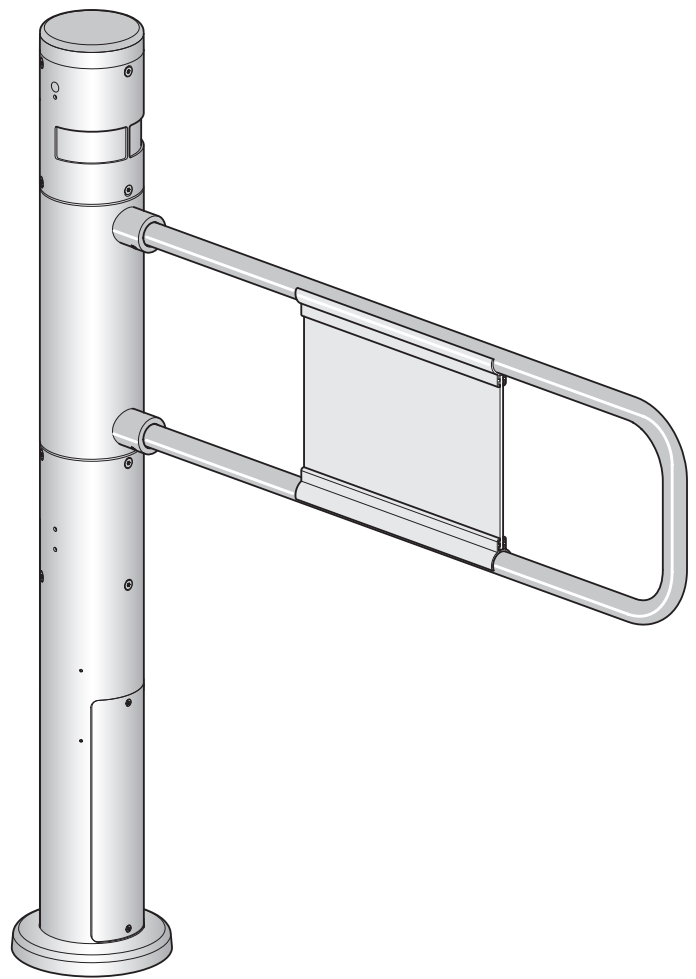
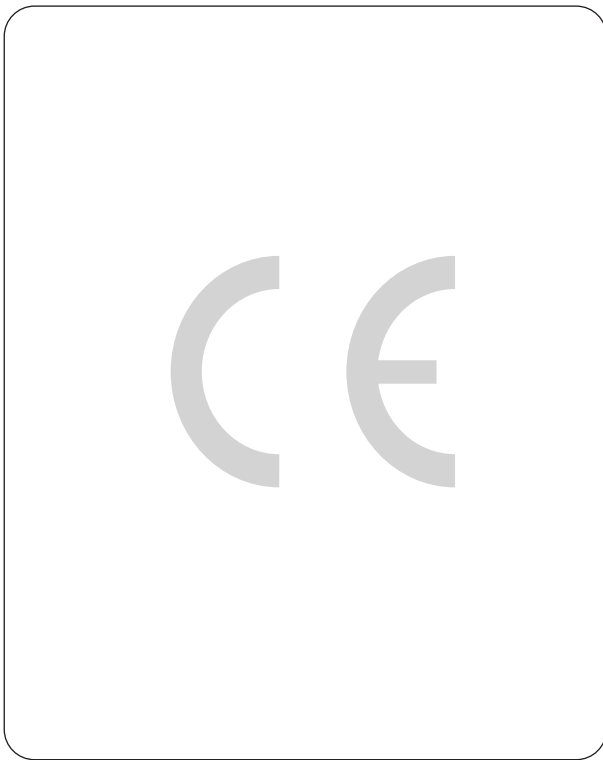




# OverGate 5.0



code AAR0050IT

## INSTALLATION MANUAL

**EN** - translation of the original instructions

**INSTRUCTION MANUAL** - Read prior to use










**Read this manual carefully before carrying out any operation, including installation**



**Disconnect the power supply before carrying out any routine and/or extraordinary maintenance**

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## 1 - FOREWORD

The instructions must contain at least the following information: (EN 60335-2-103)

### CAUTION:

**Important safety instructions. Follow all the instructions because incorrect installation can cause serious injury.** (IEC 60335-2-103)

- this device can be used by children aged 8 years and over and by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they are supervised or instructed on using the device safely and they understand the risks involved
- do not allow children to play with the device or its controls (EN 60335-2-103)
- check the installation often for any imbalances and signs of wear or visible damage. Do not use if repairs or adjustments are required
- once installed, make sure that the mechanism is set properly;
- - the equipment must be installed via a mains disconnect with every pole isolated, respecting the overload category III. (EN 60335-2-103)
- - the equipment must be connected to the power mains in compliance with the regulations in force concerning the wiring rules.

### WARRANTY

The product is guaranteed according to the general terms and conditions of sale and subject to its installation according to these instructions.

If the product is returned, it must be packaged properly.

Electronic boards must be packed in antistatic packaging (protection against electrostatic discharges).

### 1.1 - Symbols and terminology used in the manual

#### COPYRIGHT



This document is the exclusive property of the machine manufacturer. Reproduction is strictly prohibited. The manufacturer reserves the right to make changes or corrections without prior notice. The trademarks referred to in this document belong to their respective owners.

### ELECTRICAL INSTALLATION



All electrical equipment requires an adequate differential switch integrated in the general distribution box

The protective device must be sized so as to withstand a short-circuit current of at least 10kA.



### DANGER

this symbol indicates information or procedures, which could result in serious personal injury if not followed carefully. Potential source of injury or harm to health.



### CAUTION

The instructions indicating this symbol contain information, requirements or procedures, which can cause damage or malfunctions, if not carried out correctly.



### INFORMATION

The guidelines indicating this symbol contain information on particularly important topics and failure to comply with them may render the warranty null and void.



Carefully **READ** the instruction manual before commissioning.



Disconnect the power supply before performing any maintenance



Wear safety footwear



Wear protective gloves



**CAUTION:** risk of crushing



### OPERATOR.

this symbol indicates information or procedures concerning the machine operator. Procedures within the competence of the person in charge and trained on machine operation, use and routine maintenance



### QUALIFIED TECHNICIAN.

this symbol indicates information or procedures concerning the machine maintenance operator. Installation, commissioning and extraordinary maintenance (electrical/mechanical) procedures for a qualified and authorised person.

## 1.2 - GENERAL INFORMATION

These assembly instructions are an integral part of the product and are intended for assembly personnel, operators involved in product operation and maintenance technicians.

The product description contains instructions on the installation and maintenance of the system and on the rules of conduct to operate safely and prevent damage from being caused to people and property. The official language chosen by the manufacturer is: Italian.

This manual reflects the condition of the equipment at the time of delivery. **HC2 S.r.l** reserves the right to make any changes it deems appropriate to the mass production at any time and to update the relevant manuals without being obliged to update previous productions and manuals, as well as to inform users of previously supplied equipment.

Attached are the specific manuals of the various machine components supplied by **HC2 S.r.l** but produced by third parties. Refer to these specific manuals for anything not indicated in these instructions.



### CAUTION:

**THE MANUFACTURER ASSUMES NO LIABILITY FOR ANY DAMAGE CAUSED TO PEOPLE OR PROPERTY DUE TO:**

- Improper equipment use
- Use by unsuitable personnel (not authorised and/or not trained)
- Power supply defects
- Poor maintenance on system components
- Equipment changes not authorised by the manufacturer
- Use of non-original spare parts
- Components supplied by the manufacturer being replaced with other components having different technical features from those in the project
- Failure to comply with these instructions
- Failure to comply with the safety regulations
- Disassembled or bypassed protective casings or safety devices supplied with the product



### N.B.:

**However, the general warranty conditions remain those given in the sales conditions.**

**The methods of how the Customer can exercise their warranty right are indicated in said sales contract.**

The manufacturer will not be held liable for damage attributable to the user's failure to observe these installation instructions and the warranty conditions may be invalidated.

### This manual:

- is an integral part of the supply and must be carefully read to use the gate correctly, in compliance with the essential safety requirements;
- is drafted by **HC2 S.r.l** and presents the necessary technical information to carry out all the procedures correctly in safe conditions;
- must be stored with care (e.g. in a transparent and watertight casing to prevent its deterioration) and must

accompany the machine throughout its life, including any ownership changes.

- The manual must be kept in a protected place that is easily accessed by personnel using the product;
- Unless otherwise agreed when placing the order, the manufacturer will provide the purchaser with an original hard copy of this manual. In case of loss or deterioration or if additional copies are required, the purchaser and/or user can request them from **HC2 S.r.l.**, providing the info shown on the product nameplate. The price in force at the time of the request will be applied to the additional copies.
- is originally written in Italian. No liability is accepted for translations into other languages, non-compliant with the original meaning and validated by **HC2 S.r.l.**
- was prepared by **HC2 S.r.l.** and any use of the texts and illustrations in this publication must be specifically authorised by **HC2 S.r.l.**

### CAUTION:



**A copy of this manual and its attachments must always be available to the technician.**

**Some images in this manual show the product with guards, casings and other types of protection removed and/or opened for the sole purpose of illustrating the characteristics and operation of the product in detail. It is forbidden to use the gate with the safety protections and devices removed, bypassed or disabled.**

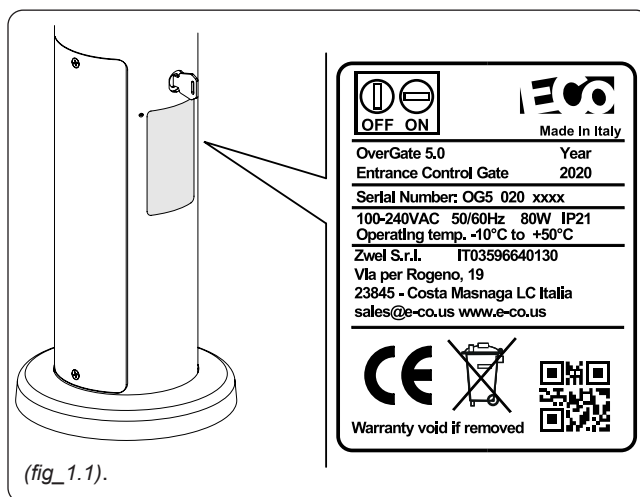
## 1.3 - USING THIRD-PARTY COMPONENTS

Any third party products or components must be previously approved by **HC2 S.r.l.** and any type of tampering or unauthorised replacement with non-original components can be dangerous for the safety of the operator and relieve **HC2 S.r.l.** from any liability.

## 1.4 - CHANGES IN HARDWARE

No changes can be made to the hardware without written permission from **HC2 S.r.l.** and any unauthorised hardware changes will render the warranty null and void.

## 1.5 - CE MARKINGS



**1.6 - EC DECLARATION OF CONFORMITY**

<b>Manufacturer</b>	<b>HC2 s.r.l.</b>
<b>Address:</b>	Registered office: Via C.A. Dalla Chiesa, 74 20037 Paderno Dugnano (MI) Italia
	<b>Production site:</b> Via delle Valli, 1 20847 Albate (MB) Italia
<b>Product</b>	Automated gate
<b>Trade name</b>	OverGate 5.0
<b>Serial number</b>	See the front cover of this manual
<b>Year of manufacture</b>	See the front cover of this manual

The above mentioned machine has been designed, developed and manufactured in compliance with the essential requirements set forth in:

- Directive 2006/42/EC on Machinery
- Directive 2014/30/EU on Electromagnetic Compatibility
- Directive 2014/35/EU on Low Voltage devices
- Directive 2015/863/EU RoHS

It is also hereby declared that the person authorised to constitute the technical file is:  
Mr. Valerio Bezzi

Albate, 21 December 2020  
L'A.D.



.....



## 2 - PRODUCT DESCRIPTION

### 2.1 GENERAL INFORMATION

The **OverGate 5.0** is a motorised product developed to control and manage the flow of people and to prevent its misuse.

The **OverGate 5.0** works in either direction thanks to simple commands; it can open clockwise and anti-clockwise and is fitted with an antipanic system.

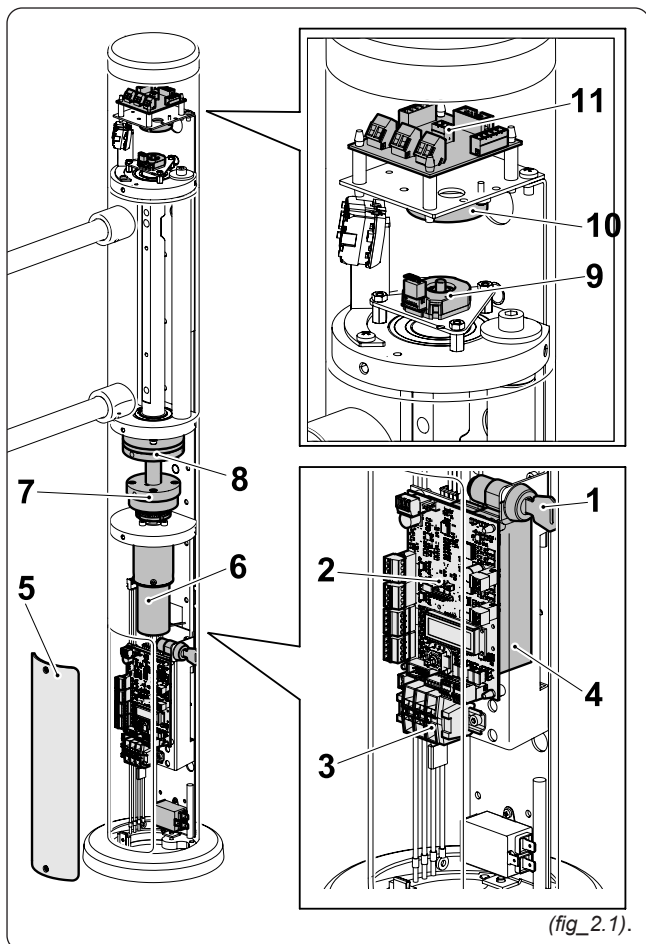
The opening function can be activated by:

- remote control;
- photocell;
- radar.

The **OverGate 5.0** can be supplied (optional) with an illuminated acrylic gate arm.

**Main components of the OverGate 5.0** (fig. 2.1)

1. OverGate 5.0 switch-on key
2. Control logic board
3. Terminal block for power line
4. Stabilised power supply unit
5. Cover to access the electronics
6. Motor lock
7. Torque limiter
8. Brake lock
9. Encoder
10. Buzzer
11. Replicator board



### 2.2 TECHNICAL SPECIFICATIONS

#### 2.2.1 - Operation

Transit is bi-directional and controlled electronically.

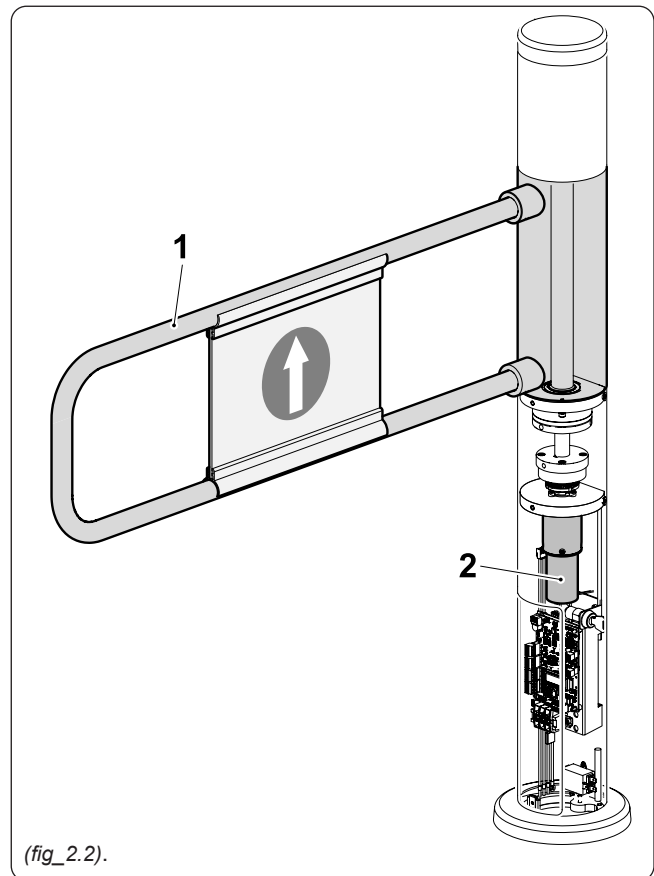
The standard model is preset for closed passageway that can only be opened when an authorisation signal is received.

An alarm is activated (in all models and with the standard parameter setting) when the gate arm is forced without authorisation.

#### 2.2.2 - Mechanism

The mechanism with the motor is found in the column.

The gate arm (pos. 1 - fig. 2.2) is moved by a 24V DC motor (pos. 2 - fig. 2.2) coupled with a mechanism that is fitted with an antipanic system that allows the gate arm to be opened manually with adequate force.

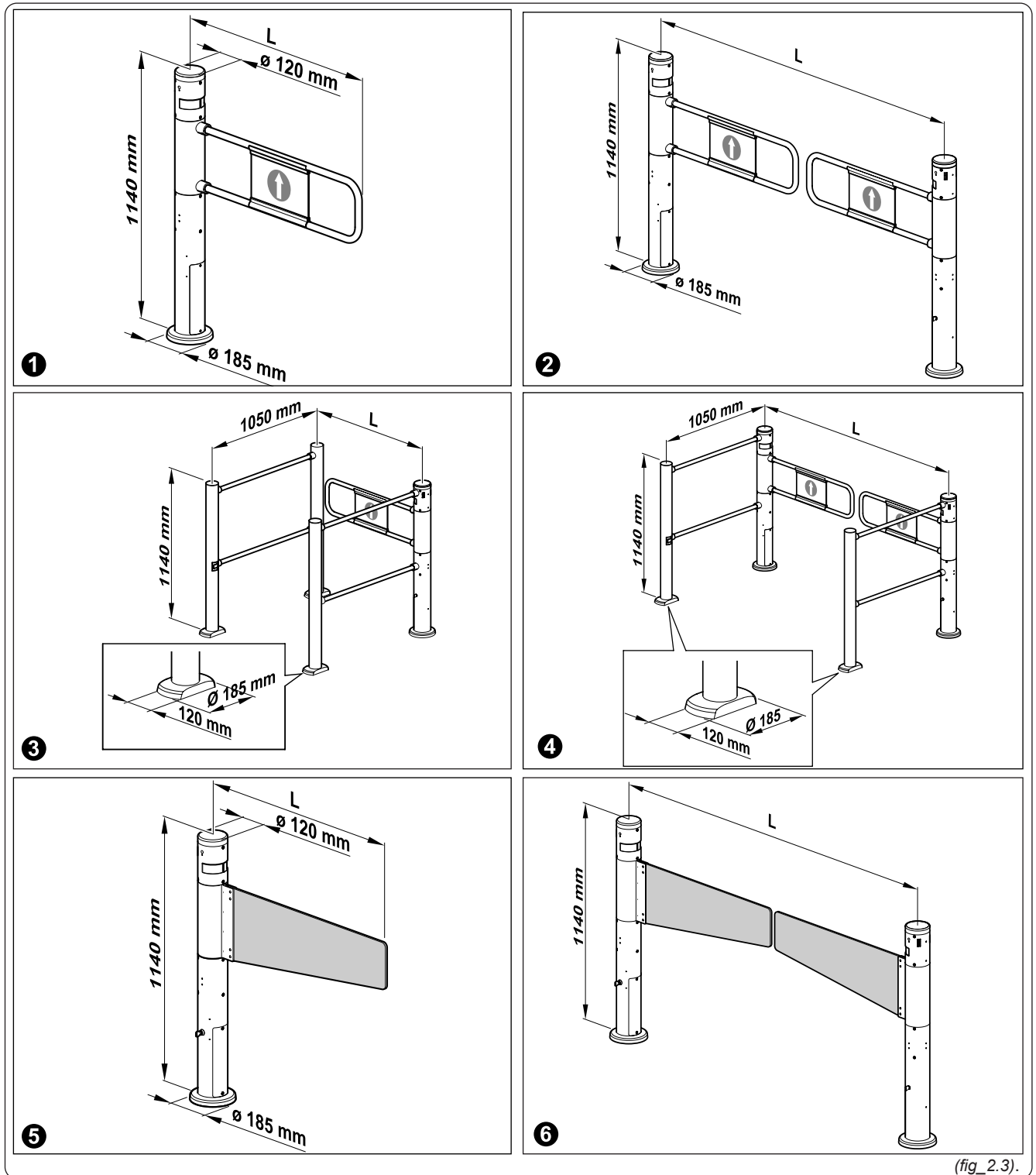


<b>Movement:</b>	bidirectional and motorised	
<b>Material</b>	column	Mirror-polished chromed, nickel-plated or painted steel
	gate arm:	Mirror-polished chromed, nickel-plated or painted steel. Aluminium, polycarbonate or acrylic
	table:	Plastic



**2.2.3 - Dimensions (fig. 2.3)**

Pos.	Model (nominal values in mm)	Gate Arm	Depth	Height	Maximum width
1	Standard single with tubular gate arm	mm 900	mm 185	Maximum width	mm 960
2	Standard double with tubular gate arm	mm 900	mm 185	mm 1140	mm 2070
3	With single photocell kit	mm 900	mm 185	mm 1140	mm 1050
4	With double photocell kit	mm 900	mm 185	mm 1140	mm 2070
5	Standard single with acrylic gate arm	mm 900	mm 1235	mm 1140	mm 960
6	Double with acrylic gate arm	mm 900	mm 1235	mm 1140	mm 2070



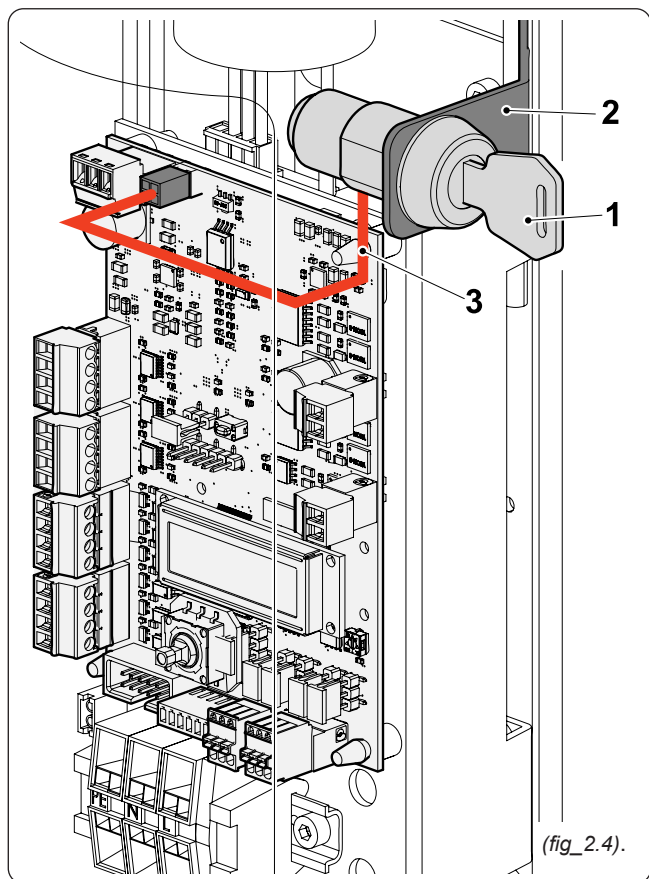
(fig\_2.3).



### 2.2.4 - Switch-on key

Access to the switch-on key is found on the outer side of **OverGate 5.0**. Inserting the key (pos. 1, Fig. 2.4) and turning it, controls the power (pos. 3, Fig. 2.4) to the control board.

The key block is secured inside the column with a special bracket (pos. 2, Fig. 2.4). This allows the column of the **OverGate 5.0** to be removed without having to remove the key block.



### 2.2.5 - Technical data

<b>Power supply:</b>	Single-phase 100-240 V AC @ 50/60 Hz		
	Consumption mainly depends on the installed control kit.		
	<b>Current (A)</b>		
<b>Model</b>	Peak	With anti-panic alarm	Standby
Standard	0,12	0,31	0,11
with radar kit	0,12	0,31	0,11
with photocell kit	0,12	0,31	0,11
<b>Control board power supply voltage:</b>	24 V DC		
<b>Power cut:</b>	<p>In the event of a power cut, the gate operates as follows:</p> <ul style="list-style-type: none"> <li>■ The gate arm remains in the position reached when the power is disconnected;</li> <li>■ The gate arm rotates freely since the torque limiter disconnects the motor shaft from the shaft that supports the gate arm and the braking system remains without power.</li> </ul>		
<b>Temperature</b>	operational:	-10 to +50 °C @ 20 to 90% RH (non-condensing)	
	transport and storage:	-20 to +85 °C @ 10 to 95% RH	
<b>IP Rating:</b>	IP21		



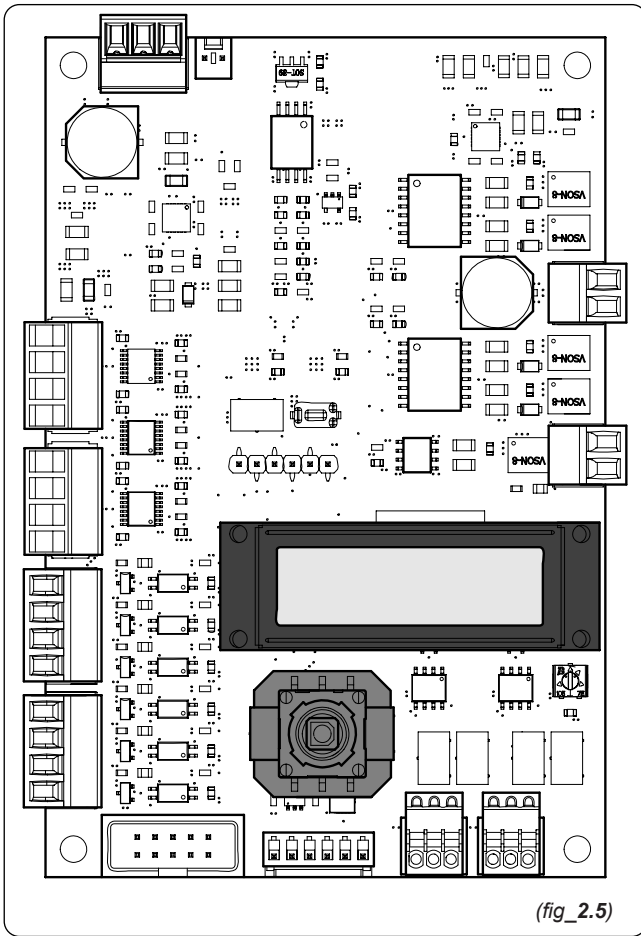
## 2.3 CONTROL LOGIC BOARD

### 2.3.1 - Description

The board (fig. 2.5) controls the operation of the **OverGate 5.0** and is found inside the column. It is accessed from a panel found in the bottom part of the column. It is an electronic board powered at 24V DC.

When the board functions correctly this is indicated by two red LEDs on the board (see par. 2.3.4 on page 13)

Figure 2.5 shows the control board that indicates the conventional joystick directions used throughout this manual.

