

SIRIO 4-24V

**CONTROL BOARD FOR
SWING GATE
OPERATORS 24V**



**USER
MANUAL**

SW.13

SUMMARY

1. ELECTRIC CONNECTIONS

- . MOTOR
- . MOTOR WITH ENCODER
- . ACCESSORIES

2. BASIC SETTINGS

3. WORKING TIME (AUTOMATIC)

4. WORKING TIME (PROFESSIONAL)

- . WITHOUT ENCODER
- . WITH ENCODER
- . PEDESTRIAN OPENING

5. REMOTE CONTROLS

6. TRIMMERS AND ADJUSTMENTS

7. DIP-SWITCHES

8. EXTERNAL BOARDS

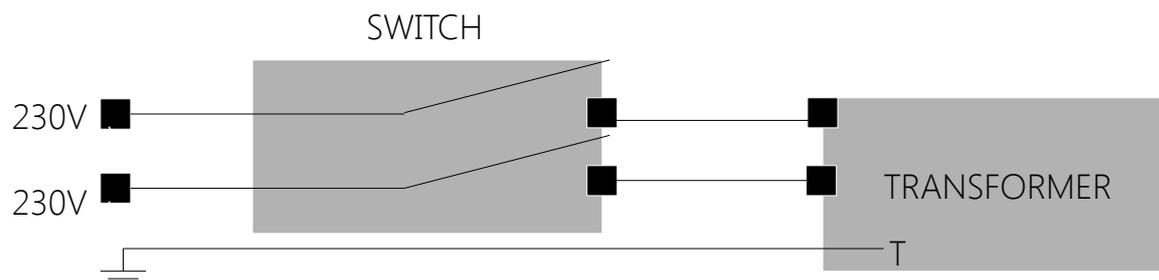
- . BACKUP MEMORY
- . BATTERY CHARGER
- . LIGHTS

9. LEDS

10. CONNETION OF A TIMER \ CLOCK

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!!!



INTRODUCTION

TECHNICAL SPECIFICATIONS

- Double limit switch input open close
- Motor force (speed) adjustable from 50-100%.using a trimmer.
- Softstart (slow motor start)
- 1 to 60" stand-by time adjustment via trimmer.
- 0.1 to 3.0" obstacle detection triggering time adjustment via trimmer.
- Initial settings using dip-switches
- Signalling LEDs
- Expansion for light
- Built in battery charger with solar panel management
- Box predisposed for optional 12V 1.2Ah battery for emergency manoeuvres (max connectable battery 7Ah)
- Built-in 433MHz rolling-code receiver with 200 memorisable codes
- Built to European reference Directive Standards (R&TTE 99/05/CE)

Transformer power supply: 230VAC

Control unit power: 20VAC

Motor output: 24VDC

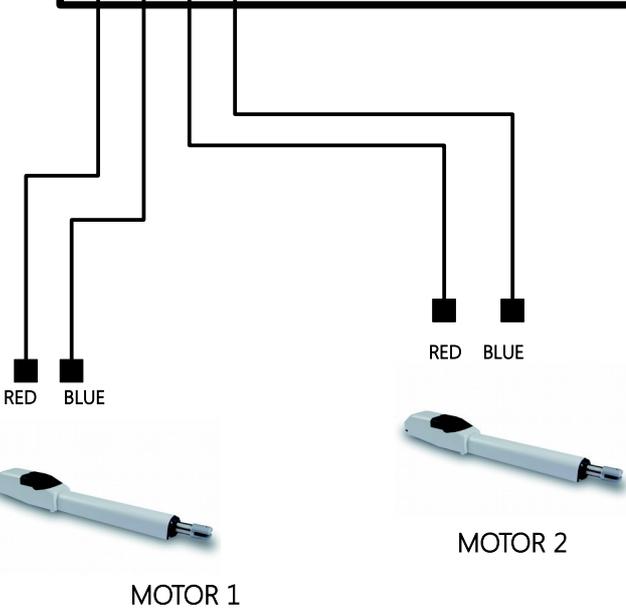
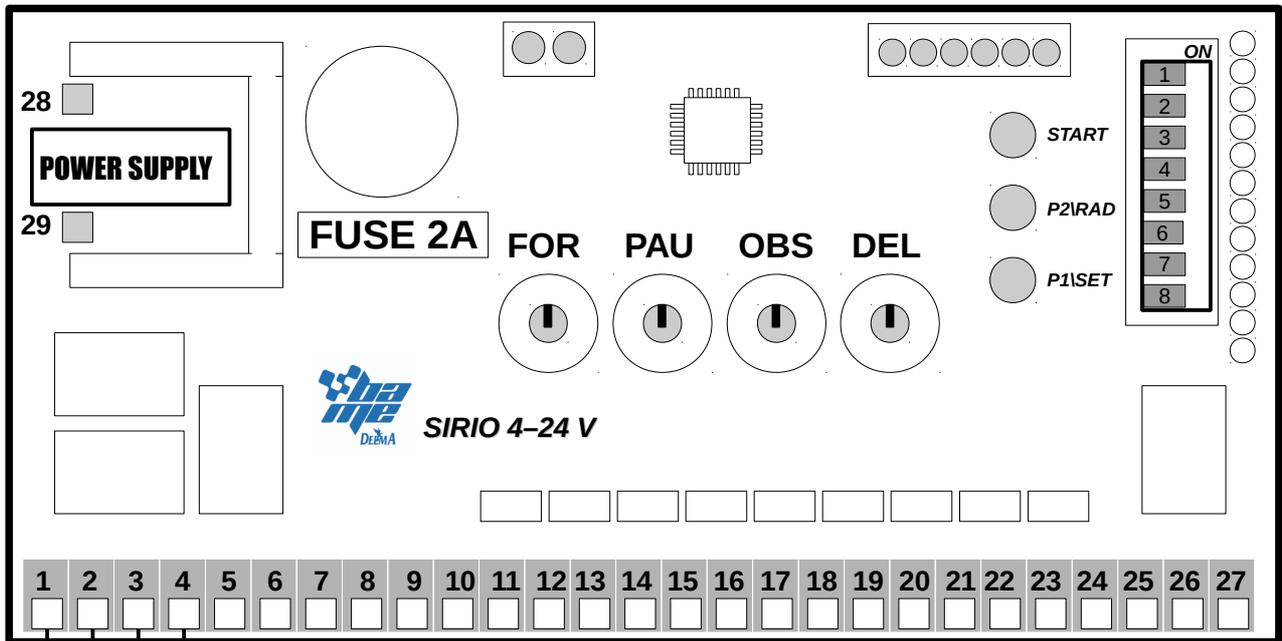
Max current peak of motor: 10 Amperes

