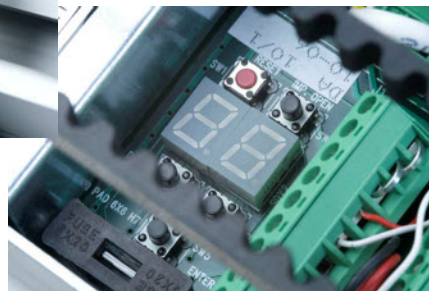


TECHNICAL INSTALLATION MANUAL

AUTOMATION FOR SLIDING DOORS

SPEED



WARNING!! Before installing, thoroughly read this manual that is an integral part of the pack

Our products if installed by qualified personnel capable to evaluate risks, comply with norms UNI EN 12453, EN 12445



The CE mark conforms to European directive EEC 89/336 + 92/31 + 93/68 D.L. 04/12/1992 N. 476.

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GENERAL PROSPECTUS

The sliding door automations allow a fluid and silent movement. The doors will arrest to the slightest obstacle and in the event of a power outage the door could be manual released.

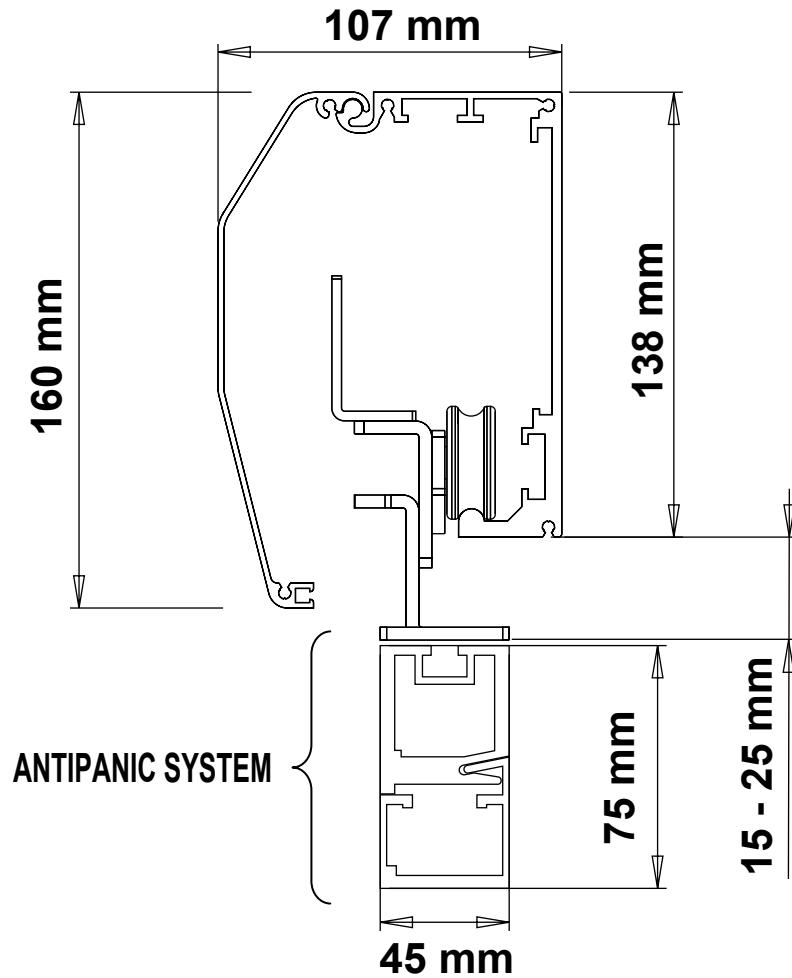
AUTOMATION PROSPECTUS

- Stamped and anodized aluminum structure
- Quick access to the equipment
- Belt drive with automatic tensioning system.
- Galvanized steel trolleys with horizontal automatic adjustment, vertical manual adjustment and nylon wheels (lubrications not required)
- Control panel supply: 24 Vac 6 A with microprocessor
- Digital programming of operating parameters with permanent memory
- Motor speed control with PWM signal.
- Optical encoder input with wiring test
- Maneuvers and alarms will be indicate in a 7 segments display and by acoustic warning signals
- Operations counter and maintenance warning
- Emergency Automatic opening with backup battery (optional).
- Control with digital selector(optional)

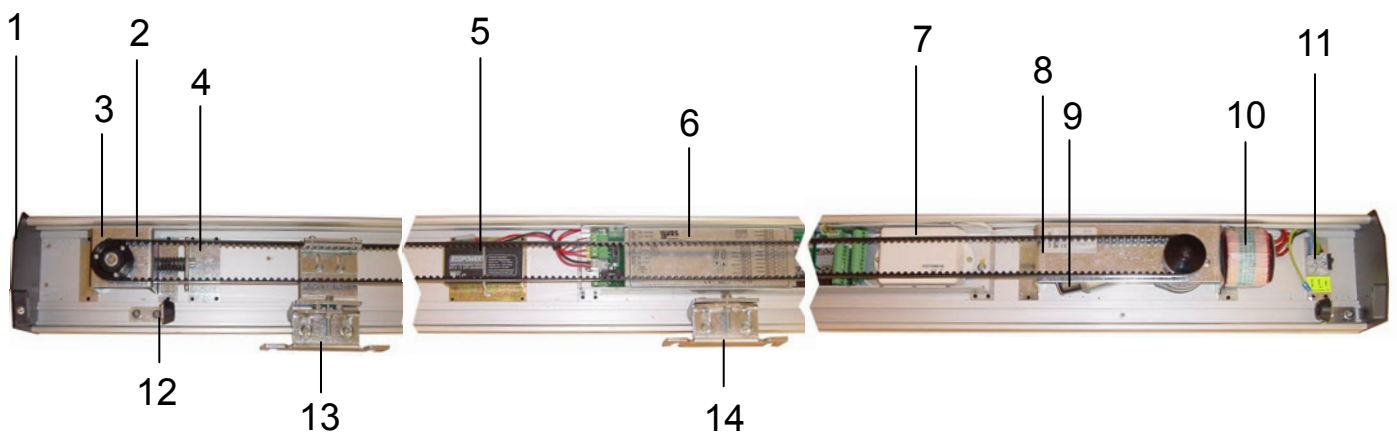
TECHNICAL DATA

Power supply	230Vac	Max weight 2 leaves	80+80 Kg
Rated frequency	50Hz	Protection rating	IP44
Nominal power	50W	Weight	4Kg/mt
Protection fuse	2A	Backup battery (optional)	12V 1.2 Ah
External accessories power supply	24Vdc	Noise level	<30dB
Max weight single leaf:	120 Kg	Working temperature	- 20\+55°C

DIMENSIONS



COMPONENTS HOUSING



- | | |
|--------------------------------------|---------------------------------|
| 1. Side caps | 8. Motor support with pinion |
| 2. Support driven pulley | 9. Motor optical encoder |
| 3. Electric lock with manual release | 10. Transformer |
| 4. Belt Tensioner | 11. Input Power supply terminal |
| 5. Back-up battery | 12. Mechanical limit switch |
| 6. Control unit | 13. Pulling cart |
| 7. Photocells amplifier | 14. Free cart |

CONSIDERATIONS FOR INSTALLATION

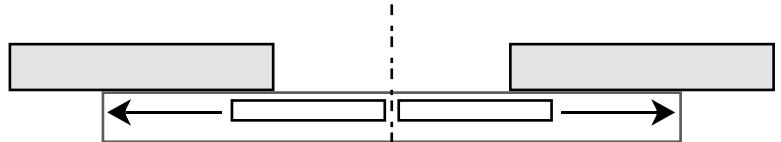
- The installation and testing operations must be performed solely by qualified personnel in order to guarantee the proper and safe operation of the sliding door.
 - The company declines any responsibility for damage caused by incorrect installations due to incompetence and/or negligence.
-

INSTALLATION

METHOD POSITIONING

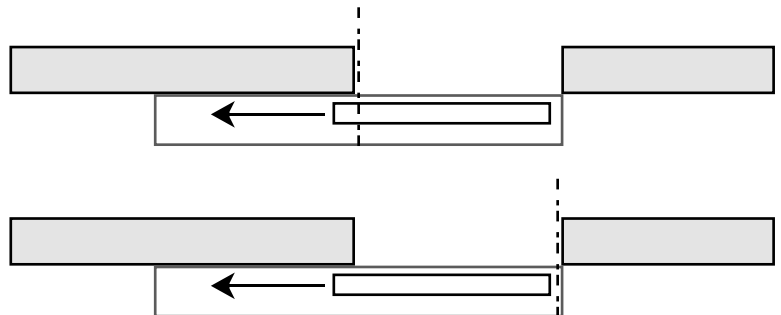
2 WINGS

The center of the profile should coincide with the center of the opening passage.



