POLARIS 4

ELECTRONIC CONTROL BOARD FOR SLIDING GATES

DELMA

MANUAL

!!! ATTENTION - NOTICE FOR THE INSTALLER !!!

The bridges present on the contacts STOP, SENSITIVE EDGE, PHOTOCELLS, will not be installed anymore by BAME s.r.l. for safety and normative reasons.

If one more of these contacts will not be utilised for any reason, the installer must insert a bridge on the contacts to assure a correct operation of the control board.

Always follow the european standard specifications for garage doors and gates, EN12453 and EN12445.

POLARIS 4

POLARIS 4 MANUAL SUMMARY

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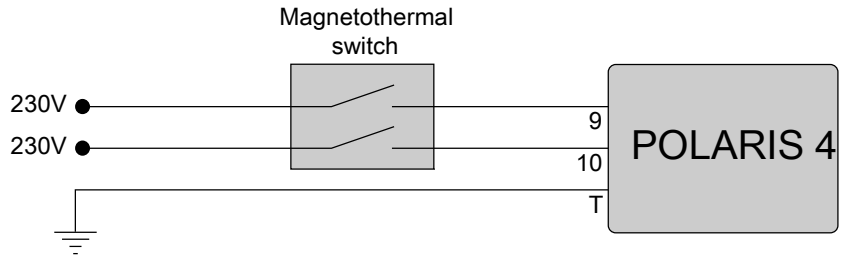
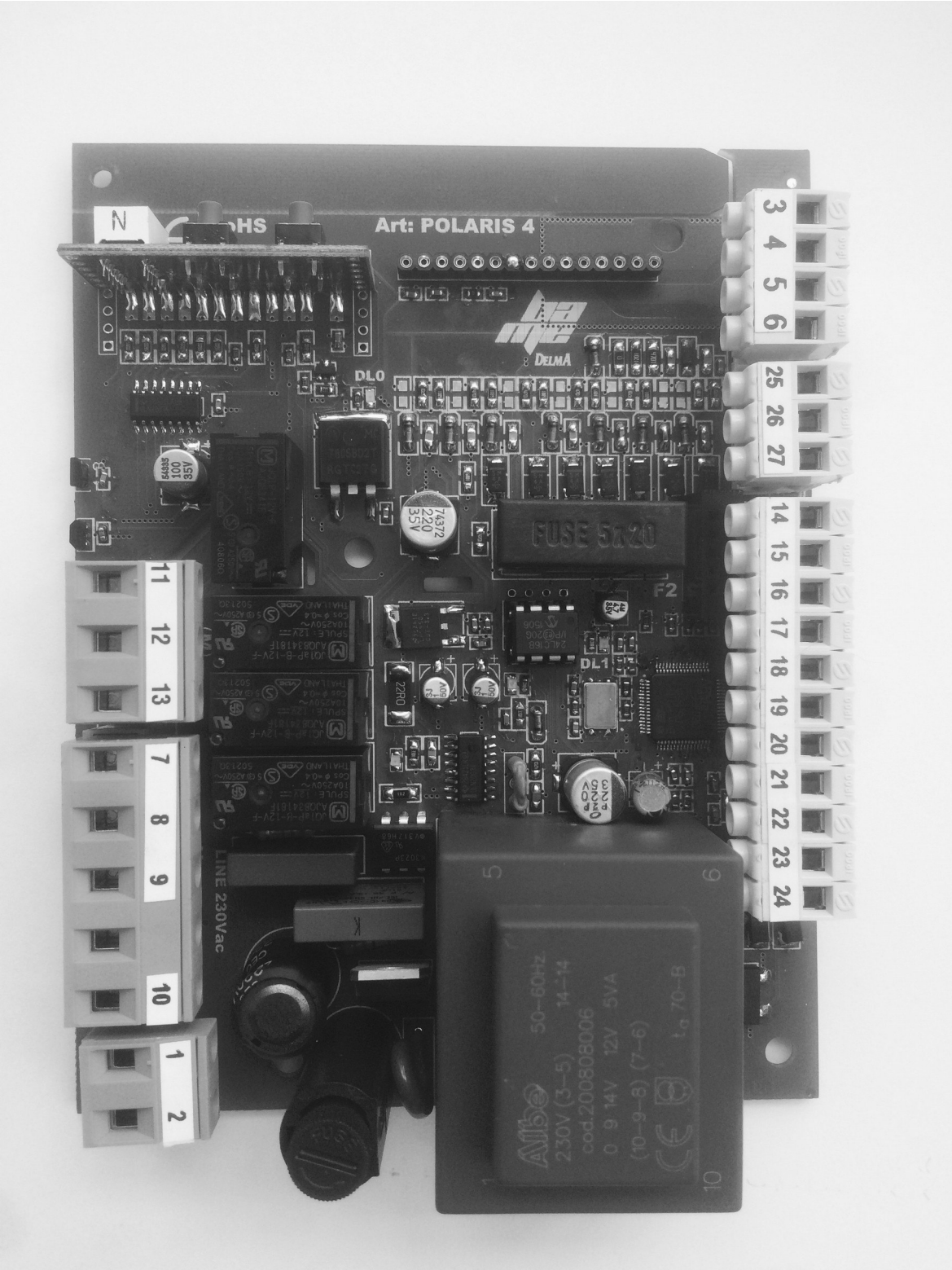
Note:
When installing the device, insert a switch with a contact opening of at least 3mm which ensures the equipment omni-polar disconnection from the power supply.