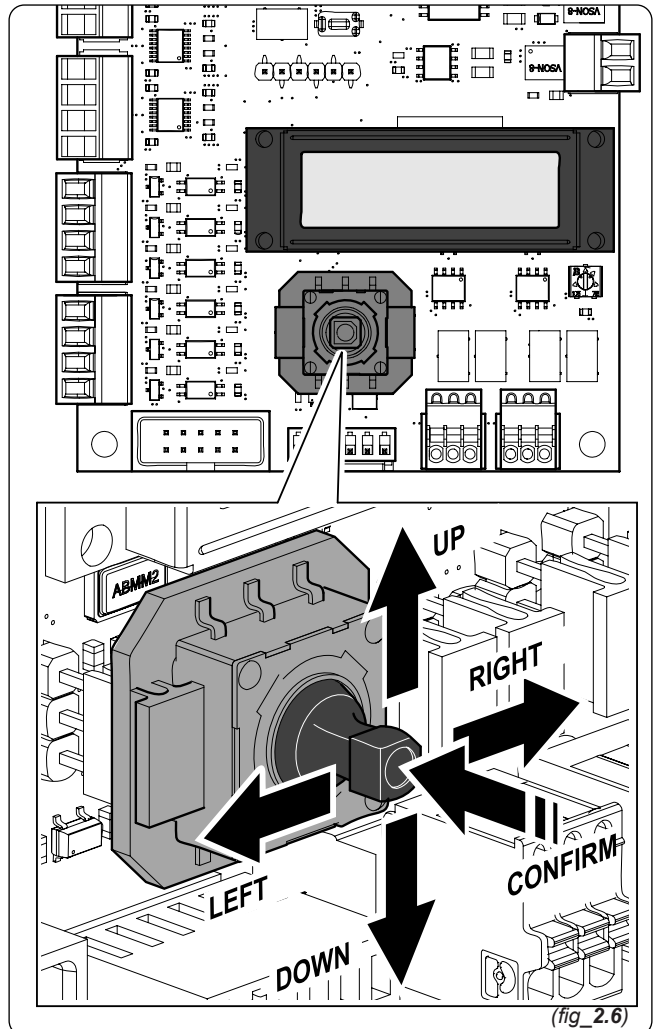


(fig\_2.5)

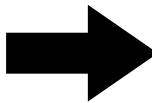
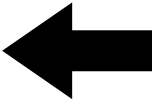

### 2.3.2- User interface

The user interface consists of an LCD display with adjustable brightness by means of a trimmer and a joystick (fig. 2.6) to navigate within the configuration menu of the **OverGate 5.0**.

The display also shows the error messages or the gate status.



(fig\_2.6)

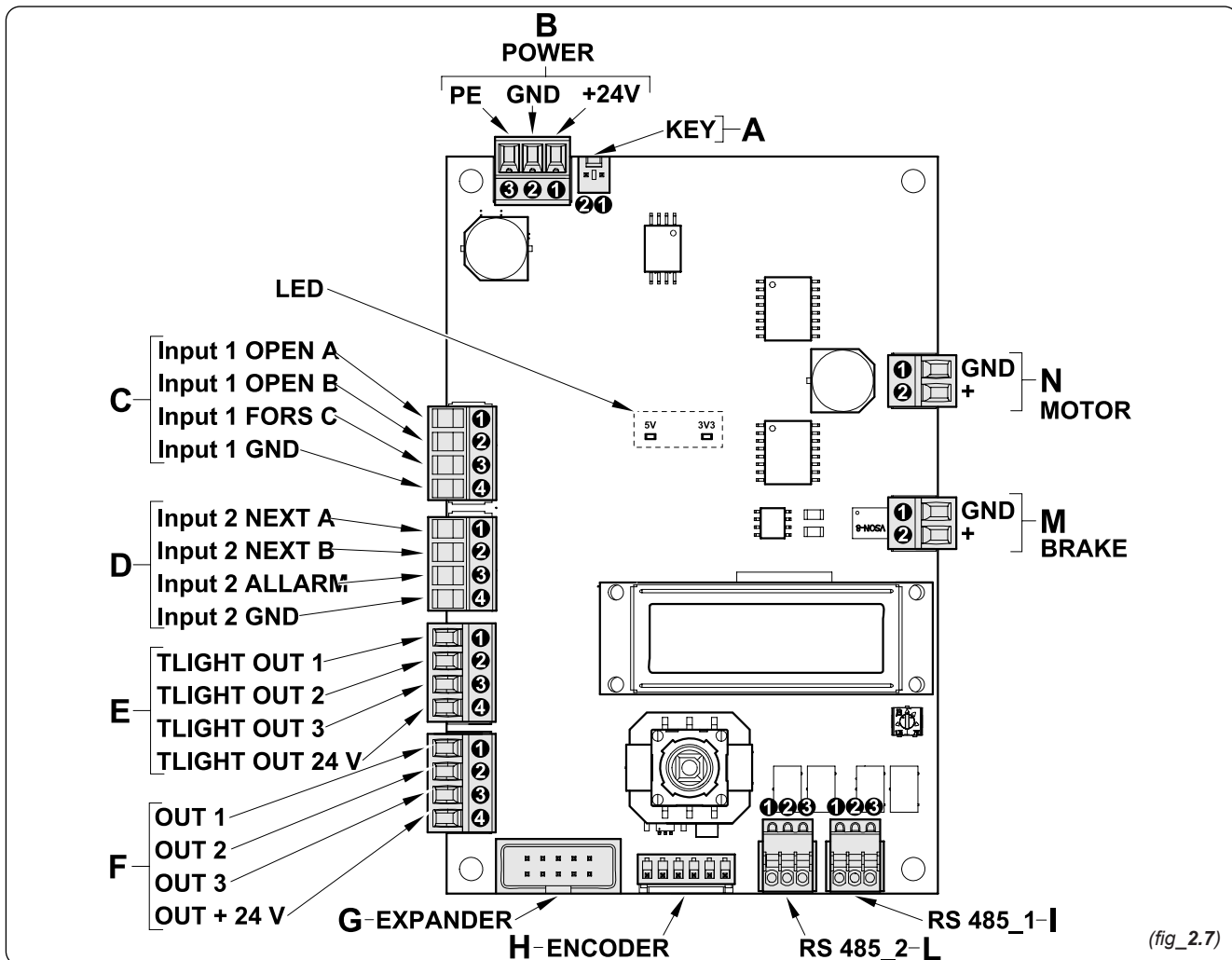
	<p><b>RIGHT - RH</b> NEXT FUNCTION <b>Action: Push the joystick to the right.</b> Allows you to:</p> <ul style="list-style-type: none"> <li>■ move forward in the menu;</li> <li>■ increase the relative value.</li> </ul>
	<p><b>LEFT - LH</b> PREVIOUS FUNCTION <b>Action: Push the joystick to the left.</b> Allows you to:</p> <ul style="list-style-type: none"> <li>■ move back in the menu;</li> <li>■ decrease the relative value.</li> </ul>
	<p><b>CONFIRM - OK</b> CONFIRM THE SELECTED FUNCTION <b>Action: Press the joystick.</b> Allows you to:</p> <ul style="list-style-type: none"> <li>■ enter the edit mode of the selected parameter and confirm the set value.</li> </ul>





2.3.3 - Connectors

Diagram of the position of the connectors on the board (fig. 2.7).



(fig\_2.7)

KEY				
Conn.	Pin	Wire colour	Signal	Description
A	1	GY - Grey	N.A.	KEY
	2	GY - Grey	N.A.	

MAIN POWER				
Conn.	Pin	Wire colour	Signal	Description
B	1	BN - Brown	+ 24 V DC	POWER
	2	WH - White	GND	
	3	PB - Yellow / Green		

Input 1				
Conn.	Pin	Wire colour	Signal	Description
C	1	N.A.	Start opening cycle	OPEN A
	2		Start opening cycle	OPEN B
	3		Brings or keeps the gate arm in C with the alarm active	FORCE IN C + ALARM
	4		GND	

Input 2				
Conn.	Pin	Wire colour	Signal	Description
D	1	N.A.	Start opening cycle	NEXT* A
	2		Start opening cycle	NEXT* B
	3			ACTIVATES ALARM
	4		GND	

\* The NEXT command has priority over the OPEN command

Tlight OUT				
Conn.	Pin	Wire colour	Signal	Device
E	1	Green	Out 1	LAMP
	2	Red	Out 2	
	3	Blue	Out 3	
	4	NPN	+ 24 V DC	







OUT				
Conn.	Pin	Wire colour	Signal	Device
F	1	N.A.	Buzzer	
	2		Count	
	3		Arm in C	
	4		+ 24 V DC	

EXPANSION				
Conn.	Pin	Wire colour	Signal	Description
G	1	RESERVED	RESERVED	EXPANSION
	2	RESERVED		
	3	RESERVED		
	4	RESERVED		
	5	RESERVED		
	6	RESERVED		
	7	RESERVED		
	8	RESERVED		
	9	RESERVED		
	10	RESERVED		

ENCODER				
Conn.	Pin	Wire colour	Signal	Description
H	1	RESERVED	RESERVED	ENCODER
	2	RESERVED		
	3	RESERVED		
	4	RESERVED		
	5	RESERVED		
	6	RESERVED		

RS 485_2				
Conn.	Pin	Wire colour	Signal	Device
I	1	RESERVED	SK	
	2	RESERVED	A	
	3	RESERVED	B	

RS 485_1				
Conn.	Pin	Wire colour	Signal	Device
L	1	RESERVED	SK	
	2	RESERVED	A	
	3	RESERVED	B	

BRAKE				
Conn.	Pin	Wire colour	Signal	Device
M	1	Reserved	GND	not used
	2	Reserved	+ 24 V DC	

MOTOR				
Conn.	Pin	Wire colour	Signal	Device
N	1	BK - Black	GND	MOTOR
	2	RD - Red	+	

### 2.3.4 - LEDs

There are 2 red LEDs on the control logic board (5V and 3V3). See fig. 2.7.

LED	Status
5V	ON
3V3	ON

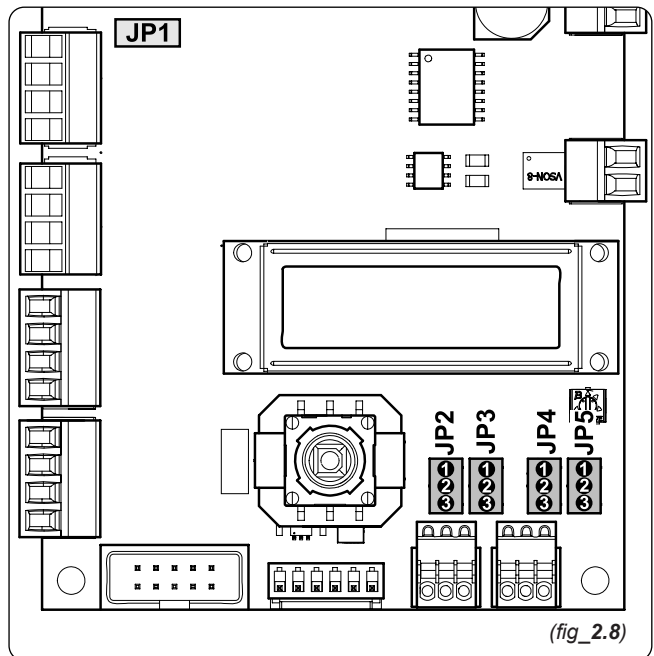
### 2.3.5 - Jumper

The following table indicates the configurations of the Jumpers.

RS 485				
Jumper	Jumpers Configuration			Operating mode
JP2	1 = OFF	2 = ON	3 = ON	
JP3	1 = OFF	2 = ON	3 = ON	
JP4	1 = OFF	2 = ON	3 = ON	
JP5	1 = OFF	2 = ON	3 = ON	
			3 = ON	



**CAUTION:** Do not modify the position of the jumpers on the **JP1** terminals (Fig. 2.8).

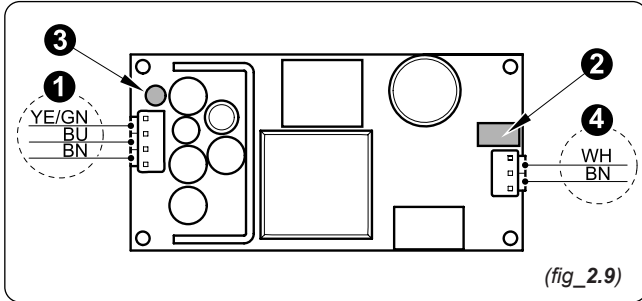




### 2.4 STABILISED POWER SUPPLY UNIT

The control board is powered by a power supply unit (Fig. 2.9) having the following characteristics:

I/O	Voltage levels	Note
Input	110/220 V AC @ 50/60 Hz	
Output	24 V DC	2,7 A max



Pos.	Description
1	Cables from the main terminal
2	FS1" - Conquer type of fuse UBM 4A/250VAC / 5ØX20mm / Quick Acting High Breaking Capacity
3	"LED1" - Green LED that indicates correct operation.
4	24V DC stabilised to the AL021 control logic board

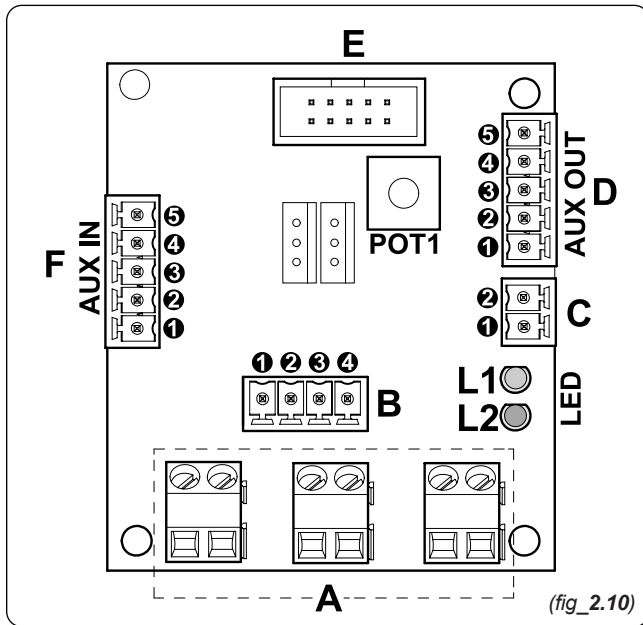
(fig\_2.10)



## 2.5 AL002 REPLICATOR BOARD

The AL002 replicator board (fig. 2.10) is found in the top part of the OverGate 5.0, under the cover, and replicates the various inputs and outputs towards the control board.

The gate can also be powered from the top, by connecting a specific cable (already found in the machine) in the terminal block for the power supply line



### 2.5.1 - LEDs

There are 2 LEDs (L1 and L2) on the AL002 replicator board (fig.2.10).

LED	LED colour	Function
L1	green	Its intensity indicates the volume of the buzzer.
L2	red	AL002 power supply presence

### 2.5.2 - Connectors

Conn.	Pin	Cable/Signal	Description
A	F	BN - Brown	Main power supply of the gate.
	N	BU - Blue	
	PE	GNYE - Yellow/ Green	

Conn.	Pin	Cable/Signal	Description
B	1	I1	Converter
	2	O1	
	3	I2	
	4	O2	

Conn.	Pin	Cable/Signal	Description
C	1	+ 24 REG	Buzzer power supply (+24V DC)
	2	BUZZ	GND

Conn.	Pin	Cable/Signal	Description
AUX OUT	1	+24	Reserved
	2	LIGHTA	
	3	LIGHTB	
	4	AUX	
	5	BUZZER	

Conn.	Pin	Cable/Signal	Description
E	1	Reserved	EXP - To the gate control logic board
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		

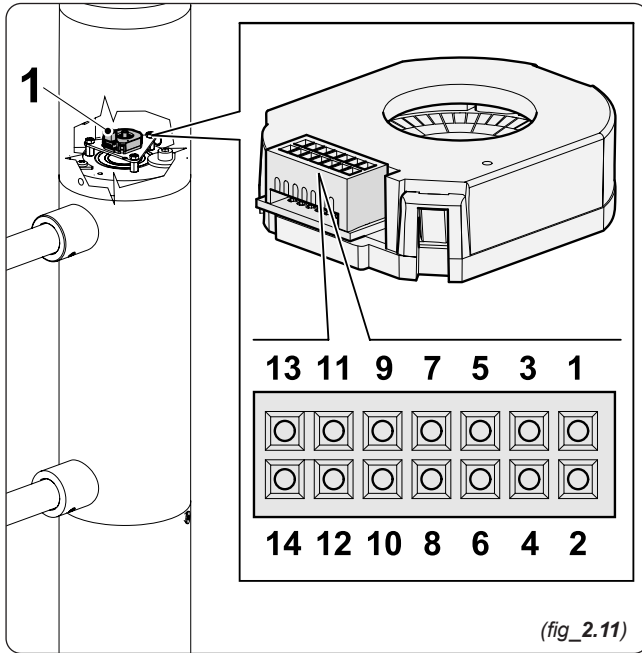
Conn.	Pin	Cable/Signal	Description
AUX IN	1	OPEN A	Opening signal in direction A
	2	OPEN B	Opening signal in direction B
	3	NEXT A	NEXT signal in direction A
	4	NEXT B	NEXT signal in direction B
	5	GND	Earth signal

Pos.	Code	Description
POT1	F/N/PE	Trimmer to adjust the volume of the buzzer.



### 2.6 ENCODER

The encoder is found in the top part of the **OverGate 5.0** column (pos. 1, fig. 2.11). The figure shows the encoder and its connector.



(fig\_2.11)



**CAUTION:** The connector requires a specific coupling position that must be complied with when inserting the cable.

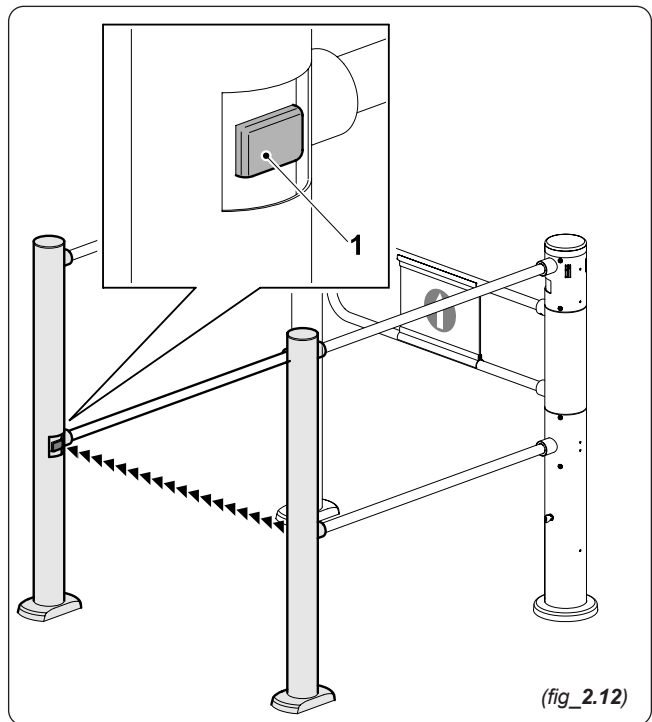
### 2.7 OPTIONAL KITS

#### 2.7.1 - Photocell kit

The **OverGate 5.0** is set up for operation with photocells, by using an optional kit. These are set up in two positions:

- The photocell is placed in a separate column (pos. 1 fig. 2.12). The cables of this photocell are passed inside the lateral tubular.

Refer to the manual attached to the "Photocells Kit" for more information about the photocells and their installation.

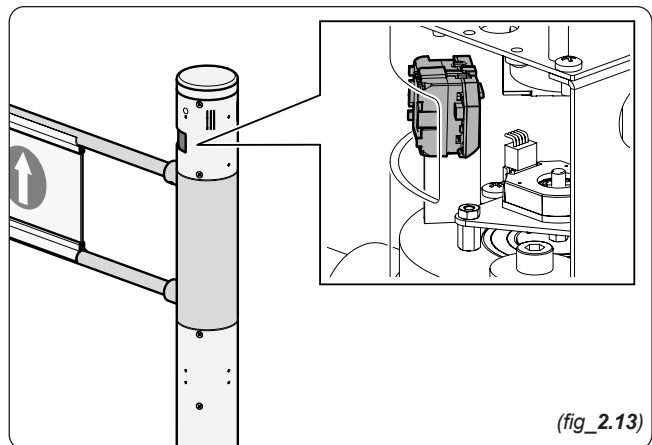


(fig\_2.12)

#### 2.7.2 - Radar kit

The **OverGate 5.0** is set up to also work with radar, by using an optional kit. The **OverGate 5.0** can function with two radars positioned in the top part of the main body.

Refer to the manual attached to the "Radar Kit" for more information about the radars and their installation.



(fig\_2.13)

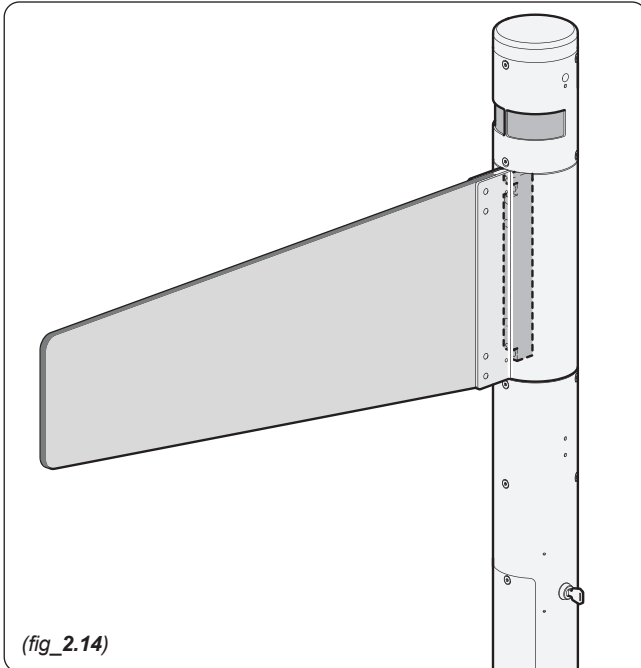


### 2.7.3 - Illuminated acrylic gate arm

The **OverGate 5.0** is set up to allow the acrylic gate arm to be illuminated by means of a LED (fig. 2.14).

This LED light is housed in line with the top bracket that supports the gate arm itself.

Refer to the manual attached to the "Lighting kit" for further information regarding the panel lighting.





### 3 - SAFETY INSTRUCTIONS



**Important personal safety instructions are found in this chapter.**

It is recommended to CAREFULLY READ all that is written to understand the warnings.

Failure to comply can cause personal injury or material damage.

#### 3.1 GENERAL SAFETY WARNINGS

##### 3.1.1 - Introduction

This manual must be complied with and referred to for any product safety-related issue.

##### 3.1.2 - General warnings

Product safety and therefore, its correct installation, is based on compliance with the technical specifications, the guidelines provided in this manual and correct installation in accordance with a professional, safe and compliance of use manner, specifically indicated in the technical documentation provided with HC2 S.r.l. products.

##### 3.1.3 - Appointed Personnel

Qualified and authorised personnel must carry out the installation, commissioning, maintenance and disposal.

The personnel in question must use the correct tools.

#### 3.2 USER SAFETY WARNINGS

Keep the manoeuvring areas of the gate clear and clean; check that the operating range of any photocells is clear.

Children must be supervised to make sure they do not play with the device and the control devices or stop in the manoeuvring area of the gate. Keep the remote control devices (if any) or any other control device out of their reach to prevent the equipment from being activated unintentionally.

The device is not intended to be used by persons (including children) with reduced physical, sensory, mental capabilities or with little experience and knowledge unless they are supervised or instructed on using the device by the person responsible for its safety.



The user is **FORBIDDEN** from performing any OPERATION THAT ARE NOT SPECIFICALLY ASSIGNED. **CONTACT TECHNICAL ASSISTANCE** for repairs, changes to settings and extraordinary maintenance.

#### 3.3 RESIDUAL RISKS

The installer and the customer are hereby informed that once the **OverGate 5.0** is installed, its activation can generate the following residual risk:

**Residual risk:** The **OverGate 5.0** gate arm risks opening on people, animals or things that are within its operating range.

**Exposure frequency:** Accidental

**Extent of damage:** Minor injuries (usually reversible).

**Adopted measures:** Before commissioning the installation, you are obliged to make sure there are no people, animals or things within the operating range of the gate arm, whose safety could be compromised. Keep the manoeuvring areas of the gate clear and clean; check that the operating range of the photocell devices is clear.

Obligation to affix pictograms or written signs near the product that clearly inform about this residual risk.



### 3.4 RISK ASSESSMENT

Risk categories ranging from 1 to 8 (where 8 is the highest risk level) define the risk assessment.

RISK LEVEL	ACTIVITY	WHO IS AT RISK	HAZARDS	REQUIRED CHECK
1	Cleaning	Technicians or maintenance personnel	Incorrect use of cleaning substances	Compliance with hygiene standards
2	General installation	Installation personnel	Objects/Equipment in the installation area	Trained installation personnel
3	Maintenance - General maintenance	Installation personnel	Electric shock	Power cut / Trained service personnel
	Maintenance - Use of chemical adhesives	Personnel adjacent to the work area	Inhalation of chemicals	Compliance with health regulations
4	Commissioning	System technicians	Power supply / Moving parts	Isolate the power supply
8	Drilling the ground	Installation personnel	Emission of chips and noise	Obligation to wear protective equipment

### 3.5 SAFETY DEVICES

	OPERATING CONDITION	TYPE OF DEVICE
A	Electronic control of the speed of rotation	<b>The nominal speed of rotation is 2 s +/- 10% (90° stroke).</b> Electronic control of the speed of rotation by possibly varying the parameters of use with a joystick found on the control board so that the speed of rotation remains within identical parameters for every gate arm/mechanism, according to settings that have been chosen with respect to children and the elderly, while ensuring an adequate transit speed for the needs of modern supermarkets.
B	No voltage	In the event of a power cut, the gate arm can <b>move freely</b> . When the power is restored, if the gate arm has been moved from its "closed" position, it will automatically return to this position.
C	Impact	In the event of accidental impact with a person or object, the torque moment is less than 5 Nm with the motor stopping immediately.
D	Antipanic	If the gate arm is powered and in the closed position, it can be forced open with a thrust of <b>approximately 30 Nm (UNI EN 1125)</b> ; the buzzer is immediately activated (and if present, the light indicator too) and the gate arm automatically returns to the closed position after a programmable interval.

### 3.6 INFORMATION ON AIRBORNE NOISE

The **OverGate 5.0** has been designed and built to minimise airborne noise at the source.

The measurements carried out in a non-reverberant environment have indicated an equivalent level of less than 70 dB(A).



## 4 - TRANSPORT

### 4.1 UNPACKING



**CAUTION:** Make sure that all components are properly packed. **HC2 S.r.l.** cannot be held liable for damage that may occur during transport and installation.



