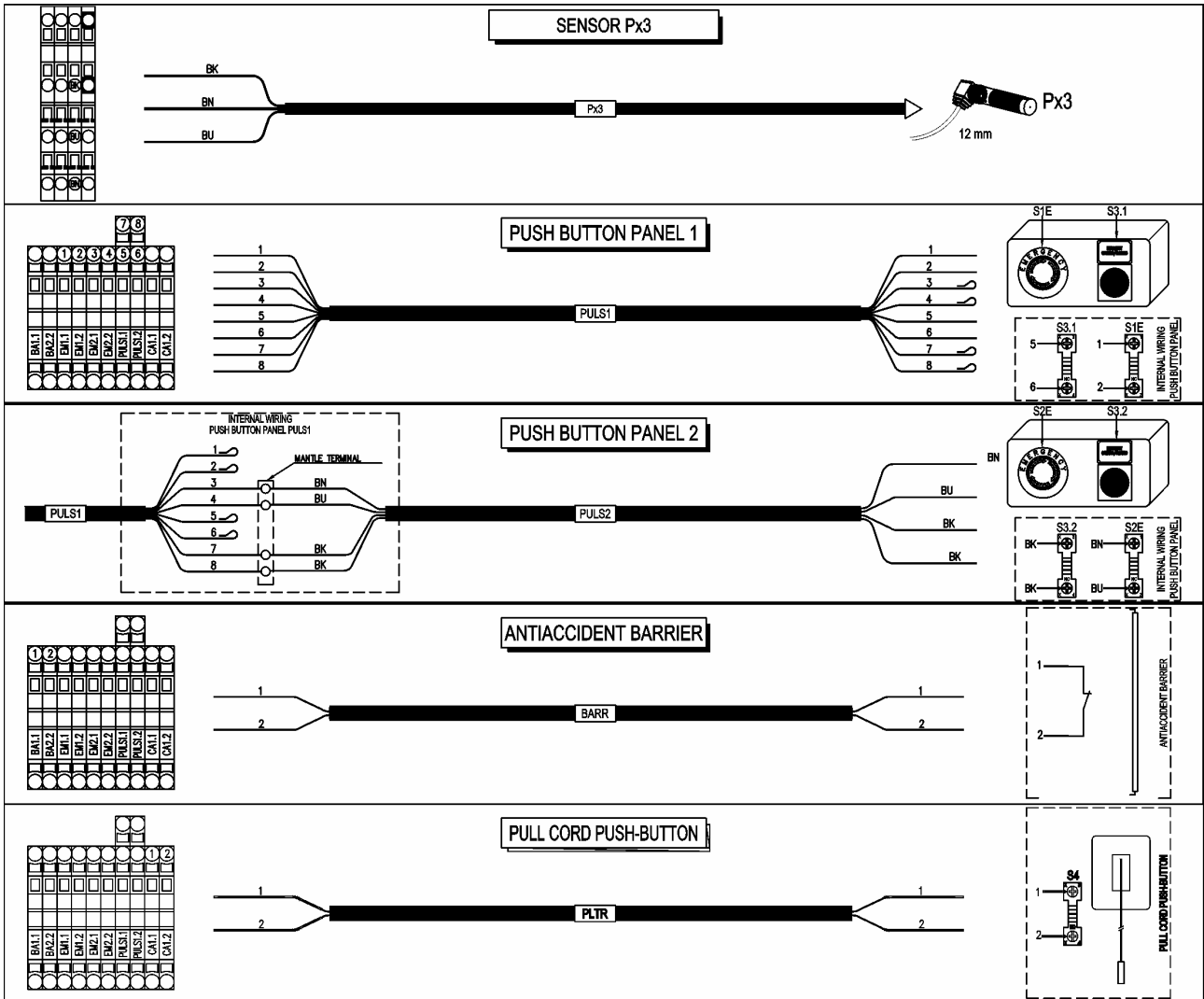
**Terminal blocks**



**Wiring diagram**



**Wiring diagram**



### System layout