!!!Please read carefully this manual before proceeding with the installation of the device!!!



ASSEMBLY DIAGRAM



CONTACTS

25	CLUTCH POWER SUPPLY (POSITIVE POLE)
26	CLUTCH POWER SUPPLY (NEGATIVE POLE)
27	CLUTCH HALL SENSOR
14 – 15	START/STOP CONTACT
14 – 16	OPEN CONTACT
17 – 18	PHOTOCELL CONTACT (Normally Closed)
17 – 19	PRESSURE SAFETY DEVICE CONTACT (Normally closed)
20 – 21	OPENING LIMITSWITCH (Insert a bridge if not used)
20 – 22	CLOSING LIMITSWITCH (Insert a bridge if not used)
23 – 24	STOP (Normally Close)
1 – 2	COURTESY LIGHT CONTACT, without electric tension (Max. 10 A / 230 V)
3 – 4	ANTENNA (Metallic mesh on contact 4)
5 – 6	PHOTOCELLS POWER SUPPLY 24 VAC (Max 150 mA)
7 – 8	BLINKER CONTACT (Type Quick MAX. 10 A 230 Vac)
9 – 10	MAIN POWER SUPPLY 230 VAC / 50 Hz (Phase on 10)
T	GROUND
11 – 12	MOTOR OUTLET (Max 500 W 230 Vac) (BROWN – BLACK)
13	COMMON OF THE MOTOR (GREY OR BLUE)

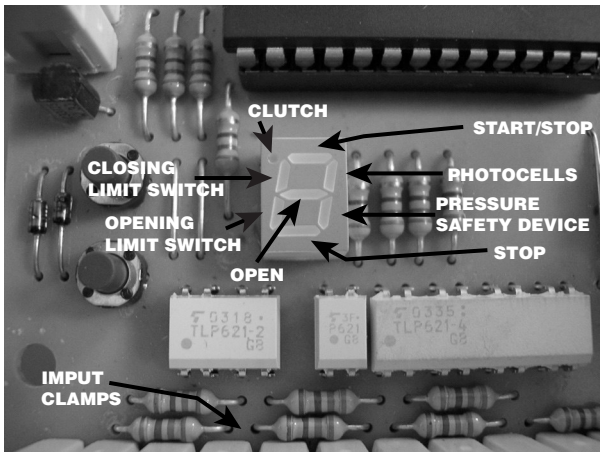
BOARD DEFAULT PARAMETERS

T3 EXTRA TIME = 4,5 SECONDS
T4 TIMING OF PHOTOCELLS OPERATED CLOSURE = 3 SECONDS
T5 TIMING OF AUTOMATIC CLOSURE = 30 SECONDS
T6 COURTESY LIGHT TIMING = GATE OPEN PILOT LIGHT
T7 PEDESTRIAN OPENING = 6 SECONDS
T8 MOTOR BRAKE = 270 ms

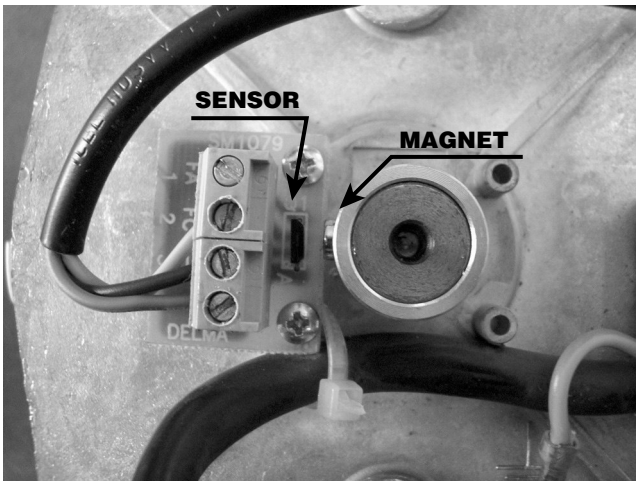
F2 PRE-BLINKING OPENING = ON
F3 PHOTOCELL ENABLED DURING OPENING PHASE = OFF
F4 TRANSFORM PRESSURE SAFETY DEVICE CONTACT IN PHOTOCELL 2 CONTACT = OFF
F5 TRANSFORM “OPEN” CONTACT IN “PEDESTRIAN OPEN” CONTACT = OFF

CHECKS TO BE DONE BEFORE PROGRAMMING THE BOARD

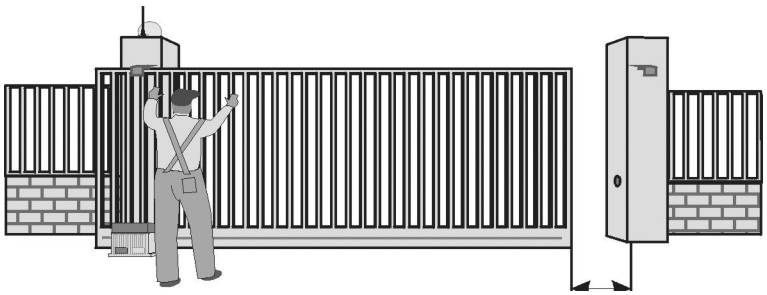
• The segments on the display corresponding to STOP, PRESSURE SAFETY DEVICE and PHOTOCELLS must be lit. These input contacts must be normally closed. (FIG.1)



• If the board for the electronic clutch is present, turn with the hand the motor shaft and verify that the small dot on the display goes on every time the magnet pass in the sensor range. (FIG.2)



• Unlock the motor with the emergency release system and move the gate until complete opening and complete closing to verify if the limit switches are installed correctly. At each limit switch correspond one segment on the display (FIG.1).
• Before to start programming bring the gate in closing and lock again the motor (FIG.4)

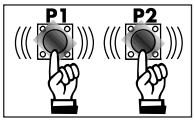


Programming the work time

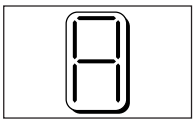
1. Power the control board.