**NOTE:** There may be several boxes, depending on the chosen set-up.



1 qualified technician

Personal protective equipment to be worn:



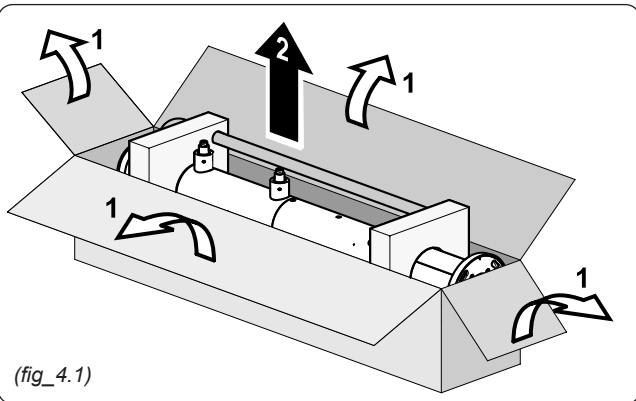
**CAUTION:** Wear protective gloves



**CAUTION:** Wear protective shoes

Open the box (or boxes) and extract its contents (fig\_4.1)

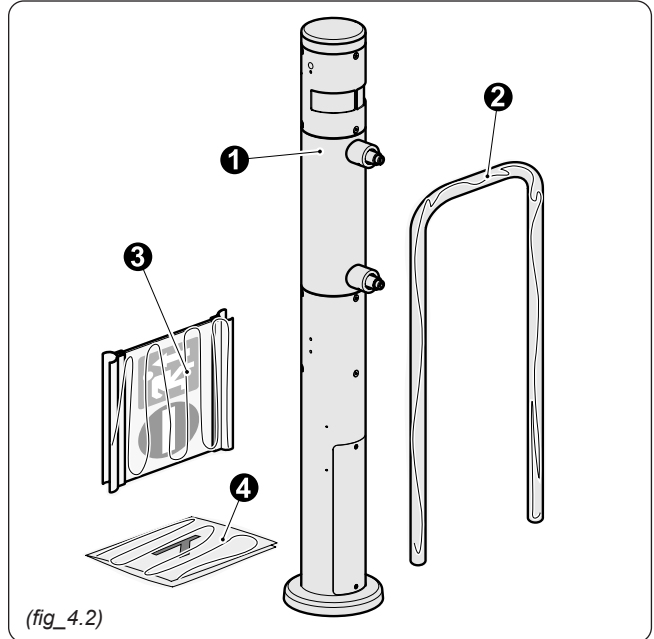
### 4.2 COMPONENTS



(fig\_4.1)

MODEL	CONFIGURATION	PACKAGING WEIGHT
OverGate 5.0	with 400 cm to 1200 cm gate arm	Kg. 28
OverGate 5.0	with 400 cm to 1200 cm gate arm + Radar kit	Kg. 28
OverGate 5.0	with 400 cm to 1200 cm gate arm + Single photocell kit	Kg. 48 (2 boxes)

### 4.2.1- Standard Overgate 5.0 with tubular gate arm

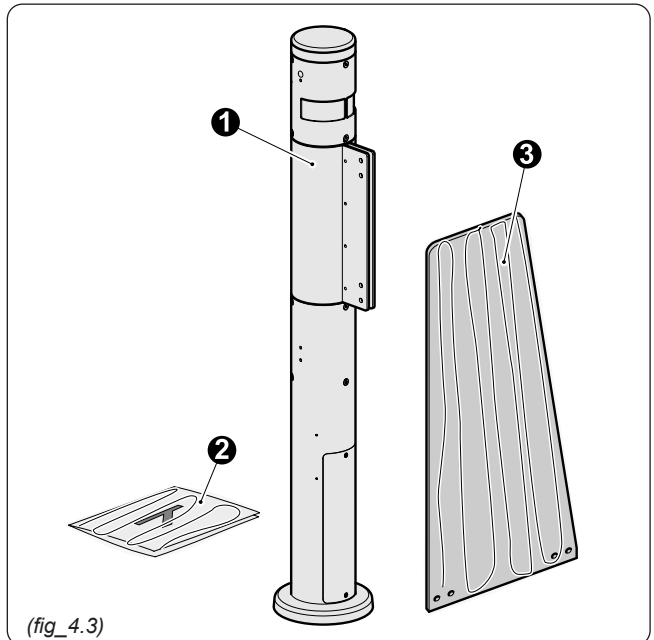


(fig\_4.2)

Box contents (fig\_4.2):

- 1 OverGate 5.0
- 2 Gate arm
- 3 Panel with instructions
- 4 Installation and maintenance manual

### 4.2.2- Standard Overgate 5.0 with plexiglass gate arm



(fig\_4.3)

Box contents (fig\_4.3):

- 1 OverGate 5.0
- 2 Installation and maintenance manual
- 3 Plexiglass gate arm



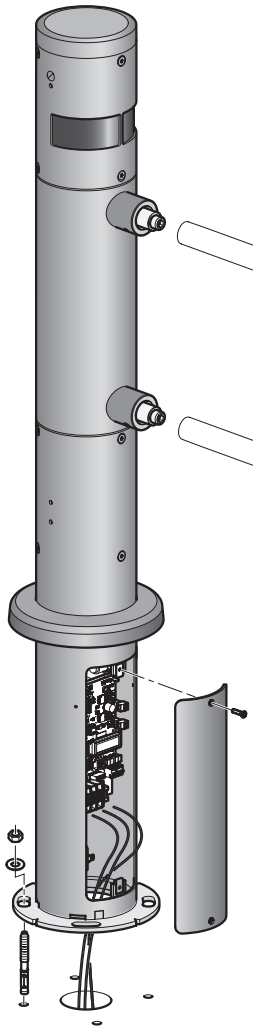
Once the product is unpacked, it must be handled with care and stored away from any risk of impact.



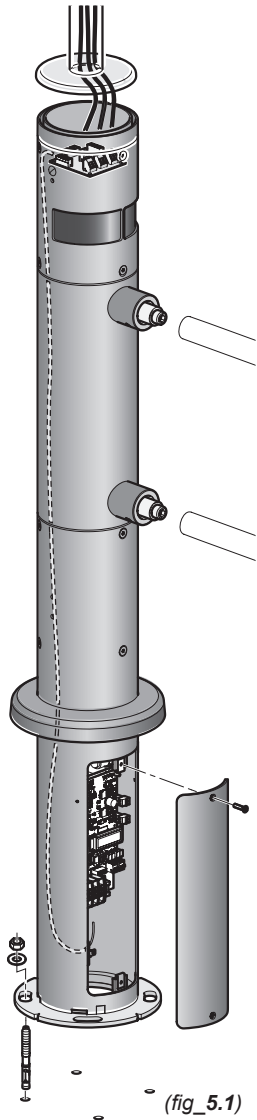


## 5 - INSTALLATION

### Power supply from the bottom



### Power supply from the top



(fig\_5.1)

The **OverGate 5.0** can be installed with its power supply from the bottom or the top (fig\_5.1).

### 5.1 SETTING UP THE SITE



**QUALIFIED PERSONNEL** must install the **OverGate 5.0** and implement all the electrical connections.

#### 5.1.1 - Atmospheric and environmental conditions of use

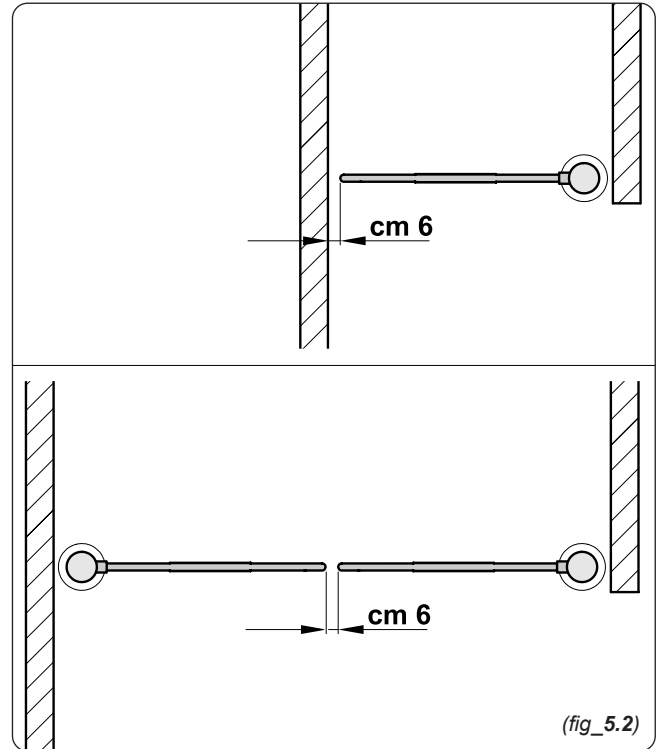
Operating environmental conditions:

-10 to +50 °C @ 20 to 90% RH (non-condensing).

- The **OverGate 5.0** must be installed indoors, i.e. protected from rain and any water splashes, as it is not protected from damage caused by any contact made with water.
- The **OverGate 5.0** must not be used in environments where potentially explosive atmospheres can be generated.

### 5.1.2 - Establishing the installation point

Maintain a distance of 6 cm between the end of the gate arm and the nearest obstacle, such as the wall, a barrier and any other unit (fig\_5.2)

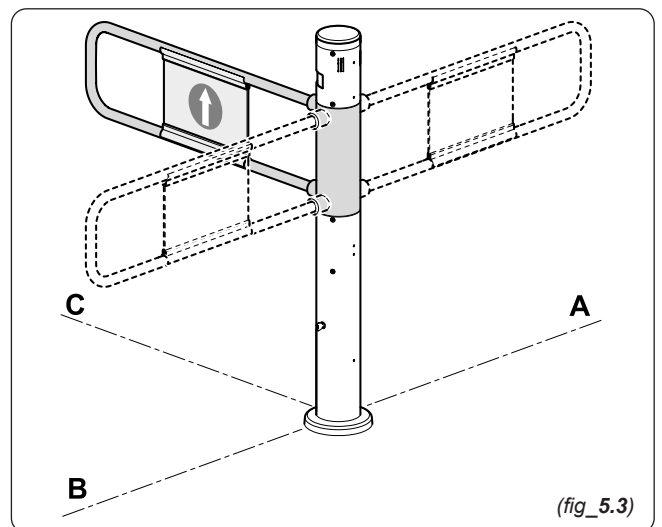


(fig\_5.2)

The **OverGate 5.0** can be used for various reasons: to control the flow of people (incoming and outgoing) or direct them towards differentiated routes.

Furthermore, the correct orientation and the mounting points of the **OverGate 5.0** must be noted with utmost precision.

The figures below indicate the operating modes and the conventional definitions of the opening directions of the **OverGate 5.0** to allow correct identification further on in this manual (fig\_5.3).

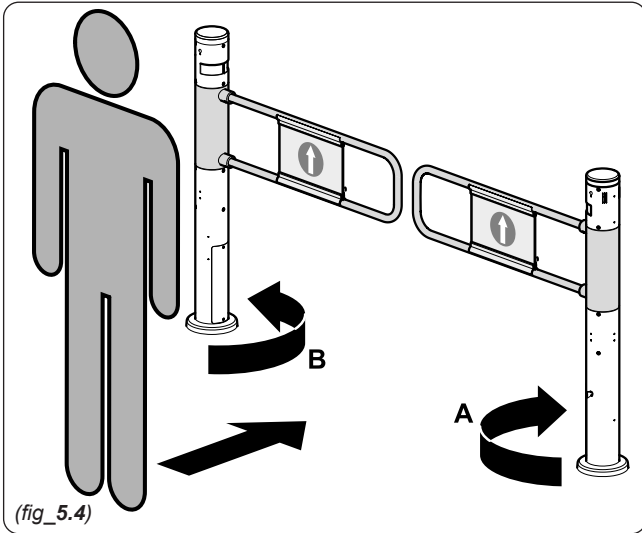


(fig\_5.3)

A = Open gate arm in position A

B = Open gate arm in position B

C = closed gate arm



Opening in direction A (clockwise) (fig\_5.4).  
Opening in direction B (anti-clockwise).

### 5.1.3 - Setting up the wiring

The **OverGate 5.0** requires two types of cables:

- Power cables;
- Cables for signal transmission.
- Follow the recommendations below when installing cables:
  - The earthing conductor must be adequate, in accordance with the standards in force.
  - Install the conduits for the power cables separately from those for the data transmission cables.
  - Install the conduits away from high voltage cables or cables with radio frequencies, electric motors and other machines.
  - Place the conduits as far away as possible from the anchor bores of the barrier in the ground.
  - The cables must come out of the conduit to reach the main terminal and avoid bends that are too tight, which could damage the cables.
  - Do not drag the cables on sharp edges as this will damage them.

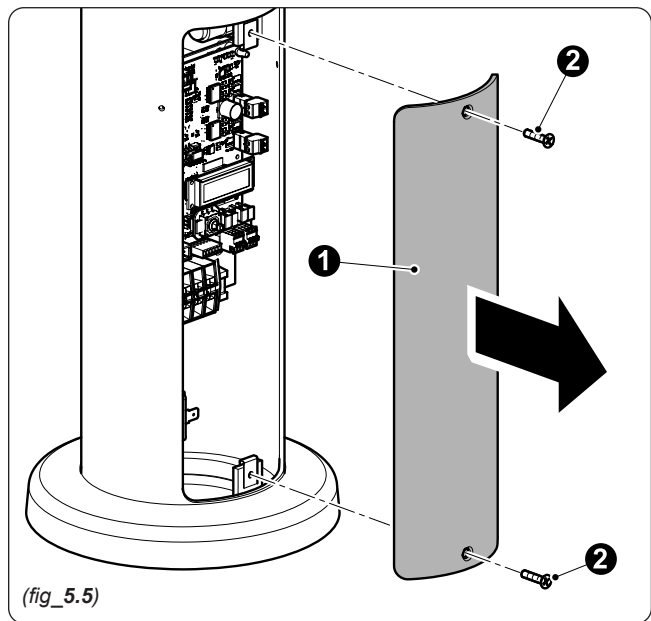
## 5.2 HANDLING

Upon receiving the **OverGate 5.0**, take it as close as possible to the installation area, using adequate equipment to transport it (e.g. trolley, pallet jack, etc.), if necessary.

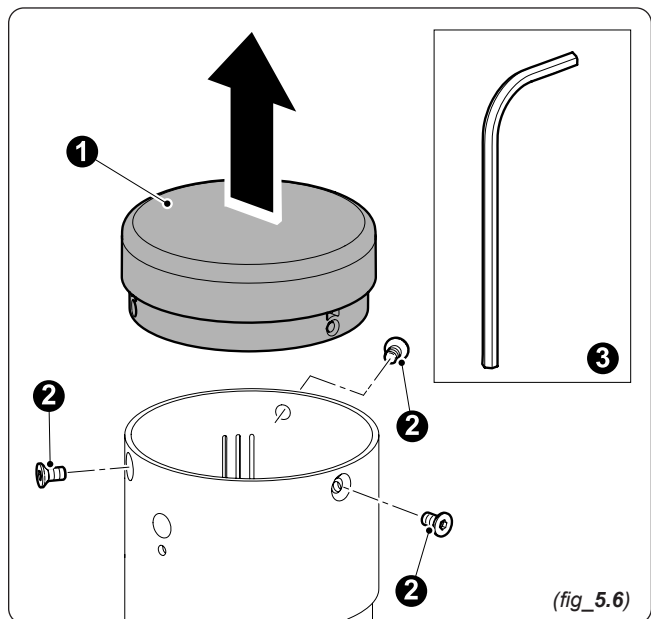
- The maximum weight that can be handled manually by an adult man is 25 kg, in accordance with the UNI ISO 11228 Standard.

## 5.3 FLOOR MOUNTING

- Remove the lower cover (pos. 1 fig\_5.4), which allows you to access the OverGate 5.0 logic, by unscrewing the indicated screws (pos. 2 fig\_5.4)



- Remove the top cover (pos. 1 fig\_5.5) by unscrewing the three screws (pos. 2 fig\_5.5) with an Allen key (pos. 3 fig\_5.6).

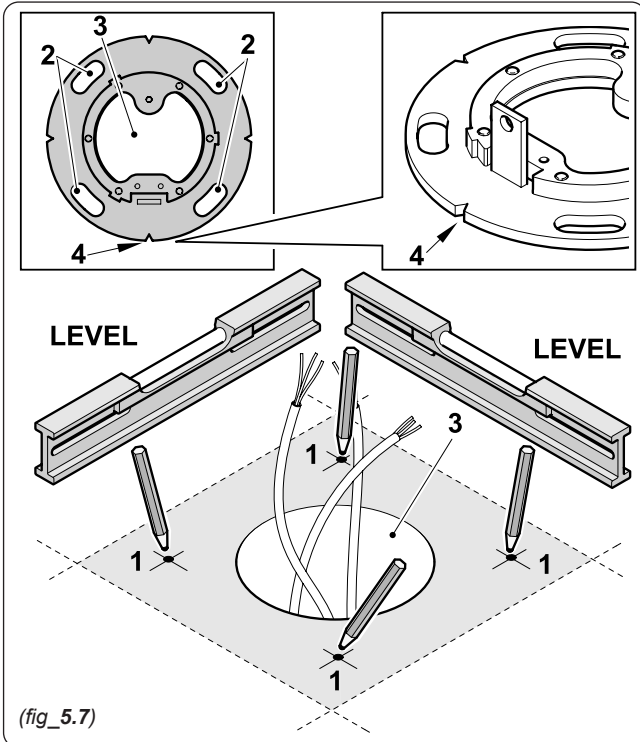




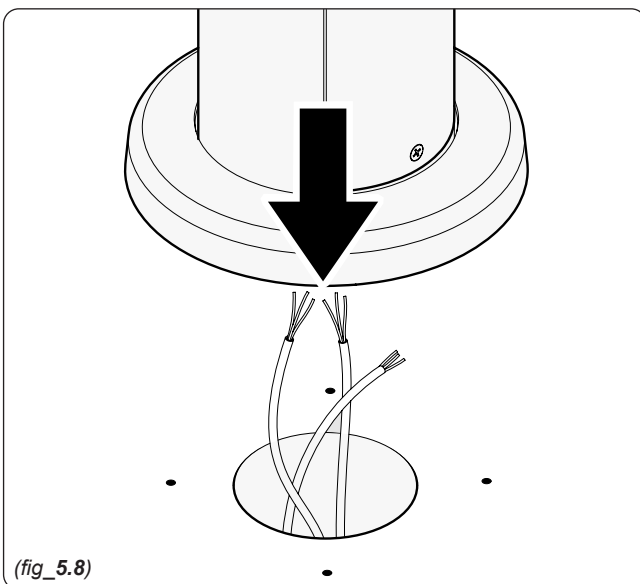
### 5.3.1 - Drilling the ground

The following guidelines are provided to ensure that the unit is positioned correctly.

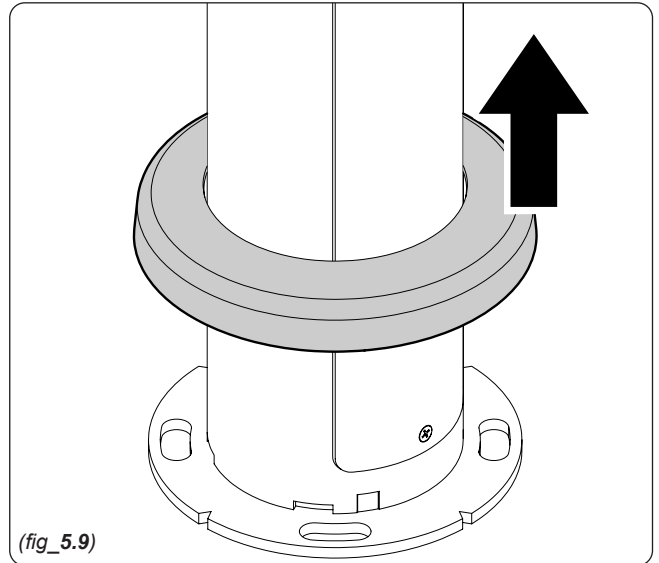
- Carefully mark the floor mounting points (pos. 1 fig\_5.7), while considering that they must be aligned with the slots of the OverGate 5.0 base plate (pos. 2 fig\_5.7).
- The point in pos. 4 fig\_5.7 indicates the closed gate "C" position. The point in pos. 2 fig\_5.7 indicates the ground anchor positions, whereas point (3) indicates the exit area of the electrical cables.



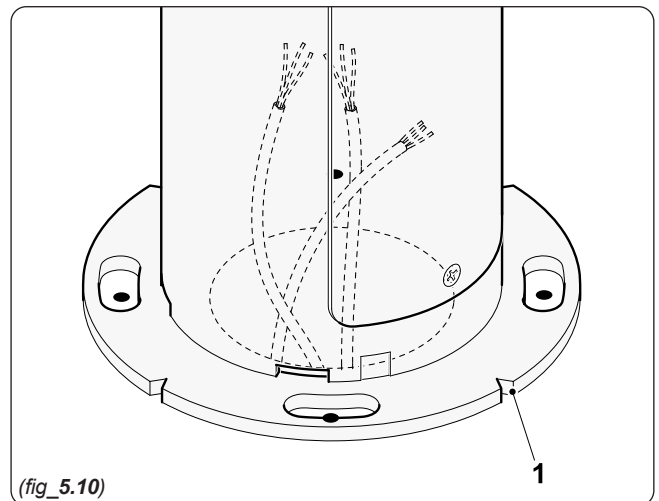
- If the installation is of multiple type, mark and check the mounting points and the cable positions before drilling for the mounts.
- Place the unit on the marked points (fig\_5.8).



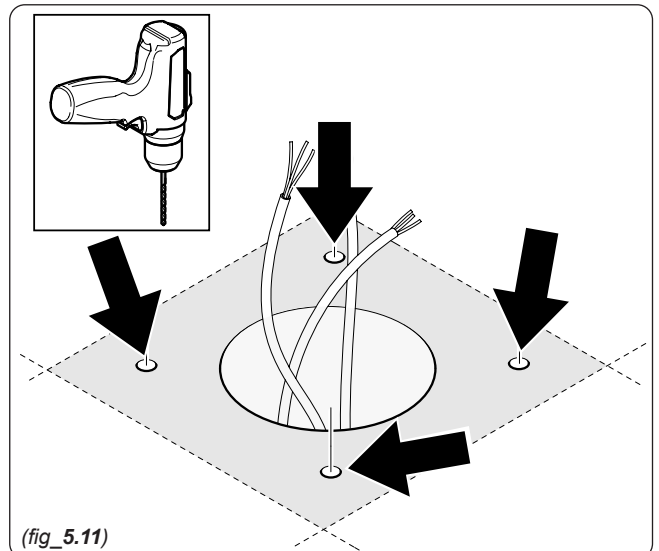
- Check that the holes of the bolts and cable exit area in the base of the unit are aligned with the markings on the ground.
- Lift the plastic cover off the base plate (fig\_5.9).



- Use the reference points on the base (pos. 1 fig\_5.10) to direct the unit.



- Move the unit away.
- FDrill the holes in the ground (fig\_5.11).



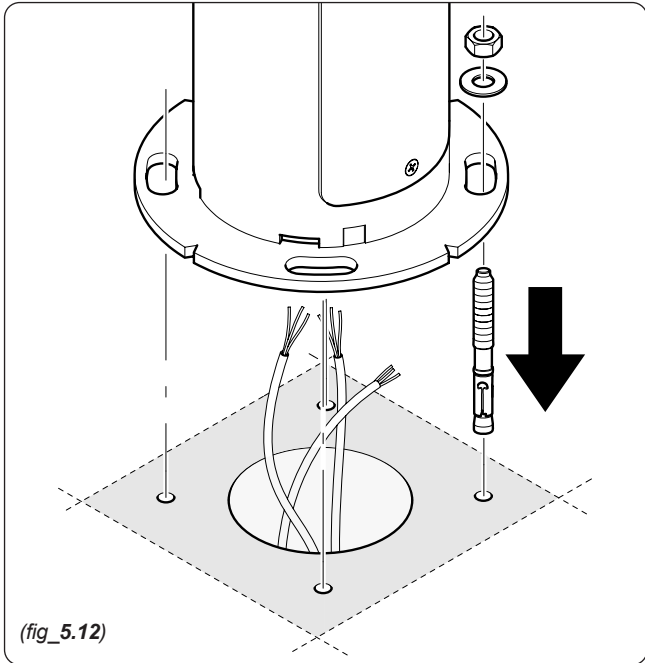


### 5.3.2 - Mounting

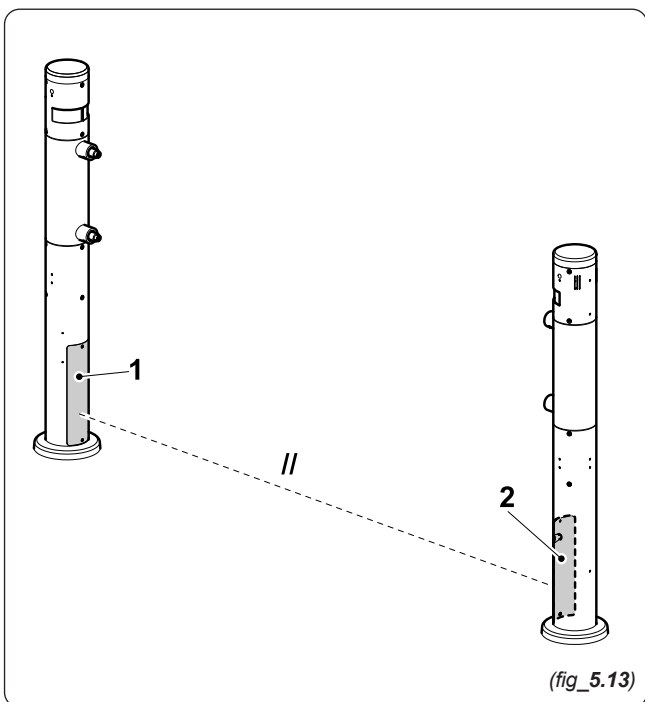


Use a Fischer plug to mount the unit and make sure that the anchor system is adequate to support the weight of the **OverGate 5.0**

- Insert the plugs into the bores previously drilled into the ground.
- Place the gate, taking care not to damage the cables.
- Fit the washers and the anchor bolts and tighten them (fig\_5.12). Make sure the product is perfectly vertical.



When installing the double **OverGate 5.0**, the access doors to the control logic board (pos. 1 fig\_5.13) must be front-facing and aligned.



### 5.4 POWER SUPPLY



The electrical system which the product is connected to must conform to the regulations in force. Before connecting the product to the mains or the electrical socket, make sure that:

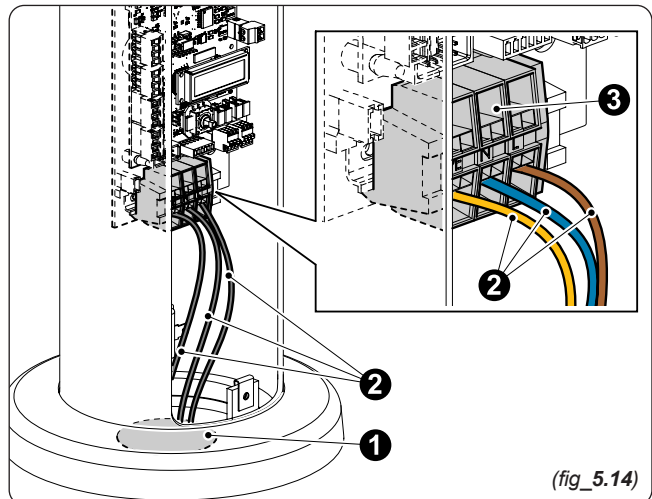
- the plate data (voltage and frequency) correspond to those of the electrical mains;
- the capacity of the system/conductors is adequate for the maximum power of the device. It is recommended to use a double-insulated multiple cable.

In accordance with the installation rules, a bipolar switch must be installed in the power supply network.

Electrical connections must only be implemented by authorised and specifically trained personnel.

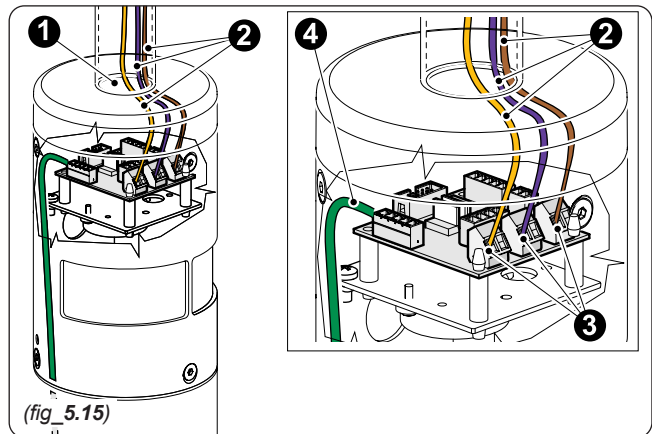
The installation of cables and connections with the equipment must conform to the instructions provided in this manual. **HC2 S.r.l.** cannot be held liable for damage resulting from failure to comply with the instructions provided in this manual. Separate the packaging materials and dispose of them separately, according to the national regulations.

