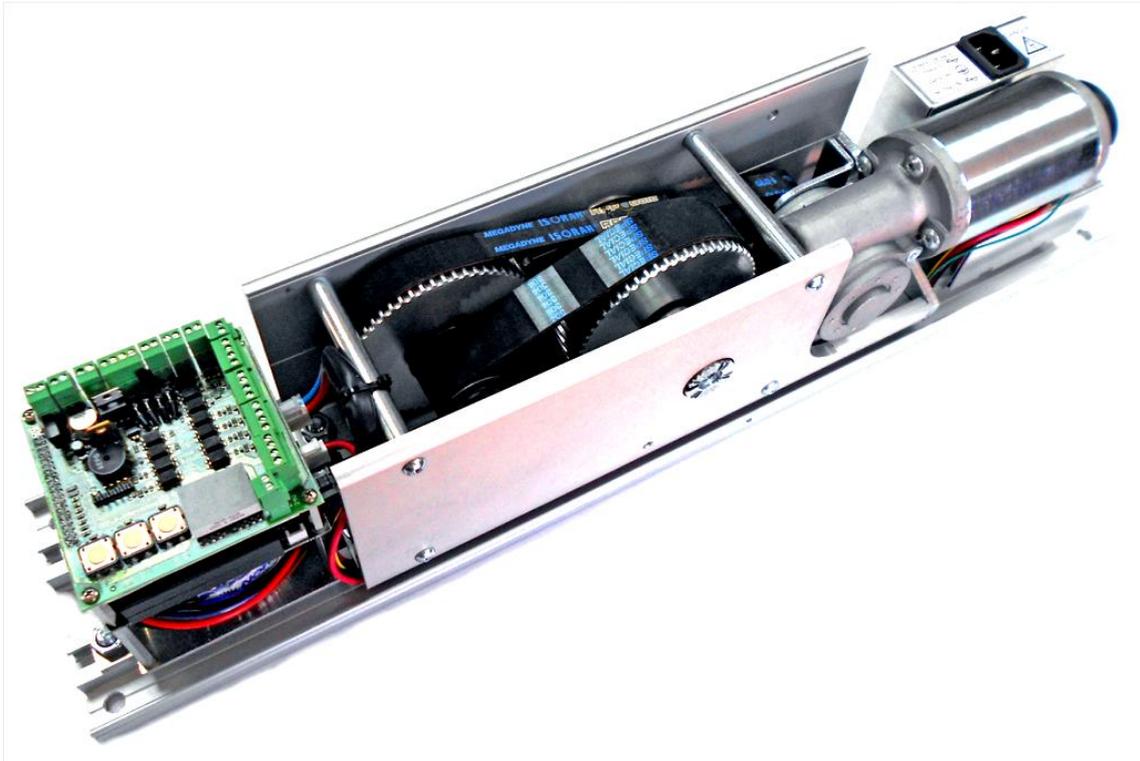


MICOM AUTODOOR Automatic Swing Door Operator Model: MICOM SWING Model SW & SWSP

Original Instructions

INSTALLATION MANUAL

The installation instruction detailed within are solely for professional installers and not intended to be handed over to the end user.



OSAKA – JAPAN
www.micomautodoor.com

vers.0001

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IMPORTANT NOTICE

	<p>Please carefully read the instructions before installing the door operator. We hold no responsibility for loss or damages caused if the following precautions are not observed.</p>
	<p>NOTCIE: It is important for security reasons that all persons follow these instructions. Please keep these instructions.</p>
	<p>When performing Maintenance and Installation tasks, the machine must be disconnected from the standard electricity supply.</p>
	<p>Use the correct electrical feed (See section "2.-Technical Specifications")</p>
	<p>Ensure that the operator is earthed! The operator covering is made of a metal material which conducts electricity and it is easy for conduction to appear, so please ensure that the earth cable is connected.</p>
	<p>The operator covering is not totally sealed and therefore dampness can destroy the electronic components within.</p>
	<p>Do not remove screws and bolts from the internal structure of the Control Unit. Do not open, repair or alter any part of the Control Unit. Failure to comply will result in loss of warranty.</p>
	<p>Installation and maintenance of this product can be performed by MICOM authorized personnel only.</p>
	<p>Before plugging in the 3-way connector (power on), make sure that no objects obstruct the travel of the automatic door.</p>
	<p>Follow all the indicated instructions, bearing in mind that an incorrect installation could provoke serious damage.</p>
	<p>It is important to separate Sensor and Selector cables from mains power (230Vac) cables. As it could provoke the micro-processor to function incorrectly - in the short term or long term - or even cause irreversible damage.</p>
	<p>In the event that all the cables require to be passed through one pipe, those pertaining to the automatic door must be shielded and must be earthed at both ends. The installation technicians must not mix the cables within the operator. Always attempt to separate signals cables (photocell, selector, radar, motor, etc.) from power cables (230V or 110V).</p>
	<p>Follow all indicated instructions, as improper installation could cause severe damage.</p>
	<p>Please keep these instructions.</p>

Note: Installation instructions detailed here within meet the requirements of BSEN 16005 and if necessary can be verified.



IMPORTANT SAFETY NOTICE!!!



When the door starts for the first time, it will automatically perform a series of opening and closing cycles (normally between 3 to 5 times) – Known as teaching or self-learning mode.

Please note these learning cycles are performed at high speed without safety features enabled.

Keep clear of the entrance and doors. Ensure that no pedestrians pass through the doors during the initial learning, installation or maintenance. Keep clear of doors when opening or closing during learning. It is advisable to identify and restrict the area with warning signs.



In certain installations of automatic doors, some installers may sometimes place operation selector cables and power supply cables (230Vac) within the same tube. This must never be done as it may cause, in the short or long term, the microprocessor to work incorrectly or to break down irreversibly.

It is advised to avoid placing cables within the same tube. Those belonging to the automatic door must be shielded and properly grounded at both ends.

It is always necessary to try to separate signal cables (photocell, selector, radars, engine, etc.) from voltage cables (230V or 110V).

1. INTRODUCTION

This instruction manual contains all the information to carry out the installation, maintenance and service of the MICOM SWING SW and SWING SWSP operators.

These operators are used for to automate swing doors of either one or two panels, both for inside and outside, opening inwards or outwards.

The mechanism incorporates an opening limiter inside, it is not necessary to have any stopper on the floor or wall.

The difference between the operators MICOM SWING-SW and MICOM SWING-SP is:

SW: Power Close

SWSP: Spring Close

The MICOM SWING is a non handed swing door operator system is to be utilized for automatic swinging pedestrian doors. It is suitable for Single and Double applications. Its small size and attractive housing design will compliment the aesthetics of any door. MICOM SWING SW & SWSP is very compact, durable and high-quality automatic swing door operator system.

MICOM SWING operator is totally reversible and therefore it can be adapted without needing to change the mechanics or the programming. It can accommodate Left and Right Push as well as Left and Right Pull applications.

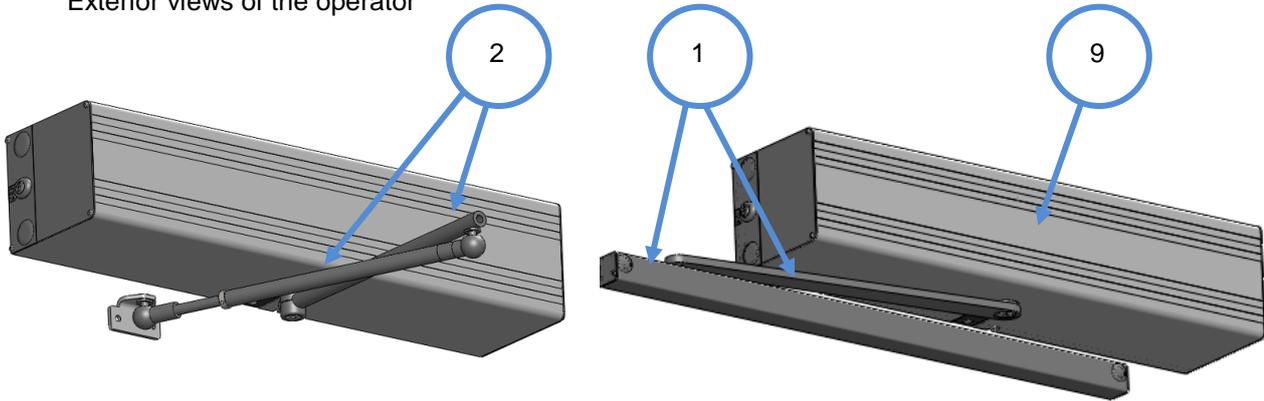
INSTALLATIONS – TO FOLLOW

2. TECHNICAL SPECIFICATION

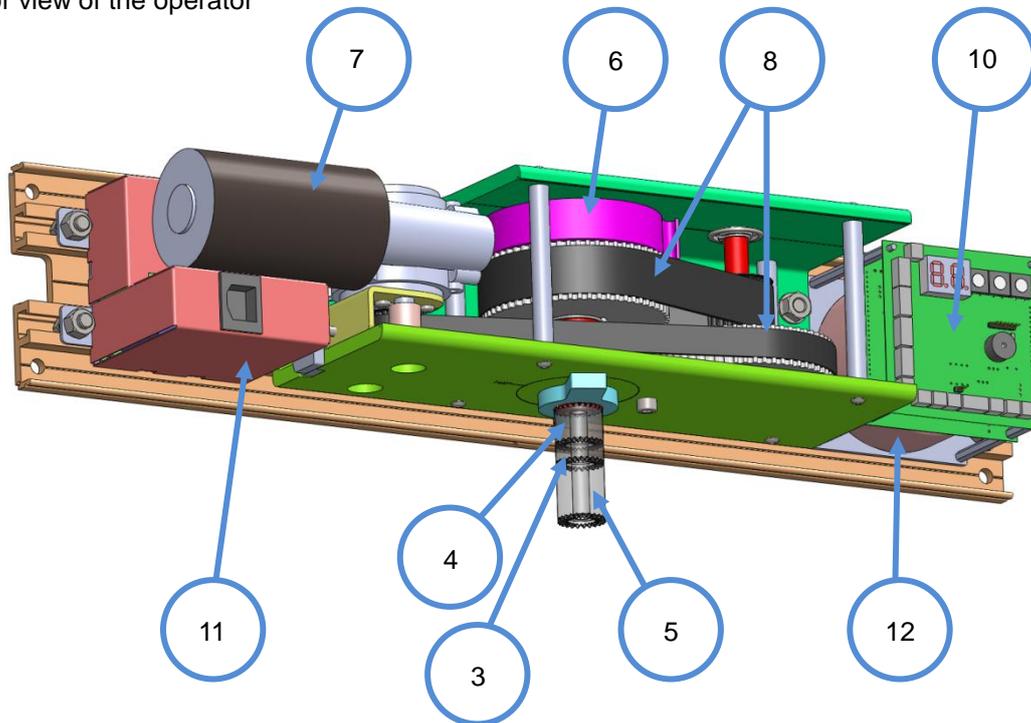
	MICOM SWING SW	MICOM SWING SWSP
Closure with spring	NO	YES
Arm system	Push (Articulate) and Pull (Slide)	
Push & Go	Yes (Adjustable)	
Power	230/110VAC 50,60Mhz 2Amp	
Opening speed	15-75deg/sec. (Adjustable)	
Weight of operator	9kg	
Control system	Micro-processor	
Braking regulator	Automatic	
Opening time	0-60 sec. (10 positions)	
Close Pressure	Elimination of door to frame gap. Electric pressure in 5 steps (adjustable)	
Safety Function	Obstruction during opening, door will stop and an alarm will sound. Obstruction during closing, door will reverse and slowly close. Obstruction remains, door will stop and an alarm will sound.	
Failure Detection	Alarm on failure detection (acoustic and on LED display)	
Operation	Continuous opening and closing	
Emergency Battery	The door will continue to function in the event of an electrical outage (optional)	
Locking	Electrical Lock of 12/24 VDC (optional)	
Operating Environment	Ambient temperature from -20C ~ +50C (no condensation or icing). Ambient humidity 30% ~ 85%. (no hazardous materials in the atmosphere)	
Max open angle	110 degrees (adjustable).	
Max leaf	250 kg	
Operator dimensions	120 x 130 x 570 mm (height, depth, length).	

3. COMPONENT PARTS

Exterior views of the operator

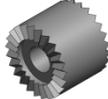
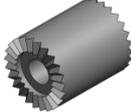
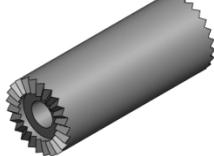


Interior view of the operator



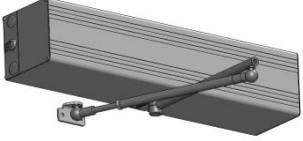
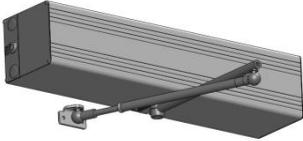
4. PARTS LIST

4.1 List of components and operators

N°	Components	Reference	Description	Image
01	Sliding arm (pull) For MI-SW-Pull	2002277	Transmits the force of the mechanism to the door. Normally this is used when the door panel must open inwards.	
02	Articulated arm(push) For MI-SW-Push	2002278	Transmits the force of the mechanism to the door. Normally this is used when the door panel must open outwards.	
03	Separator for MICOM SWING-SW of 20mm (optional)	2030001	This allows an increase the height of the mechanism by 20 mm	
04	Separator for MICOM SWING -SW of 30mm (optional)	2030002	This allows an increase the height of the mechanism by 30 mm	
05	Separator for MICOM SWING -SW of 60mm (optional)	2030003	This allows an increase the height of the mechanism by 60 mm	
06	MICOM SWING-SP SPRING Only available for MICOM SWING-SP operators	2002273	Allows door to close when there is a power cut	
07	Motor-reducer for MICOM SWING-SW	2002270	Continuous current motor	

08	25mm BELT for MICOM SWING -SW	2002271	Belt Reduction Gear	
09	Front cover for MICOM SWING -SW	2002274	Extruded Aluminum	
10	Control unit for MICOM SWING -SW	2002269	Microprocessor Control	
11	Feed source for MICOM SWING -SW	2002276		
12	Transformer for MICOM SWING -SW	2002275		
13	Access control card ST-500 (option)	5001097	To open the door by means a radio transmitter, proximity key, tag, etc...	
14	Digital selector SLD-5 (option)	2002109	Digital selector	

4.2 Identification of Operators

N°	Operators	Reference	Description	Image
A1	MICOM SWING SW-Push	2002279	Operator for swing doors with articulated arm	
A2	MICOM SWING SW-Pull	2002280	Operator for swing doors with sliding arm	
A3	MICOM SWING SWSP-Push	2002281	Operator for swing doors with articulated arm and incorporated closing spring	
A4	MICOM SWING SWSP-Pull	2002282	Operator for swing doors with sliding arm and incorporated closing spring	

5. INSTALLATION OF THE OPERATOR

5.1 Preperation - Required tools



Allen key. Sizes:

- 2'5
- 3
- 5



Spanner. Sizes:

- 13
- 14



Phillips screwdriver. Sizes:

- #0
- #1



Flat Screwdriver. Sizes:

- 2



Drill bit for wall/concrete. Sizes:

- 8
- 6



Drill bit for metal. Sizes:

- 5
- 4



Plug for metric thread:

- M6



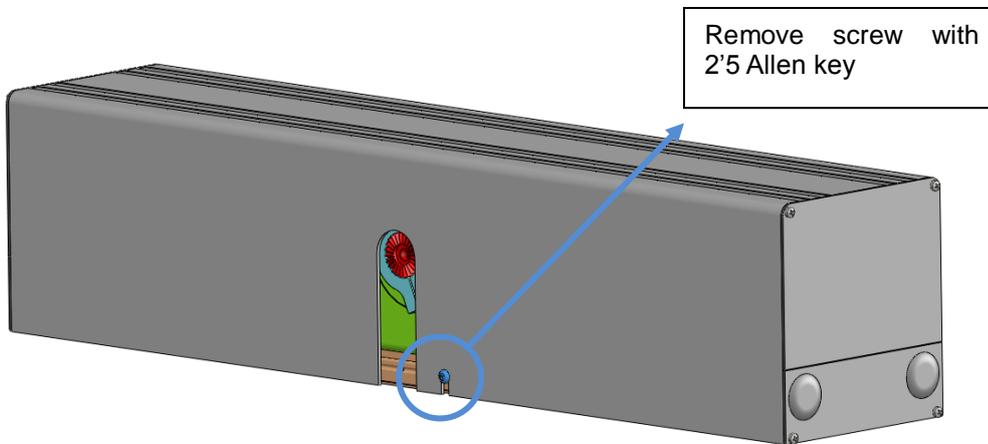
Drill



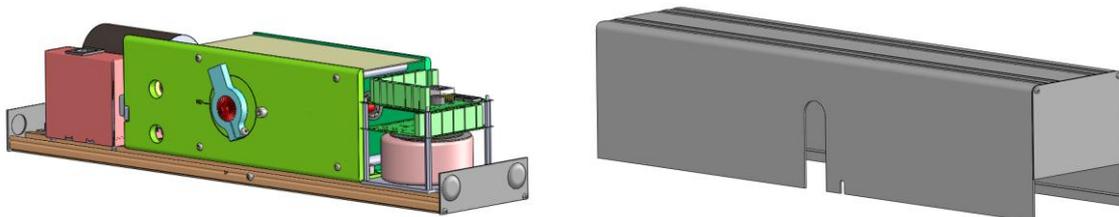
Wall plug

5.2 Prepare Operator

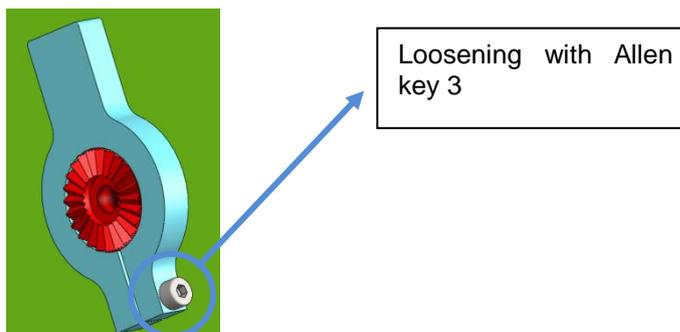
- Unpack the operator with care.
- Remove the central screw from the front cover



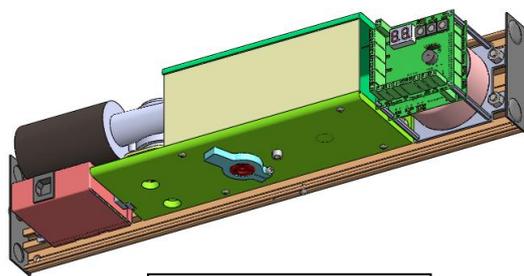
1. Remove the front cover with care



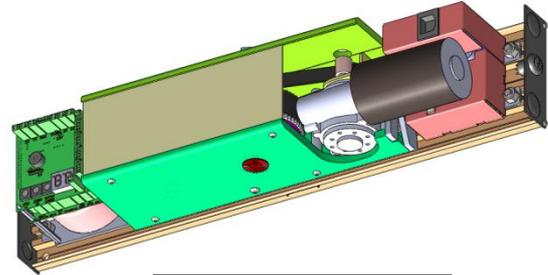
2. Loosen the screw at the end of the reel so that this can move or turn easily.



3. Orientate the operator. Before fixing the operator to the door frame or wall, we should study the orientation of the same, which can be: Normal or Reversed.



Normal Position

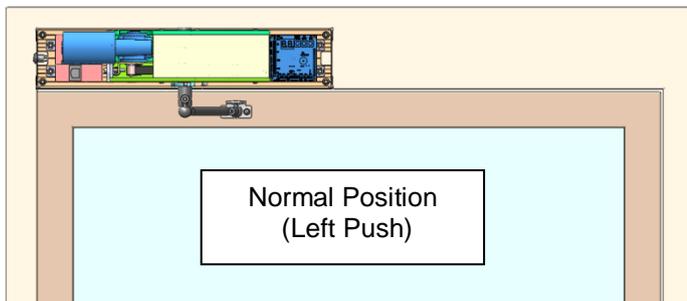


Reverse Position

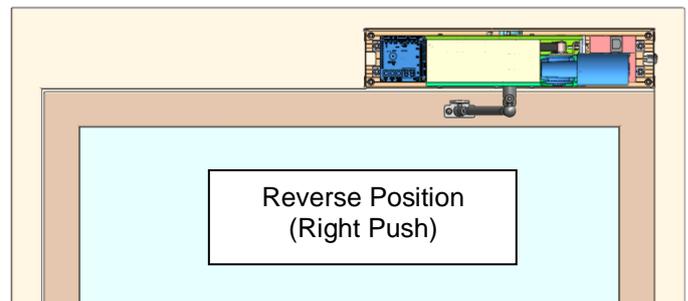
The orientation of the operator depends on the following factors:

- opening direction
- placement (this can be on the framework or on the door panel)
- situation of the door (right or left)

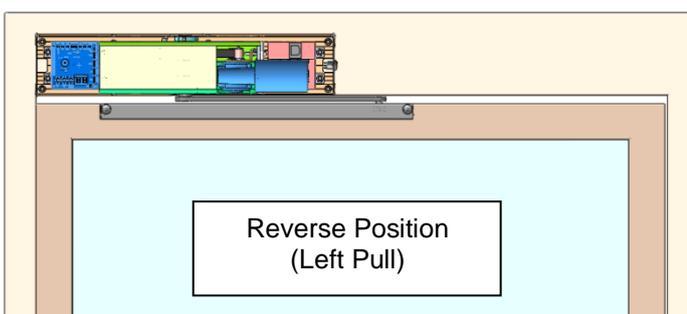
Installation Examples



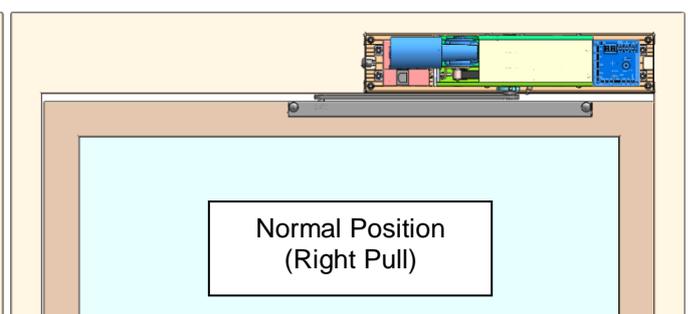
Normal Position
(Left Push)



Reverse Position
(Right Push)



Reverse Position
(Left Pull)



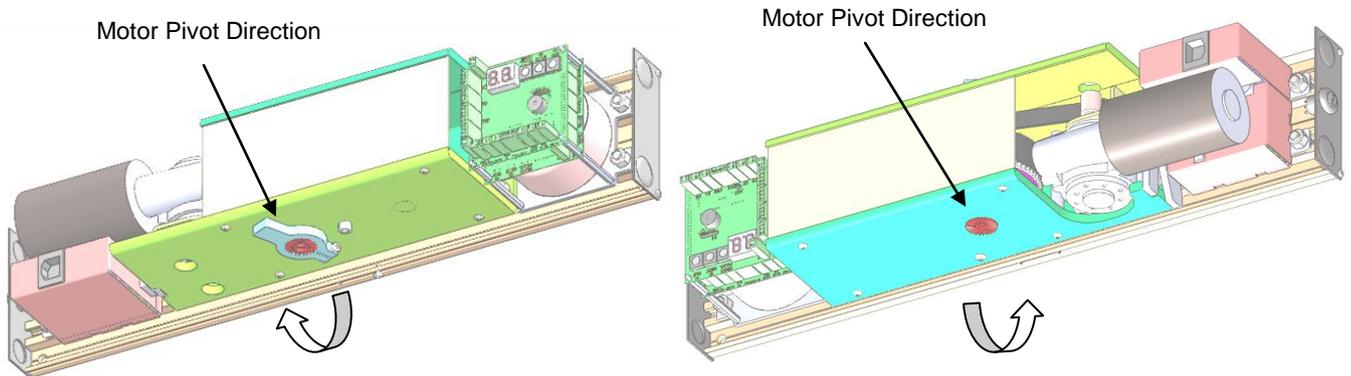
Normal Position
(Right Pull)

The operator is totally reversible and therefore it can be adapted to any of the previous factors without needing to change the mechanics or the programming. It is sufficient to turn it around to orientate it in one direction or the other.

Therefore, if by mistake the operator was installed upside down. Upon giving the order to open it actually closes, by simply changing the orientation we can solve the problem.

There are two ways to know how to orientate the operator:

A. By Motor Pivot Direction:



B. Turning the motor's pivot manually, we can use the operator arm to assist us. By turning motor pivot in both directions, using the operator arm to assist in this moment by hand, we can see that the motor turns with no resistance in one direction; while on the other hand, turning the motor in the other direction needs greater force. In summary:

- Low resistance when turning corresponds to the opening direction of the door.
- High resistance when turning corresponds to the closing direction of the door.

6. FIXING OPERATOR

6.1 Introduction

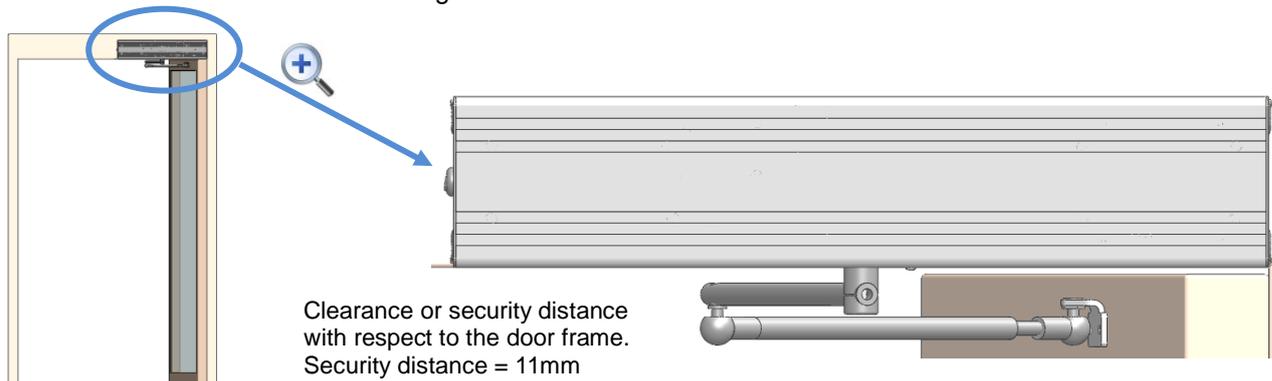
In order to fix the operator to the door frame, a template is provided with indication as to where the fixture holes should be. There are 6 holes represented (4 fix the operator to the frame and 2 fix the operator arm to the door).

These 6 holes are the minimum required that must be used to fix the mechanism correctly.

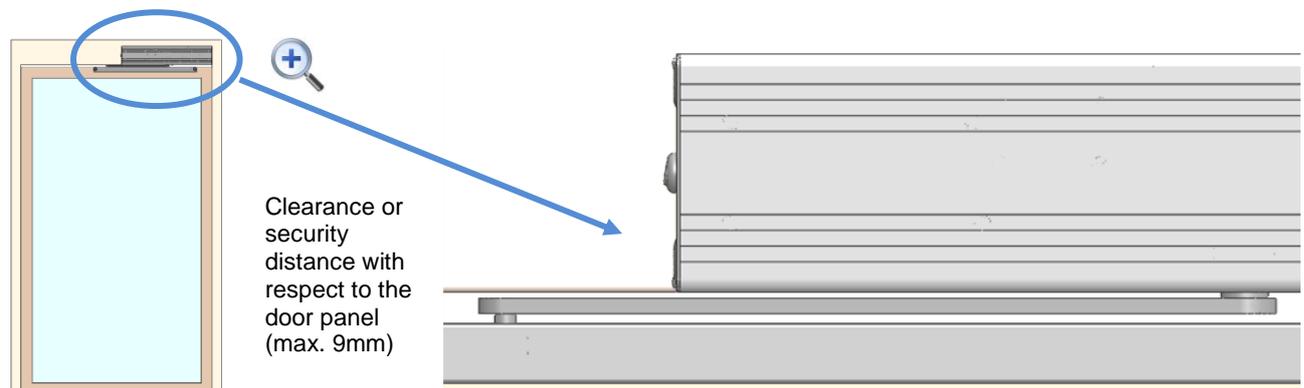
Before proceeding to fix the operator we recommend keeping the following advice in consideration:

- If the operator is fixed to a thin metal surface (less than 10mm thickness) it is strongly advised to use threaded screws metric size M6 instead of self-tapping screws.
- If the operator is fixed onto a hollow brick it is strongly advised to use a plastic wall plug and a threaded rod metric size M6.

- When the operator with an articulated arm (push) is fixed, a security distance should be used so that the arm does not hit against the door frame.



- When installing and operator with a sliding arm (pull), leave a safe distance so that the arm does not knock against the door panel.



Important notice: In the event of using less fixture points than those required, or not following the previous advice, there is a risk of the mechanism coming unfixed or falling. This would put the people using the automatic door in danger.