Accessories power: 24 VDC - 250 mA protected by fuse

Environmental operating temperature : -20°C / + 55°C

Programming parameters: memorised in EEPROM

1. ELECTRIC CONNECTIONS - MOTOR



IN CASE OF SINGLE WING, CONNECT ONLY THE FIRST MOTOR. THE BOARD AUTOMATICALLY RECOGNISE THE PRESENCE OF ONLY 1 MOTOR

DIP 4 OFF

ELECTRIC CONTACTS - MOTOR

| | | |
|-------|--------------|--------------------|
| 28-29 | POWER SUPPLY | POWER SUPPLY 24VCC |
| 1-2 | MOTOR | 1. RED 2. BLUE |

MOTOR 1

MOTOR 2

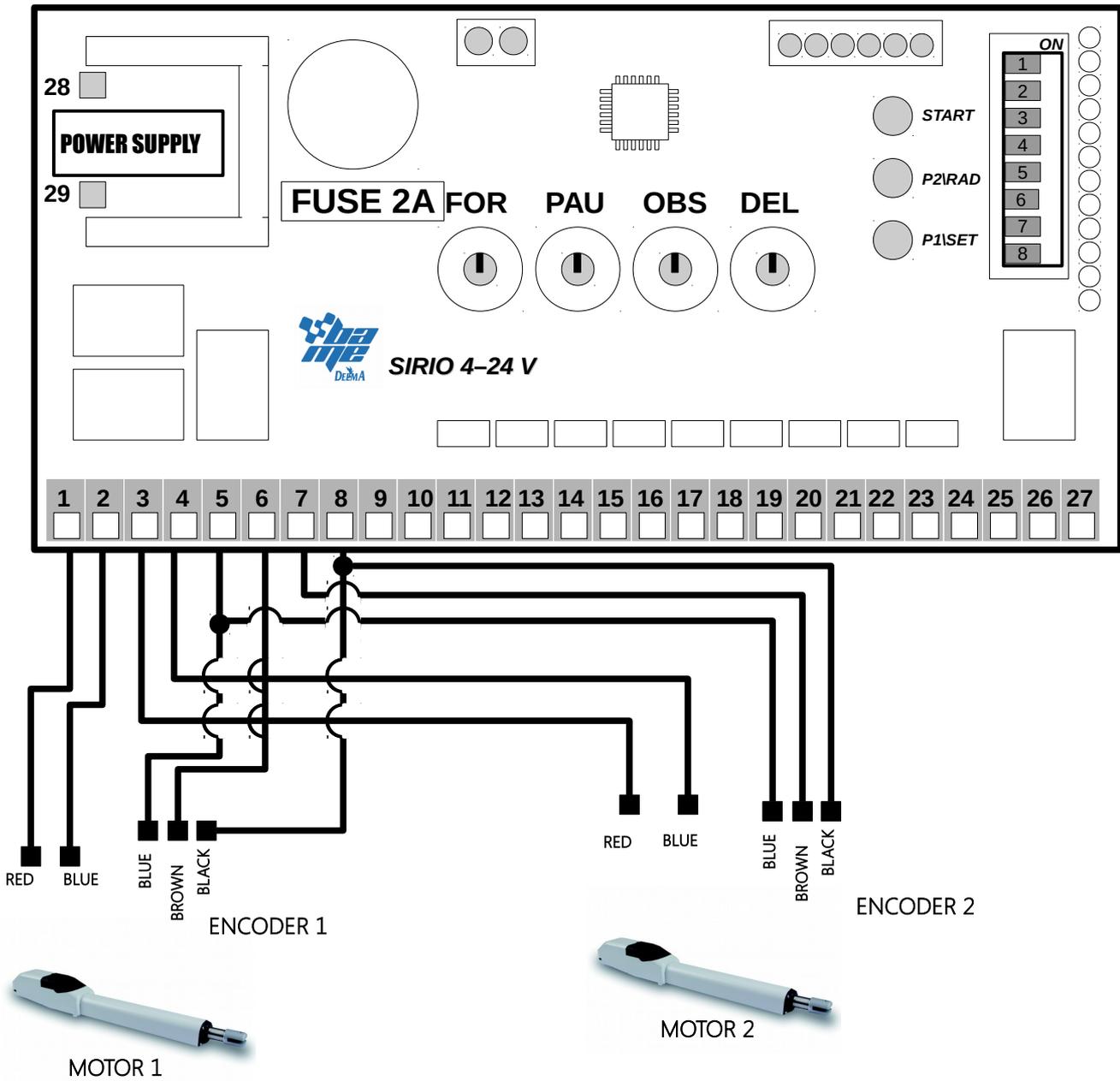
| | | |
|-------|--------------|--------------------|
| 28-29 | POWER SUPPLY | POWER SUPPLY 24VCC |
| 3-4 | MOTOR | 3. RED 4. BLUE |

!!! ATTENTION !!!

