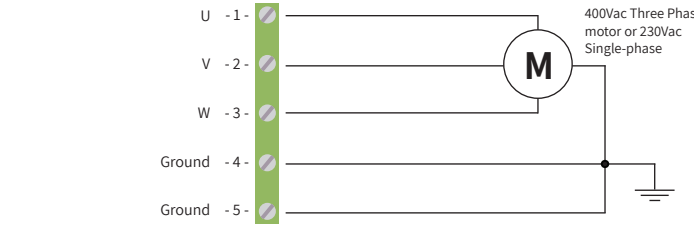
ORION-S

BLUE



Light - 6 -
Light - 7 -

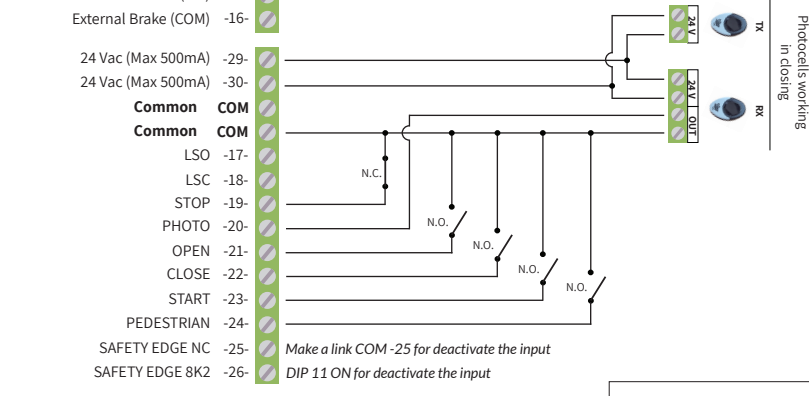
Selection 400 Vac - 8 -
Selection 230 Vac - 9 -
Selection of the power supply- -10-

Make a link:
8-10 for 400 Vac power supply
9-10 for 230 Vac power supply

230/400 Vac (R) -11-
230/400 Vac (S) -12-
230/400 Vac (T) -13-

POWER SUPPLY

External Brake (NC) -14-
External Brake (NO) -15-
External Brake (COM) -16-



Make a link COM -25 for deactivate the input
DIP 11 ON for deactivate the input

TEST -27-
TEST -28-

FOR THE CONNECTION OF THE SIGNAL LIGHT READ PAR. 2.5

Power supply of the accessories max 1A 12 VAC
Power supply of the accessories max 1A 12 VAC

Out 230 Vac -31-
Out 230 Vac -32-

2nd channel OUT2
2nd channel OUT2
- Antenna GND
+ Antenna ANT

Opening Dead Man's function OPEN
Opening Dead Man's function OPEN
Closing Dead Man's function CLOSE
Closing Dead Man's function CLOSE

SYMBOL

The special messages indicated below, may appear throughout the technical manual to draw attention to information that clarifies or simplifies a procedure.

The addition of this graphic symbol to a “Danger” or “Warning” safety advice, indicates that there is an electrical or mechanical risk, which can cause physical injury if the instructions are not followed. Please follow all safety messages that have this symbol to avoid injury or material damage.

Damage! For safety reasons, protect your face during the connection.

WARNING

Installation, management, service and maintenance must only be carried out by qualified personnel. The producer assumes no responsibility for the consequences that may arise from the use of this material. Failure to followthese instructions can result in serious personal injury.

INTRODUCTION

This manual provides all the information necessary for the correct installatin and use of the equipment in your possession. It must be read carefully at the time of purchase, and consulted to chack the limitations on the use, and when you are about to carry out maintenance. The manufacturer reserves the right to make any changes to the product without notice.

SAFETY MEASURE

In the event of incorrect use, repairs or modifications made by unqualified personelle, all guarantees will be void. The manufacturer declines all responsibility for damage deriving from inappropriate use of the product or from use other than that for which the product was intended. The manufacturer declines all responsibility for consequential damages except for the civil liability for the products. We remind you that automatic gate and door systems must only be installed by qualified technical personnel, in full compliance with the law. Before each installation check the mechanical strength of the gate or door. Check that all mechanical stops are suitable to stop the gate/door to avoid of damage.