The main power supply in the OverGate 5.0 can be installed from the bottom (fig\_5.14) through the base, or from the top through the cover (fig\_5.15).



Passing the power cable from the bottom (fig\_5.14):

1. Area available to pass the cables.
2. Main power supply cable.
3. Main terminal block.





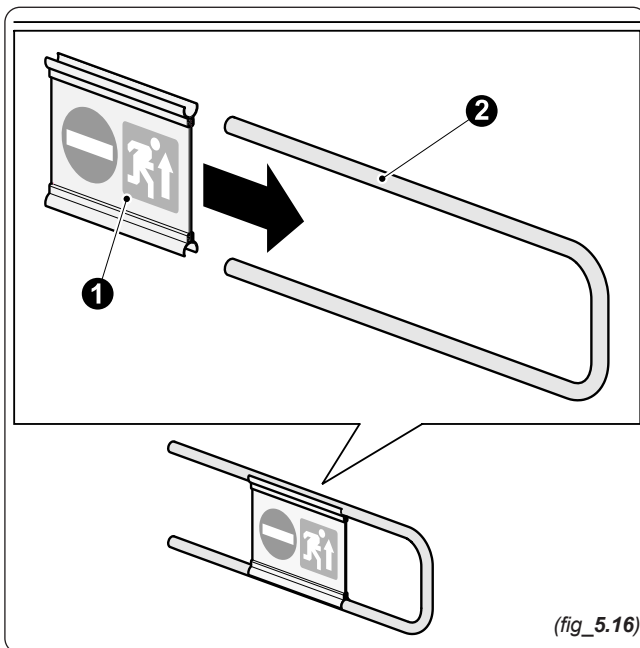
### Passing the power cable from the top (fig\_5.15):

1. Cable inlet.
2. Main power supply cable.
3. Terminal board of the replicator board.
4. Replicator board connection cable with the power terminal. Connect the cable in the terminal. The machine is provided with the cable disconnected

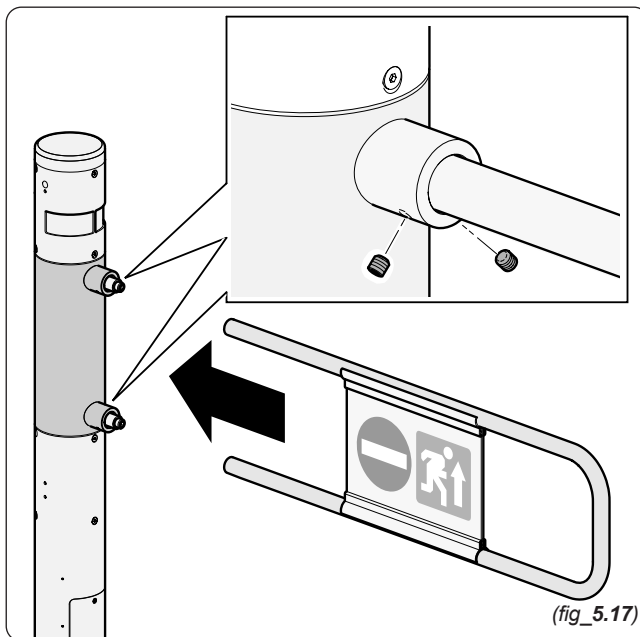
## 5.5 MOUNTING THE GATE ARM

### 5.5.1 - Mounting the tubular gate arm

Once the installation and connection to the electrical system have been completed, the gate arm must be installed on the column. Fit the panel with the instructions (pos. 1 fig\_5.16) onto the gate arm structure (pos. 2 fig\_5.16).

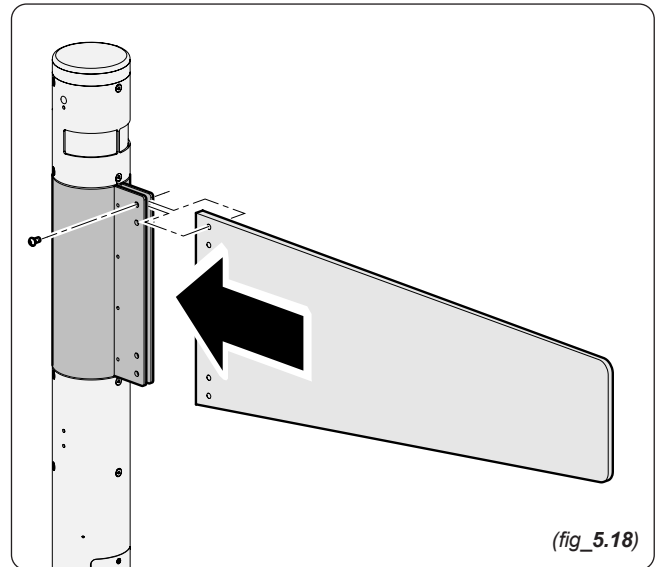


Fit the gate arm onto the column and secure it by tightening the grub screws (fig\_5.17).



### 5.5.2 - Mounting the plexiglass gate arm

Install the plexiglass gate arm by fitting it into the housing on the mobile part of the column and tighten the screws (fig\_5.18).

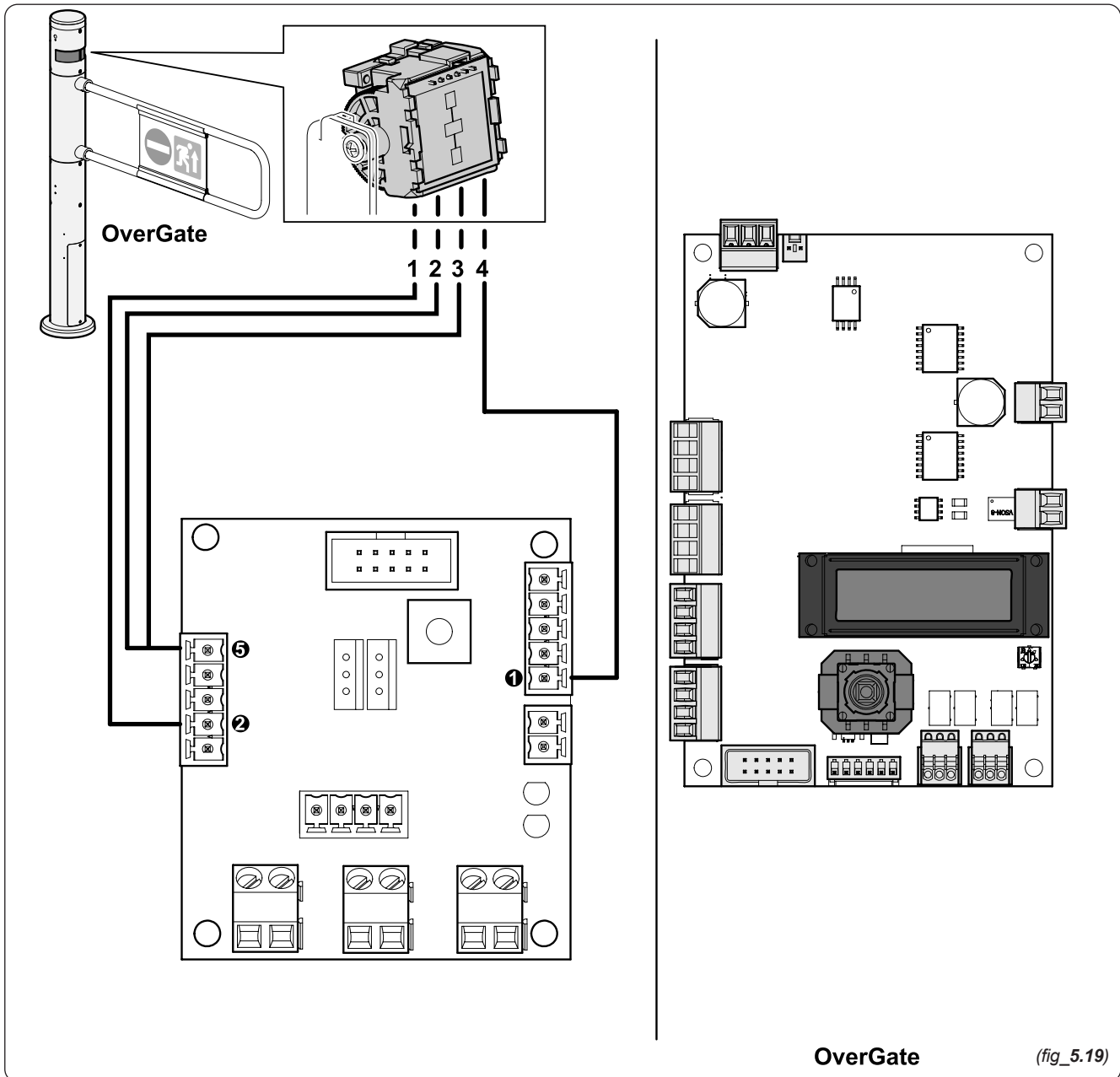


The OverGate 5.0 is supplied with standard sized gate arms, as shown in our catalogue. However, if necessary, the installer can modify the size of the gate arm on site by cutting it (shortening only).



## 5.6 CONNECTING A KIT

### 5.6.1 - Connecting the single NO radar by means of the AL002 board (fig\_5.19)



OverGate

(fig\_5.19)

#### SINGLE NO RADAR KIT (optional kit)

- 1 YE - Yellow Conductor
- 2 WH - White Conductor
- 3 BN - Brown Conductor
- 4 GN - Green Conductor

The **NO radar** is provided with a connection cable consisting of four conductors:

- The **BROWN** conductor (3) must be connected to the GND terminal, AUX IN terminal board, of the AL002 board
- The **GREEN** conductor (4) must be connected to the +24 terminal, AUX OUT terminal board, of the AL002 board
- The **WHITE** conductor (2) must be connected to the GND terminal, AUX IN terminal board of the AL002 board (with the **BROWN** conductor)
- The **YELLOW** conductor (1) must be connected to the OPEN A or OPEN B terminal, AUX IN terminal board, AL002 board, depending on whether the **OverGate 5.0** gate is to open to the right (direction A) or to the left (direction B).

The diagram shows the opening command is in direction B

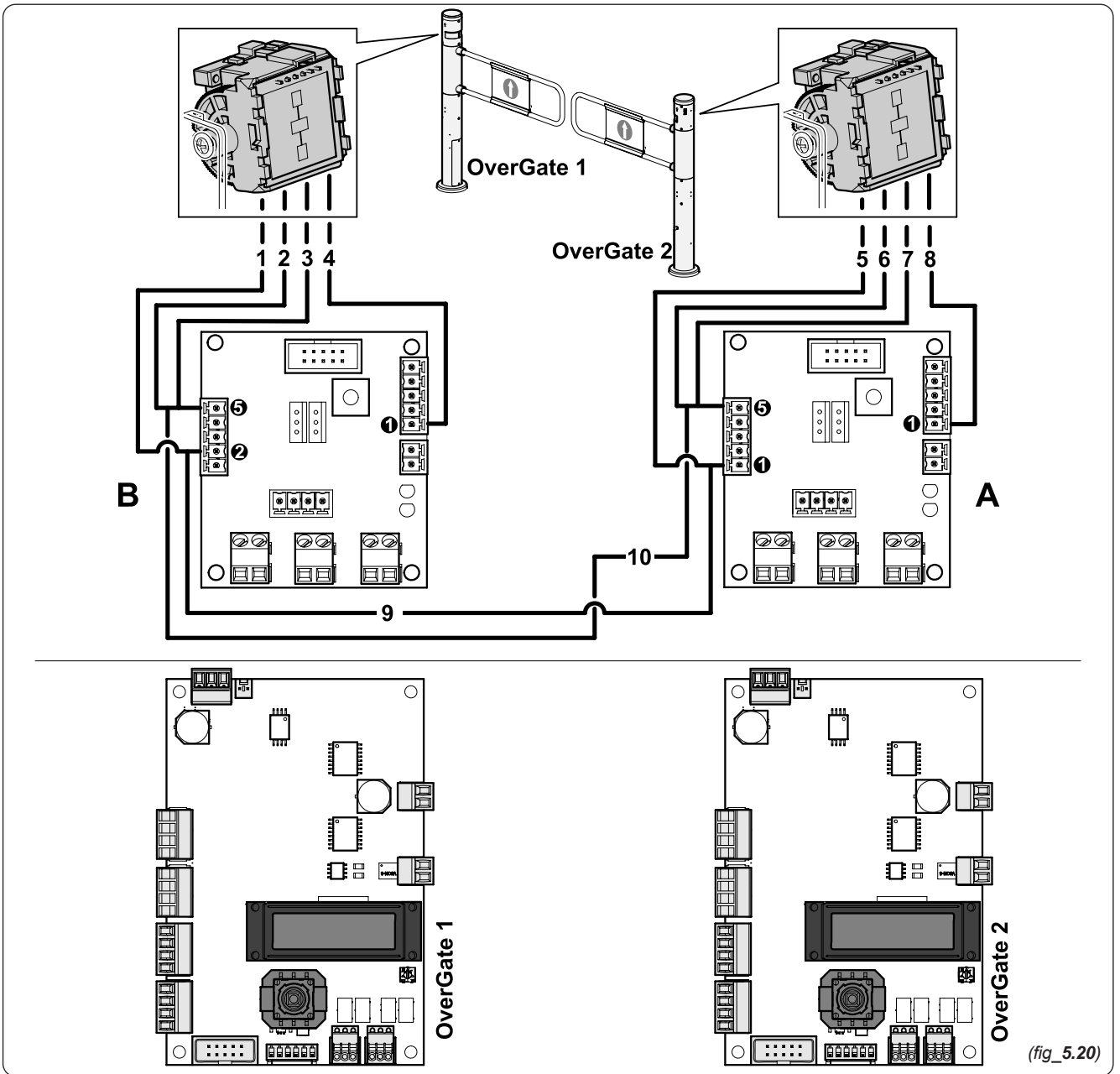


**5.6.2 - Connecting the double NO radar via the AL002 board (fig\_5.20)**



It is mandatory to install the synchronism cable.

- The **GREEN** conductor (4,8) must be connected to the +24 terminal, AUX OUT terminal board, of the AL002 board
- The **WHITE** conductor (2,6) must be connected to the GND terminal, AUX IN terminal board of the AL002 board (with the **BROWN** conductor)
- The **YELLOW** conductor (1,5) must be connected to the OPEN A or OPEN B terminal, AUX IN terminal board, AL002



(fig\_5.20)

**DOUBLE NO RADAR KIT synchronism by means of AL002 boards (optional kit)**

- 1 YE - Yellow Conductor
- 2 WH - White Conductor
- 3 BN - Brown Conductor
- 4 GN - Green Conductor
- 5 YE - Yellow Conductor
- 6 WH - White Conductor
- 7 BN - Brown Conductor
- 8 GN - Green Conductor
- 9 Not supplied
- 10 Not supplied

The NO radar is provided with a connection cable consisting of four conductors.

- The **BROWN** conductor (3,7) must be connected to the GND terminal, AUX IN terminal board, of the AL002 board

board, depending on whether the **OverGate 5.0** gate is to open to the right (direction A) or to the left (direction B). The diagram shows the opening command is in direction A

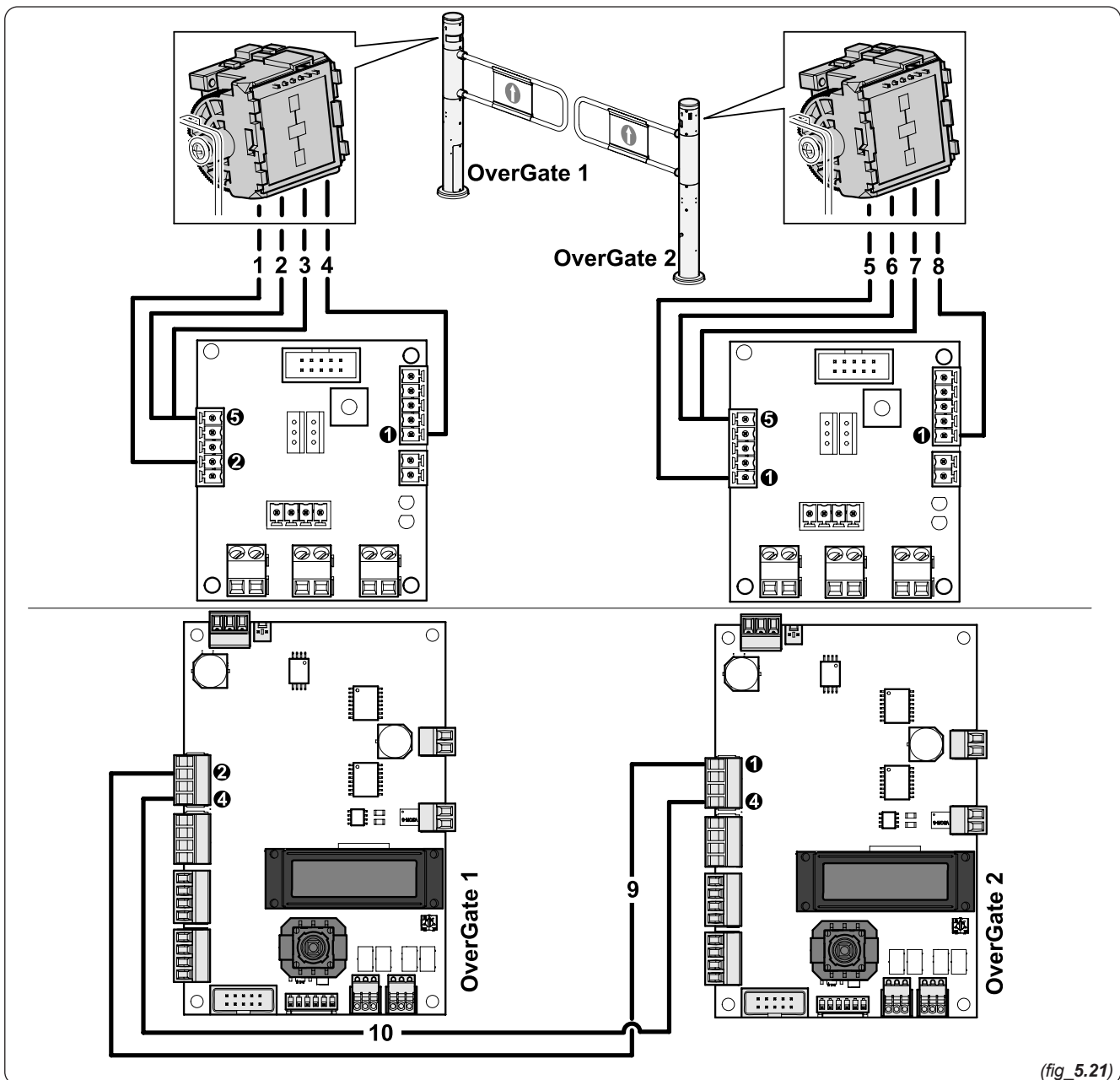
- It is mandatory for there to be synchronism between the two **OverGate 5.0** devices; for this type of synchronism, the GND pin of the AUX IN connector on the AL002 board of the **OverGate 5.0** (N° 2) (conductor 10) must be connected to the GND pin of the AUX IN connector on the AL002 board of the **OverGate 5.0** N° 1)
- The OPEN A pin of the AUX IN connector on the AL002 board of the **OverGate 5.0** (N° 2) (conductor 9) must be connected to the OPEN B pin of the AUX IN connector on the AL002 board of the **OverGate 5.0** N° 1)

The diagram shows the connection of a double OverGate 5.0 with synchronism by means of the AL002 board





### 5.6.3 - Connecting the double NO radar via the AL021 board (fig\_5.21)



(fig\_5.21)

#### DOUBLE Radar Kit, synchronism by means of AL021 boards (optional kit)

- 1 YE - Yellow Conductor
- 2 WH - White Conductor
- 3 BN - Brown Conductor
- 4 GN - Green Conductor
- 5 YE - Yellow Conductor
- 6 WH - White Conductor
- 7 BN - Brown Conductor
- 8 GN - Green Conductor
- 9 Not supplied
- 10 Not supplied

The NO radar is provided with a connection cable consisting of four conductors.

- The **BROWN** conductor (3,7) must be connected to the GND terminal, AUX IN terminal board, of the AL002 board
- The **GREEN** conductor (4,8) must be connected to the +24 terminal, AUX OUT terminal board, of the AL002 board

- The **WHITE** conductor (2,6) must be connected to the GND terminal, AUX IN terminal board of the AL002 board (with the BROWN conductor)

- The **YELLOW** conductor (1,5) must be connected to the OPEN A or OPEN B terminal, Aux IN terminal board, AL002 board, depending on whether the OverGate 5.0 gate is to open to the right (direction A) or to the left (direction B). The diagram shows the opening command is in direction A

It is mandatory for there to be synchronism between the two OverGate 5.0 devices; for this type of synchronism, the GND pin of the INPUT 1 connector on the AL021 board of the OverGate 5.0 (N° 2 - conductor 10) must be connected to the GND pin of the INPUT 1 connector on the AL021 board of the OverGate 5.0 N° 1

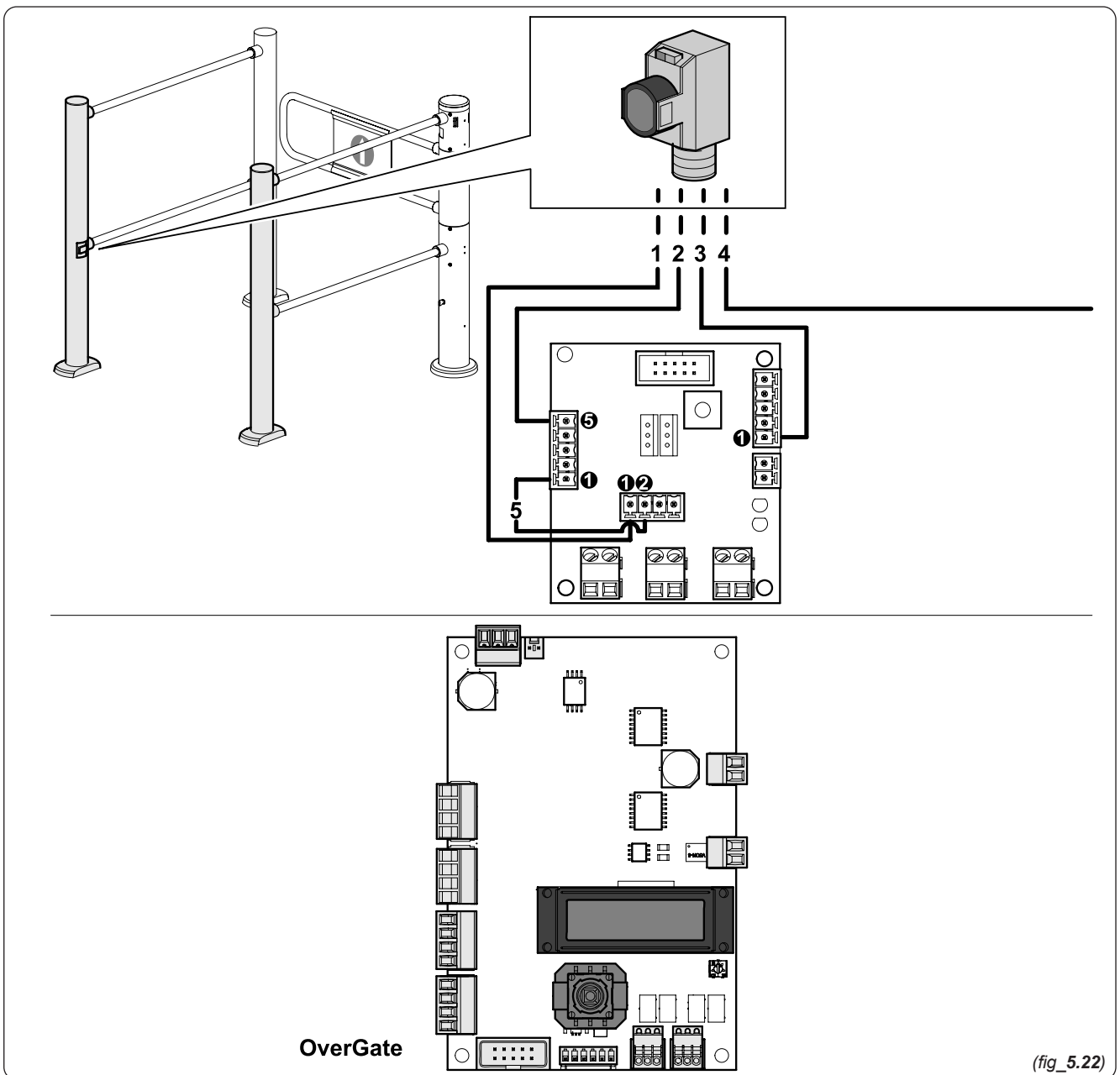
The OPEN A pin of the INPUT 1 connector on the AL021 board of the OverGate 5.0 (N° 2 - conductor 9) must be connected to the OPEN B pin of the INPUT 1 connector on the AL021 board of the OverGate 5.0 N° 1

The diagram shows the connection of a double OverGate 5.0 with synchronism by means of the AL021 board





### 5.6.4 - Connecting the single photocell kit (optional (fig\_5.22))



OverGate

(fig\_5.22)

#### SINGLE Photocell Kit (optional kit)

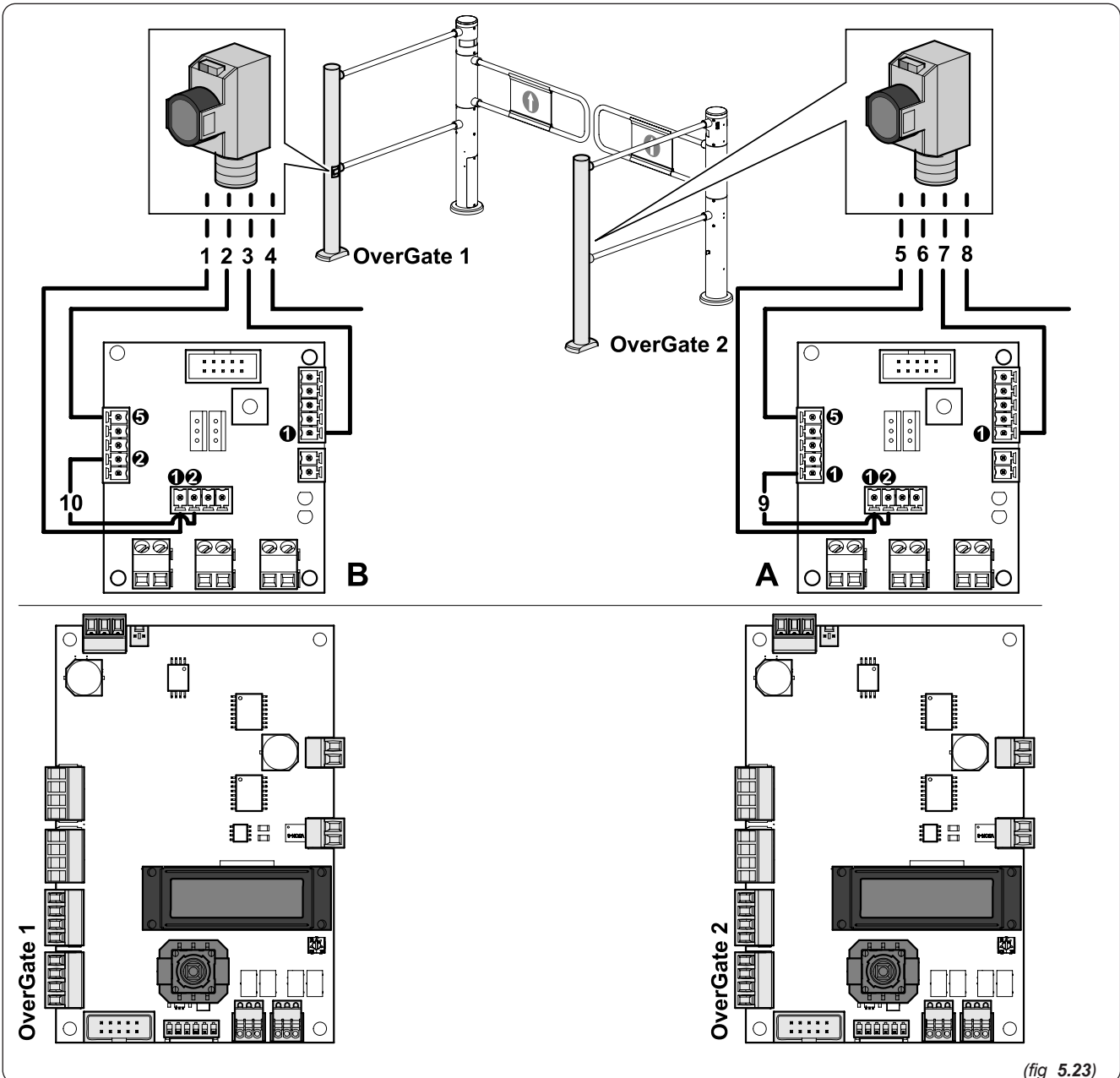
- 1 WH - White Conductor
- 2 BU - Blue Conductor
- 3 BN - Brown Conductor
- 4 NK - Black Conductor
- 5 YE - Yellow Conductor

The photocell is provided with a connection cable consisting of four conductors.