1 WING

The center of the profile should coincide with the end of the opening passage or the end of the profile should coincide with the end of the opening passage.



COVERALL FASTENING

Remove the cover. Drill holes on the front side of the coverall. It is recommended not to exceed a distance of 600 mm between the holes.



WARNING *Protect the electronic equipment before you drill the holes, and then wipe away any aluminum residues from the belt and the guide.*

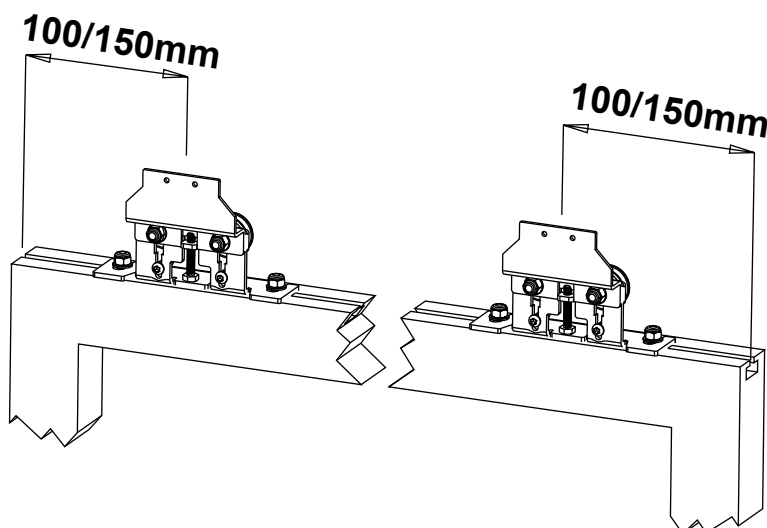
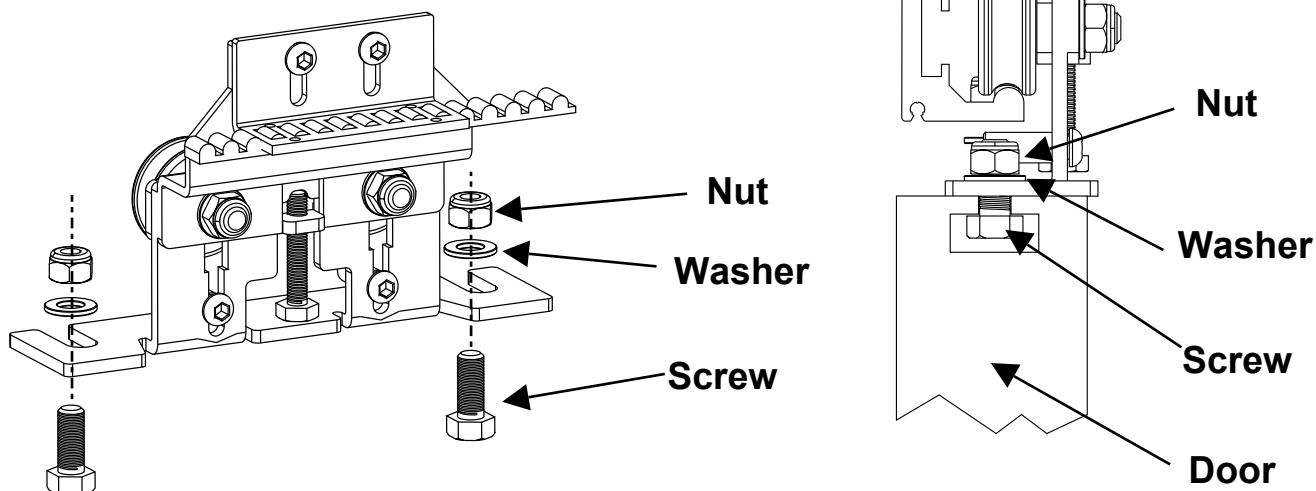
Calculate the measurements for the vertical dimension given by the height of the doors, considering the vertical distance of the carriages. (see coveralls dimensions)

Place the coverall parallel to the floor surface and mark the holes.

Provide holes for cable entry or open those pre-cutted. Fast the coverall to the wall using screws (minimum diameter of 5.)

LEAVES HOOKING

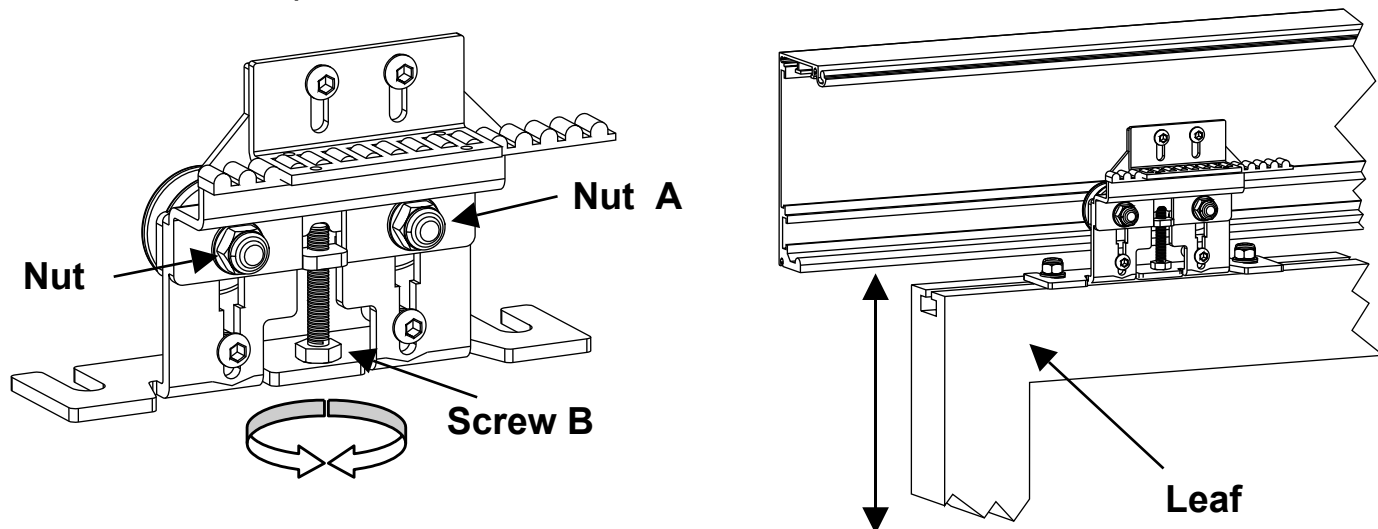
Place the leaf under the carriages of the coverall and fast with 8/10 mm screws(not supplied), to a distance from the ends of the leaf of 100/150 mm.



LEAVES HEIGHT ADJUSTMENT

To adjust the height of the leaves loosen the two nuts A and through the screw B make the adjustments : screwing the leaf goes up, unscrewing the leaf goes down.