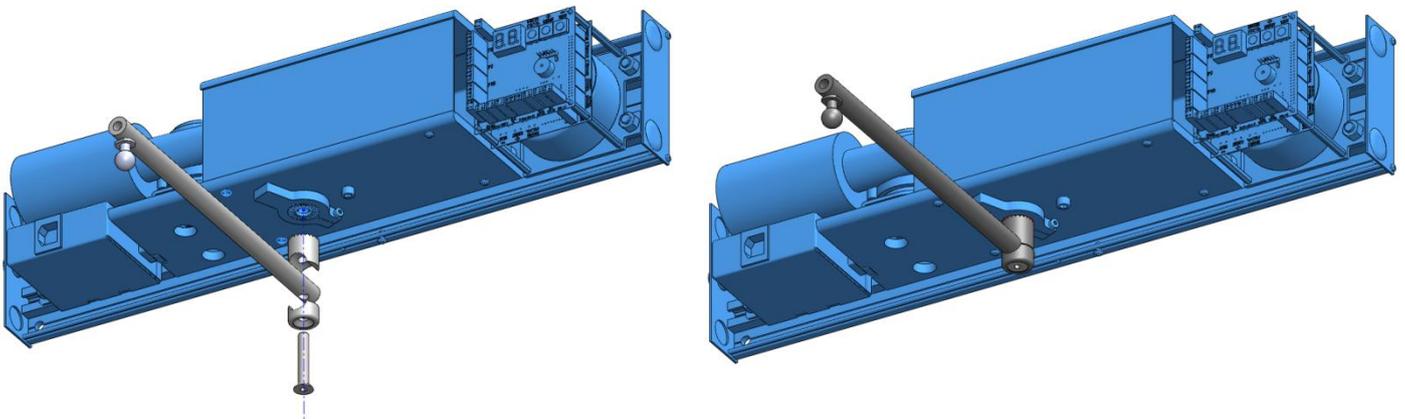
6.2 Fix and Adjust to Articulated (Push) Arm

In order to fix and adjust the articulated arm:

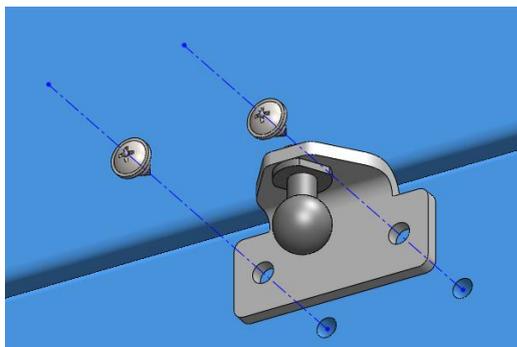
1. Separate the two parts of the arm joints. In order to separate them, you will have to remove the security ring.



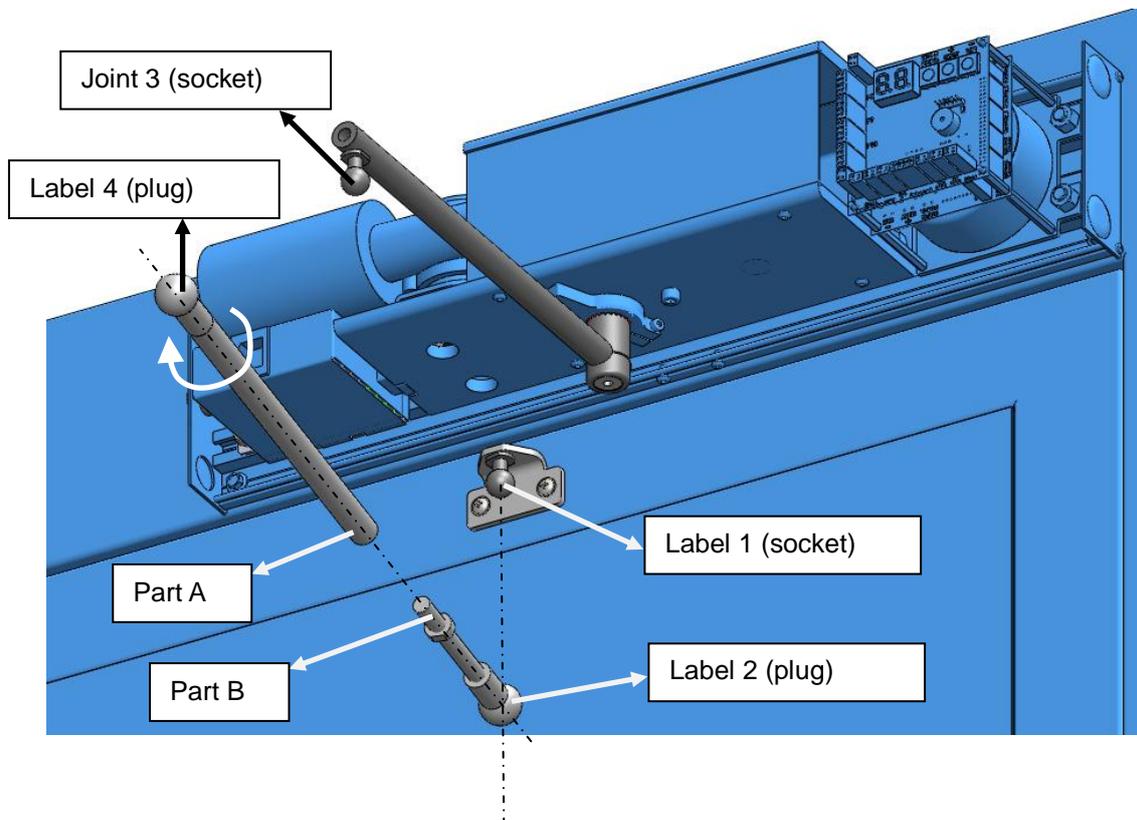
2. Screw in the upper part of the arm.



3. Make two holes in the door by following the indications as shown in drawings.



4. Introduce joint 1 (socket) into joint 2 (plug) (see the following figure).
5. Join "Part A" with "Part B" (see following figure). This will be achieved by screwing it in.
6. Close the door and keep it closed until the arm has been installed.
7. By turning "Part A" we can lengthen or shorten the arm if we turn it in one direction or the other. Turn "Part A" so that joint 4 (socket) meets up with joint 3 (plug) (see the following figure).



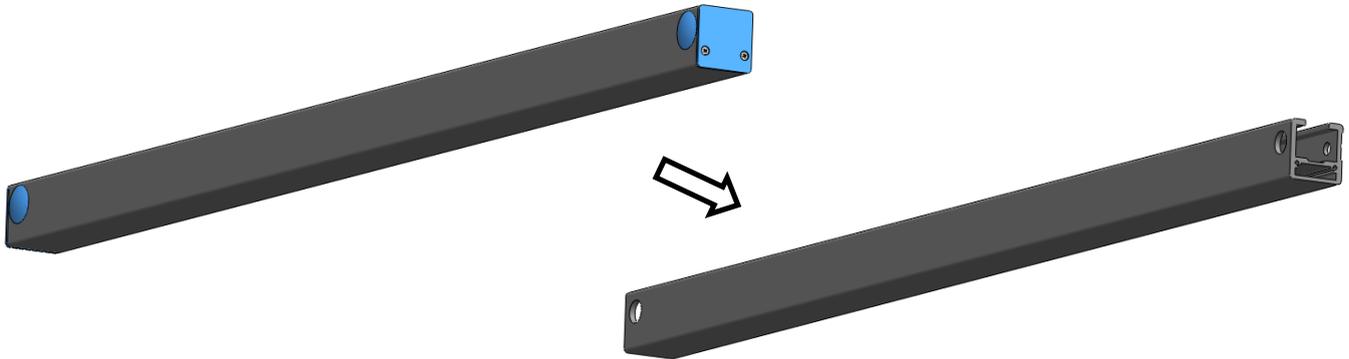
8. Then place each joint into its security ring.
9. Open and close the door and check that it is working correctly.

Note: Adjust the end of the rod (for more details see section "6.5.-ADJUST OPENING LIMIT").

6.3 Fixing Slide Arm (Pull)

In order to fix and adjust the sliding arm:

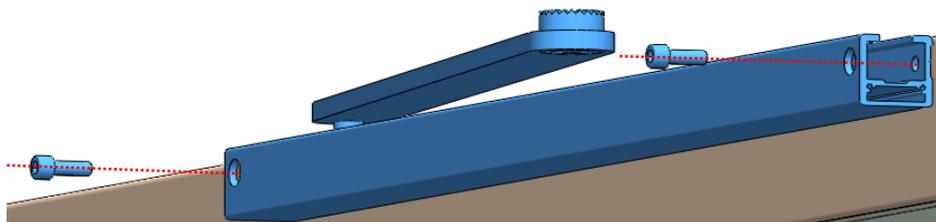
1. Remove the end covers to be able to work freely.



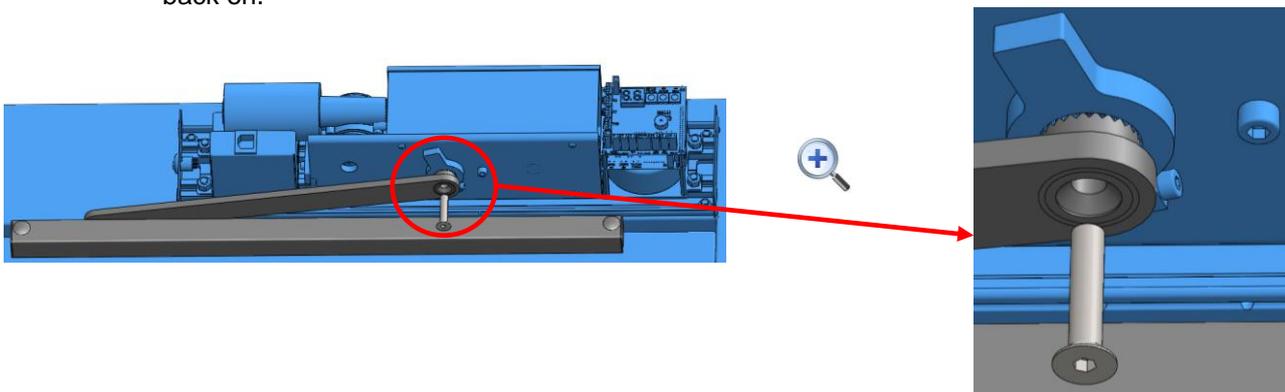
2. Introduce Part_B into Part_A, for one of its extremes.



3. Following the drawing instructions Make 2 holes in the door and fix the arm to the door panel.



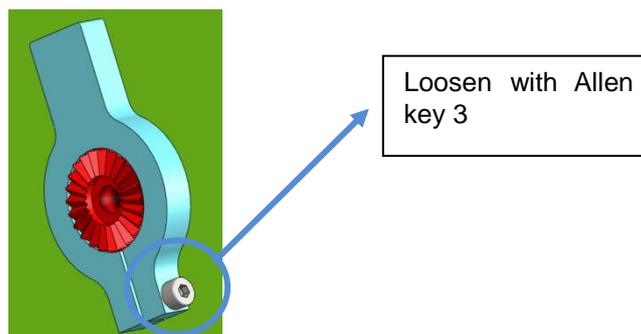
4. With the door in the closed position. Fix Part_B of the arm to the motor pivot. Put the covers back on.



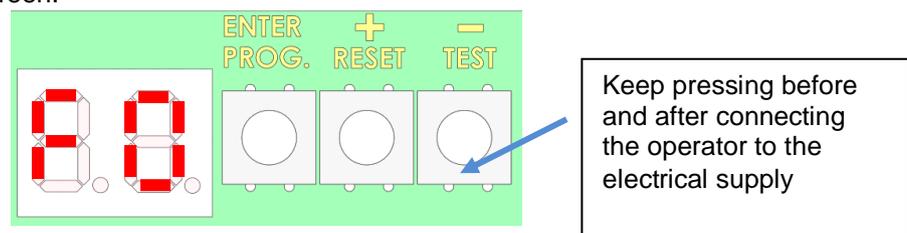
6.4 Set up of the Tension Spring

MICOM SWING SPSW has a door-closing system. In order for this to function perfectly, the tension spring must be pre-loaded. This load can be higher or lower depending upon the size/weight of the door panel or the clients' requirements. To load the spring:

1. Make sure the operator is not connected to the electricity supply. If it is, take the plug out from the feed source.
2. Remove the operator arm; it will be sufficient to remove the screw that links the arm to the motor pivot.
3. Loosen the lever screw so that this can move and turn easily.



4. Press the '-TEST' button and without letting it go, connect the electricity supply to the operator using the 3pin plug. If it has been done correctly the letter F will appear, followed by the number 0 on the screen.



5. On the screen the letter F appears followed by the number 0, which represents the force loaded on the spring; value 0 is the lowest. If we press +RESET, the number will increase and the motor will start to turn. As the motor turns the spring will be charged. The higher we increase the value, the more the spring will be charge. Please see the following table how value F relates to the spring force.

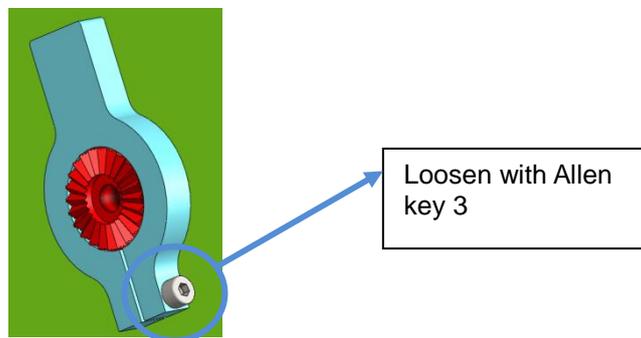
"F" Value	Force loaded on the spring	Recommendation
0	0	Invalid
1	9Nm	Doors up to 50Kg
2	13Nm	Doors up to 100Kg
3	18Nm	Doors up to 150Kg
4	22Nm	Doors up to 180Kg

6. After assigning a value to F, wait for the motor to stop turning (normally no more than a minute). When the motor stops, close the door and fix the arm to the motor pivot.
7. Then press “-TEST” once more to save the changes and to check that the letter “F” disappears from the screen.
8. Disconnect the operator from the electricity supply
9. Open the door manually and check that it closes by itself.
10. Adjust the end of the run.

6.5 Adjusting Opening Limit

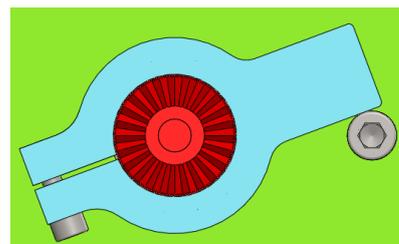
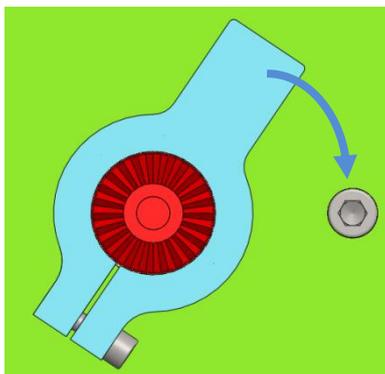
Steps to follow:

1. Loosen the screw for the limit lever so that it can move and turn freely.

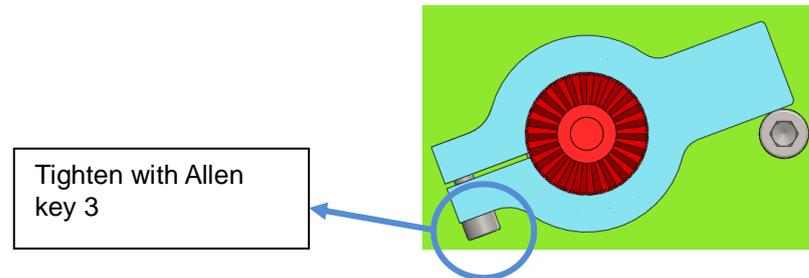


2. Open the door to the desired opening point. If the operator is spring closing, it is necessary to apply either a door stopper or something similar so that the door stays open, until finished adjusting the limit.

3. Turn the lever until the final limit is obtained.



4. Tighten the lever screw so that it is fixed firmly to the motor pivot.



7. OPERATION OF MICOM SWING SW & SWSP UNIT

7.1 Start Up and Self Learning

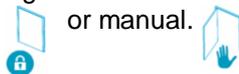
IMPORTANT NOTICE: When the MICOM SWING SW & SWSP system starts up for the first time, the self-adjustment process will start for the system. This process will carry out an opening and closing cycle to find the actual length of the door stroke.