MEASURE FOR THE ENVIRONMENT

In the event of incorrect use, repairs or modifications made by unqualified personelle, all guarantees will be void. The manufacturer declines all responsibility for damage deriving from inappropriate use of the product or from use other than that for which the product was intended. The manufacturer declines all responsibility for consequential damages except for the civil liability for the products. We remind you that automatic gate and door systems must only be installed by qualified technical personnel, in full compliance with the law. Before each installation check the mechanical strength of the gate or door. Check that all mechanical stops are suitable to stop the gate/door to avoid of damage.

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1. INTRODUCTION

1.1 SAFETY PRECAUTIONS

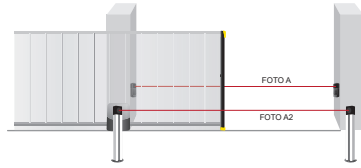
Using the unit improperly and performing repairs or modifi cations personally will void the warranty. The producer declines any responsibility for damages due to inappropriate use of the product and due to any use other than the use the product was designed for. The producer declines any responsibility for consequential damages except civilliability for the products. Every programming and/or every maintenance service should be done by qualifi ed technicians.

1.2 FIELD OF APPLICATION

400/230V single-and-three phase control unit/control panel/control board with remote control switch, for 1 motor up to 2 HP for industrial sliding gates. Installed with limit switches only. Automatic time counter, 230V brake included. Receiver RX1-I not included.

1.3 TYPE OF INSTALLATION

It is important to establish the **"MACHINE"** risks and the requirements of the final user. In the photo the final user will fix the number of accessories to be installed. In the scheme the couple of the **photo-beams A** OPEN it has no effect while it inverts completely after closing. **"FOTO A2"** is the serial connection of the foto A or ALT connection. Check the synchronisation of the photo-beams which avoid interferences.



Industrial sliding gates

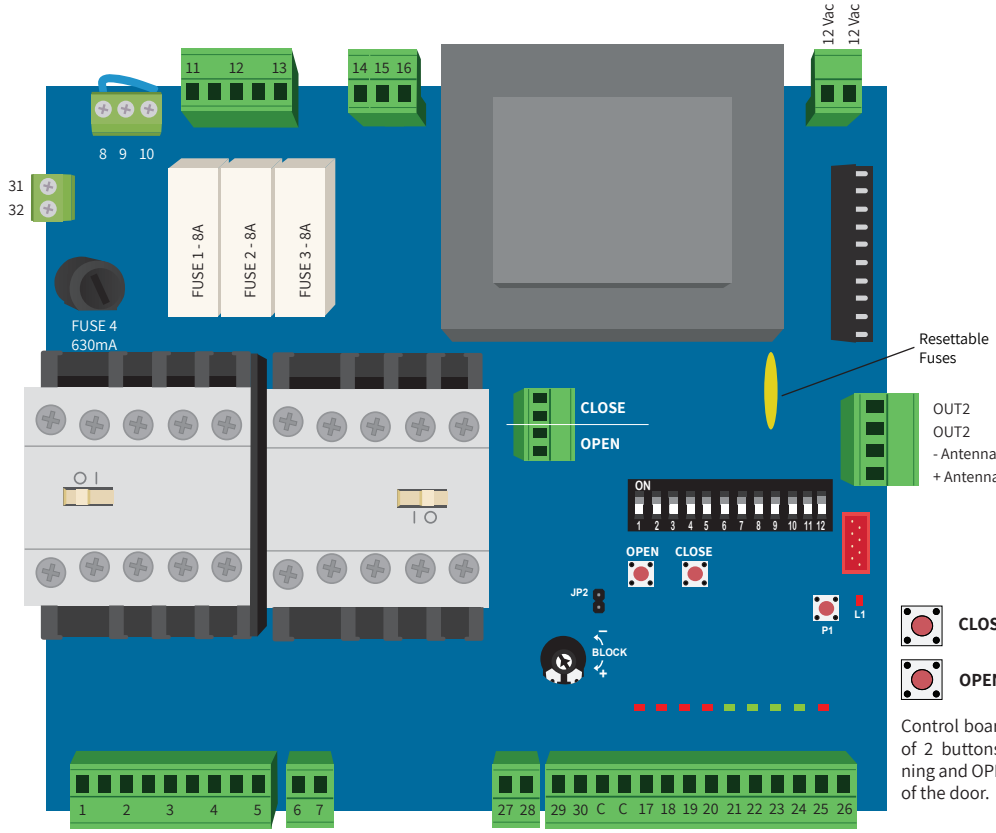
We recommend to install a STOP switch which stops immediatelly the gate. The switch has a normally close contact which opens the contact when it is working. See Par. 2.10