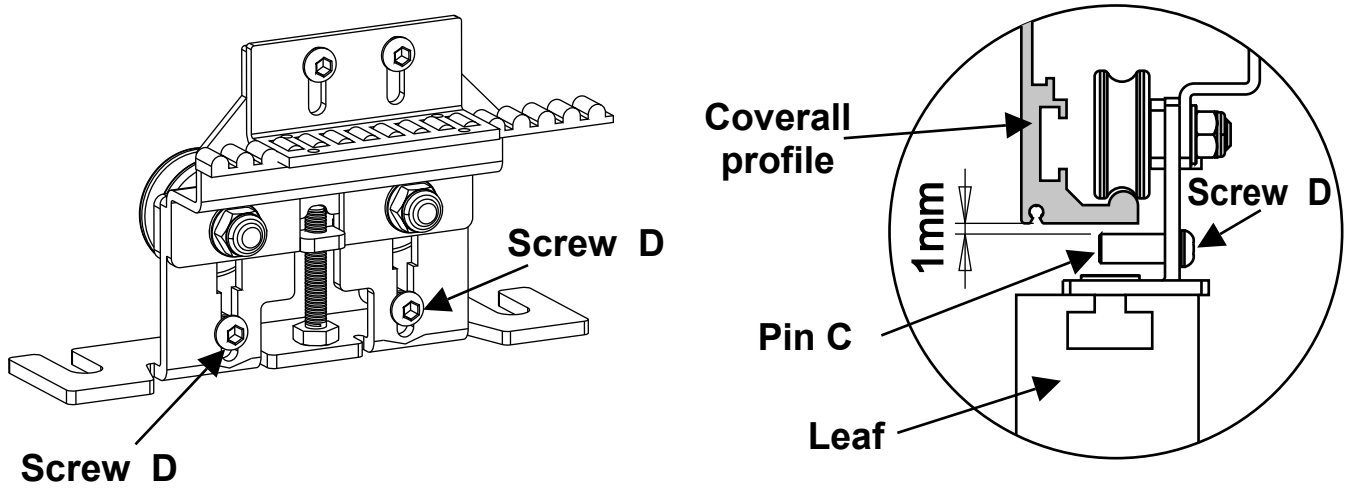
At the end of the operation block the nuts A.



ANTI-DERAILMENT SETTINGS

Adjust the pins **C** to avoid the derailment of the trolleys.

Loosen the screw **D** and adjust the pins at a distance of about 1mm from the bottom of the profile of the coverall.

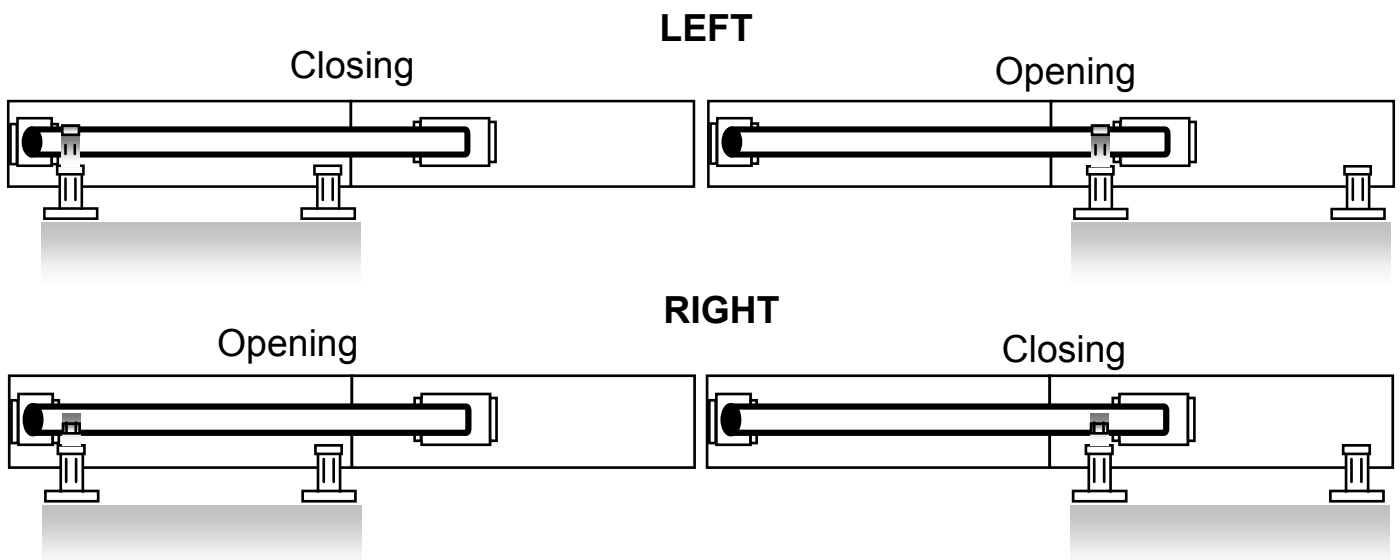


CONFIGURATION RIGHT - LEFT

All our coveralls are assembled in such a way that the procedures for inversion are minimum, without changes of space between components or belt length.

2 LEAVES : the pulling trolleys will not have obstacles in the stroke, they will run under the equipment using the full length of the coverall.

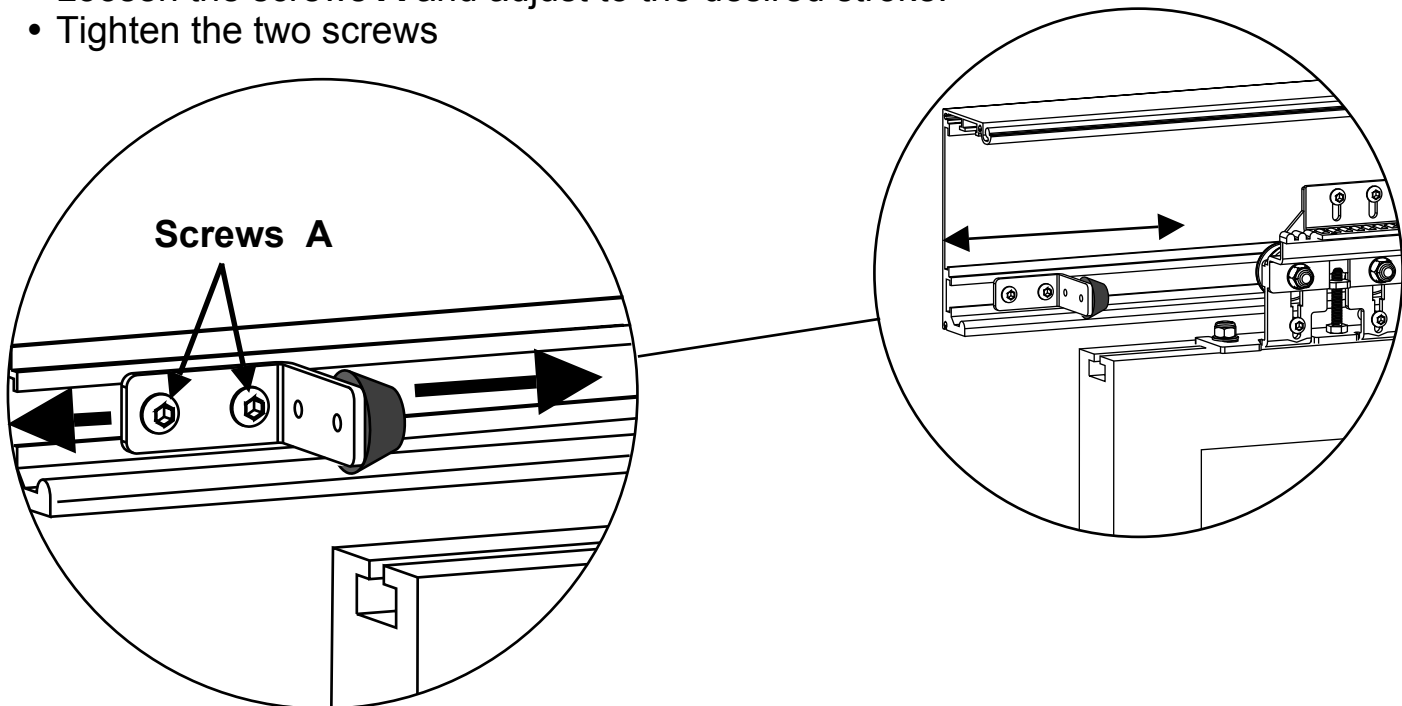
1 LEAF : to switch from the left to the right you just need to reverse the belt hook.