FOR THE SECOND MOTOR
CONNECTION TO THE BOARD
IT IS MANDATORY TO USE
CABLES WITH MIN. SIZE OF 2,5
mmq

IF NOT USED INSERT A JUMPER
BEETWEEN:
. STOP : 21 – 22
. SAFETY EDGE : 19 – 22
. PHOTOCELLS : 20 - 22

1. ELECTRIC CONNECTIONS – MOTOR WITH ENCODER



DIP 4 ON

IN CASE OF SINGLE WING, CONNECT ONLY THE FIRST MOTOR. THE BOARD AUTOMATICALLY RECOGNISE THE PRESENCE OF ONLY 1 MOTOR

ELECTRIC CONTACTS - MOTOR

| | | |
|-------|--------------|---------------------------------|
| 28-29 | POWER SUPPLY | POWER SUPPLY 24VCC |
| 1-2 | MOTOR 1 | 1. RED 2. BLUE |
| 5-6-8 | ENCODER 1 | 5. BLUE 6. BROWN 8. BLACK |

MOTOR 1

MOTOR 2

| | | |
|-------|--------------|---------------------------------|
| 28-29 | POWER SUPPLY | POWER SUPPLY 24VCC |
| 3-4 | MOTOR 2 | 3. RED 4. BLUE |
| 5-7-8 | ENCODER 2 | 5. BLUE 7. BROWN 8. BLACK |

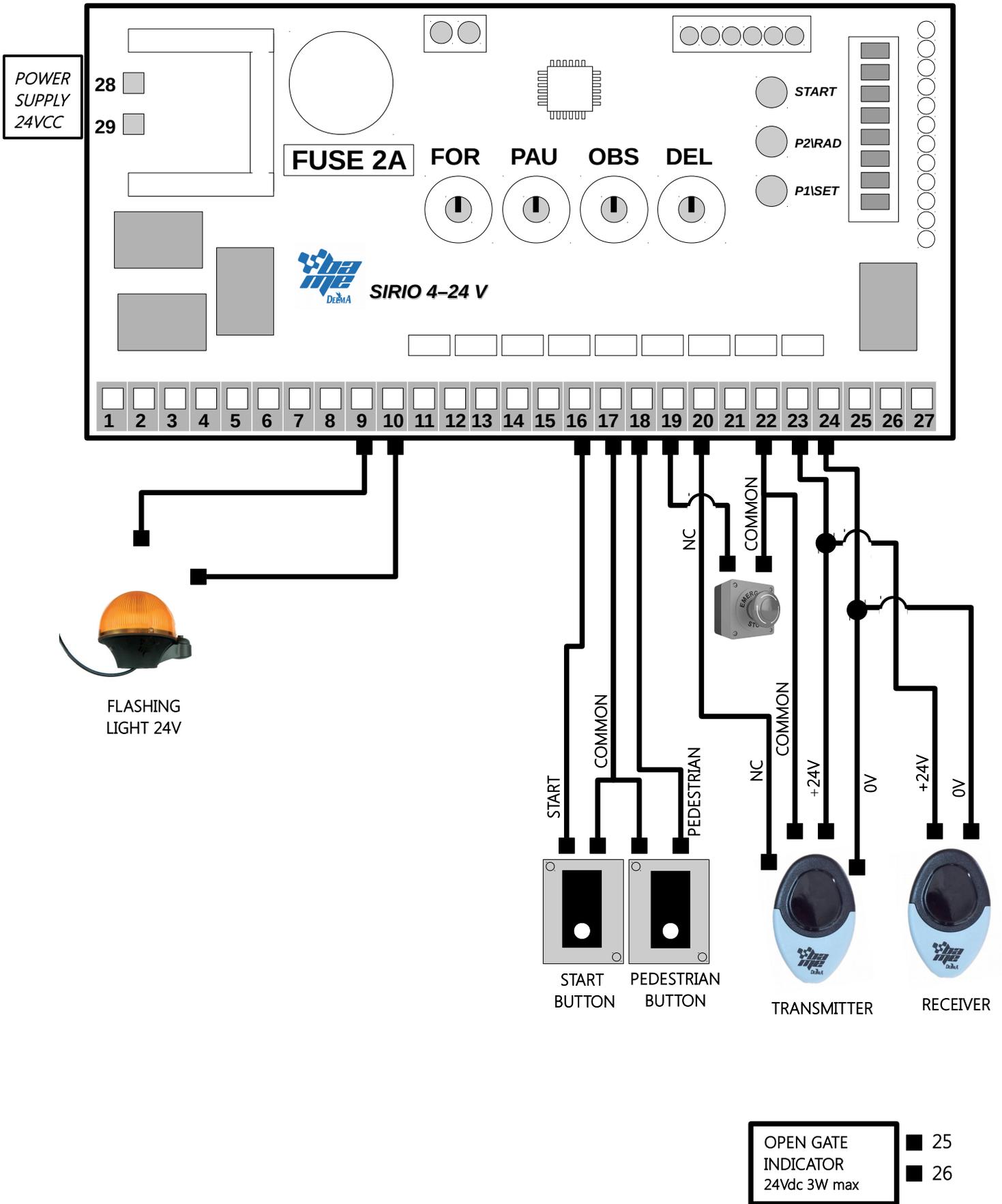
!!! ATTENTION !!!