2. Memorize the remote as parameter C1 page 16

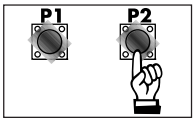
3. Press P1 and P2 simultaneously for three seconds to begin programming the board.



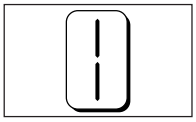
4. Letter A appear on the display.



5. Press P2 to confirm.

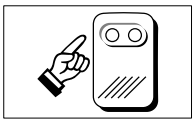


6. The number 1 appear on the display.



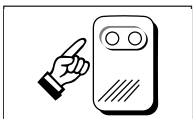
7. Push the button of the remote memorized to start opening gate

8. Push the button of the remote memorized when you want start the slowing down



9. Please wait that the gate opens completely. The reclosing is automatic.

10. The gate start for the reclosing.
Push the button of the remote memorized when you want start the slowing down.



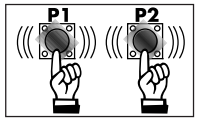
11. Please wait the complete closing of the gate.
Please wait that the board goes out automatically from the programming.

Setting the torque and lagging

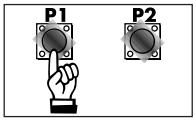
PARAMETER T1 - Torque setting for normal working phase

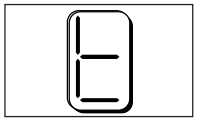
Values goes from 0 to 9 0 = maximum torque 9 = minimum torque

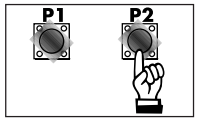
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



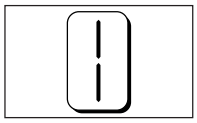
2. Letter A appear on the display. Scroll the menu with P1 until letter T appears on the display. Press P2 to confirm.

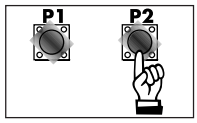




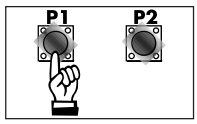


3. You should see 1 on the display. Press P2 to confirm.

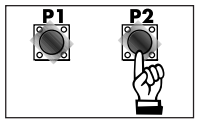




4. Select the torque from 0 to 9 with P1.



5. Press P2 to confirm.

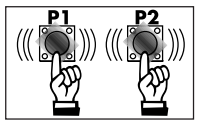


ATTENTION!!!!!! Always set and check the torque of the motor.
ATTENTION!!!!!! Every time that the force is modified it is necessary to do again the programming

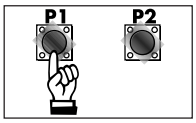
PARAMETER T2 - Torque setting for lagging phase

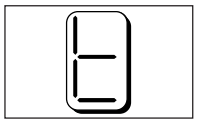
Values goes from 0 to 9 0 = maximum torque 9 = minimum torque

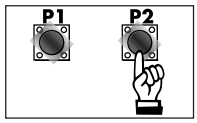
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



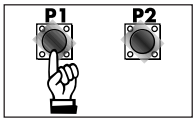
2. Letter A appear on the display. Scroll the menu with P1 until letter T appears on the display. Press P2 to confirm.

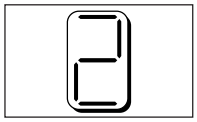


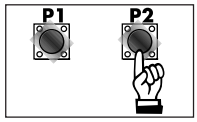




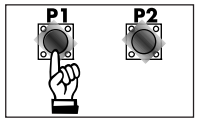
3. You should see 1 on the display. Scroll the values with P1 until 2 will appear on the display. Press P2 to confirm.



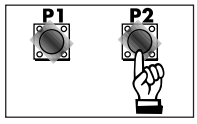




4. Select the torque from 0 to 9 with P1.



5. Press P2 to confirm.



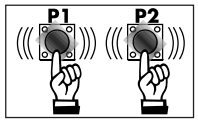
ATTENTION!!!!!! Always set and check the torque of the motor.
ATTENTION!!!!!! Every time that the force is modified it is necessary to do again the programming.

PARAMETER T3 – Extra time

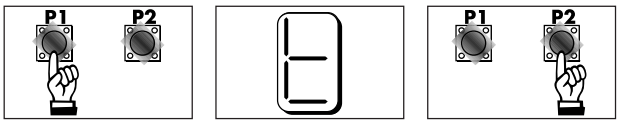
Values goes from 0 to 9
0 = 1 second of extra time
9 = 5,5 secons of extra time

Display	Seconds
0	1
1	1,5
2	2
3	2,5
4	3
5	3,5
6	4
7	4,5
8	5
9	5,5

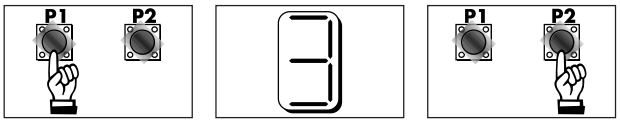
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



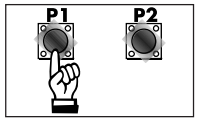
2. Letter A appear on the display. Scroll the menu with P1 until letter T appears on the display. Press P2 to confirm.