LIMIT SWITCH ADJUSTMENT

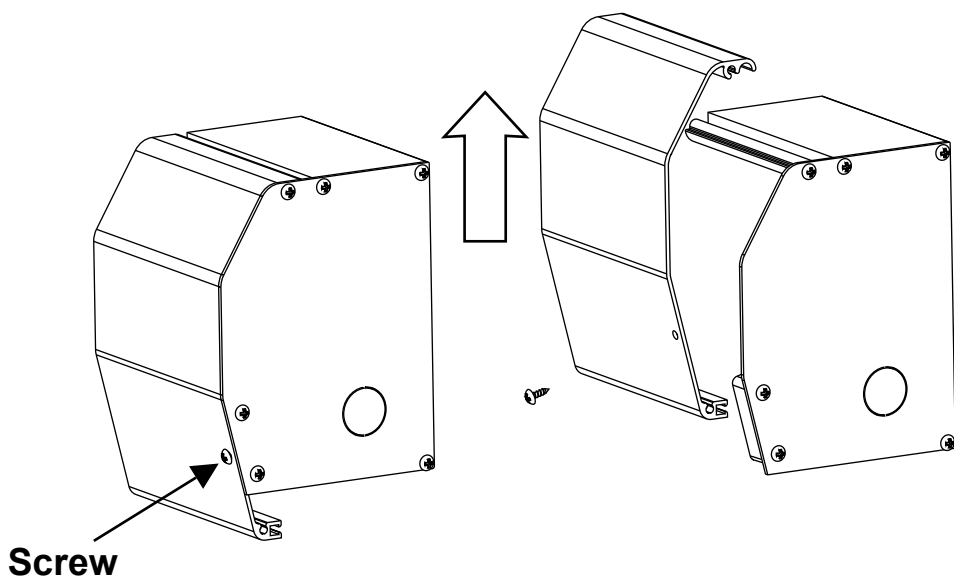
Adjust the limit switches to determine the stroke of the door.

- Loosen the screws **A** and adjust to the desired stroke.
- Tighten the two screws

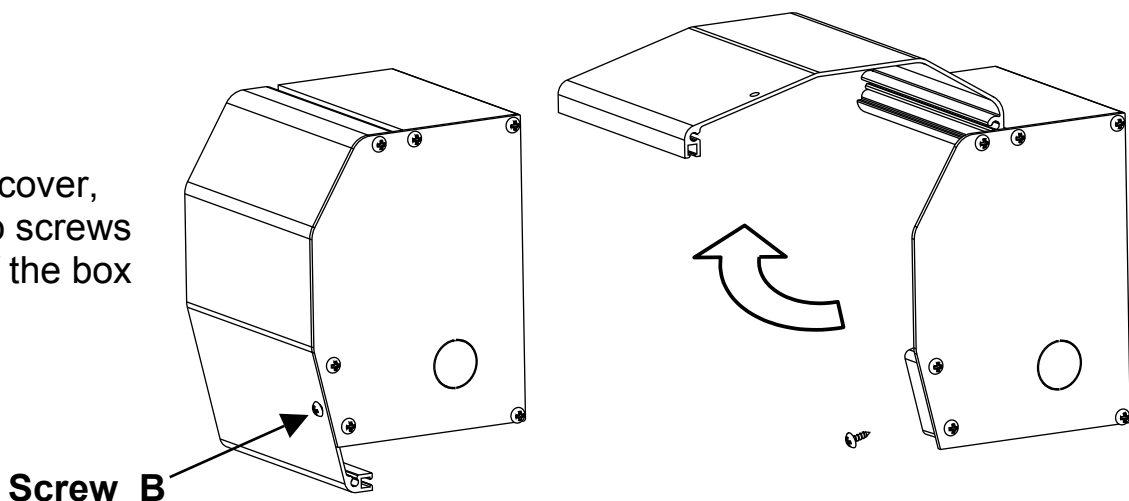


COVER REMOVAL

To remove the front cover, unscrew the two screws **B** at the ends of the box and lift



To lift the front cover, unscrew the two screws **B** at the ends of the box and rotate



ELECTRO LOCK WITH MANUAL SYSTEM (optional)

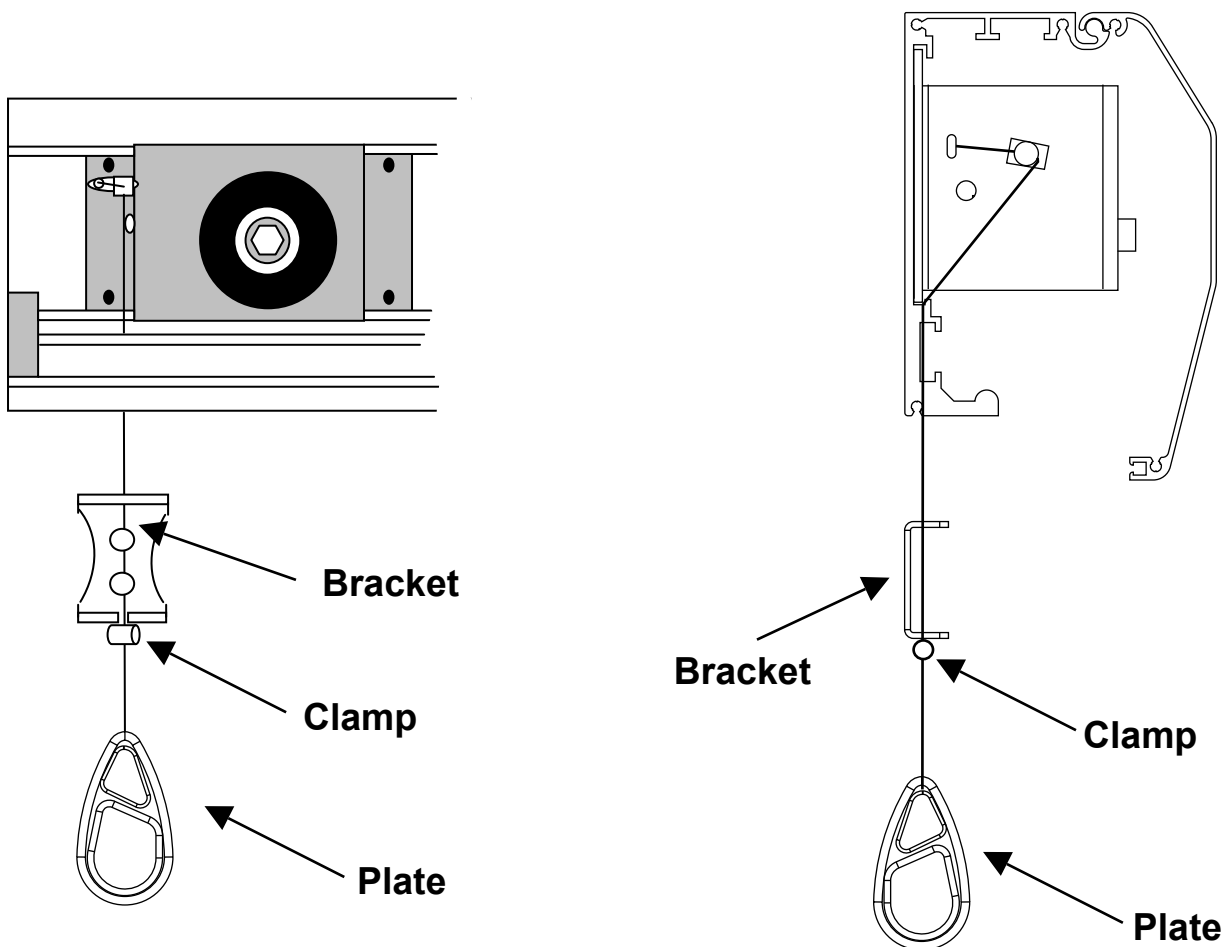
The electric lock is the safest way to lock the door. In case the backup battery is not present or in the event of failure of the latter, the system is equipped with external manual release.