FOR THE ENCODER SETTINGS,
SWITCH ON DIP 4

IF NOT USED INSERT A JUMPER
BEETWEEN:

- . STOP : 21 – 22
- . SAFETY EDGE : 19 – 22
- . PHOTOCELLS : 20 - 22

1. ELECTRIC CONNECTIONS - ACCESSORIES

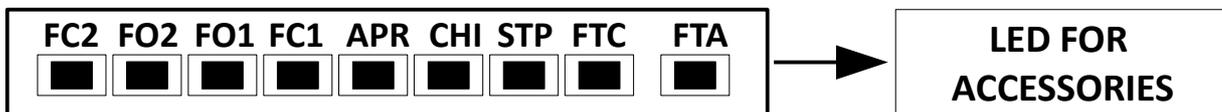
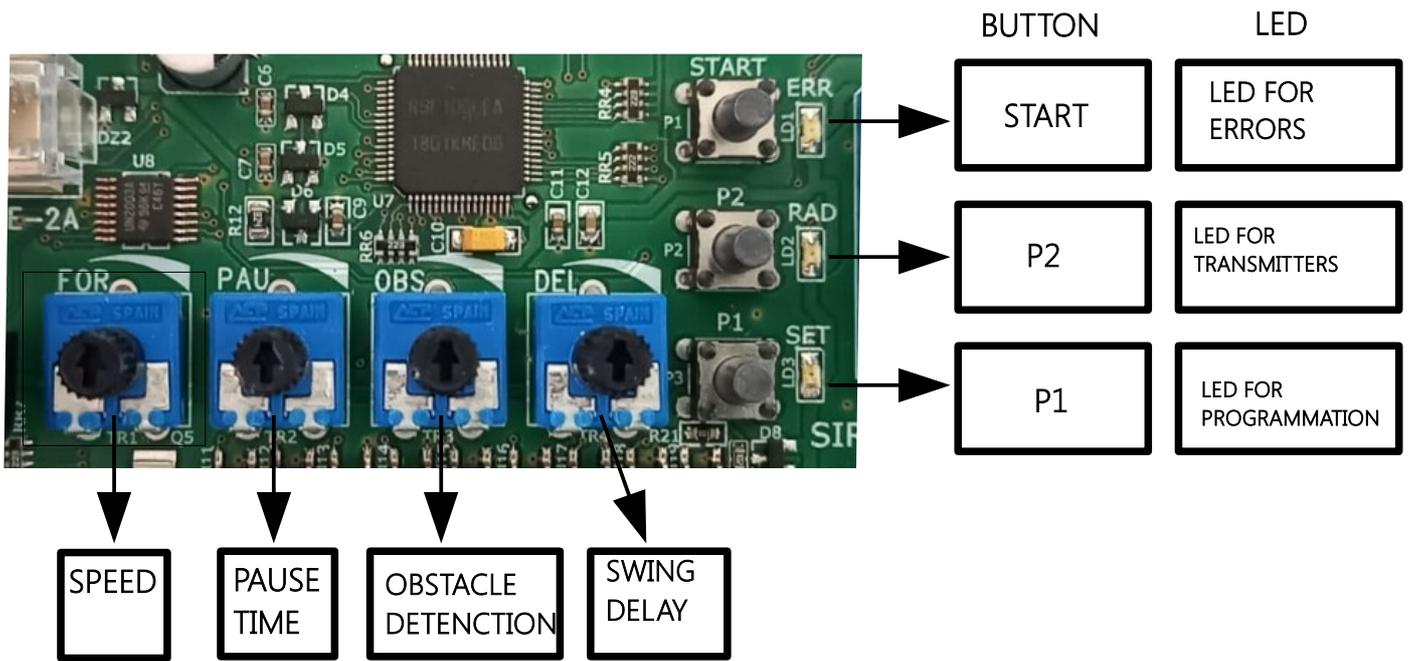


ELECTRIC CONTACTS - ACCESSORIES

| | | |
|-------|---|---|
| 9-10 | FLASHING LIGHT 24Vcc | 9. +24 Vdc FLASHING LIGHT 10. -24 Vdc FLASHING LIGHT |
| 16-17 | KEY SWITCH | 16. START 17. COMMON |
| 18-17 | PEDESTRIAN OPENING BUTTON | 18. START 17. COMMON |
| 19-22 | EMERGENCY STOP (INSERT A JUMPER IF NOT USED) | 19, STOP (NC) 22. COMMON |
| 20-22 | PHOTOCELLS (INSERT A JUMPER IF NOT USED) | 20. PHOTOCELLS (NC) 22. COMMON |
| 21-22 | PRESSURE SAFETY DEVICE (INSERT A JUMPER IF NOT USED) | 21. (NC) 22. COMMON |
| 23-24 | PHOTOCELLS POWER SUPPLY 24VCC | 23. + 24Vcc 24. - 24Vcc |
| 25-26 | OPEN GATE INDICATOR | 25. + OPEN BARRIER INDICATOR 26. - 24Vdc 3W max |
| 27 | ANTENNA | 27. ANTENNA |

**AT THE END OF ALL CONNECTION OPERATIONS
 CHECK THE LED
 STOP – FTC – FTA
 THEY MUST BE ACTIVATED**

2. BASIC SETTINGS



FC2 = CLOSING LIMIT SWITCH MOTOR 2

FO2 = OPENING LIMIT SWITCH MOTOR 2

F01 = OPENING LIMIT SWITCH MOTOR 1

FC1 = CLOSING LIMIT SWITCH MOTOR 1

APR = START (NO)