- The **BLUE** conductor (2) must be connected to the GND terminal, AUX IN terminal board, of the AL002 board
  - The **BROWN** conductor (3) must be connected to the +24 terminal, AUX OUT terminal board, of the AL002 board
  - The **WHITE** conductor (1) must be connected to the I1 terminal, CONV terminal board (at the centre) of the AL002 board
  - The **YELLOW** conductor (5) must be connected between the O1 terminal, of the CONV terminal board, and the OPEN A or OPEN B terminal, AUX IN terminal board, AL002 board, depending on whether the **OverGate 5.0** gate is to open to the right (direction A) or to the left (direction B).
  - The **BLACK** conductor (4) **MUST NOT BE CONNECTED**
- The diagram shows the opening command is in direction A



**5.6.5 - Connecting the double photocell kit**  
(fig\_5.23)



(fig\_5.23)

**DOUBLE Photocell Kit (optional kit)**

- 1 1 WH - White Conductor
- 2 BU - Blue Conductor
- 3 BN - Brown Conductor
- 4 BK - Black Conductor
- 5 WH - White Conductor
- 6 BU - Blue Conductor
- 7 BN - Brown Conductor
- 8 BK - Black Conductor
- 9 YE - Yellow Conductor
- 10 YE - Yellow Conductor

The photocells are provided with a connection cable consisting of four conductors.

- The **BLUE** conductor (2,6) must be connected to the GND terminal, AUX IN terminal board, of the AL002 board
- The **BROWN** conductor (3,7) must be connected to the +24 terminal, AUX OUT terminal board, of the AL002 board
- The **WHITE** conductor (1,5) must be connected to the I1 terminal, CONV terminal board (at the centre) of the AL002 board
- The **YELLOW** conductor (9,10) must be connected between the O1 terminal, of the CONV terminal board, and the OPEN A or OPEN B terminal, AUX IN terminal board, AL002 board, depending on whether the OverGate 5.0 gate is to open to the right (direction A) or to the left (direction B).

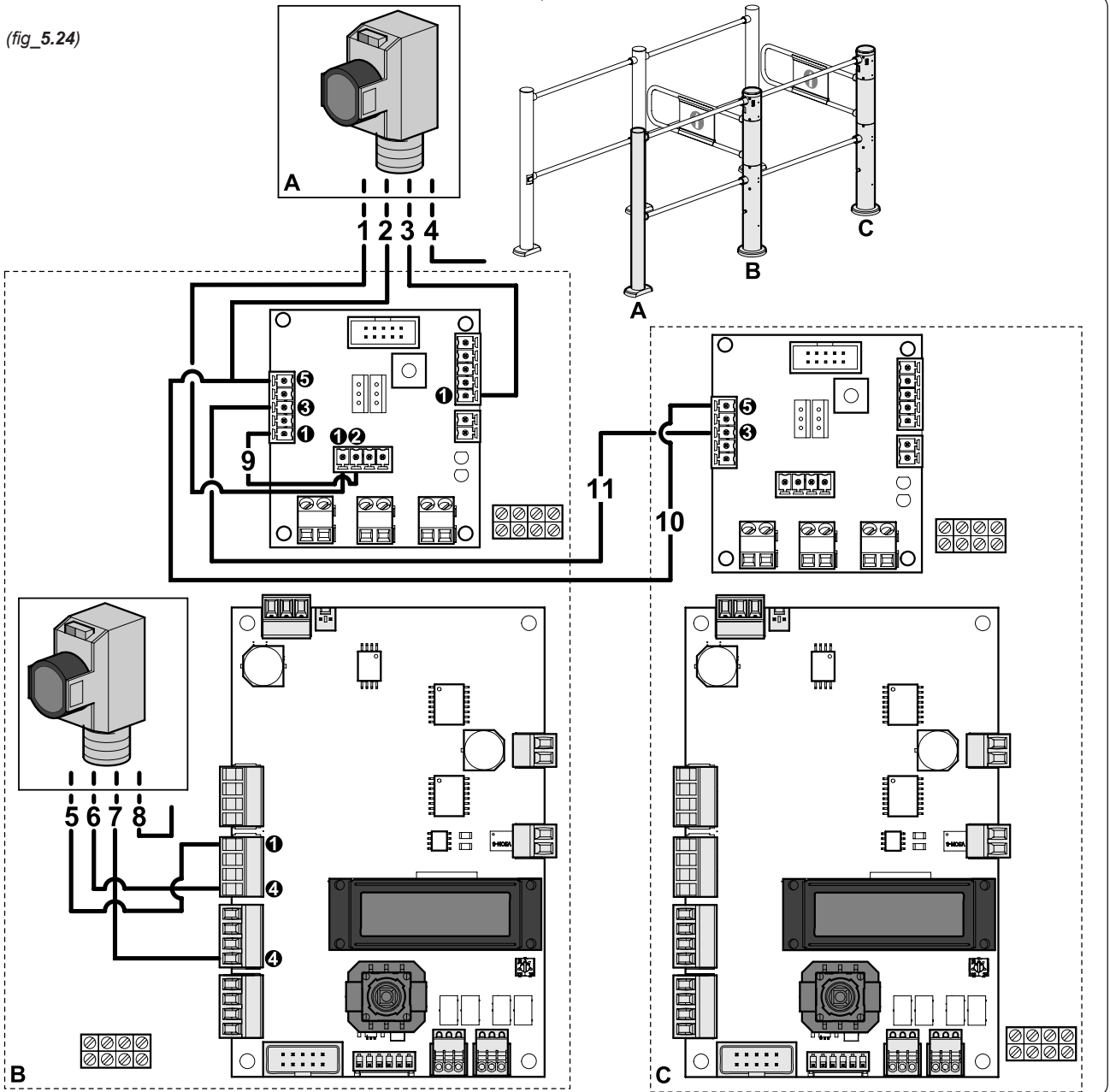
■ The **BLACK** conductor (4,8) **MUST NOT BE CONNECTED**  
The diagram shows the connection of a double OverGate 5.0



**5.6.6 - Connecting the single photocell tandem kit (fig\_5.24)**

- The **YELLOW** conductor (9) must be connected between the O1 terminal, of the CONV terminal board, and the OPEN A or OPEN B terminal, AUX IN terminal board, AL002 board,

(fig\_5.24)



**SINGLE PC+PC Tandem Kit (optional kit)**

- 1 WH - White Conductor
- 2 BU - Blue Conductor
- 3 BN - Brown Conductor
- 4 BK - Black Conductor
- 5 WH - White Conductor
- 6 BU - Blue Conductor
- 7 BN - Brown Conductor
- 8 BK - Black Conductor
- 9 YE - Yellow Conductor
- 10 Not supplied
- 11 Not supplied

The photocells are provided with a connection cable consisting of four conductors.

- The **BLUE** conductor (PC A-2) must be connected to the GND terminal, AUX IN terminal board, of the AL002 board
- The **BROWN** conductor (PC A-3) must be connected to the +24 terminal, AUX OUT terminal board, of the AL002 board
- The **WHITE** conductor (PC A-1) must be connected to the I1 terminal, CONV terminal board (at the centre) of the AL002 board

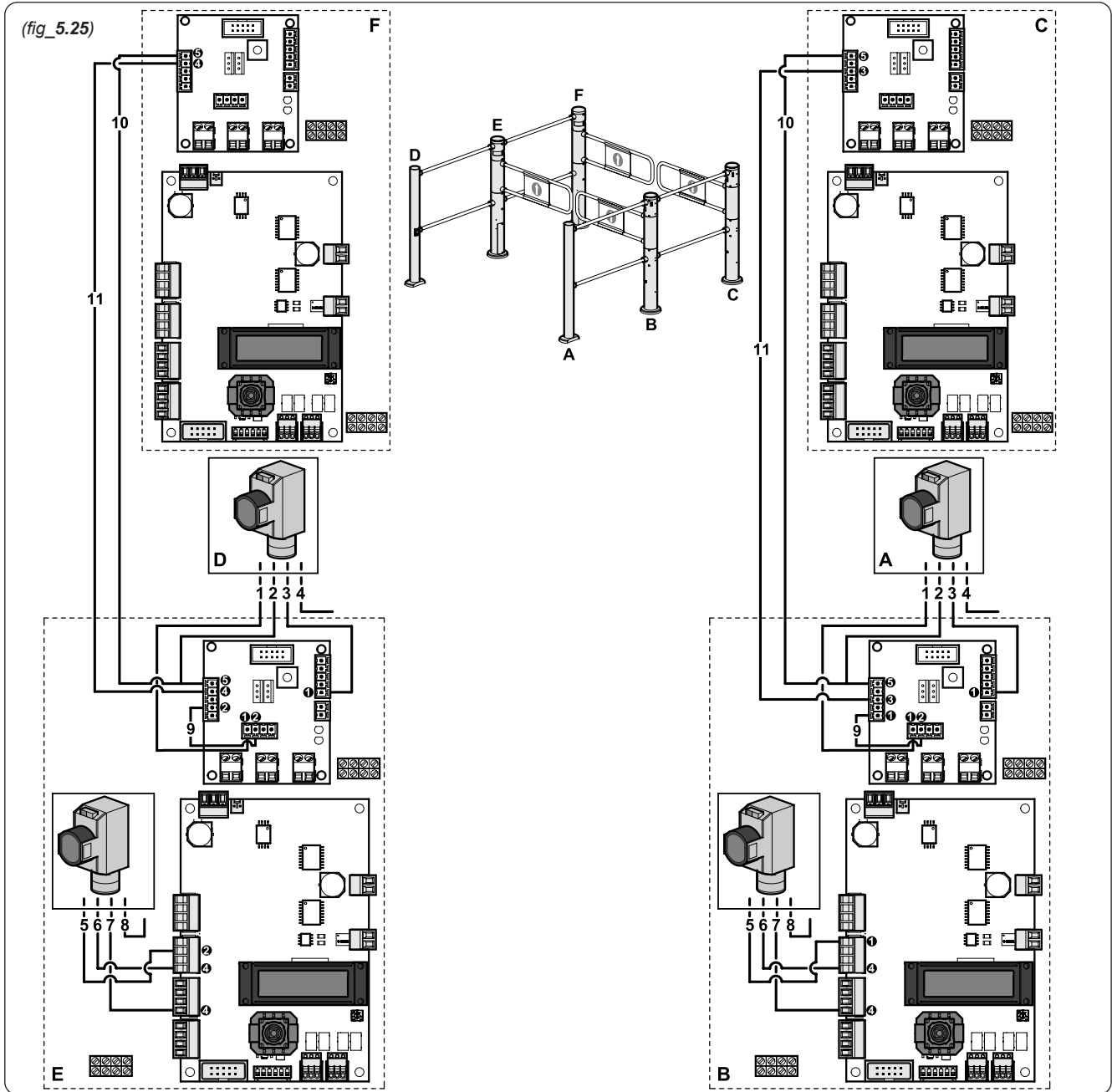
depending on whether the OverGate 5.0 gate is to open to the right (direction A) or to the left (direction B).

- The **BLUE** conductor (PC B-6) must be connected to the GND terminal, INPUT 2 terminal board, of the AL021 board
  - The **BROWN** conductor (PC B-7) must be connected to the +24 terminal, OUT terminal board, of the AL021 board
  - The **WHITE** conductor (PC B-5) must be connected between the NEXT A or NEXT B terminal, of the INPUT 2 terminal board of the AL021 board
  - The **BLACK** conductor (4-8) **MUST NOT BE CONNECTED**
- It is mandatory for there to be synchronism between the two OverGate 5.0 devices; for this type of system, the GND pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (B-conductor 10) must be connected to the GND pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (C). The NEXT A pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (B-conductor 11) must be connected to the NEXT A pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (C). The diagram shows the connection of a single PC + PC tandem opening in direction A.



### 5.6.7 - Connecting the double photocell tandem kit (fig\_5.25)

- The **YELLOW** conductor (9) must be connected between the O1 terminal, of the CONV terminal board, and the OPEN A or OPEN B terminal, AUX IN terminal board, AL002 board,



#### DOUBLE PC+PC Tandem Kit (optional kit)

- 1 WH - White Conductor
- 2 BU - Blue Conductor
- 3 BN - Brown Conductor
- 4 BK - Black Conductor
- 5 WH - White Conductor
- 6 BU - Blue Conductor
- 7 BN - Brown Conductor
- 8 BK - Black Conductor
- 9 YE - Yellow Conductor
- 10 Not supplied
- 11 Not supplied

The photocells are provided with a connection cable consisting of four conductors.

- The **BLUE** conductor (PC A-D-2) must be connected to the GND terminal, AUX IN terminal board, of the AL002 board
- The **BROWN** conductor (PC A-D-3) must be connected to the +24 terminal, AUX OUT terminal board, of the AL002 board
- The **WHITE** conductor (PC A-D-1) must be connected to the I1 terminal, CONV terminal board (at the centre) of the AL002 board

depending on whether the OverGate 5.0 gate is to open to the right (direction A) or to the left (direction B).

- The **BLUE** conductor (PC B-E-6) must be connected to the GND terminal, INPUT 2 terminal board, of the AL021 board
  - The **BROWN** conductor (PC B-E-7) must be connected to the +24 terminal, OUT terminal board, of the AL021 board
  - The **WHITE** conductor (PC B-E-5) must be connected between the NEXT A or NEXT B terminal, of the INPUT 2 terminal board of the AL021 board
  - The **BLACK** conductor (4-8) **MUST NOT BE CONNECTED**
- It is mandatory for there to be synchronism between the two OverGate 5.0 devices; for this type of system, the GND pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (B-E-conductor 10) must be connected to the GND pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (C-F). The NEXT A pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (B-E-conductor 11) must be connected to the NEXT A pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (C-F). The diagram shows the connection of a double PC+PC tandem

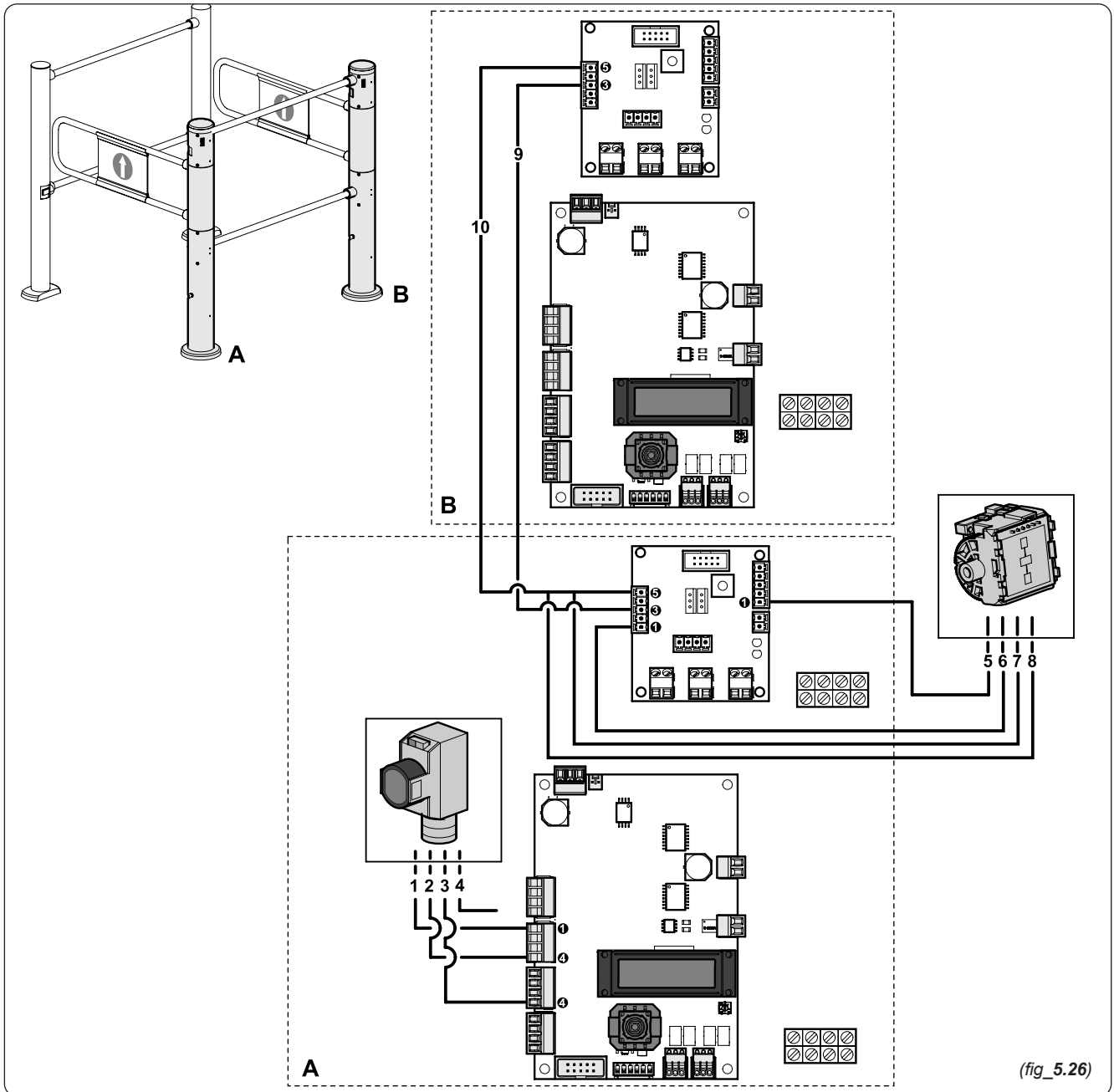




**5.6.8 - Connecting the radar + single photocell tandem kit (fig\_5.26)**

terminal, AUX IN terminal board of the AL002 board

- The **YELLOW** conductor (6) must be connected to the OPEN A or OPEN B terminal, AUX IN terminal board, AL002 board,



(fig\_5.26)

**SINGLE RADAR+PC Tandem Kit (optional kit)**

- 1 WH - White Conductor
- 2 BU - Blue Conductor
- 3 BN - Brown Conductor
- 4 BK - Black Conductor
- 5 GN - Green Conductor
- 6 YE - Yellow Conductor
- 7 BN - Brown Conductor
- 8 WH - White Conductor
- 9 Not supplied
- 10 Not supplied

The photocell and the radar are provided with a connection cable consisting of four conductors.

- The **WHITE** conductor (8) must be connected to the GND terminal, AUX IN terminal board, of the AL002 board
- The **BROWN** conductor (7) must be connected to the GND terminal, AUX OUT terminal board of the AL002 board (connect with the WHITE)
- The **GREEN** conductor (5) must be connected to the +24 ter-

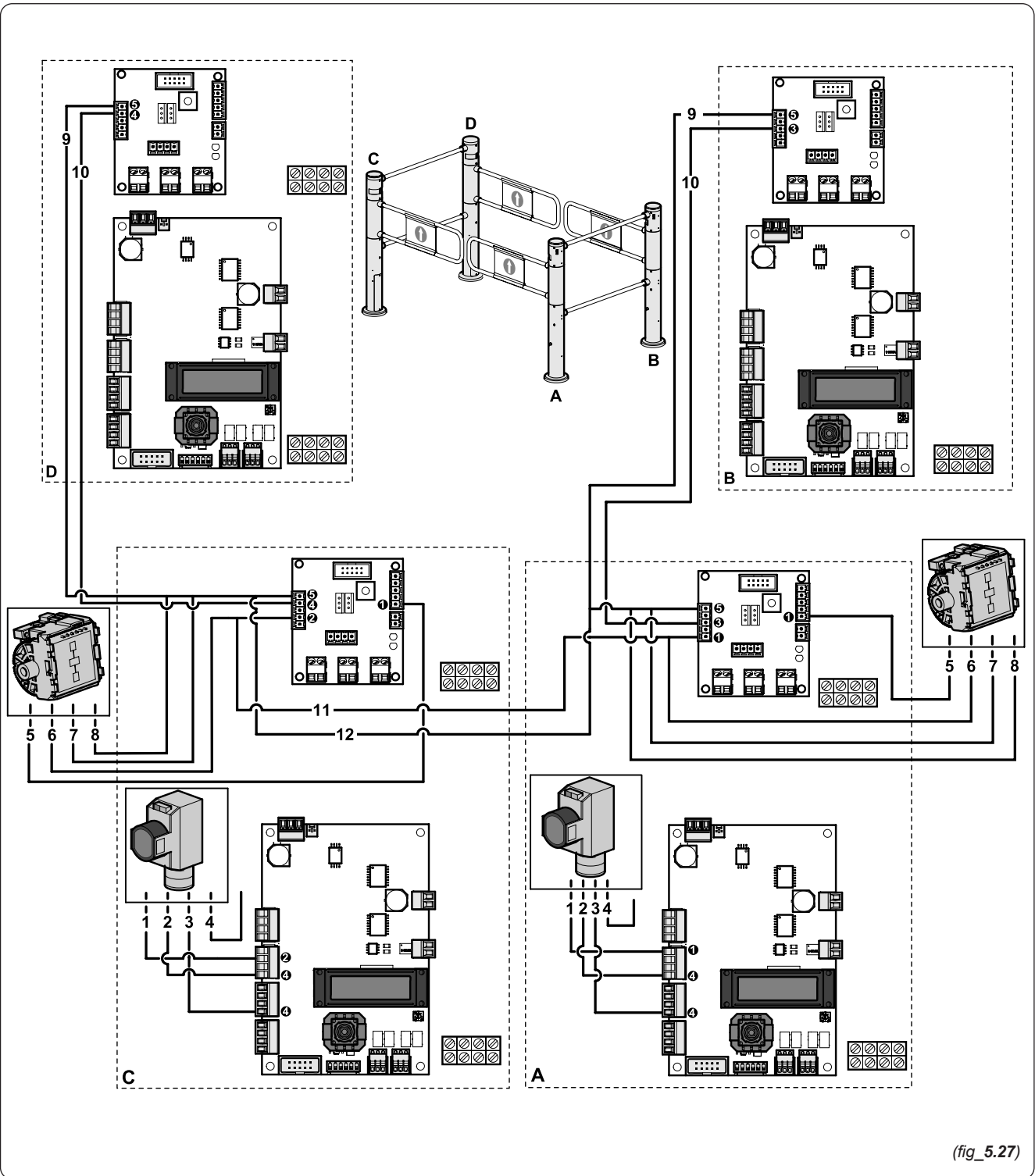
depending on whether the OverGate 5.0 gate is to open to the right (direction A) or to the left (direction B).

- The **BLUE** conductor (PC A-2) must be connected to the GND terminal, INPUT 2 terminal board, of the AL021 board
- The **BROWN** conductor (PC A-3) must be connected to the +24 terminal, OUT terminal board, of the AL021 board
- The **WHITE** conductor (PC A-1) must be connected to the NEXT A or NEXT B terminal, of the INPUT 2 terminal board of the AL021 board

- The **BLACK** conductor (4) **MUST NOT BE CONNECTED**  
It is mandatory for there to be synchronism between the two OverGate 5.0 devices; for this type of system, the GND pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (A-conductor 9) must be connected to the GND pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (B). The NEXT A pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (A-conductor 10) must be connected to the NEXT A pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (B). The diagram shows the connection of a single RADAR+PC tandem opening in direction A



5.6.9 - Connecting the double radar + photocell tandem kit (fig\_5.27)



(fig\_5.27)

**DOUBLE RADAR + PHOTOCCELL TANDEM KIT**

- 1 WH - White Conductor
- 2 BU - Blue Conductor
- 3 BN - Brown Conductor
- 4 BK - Black Conductor
- 5 GN - Green Conductor
- 6 YE - Yellow Conductor
- 7 BN - Brown Conductor
- 8 WH - White Conductor
- 9 Not supplied
- 10 Not supplied
- 11 Not supplied
- 12 Not supplied

The photocell and the radar are provided with a connection cable consisting of four conductors

- The **WHITE** conductor (8) must be connected to the GND terminal, AUX IN terminal board, of the AL002 board
- The **BROWN** conductor (7) must be connected to the GND terminal, AUX OUT terminal board of the AL002 board (connect with the WHITE)
- The **GREEN** conductor (5) must be connected to the +24 terminal, AUX IN terminal board of the AL002 board
- The **YELLOW** conductor (9) must be connected to the OPEN A or OPEN B terminal, AUX IN terminal board, AL002 board, depending on whether the OverGate 5.0 gate is to open to the right (direction A) or to the left (direction B).
- The **BLUE** conductor (PC A-2) must be connected to the GND terminal, INPUT 2 terminal board, of the AL021 board
- The **BROWN** conductor (PC A-3) must be connected to the +24 terminal, OUT terminal board, of the AL021 board
- The **WHITE** conductor (PC A-1) must be connected to the NEXT A or NEXT B terminal, of the INPUT 2 terminal board of the AL021 board
- The **BLACK** conductor (4) MUST NOT BE CONNECTED

It is mandatory for there to be synchronism between the two OverGate 5.0 devices; for this type of system, the GND pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (A-C) (conductor 9) must be connected to the GND pin of the AUX IN connector on the AI002 board of the OverGate 5.0 (B-D)

The NEXT A pin of the AUX IN connector on the AI002 board of the OverGate 5.0 (A-C-conductor 10) must be connected to the NEXT A pin of the AUX IN connector on the AL002 board of the OverGate 5.0 (B-D)

It is mandatory for there to be synchronism between the two OverGate 5.0 devices; for this type of synchronism, the GND pin of the INPUT 1 connector on the AI021 board of the OverGate 5.0 (A-conductor 11) must be connected to the GND pin of the INPUT 1 connector on the AL021 board of the OverGate 5.0 (C)

The OPEN A pin of the INPUT 1 connector on the AI021 board of the OverGate 5.0 (A-conductor 12) must be connected to the OPEN B pin of the INPUT 1 connector on the AL021 board of the OverGate 5.0 (C)

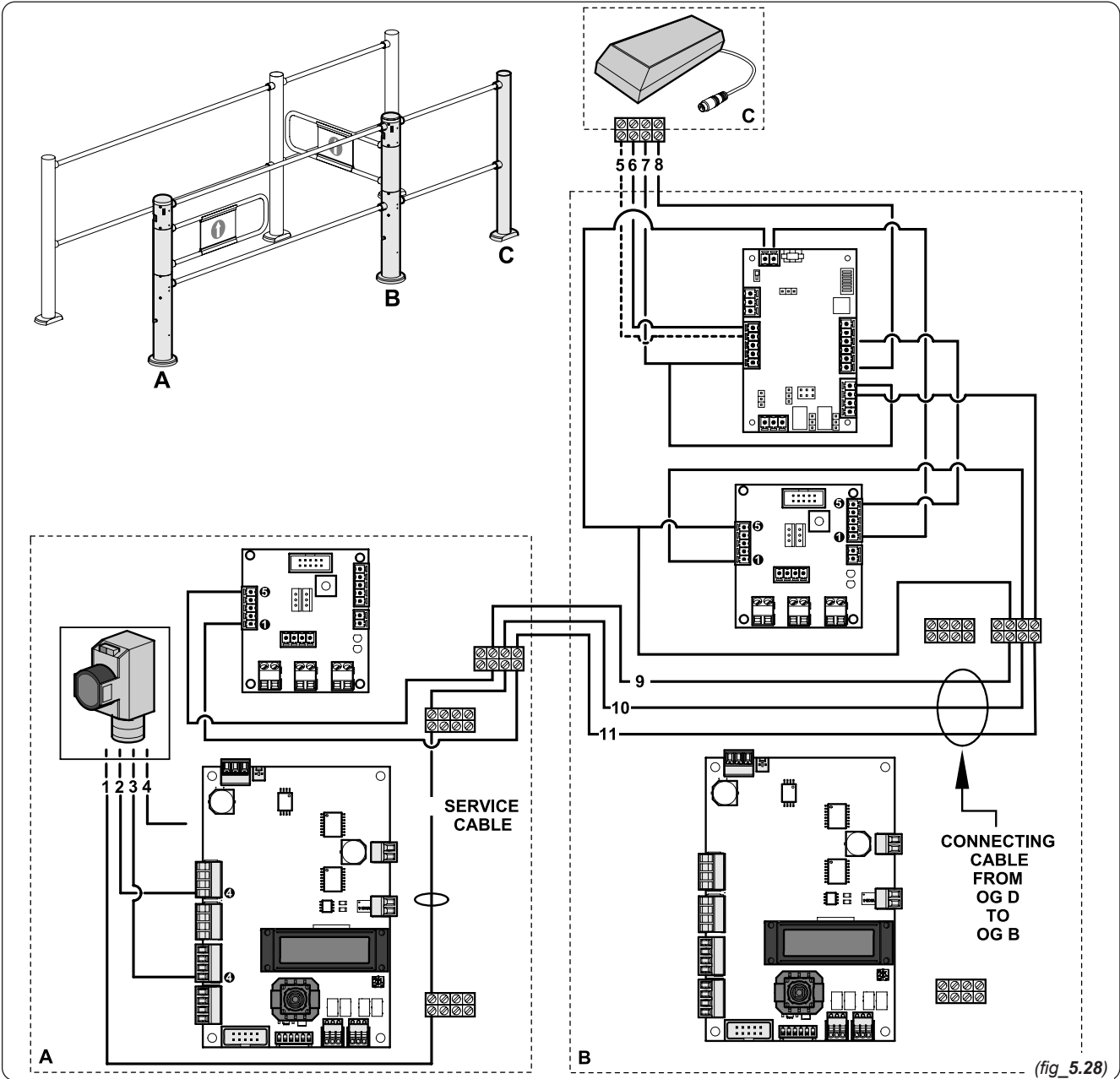
The diagram shows the connection of a double RADAR+PC tandem





5.6.10 - Connecting the normally open + normally closed kit (single) (fig\_5.28)

terminal to one of the wires of the service cable brought to the top of the gate, then from there with the synchronism cable between the two OverGate 5.0 devices, it must be connected to the OPEN A or OPEN B terminal on the AUX IN terminal



(fig\_5.28)

SINGLE NO+NC Kit (normally open + normally closed) (optional kit)

- 1 1 WH - White Conductor
- 2 BU - Blue Conductor
- 3 BN - Brown Conductor
- 4 BK - Black Conductor
- 5 WH - White Conductor
- 6 BK - Black Conductor
- 7 BU - Blue Conductor
- 8 BN - Brown Conductor
- 9 Not supplied
- 10 Not supplied
- 11 Not supplied

The photocells are provided with a connection cable consisting of four conductors.