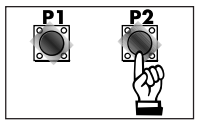
3. You should see 1 on the display. Scroll the values with P1 until 3 will appear on the display. Press P2 to confirm.



4. Select the value from 0 to 9 with P1 (SEE THE CHART).



5. Press P2 to confirm.



ATTENTION!!!!! The board has a factory setting 4,5 seconds of extra time.

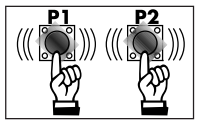
Setting of secondary parameters (not necessary for a standard installation)

PARAMETER T4 - Automatic closure of the gate from photocell impulse

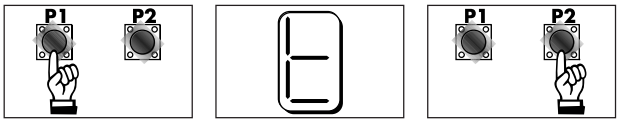
Values goes from 0 to 9
0 = function OFF
9 = closure after 27 seconds from the impulse

Display	Seconds
0	OFF
1	3
2	6
3	9
4	12
5	15
6	18
7	21
8	24
9	27

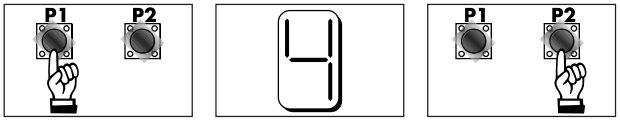
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



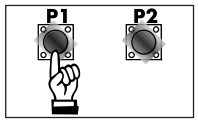
2. Letter A appear on the display. Scroll the menu with P1 until letter T appears on the display. Press P2 to confirm.



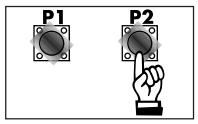
3. You should see 1 on the display. Scroll the values with P1 until 4 will appear on the display. Press P2 to confirm.



4. Select the value from 0 to 9 with P1 (SEE THE CHART).



5. Press P2 to confirm.



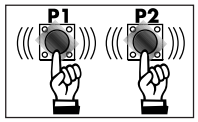
ATTENTION!!!!!! The control board has a default setting of 1 = 3 seconds.
ATTENTION!!!!!! If the automatic closure option T5 is turned off, the parameter T4 will be automatically disabled.

PARAMETER T5 - Timing for automatic closure

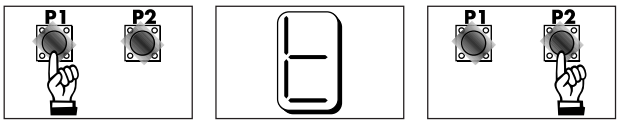
Values goes from 0 to 9
0 = function OFF
9 = closure after 240 seconds

Display	Seconds
0	OFF
1	10
2	20
3	30
4	45
5	60
6	90
7	120
8	180
9	240

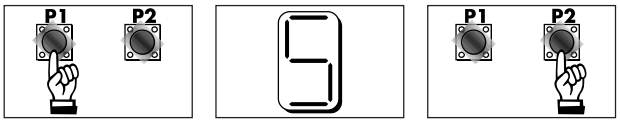
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



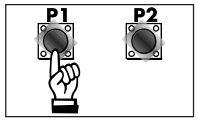
2. Letter A appear on the display. Scroll the menu with P1 until letter T appears on the display. Press P2 to confirm.



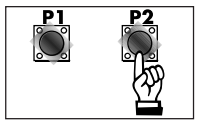
3. You should see 1 on the display. Scroll the values with P1 until 5 will appear on the display. Press P2 to confirm.



4. Select the value from 0 to 9 with P1 (SEE THE CHART).



5. Press P2 to confirm.



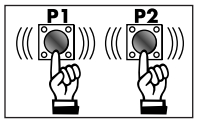
ATTENTION!!!!!! The control board has a default setting of 3 = 30 seconds.
ATTENTION!!!!!! This timing is valid also for the pedestrian opening.

PARAMETER T6 - Timing for courtesy light

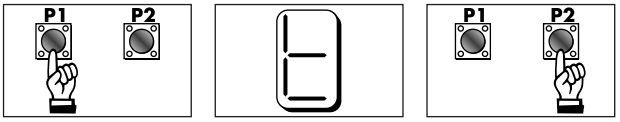
Values goes from 0 to 9
0 = open gate pilot light
9 = switching off after 4,5 minutes

Display	Seconds
0	open gate pilot light
1	30
2	60
3	90
4	120
5	150
6	180
7	210
8	240
9	270

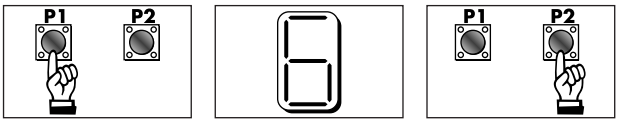
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



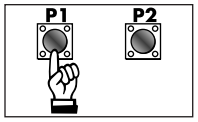
2. Letter A appear on the display. Scroll the menu with P1 until letter T appears on the display. Press P2 to confirm.