It is very important to allow the door to carry out these cycles freely, i.e. with no obstacles. It is therefore recommended that no-one goes near the door. If the panel has any obstruction during the learning cycle, the whole process should be re-started via the RESET on the control unit (see section 12.2.5 - for more information).

During the Self-learning process, the automatic door will automatically carry out the following actions:

1. Prior to starting, ensure that the operator selector has been connected, as well as the electricity supply, transformer, motor and the control unit.

2. Plug in connector to the supply situated to the right of the Control Unit and place the operator selector on any function, except that of closing or manual.



3. The door opens slowly until it reaches its opening position.

4. The door closes slowly until it reaches its closing position.

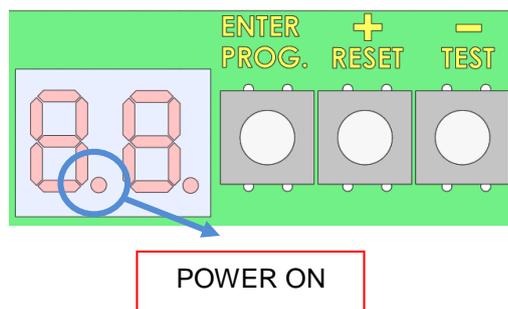
5. From here on the door will work normally, although the first movements will often brake early. As the operator continues with the closing and opening cycles, the door will gradually find the most efficient braking point.

- This process is only carried out on the first occasion when the automatic door is activated and every time the RESET is used. (see section "12.2.5.-").
- If for any reason you are unable to carry out the Self-learning process correctly, you must go through the process again through "RESET" on the Control Unit.

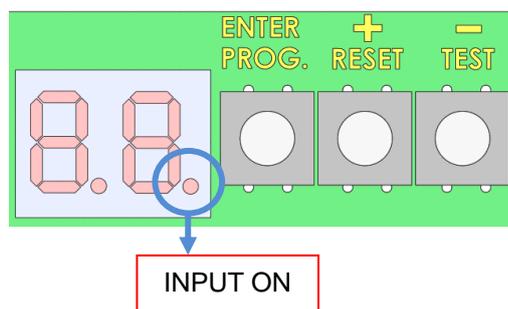
- Every time that important changes take place on the automatic door, such as: change of position of the stoppers, change to the size of the panels or change to the weight of the panels, in these cases you always have to do a “RESET” in order for the Control Unit to adapt to the changes.
- After carrying out a “RESET” on the Control Unit, as well as re-starting the Self-learning, the parameters will be cancelled off and will return to the factory settings. There are certain parameters that will not cancel off after a “RESET”, such as: the number of cycles and the function time.

7.2 Normal Function

In order to ensure that the System is working correctly, check the “POWER ON”, located on the Control Unit is always switched ON.



When the Control Unit receives an impulse to open (for example, a movement sensor, an emergency command or switch/sensor) the “INPUT ON” on the display screen will activate. The motor will then start to turn and provide movement to the automatic door panels to open.



When there is no signal to open, the motor will turn in reverse direction until the door is fully closed. When it receives the signal to stop (by means of pressing the emergency stop button) the door will brake and will remain still while the signal to stop is in place.

7.3 Electrical Fault

If the operator is equipped with a battery system (optional) and there is a cut in the electricity supply, the door will continue to function normally until the battery is dead.

Once the battery is almost empty, the automatic door will cease to function until the general electricity supply returns or until the “Night Bank” or Night Switch is activated.

If the “Night Bank” (switch) comes into action, it will activate the battery system and the motor will open/close the door.

When the electricity supply fails and if the operator is not equipped with a battery system:

- with the MICOM SWING-SW model will stop working.
- with the MICOM SWING-SWSP model the door will only close.

7.4 Errors

A case could occur where the system has suffered a problem and therefore would cease to function correctly, e.g. in the event of a power cut or when the automatic door hits a pedestrian.

In these cases, the automatic door will give both a visual and acoustic signal to indicate what error has taken place (for more information see section”14. PROBLEM SOLVING. ERROR TABLE”).

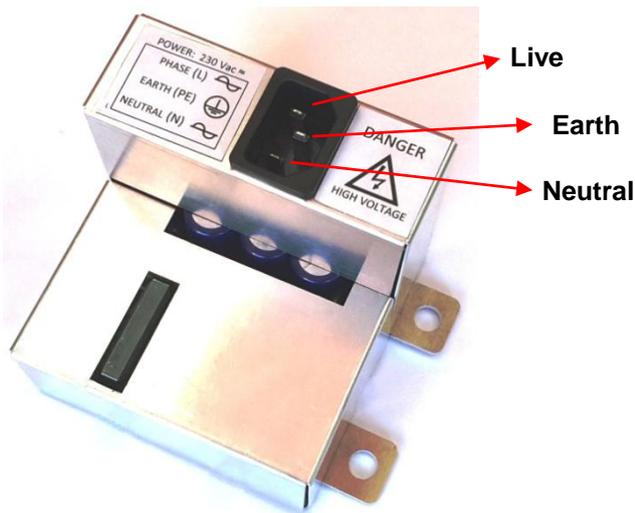
8. CONNECTIONS

8.1 Connection to the Electrical supply

The control unit can work at 230V or 110V, depending on client requirements. The feed power is 230V when it leaves the factory but the system can be configured to work at 110V; only a small modification has to be carried out inside of the feed supply (contact us for more details).

The control unit is compatible with frequencies 50Hz and 60Hz.

Power connection is by way of 3 pin connector plug located in the upper part of the operator (see the following image). It is compulsory to earth the power supply in order to avoid problems when the product is working and also to protect users from dangerous situations.



ATTENTION!!
Be extremely careful with this connection. An error can damage the Control Unit and cause serious injury or death.

8.2 Internal Basic Connections

Connection from the transformer to the feed supply.

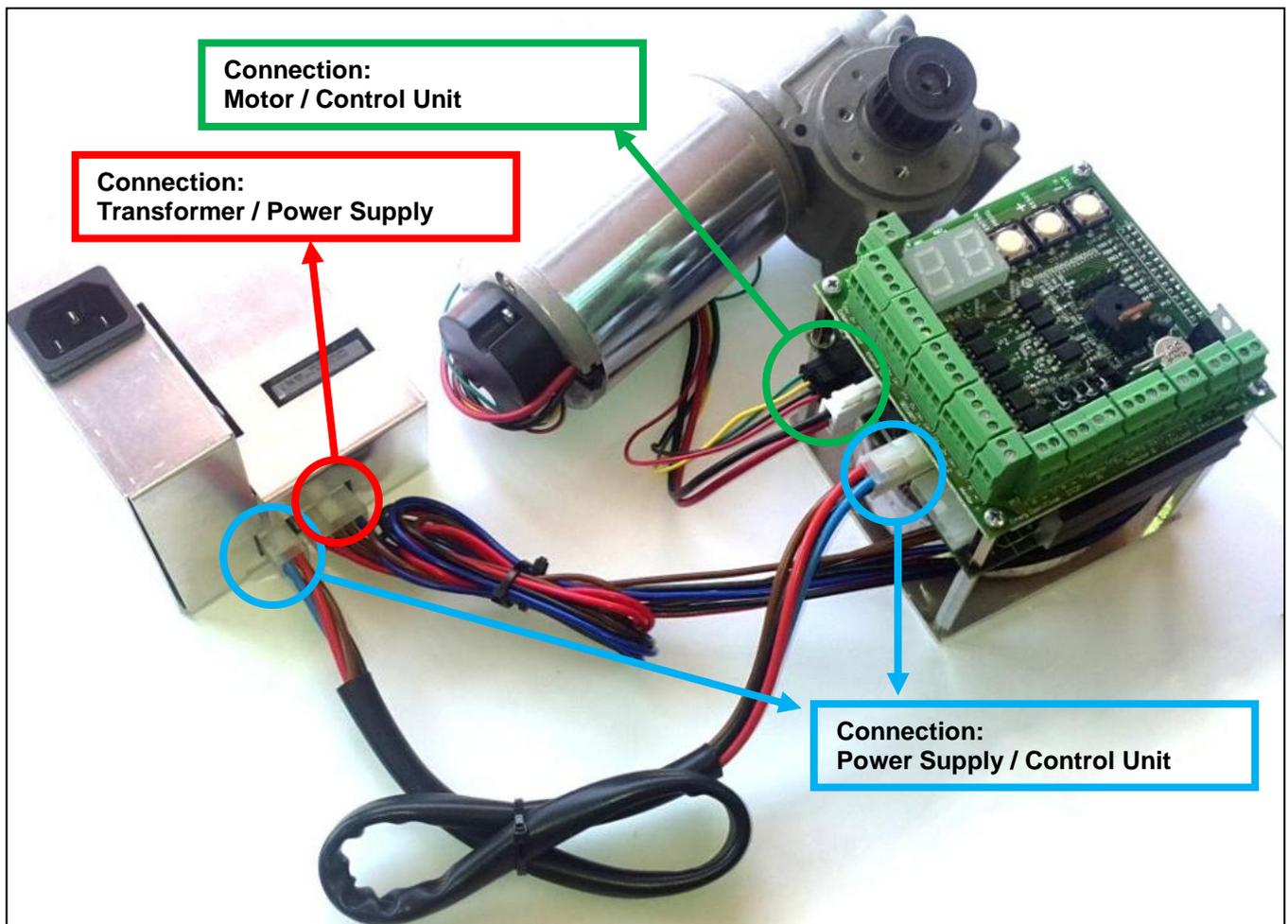
The connection from the transformer to the supply should be done with an 8-wire cable. This connection takes place in the factory and the technician should only have to do it in the event of a breakdown or when having to replace components (see the following figure for more details).

Connection from the supply to the control unit.

The connection from the supply source to the control unit will be done with a 4-wire cable. This connection will be done in the factory and the technician should only have to do it in the event of a breakdown or when having to replace components (see the following figure for more details).

Connection from the motor to the Control Unit

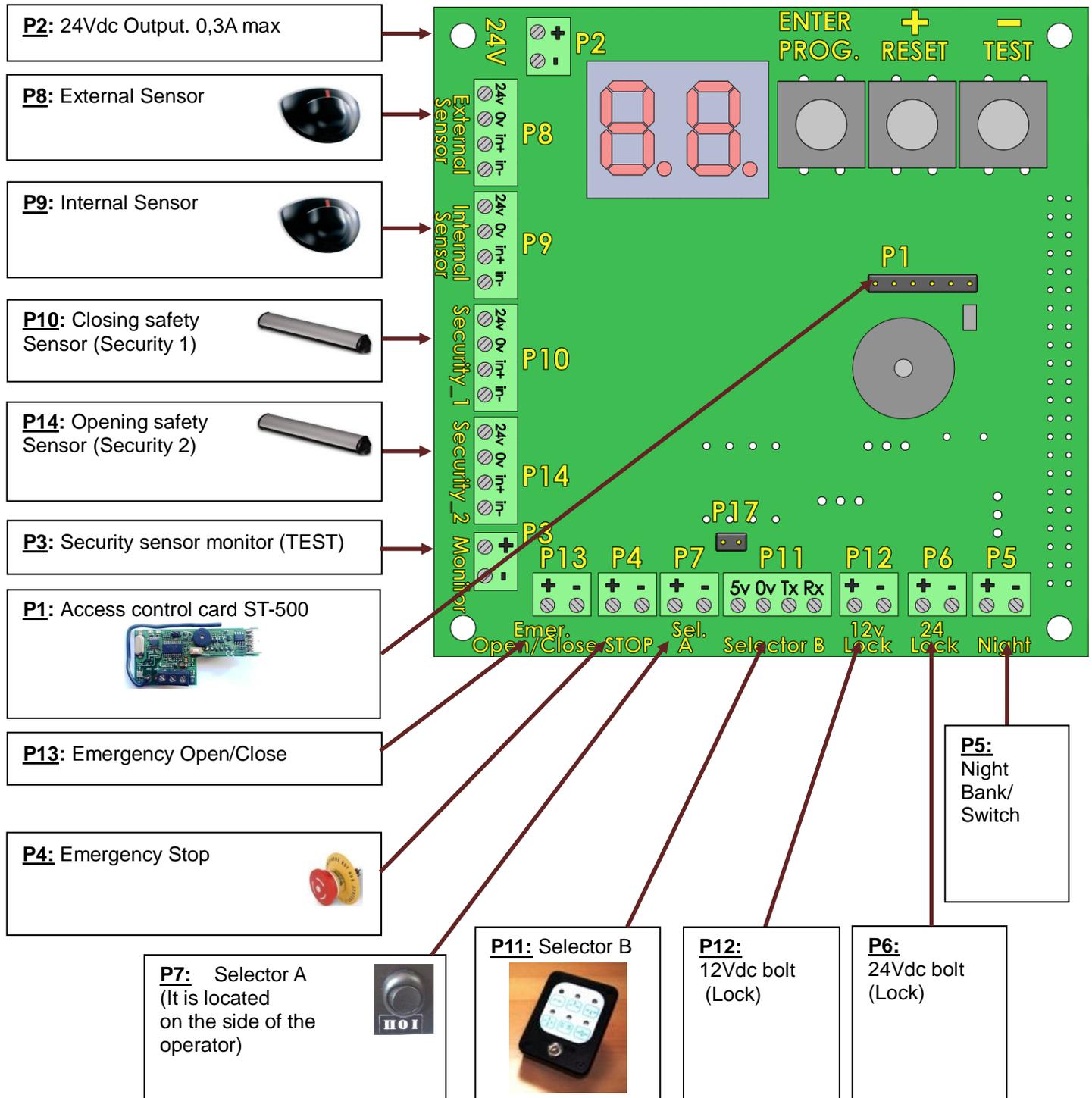
The connection from the motor is done with two cables: one of 2 wires (feed) and the other 4 wires (position coder). This connection is done in the factory and the technician should only have to do it in the event of a breakdown or when having to replace components (see the following figure for more details).



9. Connection of other Components

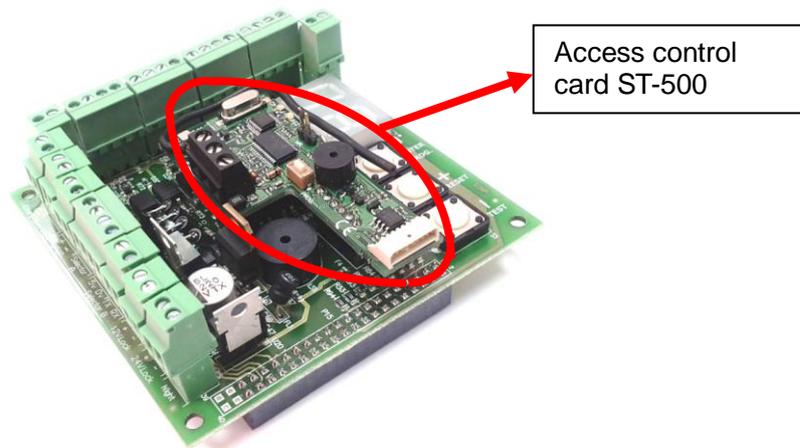
The EMICON card provides the function of inter-connecting the Control Unit to the various components: emergency battery, sensors, emergency button, control system, selectors, etc.