1.4 TECHNICAL FEATURES

Dimensions	165x190x65	mm
Weight	1500	g
MAX power of single motor	1500	W
MAX power of signal light	40	W
MAX absorption with clean contact	5	A
MAX absorption 24 Vac (clamps 29-30)	500	mA
MAX absorption 12 Vac	1	A

2. INSTALLATION

2.1 DIAGRAM OF THE CONTROL UNIT AND ELECTRICAL CONNECTIONS



CLOSE

OPEN

Control board dispose of 2 buttons for opening and OPEN closing of the door.

CHECKING CONNECTIONS
The light info indicate the correct working of the logic. It should flashes each second and it means that the micro-processor is working.

When the control board is powered, the "led" lights, that are placed on the inputs, are lit up when there is a closed contact towards the common on the input.

Normally the red lights on inputs **LSO-LSC-STOP-PHOTO-SAFETY EDGE NC,** are ON.
Normally the red lights on inputs Normally the green lights on the control inputs **OPEN-CLOSE-START-PEDESTRIAN** are OFF.

LSO = LIMIT SWITCH OPEN
LSC = LIMIT SWITCH CLOSE

2.2 DESCRIPTION OF THE ELECTRICAL CONNECTION

U	1		Output for Three Phase motor connection U
V	2		Output for Three Phase motor connection V
W	3		Output for Three Phase motor connection W
T	4		Ground
T	5		Ground

Light	6		Contact for light
	7		

Selection of the power supply	8		Make a link: 8-10 for 400 Vac power supply 9-10 for 230 Vac power supply
	9		
	10		

R	11		230/400Vac
S	12		230/400Vac
T	13		230/400Vac

NC	14		Dry contact for external brake Par. 2.13
NO	15		
COM	16		

12 Vac	12V		Power supply of the accessories 12Vac Max 1A
	12V		

Test	27		Dry contact Test
	28		

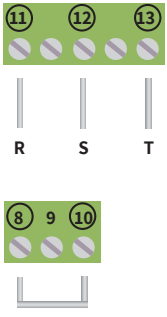
OUT2			Contact for 2nd radio channel
OUT2			Contact for 2nd radio channel
GND			- Antenna
+ ANT			+ Antenna

24 Vac	29		Power supply of the accessories 24Vac Max 500mA
24 Vac	30		
Common	COM		Common for all inputs: services, Security devices
Common	COM		Common for all inputs: services, Security devices
LSO	17		Input Opening Limit Switches
LSC	18		Input Closing Limit Switches
STOP	19		STOP input
PHOTO	20		Input photocell A: working only by closing
OPEN	21		Input command OPEN
CLOSE	22		Input command CLOSE
START	23		Input command START
PEDESTRIAN	24		Input command PEDESTRIAN
SAFETY EDGE NC	25		Input SAFETY EDGE (NC contact)
SAFETY EDGE 8K2	26		Input SAFETY EDGE (8K2 contact) *DIP 11 ON for deactivate the input*

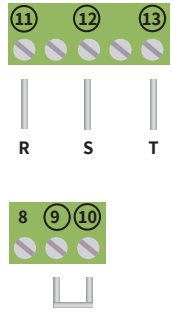
2.3 CONNECTION OF THE POWER SUPPLY

The are three possibilities to power the control unit:

THREE-PHASE 400 Vac



THREE-PHASE 230 Vac

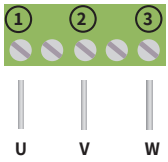


MONOFASE 230 Vac

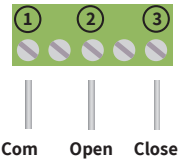
The voltage line must be protected from a thermal-cutoff-switch or from a 5A fuse. A circuit-breaker is recommended but not necessary if not available in the installation

2.4 CONNECTION OF THE MOTOR

Three-phase motor



SINGLE-PHASE motor 230 Vac



When in doubt as to the correct connection, if possible, manually position the automation at the midpoint of its stroke. Be ready to stop the system using the STOP control!