- The **BLUE** conductor (PC A-2) must be connected to the GND terminal, INPUT 1 terminal board, of the AL021 board
- The **BROWN** conductor (PC A-3) must be connected to the +24 terminal, OUT terminal board, of the AL021 board
- The **WHITE** conductor (PC A-1) must be connected via a

board of the AL002 board

- The **BLACK** conductor (4) **MUST NOT BE CONNECTED** With the same synchronism cable that connects the two OverGate 5.0 devices, connect the GND terminal of the terminal board of the OverGate 5.0 A AL002 board to the GND terminal of the AUX IN terminal board of the AL002 board of the Overgate 5.0 B
- Connect the OPEN A or OPEN B terminal of the AUX IN terminal board of the AL002 board of the OverGate 5.0 to the relay of the AL006 board (this cable causes the PC placed on the first OG to open the second, and the PC connected to the AI006 board closes the first)
- The **WHITE** conductor (5) must be connected to the pin 1 of the 5-pole terminal of the AL006 board
- The **BLACK** conductor (6) must be connected to the pin 2 of the 5-pole terminal of the AL006 board
- The **BLUE** conductor (7) must be connected to the pin 5 of the 5-pole terminal of the AL006 board
- The **BROWN** conductor (8) must be connected to the pin 6 of the 6-pole terminal of the AL006 board.

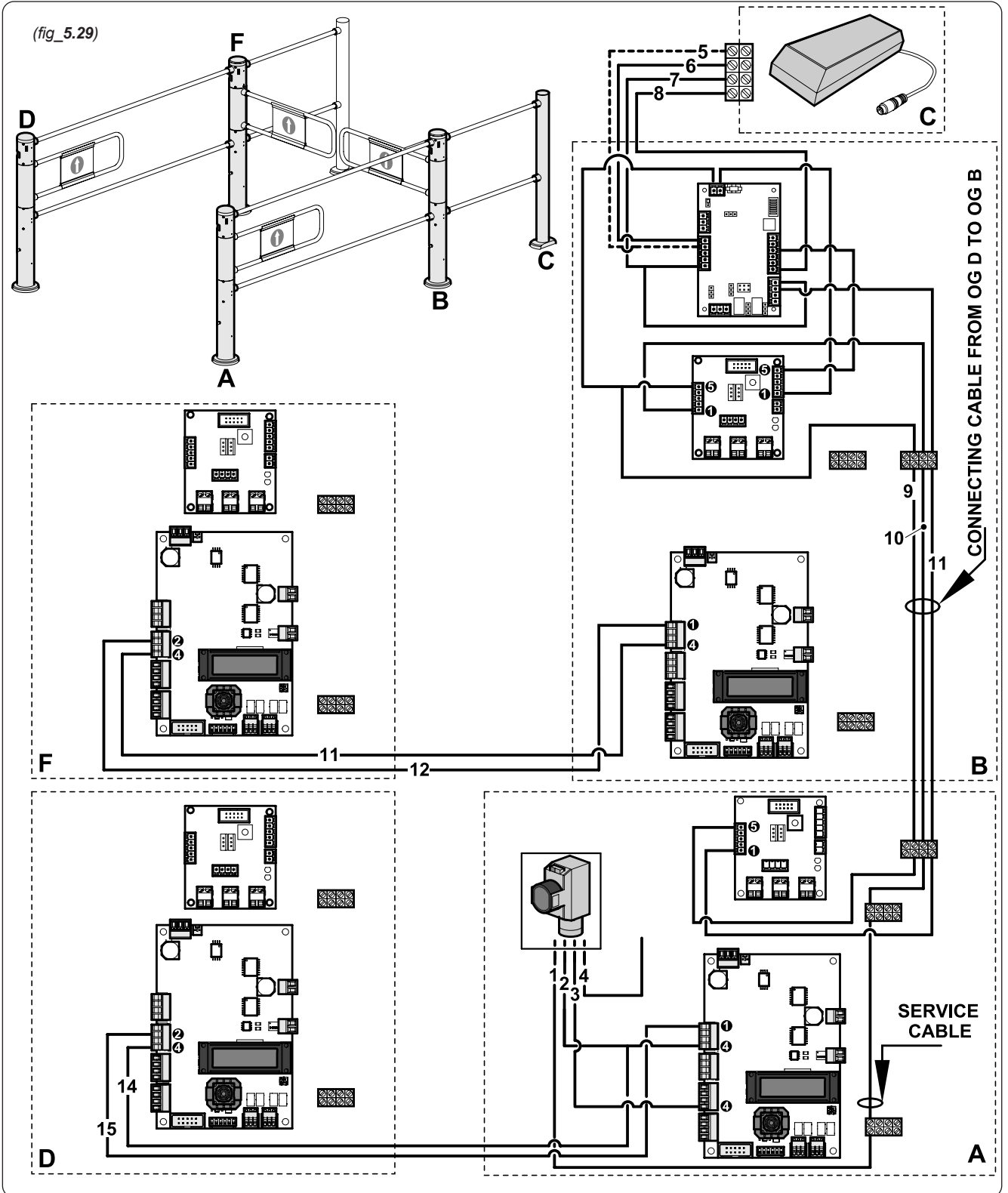






**5.6.11 - Connecting the normally open + normally closed kit (double) (fig\_5.29)**

(fig\_5.29)





### NO+NC Kit (normally open + normally closed)

#### DOUBLE (optional kit)

- 1 WH - White Conductor
- 2 BU - Blue Conductor
- 3 BN - Brown Conductor
- 4 BK - Black Conductor
- 5 WH - White Conductor
- 6 BK - Black Conductor
- 7 BU - Blue Conductor
- 8 BN - Brown Conductor
- 9 Not supplied
- 10 Not supplied
- 11 Not supplied
- 12 Not supplied
- 13 Not supplied
- 14 Not supplied

The photocells are provided with a connection cable consisting of four conductors.

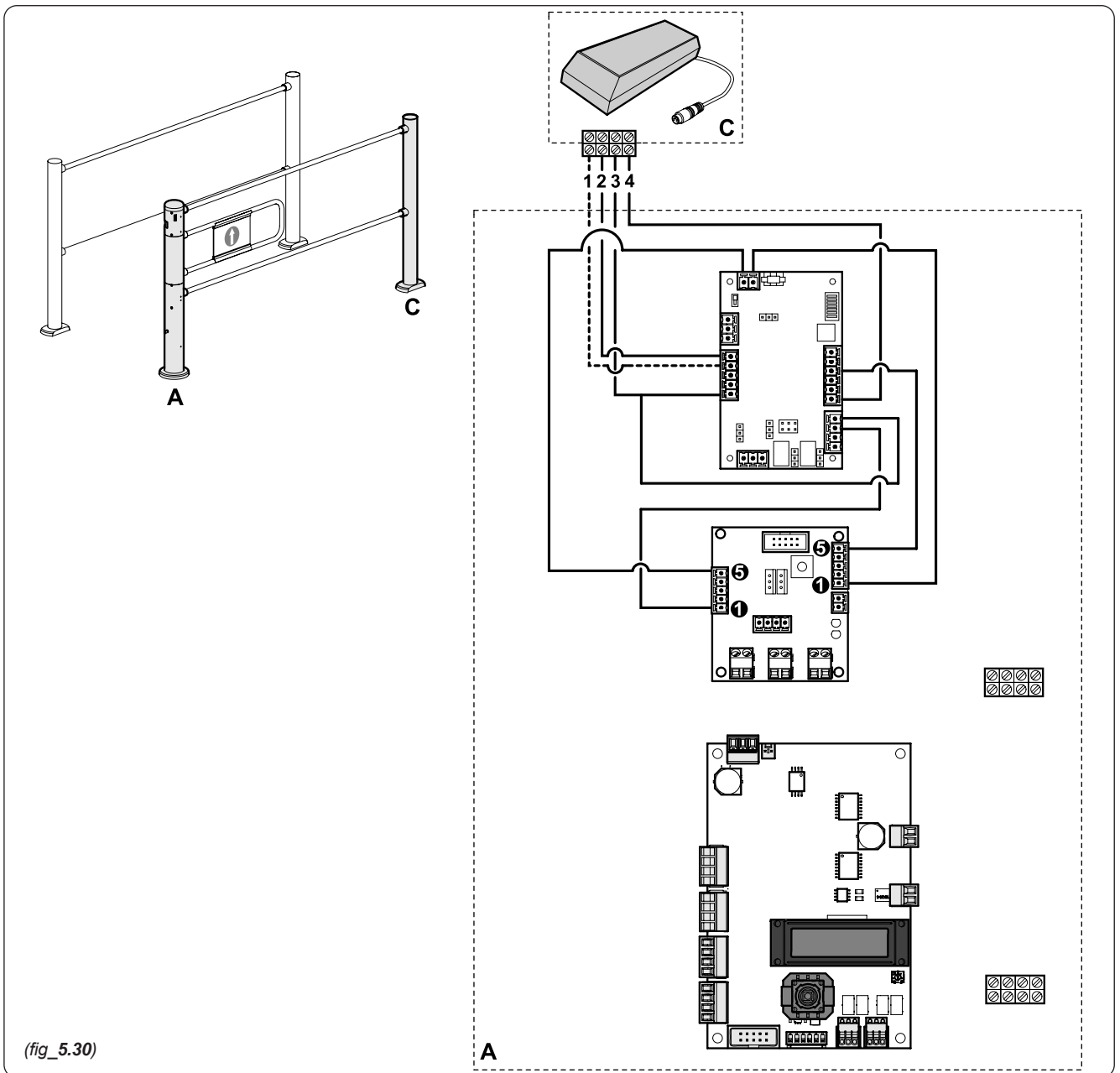
- The **BLUE** conductor (PC A-2) must be connected to the GND terminal, INPUT 1 terminal board, of the AL021 board
- The **BROWN** conductor (PC A-3) must be connected to the +24 terminal, OUT terminal board, of the AL021 board
- The **WHITE** conductor (PC A) (1) must be connected via a terminal to one of the wires of the service cable brought to the top of the gate, then from there with the synchronism cable between the two OverGate 5.0 devices, it must be connected to the OPEN A or OPEN B terminal on the AUX IN terminal board of the AL002 board
- The **BLACK** conductor (4) MUST NOT BE CONNECTED
- With the same synchronism cable that connects the two OverGate 5.0 devices, connect the GND terminal of the terminal board of the OverGate 5.0 A AL002 board to the GND terminal of the AUX IN terminal board of the AL002 board of the Overgate 5.0 B
- Connect the OPEN A or OPEN B terminal of the AUX IN terminal board of the AL002 board of the OverGate 5.0 to the relay of the AL006 board (this cable causes the PC placed on the first OG to open the second, and the PC connected to the AL006 board closes the first)
- The **WHITE** conductor (5) must be connected to the pin 1 of the 5-pole terminal of the AL006 board
- The **BLACK** conductor (6) must be connected to the pin 2 of the 5-pole terminal of the AL006 board
- The **BLUE** conductor (7) must be connected to the pin 5 of the 5-pole terminal of the AL006 board
- The **BROWN** conductor (8) must be connected to the pin 6 of the 6-pole terminal of the AL006 board

The synchronism cables between the OverGate 5.0 devices are mandatory

- Connect the GND terminal of the INPUT 1 terminal board of the AL021 board of the OG A to the GND terminal of the INPUT 1 terminal board of the AL021 board of the OG D
- Connect the OPEN A terminal of the INPUT 1 terminal board of the AL021 board of the OG A to the OPEN B terminal of the INPUT 1 terminal board of the AL021 board of the OG D
- Connect the GND terminal of the INPUT 1 terminal board of the AL021 board of the OG B to the GND terminal of the INPUT 1 terminal board of the AL021 board of the OG F
- Connect the OPEN A terminal of the INPUT 1 terminal board of the AL021 board of the OG B to the OPEN B terminal of the INPUT 1 terminal board of the AL021 board of the OG F



**5.6.12 - Connecting the normally open kit (single) (fig\_5.30)**



(fig\_5.30)

**SINGLE NO kit (normally open) (optional kit)**

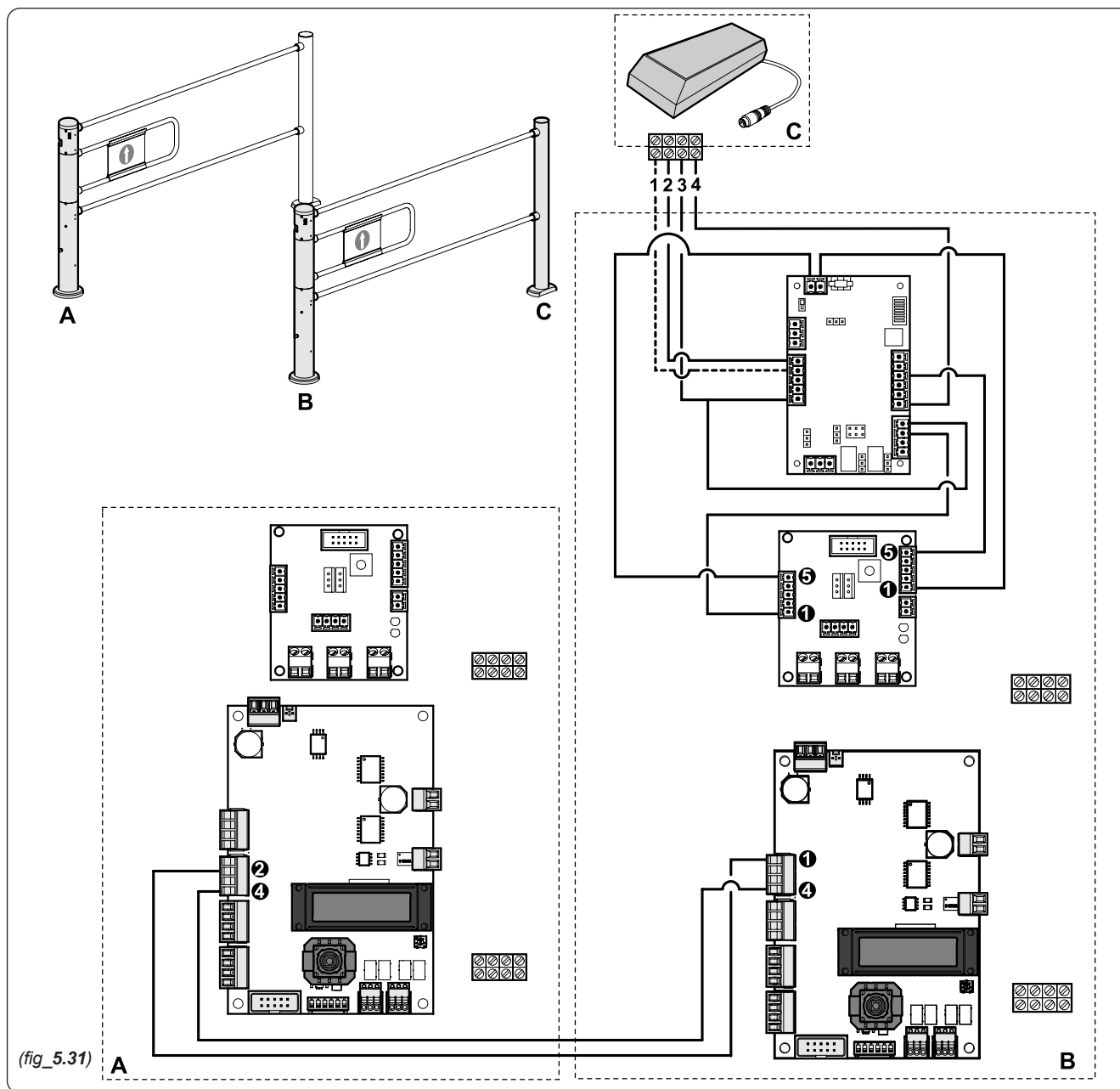
- 1 WH - White Conductor
- 2 BK - Black Conductor
- 3 BU - Blue Conductor
- 4 BN - Brown Conductor

- The **WHITE** conductor (1) must be connected to the pin 1 of the 5-pole terminal of the AL006 board
- The **BLACK** conductor (2) must be connected to the pin 2 of the 5-pole terminal of the AL006 board
- The **BLUE** conductor (3) must be connected to the pin 5 of the 5-pole terminal of the AL006 board
- The **BROWN** conductor (4) must be connected to pin 6 of the 6-pole terminal of the AL006 board
- Connect the **YELLOW** wire of the relay of the AL006 board to the OPEN A or OPEN B terminal of the AL002 board
- Connect the **GREY** wire of the AL006 board to the BUZZER terminal of the AL002 board

The diagram shows the opening command is in direction A



**5.6.13 - Connecting the normally open kit (double) (fig\_5.31)**



**DOUBLE NO kit (normally open) (optional kit)**

- 1 WH - White Conductor
- 2 BK - Black Conductor
- 3 BU - Blue Conductor
- 4 BN - Brown Conductor

- The **WHITE** conductor (1) must be connected to the pin 1 of the 5-pole terminal of the AL006 board
- The **BLACK** conductor (2) must be connected to the pin 2 of the 5-pole terminal of the AL006 board
- The **BLUE** conductor (3) must be connected to the pin 5 of the 5-pole terminal of the AL006 board
- The **BROWN** conductor (4) must be connected to pin 6 of the 6-pole terminal of the AL006 board
- Connect the yellow wire of the relay of the AL006 board to the OPEN A or OPEN B terminal of the AL002 board

- Connect the **GREY** wire of the AL006 board to the BUZZER terminal of the AL002 board

The synchronism cable between the two OGs is mandatory

- Connect the GND terminal of the INPUT 1 terminal board of the AL021 board of the OG B to the GND terminal of the INPUT 1 terminal board of the AL021 board of the OG A
- Connect the OPEN A terminal of the INPUT 1 terminal board of the AL021 board of the OG B to the OPEN B terminal of the INPUT 1 terminal board of the AL021 board of the OG A

The diagram shows the double opening command



## 5.7 PROGRAMMING

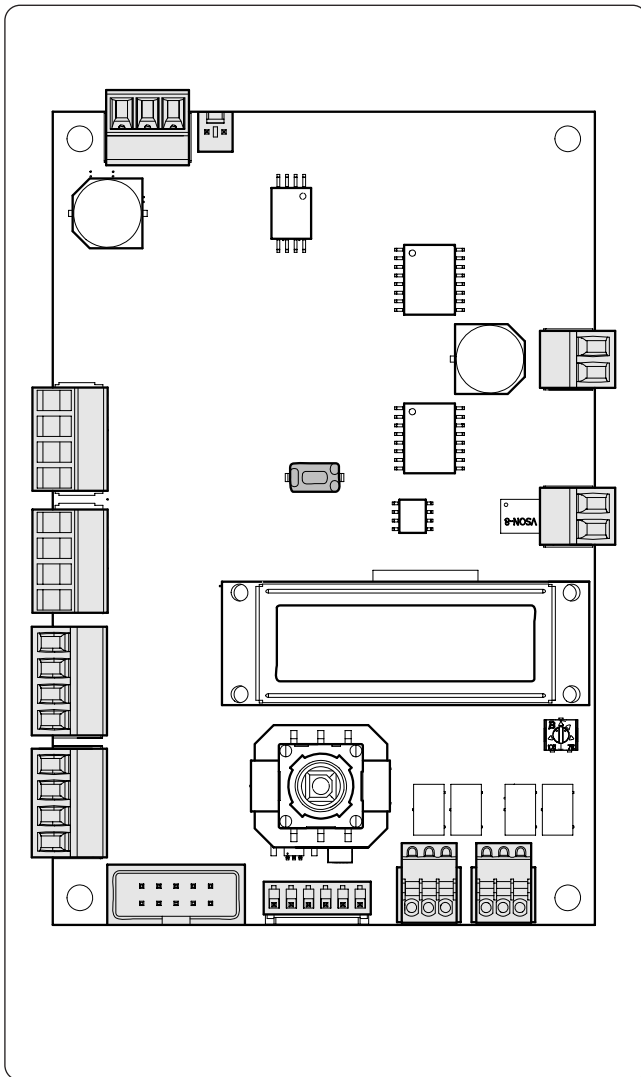
The operating parameters of the **OverGate 5.0** can be configured via the user interface (refer to the “User interface” paragraph on page 11).

Programming is only allowed when the gate arm is in the closed “C” position

### 5.7.1 - PRELIMINARY STEPS

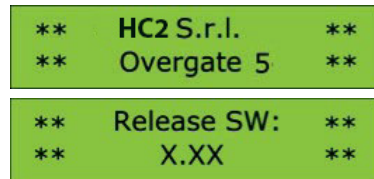
Proceed as follows, in sequence:

- Make sure that the electrical connections have been implemented to professional standard and in compliance with current regulations;
- Voltage data
- Turn the key to power the AL021 control logic board.



1 red LED - AL021 board ON..

When switched on, the following messages appear briefly on the display:



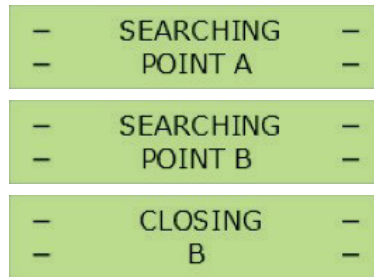
Select the installed gate arm (refer to the “GATE ARMS TABLE” paragraph on page 56). Select the gate arm by following the instructions in the “User interface” paragraph on page 11.



Make sure that no obstacle is within the operating range of the gate arm.

Press OK to confirm.

The **OverGate 5.0** now automatically acquires points A, B and C. The firmware displays the following messages on the LCD display:



It first rotates in direction A, then in direction B and stops at C. The product is now operational.

### 5.7.2 - CONFIGURATION MENU

Proceed as follows to enter the configuration menu of the **OverGate 5.0**. Use the user interface to scroll through the menu and change the parameters.

Key	
DX	to advance to the next step in the menu or to increase the value.
SX	to move back to the previous step in the menu or to decrease the value.
UP	RESERVED
WN	RESERVED
OK	to confirm the selected parameter/option.



## OverGate 5.0

Example:

- Press Ok To - Enter Setup	After having turned the gate on, access the control logic. Press the joystick as OK and enter the Setup.
→3-Arm Type ST 1001-1200mm	Use <b>RH/LH</b> to move along menu to the intended point. Press the joystick - <b>OK</b> - to change the parameter.
3-Arm Type →ST 0-800mm	Move <b>RH/LH</b> to change the value.
→3-Arm Type ST 0-800mm	Press the joystick - <b>OK</b> – to confirm the new parameter.
→17-Exit Menu Ok	Now move to item 17 to exit the menu and make the machine operational. Press OK to enter the submenu.
→19-Exit Menu Ok	Press OK to exit the menu. The machine is now operational.

### 5.7.3 - Parameters menu

** HC2 S.r.l. ** ** Overgate 5 **	These messages are displayed when the OverGate 5.0 is switched on.
** Release SW: ** ** X.XX **	
- Press Ok To - Enter Setup	This is the message that appears when the <b>OverGate 5.0</b> is ready to operate or to receive parameter changes. Press OK to make changes.

Parameter 1: Open Time	
→1-Open Time Time [s]:4	
<ul style="list-style-type: none"> <li>■ Default value: 4 s.</li> <li>■ Value range: [0 - 100 s]</li> <li>■ Waiting time of the gate arm when it reaches position A/B.</li> </ul>	
1-Open Time →Time [s]:4	Select <b>OK</b> . The parameter can now be changed.

Parameter 2: Next Time	
→2-Next Time Time [s]:3	
<ul style="list-style-type: none"> <li>■ Default value: 3 s.</li> <li>■ Value range: [0 - 100 s]</li> <li>■ The waiting time for the NEXT command is only ON if you see the NEXT ENABLE parameter.</li> </ul>	
2-Next Time →Time [s]:3	Select <b>OK</b> . The parameter can now be changed.