The working principle is based on the voltage given to the steel cable that came with their anchoring systems.

WARNING! Adjust the force according to the diameter of the cable.

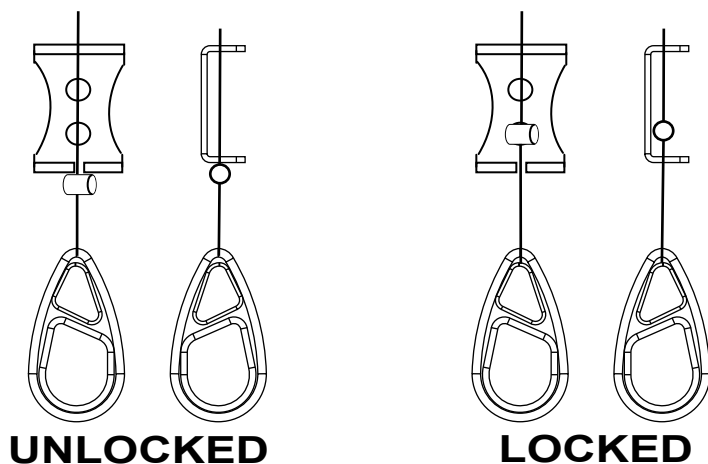
With the box open you will notice the steel cable that comes out on the on the left side of the pulling pulley. Drill a hole of 2.5mm perpendicular to the cable.

Fix the bracket onto the wall to keep the electro lock pulled permanently



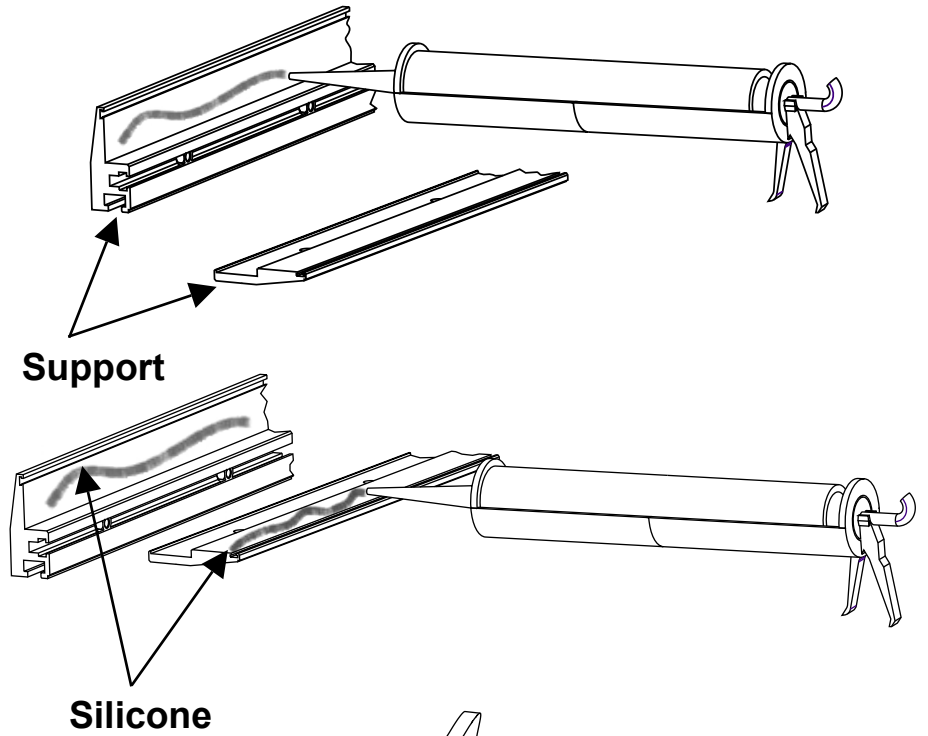
To unlock manually pull the plat and hook the clamp under the bracket.

To lock put the clamp inside the bracket

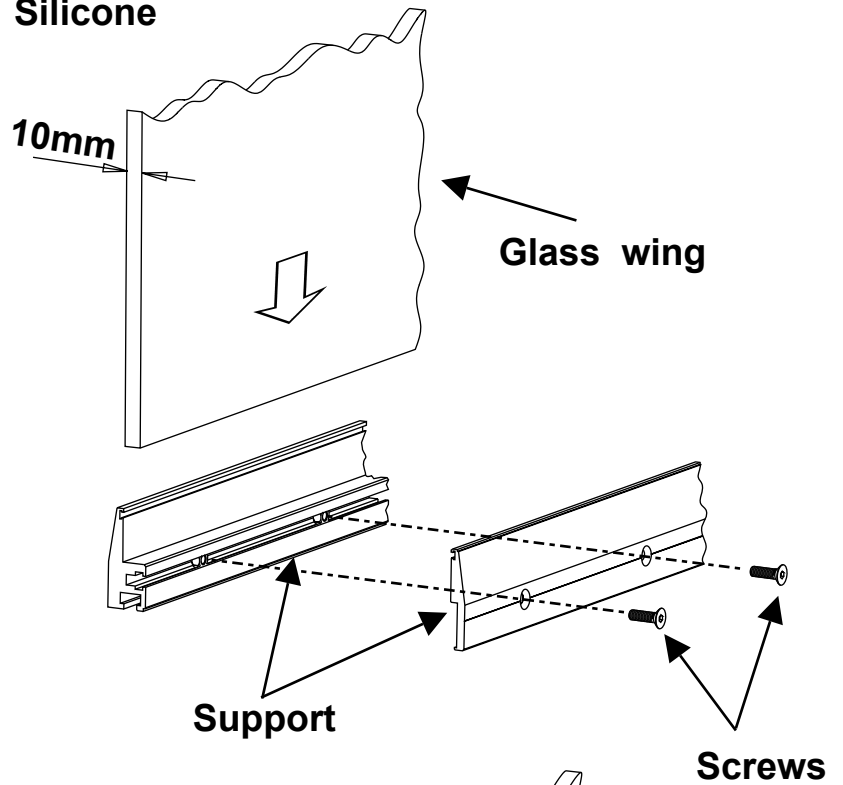


SUPPORT FOR 10mm thick GLASS WINGS (Optional)

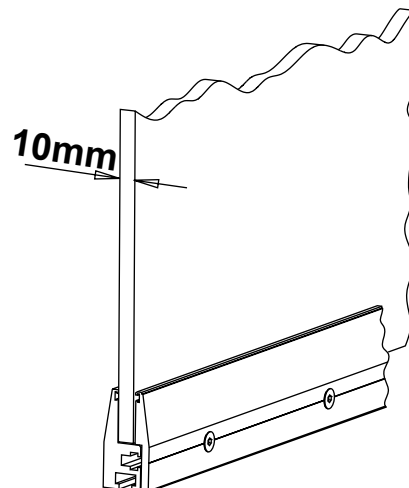
Apply silicone on the aluminum support.



Insert the glass wing (thickness 10mm)



Block the support with the screws and wait at least 48 hours for drying



MANUAL FOR SLIDING DOOR CONTROL UNIT

General description:

- Power supply: 24 VAC - 6A
- Back-up battery: 12V 2A Pb with integrated charger and functional test every 12 hours
- Output: 28 VDC +/- 15% with 500 mA fuse
- Encoder input (direction and pulse) with cable test
- Motor speed control with PWM signal
- Output for electromagnetic door lock with PWM signal
- User-programmable operating parameters
- Non-volatile (flash) data storage that does not require back-up power
- Open/close cycle meter with 2 selectable maintenance alarm settings
- Audible alarms for alerts
- Seven-section digit for operation messages
- Normally open auxiliary contact for doors in motion (optional)

Parameter Programming

Entering User-programmable parameters

If the PIN code has been entered correctly, the display will read '1' to indicate the first user-adjustable setting.