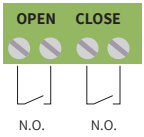
2.5 CONNECTION OF THE FLASHING LIGHT 230 VAC

FLASHING LIGHT COMPLETE
WITHOUT INTERMITTENCE CIRCUIT BOARD

DIP 8 OFF
Flashing light
ON in pause mode

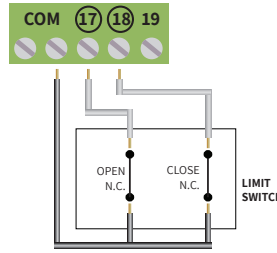
DIP 8 ON
Flashing light
OFF in pause mode

2.6 DEAD MAN'S FUNCTION



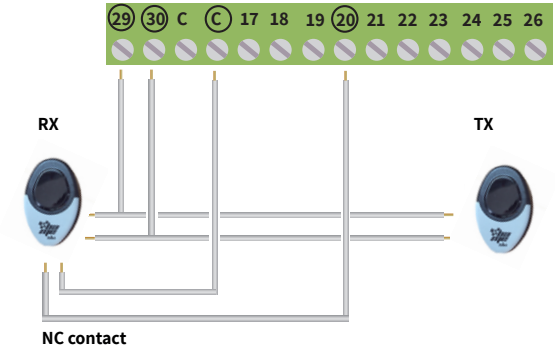
If the door is working on Dead Man's function pay attention on the intervention of the limit switches. All safeties contact are deactivated

2.7 CONNECTION OF THE LIMIT SWITCH



It is necessary to use the limit switches

2.8 CONNECTION OF THE PHOTOCELLS (ONLY CLOSE) 24 VAC



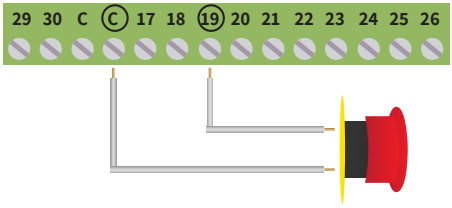
The photocell receiver contact must be:

- **dry** (insulated from power supply voltages)
- **type N.C.** (Normally closed)

If more than one pair of photocells is used, they must be connected in series.

If the PHOTO input is not used, make a link between terminal board 20 and COM.

2.10 CONNECTION OF THE STOP/ALT CONTROL DEVICES



Connection of the **STOP command**
Button: stops and inhibits temporarily the control unit until a new command.
Switch: keeps the automation blocked until a new retrieval is ordered.

! If the input STOP is not used make a link in the terminals COM-19.

Connection of the **SAFETY EDGE**:
Stops the gate and activates an inversion of direction for approximately 1.5 seconds.

SAFETY EDSGE N.C.

SAFETY EDSGE 8K2

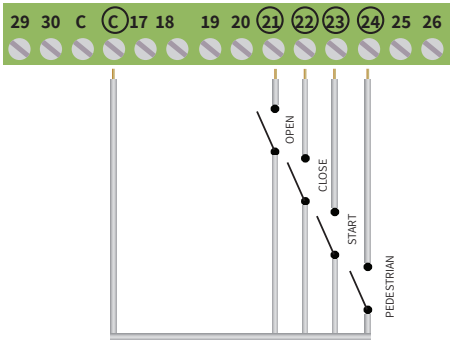
SAFETY EDGE 8K2

Deactivate the input for SAFETY EDGE 8K2 set DIP 11 ON

SAFETY EDGE N.C.
If the input SAFETY EDGE NC is not used make a link in the terminals COM-25.

You need to use any kind of button or contact provided it is type N.C. (normally closed) to connect the safety devices. If there are several safety devices they have to be connected in series

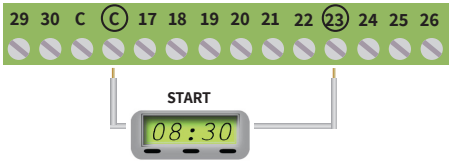
2.11 Connection of ACTIVATION COMMAND



The connection of activation COMMAND can be provided with any push button or N.O. contact.If more devices are available connect in serial.

In the paragraph 3.1 are described the different functions of each control.

Terminal block
21 OPEN
22 CLOSE
23 START
24 PEDESTRIAN

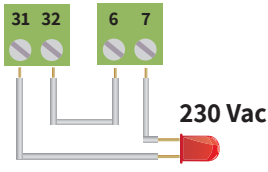


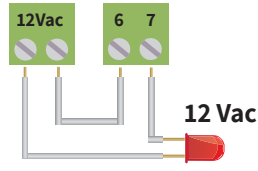
If you need a timer it is possible to connect it to the terminal board no. 23 and COM. The contact of the timer is normally open and it should be closed for all the time that the gate is open.