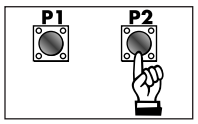
3. You should see 1 on the display. Scroll the values with P1 until 6 will appear on the display. Press P2 to confirm.



4. Select the value from 0 to 9 with P1 (SEE THE CHART).



5. Press P2 to confirm.



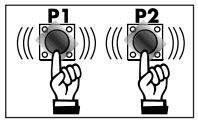
ATTENTION!!!!!! The control board has a default setting of 0 = open gate pilot light.
ATTENTION!!!!!! If the courtesy light will be operated with a remote control it will remain On until the next impulse from the remote control or until the gate will be closed or opened again.
ATTENTION!!!!!! If the value open gate pilot light will be selected it will not be possible to operate the courtesy light with the remote control.

PARAMETER T7 - Timing for pedestrian opening

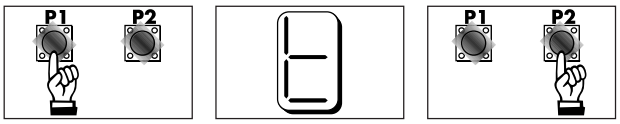
Values goes from 0 to 9
0 = function OFF
9 = opening of 18 seconds

Display	Seconds
0	OFF
1	2
2	4
3	6
4	8
5	10
6	12
7	14
8	16
9	18

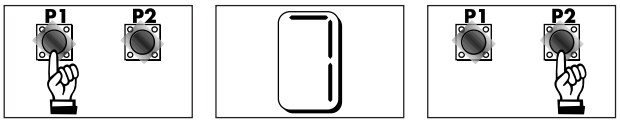
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



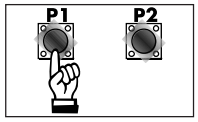
2. Letter A appear on the display. Scroll the menu with P1 until letter T appears on the display. Press P2 to confirm.



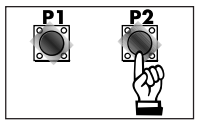
3. You should see 1 on the display. Scroll the values with P1 until 7 will appear on the display. Press P2 to confirm.



4. Select the value from 0 to 9 with P1 (SEE THE CHART).



5. Press P2 to confirm.



ATTENTION!!!!!! The control board has a default setting of 3 = 6 seconds.

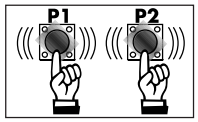
PARAMETER T8 Motor brake

The motor brake it is used to stop the movement of the gate after the intervention of a Stop command or limit switch command.

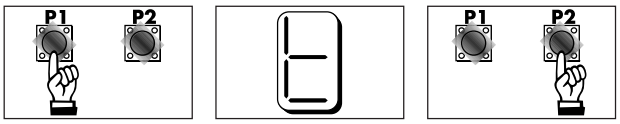
Value goes from 0 to 9
0 = brake OFF
1 = braking of 30ms
9 = braking of 270ms

Display	Milliseconds
0	OFF
1	30
2	60
3	90
4	120
5	150
6	180
7	210
8	240
9	270

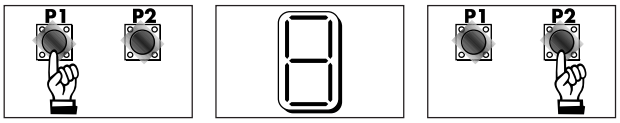
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



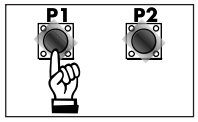
2. Letter A appear on the display. Scroll the menu with P1 until letter T appears on the display. Press P2 to confirm.



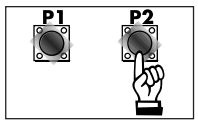
3. You should see 1 on the display. Scroll the values with P1 until 8 will appear on the display. Press P2 to confirm.



4. Select the value from 0 to 9 with P1 (SEE THE CHART).



5. Press P2 to confirm.



ATTENTION!!!!!! The control board has a default setting of 1 = 50 milliseconds.

Setting the remote control codes

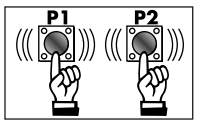
If using dipswitches remote controls before learning them on the control board, please set a personal code with the dipswitches positioned inside the remote control.

During the learning of the remote controls we advice to disconnect the antenna and do not employ too much time to send the code of the remote control, specially in urban areas where there are many radio disturbs.

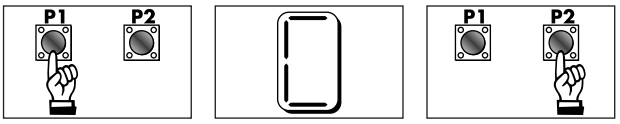
To comply with the European Specifications the gate must be opened on sight (15 meters), therefore the remote controls are set to work within this distance to avoid dangerous situations and radio pollution (see the point above).

Parameter C1: step by step logic code (start/stop)

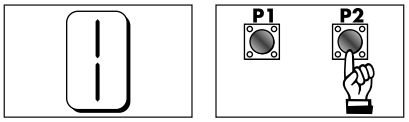
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



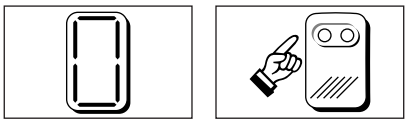
2. Letter A appear on the display. Scroll the menu with P1 until letter C appears on the display. Press P2 to confirm.



3. You should see 1 on the display. Press P2 to confirm.



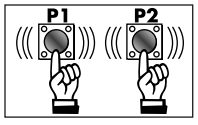
4. You should see 0 on the display. Push the button on the remote to be learned.



