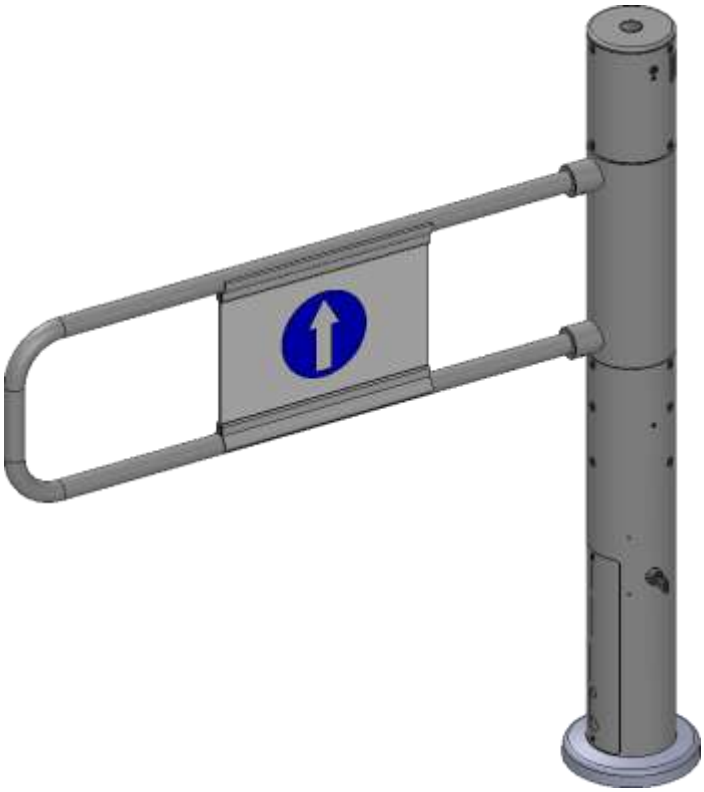
INSTALLATION MANUAL

OverGate 3



ENGLISH VERSION

Reference	Rev.	Date
AAR0020EN	**2**	**25/02/2014**

Look Out: Important NOTE

AL001 mother board's firmware had been updat. New version perfecltly stop the gate-arm when it reach "totally open or totally closed"position. As a non wanted consequence, this way to do means a noising sound "click/clack", when the gate-arm stop its rotation.

We are working to reduce as a possible this noising sound and in a few weeks we will be back with a solution.

In the meantime, if this sound feel like really noising because of the silence of the shop area, it will be possible set the gate as in a past version following these easy instructions:

- get into the paramether menu as displayed on pag. 52
- get a look for menu 17 and get it in
- moving the joystick set OFF on a display
- get out by paramether clicking the joystick
- get a look for menu 18 end click EXIT

Now the gate will result set as per firmware version 2.08

Bi-directional Motorized Wing Gate- OverGate

Year of Construction: .....

Serial Number:

SN: OG 3 .....

DOCUMENT EVOLUTION

Rev.	Date	Description	Pag.	Section
0	07/03/2013	First issue		
1	25/02/2014	Upgraded:		
		Important Notice - Warning	9	1.1.4
		Figure: CE Label	13	1.3
		Figure: Main Components of the OverGate 3 Standard	24	4.1
		Figure: Main Components of the OverGate 3 with Radar Kit	25	4.1
		Figure: Placing – OverGate 3	41	5.1.7
		Parameters Menu	51	6.3
2		Added:		
		Product Code	3	-
		CE Declaration	15	1.3

Total pages: **76**

SUMMARY

LIST OF FIGURES

TABLES

Nota Importante

The data and illustrations found in this document are not binding.
We reserve the right to modify our products in line with our policy of continuous product development. The information in this document is subject to change without notice and should not be considered as a commitment by Eco s.r.l..

1 INTRODUCTION

1.1 GENERAL

Please read carefully this manual. The information which are contained in it will help you in the installation and maintenance of the gate in order to ensure a long life of the product. ECo srl undertakes to ensure that this manual will be updated each time the designs and specifications are subject to changements. However, our policy of continuous improvement may lead to some minor differences between the unit and the description provided herein.

1.1.1 COPYRIGHT

ECo holds the copyright to this manual. This manual was written for the installation, operation and maintenance staff. It contains instructions and technical drawings that can not be copied in whole or in part. It can not be distributed or used for purposes of competition or sold to third parties.

1.1.2 ERRORS

Bug reports, comments and suggestions regarding this manual are required and encouraged. They must be submitted directly to:

ECo s.r.l. Via Rogeno, 11/B

23845 Costa Masnaga - (LC) - Italy

Tel . +39.031.879125

Fax +39.031.8570484

Web site: www.e-co.us

1.1.3 HARDWARE CHANGES

No hardware changes can be made without the written permission of ECo. It will be responsible for ensuring that the proposed amendment is found to be acceptable in all aspects of safety.

All hardware changes that are not authorized will invalidate the warranty.

1.1.4 IMPORTANT NOTICE - WARNING

It is important for the safety of the person to follow these instructions:

- **Store and keep this manual in an appropriate place, accessible and available by the maintenance personnel;**
- The device is not intended to be used by people (including children) whose sensory or mental capabilities are reduced, or lack of experience or knowledge.

  They must be oversaw from a person responsible for their safety, supervision or instruction concerning the use of the device. Children should be supervised to ensure they do not play with the device

- Children should be supervised to ensure that they do not play with the mobile device and / or with the remote control (supplied as optional).

1.2 SAFETY CONSIDERATIONS

Using our products you should be aware that the moving parts, electrical parts for high voltage, any high temperature parts, etc. can cause serious damage to people and property.

ATTENTION	Important Safety Instructions. It's important for the safety of persons to follow these instructions. Keep these instructions.
	Recognize safety information. This is the symbol of concern for safety.

The safety officer must ensure that:

- each use and improper operation are avoided;
- the safety devices are removed or tampered with.;
- maintenance be performed regularly;
- all precautions, protective equipment, etc. required by safety regulations and laws in your country are taken;
- they use only original spare parts, especially for components that perform a safety function.

For this purpose, it is essential that:

- such documentation be read carefully;
- these instructions are put into practice;
- only qualified personnel, specifically trained for that purpose may install, repair.

1.2.1 DANGER, WARNINGS AND NOTE

In this document we have used special symbols to highlight, in each instance, the possible conditions of danger to persons and / or objects:

	**DANGER**	Indicates a hazard for people and that can cause serious injury or death.
	**WARNINGS**	Indicates the situations of risk for the machine and / or for the property.
	**NOTE**	Indicates useful information for consultation of the manual, for the proper functioning of the machine, for a better installation and reliability of the same.

1.2.2 ELECTRICAL WARNINGS

The electrical supplied power, which is used in the product, is a high voltage enough to endanger life.

Before attempting maintenance or repair, you must ensure that:

- the equipment is isolated from the mains power supply;
- the insulation is complete.

The following conditions are those in which the main power can be on:

- functional testing, maintenance and repair of electrical components These operations must be performed only by technicians fully aware of the danger;
- when engaging technicians who have taken adequate precautions and the necessary training.

1.2.3 ROTATING MACHINERY

Rotating components of industrial machinery can store large amounts of energy.

It is not allowed to start the service, without the full understanding of what goes into making and / or the application of all safety precautions normally associated with electronic control systems and industrial machinery.

Before starting to work on the product, please make yourself familiar with all the blocks in the system, including control loops, mechanical drives, transducers and cables. Please read the entire manual of the device, even if you are familiar with that device.

1.2.4 STATIC SENSITIVE DEVICES

The product covered by this manual uses some electronic components sensitive to electric shocks that may damage them.

It is therefore recommended performing maintenance / installation in compliance with applicable regulations.

1.2.5 GOOD PRACTICES

The installed equipment must not be left unattended. Unless all potential mechanical and electrical hazards have been made safe. An expert must be left in charge when the equipment is to be left potentially unsafe.

The following points indicate good practice that will contribute to safety and avoid equipment damage:

- Turn off and unplug all power before working on any part of the equipment;
- NEVERr leave the equipment in a potentially dangerous state;
- Use the proper tools for the installation and / or maintenance;
- Any personal item or garment must be removed if it can be entangled by the mechanical parts..

1.2.6 EQUIPMENT SAFETY SYSTEMS

Security systems and controls, such as switches, covers and guards must be replaced or bypassed only by authorized personnel who are authorized to carry out planned actions within specific risk situations.

1.2.7 RISK ASSESSMENT

Risk assessment is graded into categories of safety, rated 1 to 8 (where 8 is the highest risk level). The following activities are covered.

Rating	Activity	Who is at Risk	Hazard	Current Control
1	Cleaning	Engineers or Site Personnel	Mis-use of Cleaning Fluids	Compliance with health regulations
2	General Installation	Site Personnel	Objects/Tools in installation area	Trained Installation Engineers
3	Servicing - General Maintenance	Site Personnel	Electric Shock	Isolation of Power/Trained Service Personnel
	Servicing – Using Chemical Fixers	Site Personnel within the Vicinity of the Work Area	Fume Inhalation	Compliance with health regulations
4	Commissioning	Site Engineer	Power Supply/Moving Parts	Isolate Power
8	Floor Drilling	Installation Engineer	Flying debris and noise	Protective Equipment must be worn

1.2.8 GENERAL CONDITION OF USE

The OverGate 3 is a device for controlling flow of pedestrian. Do not use for other purposes, is not 'a game for children, do not sit on any component of the product. Handle with care.

This equipment should not be used in potentially explosive atmospheres.

This equipment must be installed indoors, away from rain and splashes of water, since it is not protected from harmful effects of water penetration.

1.3 CE LABEL

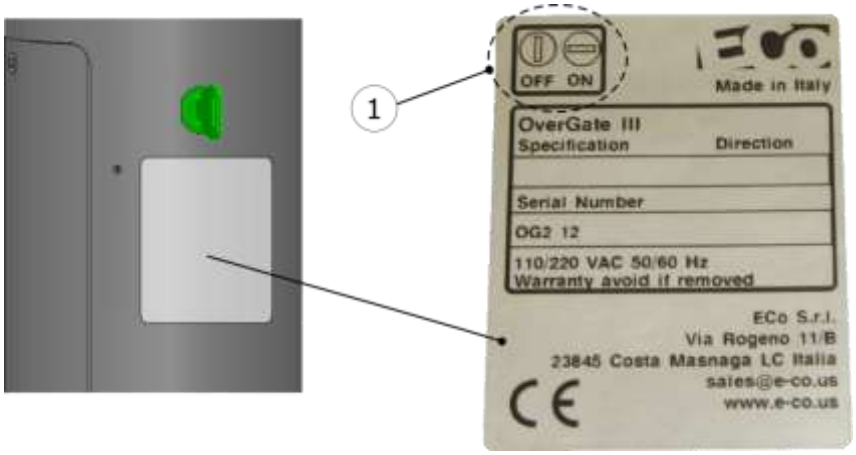


Figure 1-1: CE Label

The OverGate 3 product is developed and produced according to the EU Machinery Directive, Low Voltage Directive and EMC Directive.

The CE mark shows the OverGate 3 information and how to turn on the product (point 1). This label is located next to the ignition key.

CE Dichiarazione di conformità
(Allegato IIA della Direttiva 2006/42/CE)

Il Fabbricante:

ECo S.r.l.
Cso Carlo Alberto 108/A
I-23900 Lecco
sede operativa:
Via per Rogeno, 11/B
I-23845 Costa Masnaga LC

dichiara che la macchina
Portello motorizzato bidirezionale OverGate

Il portello motorizzato OverGate è stato progettato, sviluppato e prodotto in osservanza delle seguenti norme:

Direttiva macchine 2006/42/EC del Parlamento Europeo e del Consiglio del 17 maggio 2006 relativa alle macchine.

Direttiva 2006/95/CE del Parlamento Europeo e del Consiglio del 12 dicembre 2006 concernente il riavvicinamento delle legislazioni degli Stati membri relative al materiale elettrico destinato ad essere adoperato entro taluni limiti di tensione.

Direttiva 2004/108/CE del Parlamento Europeo e del Consiglio del 15 dicembre 2004 concernente il riavvicinamento delle legislazioni degli Stati membri relative alla compatibilità elettromagnetica.

La macchina è inoltre conforme alle disposizioni delle seguenti norme armonizzate e specifiche tecniche:

EN ISO 12100:2009 Sicurezza del macchinario - Concetti fondamentali, principi generali di progettazione - Parte 1 Terminologia di base, metodologia e Parte 2: Principi generali.

UNI EN 349:2008 - Sicurezza del macchinario - spazi minimi per evitare lo schiacciamento di parti del corpo.
EN 60204:2009 - Sicurezza del macchinario - Equipaggiamento elettrico delle macchine - Parti 1: Requisiti generali.

Si dichiara inoltre che la persona autorizzata a costituire la documentazione tecnica pertinente è il:
Sig. Stefano Steffenini

Lecco, 10 Gennaio 2010

L'amministratore Unico
Stefano Steffenini

ECo S.r.l. - Via per Rogeno, 11/b - I-23845 Costa Masnaga LC - phone +39 031 879125 - www.e-co.us

2 PRODUCT DESCRIPTION

2.1 OVERVIEW

OverGate 3 is a motorized product and has been developed for the control and management of the flow passage and to prevent misuse. Emergency situations are considered a special case.

The product OverGate 3 operates in bidirectional mode and by means of simple commands can open both clockwise and anticlockwise..

The opening movement can be activated by the initial push on the door, remote control, sensor or radar.

OverGate 3 also has the option of flying illuminated plexiglass and is equipped with a system panic.

For security situations OverGate 3 has an input for a specific signal that stops any operation in progress to allow the opening of the door and the evacuation.

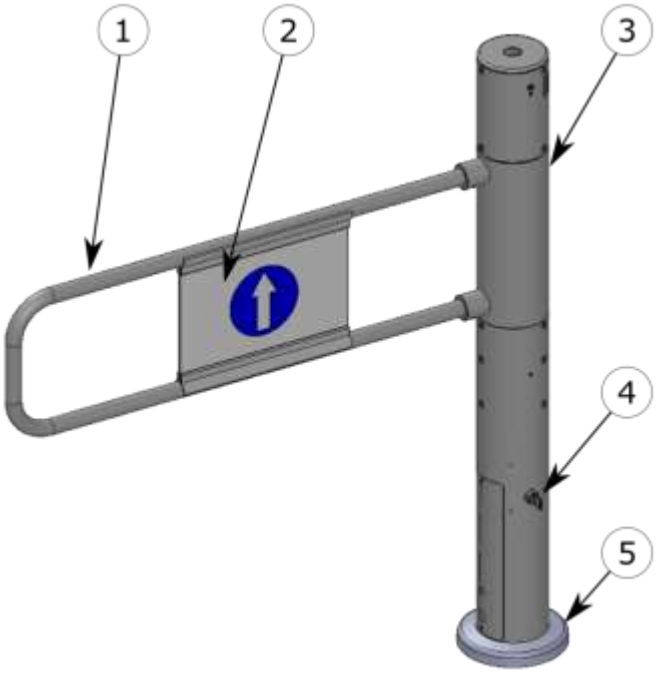


Figure 2-1: Main Components of the OverGate 3 Standard

The OverGate 3 main components are:

1 – Swinging door;

2 – Table with permission direction or no entry;

3 - Cabinet, host mechanism and system logic;

4 – Power key for the control logic;

5 – Lid of the anchorage plate;

6 - Radar as optional kit.

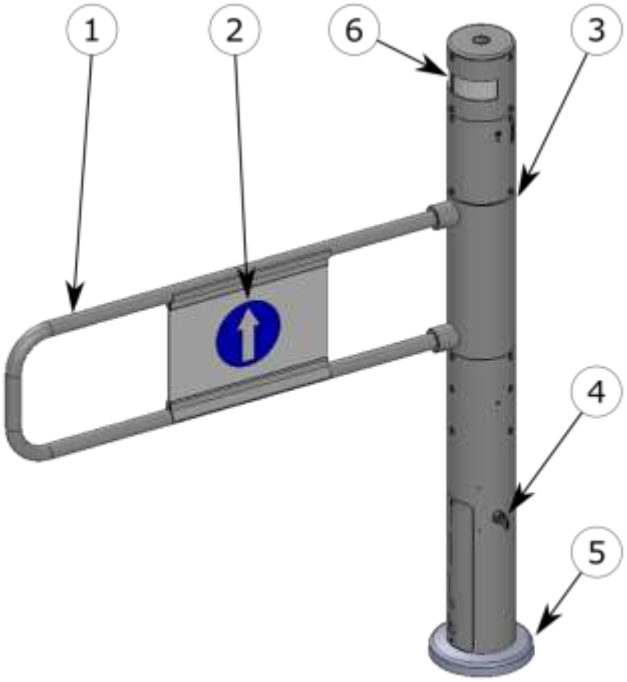


Figure 2-2: Main Components of the OverGate 3 with Radar Optional

2.2 TECHNICAL SPECIFICATION

Movement: motorized

Material **column:** Chromed steel
Nickel-plated steel
swing arm: Chromed steel / Nickel-plated steel /Plexiglass
Aluminum
table: Plastic

Unit Type: (mm)	**Swing arm**	**Depth**	**Height**	**Width**
Standard	900	185	1120	1058,5
Standard	1150	185	1120	1308,5
With Photocells kit	900	185	1120	1240,0
With Photocells kit	1150	185	1120	1240,0
With Radar kit	900	185	1245	1058,5
With Radar kit	1150	185	1245	1308,5

Function: Passage in both directions, electronically controlled.

The standard model provides a closed passage that can be opened only after the reception of a signal for authorization.

Activates an alarm sound (in all models and with the standard configuration of the parameters) when the swing arm is forced without authorization.

Mechanism: The motor-and mechanism are placed into the column.

The swing arm is moved by a motor to $26V_{DC}$ coupled with a mechanism with an anti-panic system that allows the manual opening when a certain strength is applied.

Power Supply: 110/230 V_{AC} 50/60Hz

Power Comsumption: Consumption depends mainly on the mechanism on board.

	Current - Ampere		
Model	**peak**	**With anti-panic alarm**	**Stand-by**
standard	0,12	0,31	0,11
With Radar Kit	0,12	0,31	0,11
With Photocells Kit	0,12	0,31	0,11

Logic Power Supply Voltages: 26Vdc

Power Failure: In the event of power failure the passageway operates as follows:

- The swing arm remains in the position reached at the time of power failure;
- The swing arm is free to rotate since the torque limiter decouples the crankshaft from the shaft that supports the swing arm and that the brake system remains without voltage.

Operating Temperature: 5 to +25° C

transport and storage: 0 to +50° C

Location:
- Indoor, out of rain and water sprays, as it is not protected from dangerous effects of water penetration.
- Far from direct sunlight;
- Do not use in potentially explosive atmospheres.

Relative Humidity: 95% maximum without condensation.