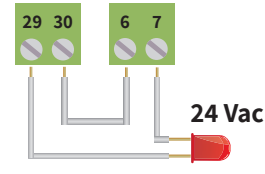
If an opening command is connected to terminal 21, it must be connected in serial.

2.12 Connection of the LIGHT

We can see how to connect a 230Vac light:24Vac or 12Vac..If the signal light is connected on terminals 6 and 7, it is not possible to connect a light . DIP8 in ON for fixed light and DIP8in OFF for flashing light

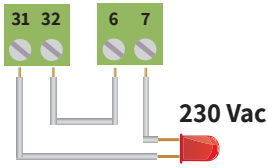


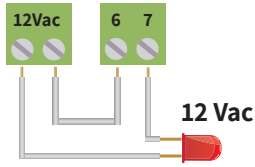


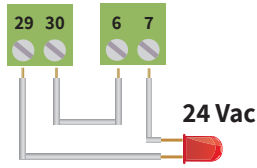


2.12 Connection of the LIGHT

We can see how to connect a 230Vac light:24Vac or 12Vac..If the signal light is connected on terminals 6 and 7, it is not possible to connect a light . DIP8 in ON for fixed light and DIP8in OFF for flashing light

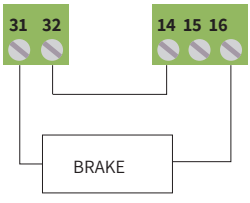




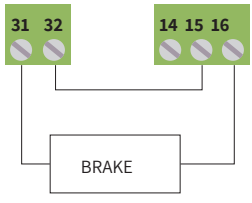


2.13 Connection of a MECHANICAL BRAKE 230 Vac

POSITIVE BRAKE



NEGATIVE BRAKE



We can see how to connect a 230V break in two versions: Negative or Positive

DIP 4 ON
Obliged in case of the installation of the break

3. FUNCTIONS AND ADJUSTMENTS

3.1 SETTING UP WITH DIP

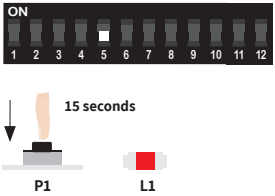
	1-OFF 2-OFF		By each control it reverse. It recluse automatically at the end of the pause time.
	1-ON 2-OFF		When opening and in pause time it doesn't accept any control, it reclose automatically at the end of the pause time.
	1-OFF 2-ON		Each control the sequenze is OPEN-STOP-CLOSE-STOP etc. It doesn't reclose automatically
	1-ON 2-ON		By each control the sequence is OPEN-STOP-CLOSE-STOP etc. It reclose automatically at the end of the pause time.
	3-ON		Activates the phototest
	4-ON	**Mechanical brake**	Bring in ON if the mechanical brake is available. In case you bring in OFF position you can connect a signal light on terminals 14-15-16
	6-ON	**Pre-lighting**	Attiva il prelampeggio nel caso in cui sui morsetti 14-15-16 viene collegato un lampeggiante. DIP4 OFF
	7-ON	**Internal Brake**	IT activate the integrated brake and it works when the gate stops, after that the brake will be released and the motor can work properly.
	8	**LIGHT (terminal 6-7)**	ON: Flashing light, light off during pause time OFF: Flashing light, light on during pause time
	9-ON 10-ON	**Radio partial opening**	It activate the partial opening throught the radio receiver. If you use this set up the terminals OUT 2 must be free.
	11-ON	**Exclusion SAFETY EDGE 8K2**	Exclusion of the input for SAFETY EDGE 8K2
	12-ON	**Crossing detector**	As the photocells detect a crossing, the control board opens completely then closes but 2 sec. before according to the pause time, when the obstacle is gone.

4. MANAGEMENT OF REMOTE CONTROL

To manage remote controls, the electronic circuit board must have a wireless module RX1-I. The electronic circuit board can handle several types of code, the first remote control learned determines the type and, as a result, it is not possible to learn remote controls with codes that differ from that of the first remote control learned. The codes that can be handled are the 12 to 64 bit standards and, for rolling HCS© type codes, only the fixed part but not the rolling counter control. The first transmitter learned determines the type of code that the receiver can handle; consequently the subsequent transmitters learned must have the same type of code.