To change the value of the setting, select the desired parameter by pressing 'INVIO'. The parameter number will increase by 1 each time the key is pressed, and when the desired parameter is reached use the UP and DOWN keys to change its setting. The display will flash when the setting can be changed.

To move to another parameter, press INVIO until the desired parameter is reached and use the UP and DOWN keys to set the desired value.

The settings will be saved automatically a few seconds after no further keys are pressed, or can be saved immediately by pressing the INVIO button until the last parameter is reached and then one further time to confirm the values.

The new settings are confirmed with the message 'rd' on the display and a 1 second tone.

Figure 1 contains a list of all user-programmable parameters.

Unit setup

After installation, the control unit will automatically measure the size of the door system; if the system is connected correctly, a few seconds after providing power the setup program will start.

The door will slide slowly to position itself first at the mechanical stop for the open position and then at the mechanical stop for the closed position.

If the entire procedure is completed successfully the line on the screen will flash, while if errors were encountered the screen will display the error message . (**List of messages viewable on the screen**)

The setup program can be activated at any time using the 'RESET' feature (see input selector).

Caution without power supply, also with battery inserted, the control board do not enter in setup mode.

Note: during the setup program the radar proximity sensors are disabled, so to prevent injury please ensure that no people or animals approach the doors during this process.

The botton test it is able to do the test directly on the control board.

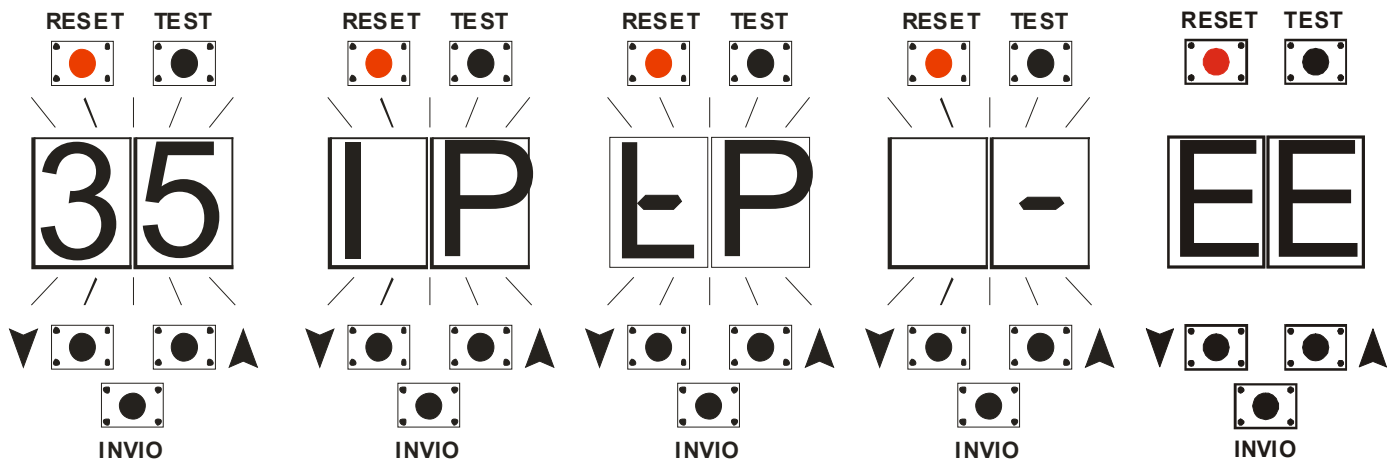


Figure 1. List of programming parameters

N Pr.	RANGE	UNITS	DESCRIPTION
1	2 – 18	Amp.	Motor power consumption on opening
2	2 – 18	Amp.	Motor power consumption on closing
3	1 – 5	cm/sec ²	Acceleration when opening
4	1 – 5	cm/sec ²	Acceleration when closing
5	10 – 60	cm/sec	Speed when opening
6	10 – 60	cm/sec	Speed when closing
7	3 – 15	cm/sec	Approach speed when opening
8	3 – 15	cm/sec	Approach speed when closing
9	3 – 35	cm	Approach distance when opening
10	3 – 25	cm	Approach distance when closing
11	5 – 90	%	Partial opening percentage
12	0 – 5	cm	Manual travel
13	0 – 30	sec.	Delay for automatic closing
14	0 – 30	sec.	Delay for auxiliary closing
15	0 – 30	sec.	Delay for partial closing
16	1 – 10	decimi/sec	Time for electric lock
17	0 – 15	number	System configuration menu 1
18	0 – 15	number	System configuration menu 2
19	0 – 1	number	System configuration menu 3
20	0 – 9	number	1 st digit PIN code (A)
21	0 – 9	number	2 nd digit PIN code (B)
22	0 – 9	number	3 rd digit PIN code (C)
23	0 – 9	number	4 th digit PIN code (D)

NOTE: during the programation remember that the speed and weight of the leaves are proportional to the current drawn by the motor, then in case of changes in the speed you need to adjust current supply (range 1-2) Otherwise you the control panel will report an obstacle error due to the over absorption for the output current

(Index no. 17) - 1st MENU - configuration

FUNCTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
close using battery power in case of power failure		X		X		X		X		X		X		X		X
open using battery power in case of power failure	X		X		X		X		X		X		X		X	
when closed/switched off, open in case of power failure			X	X			X	X			X	X			X	X
when closed/switched off, close in case of power failure	X	X			X	X			X	X			X	X		
Electromagnetic lock closed without power					X	X	X	X					X	X	X	X
Electromagnetic lock closed with power	X	X	X	X					X	X	X	X				
security inputs into logic normally closed									X	X	X	X	X	X	X	X
security inputs into logic normally open	X	X	X	X	X	X	X	X								

(Index no. 18) - 2st MENU - configuration

FUNCTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
audible alarm enabled		X		X		X		X		X		X		X		X
audible alarm disabled	X		X		X		X		X		X		X		X	
set alert for 1,500,000 mechanical cycles			X	X			X	X			X	X			X	X
set alert for 300,000 mechanical cycles	X	X			X	X			X	X			X	X		
mechanical cycles meter enabled					X	X	X	X					X	X	X	X
mechanical cycles meter disabled	X	X	X	X					X	X	X	X				
reset mechanical cycles meter									X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X								

(Index no. 19) - 3st MENU - configuration

FUNCTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
battery management (battery installed)		X		X		X		X		X		X		X		X
battery management (battery not installed)	X		X		X		X		X		X		X		X	
Auxiliary output for door in motion relay enabled (optional)			X	X			X	X			X	X			X	X
Auxiliary output for door in motion relay disabled (see above)	X	X			X	X			X	X			X	X		

Description of user-programmable parameters

Index

1	Motor power consumption on opening	signal strength above which the control unit registers blockage when opening
2	Motor power consumption on closing	signal strength above which the control unit registers blockage when closing
3	Acceleration when opening	system initial response time when opening, 1 = minimum, 5 = maximum
4	Acceleration when closing	system initial response time when closing
5	Speed when opening	speed when opening until end of acceleration ramp
6	Speed when closing	speed when closing until end of acceleration ramp
7	Approach speed when opening	speed of the approaching phase when opening
8	Approach speed when closing	speed of the approaching phase when closing
9	Approach distance when opening	distance from open door stop when the door is slowed to reach the programmed approach speed
10	Approach distance when closing	distance from closed door stop when the door is slowed to reach the programmed approach speed
11	Partial opening	percentage in reference to closed door, used to open door when partial opening is selected
12	Manual travel	0 = door is actively held shut; 1 = door opens freely; >2 = automatic opening when door is manually pulled from closed position
13	Delay for automatic closing	Pause in open position before closing automatically
14	Delay for auxiliary closing	Pause in open position before closing in response to auxiliary command
15	Delay for partial closing	Pause in partial open position before closing from partial opening
16	Time for electromagnetic lock	delay before electromagnetic lock is activated
17	Menu 1	programming menu no. 1
18	Menu 2	programming menu no. 2
19	Menu 3	programming menu no. 3
20	1st digit of PIN code	**
21	2nd digit of PIN code	**
22	3rd digit of PIN code	**
23	4th digit of PIN code	**