The following are the connections:



9.1 P1 Connector. Access control card ST-500 connection

The P1 connector links to the access control card, which allows control of the opening and closing of the door by means of remote controls, proximity key, tag, etc.



9.2 P2 Connector. 24V output

The P2 connector has a power supply output of 24V. This output can be used when additional components are required to be connected to the automatic door, e.g. access control systems via password, etc.

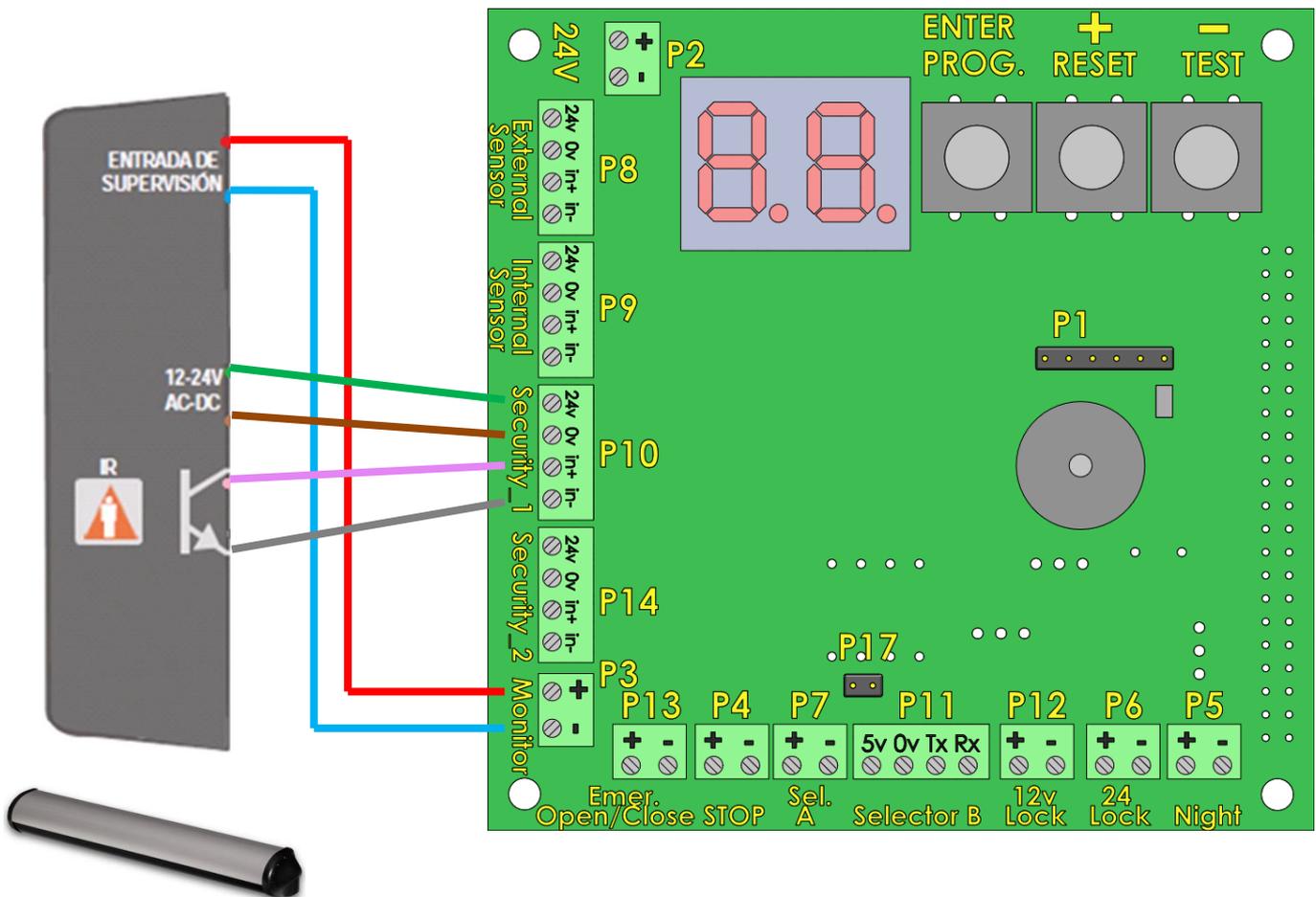
Consider the consumption required by the component being connected as the maximum current is 300mA.

9.3 P3 Connector. Monitoring output (Security Sensor Monitor)

The P3 connector is a communication output used by some presence detectors. It will check if the sensor is working correctly with this communication and therefore increasing the level of security for the automatic door (EN16005).

This connection takes place between the P3 connector and the sensor input, which is usually called "MONITORING", or supervision input".

The P3 connector output is 24V and its polarity must be taken into consideration as shown in the following image:



NOTE: The Control Unit does not have the Monitoring function activated when it leaves the factory.

In order to activate it, parameters 18, 19 or 35 need to be programmed - depending upon which sensor we want to Monitor in the Control Unit (see section "12.-PROGRAMMING OF THE CONTROL UNIT").

Parameter 18 activates the Monitoring of the sensors connected to P10 (Closing Safety), Parameter 19 P9 (internal sensor).

Parameter 35 activates the Monitoring of the sensors connected to P14 (Opening Safety).

P3 is connection of the Monitoring signal of multiple sensors. i.e : safety when closing, movement or safety when opening.

9.4 P4 Connector. Emergency Stop

The P4 connector is an input used for connection to the emergency stop device. This input is programmed when leaving the factory to work with Normally Open contacts (NO), but can be programmed to work with Normally Closed contacts (NC), (please see section "13 - PROGRAMMING PARAMETRES" - Parameter N°22").

When this input is activated the door will immediately stop.



9.5 P13 Connector. Emergency Open/Close

This input is connected mainly to the fire alarm and anti-panic systems and its function is to Open or Close the door in any situation, except when the function selector is in the position of CLOSED or MANUAL.

This input is programmed at the factory so that it works with Normally Open (NO) contacts. The door can open but it can be programmed to function with Normally Closed (NC) contacts, or for the door to close (see section "13.-PROGRAMMING PARAMETRES" - Parameter N°32").

9.6 P5 Connector. Night Bank / Switch

Its function is to Open the door in whatever situation, including a power cut (battery optional).

In the event of a fault in the general electricity supply, this signal can open the door by making use of an emergency battery (this battery is optional and is not included in the operator).

This input has priority over the function selector.

This input only works with Normally Open (NO) contacts.

9.7. P6 Connector. E-Lock or Automatic Bolt (Lock) 24Vdc

The P6 connector is a 24Vdc output.

NOTICE! Never go over the maximum consumption. If so the control unit will be damaged. The maximum consumption is 7W (300mA).

Automatic alternating current bolts are not allowed; their use provokes severe damage to the control unit. Only automatic bolts that work with direct current can be connected. Special attention should be paid to the voltage value; in the event of placing an automatic bolt that is different from 24V, the control unit will be damaged.

This input has 5 working modes:

Value 0 = No Lock Fitted (recommended when using Push&Go)

Value 1 = Automatic Bolt unlocked with 12/24Vdc; and locked with 0V. *

Value 2 = Automatic Bolt unlocked with 0V; and locked with 12/24Vdc. *

Value 3 = Automatic Bolt unlocked with 12/24Vdc; and locked with 0V. **

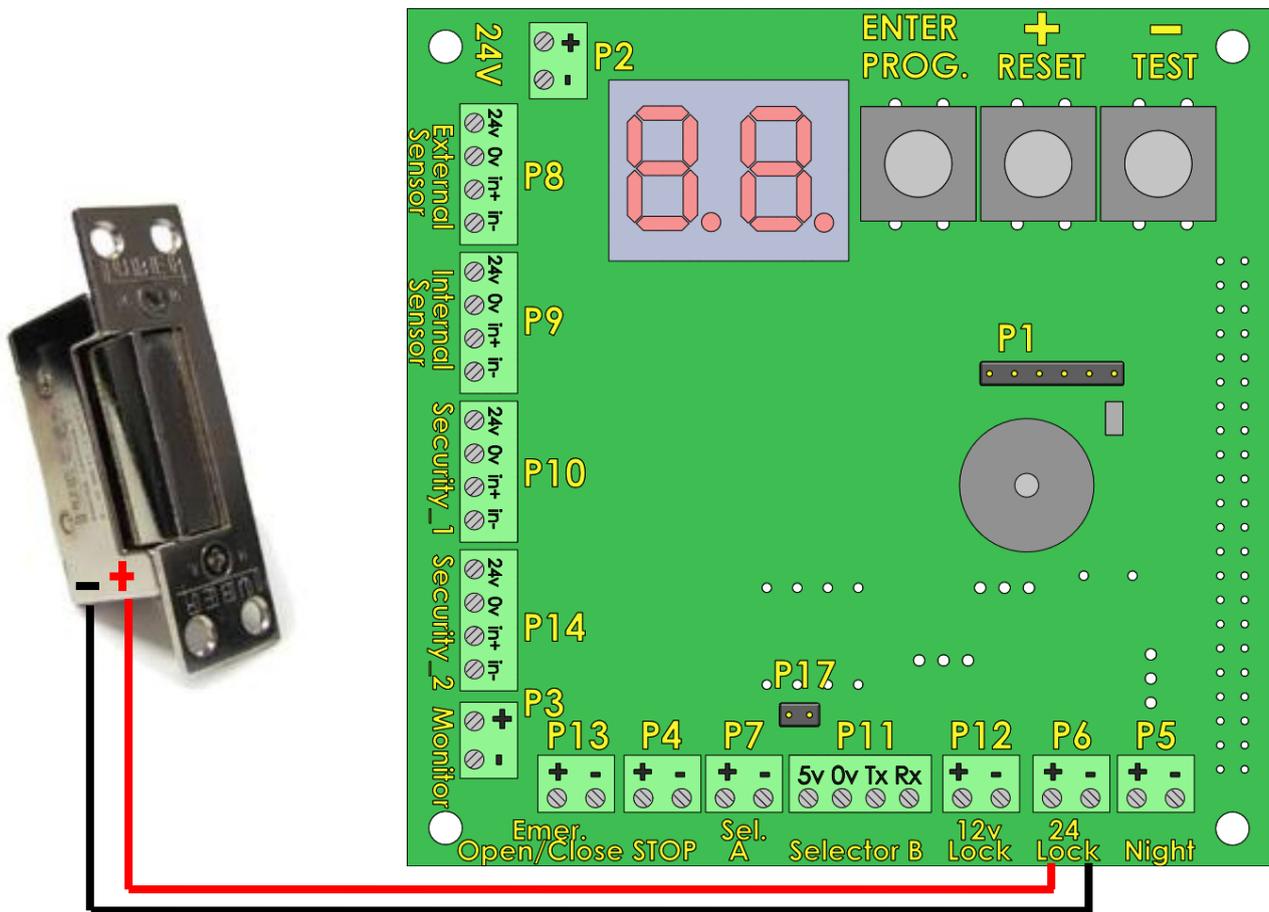
Value 4 = Automatic Bolt unlocked with 0V; and locked with 12/24Vdc. **

* It unlocks just prior to the door opening and during the first 0°~20°of opening.

** It unlocks just prior to the door opening and during the entire process of opening/closing.

These functions are programmable in the Unit Control (see section "13.-PROGRAMMING PARAMETRES" - Parameter N°15).

In the event that the E-lock used should have **polarity**, the connection has to be carried out as follows:



Note: If the E-Lock product has no polarity, then connections are free

9.8 P12 Connector. Supply for E-Lock or automatic bolt 12Vdc (Lock)

The P12 connector has the same qualities as the P6. The only difference is that the P12 connector works with 12Vdc voltage and therefore the automatic bolts connected in the P12 must be 12V DC.

Note: Special attention must be given to the working voltage value; in the event of placing an automatic bolt that is different from 12 V, the control unit will be damaged.

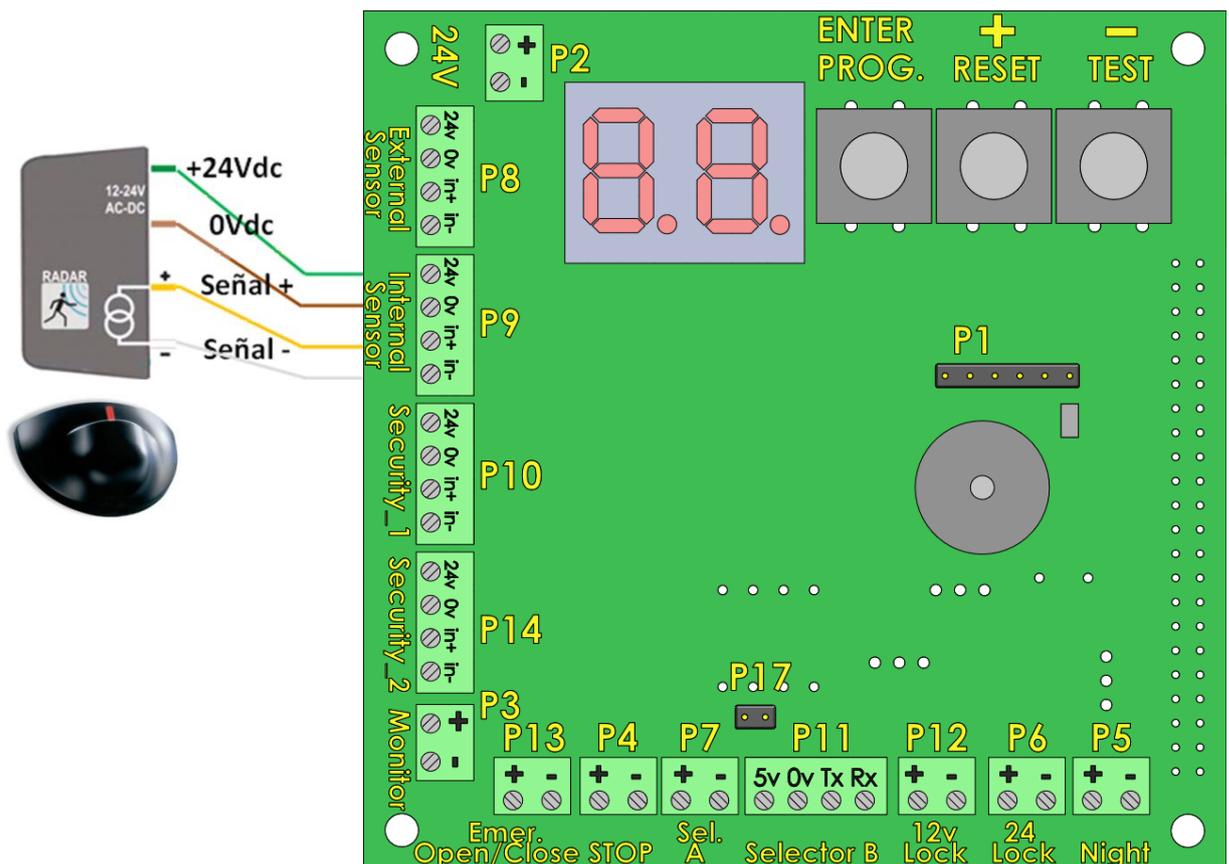
9.9 P9 Connector. Internal movement sensor (Internal Sensor)

The P9 connector is used to connect a motion sensor.