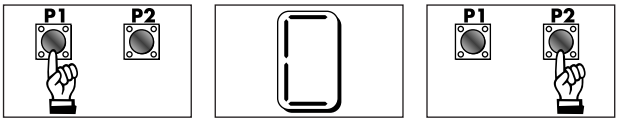
ATTENTION!!!!!! When entering a code already stored, the code will be deleted from the memory of the board.

Parameter C2: non step by step logic code (open)

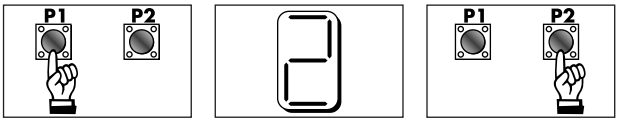
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



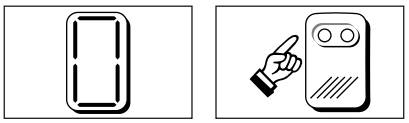
2. Letter A appear on the display. Scroll the menu with P1 until letter C appears on the display. Press P2 to confirm.



3. You should see 1 on the display. Scroll the values with P1 until 2 will appear on the display. Press P2 to confirm.



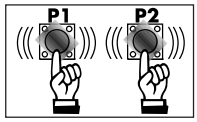
4. You should see 0 on the display. Push the button on the remote to be learned.



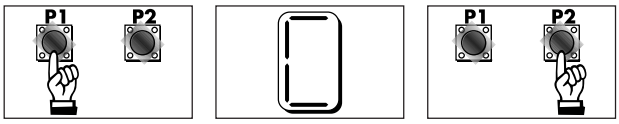
ATTENTION!!!!!! When entering a code already stored, the code will be deleted from the memory of the board.

Parameter C3: pedestrian opening code

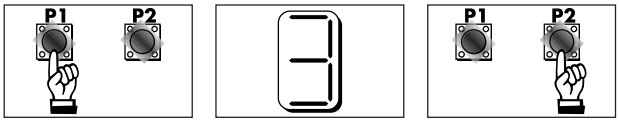
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



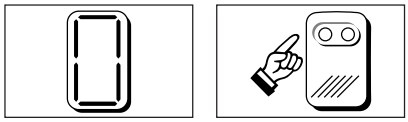
2. Letter A appear on the display. Scroll the menu with P1 until letter C appears on the display. Press P2 to confirm.



3. You should see 1 on the display. Scroll the values with P1 until 3 will appear on the display. Press P2 to confirm.



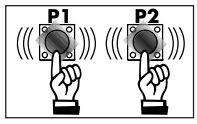
4. You should see 0 on the display. Push the button on the remote to be learned.



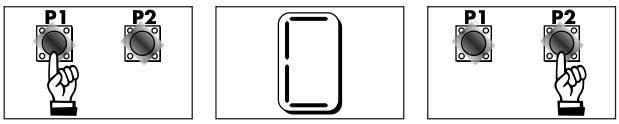
ATTENTION!!!!!! When entering a code already stored, the code will be deleted from the memory of the board.

Parameter C4: courtesy light code

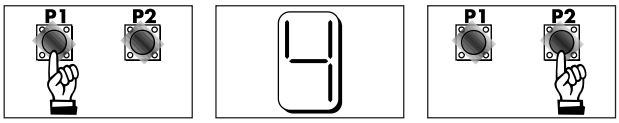
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



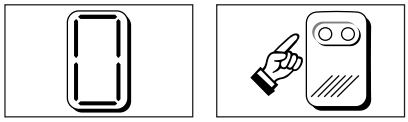
2. Letter A appear on the display. Scroll the menu with P1 until letter C appears on the display. Press P2 to confirm.



3. You should see 1 on the display. Scroll the values with P1 until 4 will appear on the display. Press P2 to confirm.



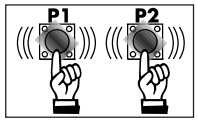
4. You should see 0 on the display. Push the button on the remote to be learned.



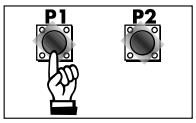
ATTENTION!!!!!! When entering a code already stored, the code will be deleted from the memory of the board.
ATTENTION!!!!!! If the parameter T6 has been set to Open gate pilot light, the courtesy light cannot be operated with the remote control.

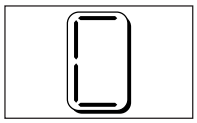
Parameter C5: erasing of all remote control codes

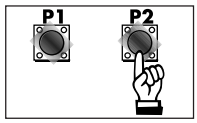
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



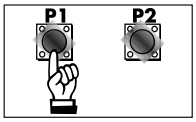
2. Letter A appear on the display. Scroll the menu with P1 until letter C appears on the display. Press P2 to confirm.

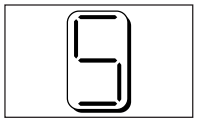


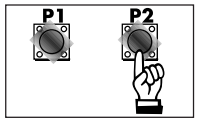




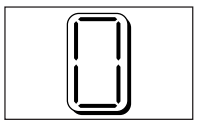
3. You should see 1 on the display. Scroll the values with P1 until 5 will appear on the display. Press P2 to confirm.