Display functions on the unit:

- With the door closed at rest position, the screen on the right shows a flashing horizontal line
- When door is moving the screen shows the power distributed by the control unit
- In case of alerts or anomalous functioning the screen will display a message from the following table
- View user-programmable parameters
- View number of cycles

List of messages viewable on the screen

HC	HIGH CURRENT	Short circuit in motor and/or malfunctioning power supply electronics
EC	POWER CONSUMPTION ERROR	Over-consumption of power while operating.
nL	NO LINE	No power available and/or power supply fuse interruption.
EE	ENCODER ERROR	No encoder signal. Wire broken and/or encoder malfunction.
nb	NO BATTERY	No battery installed. Wire broken and/or battery fuse interruption
FE	FLASH ERROR	Memory problem. Processor malfunction, must be replaced.
Lb	LOW BATTERY	Insufficient battery voltage, battery dead.
oA	BLOCKAGE ON OPENING	Blockage encountered during opening.
oC	BLOCKAGE ON CLOSING	Blockage encountered during closing.
Eb	BATTERY ERROR	Battery failure, must be replaced.
tb	BATTERY TEST	Indicates when the battery test is being carried out.
HL	HIGH LINE	Voltage of AC power supply 230 V too high.
LL	LOW LINE	Voltage of AC power supply 230V too low.
EP	TEST PINCODE	PIN code being checked
EP	PINCODE ERROR	Incorrect PIN code entered
nE	SAFETY ERROR	Safety nc open or not installed correctly
cB	ENGINE X ERROR IMPEDIMENT	Mechanical impediment to the start of the reset phase. The c8 will be repeated continuously

Security code (PIN)

Press the INVIO button once and the message 'IP' (Insert Pin) will appear on the screen, and after a moment the letter 'A'-- the first digit of the 4-digit code--will appear, and a moment later a flashing number '0' will be displayed.

At this point, use the 'UP' and 'DOWN' keys to enter the first digit of the PIN code. Press INVIO to move on to the second digit (letter 'B'), wait until the a flashing number '0' appears on the screen, and as before use the 'UP' and 'DOWN' keys to enter the second digit of your PIN.

Press INVIO to confirm and enter the remaining digits using the same process described above.

When the last digit has been confirmed, the screen will display 'tP' to indicate that the PIN code is being checked; if the code is correct the attention tone will sound two short tones and the screen will show the first user-programmable parameter. If the PIN code was entered incorrectly, the message 'EP' will be displayed and a tone will sound for approximately 1 second, then the control unit will automatically return to standby mode showing the flashing line, and will not allow the user-programmable parameters to be modified.

The control unit has a timer function so that if no keys are pressed for 10 seconds while in programming mode, the information entered up to that point will be saved and the unit will exit the programming mode.

Setting all 4 digits of the PIN to 0 turns off the security code.

The control unit comes with the 4 digit PIN code set to 0; please set a personal security code to protect the user-programmable settings.

If the PIN code is not required (0000), press INVIO to go directly to the first user-programmable parameter (Index 1).

Unlocking password PIN-CODE procedure

When you turn on the card, close to ground at the same time the interior and the exterior radar ;

The display will show the message: "Rd" (read) followed by a beep that signals the **PIN CODE** restore factory default.

View number of cycles carried out

Introduction.



The meter presents the number of cycles in multiples of 1000, so the number displayed must be multiplied by this factor.

This data is recorded in permanent memory, but always in multiples of 1000 cycles.

The number of cycles can only be read when the system is in stand-by, that is, when the screen displays a flashing horizontal line.

In addition, the mechanical cycles meter must be enabled in Menu 2 (index 18).

The following is an example.

<p>Press the DOWN key and for a few seconds the number that corresponds to the 'high' part of the figure is displayed.</p> <p>After a few seconds the screen returns to displaying the flashing line.</p>							
<p>Press the UP key and for a few seconds the number that corresponds to the 'low' part of the figure is displayed.</p> <p>After a few seconds the screen returns to displaying the flashing line. The two numbers are combined as in the following illustration</p>							
<table style="width: 100%; text-align: center;"><tr><td style="font-size: 2em;">04</td><td style="font-size: 2em;">37</td><td style="font-size: 2em;">000</td></tr><tr><td>HIGH PART</td><td>LOW PART</td><td>MULTIPLY X 1000</td></tr></table> <p>Therefore, this unit has completed 437,000 cycles</p>		04	37	000	HIGH PART	LOW PART	MULTIPLY X 1000
04	37	000					
HIGH PART	LOW PART	MULTIPLY X 1000					

If the buzzer option is enabled, upon reaching the maximum number of cycles the system will indicate the 'unit maintenance' status by sounding a 1 second audible alarm at 1 hour intervals when the door is open.