The connector consists of 4 poles:

- Two poles are used to supply the sensor. The output is 24V DC.
- The other two poles are the input of the sensor signal, which can be: free of voltage (relay output, no polarity) or by transistor (with polarity).

The signal input is programmed at the factory to act as a Normally Open contact. It can also be configured as Normally Closed contact (see section "13.-PROGRAMMING PARAMETRES" - Parameter N°19).



9.10 P8 Connector. External movement sensor (External Sensor)

The P8 connector is used to connect a movement sensor.

The connector consists of 4 poles:

- Two poles are used to supply the sensor. The output is 24V DC.
- The other two poles are the input of the sensor signal, which can be: free of voltage (relay output, no polarity) or transistor (with polarity).

The input signal is programmed from the factory to act as a Normally Open contact, although it can be configured as a Normally Closed contact as well (see section "13.-PROGRAMMING PARAMETRES" - Parameter N°20").

Its connection is identical to that of the P9 connector, except that it can be carried out in the P8 connector.

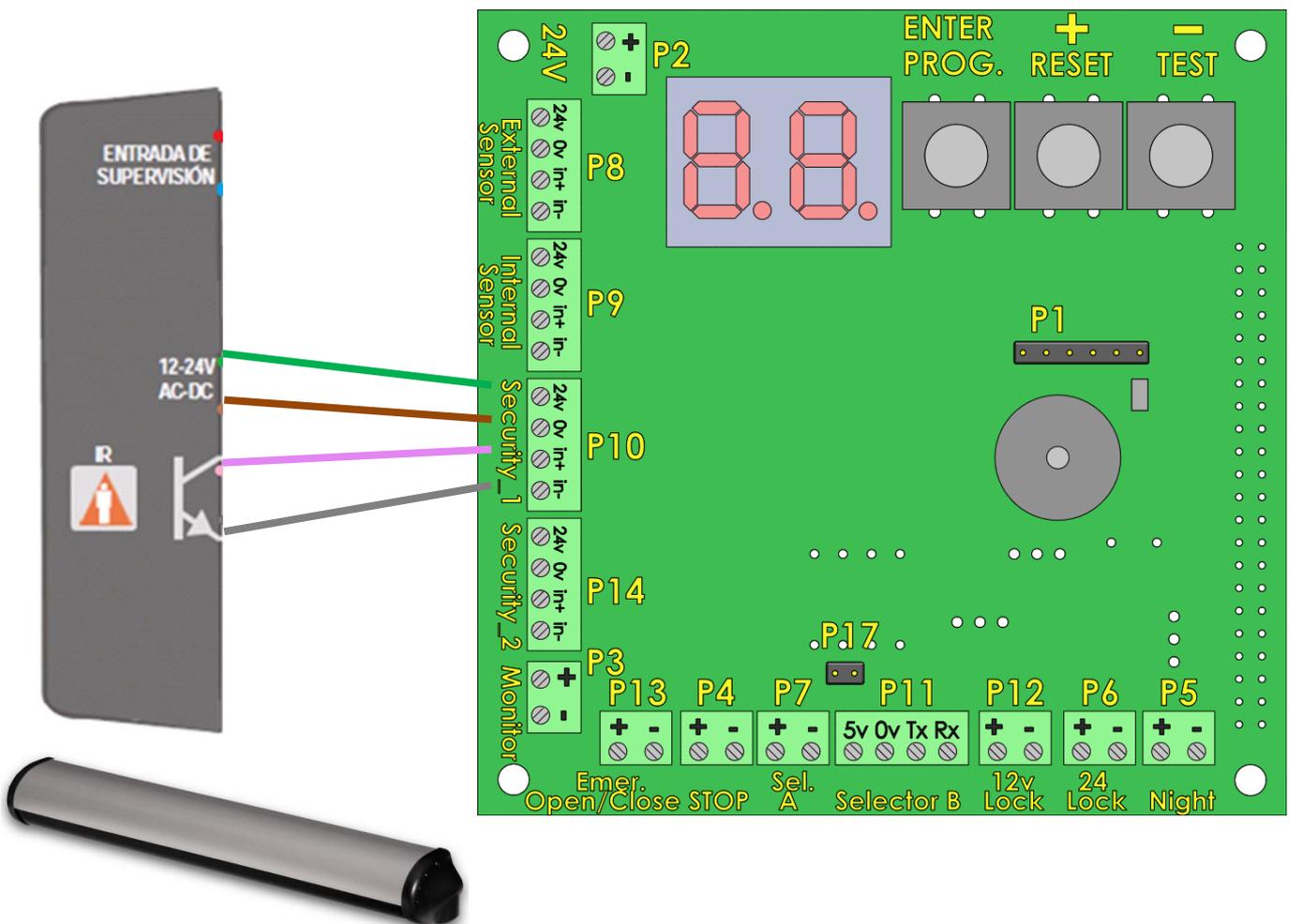
9.11 P10 Connector: Closing Safety Sensor 1 (Security 1)

The P10 connector is used to connect the security sensor (or presence sensor) which protects from possible obstruction in the door closing movement.

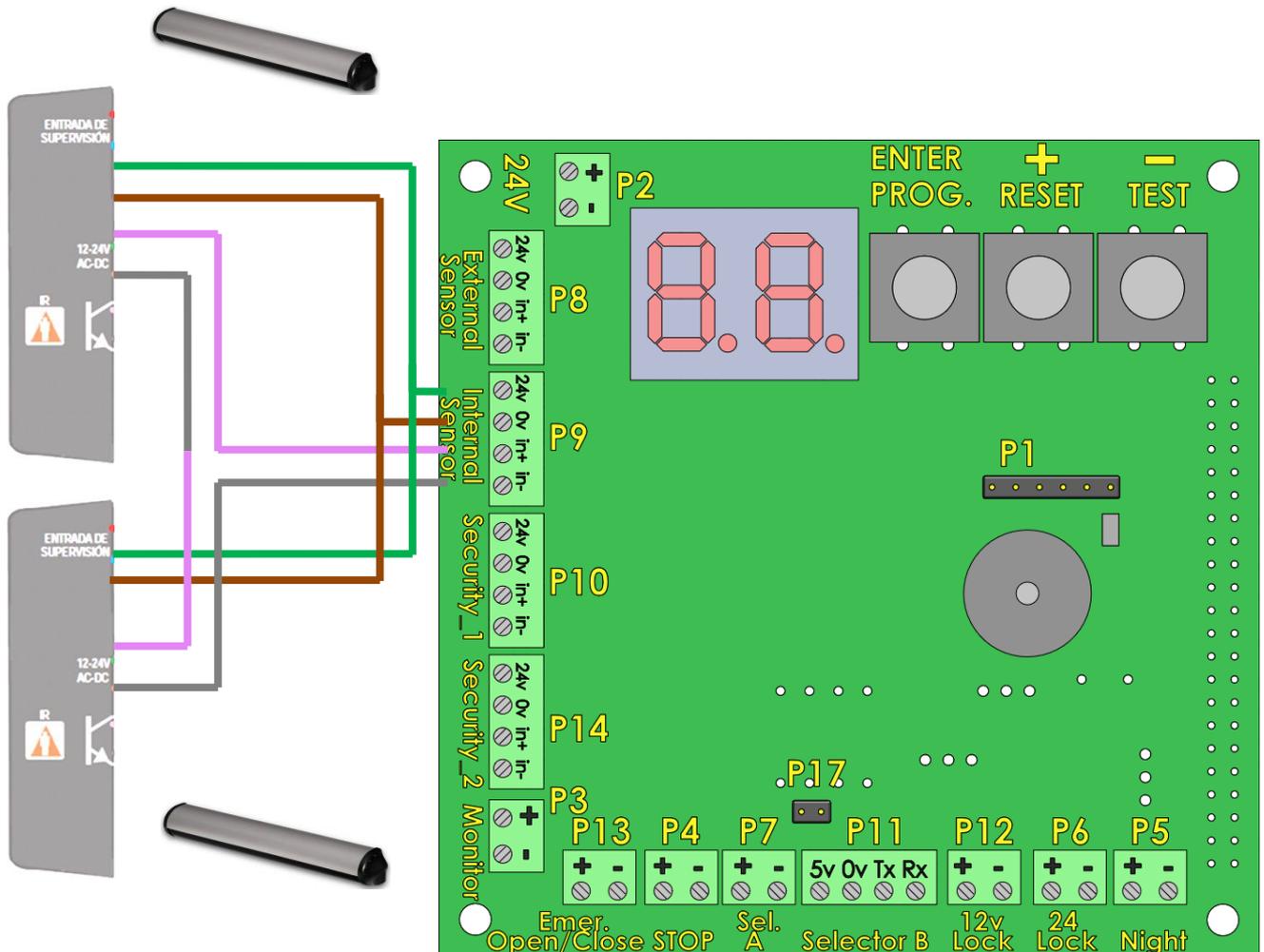
The connector consists of 4 poles:

- Two poles are used to supply the sensor. The output is 24V DC.
- The other two poles are the input to the sensor signal, which can be: free from voltage (relay output, no polarity) or by transistor (with polarity).

The signal input comes programmed from the factory to act as a Normally Closed contact, although it can be configured as a Normally Open contact as well (see section "13.-PROGRAMMING PARAMETRES" - Parameter N°21").



In the event of needing more than one security sensor with NC (Normally Closed) contacts there needs to be a connection in series with the signal sensors, just as can be seen in the following figure:



9.12 P14 Connector: Opening Safety Sensor 2 (Security 2)

The P14 connector is used to connect the security sensor. This sensor protects from possible collisions of door opening movement.

The connector consists of 4 poles:

- Two poles are used to feed the sensor. The output feed is 24V DC.
- The other two poles are the input of the sensor signal, which can be: free of voltage (relay output, no polarity) or transistor (with polarity).

The signal input comes programmed from the factory to act as Normally Open contact, although it can be configured as a Normally Closed contact as well (see section "5.3.-PROGRAMMING PARAMETRES" - Parameter N°33").

Its connection is identical to that of the P10 connector except that it is carried out in the P14 connector.

9.13 P7 Connector: Selector A (Switch in three positions)

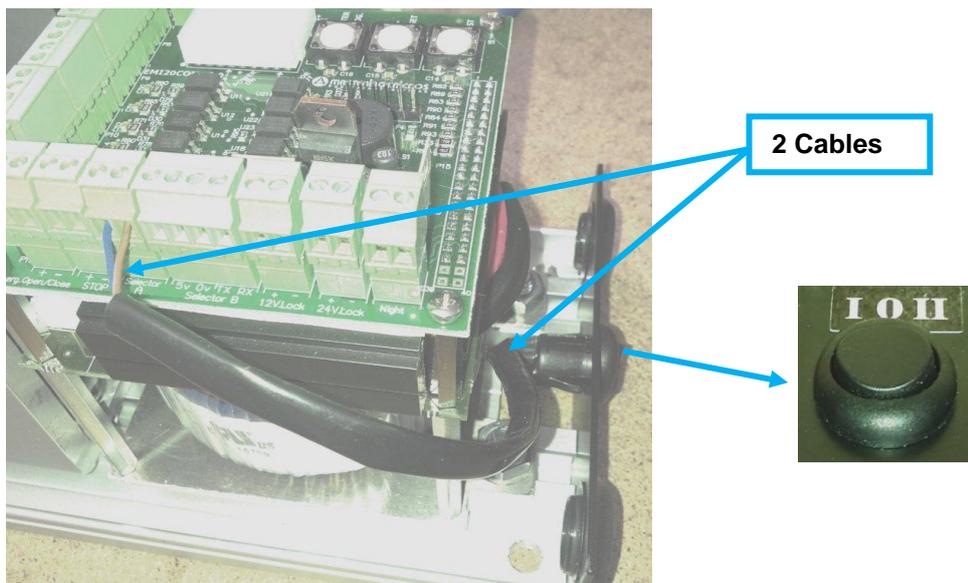
The P7 connector connects the selector on the side of the operator.

This selector has three positions, which are:

- I - HOLD OPEN - This mode allows the door to stay open.
- 0 - MANUAL – The door will only open or close manually.
- II - AUTOMATIC - This mode allows entering and exiting automatically.

The connection is carried out by a two-wire cable without polarity.

This connection is carried out in the factory and is very simple to replace if needed.



Note: If Selector B (Digital) is connected the action of this selector will be cancelled. Selector B will have priority over Selector A.

9.14 P11 connector: Selector B (Digital)

The P11 connector connects a Digital Selector. In order to change the function mode of the automatic door and keep it in its memory.

The connection is by a 4- wire cable. Please be careful in the connection because these cable have polarity.

Note: Bridge P7 of the control unit must be connected (it already comes connected from the factory).



Digital Selector B

The voltage used is 5V.

Multiple selectors B (Digital) can be connected to the same Control Unit.

When this selector is connected to the Control Unit, Selector A (three position selector) becomes deactivated and stops working.

If multiple Selector B (Digital) are required, the following configuration of Selector B is necessary:

- 1.- Open the cover to access to the electronic board. For this you will have to remove 4 internal screws.
- 2.- Once the screws have been removed, remove a "Bridge" called P5.
- 3.- This procedure should be carried out on all the selectors connected to the operator EXCEPT in one of them. This should be the one furthest away from the operator. If, for example, we have an operator with three connected selectors, we should remove the "bridge" to the two selectors nearest to the operator; the selector which is the furthest away, will not be modified.

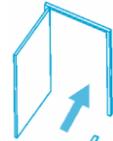
NOTICE! Selector B (Digital) must be connected to the correct Connector. If connected to wrong connector (for example, sensor or security sensor), it will be irreversibly damaged and could also damage the Control Unit.

Operating Modes

The Selector B (Digital) has 6 buttons, giving various working modes. It also has 6 LED indicators that show the current working mode. All of the working modes available are as follows:



“Close” mode. This mode allows us to close the door (locked if it has an electro-magnetic lock). In this mode the emergency opening system (battery) will remain disconnected.



“Exit only” mode. This mode only allows to exit.



“Entre only” mode. This mode only allows Entry only.



“Automatic” mode. This mode allows to enter and exit.



“Permanently open” mode.



“Manual” mode. In this mode, the operator does not act on the door and allows it to open or close manually.

Memory Retension

Another function that Selector B (Digital) offers is to save the setting in the memory even after a power cut. There are 2 possible working modes.

“NO MEMORY” mode. In this programming mode the state of the selector is NOT saved in the memory in the event of a power cut. When the power resumes the automatic door will always be re-established in the “close” working mode.

In order to activate the NO MEMORY mode, keep the ‘close’ button pressed down for 5 seconds.

“WITH MEMORY” mode. In this programming mode, the state of the selector is saved in the memory when there is a power cut and therefore when the electric supply returns, the operator will

resume the same state as to prior to the power cut.