CHI = PEDESTRIAN (NO)

STP = EMERGENCY STOP (NC)

FTC = PHOTOCELLS (NC)

FTA = SAFETY EDGE (NC)

3. WORKING TIME

AUTOMATIC learning
Slow down is setted by the board

DIP 4 OFF

| | |
|---|--|
| 1 | RELEASE THE 2 LEAVES AND MOVE THE GATE IN THE MIDDLE |
| 2 | PRESS AND KEEP PRESSED P1\SET BUTTON FOR 5 SECONDS |
| 3 | THE YELLOW LED START BLINKING RELEASE THE BUTTON |
| 4 | IN 3 SECONDS PRESS AGAIN THE BUTTON P1\SET |
| 5 | THE 2 LEAVES PERFORM A BRIEF REDUCED SPEED OPENING (If motor turns in reverse invert wires and start procedure again from the beginning.) |
| 6 | THE 2 LEAVES PERFORM A REDUCED SPEED CLOSING UNTIL THE LIMIT SWITCH |
| 7 | THE 2 LEAVES PERFORM A NORMAL SPEED OPENING MOVEMENT UNTIL THE LIMIT SWITCH |
| 8 | THE 2 LEAVES PERFORM A NORMAL SPEED CLOSING MOVEMENT UNTIL THE LIMIT SWITCH |
| 9 | AUTOMATIC LEARNING PROCEDURE FINISHED |

!!! ATTENTION !!!

WITH ENCODER IS MANDATORY TO DO THE PROFESSIONAL PROGRAMMATION

!!! ATTENTION !!!

ADJUST TRIMMERS IF NECESSARY

!!! ATTENTION !!!

A trimmer variation "FOR" (speed) requires the repetition of the learning procedure from The beginning (vary the manoeuvre time).

4.WORKING TIME

PROFESSIONAL learning

Slow down is setted by the operator

IT IS MANDATORY TO PROGRAM 1 REMOTE CONTROL

DIP 4 OFF

| | |
|-----|---|
| 1 | RELEASE THE 2 LEAVES AND MOVE THE GATE IN THE MIDDLE |
| 2 | PRESS AND KEEP PRESSED P1\SET BUTTON FOR 5 SECONDS |
| 3 | THE YELLOW LED START BLINKING RELEASE THE BUTTON |
| 4 | IN 3 SECONDS PRESS AGAIN THE BUTTON P2\RAD |
| 5 | THE 2 LEAVES PERFORM A BRIEF REDUCED SPEED OPENING (If motor turns in reverse invert wires and start procedure again from the beginning.) |
| 6 | THE 2 LEAVES PERFORM A REDUCED SPEED CLOSING UNTIL THE MECHANICAL STOP |
| 7 | . AUTOMATICALLY THE FIRST LEAF PERFORM A NORMAL SPEED OPENING MOVEMENT . WHEN THE ARMS REACH THE POINT FOR THE DESIRED SLOW DOWN PRESS P1 OR THE REMOTE CONTROL . THE ARMS REACH THE MECHANICAL STOPPER |
| 8 | . SECOND LEAF START AUTOMATICALLY TO OPEN . WHEN THE ARMS REACH THE POINT FOR THE DESIRED SLOW DOWN PRESS P1 OR THE REMOTE CONTROL . THE ARMS REACH THE MECHANICAL STOPPER |
| 9 | SECOND LEAF START AUTOMATICALLY TO CLOSE . WHEN THE ARMS REACH THE POINT FOR THE DESIRED SLOW DOWN PRESS P1 OR THE REMOTE CONTROL . THE ARMS REACH THE MECHANICAL STOPPER |
| 10 | FIRST LEAF START AUTOMATICALLY TO CLOSE . WHEN THE ARMS REACH THE POINT FOR THE DESIRED SLOW DOWN PRESS P1 OR THE REMOTE CONTROL . THE ARMS REACH THE MECHANICAL STOPPER |
| 11. | PROFESSIONAL LEARNING PROCEDURE FINISHED |

4.WORKING TIME with ENCODER

PROFESSIONAL learning

Slow down is setted by the operator

IT IS MANDATORY TO PROGRAM 1 REMOTE CONTROL

DIP 4 ON

| | |
|-----|---|
| 1 | RELEASE THE 2 LEAVES AND MOVE THE GATE IN THE MIDDLE |
| 2 | PRESS AND KEEP PRESSED P1\SET BUTTON FOR 5 SECONDS |
| 3 | THE YELLOW LED START BLINKING RELEASE THE BUTTON |
| 4 | IN 3 SECONDS PRESS AGAIN THE BUTTON P2\RAD |
| 5 | THE 2 LEAVES PERFORM A BRIEF REDUCED SPEED OPENING (If motor turns in reverse invert wires and start procedure again from the beginning.) |
| 6 | THE 2 LEAVES PERFORM A REDUCED SPEED CLOSING UNTIL THE MECHANICAL STOP |
| 7 | . THE FIRST LEAF PERFORM A NORMAL SPEED OPENING MOVEMENT . WHEN THE ARMS REACH THE POINT FOR THE DESIRED SLOW DOWN PRESS P1 OR THE REMOTE CONTROL . WHEN THE ARMS REACH THE DESIRED STOP POINT PRESS P1 OR THE REMOTE CONTROL |
| 8 | . SECOND LEAF START AUTOMATICALLY TO OPEN . WHEN THE ARMS REACH THE POINT FOR THE DESIRED SLOW DOWN PRESS P1 OR THE REMOTE CONTROL . WHEN THE ARMS REACH THE DESIRED STOP POINT PRESS P1 OR THE REMOTE CONTROL |
| 9 | SECOND LEAF START AUTOMATICALLY TO CLOSE . WHEN THE ARMS REACH THE POINT FOR THE DESIRED SLOW DOWN PRESS P1 OR THE REMOTE CONTROL . THE ARMS REACH THE MECHANICAL STOPPER IN CLOSING POSITION . PRESS P1 OR THE REMOTE CONTROL TO STOP THE MOTOR |
| 10 | FIRST LEAF START AUTOMATICALLY TO CLOSE . WHEN THE ARMS REACH THE POINT FOR THE DESIRED SLOW DOWN PRESS P1 OR THE REMOTE CONTROL . THE ARMS REACH THE MECHANICAL STOPPER IN CLOSING POSITION . PRESS P1 OR THE REMOTE CONTROL TO STOP THE MOTOR |
| 11. | PROFESSIONAL LEARNING PROCEDURE FINISHED |