4.1 FULL CANCELLATION OF THE MEMORY

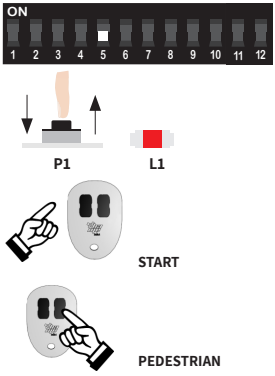
This operation cancels all previous memorized codes. It is not contemplated the cancellation of a single remote control code. It is necessary to reset the memory before learning the first remote control to avoid the remaining of previously memorized codes that aren't in use in the installation. The cancellation of the memory (all codes) is possible only when the gate is closed.



1	Make sure that the DIP5 in OFF position and the gate closed
2	Keep pressed the button P1 in the control unit until the led L1 starts flashing
3	Release the button P and wait until the led INFO until the led is flashing regularly Wait the reset of the memory

4.2 LEARNING OF THE REMOTE CONTROL

The remote controls can be learnt ONLY when the gate is CLOSED.



1	Make sure that the DIP5 in OFF position and the gate closed
2	Press and release the Push Button, led L1 is lit on.
3	Press the button of the remote control for START the led L1 flashes for a while and then it lits on. The code is memorized If you don't need to associate any START command, wait led INFO is flashing
4	...Press the button of the remote control for the PARTIAL OPENING. Led INFO flashes for a while and the it lits on. the code has been memorized If you don't need to associate any command to the PARTIAL OPENING, wait until led INFO is flashing.

- If you need to learn a new remote control repeat the same operation.
- When you push the remote control's button and the L.E.D. codes is switched ON, it means that the remote control is not compatible.
- When you push the remote control's button and the L.E.D. codes flashes slowly, it means that the memory is FULL.
- In this card is not previewed the cancellation of a single remote control 's code

5. TURNING ON AND PROGRAMMING THE UNIT

When you turn on the control panel, if everything is ct properly, the green LED TEST must fl ash while the LED for inputs STOP, FOTO, LSO, LSC and Safety Edge must be lit one (if the gate is closed LSC is switched off). LED START and Partial Opening must be switched off . After the turning on, the motor opens it means that the control panel has been switched off suddendly. (cut off power supply)while the door was open.

<u>If you need to programm the working time:</u>
<u>turn off the control panel, close the door,</u>
<u>put in ON DIPA 5 and give power supply again</u>

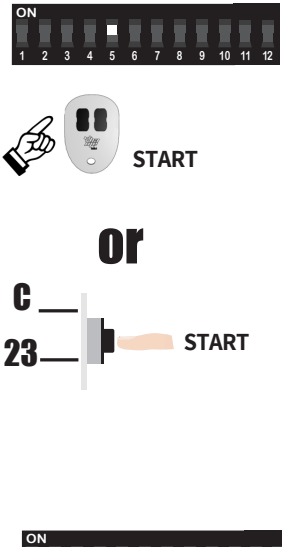
Put in ON DIP 5, and the control card is in working time mode .
This is possible to set up the working time and pause time of the motor

5.1 LEARNING WORKING TIME

Here is the procedure of the working learning time .
It is necessary to use the control START and PEDESTRIAN (partial opening)
These controls connected to the terminals 16-23 to open the START or 16-24 for partial opening (see “CONNECTION OF THE OPENING “ and “CONNECTION of THE PARTIAL OPENING) OR from a memorized remote control (see “MEMORIZATION OF THE REMOTE CONTROL”)

This operation is possible when the door is closed.
Starting from the beginning of the control unit :
put in ON the micro switch 5 of DIP A before powering the control unit

5.3 MEMORIZATION OF THE WORKING TIME WITH START (OPENING CONTROL)

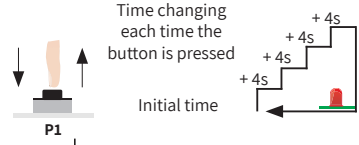


1	Bring ON the microswitch 5 of DIP A	Gate is closed
2	Press START (or everything connected to the input no.23 or the 1st channel of the remote control)	Gate is opening
3	When the gate reach the closing limit switch (FCC) the motor stops	Gate stops
4	Count the time for the opening gate	Gate is in pause
5	Press the control START to close the gate	Gate is closing
6	Wait until the gate stops automatically	The gate is CLOSED
7	Put the DIP5 in OFF position for the standard mode. The signal light turns off and the led TEST starts	End of the programming

5.4 INCREASING THE PAUSE TIME

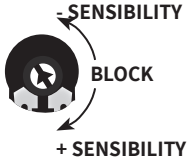
It is possible to increase the pause time without repeating the memorization of the working time.