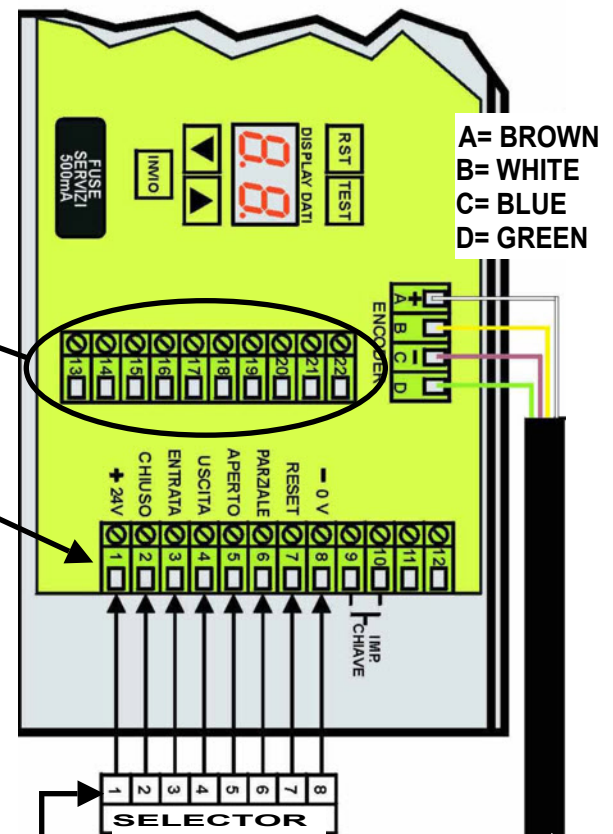
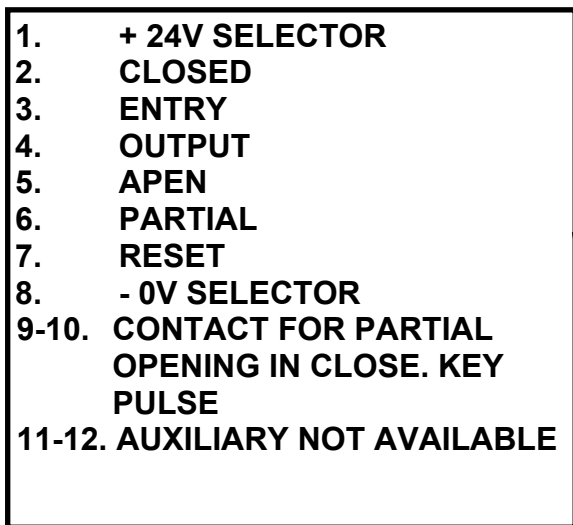
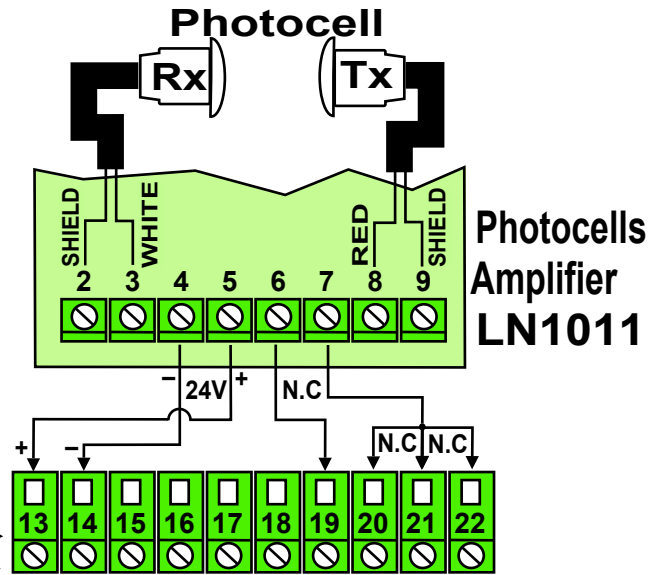
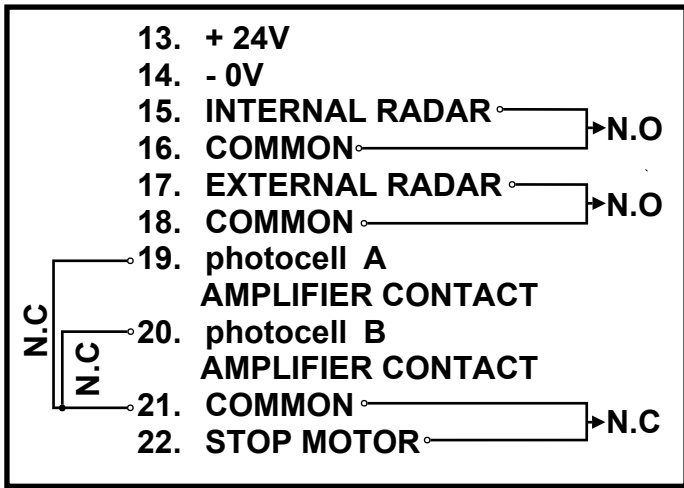
LATEST NOTIONS

The contacts -0V are in series between them, it is recommended the distribution of equipments for all the available inputs.

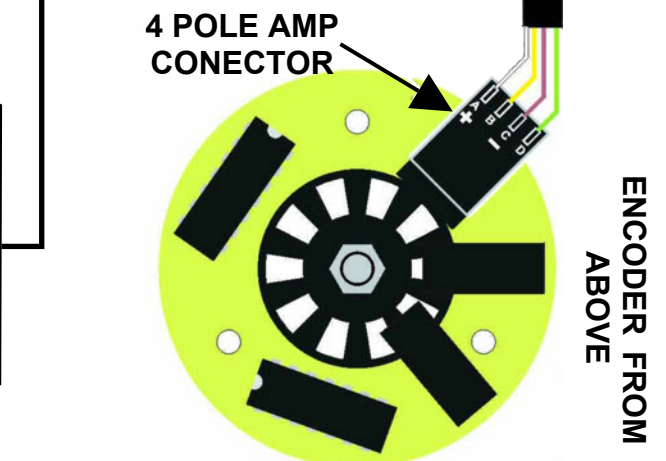
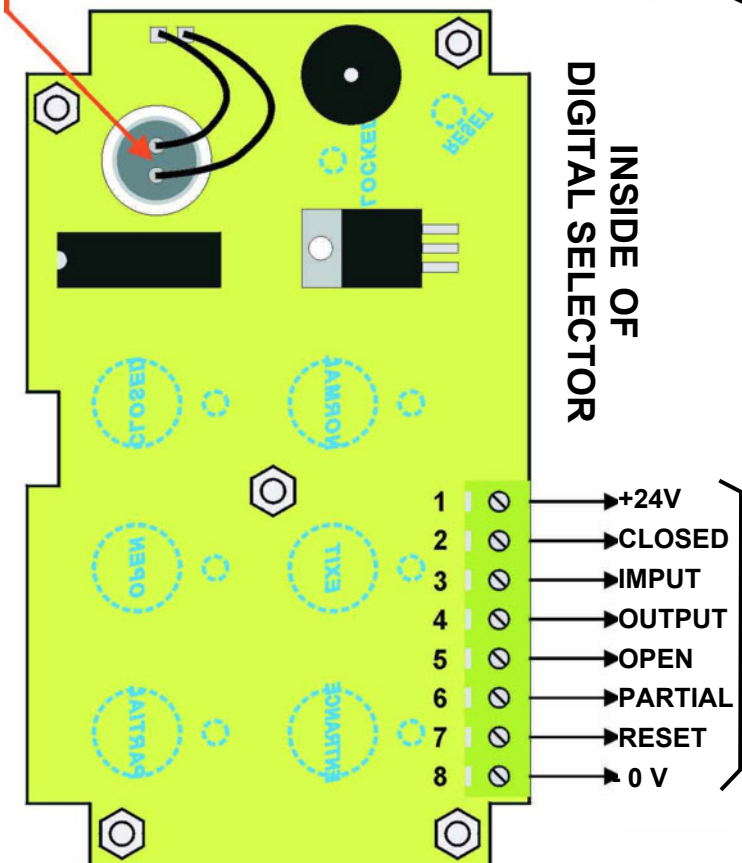
When the contact 9-10 is closed the door will make a partial opening even if the selector is in close position.

Is very useful to allow opening from the outside even with the automation blocked.

The safety contacts 22,20,19 if not used close to ground through a bridge.



0.22 WIRE
7Cm+NEOPRENE
INSULATION ON KEY



SAFETY PRECAUTIONS

These warnings are an essential, integral part of the product and must be given to the user. They provide important indications on the installation, use and maintenance and must be read carefully. This form must be preserved and passed on to subsequent users of the system. The incorrect installation or improper use of the product may be dangerous.

INSTALLATION INSTRUCTIONS

- The installation must be performed by professionally skilled personnel and in compliance with current local, state, national and European legislation.
- Before beginning the installation, check the integrity of the product.
- The laying of cables, electrical connections and adjustments must be workmanlike performed.
- The packing materials (cardboard, plastic, polystyrene, etc.) are a potential hazard and should be disposed of correctly and not left within reach of children.
- Do not install the product in potentially explosive environments or environments disturbed by electromagnetic fields. The presence of inflammable gases or fumes is a grave danger to safety.
- Set up a safety device for overvoltage, a disconnecting and/or differential switch suitable for the product and conforming to current standards.
- The manufacturer declines any and all responsibility for product integrity, safety and operation in the event incompatible devices and/or components are installed.
- Solely original spare parts should be used for repairs and replacements.
- The installer must provide all the information relating to the operation, maintenance and use of the individual parts, components and system as a whole.

WARNINGS FOR THE USER

- Read the instructions and enclosed documentation carefully.
- The product must be used for the express purpose for which it was designed. Any other use is considered improper and therefore hazardous. In addition, the information given in this document and in the enclosed documentation may be subject to modifications without prior notice. It is given as an indication only for product application. The company declines any responsibility for the above.
- Keep products, devices, documentation and anything else provided out of reach of children. In the event of maintenance, cleaning, breakdown or faulty operation of the product, cut off the power and do not attempt to operate on the product. Contact solely the professionally skilled personnel responsible for these operations. Failure to adhere to the above indications may be dangerous.

The data and images are for guidance only
VDS reserves the right to change at any time characteristics of the products described in
its sole discretion, without notice.



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