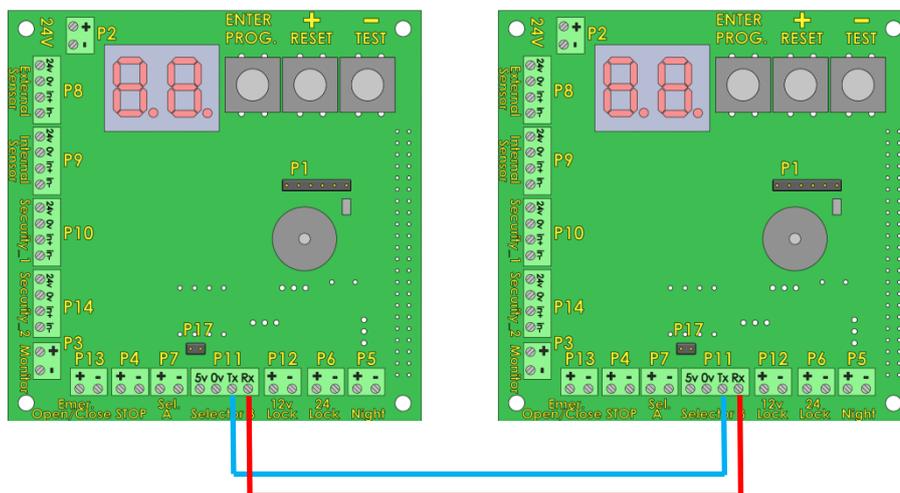
In order to activate the WITH MEMORY mode, the 'Automatic' button must be pressed down for 5 seconds.

Note: This programming mode has been implemented by the factory.

10. DOULE DOOR OPERATION (DUAL)

Installation of Double Swing operation:

- Two operators are used in double doors - one for each door. Install both operators (for more information see section 5.-OPERATOR INSTALLATION).
- Place a bridge P17 in each of the control units (this comes installed from the factory).
- Connect the TX signal from the P11 connector from operator 1 with the TX signal connector P11 of operator 2. Connect the RX signal of the P11 connector of operator 1 with the RX signal of the P11 connector of operator 2.



- Check the resistance value with a polimetre (Ω) between TX and RX. If everything is correct, you should obtain a value between 55 and 65 Ω . If this is not the case, check that a bridge has been done on P17. If you continue to receive an incorrect value, remove the bridge situated in the B selectors (digital).
- Go into programming and assign the following values to the Master door:
 - Parameter 37 = 1
- Go into programming and assign the following values to the Slave door:
 - Parameter 37 = 2
- It may be required to alter the following parameters relating to the double doors:
 - Parameter 38, Parameter 41, Parameter 42.

11. PROBLEMS

11.1 Interference

NOTICE: In certain automatic doors installations it could require to wire cables together. This should never be done. It is important to keep sensor and function selector cables apart from mains power cables. If wired together, it could make the microprocessor function incorrectly in either the long term or short term, resulting in irreversible damage and break down.

If it is necessary to pass all cables through the same pipe, the cables belonging to the automatic door must be shielded and earthed at both ends. Always try to keep the power cables (230V or 110V) away from the signal cables (photocell, selector, radar, motor, etc.).

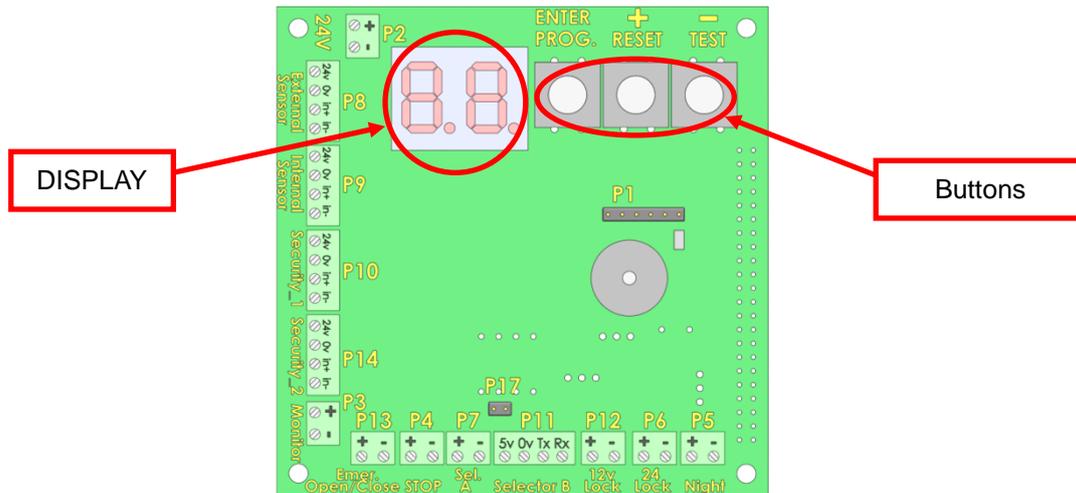
The function selector cable and the power supply cables (230V or 110V) should never be bound together and must always where ever possible be separated.

12. PROGRAMMING THE CONTROL UNIT

12.1 Introduction

The Control Unit has an area dedicated to programming of distinctive parameters of the automatic door, such as: speed, opening time, brake power, etc.

The programming is carried out via a LED display and 3 buttons, as shown in the following image.



12.2 Programming Menu

12.2.1 Enter into the programming menu

To get into the programming menu press the “ENTER PROG.” for approximately 5 seconds.

While pressing “ENTER PROG.”, the Control Unit will make a sound and the display screen will show the letter “P”, once every second.

Once 5 seconds have passed, a “00” message will show on the screen and this will indicate that the programming menu is now active. Stop pressing “ENTER PROG.”.

This operation should only be carried out after the automatic door has stopped.

12.2.2 Modify the programming parameter

When in the programming menu, modify the programming parameters as follows:

- Initially the display will show two digits that go from “00” to “50”, this represents the parameter we wish to modify (see section “5.3.-Programming parameters”). Pressing “ENTER”, it will show the value of the parameter which is represented by “=”, followed by the number representing this value, e.g. “=0”. Every time press “ENTER” it will go between the change parameter mode and change parameter value mode.
- When the buttons “+” and “-” are in the change parameter mode, select the parameter required. When in the change of parameter value mode, these buttons will increase or decrease this particular value.

12.2.3 Exit Programming Menu & Saving Modifications

In order to exit the programming menu and save all the changes carried out, you must do the following:

- Go into the "00"parametre
- Press "ENTER"
- Press "+"

12.2.4 Programming Example

We wish to change the option how the emergency stop works and we want this function to act as normally closed contact. In order to do this we need to follow the following steps:

- If the door is working, we have to wait until it finishes opening or closing. In order to avoid possible accidents while we reprogrammed, we recommend putting the function selector at "door closed" or "door open".
- Hold the "ENTER" button for 5 seconds until the display screen shows the "00" message.
- Now press 22 times on the "+", that is until the number 22 appears on the display (if we look at the table from section "5.3.- Programming parameters", we will see that 22 represents the emergency stop parameter).
- Press "ENTER". The display screen will show the "=0" value which indicates that the emergency stop is configured to work as a normally open contact.
- Press "+". The display screen will show the "=1" value which indicates that the emergency stop is configured to work as a normally closed contact.
- Press "ENTER". The display screen will show the value "22".
- At this moment, the emergency stop has been programmed as a normally closed contact. Now we are need to Exit the programming and save the data:
 - Press "-" 22 times, i.e. until the value of "00" appears on the display screen.
 - Press "ENTER".
 - Press "+".

12.2.5 RESET of the programming

The control unit retains programming parameters in its memory and also other important details such as door operation setting from the learning process as well as braking adjustments etc...

This data can be reset to factory default setting.

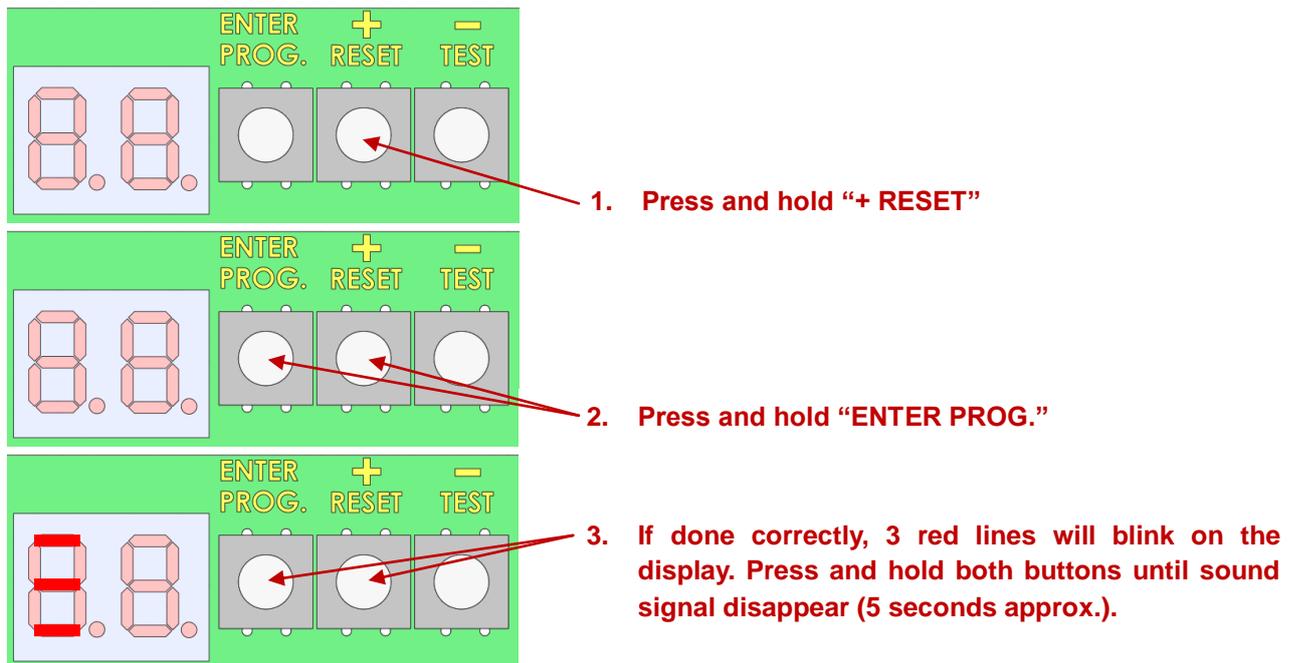
The RESET of the Control Unit can be done in two ways:

First (recommended)

- Remove the power supply from the Control Unit (if so, also the battery).
- Press the “RESET” button and keep it pressed, then re-insert the power supply to the Control Unit.
- Wait 5 seconds until the Control Unit stops beeping.
- Stop pressing the “RESET” button.

Second

- Press the “+ RESET” button and then “ENTER PROG.” and maintain them both pressed for 5 seconds.



13. PROGRAM PARAMETERS

<u>Parameter</u>	<u>Description</u>	<u>Adjust Value</u>	<u>Factory Setting</u>
00	Exit programming		
01	Display screen rotation	From 0 to 2	0
	Value 0 = Automatic Value 1 = Normal Value 2 = Reserve		
02	Automatic Closing Timer	From 1 to 9	2
	Value 1 = 1 second Value 2 = 2 seconds Value 3 = 3 seconds Value 4 = 4 seconds Value 5 = 5 seconds Value 6 = 10 seconds Value 7 = 20 seconds Value 8 = 30 seconds Value 9 = 60 seconds		
03	Opening Speed	From 0 to 9	6
	Value 1 = 15°/s Value 2 = 25°/s Value 3 = 35°/s Value 4 = 45°/s Value 5 = 50°/s Value 6 = 55°/s Value 7 = 60°/s Value 8 = 65°/s Value 9 = 75°/s		
04	Closing Speed	From 0 to 5	2
	Value 1 = 15°/s Value 2 = 25°/s Value 3 = 35°/s Value 4 = 45°/s Value 5 = 50°/s		
05	Dynamic Opening Force	From 1 to 9	9
	Value 1 = Even Minimum Strength Value 9 = Even Maximum Strength		
06	Dynamic Closing Force	From 1 to 9	9
	Value 1 = Even Minimum Strength Value 9 = Even Maximum Strength		

07	Opening Deceleration	From 0 to 9	5
	Value 0 = Gradual Deceleration Value 9 = Rapid Deceleration		
08	Closing Deceleration	From 0 to 9	0
	Value 0 = Gradual Deceleration Value 9 = Rapid Deceleration		

09	Static Opening Force	From 0 to 4	0
	Value 0 = 0 N Value 1 = 10 N Value 2 = 20 N Value 3 = 30 N (recommended in areas of high winds) Value 4 = 40 N ((recommended in areas of high winds)		
10	Static Closing Force	From 0 to 4	1
	Value 0 = 0 N (recommended when using the Push&Go) Value 1 = 10 N Value 2 = 20 N Value 3 = 30 N (recommended in areas of high winds) Value 4 = 40 N (recommended in areas of high winds)		
11	Push & Go	0 or 5	0
	Value 0 = Deactivated Value 1 = Activated in 2° Value 2 = Activated in 3° Value 3 = Activated in 5° Value 4 = Activated in 9° Value 5 = Activated in 15°		
12	Acoustic Warning	0 or 1	1
	Value 0 = Deactivated Value 1 = Activated		
13	Brake Point on Opening	From 0 to 6	2
	Value 0 = At 0° of the total opening Value 1 = At 5° of the total opening Value 2 = At 10° of the total opening Value 3 = At 15° of the total opening Value 4 = At 20° of the total opening Value 5 = At 25° of the total opening Value 6 = At 30° of the total opening		
14	Brake Point on Closing	From 0 to 6	2
	Value 0 = At 0° of closing (this value is only available if there is no automatic bolt) Value 1 = At 5° of closing (this value is only available if there is no automatic bolt)		

	<p>Value 2 = At 10° of closing Value 3 = At 15° of closing Value 4 = At 20° of closing Value 5 = At 25° of closing Value 6 = At 30° of closing</p>		
15	Electromagnetic Lock	From 0 to 4	1
	<p>Value 0 = No Lock Fitted (recommended when using Push&Go) Value 1 = Automatic Bolt unlocked with 12/24Vdc; and locked with 0V. *</p> <p>Value 2 = Automatic Bolt unlocked with 0V; and locked with 12/24Vdc. *</p> <p>Value 3 = Automatic Bolt unlocked with 12/24Vdc; and locked with 0V. **</p> <p>Value 4 = Automatic Bolt unlocked with 0V; and locked with 12/24Vdc. **</p> <p>* It unlocks just prior to the door opening and during the first 0°~20° of opening.</p> <p>** It unlocks just prior to the door opening and during the entire process of opening/closing.</p>		
16	Electromagnetic Lock Release Force	From 0 to 4	1
	<p>Value 0 = 10N Value 1 = 15N Value 2 = 20N Value 3 = 25N (recommended in areas of high winds) Value 4 = 30N (recommended in areas of high winds)</p>		
17	Acoustic Warning prior to Closing	0 or 1	0
	<p>Value 0 = Deactivated warning Value 1 = Activated warning</p>		
18	Safety Sensor in Monitoring Mode (Closing side)	0 or 1	0
	<p>Value 0 = Monitoring Mode deactivated Value 1 = Monitoring Mode activated</p>		
19	Internal Activation Sensor / Device Input	From 0 to 2	0
	<p>Value 0 = NO (Normally Open). Value 1 = NC (Normally Closed). Value 2 = Bi-stable.</p>		
20	External Activation Sensor / Device Input	0 or 1	0
	<p>Value 0 = NO (Normally Open). Value 1 = NC (Normally Closed).</p>		