4.WORKING TIME – PEDESTRIAN OPENING

PEDESTRIAN OPENING learning

IT IS MANDATORY TO PROGRAM 1 REMOTE CONTROL

| | |
|---|--|
| 1 | RELEASE THE 2 LEAVES AND MOVE THE GATE TO THE CLOSING POSITION |
| 2 | MOVE DIP NR. 5 TO ON POSITION |
| 3 | PRESS AND KEEP PRESSED P1\SET BUTTON FOR 5 SECONDS |
| 4 | . THE YELLOW LED START BLINKING . RELEASE THE BUTTON |
| 5 | IN 3 SECONDS PRESS THE BUTTON P2\RAD |
| 6 | PRESS THE BUTTON ON THE REMOTE CONTROL |
| 7 | THE LEAF START TO OPEN |
| 8 | . AT THE DESIRED POINT, PRESS THE REMOTE CONTROL TO STOP THE GATE . AUTOMATICALLY THE GATE RECLOSE UNTIL THE MECHANICAL STOPPER |
| 9 | LEARNING PROCEDURE FOR PEDESTRIAN OPENING IS FINISHED |

!!!ATTENTION!!!

IN CASE OF RESETTING OR REPROGRAMMING THE BOARD, THE INSTALLER HAS
TO REPEAT THE PEDESTRIAN OPENING PROGRAMMATION

5. REMOTE CONTROLS

MEMORISE ONE REMOTE CONTROL START\STOP

| | |
|-----|--|
| 1 | PRESS THE BUTTON P2 ON THE BOARD |
| 2 | THE RAD LED LIGHTS UP |
| 3 | PRESS THE DESIRED BUTTON ON THE REMOTE CONTROL |
| 4 | RAD LED PERFORMS 4 FLASHES TO INDICATE THAT THE REMOTE IS MEMORISED |
| 4.B | RAD LED BECOME RED MEMORISE ALL THE REMOTE CONTROLS BY FOLLOWING ISTRUCTIONS FROM THE POINT 3 |
| 5 | PRESS P2 FOR 2 SECONDS |
| 6 | REMOTE CONTROLS PROGRAMMATION FINISHED |

MEMORISE ONE REMOTE CONTROL FOR PEDESTRIAN OPENING

| | |
|-----|--|
| 1 | SET DIP 5 TO ON |
| 2 | PRESS THE BUTTON P2 ON THE BOARD |
| 3 | THE RAD LED LIGHTS UP |
| 4 | PRESS THE DESIRED BUTTON ON THE REMOTE CONTROL |
| 4.B | RAD LED PERFORMS 4 FLASHES TO INDICATE THAT THE REMOTE IS MEMORISED |
| 5 | RAD LED BECOME RED MEMORISE ALL THE REMOTE CONTROLS BY FOLLOWING ISTRUCTIONS FROM THE POINT 3 |
| 6 | PRESS P2 FOR 2 SECONDS |
| 7 | SET DIP 5 TO OFF |
| 8 | REMOTE CONTROLS PROGRAMMATION FINISHED |

DELETE REMOTE CONTROLS MEMORY

| | |
|---|---|
| 1 | PRESS THE BUTTON P2 ON THE BOARD |
| 2 | RED LED FLASHES |
| 3 | PRESS AND KEEP PRESSED P2 FOR 5 SECONDS |
| 4 | RED LED START FLASHING FASTLY |
| 5 | RED LED SWITCHES OFF |
| 6 | MEMORY DELETED |

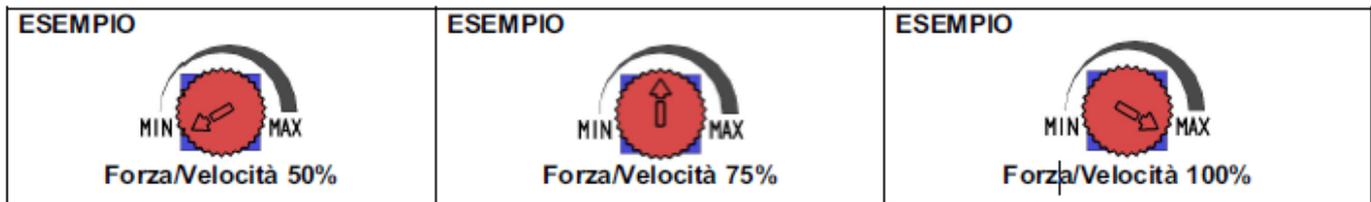
6. TRIMMERS AND ADJUSTMENTS

TRIMMER "FOR" - MOTOR SPEED

Trimmer "FOR" adjusts the voltage applied to the motors during operations, which means adjusting the speed of the motors. With the trimmer turned fully counter-clockwise the speed of the motor is 50% of the maximum speed.