2.3 TYPICAL UNITS

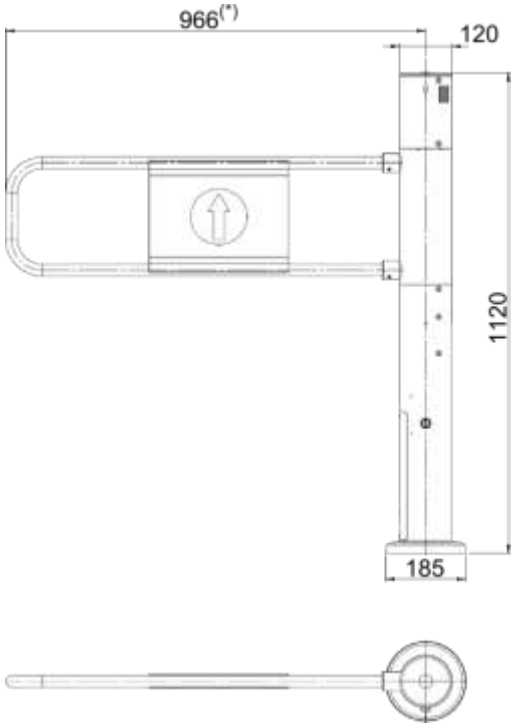


Figure 2-3: OverGate 3 Standard Single – Swing Arm 900

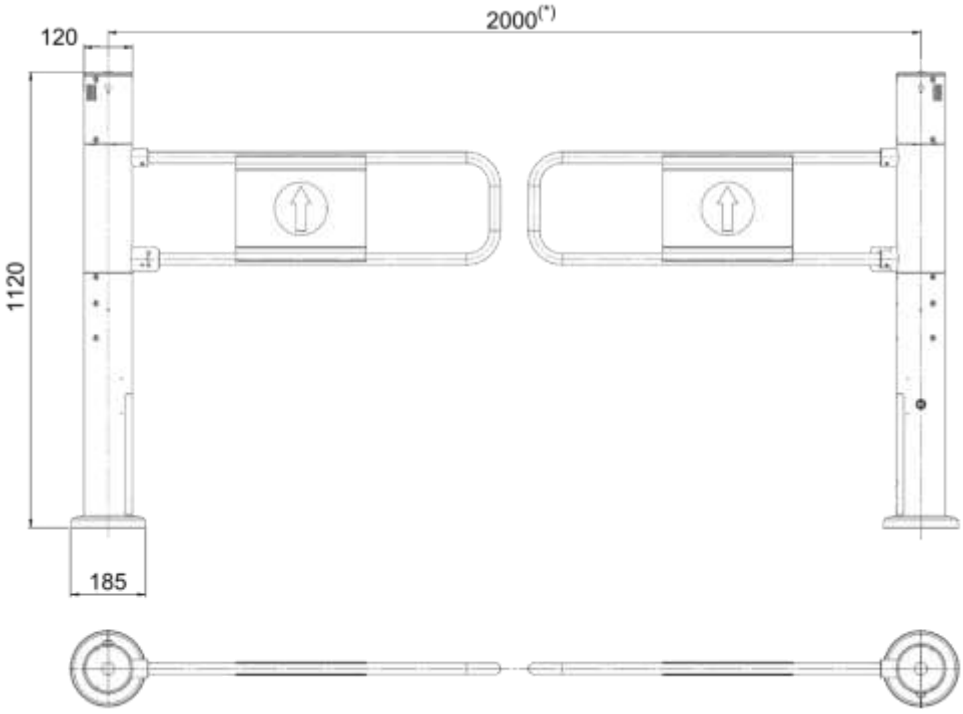


Figure 2-4: OverGate 3 Standard Double – Swing Arm 900

(*) = approximate measure

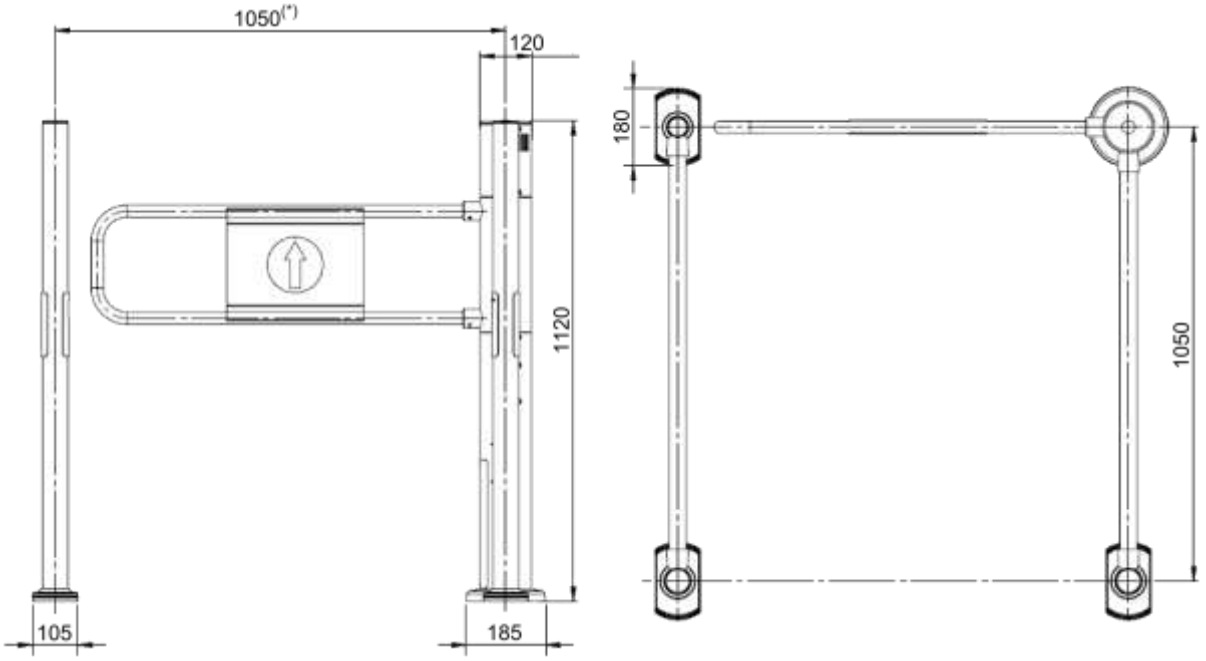


Figure 2-5: OverGate 3 Standard Single with Photocells – Swing Arm 900

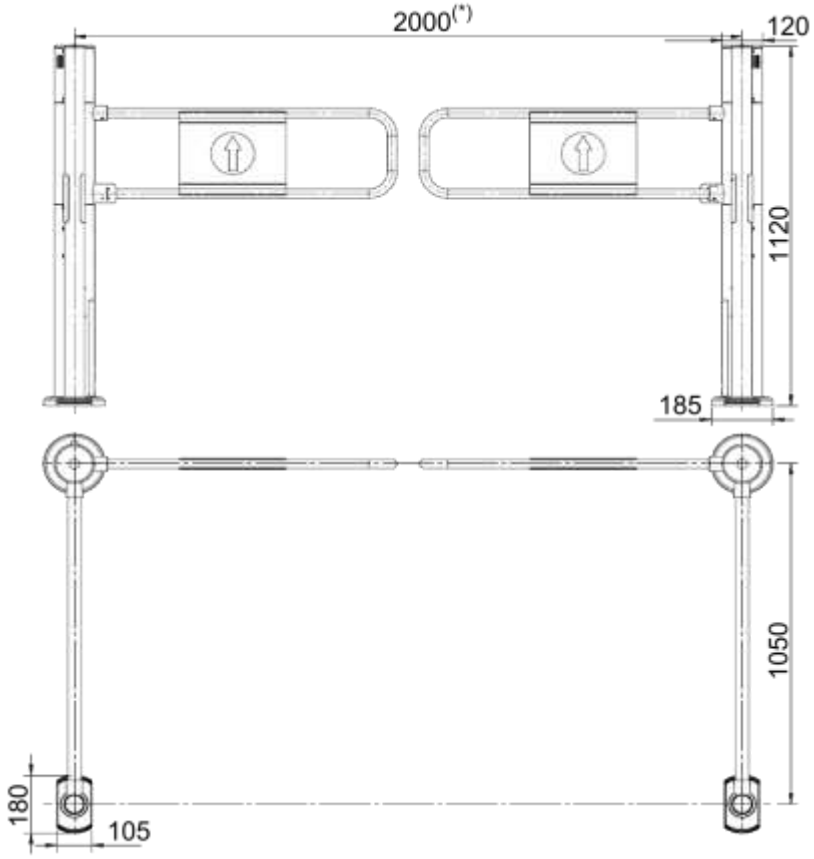


Figure 2-6: OverGate 3 Standard Duble with Photocells – Swing Arm 900

(*) = approximate measure

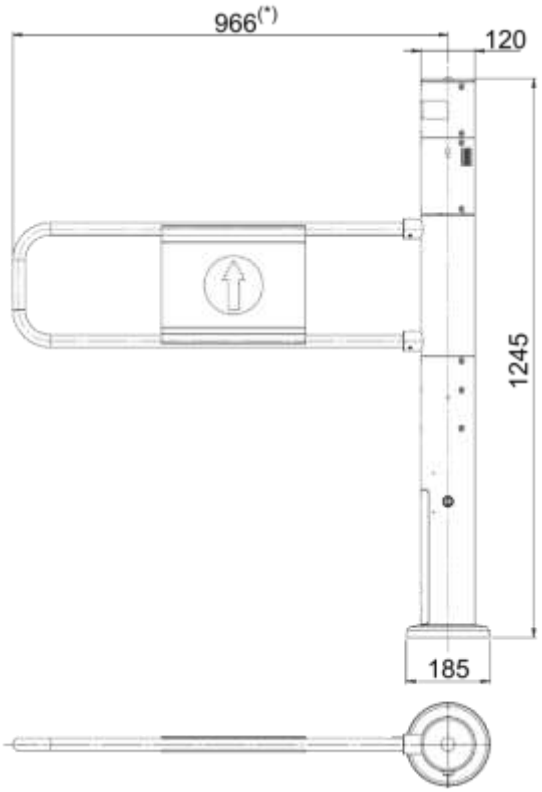


Figure 2-7: OverGate 3 Standard Single with Radar Kit – Swing Arm 900

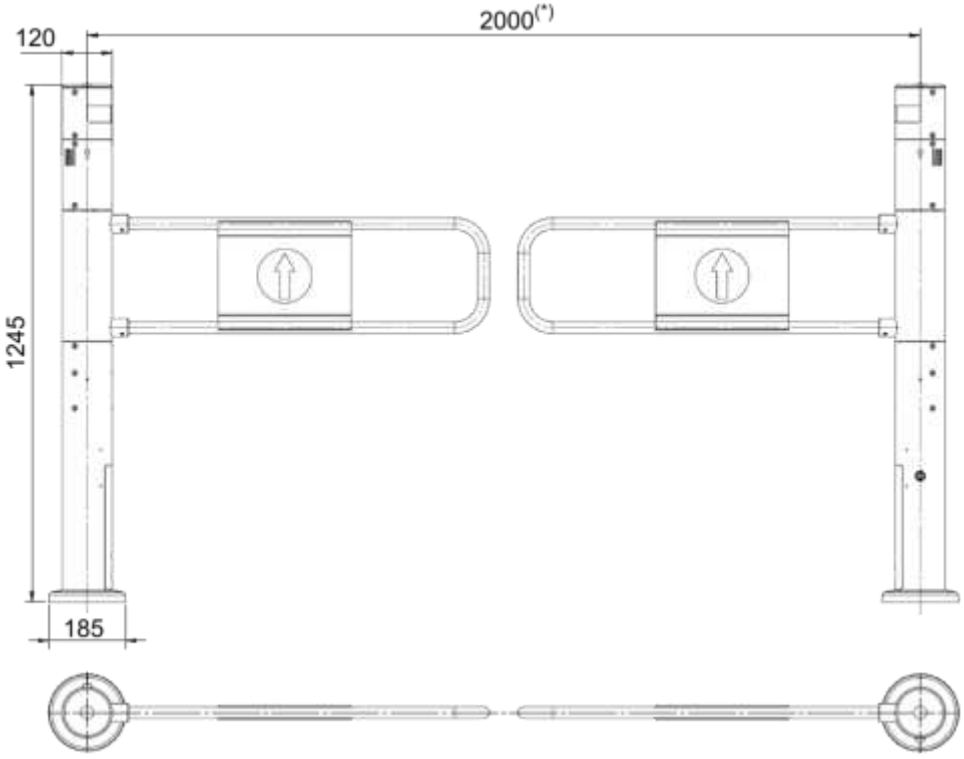


Figure 2-8: OverGate 3 Standard Double with Radar Kit – Swing Arm 900

(*) = approximate measure

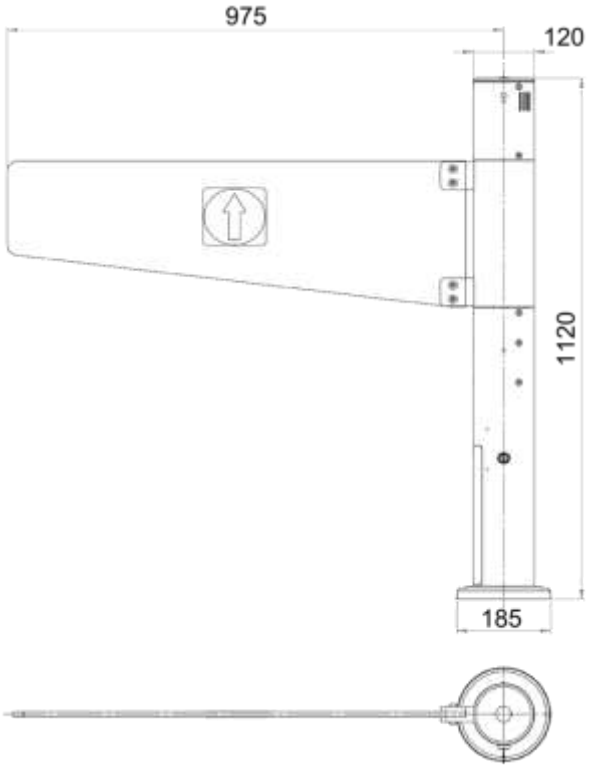


Figure 2-9: OverGate 3 Standard Single with Plexiglass – Swing Arm 900

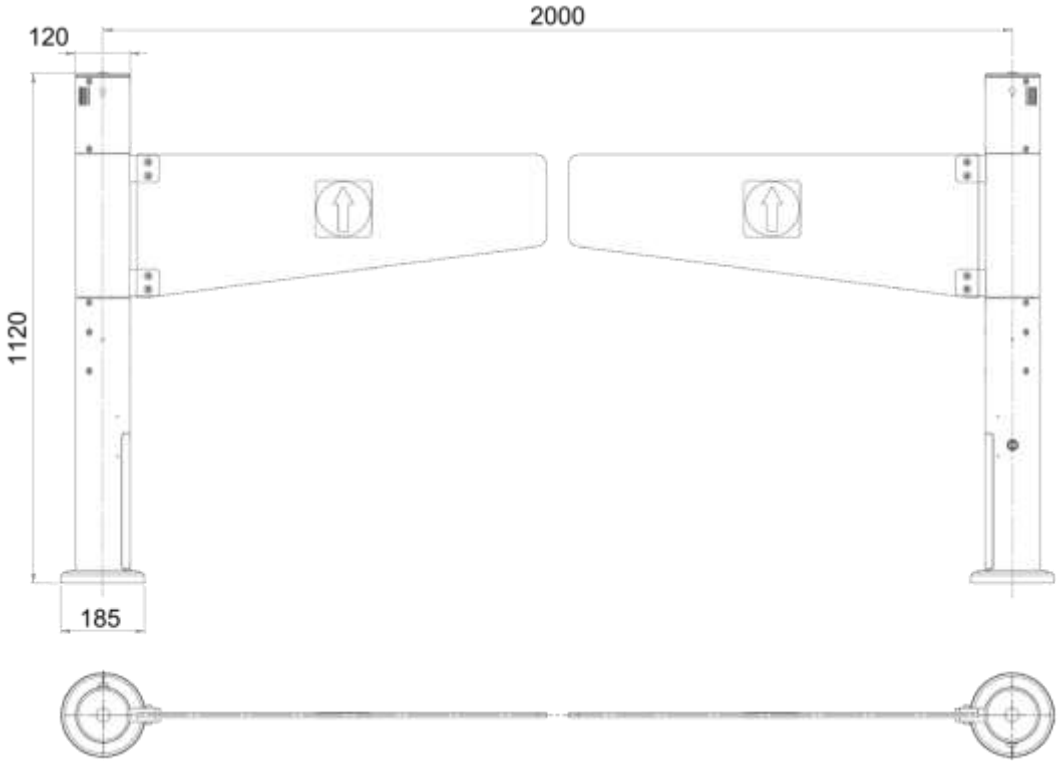


Figure 2-10: OverGate 3 Standard Double with Plexiglass – Swing Arm 900

3 INSTRUCTIONS FOR USE

3.1 DEFINITIONS

OPEN A": Timed opening clockwise direction;

OPEN "B": Timed opening counterclockwise direction;

NEXT "A": Opening command in Direction A and overrides the command "Open A";

NEXT "B" Opening command in Direction B and overrides the command "Open B";

POSITION "C": The swing arm s in the closed position, not allowing the transit.

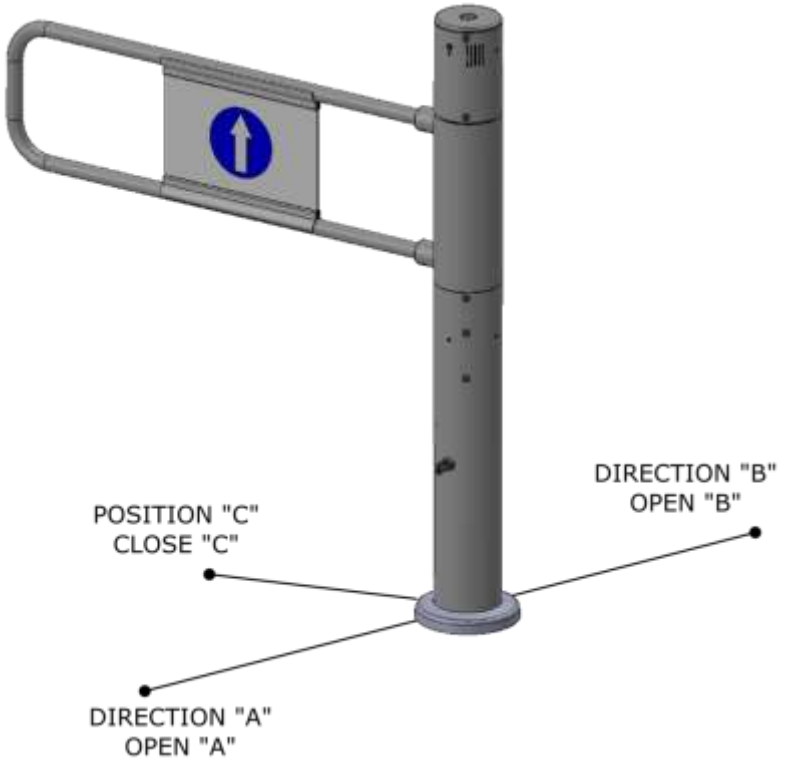


Figure 3-1: Definitions for the OverGate 3

3.2 USE

The OverGate 3 is a product developed for the management of the transit of people in places that are indoors, away from direct sunlight and any water spray..

The OverGate 3 is configurable user interface that is present on the control logic and housed in the cabinet (for more information, see section 6 "*Programming*").

The first command that arrives at the control board, has priority on the command in progress.

The opening of the swing arm can take place in a bi-directional mode (Dir A / Dir B) and may occur in the following situations:

- opening controlled by the operator via remote command. The closure can be done either by means of remote command or for the expiration of its time-out. This is the mode of OverGate 3 standard;
- opening controlled by photocell (Optional) installed inside an upright place before the main body of the OverGate 3 and next closing at the end of the relative time-out;
- opening controlled by the radar sensor (Optional) mounted within an additional module placed at the top of the cabinet. In this module can be housed two radar sensors, one for the direction A and one for the direction B;
- NEXT command (Direction A/B) that has priority over any other command (for more information see the section 6 “Programming”) coming from:

  alarm;

  photocell;

  radar sensor.

This prevalence is valid if and only if the "Enable Next" is ON (see item 13 on the menu, section 6 "*Programming*").

If the swing arm is in a different position from the closed one (position "C"), when the OverGate 3 is switched on, the control logic provides to bring the door in the position "C".

During the movement of opening / closing, the OverGate 3 accepts the following:

Dir A/Dir B command;

Next A/B command.

4 TECHNICAL INFORMATION

4.1 COMPONENTS LAYOUT

The following images show the main components placed on the standard OverGate 3 and the model with the radar kit (Optional).