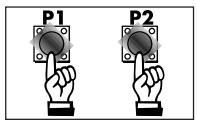






4. You should see 0 on the display. Push the button P1 and P2 simultaneously until the exit from programming mode.





5. All codes are now deleted.

ATTENTION!!!!!! This operation will delete all remote control codes stored in the control board memory.

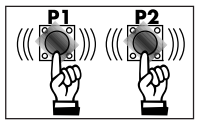
Additional features

The additional features are not necessary for normal operations, but they are very useful in case of particular installations.

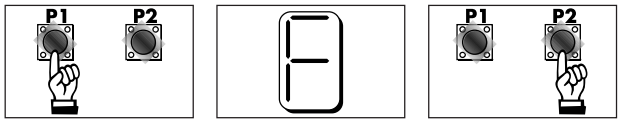
Parameter F1: display clutch status (ON/OFF)

This parameter is used to check if the clutch has been detected or not, during the setting of the work time.

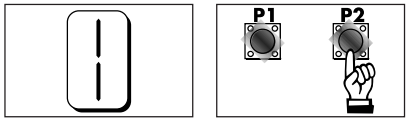
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



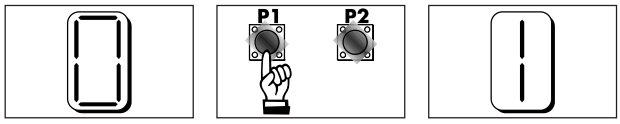
2. Letter A appear on the display. Scroll the menu with P1 until letter F appears on the display. Press P2 to confirm.



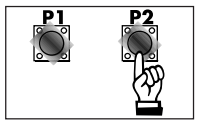
3. You should see 1 on the display. Press P2 to confirm.



4. If on display appear the number 0,the clutch is not enabled.
If on display appears one 1 the encoder is activated.



5. Press P2 to get out

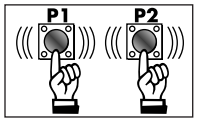


ATTENTION!!!!!! This parameter allows to visualize only the encoder state, not to change it

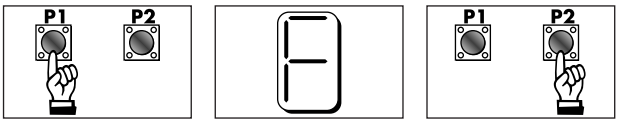
Parameter F2: pre-blinking

It is possible to enable or disable the pre-blinking in the opening and closing phase following the instruction listed below.
Values goes from 0 to 1
0 = pre-blinking OFF
1= pre-blinking ON

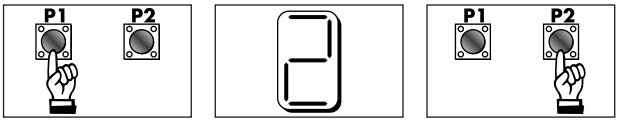
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



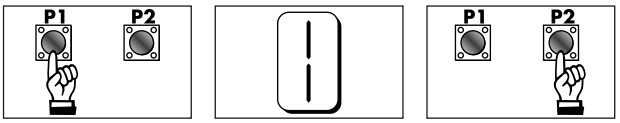
2. Letter A appear on the display. Scroll the menu with P1 until letter F appears on the display. Press P2 to confirm.



3. You should see 1 on the display. Scroll the values with P1 until 2 will appear on the display. Press P2 to confirm.



4. Select the value from 0 to 1 with P1 and press P2 to confirm.

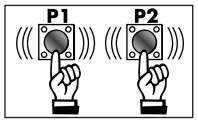


ATTENTION!!!!!! For security reasons the pre-blinking can be excluded only for the opening phase and not for the closing phase. The control board has a default setting of 0 = pre-blinking OFF.

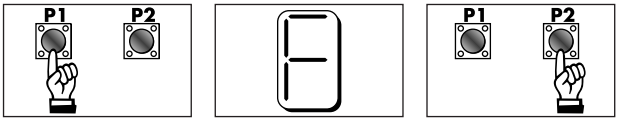
Parameter F3: enable the photocells also during the opening phase

Values goes from 0 to 1
0 = photocells enabled during the closing phase
1= photocells enabled during the closing and the opening phase

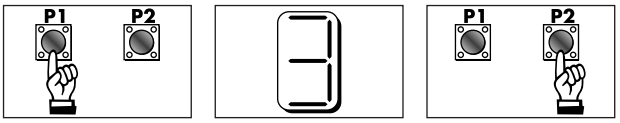
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



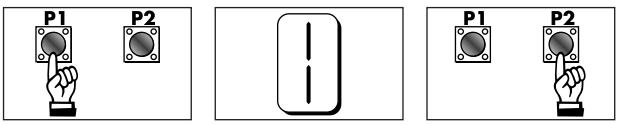
2. Letter A appear on the display. Scroll the menu with P1 until letter F appears on the display. Press P2 to confirm.



3. You should see 1 on the display. Scroll the values with P1 until 3 will appear on the display. Press P2 to confirm.



4. Select the value from 0 to 1 with P1 and press P2 to confirm.



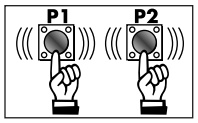
ATTENTION!!!!!! The control board has a default setting of 0 = photocells enabled during the closing phase.