Parameter 3: Arm Type	
→3-Arm Type ST 1001-1200mm	
Allows you to select the type of gate arm installed on the OverGate 5.0 (refer to "GATE ARMS TABLE" on page 73). ST = standard in chromed steel. PL = acrylic/polycarbonate AL = aluminium	
3-Arm Type →PL 600mm	Select <b>OK</b> . The parameter can now be changed.

Parameter 4: Antipanic	
→4-Antipanic Time [s]:5	
<ul style="list-style-type: none"> <li>■ Default value: 5 s.</li> <li>■ Value range: [0 - 100 s]</li> </ul> <p>The time of the buzzer alarm and flashing in the case of the acrylic gate arm, when it is pushed from the closed "C" position to that of "ANTIPANIC".</p> <p>While the buzzer sounds, the motor brake intervenes at maximum power and the LCD display of the AL021 board indicates the "Waiting antipanic C" message.</p> <p>If it is free, the gate returns to the "C" position after it stops ringing.</p>	



Parameter 5: Pos. C Setting	
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">→5-Set Pos. C Position: 2509</div>	
<p>The modified setting of Positions A, B and C is accepted by the firmware according to this RULE:</p> <p style="text-align: center;"><b>Position A &lt; Position C &lt; Position B</b></p> <p>Example: Position A: 2506 - Position C: 2800 - Position B: 3520</p> <p><b>Note:</b> the indicated numerical value is the result of a calculation made by the AL021 control logic board based on the signal given by the absolute value encoder. It does not correspond to an angular or linear value. The numerical value changes in real time as the gate arm is pushed.</p>	
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">5-Set Pos. C →Position: 2506</div>	<p>a) Select OK and when the arrow is on the "Position" line, you can change the value as follows:</p> <ul style="list-style-type: none"> <li>■ push the gate arm to the intended position and then press OK.</li> </ul> <p>The value has been stored.</p>

Parameter 6: Pos. A Setting	
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">→6-Set Pos. A Position: 1499</div>	
<p>The modified setting of Positions A, B and C is accepted by the firmware according to this RULE:</p> <p style="text-align: center;"><b>Pos. A &lt; Pos. C &lt; Pos. B</b></p> <p>Example: Pos. A: 2506 – Pos. C: 2800 – Posi. B: 3520</p> <p><b>Note:</b> the indicated numerical value is the result of a calculation made by the AL021 control logic board based on the signal given by the absolute value encoder. It does not correspond to an angular or linear value. The numerical value changes in real time as the gate arm is pushed.</p>	
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">6-Set Pos. A →Position: 2506</div>	<p>a) Select OK and when the arrow is on the "Position" line, you can change the value as follows:</p> <ul style="list-style-type: none"> <li>■ Push the gate arm to the intended position and then press OK.</li> </ul> <p>The value has been stored..</p>
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">→6-Set Pos. A Position: NO A</div>	<p>If the message at the side appears, the firmware <b>DOES NOT ACCEPT</b> the selected value, thereby violating the RULE.</p> <p>The previous value remains as the stored value.</p> <p>Return to point a) and repeat the indicated steps to modify the parameter again.</p>

Parameter 7: Pos. B Setting	
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">→7-Set Pos. B Position: 3520</div>	
<p>The modified setting of Positions A, B and C is accepted by the firmware according to this RULE:</p> <p style="text-align: center;"><b>Position A &lt; Position C &lt; Position B</b></p> <p>Example: Pos. A: 2506 – Pos. C: 2800 – Posi. B: 3520</p> <p><b>Note:</b> the indicated numerical value is the result of a calculation made by the AL021 control logic board based on the signal given by the absolute value encoder. It does not correspond to an angular or linear value. The numerical value changes in real time as the gate arm is pushed.</p>	
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">7-Set Pos. B →Position: 3500</div>	<p>a) Select OK and when the arrow is on the "Position" line, you can change the value as follows:</p> <ul style="list-style-type: none"> <li>■ Push the gate arm to the intended position and then press OK.</li> </ul> <p>The value has been stored..</p>
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">→7-Set Pos. B Position: 3500</div>	<p>If the message at the side appears, the firmware <b>DOES NOT ACCEPT</b> the selected value, thereby violating the RULE.</p> <p>The previous value remains as the stored value.</p> <p>Return to point a) and repeat the indicated steps to modify the parameter again.</p>

Parameter 8: Auto C+A+B	
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">→8-Auto C+A+B Auto Position</div>	
<p>Selecting <b>OK</b> allows you to reset the position values and start their automatic search.</p>	
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">8-Auto C+A+B →Auto Position</div>	<p>By pressing <b>OK</b> again, you will proceed with the Auto Position.</p>
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">– SEARCHING – – POINT A –</div>	<p>The following messages appear on the display in sequence during the automatic acquisition process of the A/B and C points.</p>
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">– SEARCHING – – POINT B –</div>	
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">– CLOSING – – B –</div>	
<div style="background-color: #d9ead3; padding: 5px; border: 1px solid #ccc;">– Press Ok To – – Enter Setup –</div>	<p>Once the search is completed, the <b>OverGate 5.0</b> is operational.</p>





**Parameter 9: Alarm Time**

→ 9 -Alarm Time  
Time [s]:3

- Default value: 3 s.
- Value range: [0 - 100 s]

**Relative behaviour:**

- The Open A command is given (also applies to B).
- The gate opens and reaches Position A (also applies to B) where it waits for "Open Time" before closing;
- If it encounters an obstacle while closing, it returns to Position A (also applies to B);
- This cycle is repeated three times;
- On the third attempt, it stops and rings due to Alarm time;
- This cycle is repeated until the obstacle is removed or there is consent in direction A or a Next A/B command.

**Parameter 10: Push & Go**

→10-Push & Go  
Status: Off

- Default value = off.
- Value range: [off - A - B - A+B].

→10-Push & Go  
Status: Off

It allows the thrust exerted on the gate arm to be used as authorisation for opening.

→10-Push & Go  
Status: Off

The opening direction is the direction of the thrust itself.

→10-Push & Go  
Status: Off

**Parameter 11: Next Enable**

→11-Next Enable  
Status: On

- Default value = on.
  - Value range: [off - on]
- It works in both directions (A/B).

**ON** the Next command is always active;  
**OFF** the Next command is only active if the gate is in the open position (point A or point B);

In the presence of the traffic light kit, the following colours are displayed for the different states:

C	Red
Opening	Green
Waiting Open	Green
Waiting Next	Red
Closing	Red
C	Red
Alarm	Red

In the case of a "safe payment" installation, Next Enable to OFF cannot be used for safety purposes. Example:

- The "Open A" command is given from the cash desk with an "Open Time" equal to 60 s.
- The gate opens and once position A is reached, it waits for a time equal to "Open Time" before closing.
- If the "Next" command is given, the door closes once the time equal to "Next Time" elapses.

**Parameter 12: Counters**

→12 -Counters  
N-OA 3

12 -Counters  
→N-OA 3

This meter is incremented every time a complete cycle is performed from position C to position A.

12 -Counters  
→N-OB 1

This meter is incremented every time a complete cycle is performed from position C to position B.

12 -Counters  
→N-CA 3

This meter indicates the total number of completed cycles.

**Parameter 13: BUZ. TIME**

→13 BUZ. TIME  
Time [s]:3

Duration of the sound time when the Alarm command (6) is activated.

- Default value: Range 1 - 20 sec.





**Parameter 14: Tlight Man**

→ 14-Tlight Man.  
Status: Mode 1

Allows you to select the operating modes of the traffic light kit.  
If parameter no. 13 "Next Enable" is set to ON, the traffic light follows one of the ways indicated below.  
If parameter no. 13 "Next Enable" is set to OFF, the traffic light follows the configuration indicated in parameter 13.  
Select OK to change the way the traffic light works.

14-Tlight Man.  
→ Status: Mode 1

Use the RIGHT or LEFT button to select the operating mode of the traffic light kit:

	C	Opening	Waiting Open	Closing	C	Alarm
<b>MODE 1</b>	RED	GREEN	GREEN	RED	RED	RED
<b>MODE 2</b>	GREEN	GREEN	GREEN	RED	VERDE	RED
<b>MODE 3</b>	BLUE	BLUE	BLUE	BLUE	BLUE	RED
<b>MODE 4</b>	BLUE	GREEN	GREEN	RED	BLUE	RED

**Parameter 15: Brake IDLE**

→ 15-Brake IDLE  
Status: ON

- Default value: Reduce
- Value range: [Reduce - ON - OFF]

This parameter allows you to choose the operating mode of the antipanic unit.

**Note:** If the antipanic mode is activated, the brake works at maximum torque.

15-Brake IDLE → Status: ON	"On": the brake engages in all "A/B/C" positions
15-Brake IDLE → Status: OFF	"Off": the brake does NOT engage in any position
<b>Reduce:</b>	"Reduce": the brake only engages in the "C" position

**Parameter 16: Climb Over**

→ 16-Climb Over  
Status: Off

- Default value: Off
- Value range: [ON - OFF]

16-Climb Over → Status: Off	<b>Off</b> Not active
16-Climb Over → Status: On	<b>On</b> <b>Note:</b> Activating this parameter requires the supplied basic product to be fitted with the "Anti-Climb Over Kit". In this case, if the gate arm is in position C and the user tries to climb over or pass under it, an alarm is generated. The maintenance time of the alarm signal is defined by parameter 13 "Buzzer Time".

**Parameter 17: EXIT**

→ 17-Exit Menu  
Ok

This is the menu position from which programming is completed. Select OK to exit.

17-Exit Menu → Ok	Select OK again to confirm the changes made to the operating parameters of the <b>OverGate 5.0</b> .
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### 5.7.3 - Error messages

The following three error messages can stop the board until steps are taken to reset it

- **3 FAULT Turn Gate Off:** this message appears when three times the board detects a problem on the valves that manage the motor, consequently the board stops and goes in protection.

**SOLUTION:** Turn off and on again, if the anomaly has disappeared, the system will start working again, otherwise it will stop again.

- **NO ENCODER Turn gate Off:** this message appears if there is a communication problem between the encoder and the board. When this message appears, the board freezes and goes in protection.

**SOLUTION:** Turn off and on again to solve the problem.

- **LOW VOLTAGE:** this message appears if there is a drop in the power supply voltage of the board. When this message appears, the board stops and goes in protection.

The following three anomaly messages on the rutin do not affect the operation of the gate

- **Waiting 3 Block:** this message appears during the machine operating routine, indicating that an obstacle has been detected three times during the closing phase from point A or B to point C. This does not affect the functioning of the machine. If the obstacle is removed and the gate arm will operate correctly.

- **Waiting Block:** this message appears during the machine operating routine, indicating that the gate arm has not reached the target point in the opening phase towards point A or B, or has not reached the target point C in the closing phase. This does not affect the operation of the machine. If the obstacle is removed and the gate arm will operate correctly.

- **Waiting over Speed:** this message appears during the machine operating routine, it indicates that the gate arm has been accelerated in an anomalous manner. This does not affect the operation of the machine



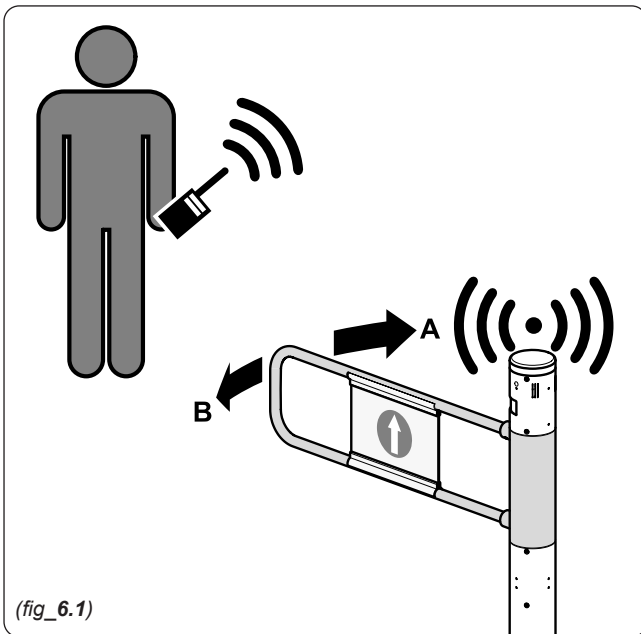
## 6 - USE

The **OverGate 5.0** is a product that has been developed to manage the transit of people in indoor places, away from direct sunlight and any splashes of water.

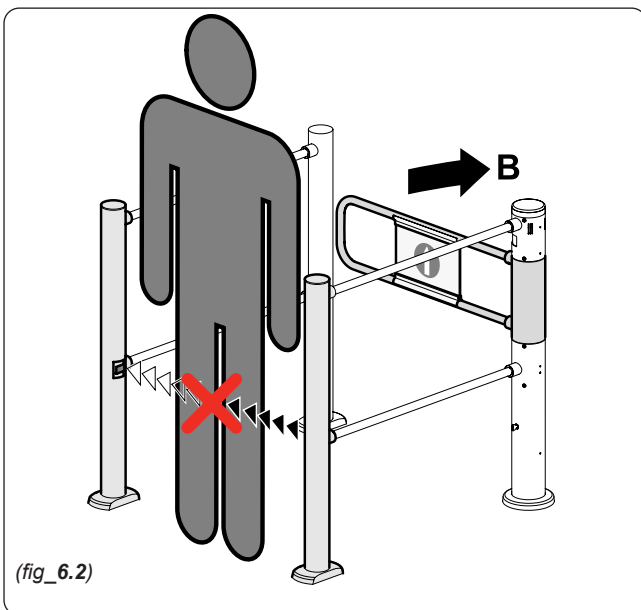
The **OverGate 5.0** can be configured via the user interface, which is found on the control logic housed in the column (for more information see the “5.8 PROGRAMMING” paragraph on page 41).

The gate arm can be opened in two directions (Dir A/Dir B) and as follows:

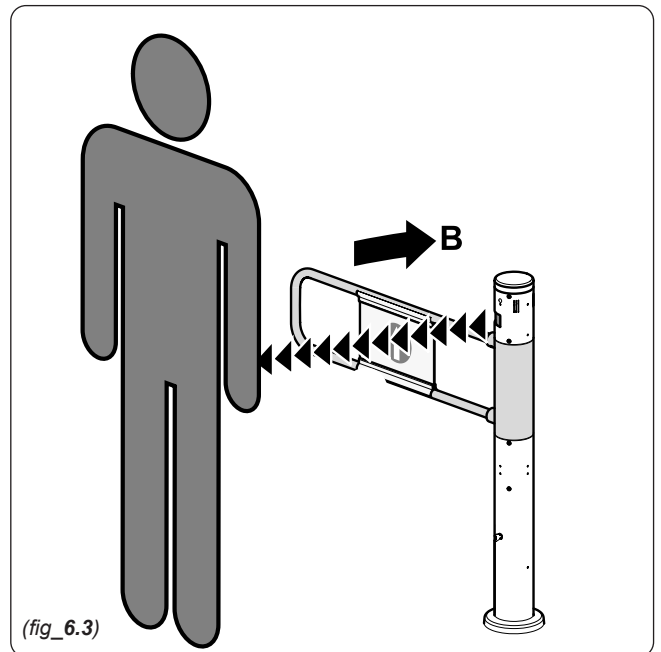
- Operator remote controlled opening (optional). It closes either via a remote command or due to the relative time-out elapsing. This is the mode related to the standard **OverGate 5.0** (Fig. 6.1).



- Opening controlled by a photocell (optional) installed inside a column placed before the main body of the **OverGate 5.0** and subsequently closes once the relative time-out elapses (Fig 6.2).



- Opening controlled by a radar sensor (optional) fitted inside the column. Two radar sensors can be housed in this module – one for direction A and one for direction B (Fig. 6.3).



- NEXT command (Direction A/B) that overrides any other command (for more information, refer to the “5.8 PROGRAMMING” paragraph on page 41), deriving from:

→2-Next Time  
Time [s]:3

→11-Next Enable  
Status: On



This priority is only valid if the “Next Enable” command is ON (refer to the “5.8 PROGRAMMING” paragraph on page 41)

If the gate is in a position other than closed (Position “C”) when the **OverGate 5.0** is switched on, the control logic brings the gate to Position “C”.

The **OverGate 5.0** accepts the following commands during the opening/closing movement:

- movement command in Dir A/Dir B;
- Next A/B command.



The **OverGate 5.0** is designed to control the pedestrian flow and is to be installed as described in the following chapters.

- The device must only be intended for the use it is specifically designed for as indicated in the catalogue and in the respective technical documentation.
- Any other use is to be considered improper and therefore, potentially dangerous. **HC2 S.r.l.** is not liable for any damage caused by improper use



## 7 - MAINTENANCE AND INACTIVITY

Be sure to disconnect the device from the power supply before carrying out any cleaning or maintenance.

Settings and programming must be carried out by qualified personnel. Errors or incorrect settings can generate dangerous conditions and/or irregular operation.

### 7.1 CLEANING

#### Routine cleaning for all surfaces

Cleaning product:	Soap or mild cleansing product and water.
Action:	Wipe with a sponge and rinse with water; dry if necessary.

#### Stubborn stains and spots on all surfaces

Cleaning product:	Mild detergent or household cleaner.
Action:	Rinse well with clean water and dry.

#### Oil and grease stains on all surfaces

Cleaning product:	Solvent for organic compounds (acetone, alcohol, genklene, trichloroethane).
Action:	Clean with soap and water, rinse well with clean water and dry.

#### Anti-rust and other corrosion products for chrome finishes

Cleaning product:	Oxalic acid. The cleaning solution must be applied with a swab and allowed to sit for 15 to 20 minutes before being washed off with water. Use a household surface cleaner for the final cleaning.
Action:	Rinse well with clean water (precautions relating to acid cleaners must be observed).

#### Small scratches on painted surfaces

Cleaning product:	Rub lightly with abrasive paste. Wash the area with water and dry. Apply thin coats of paint touch-ups.
Action:	Let it harden for about two weeks. Blend the edges of the touch-up with fine abrasive paste.

#### Deep scratches on painted finishes that create rust

Cleaning product:	Remove the rust with a sharp knife. Apply a rust inhibiting product. Fill with putty flush with the surface. Then follow the procedure for small scratches.
Action:	Let it harden for about two weeks. Blend the edges of the touch-up with fine abrasive paste.

### 7.2 ROUTINE MAINTENANCE

#### 7.2.1 - General guidelines

The mechanism must be checked regularly to ensure that the components function properly and to prevent damage deriving from wear.

Increase inspection frequency if the mechanism is used under more heavy duty conditions.

#### 7.2.2 - Maintenance on mobile parts



Pay attention to the risk of electric shock. Make sure that the main power supply is disconnected before inspecting the mechanism and the main power panel.

Proceed as follows every 800,000 passages:

- Check that the cable connectors are firmly connected;
- Open the access door to the control logic (refer to the "2 - PRODUCT DESCRIPTION" paragraph on page 8) to ensure that all the cables are connected correctly;
- Lift the cover of the anchor plate and check the tightening of the **OverGate 5.0** locking screws to the ground;
- Remove dust with a vacuum cleaner while paying attention to the electronic components.

#### 7.2.3 - Wiring and connectors



Pay attention to the risk of electric shock. Make sure that the main power supply is disconnected before inspecting the mechanism and the main power panel.

Proceed as follows every 800,000 passages:

- Check that the cable connectors are firmly connected;
- Check that the cable terminals are firmly connected;
- Check that the insulation of the cables is in good condition and that there are no exposed conductors.



### 7.3 EXTRAORDINARY MAINTENANCE

Carry out the following checks and any corrective action when the gate arm blocks:

CHECK	ACTION
1 Check that the key is in the ON position.	Check the supply system;
2 Check for voltage.	
Verify operation and connections of the controls.	Call assistance.

If the above do not resolve the issue, one or more components of the **OverGate 5.0** may need to be replaced.

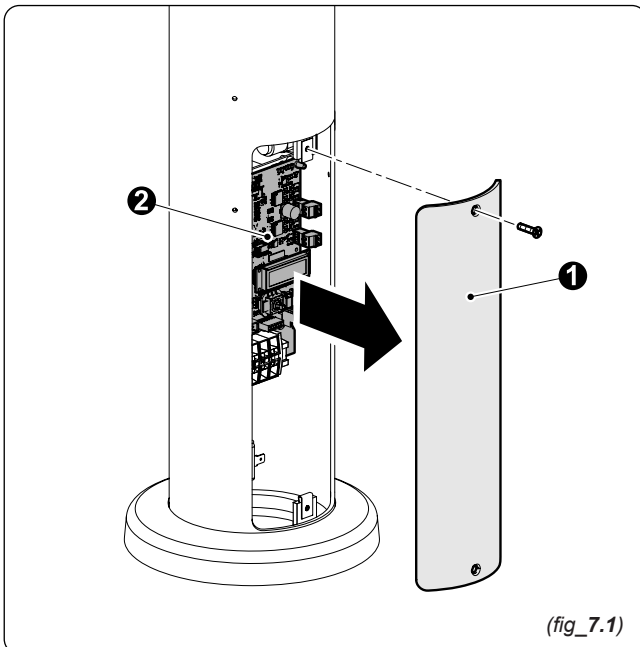
#### 7.3.1 - Replacing the AL021 board



Pay attention to the risk of electric shock. Make sure that the main power supply is disconnected before carrying out the operation.

**Note:** Take note of the position of the jumpers and connectors before removing the AL021 electronic board.

- Remove the access door to the control logic board (pos. 1, fig. 7.1).
- Remove all the connectors from the board.
- Remove the board (pos. 2, fig. 7.1).
- Insert the new board, connect the connectors and reassemble the cover.



#### 7.3.2 - Removing the top cover

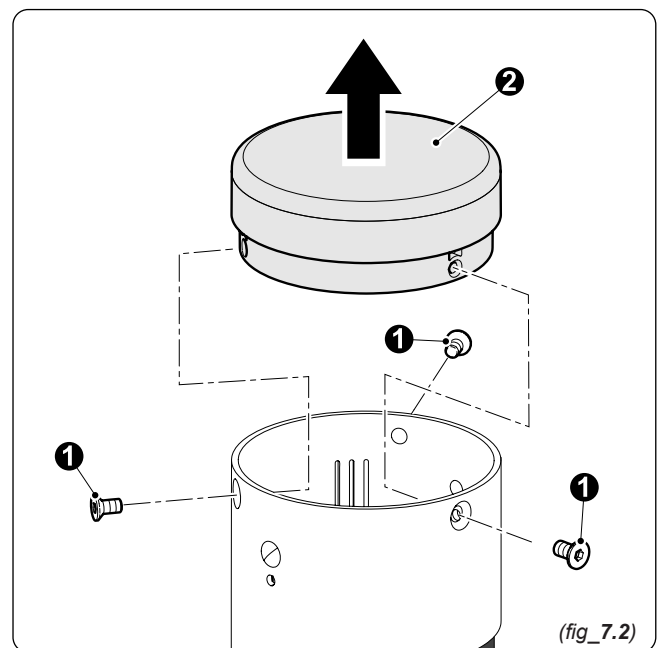


Pay attention to the risk of electric shock. If the power is provided from the top, make sure that the main power supply is disconnected before carrying out the operation.

**Note:** Regardless if the cover is made of plastic or metal, the steps to be followed for it to be removed and possibly replaced, remains the same.

Proceed as follows:

- Unscrew the three screws (pos. 1, fig. 7.2) with an Allen key.
- Remove the cover, taking care not to damage it (pos. 2, fig. 7.2).
- If necessary, replace the cover itself.
- Put it back and tighten the screws that hold it in place (pos. 1, fig. 7.2).





### 7.3.3 - Removing or replacing the head



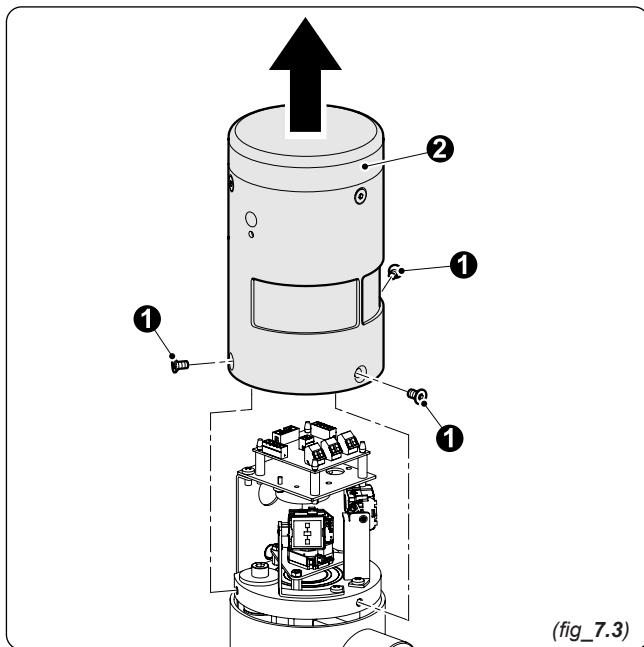
If the power is supplied from the top, disconnect the main power supply (refer to the "5.4 Power supply" paragraph on page 24).



Pay attention to the risk of electric shock. If the power is provided from the top, make sure that the main power supply is disconnected before carrying out the operation.

Proceed as follows:

- Unscrew the three screws (pos. 1, fig. 7.3) with an Allen key.
- Carefully remove the head, while being careful not to damage it (pos. 2, fig. 7.3).
- Replace it, if necessary.
- Put it back and tighten the screws that hold it in place (pos. 1, fig. 7.3).



### 7.3.4 - Removing or replacing the AL002 replicator board



Refer to the 6.3.3 "HEAD REMOVAL OR REPLACEMENT" paragraph to access this component.



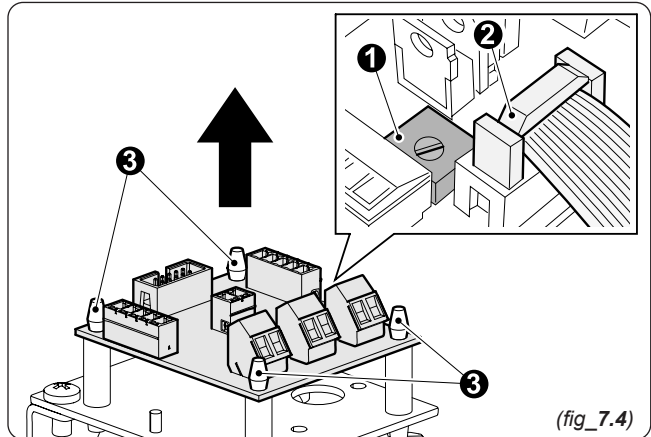
Pay attention to the risk of electric shock. If the power is provided from the top, make sure that the main power supply is disconnected before carrying out the operation.

Take note of the position of the cables before removing the electronic board and proceed as follows:

- Take note of the position of the trimmer (pos. 1, fig. 7.4) that adjusts the volume of the alarm
- Remove all the connectors from the board (pos. 2, fig. 7.4).
- Tighten the ends of the four supports of the board (pos. 3,

fig. 7.4) and carefully lift its corners, until it is released from the supports themselves.

- Remove the board and replace it, if necessary, restoring the connection of the connectors.
- If necessary, adjust the buzzer volume using the POT1 potentiometer (see the "AL002 Replicator board" section on page 15).
- Reassemble the blind head and power the **Over-Gate 5.0** and check that the gate functions correctly.