21	Safety Sensor Input (Closing Side)	0 or 1	1
	Value 0 = NO (Normally Open) Value 1 = NC (Normally Closed)		
22	Emergency Stop Input	0 or 1	0
	Value 0 = NO (Normally Open) Value 1 = NC (Normally Closed)		
23	NIGHT BANK / Switch		0
	Value 0 = Emergency Opening Mode NO (Normally Open)		
24	Low Energy System (Low Kinetic Energy)	From 0 to 6	0
	Value 0 = System deactivated. Value 1 = Activated. Weight of the lower panel or equal to 50Kg. Value 2 = Activated. Weight of the lower panel or equal to 60Kg. Value 3 = Activated. Weight of the lower panel or equal to 70Kg. Value 4 = Activated. Weight of the lower panel or equal to 80Kg. Value 5 = Activated. Weight of the lower panel or equal to 90Kg. Value 6 = Activated. Weight of the lower panel or greater than 90Kg.		
25	Acoustic warning at the entrance	From 0 to 3	0
	Value 0 = Deactivated warning. Value 1 = Warning lasting 1 second. Value 2 = Warning lasting 2 seconds. Value 3 = Warning lasting 3 seconds.		
26	Battery Monitoring	From 0 to 2	0
	Value 0 = No Battery. Value 1 = Monitoring Activated Value 2 = Monitoring Deactivated		
27	Reserved		
	Not available		
28	Closing Force after Deceleration	From 0 to 5	1
	Value 0 = Low Value 1 = Medium-Low Value 2 = Medium Value 3 = Medium-High Value 4 = High (recommended in areas of high winds) Value 5 = Very High (recommended in areas of high winds)		
29	Opening Force after Deceleration (motor damping effect)	From 0 to 5	2
	Value 0 = Low (recommended when using Push&Go system) Value 1 = Medium-Low Value 2 = Medium Value 3 = Medium-High		

	Value 4 = High (recommended in areas with high winds) Value 5 = Very High (recommended in areas with high winds)		
30	Lock Delay	From 0 to 1	0
	Value 0 = 0,5 second Value 1 = 1 second Value 2 = 2 second Value 3 = 3 second Value 4 = 4 second		
31	Interlock Mode	From 0 to 1	0
	Value 0 = Deactivated Value 1 = Activated		
32	Emergency Open/Close Input	From 0 to 3	0
	Value 0 = Emergency Opening Mode NO Value 1 = Emergency Opening Mode. NC Value 2 = Emergency Closing Mode. NO Value 3 = Emergency Closing Mode. NC		
33	Safety Sensor Input (Opening Side)	From 0 to 1	0
	Value 0 = NO Door stops on detection Value 1 = NC Door stops on detection Value 2 = NO Door opens slowly on detection Value 3 = NC Door opens slowly on detection		
34	Open Limit Prior to Physical Stop	From 0 to 1	0
	Value 0 = Deactivated Value 1 = Activated		
35	Safety Sensor Monitoring Mode (Opening Side)	0 or 1	0
	Value 0 = Monitoring deactivated Value 1 = Monitoring activated		
36	Selector B (Digital) SLD-5 Monitoring Mode	0 or 1	0
	Value 0 = Monitoring deactivated Value 1 = Monitoring activated		

37	Double Door (Dual) Function	From 0 to 2	0
	Value 0 = Not defined (Single door) Value 1 = Master Value 2 = Slave		
38	Double Door Closing Sequence	From 0 to 2	0
	Value 0 = Both doors open at the same time. Value 1 = The master door opens first and closes after the slave door.		

	Value 2 = The master door will open before the slave door and they close at the same time		
39	Function of the Channel 2 receptor	From 0 to 2	0
	Value 0 =Close the door immediately Value 1 = Activates and deactivates the Push & Go (one beep confirms the activation; two beeps the deactivation) Value 2 = Activates and Deactivates the function of door opening		
40	Lock Out (Opening Against a Wall or Fixed Structure)	From 0 to 2	0
	Value 0 = No Wall or Fixed Structure Value 1 = Opening Safety sensor (safety 2) is deactivated last 10° of opening Value 2 = Opening Safety sensor (safety 2)is deactivated last 20° of opening		
41	Master & Slave Door Offset	From 0 to 4	0
	Value 0 = 5° Value 1 = 10° Value 2 = 15° Value 3 = 20° Value 4 = 25°		
42	Master & Slave Door Closing Offset	From 0 to 5	0
	Value 0 = No security distance Value 1 = 5° Value 2 = 10° Value3 = 20° Value 4 = 30° Value 5 = 40°		
43	Internet System (Optional)	From 0 to 2	0
44	Internet System (Optional)	From 0 to 9	0
45	Obstruction Sensitivity	From 0 to 4	0
	Value 0 = very low (it takes 4sec. to detect an obstruction) Value 1 = low (it takes 3sec. to detect an obstruction) Value 2 = medium (it takes 4sec. to detect an obstruction) Value 3 = high (it takes 1sec. to detect an obstruction) Value 4 = very high (it takes 0.5sec. to detect an obstruction)		
46	Automatic bolt unlocked on 'manual function mode'	From 0 to 1	0
	Value 0 = Deactivated Value 1 = Activated		
50	Technical Diagnostics	From 0 to 7	
	Value 1 = Number of cycles completed. Display will show the number of cycles via digits, scrolling from left hand digit.		

	<p>For example, to show the number 2500, it will appear as follows:</p> <ul style="list-style-type: none"> • "2" • • "5" • • "0" • • "0" • 						
	<p>Value 2 = Shows the charge level of the battery.</p> <table border="1" data-bbox="338 1043 1128 1290"> <tr> <td data-bbox="338 1043 732 1167"> = Level Maximum </td> <td data-bbox="732 1043 1128 1167"> = Level High </td> </tr> <tr> <td data-bbox="338 1167 732 1290"> = Level Medium </td> <td data-bbox="732 1167 1128 1290"> = Level Low </td> </tr> </table>	= Level Maximum 	= Level High 	= Level Medium 	= Level Low 		
= Level Maximum 	= Level High 						
= Level Medium 	= Level Low 						
	<p>Value 3= Number of days functioning.</p> <p>To show the number of days working on the display the numeral digits will appear, one after the other, starting with the digit situated to the left.</p> <p>For example, to show the number of 2500, the following will appear:</p> <ul style="list-style-type: none"> • "2" • • "5" • • "0" • 						

	<ul style="list-style-type: none"> • "0" • 		
	Value 4= Software Version.		
	Value 5= Test Monitoring Output (activates for 4 seconds).		
	Value 6= Indicates the strength charged on the spring.		
	Value 7= Indicates, approximately, the weight of the door panels.		
	Value 8= Indicates the type of operator installed: 1=SW; 2=SWSP		
	Value 9= Indicates the value of the motor.		
	Value 10=Shows error counter 0		
	Value 11= Shows error counter 1		
	Value 12= Shows error counter 2		
	Value 13= Shows error counter 3		
	Value 14= Shows error counter 4		
	Value 15= Shows error counter 5		
	Value 16= Shows error counter 6		
	Value 17= Shows error counter 7		
	Value 18= Shows error counter 8		
	Value 19= Shows error counter 9		
	Value 20= Shows error counter 10		
	Value 21=Shows error counter 11		
	Value 22= Shows error counter 12		

14. TROUBLE SHOOTING – ERROR TABLE

When the automatic door finds itself in a state of error, a message will appear on the Control Unit display screen which indicates the type of error that has occurred. An acoustic signal will be heard. In order to recognize the type of error that has occurred from the signal as long and short sounds are employed:

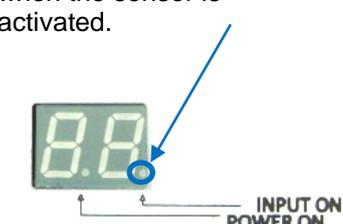
- Long sound
- Short sound

Error	Acoustic Sound	Description	Solution
E0	— — —	Error in calculation of the door run.	<ul style="list-style-type: none"> - The door movement should be no less than 20°. - Remove any obstacle that stops the door panels from carrying out its movement. - If the weight of the door goes over the maximum allowed, the load must be lightened. - The mechanical components in the door are not functioning correctly, whether because of abnormal rubbing, imbalance or breakage. - The motor connector is in bad condition or disconnected.
E1	— — — — —	Knocks when opening	<ul style="list-style-type: none"> - The door has been knocked during the opening movement. Remove any obstacle that could obstruct its movement. - If the problem persists, remove the supply and check that the door panels are working correctly throughout their run. When the door receives its supply again, the error should disappear. - If the problem occurs now and again without there having been an obstacle or impediment, carry out a RESET or reduce the even opening motor. - Decrease the impact sensitivity value (parameter 45)
E2	— — — — — —	Knocks when closing	<ul style="list-style-type: none"> -- The door has been knocked during the closing movement. Remove any obstacle that could obstruct its movement. - If the problem persists, remove the supply and check that the door panels are working correctly throughout their run. When the door receives its power supply again, the error should disappear. - If the problem occurs now and again without there having been an obstacle or blockage, carry out a RESET or reduce the even closing motor. - Decrease the impact sensitivity value (parameter 45)
E4	— — — — —	Error in the supervision of the opening security	<ul style="list-style-type: none"> - Check that the opening security sensor connected has the supervision is activated. (Monitoring). - Check that the security sensor is correctly connected.

		sensor (monitoring the opening)	- If the problem persists, replace the security sensor with a new one.
E5	-----	Broken belt or reducer of the broken motor	- Check the good working state of the motor belts. If the belt is damaged, replace it with a new one. - Test the motor to turn manually. In the event that it does not turn easily (a small force applied to the end of the arm should make it turn), replace the motor with a new one of identical characteristics.
E6	-----	Error in the supervision of the closing security sensor (monitoring)	- Check that the security sensor connected has the supervision option activated (Monitoring). - Check that the security sensor is correctly connected. - If the problem persists, replace the security sensor with a new one.
E7	----- —	Emergency open in the case of an electrical fault	- If there has been an electrical fault, then it is normal that this error appears. - If there has been no electrical fault, check that the supply connection on the Control Unit has a voltage of between 100V and 230V AC. - If the problem persists, change the Control Unit with a new one.
E8	----- —	Error in the automatic bolt	- The automatic door is closed and will not open. Check that the automatic lock is connected and is working correctly. - Check that the automatic lock parameter has been programmed correctly (see section "5.3.-PROGRAMMING PARAMETRES" parameters nº15). - Lightly lubricate the movement zone of the lock (Caution: the electrical area should not be lubricated). - If the problem persists replace the electrical lock with a new one. - Decrease the impact sensitivity value (parameter 45)
E9	A short sound every 30 seconds	Battery in poor condition	- Check the battery is connected to the unit control. - If the problem persists the battery is discharged and should be left to charge for at least 15 minutes. For this it will only be necessary to plug the Control Unit into the electricity supply. - If the problem persists then replace the battery by a new one.
E10	----- -----	Error in the motor	- The motor is in bad condition or the operator is too inclined or uneven.
E11	----- -----	Erroneous position	- Check that the cabling of the motor coder is correctly connected and in good condition along the length of its run. - Check that the arm of the mechanism is correctly fixed and

			doesn't have any space.
E12	----- -----	Error in the supervision of the internal sensor movement (internal sensor)	<ul style="list-style-type: none"> - Check that the internal movement sensor connected has the supervision option activated (Monitoring). - Check that the movement sensor is correctly connected. -If the problem persists, replace the movement sensor with a new one.

14.1 Trouble Shooting

Problem		Solution	
	<p>The POWER symbol on the LED display does not light up.</p> 		<ul style="list-style-type: none"> - There is a fault in the supply or the Control Unit to the electricity supply (110-230Vac). - Turn off the Control Unit. After some seconds have gone past, connect the Control Unit up again. - If the problem persists, replace the Control Unit by a new one.
	<p>The INPUT ON signal does not light up on the display when the sensor is activated.</p> 		<ul style="list-style-type: none"> - Check that the function selector is correctly connected and is working correctly. - Check that the function selector is not in the position of "Door closed" or "Manual Door". - Check that the sensors are correctly connected. It could be that one of the components connected to the control unit is creating a short circuit due to a bad connection. Check the 24Vdc in connector P2. - If the problem persists, replace the Control Unit by a new one.
	<p>The door doesn't close or open completely and there are some centimeters required to complete the operation.</p>		<ul style="list-style-type: none"> - Check that there is no friction in the movement. - Check that the arm is working correctly to the end. - If the problem persists, increase the even closing and opening motor after the brake (Parameter 28 and 29) until the problem is resolved. -If the problem persists, adjust parameters 13 and 14.

	<p>The door doesn't open and always remains closed</p>	<p>- Check that the opening security sensor is not activated or defective.</p> <p>-Check that the function selector is not on "close" or "manual" mode.</p> <p>- If the function selector has a lock and key, place the key on the ON position.</p> <p>- If the problem persists, disconnect the function selector and check with a Vdc voltage meter that the P7 connector has a voltage of 5V (for more information consult sector 4.2.).</p> <ul style="list-style-type: none"> ● If the voltage is "0V", it is possible that the Control Unit could be broken and we therefore recommend you to disconnect and then re-connect again. ● If the voltage is "5V", replace the function selector with a new one.
	<p>The door doesn't close.</p>	<p>- Check that the closing security sensor is not activated or is defective.</p>
	<p>The B Selector (Digital) is not working correctly</p>	<p>- Check that the connections have been done correctly (for more information consult section 4.3.14.-).</p> <p>- Check that between the TX and RX Control Unit terminals there is a resistance value of 60 ohms (measure this with a digital multcentre). If the resistance value shows 1200 ohms or higher, then more bridges than necessary have been removed. If the resistance value in 30 ohms or less, then more than one selector has been connected and not enough bridges have been removed (for more information consult section "4.3.14.- P11 Connector: Selector B (Digital)").</p>
	<p>The door takes a while to react upon opening</p>	<p>If parameter 15 is different from 0, then the control unit will wait 0,5 seconds prior to commence opening in order for the automatic bolt not to get stuck. If the door doesn't have an automatic bolt, then change the parameter value 15 to 0.</p>
	<p>The mechanism starts to brake too soon</p>	<p>If more than 10 complete opening cycles have not taken place, this is normal. One has to wait for at least 15 opening/closing cycles have taken place.</p> <p>If the problem is not resolved, carry out a RESET.</p> <p>If the problem is not resolved, increase the value in parameters: 7, 8, 13, and 14.</p>

	If considerable force is required to push the door when the Push&Go option is in use	Assign value 0 to the following parameters: 10, 15, 29 Assign value 1 to parameter 11
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15. MAINTENANCE

The automatic doors require servicing and maintenance. It is essential to be aware of the importance in carrying out maintenance in order to enjoy a secure and trustworthy product.

The adjustments and service will ensure a safe and correct function of the automatic doors.

Regular inspections should be carried out as indicated under the national regulations and the times deemed necessary. It is especially important when dealing with approved fire doors or doors operating as emergency opening doors.

In the event that there are no specific scheduled inspection regulations, we recommend these are carried out maximum every 6 months.

For the correct function of the automatic door, we recommend replacement of the parts that have a limited life span. In the following table we indicate the parts which have to be periodically checked.

Part	Reference
MICOM-SWING-SP SPRING	2002273
25mm BELT for MICOM SWING-SW	2002271
15mm BELT for MICOM SWING-SW	2002272