With the trimmer at half travel the speed of the motor is 50% of the maximum speed.

ATTENZIONE: Changing the setting of trimmer "FOR" requires repeating the learning procedure, since the travel times and the slow-down start times change.



TRIMMER "PAU" - PAUSE TIME

Switch the dip-switch 6 to OFF and the dip-switch 7 to ON.

Set the "PAU" trimmer in an intermediate position according to the pause time desired. The pause time can be set between 3 and 60 seconds and is increased by rotating the trimmer clockwise.



TRIMMER "OBS" - OBSTACLE SENSITIVITY DETECTION

The "OBS" TRIMMER is used to adjust at the same time the delay time of intervention after an obstacle has been detected and the threshold of the counter-force against the operator necessary to trigger the intervention. Both the counter-force and the delay time increase when the trimmer is turned clockwise. The delay time can be adjusted between 0.1 and 3 seconds. This function is useful to overcome any critical points of the operator which cause a higher power absorption by the motor for a short time.



TRIMMER "DEL"- DELAY BETWEEN MOTORS

The Trimmer "DEL" can be used to adjust the delay between the two motors in opening and closing operations. If the trimmer is turned fully counter-clockwise, the delay is 0 both in opening and in closing, and the two leaved will move together. In all the other positions of the trimmer, the delay in opening is 3 seconds and the delay in closing varies from 0 to 15 seconds according to the position of the knob.



7. DIP-SWITCHES

| | | |
|---|-----|---|
| 1 | ON | MOTOR STRIKE FOR ELECTRIC LOCK ENABLED |
| | OFF | MOTOR STRIKE FOR ELECTRIC LOCK DISABLED |
| 2 | ON | DO NOT TOUCH – MANUFACTURER SETTINGS |
| | OFF | DO NOT TOUCH – MANUFACTURER SETTINGS |
| 3 | ON | PRESSURE SAFETY DEVICE NC DETENTION |
| | OFF | PHOTOCELLS WORK ALSO DURING OPENING |
| 4 | ON | MOTOR'S ENCODER ENABLED |
| | OFF | MOTOR'S ENCODER DISABLED |
| 5 | ON | PEDESTRIAN OPENING SETTINGS ENABLED |
| | OFF | PEDESTRIAN OPENING SETTINGS DISABLED |
| 6 | ON | STEP BY STEP MODE |
| | OFF | OPEN MODE |
| 7 | ON | AUTOMATIC CLOSURE ENABLED |
| | OFF | AUTOMATIC CLOSURE DISABLED |
| 8 | ON | OPEN GATE ALERT DISABLED |
| | OFF | OPEN GATE ALERT ENABLED |

4. : If enabled, on the clamp 16-17 connect one NO button for OPEN, on clamp 17-18 one NO button for close

6. The logic is OPEN\STOP\CLOSE\STOP

For the open mode, the barrier will accept only an Open command.

8. if enabled, the board offers 1 contact for the OPEN GATE ALERT (24Vdc 3W max).

It is flashing during opening and closing movements.

It is switched on when the gate is opened

It is switched off when the gate is closed

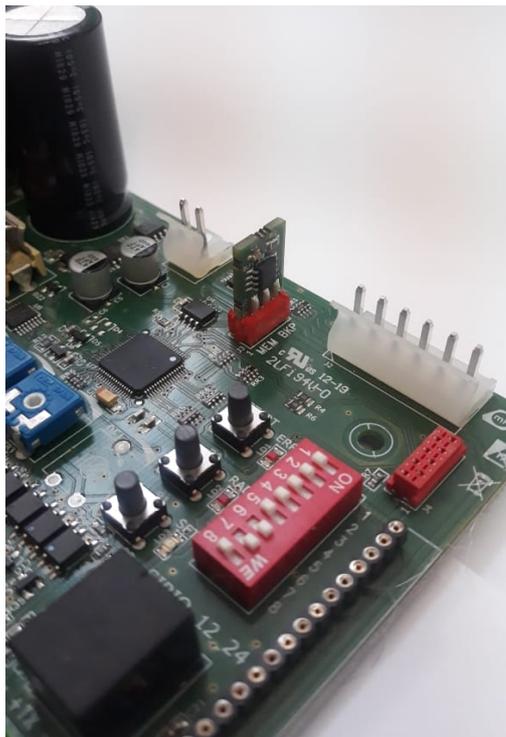
MAN PRESENT MODE

DIP 6 = OFF

DIP 7 = OFF

The buttons OPEN\CLOSE must be pressed until reaching the open\close limit switch