### 7.3.5 - Removing or replacing the encoder

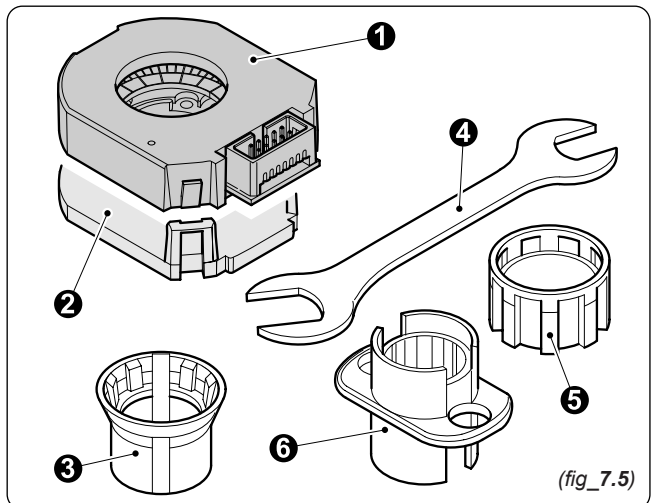


Refer to the 7.3.3 "HEAD REMOVAL OR REPLACEMENT" paragraph to access this component.



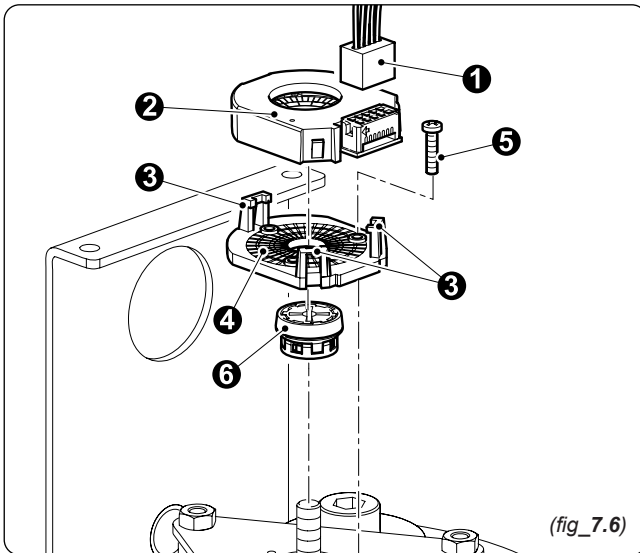
Pay attention to the risk of electric shock. Make sure that the main power supply is disconnected before inspecting the mechanism.

A specific kit will be provided (fig.6.5) if the encoder needs to be replaced:



- 1 Encoder
- 2 Encoder base
- 3 Adapter for motor shaft
- 4 Tool\_1
- 5 Sleeve
- 6 Tool\_4



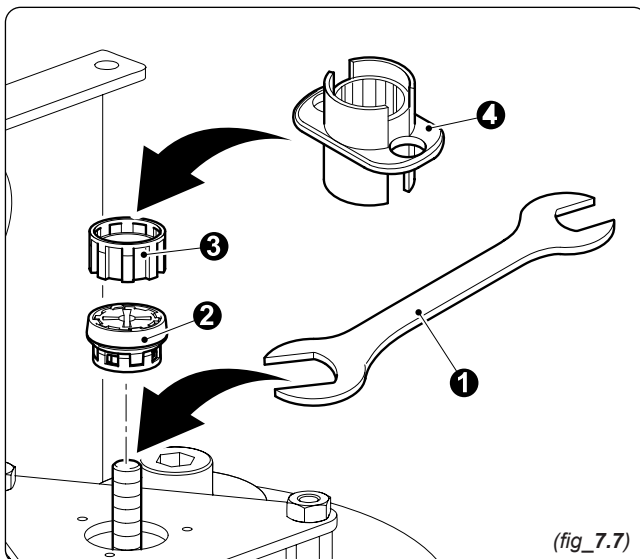


Proceed as follows to replace the encoder:

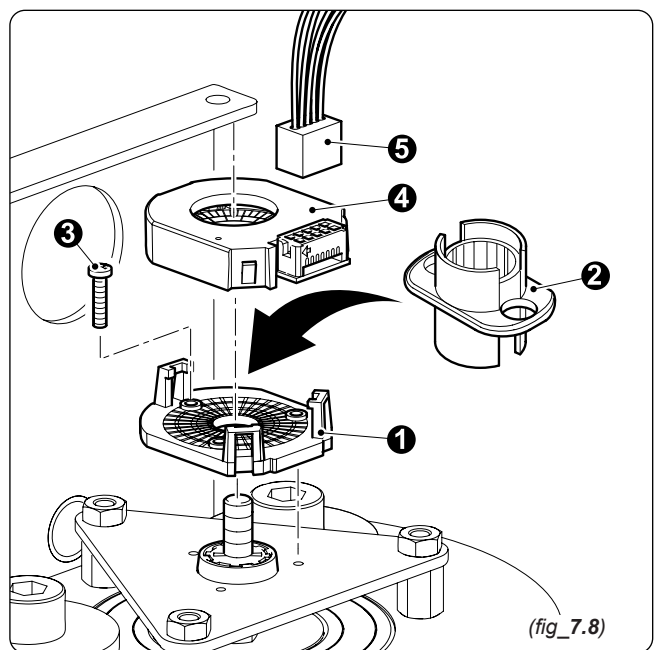
- Remove the encoder connection cable (pos. 1, fig. 7.6).
- Release the encoder (pos. 2, fig. 7.6) from its base by pressing on the three closing clips on it (pos. 3, fig. 7.6).
- Remove the encoder from its base (pos. 4, fig. 7.6).
- Remove the encoder base by unscrewing the screws (pos. 5, fig. 7.6) with which it is screwed to the triangular metal plate.
- Gently remove the shaft adapter (pos. 6, fig. 7.6) from the sleeve, using a flat-head screwdriver. Then remove the adapter and sleeve.

Then you can fit a new encoder while referring to the assembly steps indicated below

- Insert tool\_1 (pos. 1, fig. 7.7) as a spacer that defines the distance from the mounting surface;
- Slide the sleeve (pos. 2, fig. 7.7) of adequate size on the shaft until it stops against tool\_1
- Then slide the motor shaft adapter onto the sleeve (pos. 3, fig. 7.7);
- Use tool\_4 (pos. 4, fig.7.7) to press the motor shaft adapter onto the sleeve until it stops against tool\_1 (make sure the groove of the motor shaft adapter and that of tool\_4 are aligned correctly)



- Remove both tools.
- Place the base of the encoder (pos. 1, fig. 7.8) on the triangular plate using tool\_4 as a centring tool (pos. 2, fig. 7.8).
- Align tool\_4 with the flange of the base, then slide the base of the encoder and tool\_4 until it stops on the triangular plate.
- Align tool\_4 with the flange of the base, then slide the base of the encoder and tool\_4 until it stops on the triangular plate.
- Secure the base of the encoder to the plate using the screws (pos. 3, fig. 7.8). In certain cases, assembly requires tool\_4 to be rotated.
- Once the encoder base has been secured, remove tool\_4 and fit the encoder cover (pos. 4, fig. 7.8).
- Restore the encoder connection by actuating the connector (pos. 5, fig. 7.8).



### 7.3.6 - Removing or replacing the buzzer



Refer to the 7.3.3 "HEAD REMOVAL OR REPLACEMENT" paragraph to access this component.



Pay attention to the risk of electric shock. Make sure that the main power supply is disconnected before working on the buzzer.

The buzzer installed on the **OverGate 5.0** emits an acoustic signal based on the operating program of the **OverGate 5.0**.

The volume of the buzzer can be adjusted by means of a potentiometer (POT1) found on the AL002 replicator board (for more information refer to the "AL002 Replicator board" paragraph on page 15).

Proceed as follows to carry out interventions on the Buzzer:

- Disconnect and remove the buzzer connector (pos. 1, fig. 7.8) from the AL002 replicator board
- Unscrew the two fixing screws (pos. 2, fig. 7.8) of the buzzer.

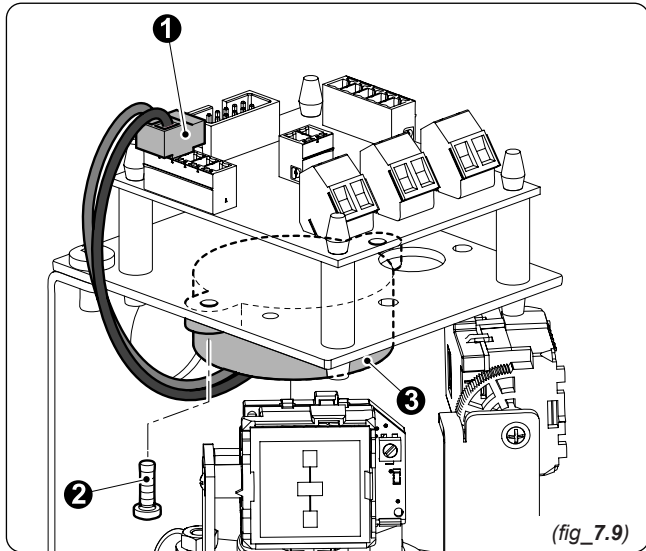


- Remove the buzzer (pos. 3, fig. 7.8) and replace it if damaged;
- Secure the new buzzer with the screws (pos. 2, fig. 7.8) and connect the connector (pos. 3, fig. 7.8).

Reassemble the blind head and the top cover; Power the **OverGate 5.0**;

Check that the gate functions correctly;

If necessary, adjust the buzzer volume from the POT1 trimmer (refer to the "AL002 Replicator board" paragraph on page 15).



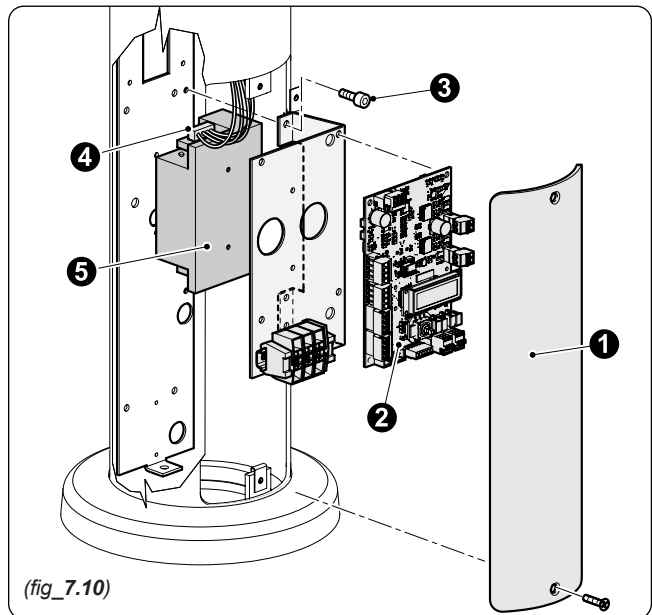
### 7.3.7 - Removing or replacing the stabilised power supply unit.



Pay attention to the risk of electric shock. Make sure that the main power supply is disconnected before carrying out this operation.

Proceed as follows to replace the stabilised power supply unit:

- Remove the access door to the logic board (pos. 1, fig. 7.10);
- Take note of the position of the jumpers, DIP switches and connectors before removing the AL021 electronic board (pos. 2, fig. 7.10).
- Remove the cables (pos. 4, fig. 7.10) from the stabilised power supply unit (pos. 5, fig. 7.10) and extract it.
- Replace the damaged power supply unit with a new one and restore the connections.



(fig\_7.10)

- Reassemble everything by carrying out the steps in inverse order;
- Power the **OverGate 5.0**;
- Check that the gate functions correctly

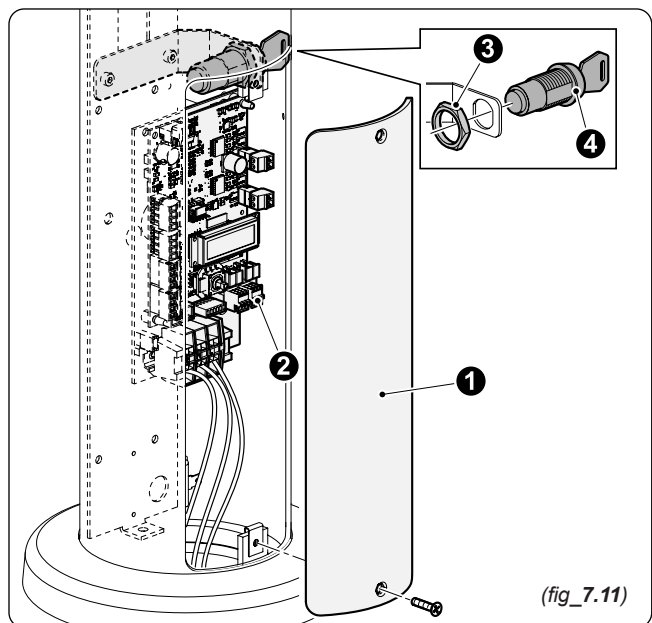
### 7.3.8 - Removing or replacing the switch-on key block.



Pay attention to the risk of electric shock. Make sure that the main power supply is disconnected before carrying out this operation.

Proceed as follows to replace the switch-on key block:

- Remove the access door to the logic board (pos. 1, fig. 7.11);
- Remove the AL021 electronic board (pos. 2, fig. 7.11).
- Unscrew the locking ring (pos. 3, fig. 7.11) of the key block using a size 22 spanner.
- Replace the damaged key block with a new one (pos. 4, fig. 7.11);



(fig\_7.11)





- Reassemble everything by carrying out the steps in inverse order;
- Power the **OverGate 5.0**; Check that the gate functions correctly.

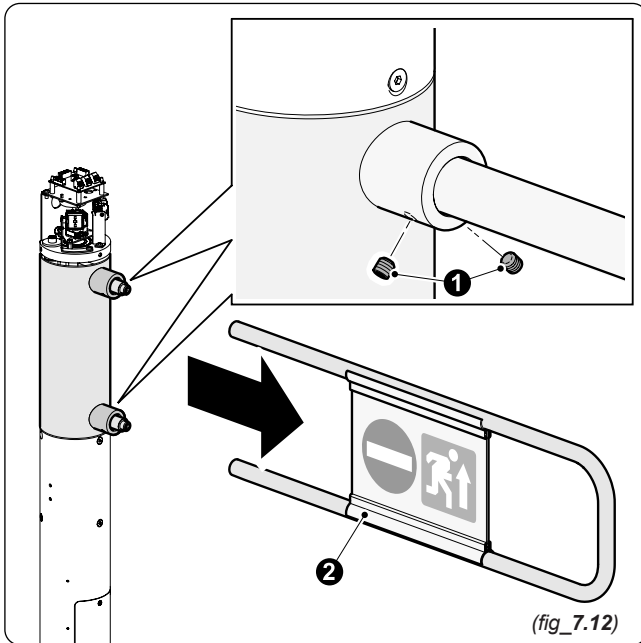
**7.3.9 - Removing or replacing the motor**



Pay attention to the risk of electric shock. Make sure that the main power supply is disconnected before carrying out this operation.

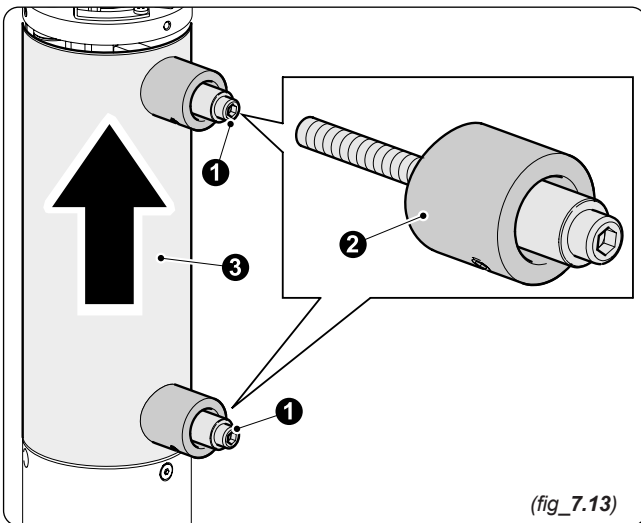
Proceed as follows to replace the motor:

- Remove the top cover (refer to chap. 7.3.2) and the head (refer to chap. 7.3.3);
- Remove the AL021 electronic board (refer to chap. 7.3.2)
- Make sure that the switch-on key is removed.
- Unscrew the four grub screws (pos. 1, fig. 7.12) that secure the gate arm with an Allen key;
- Then remove the gate arm (pos. 2, fig. 7.12)



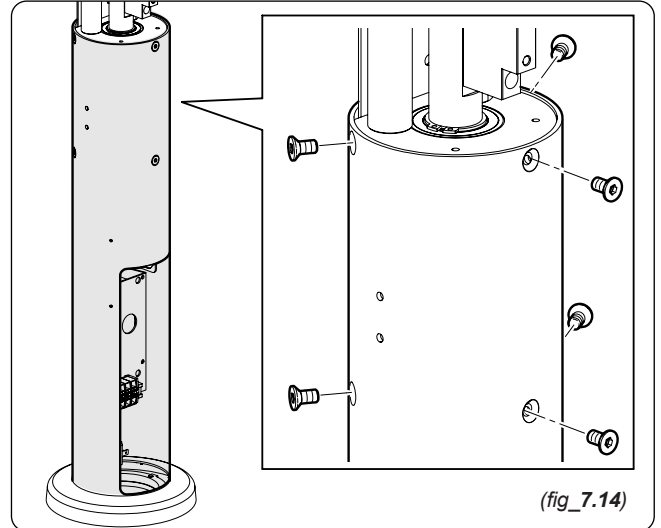
(fig\_7.12)

- Unscrew the two screws (pos. 1, fig. 7.13);
- Remove the two sleeves (pos. 2, fig. 7.13) that support the gate arm.
- Remove the rotating tube upwards (pos. 3, fig. 7.13)



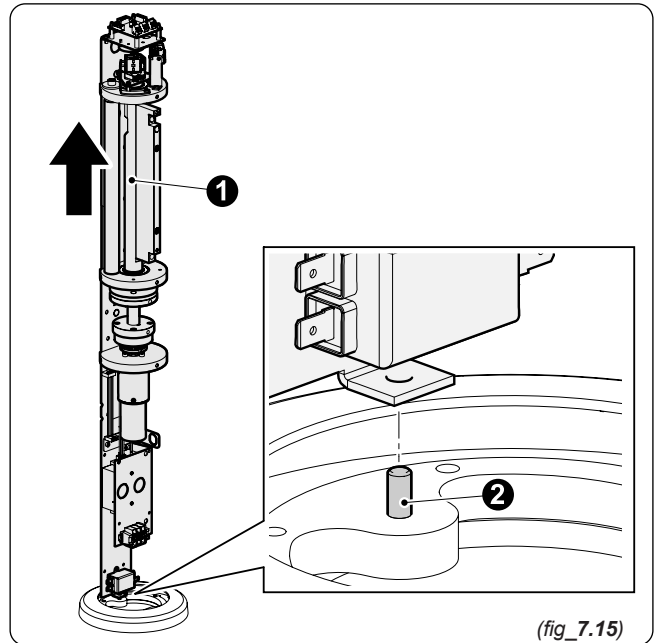
(fig\_7.13)

Unscrew the six screws that secure the motor-clutch block to the supporting structure of the column (fig. 7.14);



(fig\_7.14)

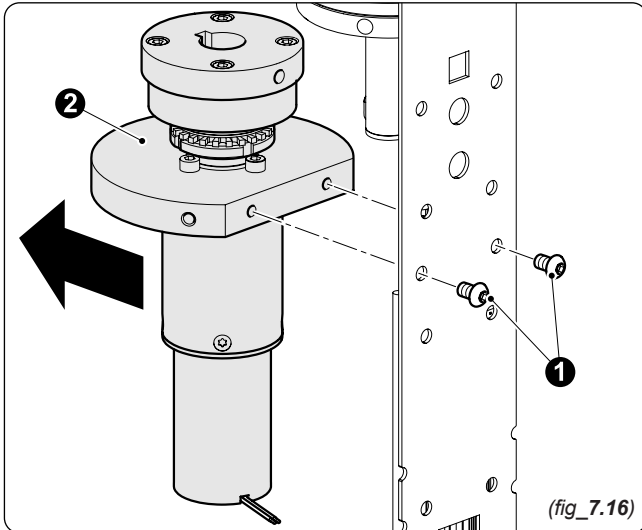
Remove the entire motor-clutch block (pos.1, fig. 7.15) upwards, releasing it from the pin at the base (pos.2, fig. 7.15);



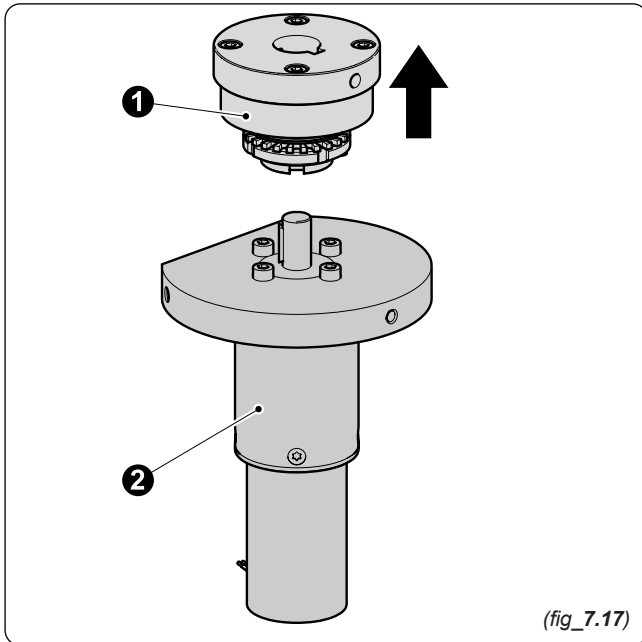
(fig\_7.15)



Unscrew the two screws (pos. 1, fig. 7.16) and remove the motor-clutch block (pos. 2, fig. 7.16).



Place a flat-head screwdriver between the clutch (pos.1, fig. 7.17) and the motor (pos.2, fig. 7.17) and exert light force to remove the clutch.



- Replace the damaged motor
- Reassemble everything by carrying out the steps in inverse order;
- Power the **OverGate 5.0**;
- Check that the gate functions correctly

## 8 - WARNINGS ON DISPOSAL



When disposing of the product, remove the main power supply and uninstall the product by following the steps indicated in the "5 INSTALLATION" paragraph on page 21 in inverse order



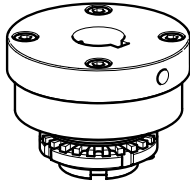
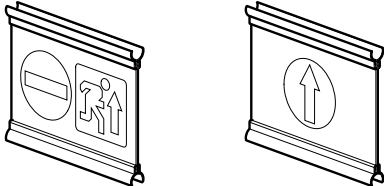
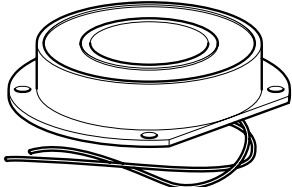
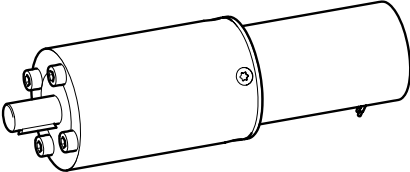
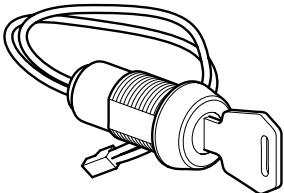
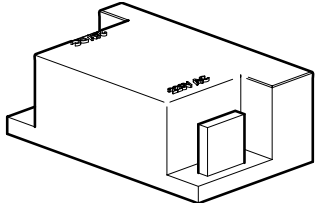
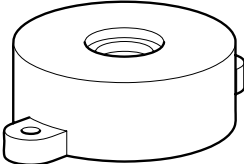
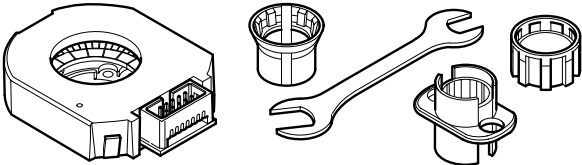
At the end of its useful life cycle, the product must **NOT** be disposed of together with municipal waste. It can be delivered to the appropriate separate waste facilities set up by the municipalities or to retailers that provide this service.

Disposing of the device separately allows you to avoid potential adverse consequences for the environment and health deriving from inappropriate disposal and allows you to recover the materials it is made of so as to achieve significant savings in energy and resources.

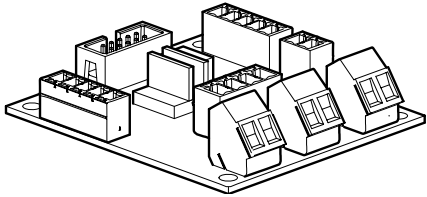
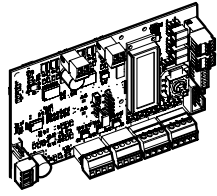
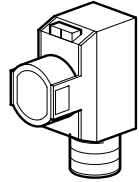
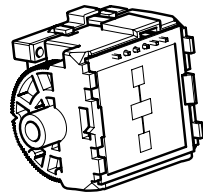
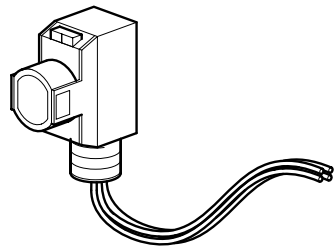
The product bears the mark of the crossed-out wheeled bin to emphasise the obligation to dispose of devices separately.



**9 - SPARE PARTS**

Description	Code	Image
Torque limiter joint	TAA000154	
Sign complete with gate arm support	232850310	
Electromagnetic brake	WAA000005	
Motor	WAA000242	
Key block	AAA010045	
Stabilised power supply unit	WAA000319	
Buzzer	WAA000325	
Encoder Kit	WAA000212	



AL002 Replicator board	WAA000109	
AL021 control board	WAA000322	
PNP photocell for Ø60 mm column (optional)	WAA000069	
Radar sensor (optional)	WAA000201	
OG Base NPN photocell (optional)	WAA000045	



**10 - GATE ARMS**

Description	Cl.	Material	Finish	Connection centre distance (2)	Diameter (2)	Standard Dimensions (2)	Shape
Standard tubular gate arm (1)	ST	Steel	<ul style="list-style-type: none"> <li>■ mirror-polished chrome</li> <li>■ nickel-plated</li> <li>■ painted</li> </ul>	250	28	<ul style="list-style-type: none"> <li>■ 700</li> <li>■ 900</li> <li>■ 1.150</li> </ul>	
	AL	Aluminium	<ul style="list-style-type: none"> <li>■ polished</li> </ul>	250	28	<ul style="list-style-type: none"> <li>■ 1.200</li> </ul>	
"Rotated P" tubular gate arm	AL	Aluminium	<ul style="list-style-type: none"> <li>■ chrome</li> <li>■ polished</li> <li>■ painted</li> </ul>	250	28	<ul style="list-style-type: none"> <li>■ 950* 770</li> </ul>	
Extendable tubular gate arm	ST	Steel	<ul style="list-style-type: none"> <li>■ mirror-polished chrome</li> <li>■ nickel-plated</li> <li>■ painted</li> </ul>	250	28	<ul style="list-style-type: none"> <li>■ 700 ÷ 1.100</li> </ul>	
Panel gate arm (1)	PL	Polycarbonate		250	n.a.	<ul style="list-style-type: none"> <li>■ 600</li> <li>■ 700</li> <li>■ 900</li> </ul>	
	PL	Acrylic with 24V RGB LED lighting		250	n.a.	<ul style="list-style-type: none"> <li>■ 600</li> <li>■ 700</li> <li>■ 900</li> </ul>	
	PL	Polycarbonate		250	28	<ul style="list-style-type: none"> <li>■ 800 x 600</li> </ul>	
Gate	AL	Aluminium	<p>Frame finish:</p> <ul style="list-style-type: none"> <li>■ chrome</li> <li>■ painted</li> </ul> <p>Panel</p> <ul style="list-style-type: none"> <li>■ Polycarbonate</li> <li>■ Acrylic</li> </ul>	250		<ul style="list-style-type: none"> <li>■ 1080 x 650</li> <li>■ 1080 x 850</li> <li>■ 1080 x 1050</li> </ul>	





Comments and suggestions regarding this manual are welcome. They must be sent to:

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