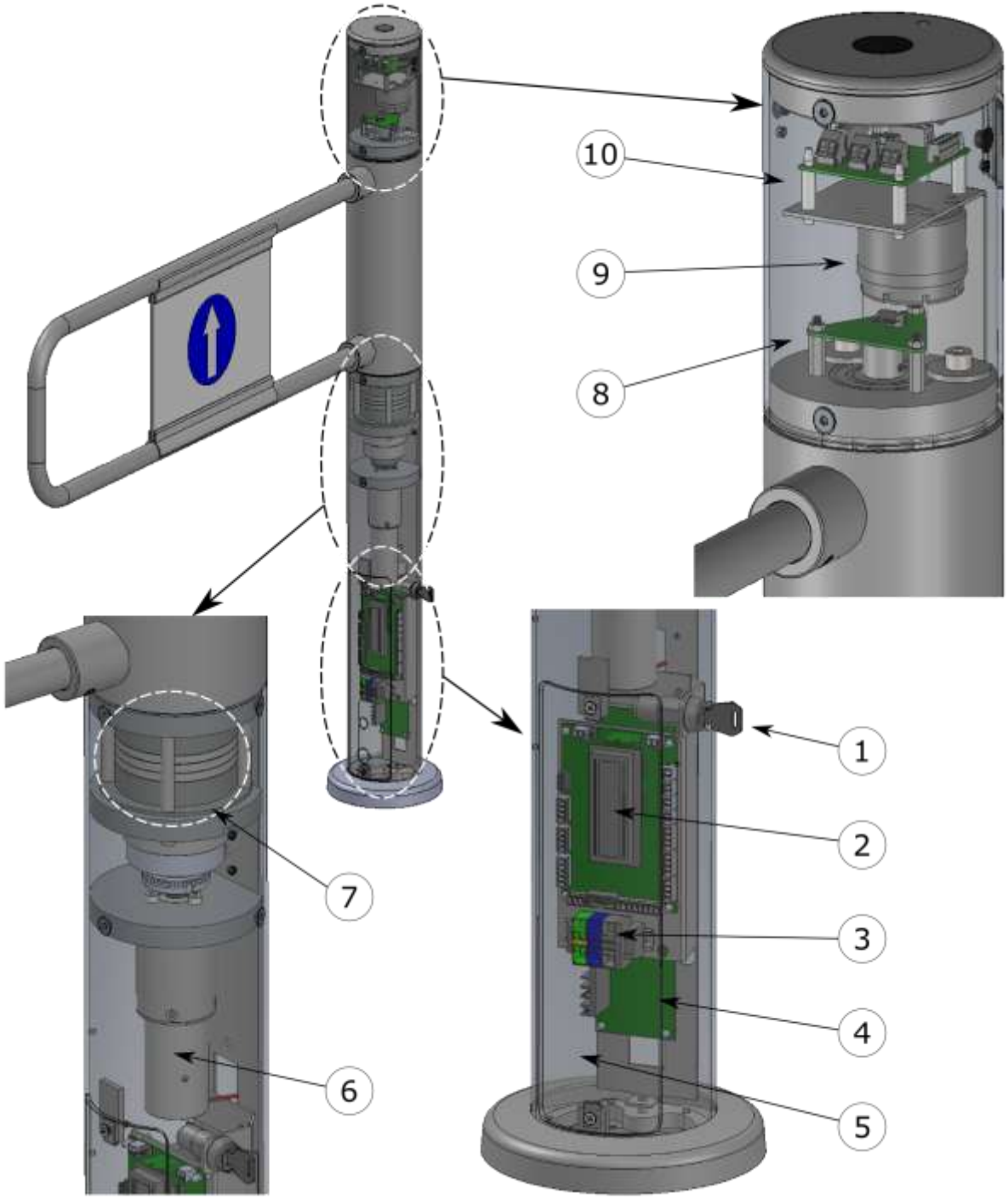


Figure 4-1: Main Components of the OverGate 3 Standard

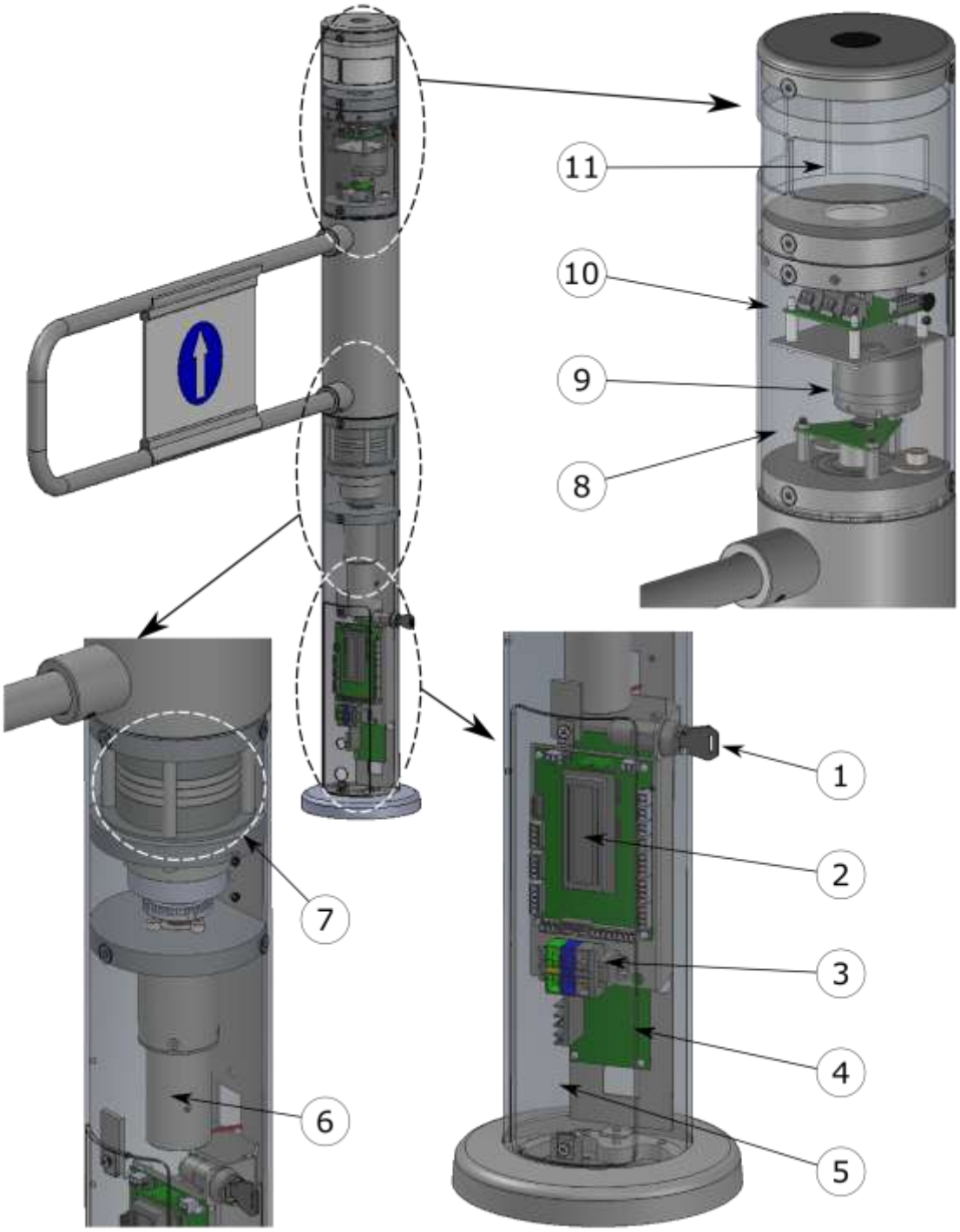


Figura 4-2: Main Components of the OverGate 3 with Radar kit (*Optional*)

Item	Description
1	OverGate 3 switching on key
2	Control logic board
3	Terminal block for the power line
4	Stabilized power supply
5	Door to access at the electronic components (nr. 2 holes ONLY for double model)
6	Motor-Brake block
7	Torque limiter
8	Encoder board
9	Buzzer
10	Repeater board
11	Radar

4.1.1 SWITCHING ON KEY

The switching on key (point 1) is laterally placed outside of the OverGate 3 (see Figure 4-1). Acting on it is removed the main power supply to the AL001 control board.

The key is connected to the control logic board AL001 at the point indicated in Figure 4-3 (Step 2).

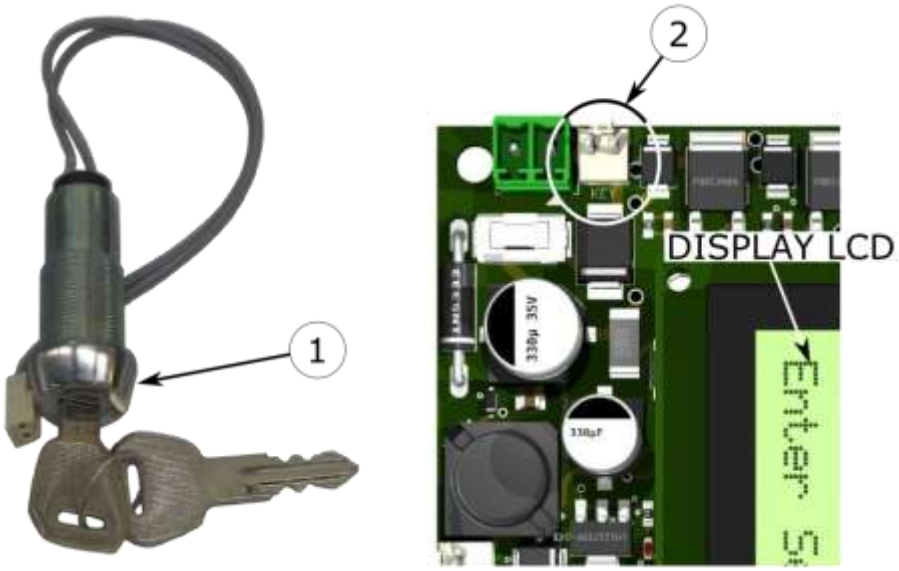


Figure 4-3: Switching On key - Connections

4.1.2 CONTROL LOGIC BOARD - AL001

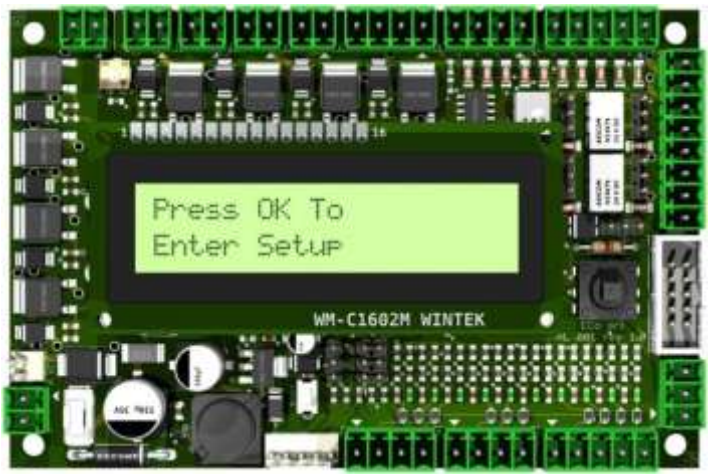


Figure 4-4: Control Logic Board – AL001

The card that manages the operation dell'OverGate 3 is placed inside the cabinet.

It can be accessed by a panel fixed with screws.

It is an electronic power to $26V_{DC}$.

The user interface consists of an LCD display with brightness adjusted with the trimmer (see Figure 4-5, LCD) and a "joystick" to move through the setting menu of the OverGate 3.

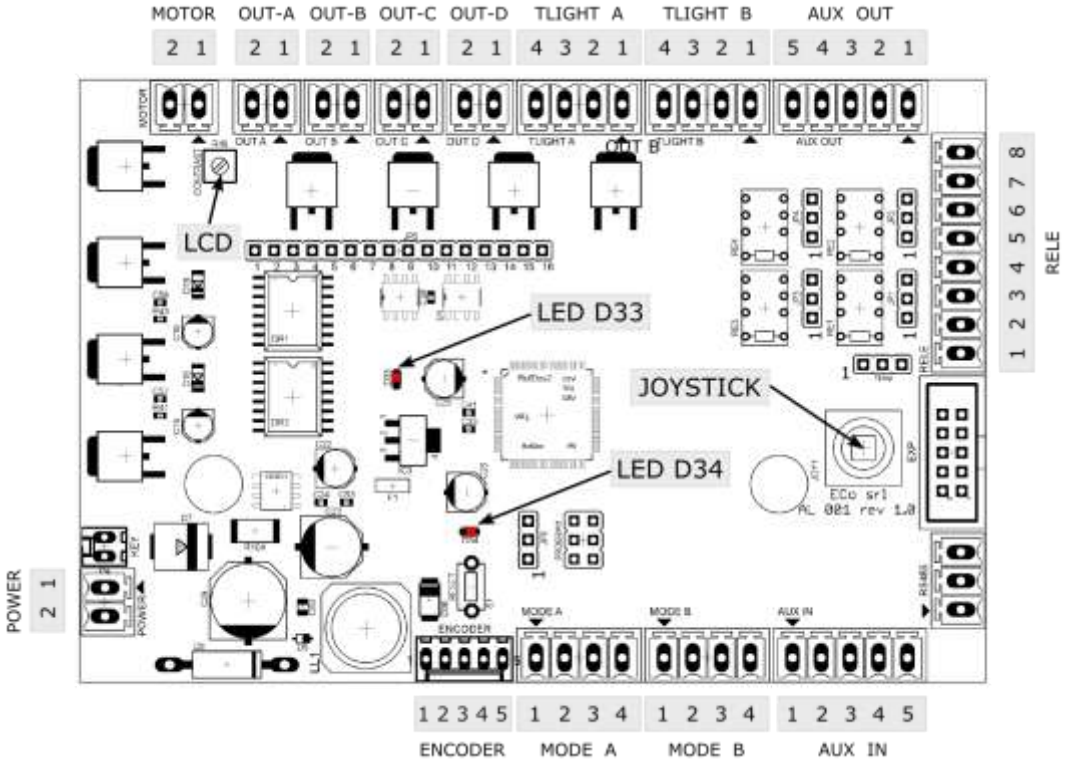
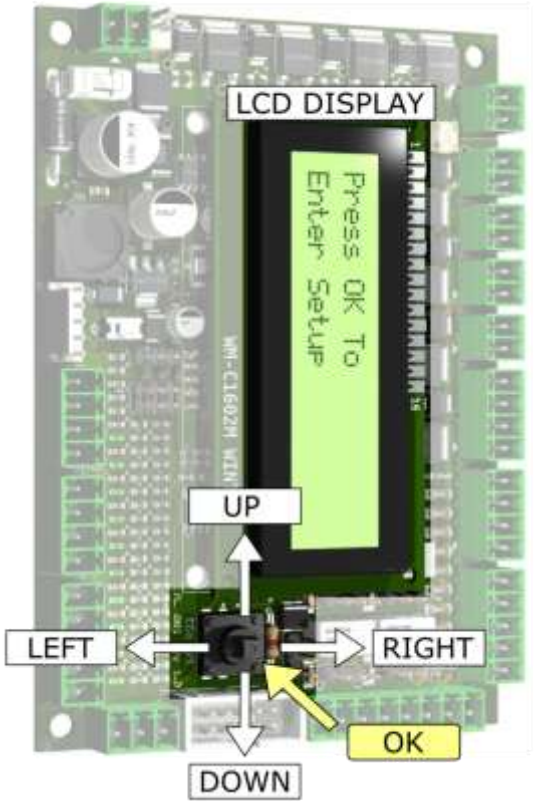


Figure 4-5: Components Layout – AL001 Board

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

The correct functionality of the AL001 board is indicated by two red LEDs placed on it (for more information see the 4.1.2.3 "LED").

4.1.2.1 User Interface



RIGHT - RH
NEXT FUNCTION
Allow:
- to move forward in the menu.
- to increase the selected value

Push the joystick to the RIGHT.

LEFT - LH
PREVIOUS FUNCTION
Allow:
- to go back in the menu
- to reduce the selected value.

Push the joystick to the LEFT.

CONFIRM - OK
CONFIRM THE SELECTED FUNCTION
Allow to procede at the modify of the selected parameter and confirm the selected value.

Press the joystick.

Figure 4-6: User Interface– AL001 Board

4.1.2.2 Connectors

Pin	Cable / Signal	Description
1	GY - Grey	Switching on key
2	GY - Grey	

Pin	Cable / Signal	Description
1	BN - Brown	Power Supply
2	WH - White	

Pin	Cable / Signal	Description
1	GN - Green	Ratary Encoder
2	YE – Yellow	
3	WH - White	
4	BN – Brown	
5	GY - Grey	

Pin	Cable / Signal	Description
1	Reserved	Mode A – Opening Direction A
2		
3		
4		

Pin	Cable / Signal	Description
1	Reserved	Mode B – Opening Direction B
2		
3		
4		

Pin	Cable / Signal	Description
1	Reserved	AUX IN
2		
3		
4		
5		

Pin	Cable / Signal	Description
1	Signal	Rele
2	-	
3	Signal	
4	-	
5	Signal	
6	-	
7	Signal	
8	-	

Pin	Cable / Signal	Description
1	Reserved	AUX output
2		
3		
4		
5		

Pin	Cable / Signal	Description
1	Reserved	TLight B
2		
3		
4		

Pin	Cable / Signal	Description
1	Reserved	TLight A
2		
3		
4		

Pin	Cable / Signal	Description
1	BU – Blue (+)	Output D
2	BK – Black (GND)	

Pin	Cable / Signal	Description
1	BU – Blue (+)	Output C
2	BK – Black (GND)	

Pin	Cable / Signal	Description
1	BU – Blue (+)	Output B
2	BK – Black (GND)	

Pin	Cable / Signal	Description
1	BU – Blue (+)	Output A
2	BK – Black (GND)	

Pin	Cable / Signal	Description
1	RD - Red	Motor
2	BK – Black	

4.1.2.3 LED

On the control logic board are present two red LEDs (D33 and D34, see Figure 4-5).

LED D33 ON clearly visible on the board, indicates if the AL001 is powered;

D34 ON place below the display, indicates if the power supply stage of the microprocessor is operating correctly.

4.1.2.4 Jumper

The factory setting of the jumpers on the standard OverGate 3 is as follows:

Jumper	Setting			Notes
	OverGate 3 Standard			Operating Modes
JP1	1=OFF	2=ON	3=ON	Normally Open (N.O.)
JP2	1=OFF	2=ON	3=ON	
JP3	1=OFF	2=ON	3=ON	
JP4	1=OFF	2=ON	3=ON	
JP6	1=ON	2=ON	3=OFF	Reserved
TERM	1=OFF	2=OFF	3=OFF	Reserved

Table 1: Jumper Setting

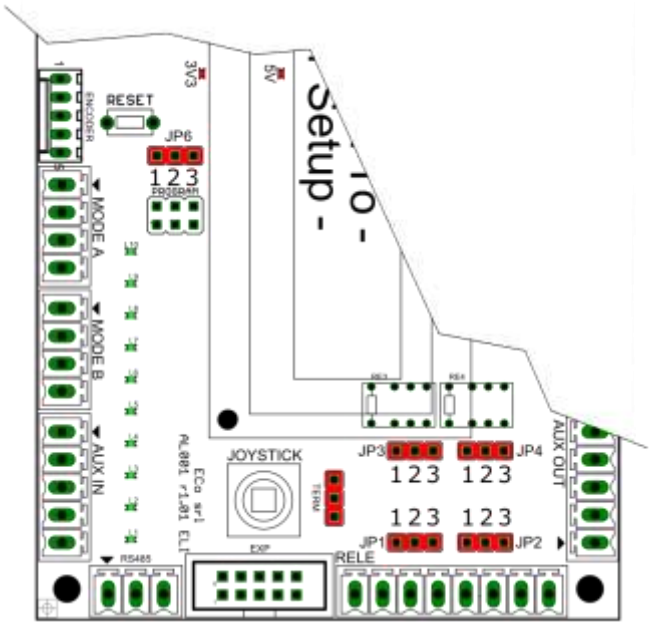


Figure 4-7: Factory Setting of the Jumper

4.1.3 STEADY POWER SUPPLY

The AL001 control board is powered by a steady power supply with the following characteristics:

Input:	110/220 VAC 50/60 Hz 4 Ampere max
Output:	26VDC 3 Ampere max

The highlights of the power supply are shown in the image below.