Parameter F4: transform pressure safety device contact in second photocell contact

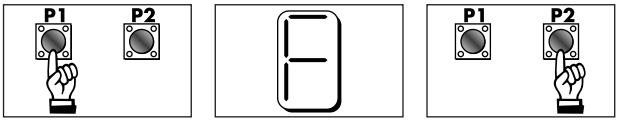
This function transform the costa (PSD) contact in a second contact for photocells enabled also during the opening phase.This option can be used when installing two pairs of photocells, one pair working only during the closing phase and the second pair working during the closing and the opening phase.Furthermore during closure if there is an obstacle between the second pair of photocells the control board will stop the gate and then reverse the movement only when the obstacle is removed.

Values goes from 0 to 1 0 = function OFF 1= function ON

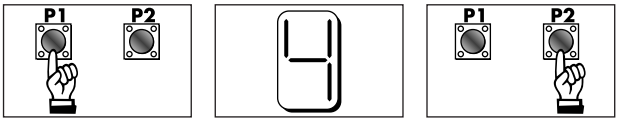
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



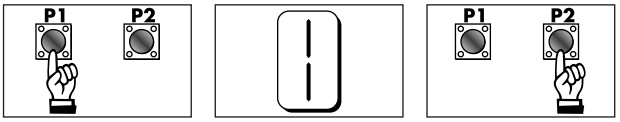
2. Letter A appear on the display. Scroll the menu with P1 until letter F appears on the display. Press P2 to confirm.



3. You should see 1 on the display. Scroll the values with P1 until 4 will appear on the display. Press P2 to confirm.



4. Select the value from 0 to 1 with P1 and press P2 to confirm.



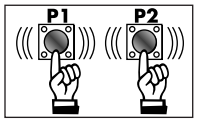
ATTENTION!!!!!! The control board has a default setting of 0 = function OFF.

Parameter F5: transform the “open” contact in “pedestrian open” contact

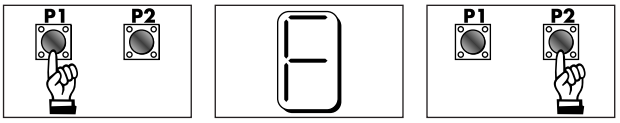
If there is the need of a pushbutton for the pedestrian opening set this option to ON, and connect the push-button to the “open” contacts.

Values goes from 0 to 1 0 = function OFF 1= function ON

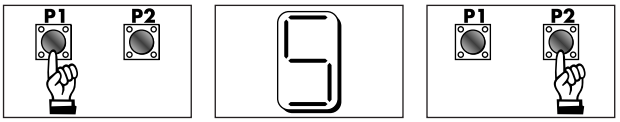
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



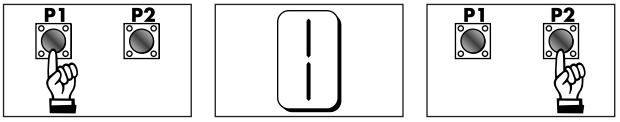
2. Letter A appear on the display. Scroll the menu with P1 until letter F appears on the display. Press P2 to confirm.



3. You should see 1 on the display. Scroll the values with P1 until 5 will appear on the display. Press P2 to confirm.



4. Select the value from 0 to 1 with P1 and press P2 to confirm.

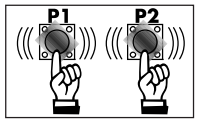


ATTENTION!!!!!! The control board has a default setting of 0 = function OFF.

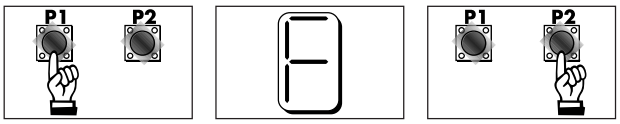
Parameter F6: reset of the control board

This function will reset all parameters to default settings without deleting the remote controls codes.

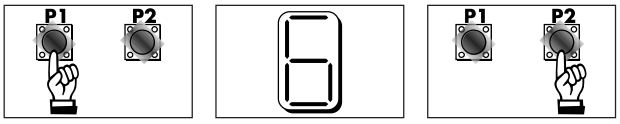
1. Press P1 and P2 simultaneously for three seconds to begin programming the board.



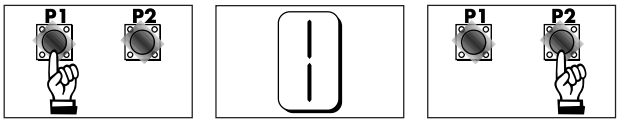
2. Letter A appear on the display. Scroll the menu with P1 until letter F appears on the display. Press P2 to confirm.



3. You should see 1 on the display. Scroll the values with P1 until 6 will appear on the display. Press P2 to confirm.



4. Select the value 1 with P1 and press P2 to confirm the reset.



ATTENTION!!!!!! This operation will not delete the remote control codes.

WARNINGS!!!

OUR COMPANY, AS MANUFACTURER, CAN NOT BE HELD RESPONSIBLE FOR DAMAGES DUE TO WRONG OR MISSING CONN ECTIONS 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:

Our company devices and accessories are for a period 24 months after production, whose date is printed on each item. Our company will replace or repair its devices, provided that they are returned to our plant. In order to check the actual functioning of the returned pieces, they will remain the property of the manufacturer. The warranty does not include demages due to any incorrect use, such as: non-fulfilment of the instruction detailed for each device, maintenance and repairing 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 in case of the customer's non-fulfilment of payment. Each device by our company meets the safety regulations in force (UNI 8612). Our company declines all responsibility for the non-observance of the safety rules by part of the installer.

In order to reduce the time spent for repairing, all faulty materials sent back to us must be accompanied by the installer's comment about the piece.

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