When the door is in pause, each pression of button P, the pause time increases of 4 seconds. There are 5 steps to increase the pause time until 20 seconds. (5 pressions at 4 sec. each). At the 6th pression the pause time is at 2 seconds (LED START and PEDRESTRIAN PARTIAL OPENING are lighting).



This operation is possible when the door is open but in pause time

5.5 ADJUSTMENT OF THE OBSTACLE DETECTION



JP2
Obst. Detection Activated

JP2
Obst. Detection Deactivated

The control panel has an electronic control for the consumption of the motor. In case of an obstacle, the electronic block will stop the motor. It is possible to adjust the sensitivity of the obstacle detection with the trimmer in the control panel. Turning in the clockwise you increase the sensitivity (the motor stops easily) Turning in the counterclockwise you reduce the sensitivity

WARNING: the control is not activated for the fi rst 2 seconds because the inertia phenomena.

For a correct set up of the sensitivity you need to adjust fi rst a very low sensitivity. If you set up a higher sensitivity the control panel can stop the motor even if the door is not slowing down. (low temperature or small frictions in the mechanic).

There is a Jumper JP2 in the control unit available which can deactivate the obstacle detection, set up the jumper as follow:

WARNINGS!!!

OUR COMPANY, AS MANUFACTURER, CAN NOT BE HELD RESPONSIBLE FOR DAMAGES DUE TO WRONG OR MISSING CONNECTIONS OR DUE TO AN IMPROPER SETTING.

THE SAFETY DEVICES SHOULD BE ALWAYS INSTALLED AND KEPT IN FULL WORKING ORDER.

ONCE TERMINATED THE SYSTEM SETTING, YOU SHOULD PLACE BACK THE CONTAINER ON ITS POSITION, FASTENING TIGHT ITS SCREWS.

OUR COMPANY, AS MANUFACTURER, CAN NOT BE HELD RESPONSIBLE FOR DAMAGES DUE TO IMPROPER USE OF THE DOOR/GATE.

IT IS FORBIDDEN TO REPLACE ANY ELECTRIC, ELECTRONIC OR MECHANIC PART WITH NOT ORIGINAL OUR COMPANY SPARE PARTS.

OUR COMPANY, HAS THE RIGHT TO MODIFY OR CHANGE THE ELECTRONIC BOARDS AND MANUALS, WITHOUT PRIOR NOTICE.

ALWAYS REGULATE ACCURATELY THE TORQUE OF THE MOTORS. AN INCORRECT SETTING OF THE TORQUE, MAY CAUSE DAMAGE TO PEOPLE, ANIMALS OR OBJECTS.

WARRANTY:

Devices and accessories are guaranteed for a period of 24 months after production, whose date is printed on each item. The company will replace or repair its devices, provided that they are returned to our factory with the warranty label in good conditions. In case of replacement of the returned items, these will remain property of the company.
The warranty does not include damages due to any incorrect use, such as: non fulflment of the instruction detailed for each device, maintenance and servicing carried out without the previous written consent of our company. Moreover, warranty does not cover any damage due to wrong tension supply and any other reason for which the manufacturer cannot be made responsible. Any device returned must be delivered to our company with carriage paid and will be sent back with freight collect.
Warranty validity ceases if customer's payments are not fulflled. Each device manufactured by our company meets the european safety standards.
Our company declines all responsibility for the non-observance of the safety rules by the installers.

In order to reduce the time spent for servicing the returned items, all faulty materials which have been sent back to us must be accompanied by the installer description of the item fault.

BAME s.r.l. - Via L. da Vinci, 23 - 46020 SAN GIACOMO SEGNATE (MN) - ITALY
Tel. +39 0376 616 638 - Fax +39 0376 629 456 - http://www.bame.it - http://www.delma.it
Unità locale: Via Enrico Berlinguer, 6 - 63844 GROTTAZZOLINA (FM) - ITALY
Tel. +39 0734 633 533 - Fax +39 0734 636 895 - e-mail: delma@bame.it - venditedelma@bame.it