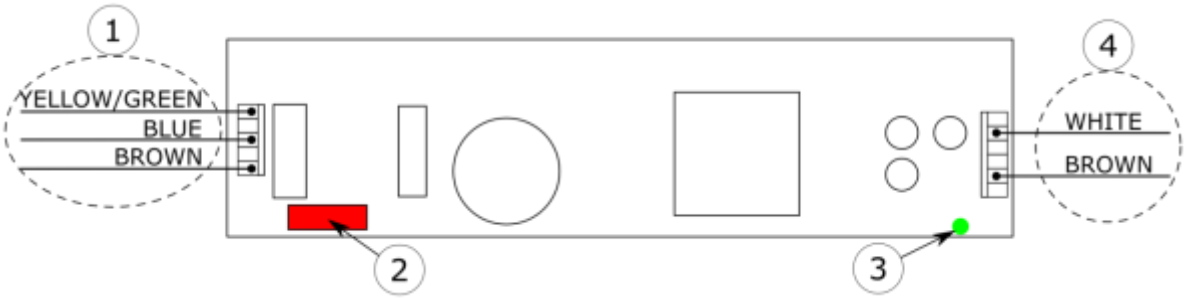


Figure 4-8: Steady Power Supply

Item	Description
1	Cables from the main terminal
2	FS1 - Fuse FAST 4A - 250VAC - 5x20
3	LED1 – green LED for the right functioning
4	Output - 26VDC steady for the AL001 control logic board

4.1.4 REPLAY BOARD - AL002

The AL002 replay board is placed at the top of dell'OverGate 3 under the cover and has the purpose of replicating the various inputs and outputs to the control board.

The product can also be powered from the top by passing the power inside a special optional pipe and subsequently connected to the board.

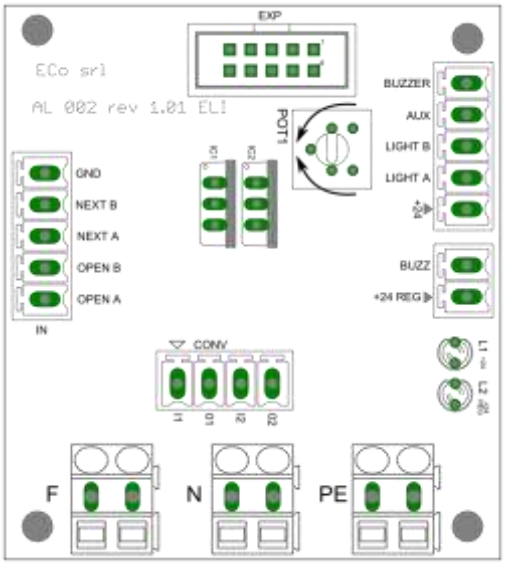


Figure 4-9: Replay Board - AL002

Where:

- POT1 trimmer for the buzzer volume setting.

↶	to increase the volume
↷	to reduce the volume

- F/N/PE input for the main power supply of the OverGate 3.
- EXP connection interface with the AL001 control board

4.1.4.1 LED

Two LEDs are present on the replay board (L1 e L2, see Figure 4-9).

LED	L1 green	its intensity indicates the volume of the buzzer;
	L2 red	indicates that the main power supply is present on the replay board.

4.1.4.2 Connectors

Pin	Cable / Signal	Power - Description
F	BN - Brown	Main power supply of the gate
N	BU - Bleu	
PE	GNYE– Yellow/Green	

Pin	Cable / Signal	CONV - Description
1	I1	Converter
2	O1	
3	I2	
4	O2	

Pin	Cable / Signal	Buzzer - Description
1	+24 REG	Buzzer supply (+26V_{DC})
2	BUZZ	GND

Pin	Cable / Signal	OUT - Description
1	+24	Reserved
2	LIGHT A	
3	LIGHT B	
4	AUX	
5	BUZZER	

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

Pin	Cable / Signal	IN - Description
1	OPEN A	Opening Signal - Direction A
2	OPEN B	Opening Signal - Direction B
3	NEXT A	NEXT Signal – Direction A
4	NEXT B	NEXT Signal – Direction B
5	GND	Ground signal

4.1.5 PHOTOCELL (Optional)

The OverGate 3 is designed to operate with photocells, through optional kit. They are arranged in two positions:

- a photocell can be positioned inside the main body in correspondence of the access lid to the control logic;
- other photocell is placed in a separate upright. The cables of this photocell are placed inside the tubular profile side of the passage.

For more information about photocells and their installation, refer to the manual attached to the "Kit photocells".

4.1.6 RADAR (Optional)

Moreover, OverGate 3 is designed to operate with radar, using optional kit. It is able of operating with two radars which are located at the top of of the main body.

For more information on the radar and its installation, refer to the manual attached to the "Radar Kit".

4.1.7 PLEXIGLASS SWING ARM WITH LIGHT (Optional)

The OverGate 3 is designed to make it possible to illuminate the Plexiglass swing arm with LED Light (Figure 4-10, *tem 1*).

This light is placed in correspondence of the upper bracket that supports the same swing arm (see Figure 4-10).

For more information about the lighting of the arm refer to the manual attached to the "Lighting Kit."

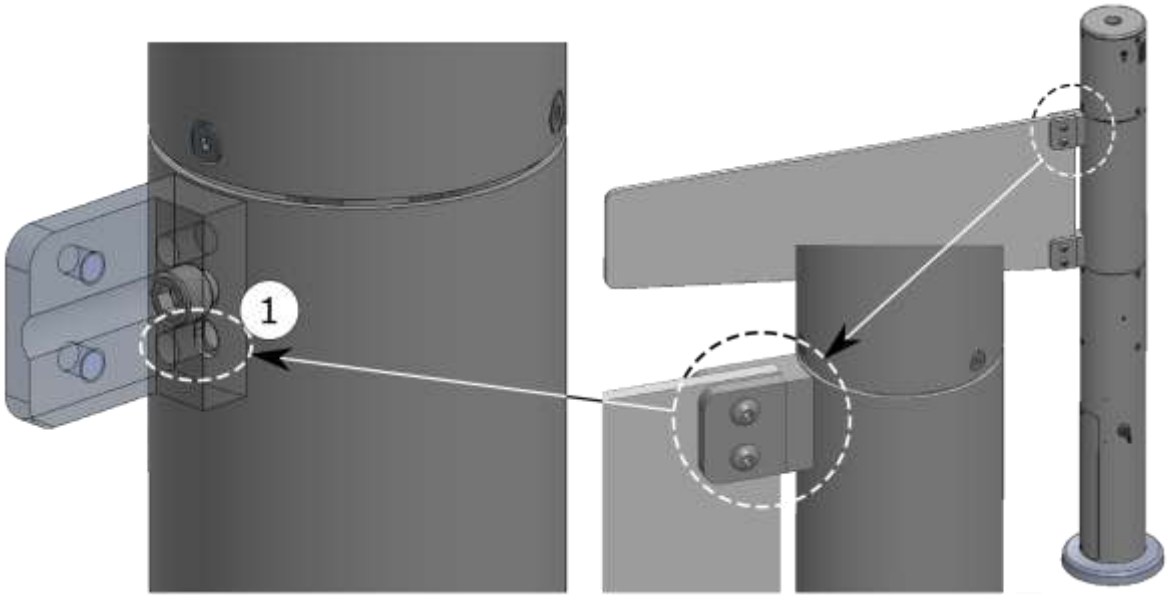


Figure 4-10: Plexiglass Swing Arm with Light

5 INSTALLATION AND CABLING

5.1 INSTALLATION

5.1.1 UNPACKAGING

Check that all components are packaged properly. ECo srl can not be held liable for any damage that may occur during transport and installation.

Electrical connections must be carried out **only by authorized and specially trained personel**.

The installation of cables and the connections to the equipment must be combined with the instructions contained in this manual.

ECo srl can not be held liable for damages due to non-compliance with the instructions contained in this manual.

Separate packaging materials and proceed to the collection point in accordance with the national regulations.

Model	Packaging Weight (Kg)
OverGate 3 + swing arm to 900mm	31
OverGate 3 + swing arm to 900mm + radar Kit	33
OverGate 3 + swing arm to 900mm + single photocell kit	49

5.1.2 INSTALLATION KIT

Here are the images that give evidence of the OverGate 3 packaging and the components to install.

Figura 5-1: On Delivery – OverGate 3

Figura 5-2: On Delivery - OverGate 3

Figure 5-3: Contents - OverGate 3

1	OverGate 3
2	Swing Arm
3	Direction Table
4	Installation and Maintenance Manual

Figure 5-4: Contents - OverGate 3 Plexiglass

1	OverGate 3
2	Installation and Maintenance Manual – Information Stikers
3	Plexiglass Arm

5.1.3 INSTALLATION TOOLS

Percussion drill with a set of tips for stoneware and ceramic material 	Set of core drill for tile 
Set of Screwdrivers for Slot Head Screws 	Set of screwdrivers for PHILLIPS screws 
Set of steel drill 	Cordless screwdriver 
Magnetic spirit level - short 	Set of open wrench jaw from 5 to 22 size 
Havy hammer 	Rubber hammer 
Hacksaw for steel 	Angle grinder 
Cutting-off disc 	Felt tip pen / Pencils 
Meter 	Digital Multimeter 

Chalk line reel	Vacuum cleaner
	
Scissors	Universal pliers
	
Needle nose pliers	Alligator wrench
	
Crimping pliers	Set of T-Handle hexagon key – 2 to 10 size
	
Set of seven pin punches	Automatic wire stripper
	

5.1.4 PREPARATON OF THE INSTALLATION PLACE

Before installing the OverGate 3, must be taken into account the following aspects:

- Environmental condition;
- Physical space;
- Cabling;
- Main power supply.

5.1.4.1 OverGate 3 Setting

- open the lower door that allows access to the OverGate 3 logic (see section 7.4.1 "*AL001 Board Replacement*");

- Remove the top cover (see section 7, "*Maintenance*").

5.1.4.2 Environmental Conditions of Use

Working temperature: +5 to +25°C

Humidity level must not exceed: 95%

- OverGate 3 must be installed indoor. It has to be away from rain and possible splashes of water, since it is not protected from the damage caused from the entrance of water.
- This equipment **must not** be used in potentially explosive atmospheres.
- It is important to evaluate the type of expected users and the volume of pedestrian traffic that can go through the installation.
- The installation and the environment shall be designed and arranged so as to facilitate safely the pedestrian flow.
- Each installation and all electrical connections **must** be performed by **QUALIFIED PERSONNEL**.

5.1.4.3 Physical Space

To setup, you should compare the OverGate 3 dimensions (see section 2.3 "*Typical Units*") with the space actually available from the customer.

5.1.4.4 Cabling

The OverGate 3 product requires two types of cables:

- Cables for the main power supply;
- Signal cables.

Please follow the instructions in the cables installation:

- The earthing conductors must have a diameter not less than 20mm;
- Lay separately the conduits for the supply cables from those for data transmission cables;
- Lay the ducts away from high voltage cables or cables with radio-frequency, electric motors and other machines;
- Place the conduits, as far as possible, away from the anchor holes of the barrier in the floor;
- The cables must exit from the duct in order to reach the main terminal and avoid the formation of sharp bends that might damage the cables;
- Avoid crawling the cables on the sharp edges in order to prevent damage to the same.

5.1.5 ASSEMBLING DETAILS

The item 1 indicates the "C" position when the swing arm is closed. The item 2 is to indicate the anchorage's positions to the ground while the item 3 indicates the exit area of the electrical cables.

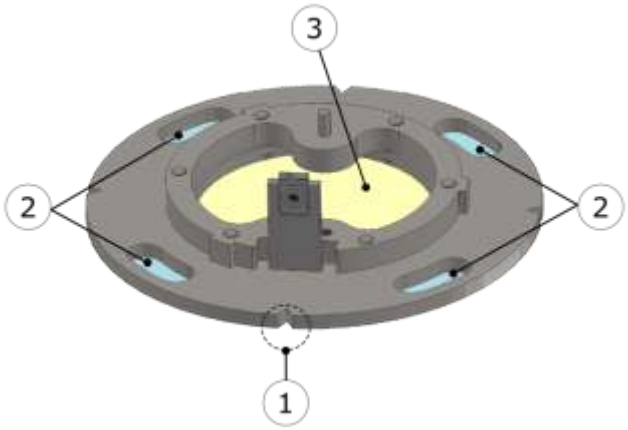


Figure 5-5: Basement Plate - OverGate 3

5.1.6 UNIT POSITIONING

Observe the following details when is defined the OverGate 3 positioning:

- Keep a distance of 50 mm between the end of the swing and the nearest obstacle such as wall, barrier, and any other units.
- A wall or a barrier adjacent that it be used as a transit route, must be have a distance least 700mm.

When it is installed the double OverGate 3 (see items 1 e 2, Figure 5-6), the control logic doors must be front and aligned.

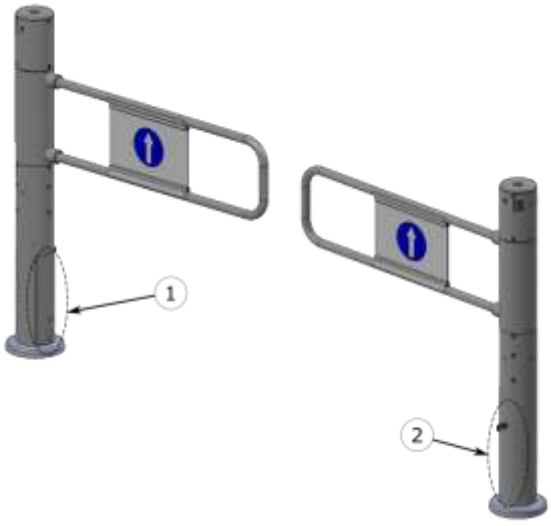


Figure 5-6: Cabinet Placing for the double Installation

5.1.7 FLOOR DRILLING

Before drilling, read the instruction manual of the hammer drill about the safety notices and follow the its use instructions.

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

- Mark the fixing positions on the floor carefully;
- If the installation is of multiple type, mark and check the fixing positions and the positions of the cables, before proceeding to drill holes for the fasteners;
- Place the unit on the marked positions;
- Check that the bolt holes and the area of the cable outlet (item 4) in the base of the unit correspond to the markings on the floor;
- Lift up (item 1) the plastic cover of the base plate;
- Use the reference points on the base (*item 2*) to orient the unit;
- Mark the position of the four holes (*item 3*);
- Move the OverGate 3 away;
- Drill the floor;

Use a threaded rod M10 to fix the unit and make sure that the anchoring system is adequate to support the OverGate 3 weight.

- Position the gate making attention to the cables;
- Install the anchor bolts.

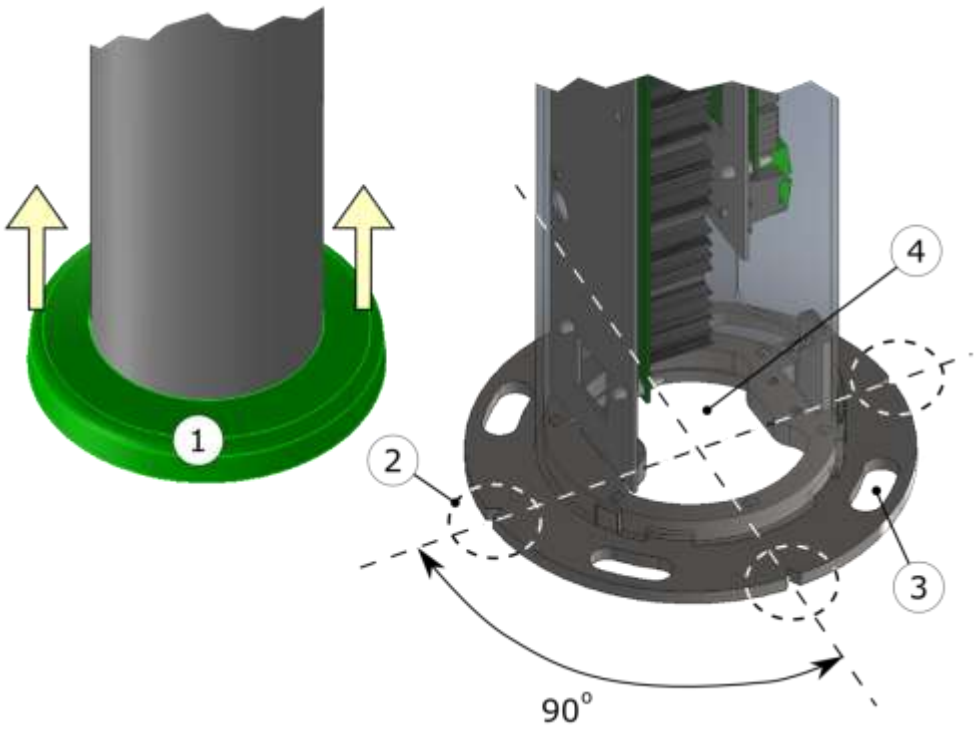


Figure 5-7: Placing - OverGate 3

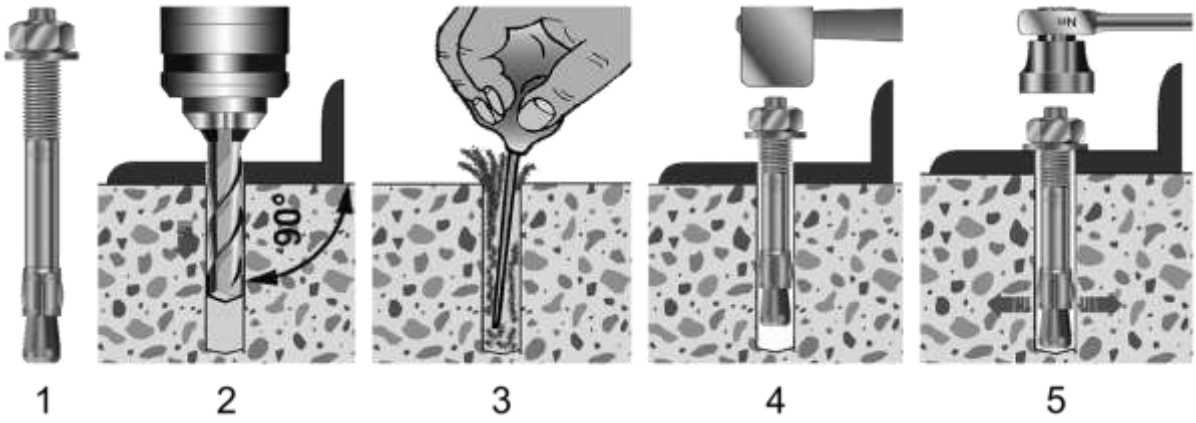


Figure 5-8: Fixing Example

Step	Description (see Figure 5-8)
1	Fixing element
2	Drilling
3	Clean the hole
4	Insert the fixing element
5	Fix the product

5.1.8 MAIN POWER SUPPLY

The main power cable of the OverGate 3 must be a multipole cable with double insulation.

The minimum cross-section of the conductor must be of 1.5 mmq with adequate protection, consisting of an external switch (component provided by the customer) in order to disconnect the power supply.

In the OverGate 3 the main power can be supplied from below through the base or top through the lid..

Item	Description
1	Area Available for the cables passaggio
2	Main power cable
3	Main terminal

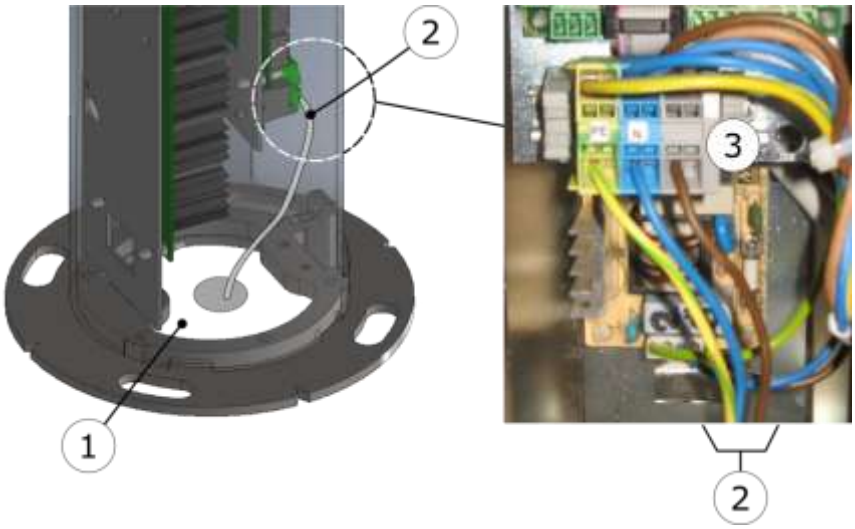


Figure 5-9: Cables Entry – Bottom Side

In the case of power from above have a pattern as shown in the following figure.

Item	Description
1	Area Available for the cables passaggio
2	Main power cable
3	Replay board terminal

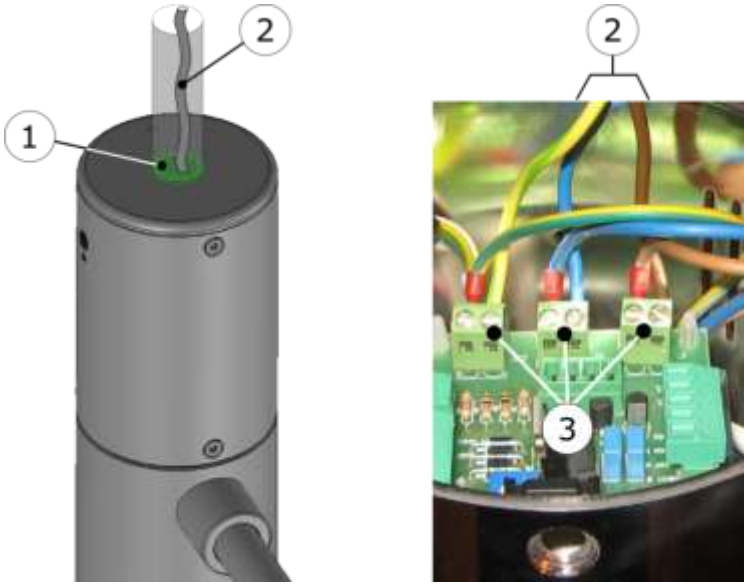


Figure 5-10: Cables Entry – Upper Side

5.1.9 SWING ARM ASSEMBLING

The OverGate 3 comes with swing arm in standard sizes in accordance with our catalog. The installer may, however, obtain the extent necessary for the customer by cutting the same.

The cutting of the swing arm should be performed with proper equipment, eg. hacksaw for steel, and with the personal protections of the case.

5.1.10 RADAR 1/2 CABLING (Optional)

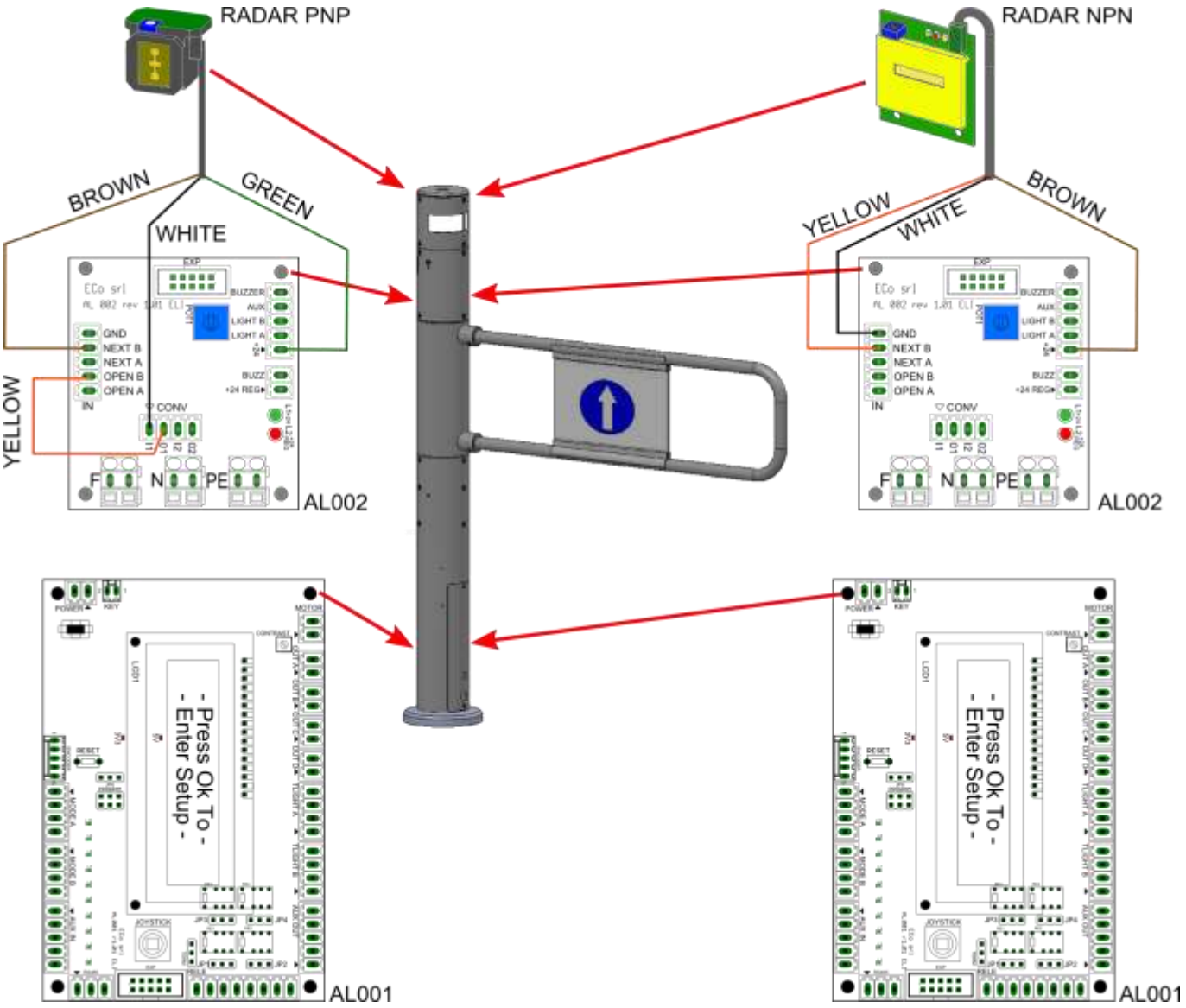


Figure 5-11: OverGate 3 Single – Radar Cabling

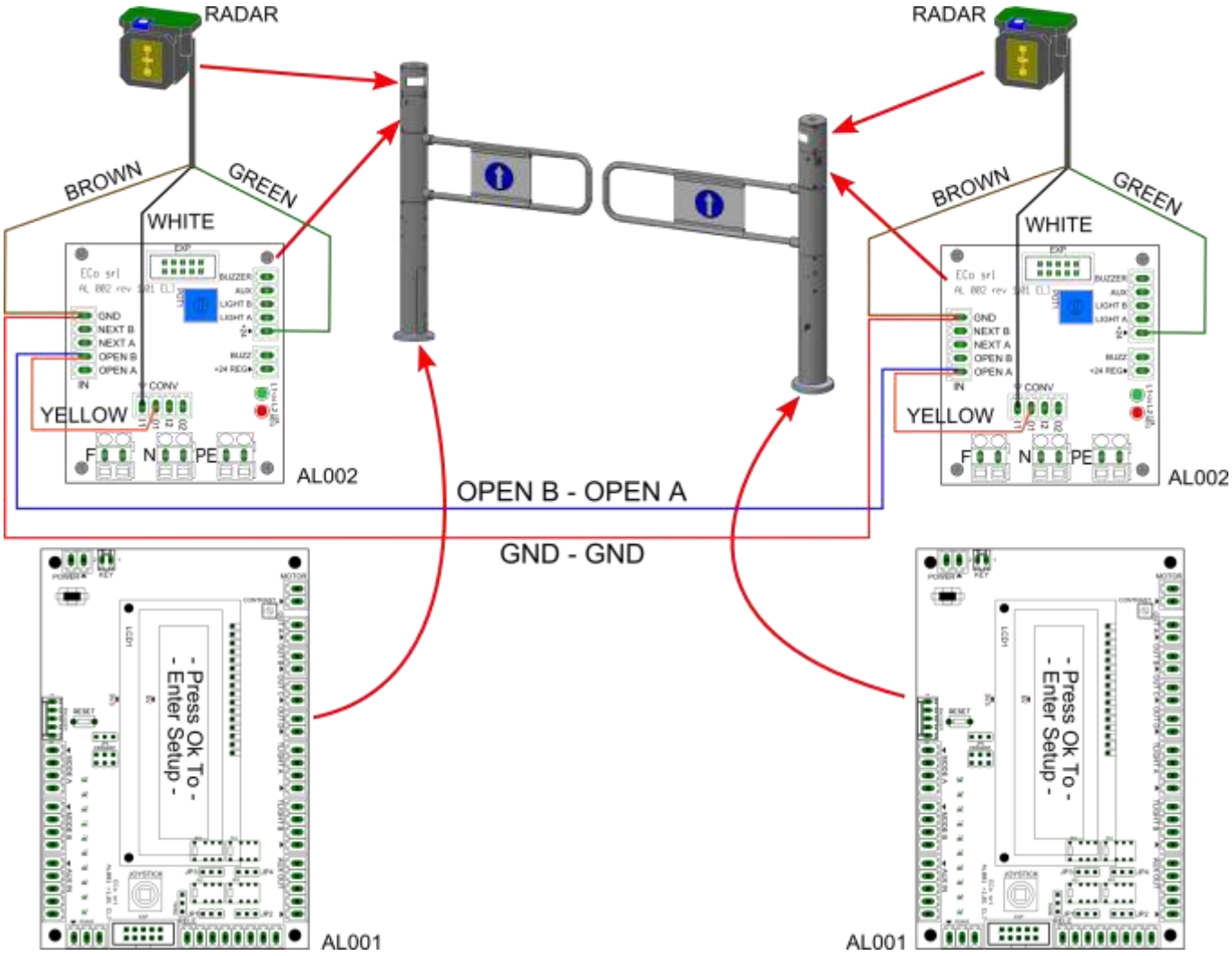


Figure 5-12: OverGate 3 Double – Radar cabling on AL002 board

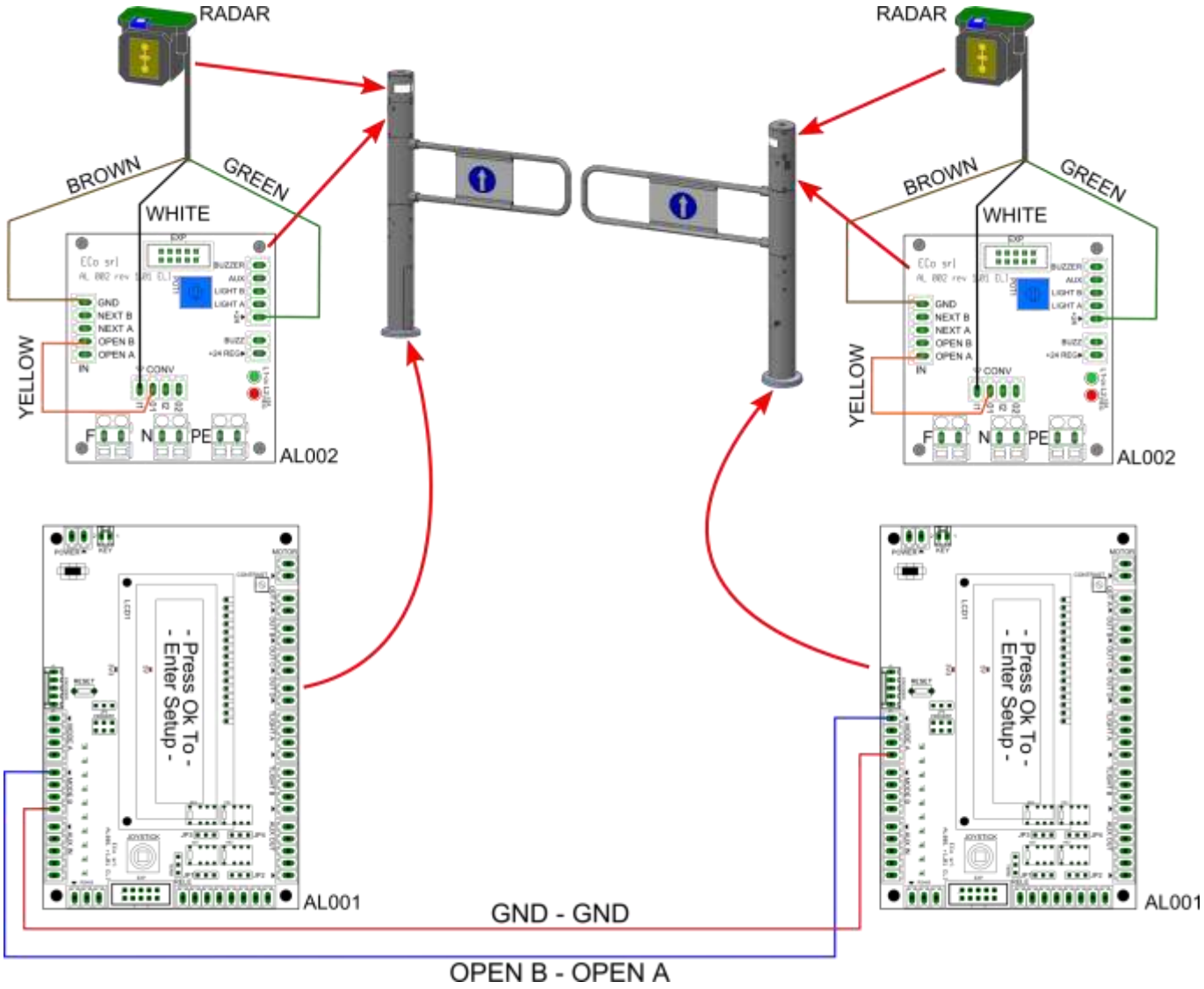


Figure 5-13: OverGate 3 Double – Radar cabling on AL001 board

5.1.11 PHOTOCELLS 1/2 CABLING (Optional)

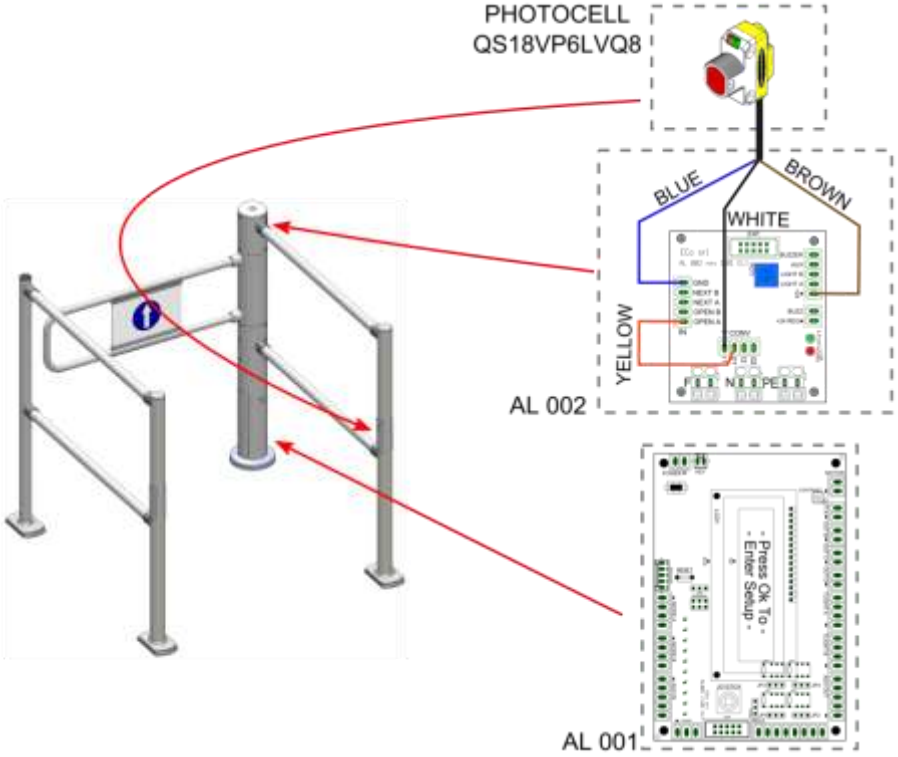


Figure 5-14: OverGate 3 Single – Photocell cabling

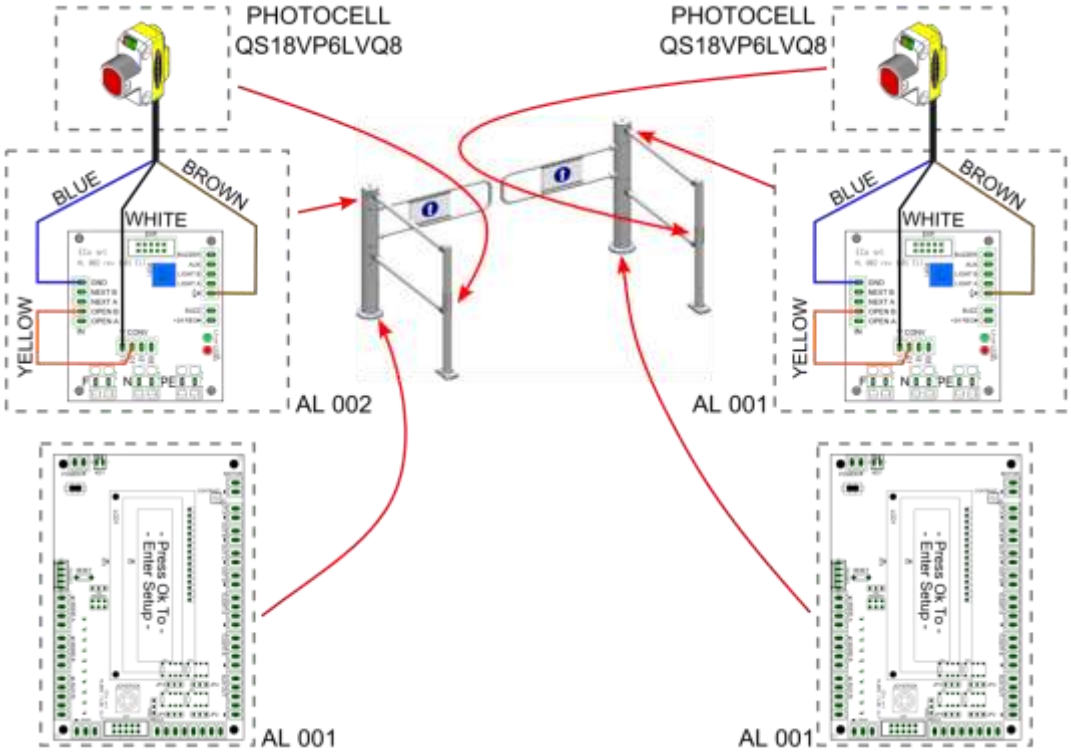


Figure 5-15: OverGate 3 Double – Photocells cabling

6 PROGRAMMING

The OverGate 3 product is configured in its operating parameters through the user interface (see section 4.1.2.1 "*User Interface*").

Programming is allowed only when the door is in position "C" closed (see section 3.1 "*Definitions*").

6.1 PRELIMINARY OPERATIONS

Check that all connections are present;

Power ON;

Make sure the green LED is ON on the steady power supply;

Put the key to start the OverGate 3 and power ON the control logic board AL001 (see section 1.3 "*CE Label*");

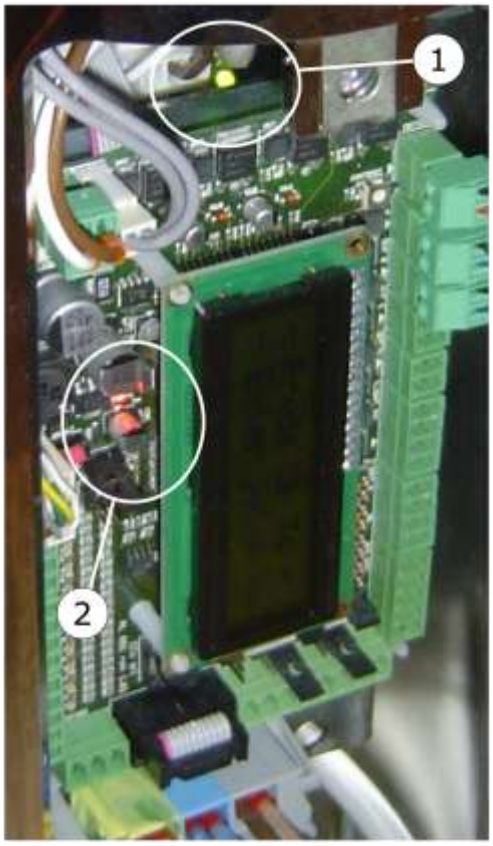


Figure 6-1: AL001 board ON

Item	Description
1	Green LED – Steady power supply is ON
2	Red LEDs – AL001 board is ON

When you turn the display shows briefly the following messages:

**	Eco S.r.l.	**
**	Overgate III	**

**	Release SW:	**
**	X.XX	**

Select the swing arm installed (see section 9 "*Swing Arms Table*"). To select the swing arm follow the instructions in section 4.1.2.1 "*User Interface*".

Make sure that no obstacle is present in the range of the swing arm.

Press OK to confirm.

At this point the OverGate 3 automatically acquired by the points A, B and C. The firmware displays the following messages on the LCD:

–	SEARCHING	–
–	POINT A	–

–	SEARCHING	–
–	POINT B	–

–	CLOSING	–
–	B	–

First it rotates in the direction A, then B and stops in C.

Now the product is operating.

6.2 SETTING MENU

Proced as follows to enter the setup menu of the OverGate 3:

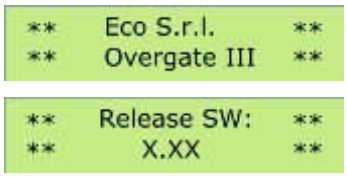
- with the user interface (see section 4.1.2.1 "*User Interface*") scroll through the menu and change the parameters.

RIGHT	to go ahead in the menu to the next point or to increase the parameter value;
LEFT	to come back in the menu to the previous or reduce the parameter value;
UP	RESERVED
DOWN	RESERVED
OK	to confirm the parameter/option selected.

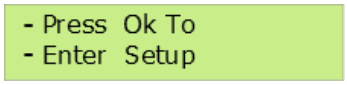
Example:

- Press Ok To - Enter Setup	After power on the gate, go to the control logic. Press the joystick for **OK** and enter into the Setup menu
→3-Arm Type ST 1001-1200mm	With **RIGHT/LEFT** navigate through the menu to the desider point.
	Press the joystick - **OK** – to execute the parameter.
3-Arm Type →ST 0-800mm	Use **RIGHT/LEFT** to change the value.
→3-Arm Type ST 0-800mm	Press the joystick - **OK** – to confirm the new parameter.
→17-Exit Menu Ok	To exit from the menu and make ready the product.
	Press **OK** to enter into the sub-menu
17-Exit Menu →Ok	Press **OK** to exit from the menu.
	At this point the machine is operating.

6.3 PARAMETERS MENU

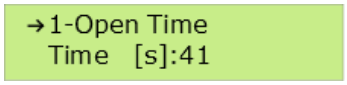


These messages appear when the OverGate 3 is switched on.



These message appears when the OverGate 3 is ready to operate or receive the modify of the parameters.

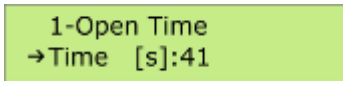
Press **OK** to proceed with the modify.



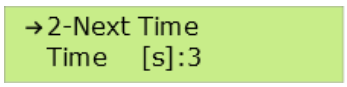
Default value: 4 sec

Range: [0 – 100 sec]

Waiting time of the swing arm when it comes to position A/B



Select **OK**. Now you can change the parameter.



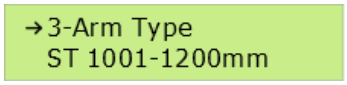
Default value: 3 sec

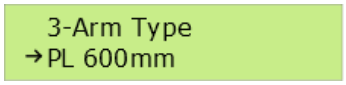
Range: [0 – 100 sec]

The Next command can come from an alarm, photocell or radar sensor and takes precedence on "*Open*".

Indicates the time waiting for the NEXT command.

Select **OK**. Now you can change the parameter.





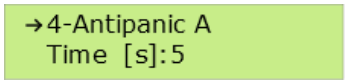
Allows you to select the type of swing arm installed on the OverGate 3. (see section 9 "*Swing Arm Table*").

ST = chromed steel standard

PL = Plexiglass

AL = aluminium

Select **OK**. Now you can change the parameter.



Default value: 5 sec

Range: [1 – 100 sec]

Time of the buzzer alarm or flashing in the case of plexiglass swing arm, when the door is pushed from the closed position "*C*" to that of "*A*".

While the buzzer sounds, the engine brake operates at full power and on the AL001 control board the LCD display shows the following message "*Waiting antipanic C*".

If free, the swing arm returns to position "C" when the buzzer stops to sound.

→5-Antipanic B
Time [s]:5

Default value: *5 sec*

Range: *[1 – 100 sec]*

Time of the buzzer alarm or flashing in the case of plexiglass swing arm, when the door is pushed from the closed position "*C*" to that of "*B*".

A similar behaviour of **step 4**.

MOVE THE POINT "C"

→6-Set Pos. C
Position:2509

*Changing the set of positions A,B and C is accepted by the firmware under this **RULE**:*

Position A < Position C < Position B

Example:

Position A:2506 – Position C:2800 – Position B:3520

Info: the displayed numerical value is the result of a calculation done by the AL001 control logic board according to the signal supplied from the absolute encoder. It does not correspond to an angular or linear value. While the sash is pushed, the numerical value changes in real time.

6-Set Pos. C
→Position:2506

a) Select **OK** and, when the arrow is placed on the "*Position*" row, change its value in the following mode:

- push the swing arm until the selected position.

→6-Set Pos. C
Position:2506

Press **OK** and the value is stored.

→6-Set Pos. C
Position: NO C

If the LCD display shows the message "**NO C**", the firmware DOES NOT ACCEPT the selected value. The Rule is been violated.

The stored value is the previous one.

Return to step a) and repeat these steps to change the parameter again.

MOVE THE POINT "A"

→7-Set Pos. A
Position:1499

*Changing the set of positions A,B and C is accepted by the firmware under this **RULE**:*

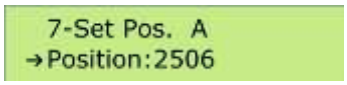
Position A < Position C < Position B

Example:

Position A:2506 – Position C:2800 – Position B:3520

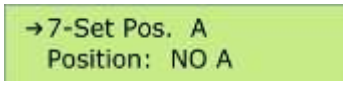
Info: the numerical value that is displayed is the result of a calculation done by the AL001 control logic board according to the signal supplied from the absolute encoder. It does not correspond to an angular or linear value. While the sash is pushed, the numerical value changes in real time.

a) Select **OK** and, when the arrow is place on the "*Position*" row, change its value in the following mode:



- push the swing arm until the selected position.

Press **OK** and the value is stored.

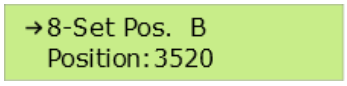


If the LCD display shows the message "**NO A**", the firmware DOES NOT ACCEPT the selected value. The Rule is been violated.

The stored value is the previous one.

Return to step a) and repeat these steps to change the parameter again.

MOVE THE POINT "B"



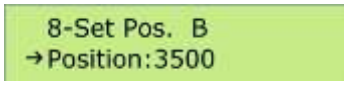
*Changing the set of positions A,B and C is accepted by the firmware under this **RULE**:*

Position A < Position C < Position B

Example:

Position A:2506 – Position C:2800 – Position B:3520

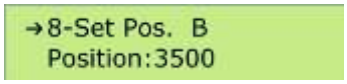
Info: the numerical value that is displayed is the result of a calculation done by the AL001 control logic board according to the signal supplied from the absolute encoder. It does not correspond to an angular or linear value. While the sash is pushed, the numerical value changes in real time.

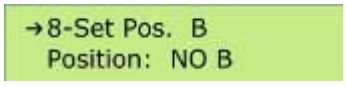


a) Select **OK** and when the arrow is placed on the "*Position*" row, you can change its value as follows:

- push the swing arm until the selected position.

Press **OK** and the value is stored.





If the LCD display shows the message "**NO B**", the firmware DOES NOT ACCEPT the selected value. The Rule is been violated.

The stored value is the previous one.

Return to step a) and repeat these steps to change the parameter again.

→9-Auto C+A+B Auto Position	Pressing **OK**, it is possible to reset the position values and start the their automatic search.
9-Auto C+A+B →Auto Position	Pressing **OK** again, the Auto Position starts.
– SEARCHING – – POINT A –	The LCD display shows the following messages in sequence, during the process of automatic acquisition of the points A/B and C.
– SEARCHING – – POINT B –	
– CLOSING – – B –	
– Press Ok To – – Enter Setup –	After the search, the OverGate 3 is operating.
→10-StdBy SND Status: Off	*Default value: off* *Range: [off – on]* Manages the alarm sounds if there is an input signal to the AUX IN connector (pin 3) and is from a sensor that sees an obstacle. If **OFF** no sounds **ON** the buzzer sounds until the signal is present on pin 3.
→11-Alarm Time Time [s]:3	*Default value: 3 sec* *Range: [1 – 100 sec]* Interested behavior: • Send a command open A (also applies to B). • The gate opens and reaches the *Position A* (also applies to B) where it waits for *Open Time* before to close. • If the closing encounters an obstacle, the OverGate 3 returns to Position A (also applies to B). • This cycle is repeated for three times. • On the third attempt the OverGata 2 stops and sounds for "Alarm" time. • This cycle is repeated until the obstacle is removed or when it is present: - authorisation Direction A, or - Next A/B command.

→12-Push & Go
Status: Off

→12-Push & Go
Status: A

→12-Push & Go
Status: B

→12-Push & Go
Status: A+B

Default value: *off*

Range: *[off – A - B]*

Allows the use of the force exerted on the swing arm as authorization to open.

The opening direction is the direction of the thrust same.

→13-Next Enable
Status: On

Default value: *on*

Range: *[off – on]*

It works on both directions (A/B).

If **ON** the NEXT command is always activated

OFF The NEXT command works only if the gate is in the opened position (point A or B)

with the traffic light kit installed, it displays the following colors for different states

C	Opening	Waiting Open	Waiting Next	Closing	C	Alarm

In case of installation **safe payment**, *Next Enable* on *OFF* can not be used for safety.

Example:

- The customer personel gives the OpenA command with an *Open Time* equal to 60 sec.
- The gate open and waits for an *Open Time* when it is in the position A. Then it close.

If it is sent the Next command, the gate close after the *Next Time.*.

→14-Counters
N-OA 3

14-Counters
→N-OA 3

This counter is increased every time the control board receives an opening command in Dir A.

14-Counters
→N-OB 1

This counter is increased every time the control board receives an opening command in Dir B.

```
  14-Counters
→N-CA   3
```

This counter is increased every time a complete cycle is performed by posizone C toward the position A.

```
  14-Counters
→N-CB   0
```

This counter is increased every time a complete cycle is performed by posizone C toward the position B.

```
  14-Counters
→N-CT   3
```

This counter shows the total number of cycles performed.

```
→15-Buz. Time
  Time  [s]:3
```

Default value: *3 sec*

Range: *[1 – 20]*

This parameter sets the buzzer sounding time and the blinking of the red light, if present.

```
  15-Buz. Time
→Time  [s]:3
```

Select **OK** to confirm the new parameter.

Note: The Buzzer output is available on the pin 4 of the AUX IN connector (see Figure 4-5).

```
→16-Tlight Man.
  Status: Mode 1
```

This parameter allows to select the operating modes of the traffic light kit.

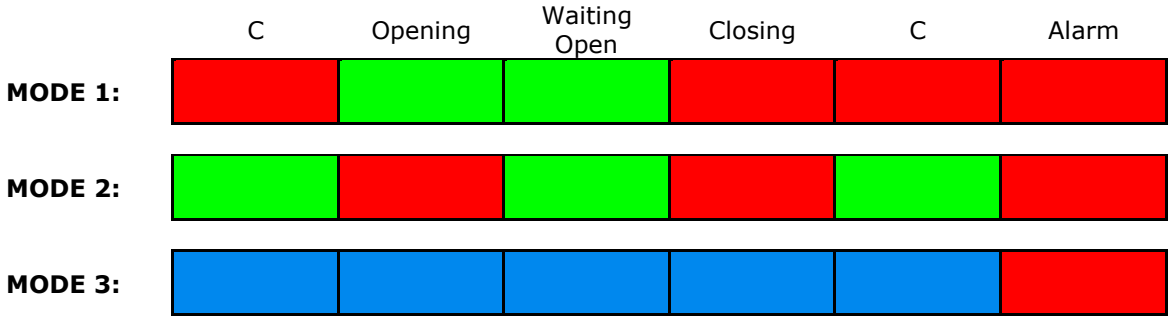
If the parameter nr. 13 "**Next Enable**" is set to **ON**, the traffic light follows one of the modes listed below.

If the parameter nr. 13 "**Next Enable**" is set to **OFF**, the traffic light follows the mode indicated in point 13 of the parameters menu.

Select **OK** to confirm the new parameter.

```
  16-Tlight Man.
→Status: Mode 1
```

Use the LEFT or RIGHT button to select the mode of operation of the traffic lights kit:



Selezionare **OK** per confermare il nuovo parametro.

```
→17-Exit Menu
  Ok
```

It is the menu position from which it is possible to complete the programming.

Select **OK** to exit.

```
  17-Exit Menu
→Ok
```

Select **OK** again to confirm the changes made to the operating parameters of the OverGate 3.

7 MAINTENANCE

7.1 GENERAL CARE

Routine cleaning, all finishes

Cleaning agent: Soap or mild detergent with water.

Action: Wipe with a sponge and rinse with water, dry it if necessary.

Stubborn stains and spots on all surfaces

Cleaning agent: Mild detergent or detergent for domestic use

Action: Rinse well with clean water and dry

Oil stains and grease on all surfaces

Cleaning agent: Solvent for organic compounds (acetone, alcohol, genclene, trichloroethane).

Action: Clean with soap and water, rinse well with clean water and dry.

Rust and other corrosion products for chrome

Cleaning agent: Oxalic acid. The cleaning solution must be applied with a swab and allowed to stand 15 to 20 minutes before being washed away with water. Use a household cleaner area to perform the final cleaning.

Action: Rinse well with clean water (Observe the precautions associated with acid cleaners).

Minor scratches on painted surfaces

Cleaning agent: Lightly rub with abrasive paste. Wash the area with water and dry. Apply touches of paint in thin layers.

Action: Allow to harden for about two weeks. Softening the edges of retouching with fine abrasive paste.

Deep scratches on painted finishes causing rust

Cleaning agent: Remove rust with a boxcutter sharp. Apply a product of inhibition of rust. Fill with putty flush with the surface. Then follow the procedure for minor scratches.

7.2 ROUTINE MAINTENANCE

7.2.1 GENERAL INDICATIONS

The mechanism must be inspected and cleaned at regular intervals in order to ensure the proper functioning of the components and prevent damage due to the wear.

Reduce the control intervals if the mechanism is used in toughest conditions.

Pay attention to the risk of electric shock. Make sure that the main power is removed before carrying out an inspection of the mechanism.

7.2.2 COMPONENTS

Every 800,000 passages perform the following checks:

- Remove the main power supply and open the door of the control logic to check that all cables are properly connected;
- Raise the plastic cover of the anchor plate and check the tightness of the fixing screws;
- Remove dust with a vacuum cleaner, taking care to electronic components.

7.2.3 CABLING AND CONNECTORS (Execute when the main power is removed)

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

7.3 FAULT FINDING

Symptom	Check	Action
The swing arm does not move	1-Verify that the key is in the ON position 2-Check presence of voltage	Check the main system power;
	Check that the red LEDs (D33 and D34) and the LCD display are on.	Check that the green LED on the stabilized power supply is on.
	Check that the green LED on the power supply is turned on.	Verify the presence of the main power supply on the terminal.
	Check the operation and control connections.	Call for service

7.4 GENERAL COMPONENT MAINTENANCE

7.4.1 AL001 BOARD REPLACEMENT

- *Before removing the electronic board, record the location of the jumpers and connectors..*

Execute the following steps if you need to replace it:

- Disconnect the supplied power by acting on the key (*item: 1*);
- Open the access door to the logic board (*item: 2*) with a Phillips screwdriver (*item: 3*);

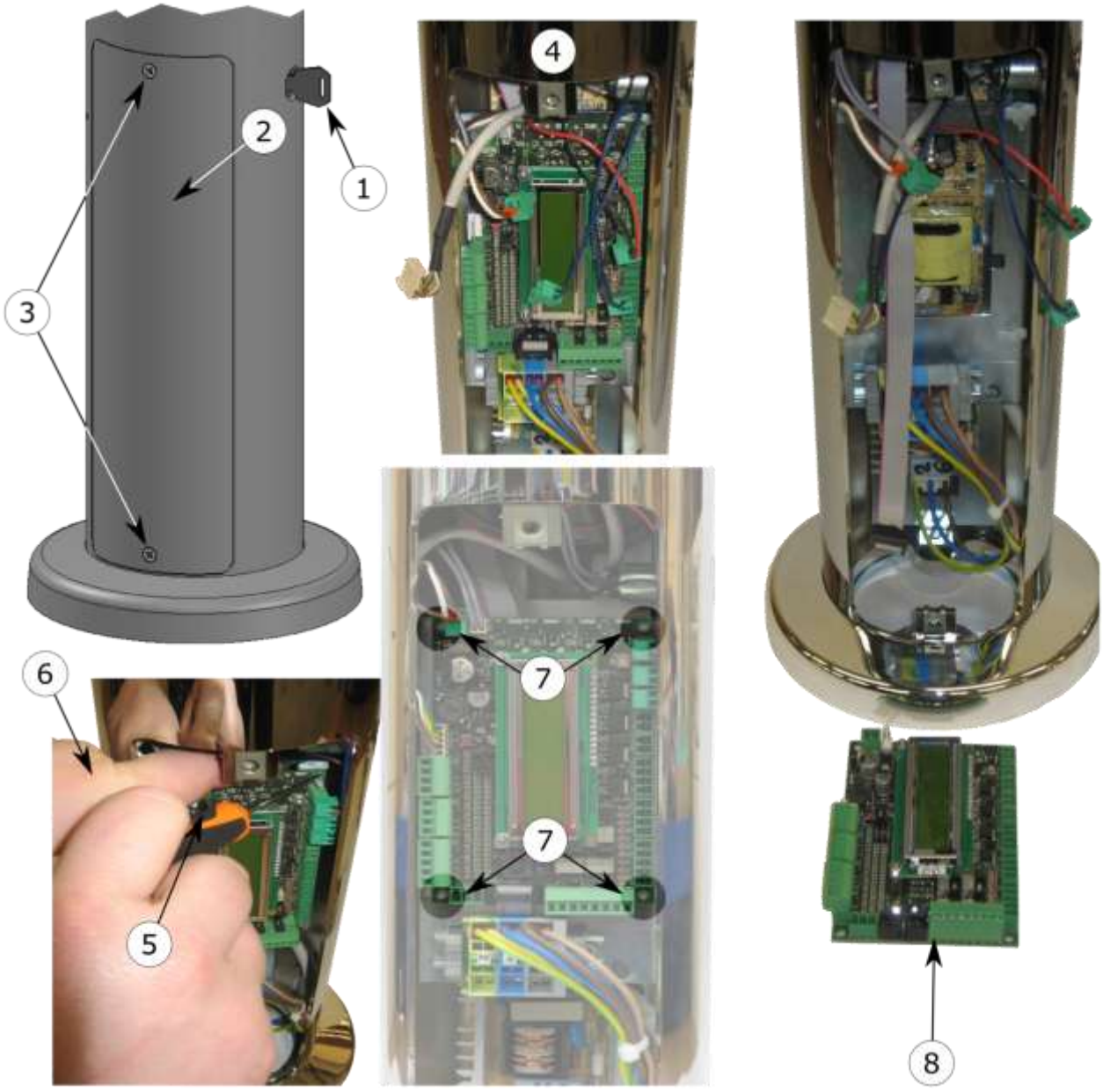


Figure 7-1: AL001 Board Replacement

- Remove all connectors from the board (*item: 4*);
- Use a flat screwdriver (*item: 5*) to help out the board and at the same time gently pull with the other hand (*item: 6*);
- Repeat the previous action for the remaining fixing points. (*item: 7*)
- Insert the new board (*item: 8*) and fix it into the fixing points (*item: 7*);
- Reconnect the cables and connectors;
- Switch on the OverGate 3;
- Configure the AL001 board (see section 6.1 "*Preliminary Operations*").

7.4.2 REMOVING THE TOP COVER AND BLIND HEAD

- *in the case of power being supplied from the top, remove the main power (see Figure 7-2).*

Removing the top cover: Perform the following steps if you need to replace it.

- Unscrew the three screws TCEI (*item: 1*) with an Allen wrench (*item: 2*), size 4;
- Carefully remove the cover (*item: 3*) upward;
- Replace if it is necessary;
- Reassemble the parts in reverse order.

Figure 7-2: Top Cover Removing

Removing the blind head: Eseguire i passi seguenti se è necessario la sua sostituzione (vedere Figure 7-3).

- Unscrew the three screws TCEI (*item: 1*) with an Allen wrench (*item: 2*), size 4
- Carefully remove the blind head (*item: 3*) upward
- Replace if it is necessary;
- Reassemble the parts in reverse order.

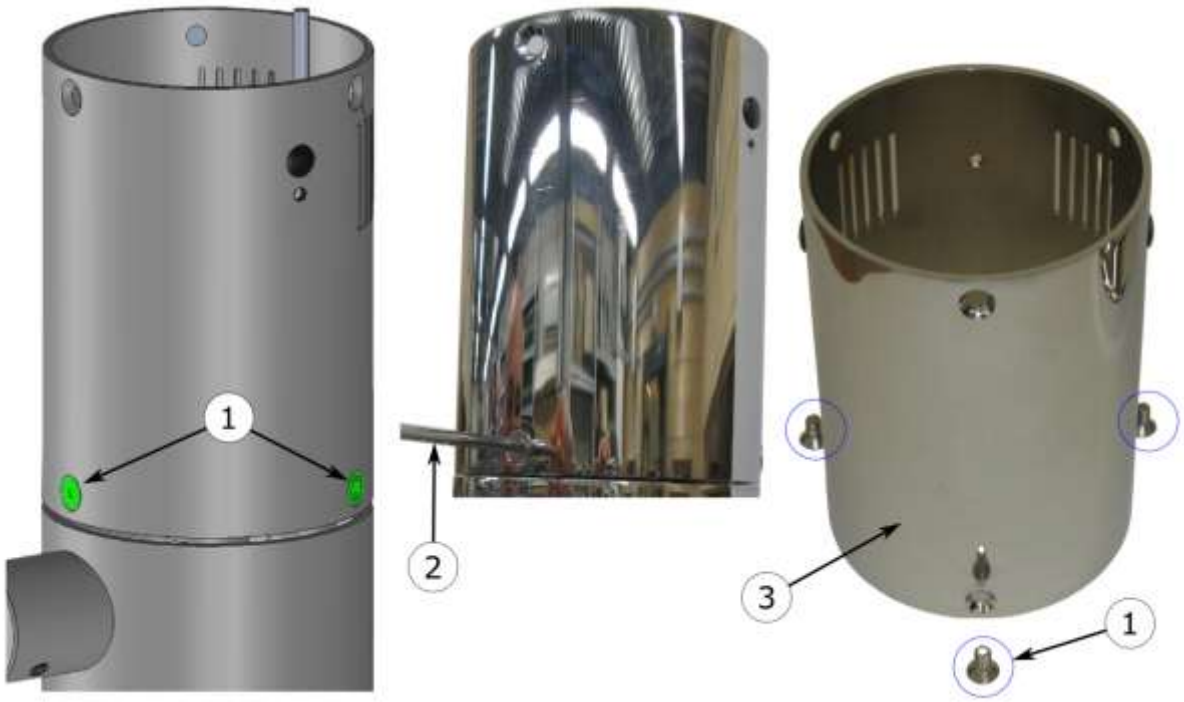


Figure 7-3: Blind Head Removing

7.4.3 REPLACEMENT OF THE AL002 REPLAY BOARD

- *To access this component see section 7.4.2 "Removing the Top Cover and Blind Head".*
- Record the location of the cables before removing the circuit board.

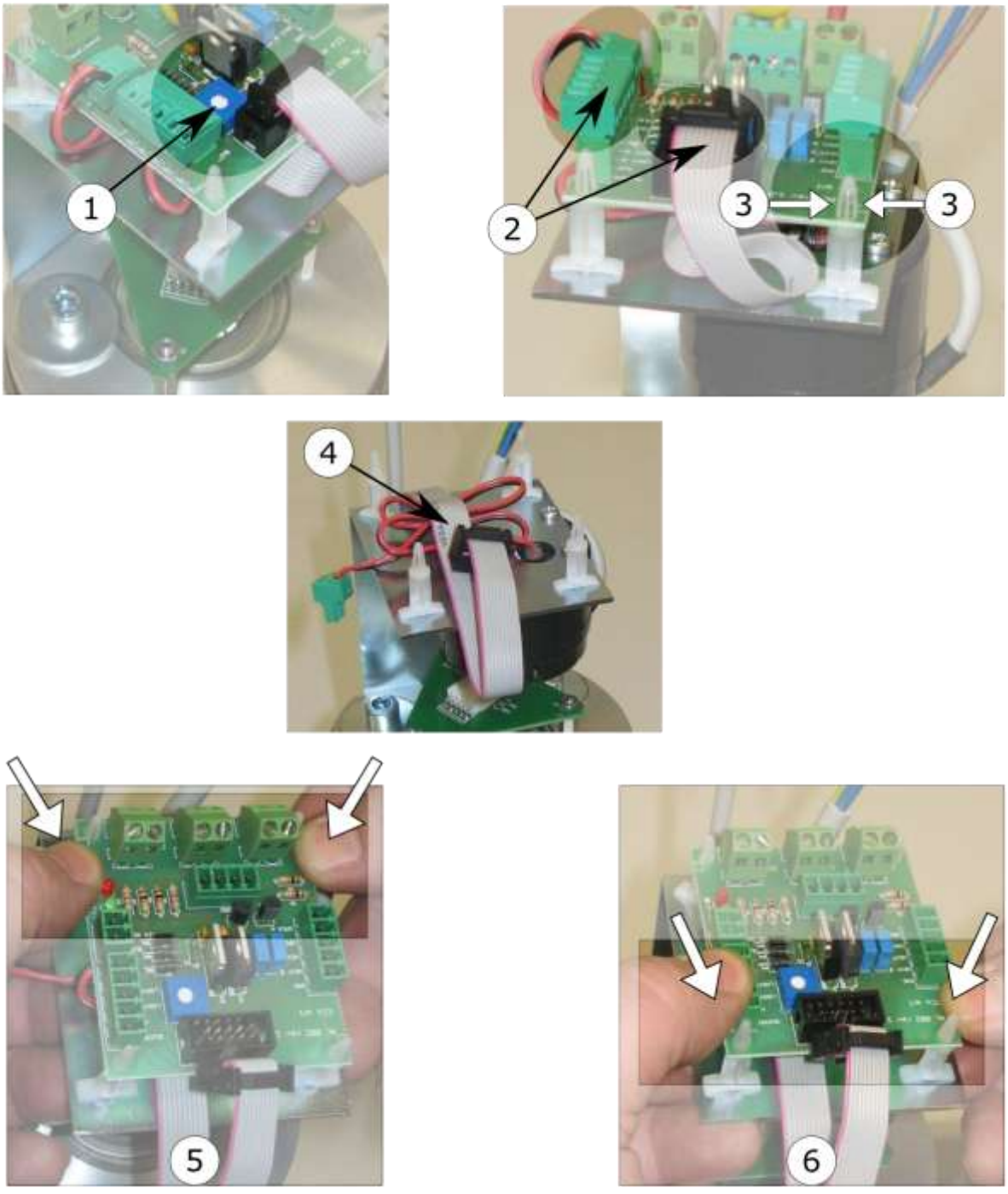


Figure 7-4: Replacement of the AL002 Replay Board

Perform the following steps if you need to replace it:

- Disconnect the main supplied power from the customer;
- Record the position of the trimmer (*item: 1*) that adjusts the alarm volume;
- Remove all connectors from the board (*item: 2*);
- Finger tighten (*item: 3*) the end of the board support and raise it carefully
- Repeat the previous step for the other three supports;
- Replace the damaged board making attention to the arrangements of the cables (*item: 4*);
- Fix the board by gently pushing down as indicated in *items 5* e 6;
- Reattach the cables into the corresponding connectors and, if necessary, adjust the buzzer volume by the potentiometer *POT1* (see section 4.1.4 "*Replay Board AL002*");
- Reassemble the blind head;
- Reassemble the top cover;
- Switch on the OverGate 3;
- Check the right operation of the OverGate 3.

7.4.4 ENCODER BOARD REPLACEMENT - AL003

- *To access this component see section 7.4.2 "Removing the Top Cover and Blind Head".*

Perform the following steps if you need to replace it:

- Disconnect the main power supplied from the customer;

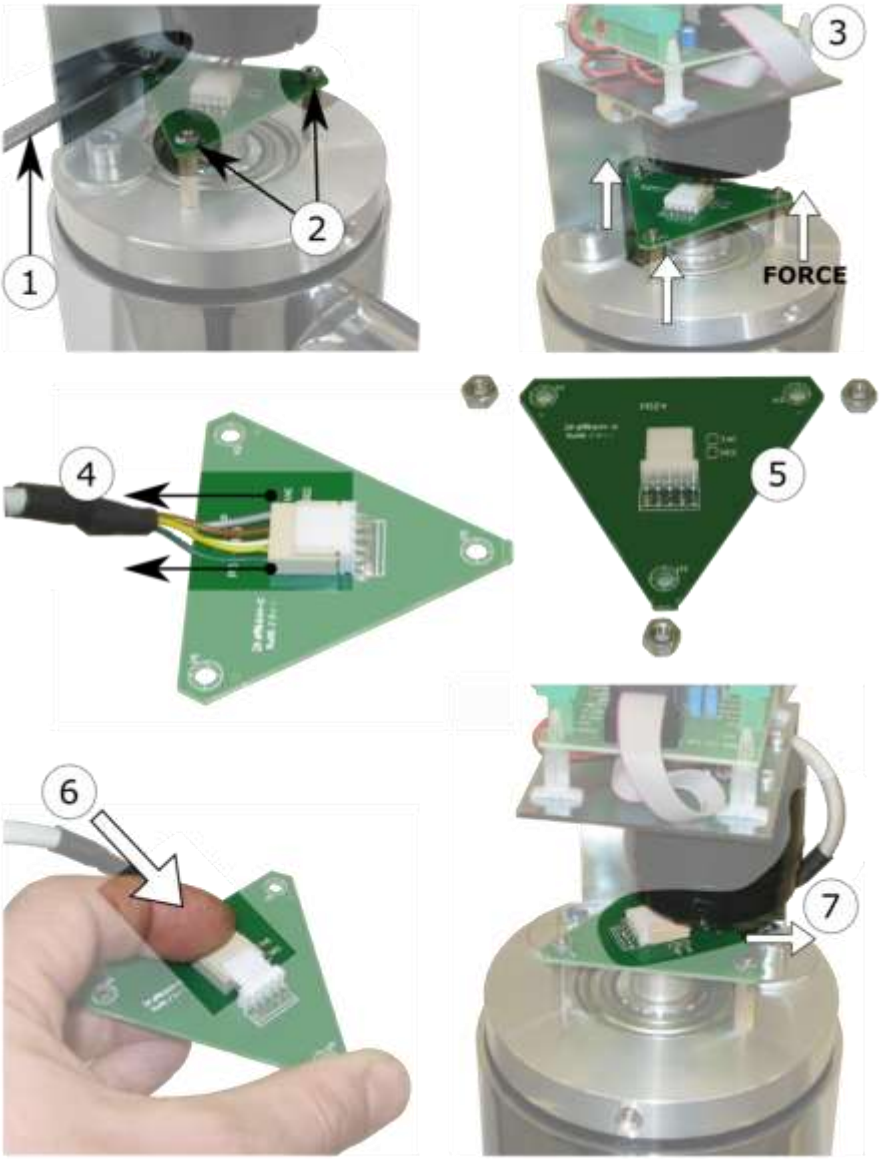


Figure 7-5: Encoder Board P024 Replacement

- Unscrew with a wrench (*size 7; point 1*) the three nuts (*item: 2*);
- Pull the damaged board (*item: 3*);
- Carefully remove the cable from the connectory (*item: 4*);
- Replace the damaged board with a new one (*item: 5*);

- Reconnect the cable to the board (*item: 6*);
- Insert the board in the supports as shown (*item: 7*) and carefully tighten the three nuts;
- Reassemble the blind head and the top cover;
- Switch on the OverGate 3;
- To learn to the control board AL001 the new encoder. (see item 9, section 6.3 "*Parameter Menu*")
- Check the right operation of the OverGate 3.

7.4.5 BUZZER REPLACEMENT

On the OverGate 3 is mounted a buzzer that provides for an acoustic signal according to the installed program.

The buzzer volume can be adjusted via a potentiometer (POT1) on the replay board AL002 (for more information see section 4.1.4 "*Replay Board AL002*").

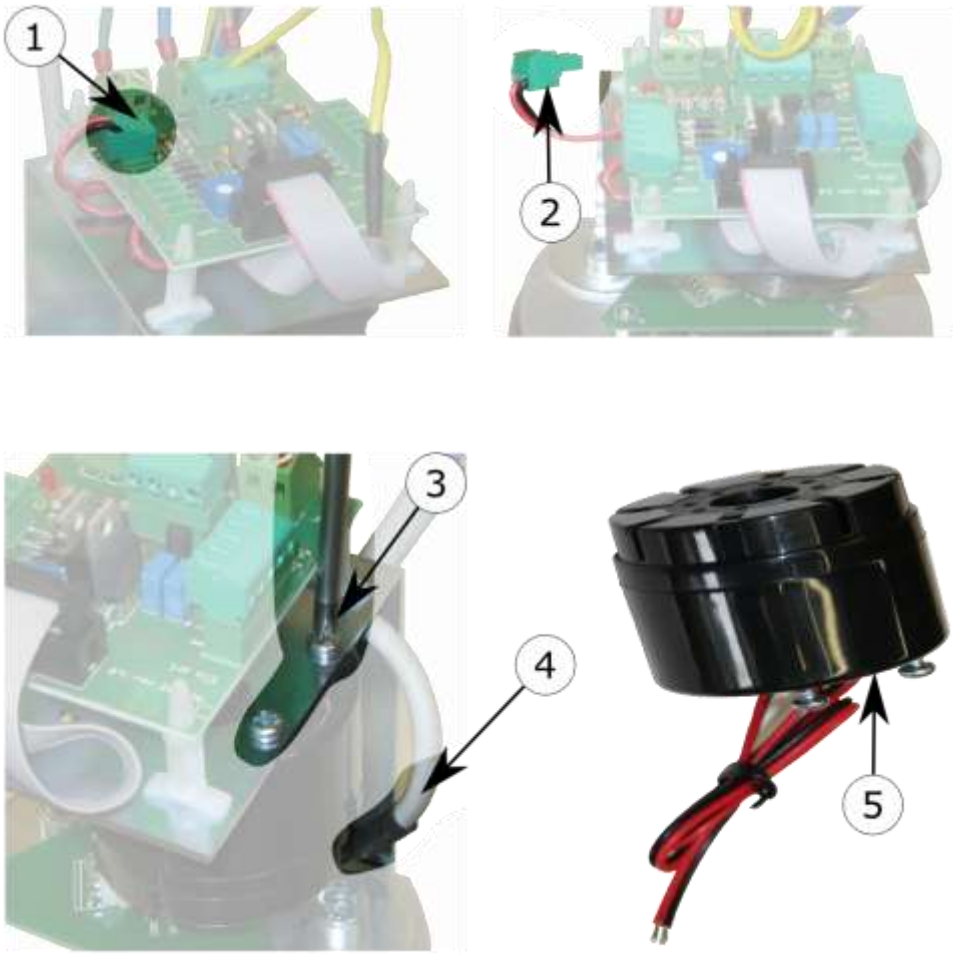


Figure 7-6: Buzzer Replacement

- *To access this component see section 7.4.2 "Removing the Top Cover and Blind Head".*
- *Before removing the buzzer record the location of the cables.*

Perform the following steps if you need to replace it:

- Disconnect the main supplied power from the customer;
- Disconnect the buzzer connector (*item: 1*) from the replay board AP024;
- Remove (*item: 2*) the connector from the cable using a flat screwdriver;
- Unscrew the two fixing screws (*item: 3*) of the buzzer with a Phillips screwdriver;
- Replace the damaged buzzer (*item: 5*);
- Reassemble the connector and fix the buzzer as shown in figure (*item: 4*)
- Reconnect the cable to the board (*item: 1*);
- Reassemble the blind head and the top cover;
- Switch on the OverGate 3;
- Check the right operation of the OverGate 3;
- If necessary, adjust the buzzer volume using the trimmer POT1 (see section 4.1.4 "*Replay Board AL002*").

7.4.6 REPLACEMENT OF THE STABILIZED POWER SUPPLY

- Before to remove the control board AL001, record the location of the jumpers, DIP switches and connectors.

Perform the following steps if you need to replace it.

- Disconnect the main power supplied from the customer;
- Remove the control board AL001 (see section 7.4.1 "*AL001 Board Replacement*");
- Record the positions of the connections and then remove;
- Unscrew the three screws TCEI M4x6 (*item: 1*) with an Allen wrench, size 3, and remove the AL001 card (*item: 2*);
- Remove the cables from the stabilized power supply (*item*: 5)
- Act on the four plastic supports (*item: 3*) of the power supply and extract it;
- Replace the damaged power supply with a new one (*item: 4*) and restore the connections (*item: 5*);

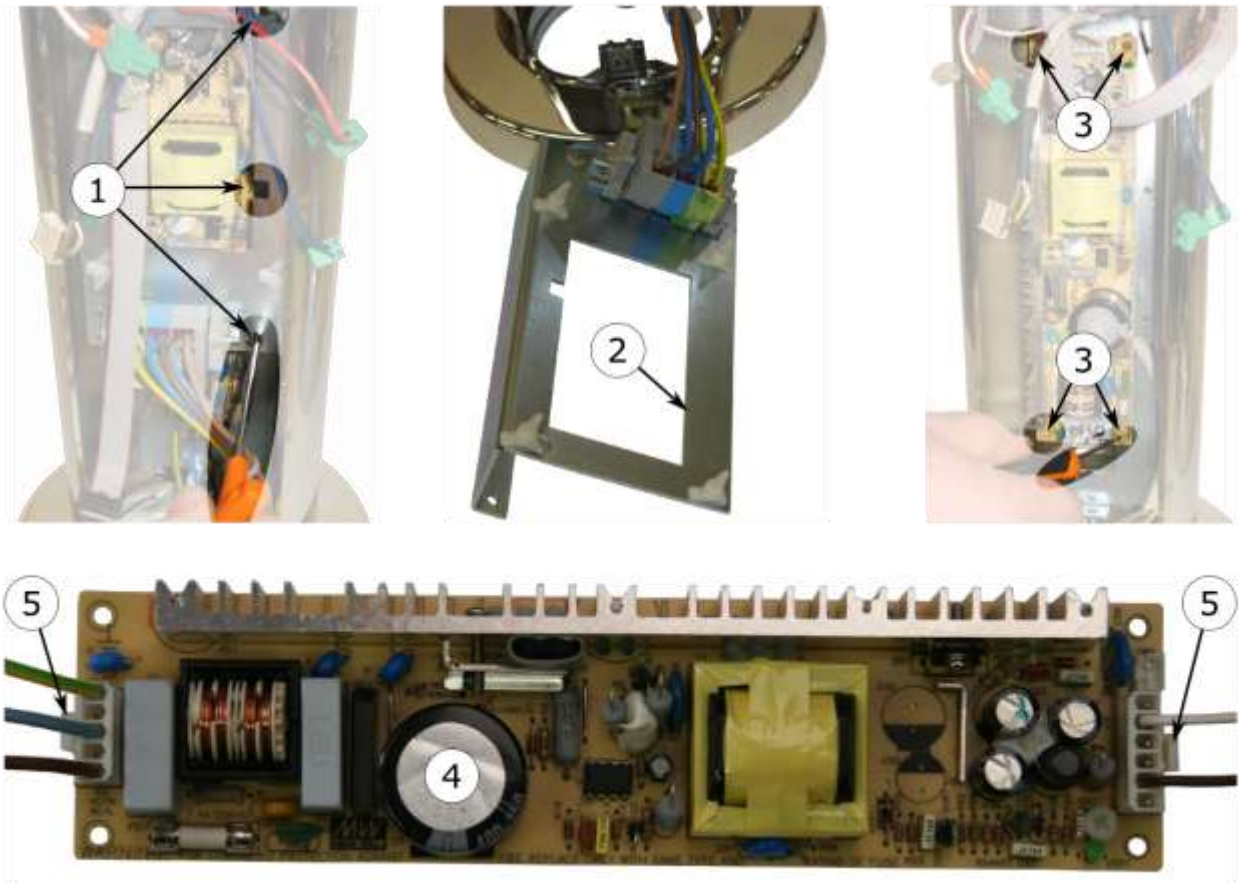


Figure 7-7: Replacement of the Stabilized Power Supply

- Reassemble the components by performing the operations in reverse order;
- Switch on the OverGate 3;
- Check the right operation of the OverGate 3.

7.4.7 REPLACEMENT OF THE SWITCHING ON KEY

Perform the following steps if you need to replace it.

- Disconnect the main power supplied from the customer;
- Remove the top cover and blind head (see section 7.4.2);
- Remove the control board AL001 (see section 7.4.1 "*AL001 Board Replacement*");
- Slide off the entire motor-clutch block upwards (see section 7.4.8) taking care not to damage the components;
- Unscrew (*item: 1*) the lock nut (*item: 2*) of the key block using an open wrench, size 22 (*item: 3*);
- Replace the damaged key with a new one (*item: 4*);
- Reassemble the components by performing the operations in reverse order;
- Switch on the OverGate 3;
- Check the right operation of the OverGate 3.

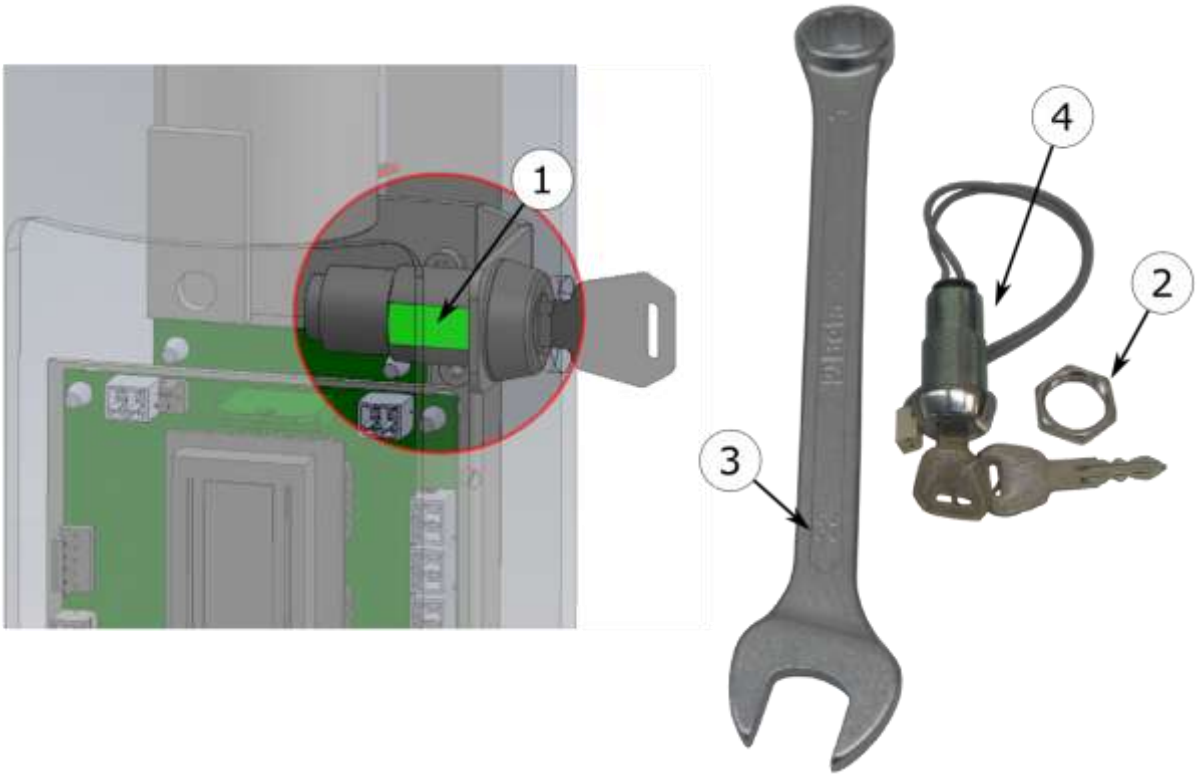


Figure 7-8: Replacement of the Switching on Key

7.4.8 MOTOR REPLACEMENT

- *To access this component see section 7.4.2 "Removing the Top Cover and Blind Head".*

Perform the following steps if you need to replace it.

- Disconnect the main power supplied from the customer;
- Remove the control board AL001 (see section 7.4.1 "*AL001 Board Replacement*");
- Unscrew the four grubs (*item: 1*) fixing the swing arm. Use an Allen wrench size 4 (*item: 2*);
- Slide off the swing arm (*item: 3*);

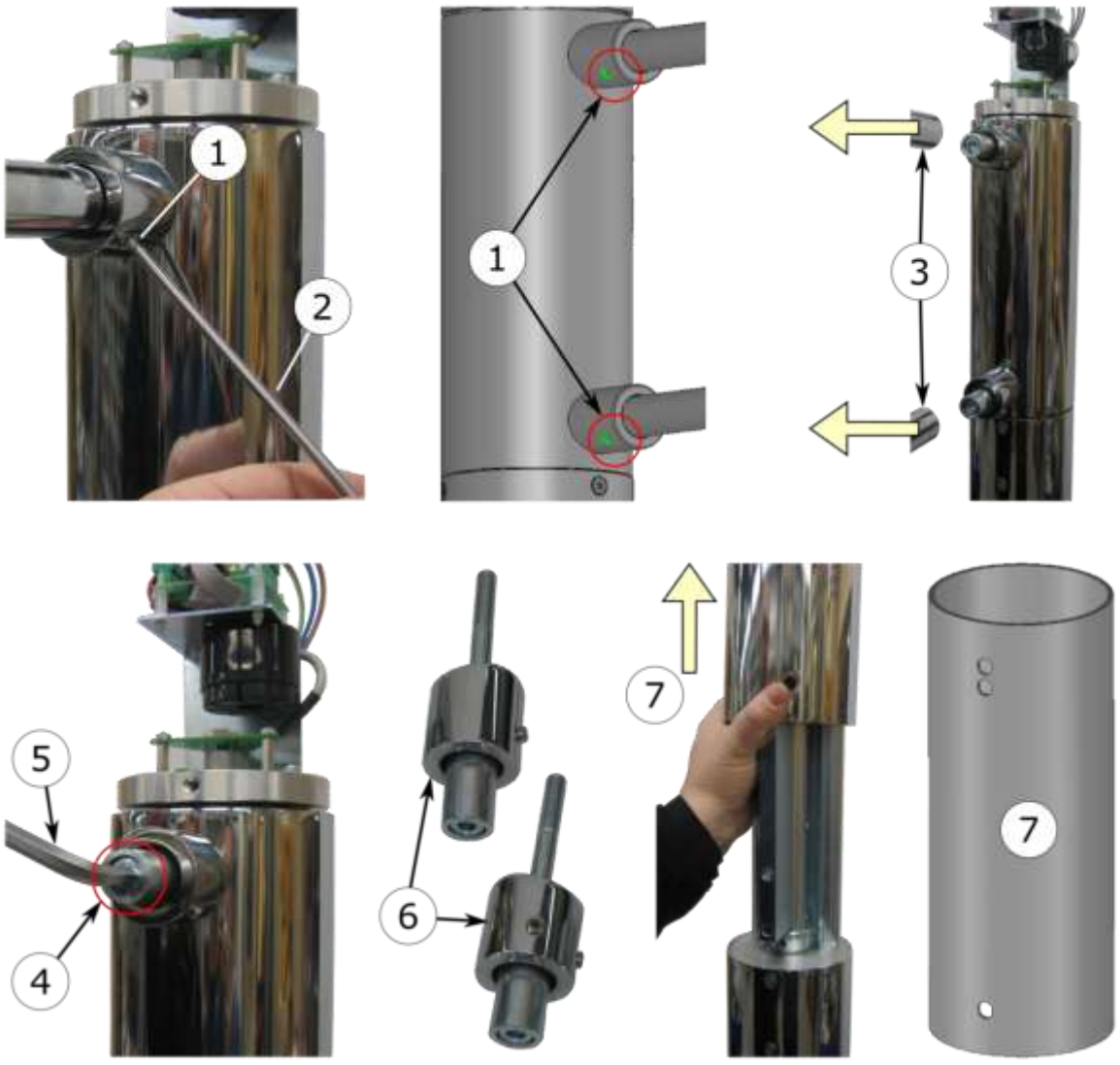


Figure 7-9: Motor Replacement #1

- Unscrew the two screws TCEI M10x130 (*item: 4*) with an Allen key size 8 (*item: 5*);
- Remove the two support sleeves (*item: 6*) of the swing arm;
- Slide off the rotating tube (*item: 7*);
- Unscrew the six screws TSEI M6x12 (*item: 8*) with an Allen key size 4.
- Slide off (*item: 9*) the entire motor-clutch block upwards and remove it from the pin located at the base (*item: 10*);

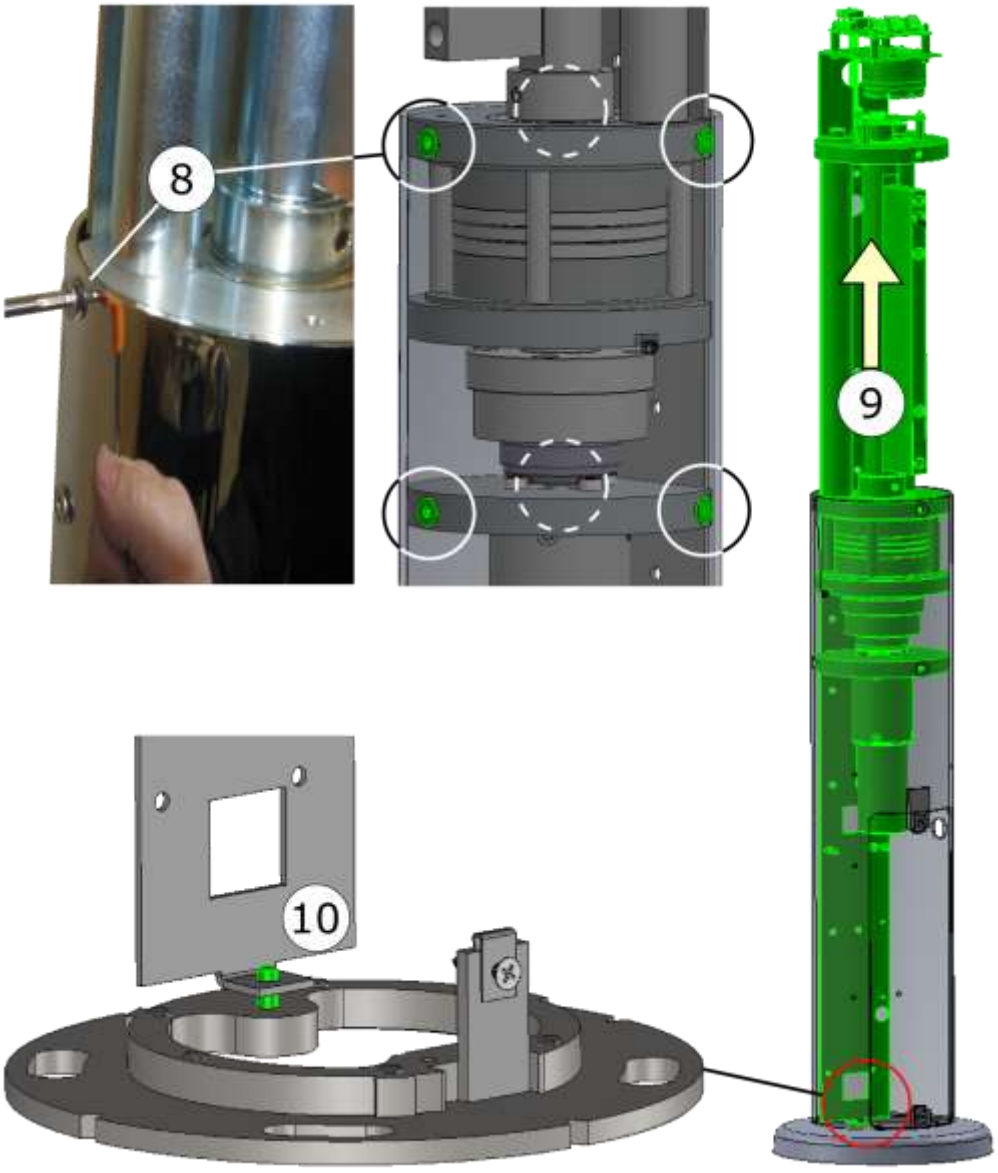


Figure 7-10: Motor Replacement #2

- Unscrew the two screws VTBEI M6x10 (*item: 11*) taking care not to lose them and remove the engine-clutch block (*item 12*);
- Place a flat-head screwdriver between the clutch and the engine. (*item: 13*);

- Apply gradually a lever to remove the clutch;
- Replace the damaged motor;
- Reassemble the components by performing the operations in reverse order;
- Switch on the OverGate 3;
- Check the right operation of the OverGate 3.

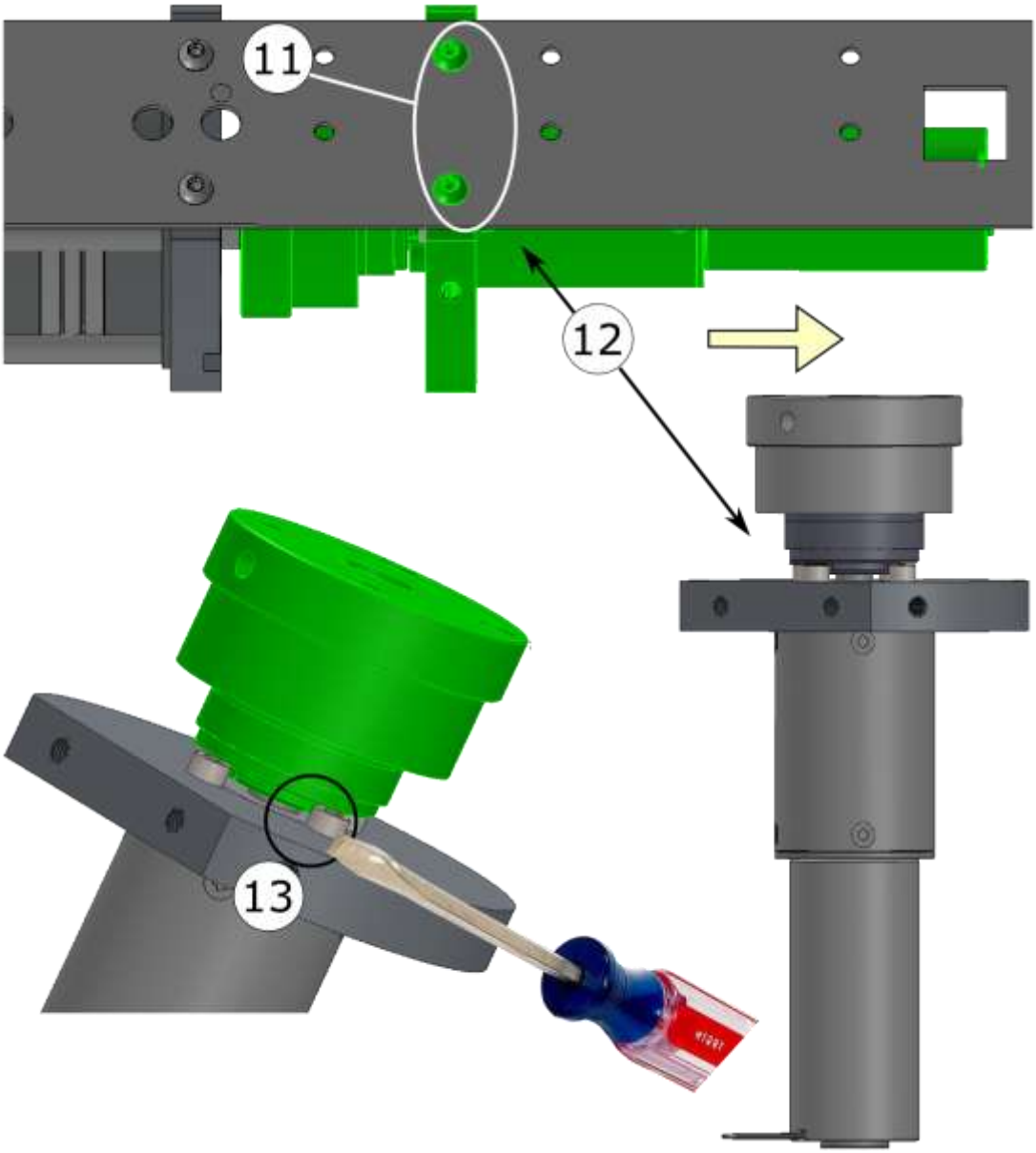
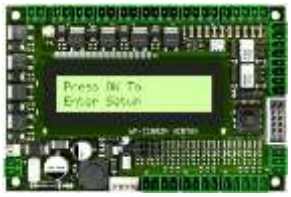


Figure 7-11: Motor Replacement # 3

8 SPARE PARTS

Description	Code	
Torque limiter	TAA000154	
Sign complete with support for swing arm	232850310	
Brake	WAA000005	
Motor	WAA000007	
Key block	AAA010045	
Stabilized power supply	WAA000004	
Buzzer	WAA000074	
Encoder Board AL003	WAA000110	

Replay board AL002	WAA000109	
Control Board AL001	WAA000108	
Photocell (optional)	WAA000069	
Radar Sensor MICAS (optional)	WAA000044	
Radar Sensor BEA (optional)	WAA000080	

9 SWING ARM TABLE

Valori (mm):	STD	0 – 800
		801 – 1000
		1001 – 1200
	PL	600
		900
		800x600
	AL	1080x650