8. EXTERNAL BOARDS



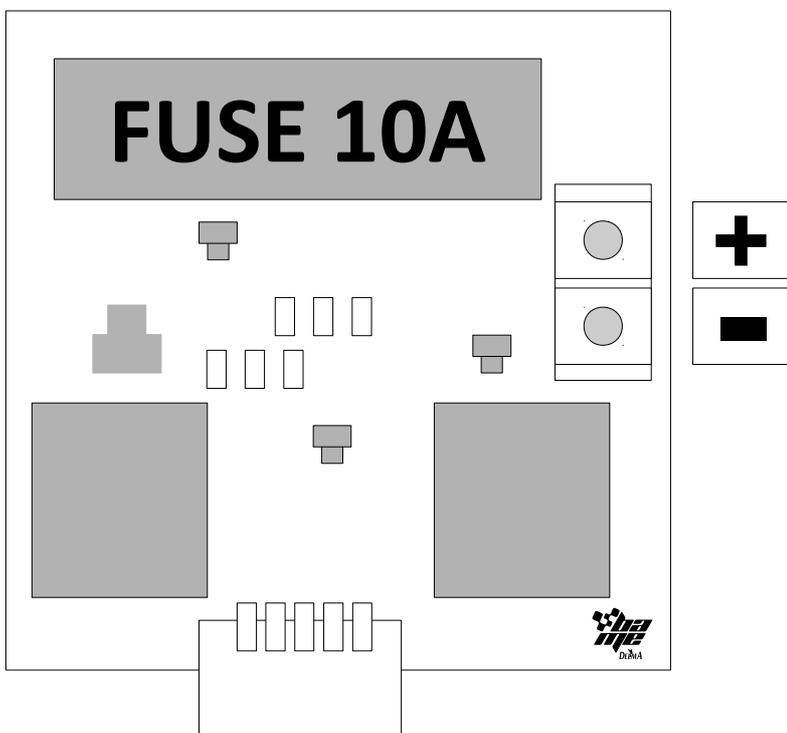
BACKUP MEMORY

Inside there are all remote controls code and working time.

Everytime one new remote control is memorized, automatically it is transferred to the backup memory

TRANSFER ALL DATA FROM THE BACKUP MEMORY

- . Remove power supply
- . Insert backup memory
- . Give power to the board
- . When all the leds are off, press and keep pressed the button P1 for 5 sec. Automatically the board check the memory and transfers the contents



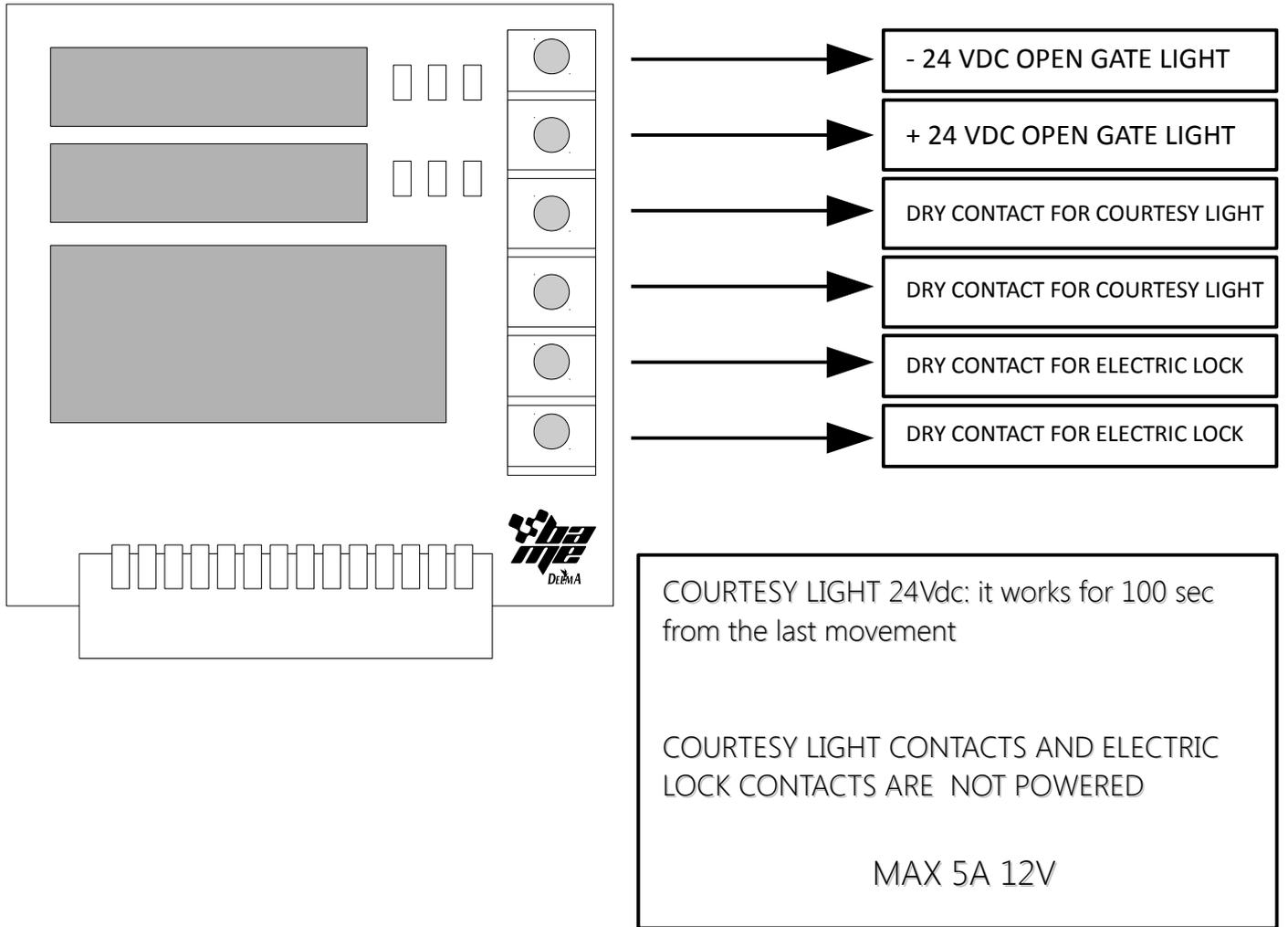
!! RESPECT THE POLARITY !!

BATTERY CHARGER

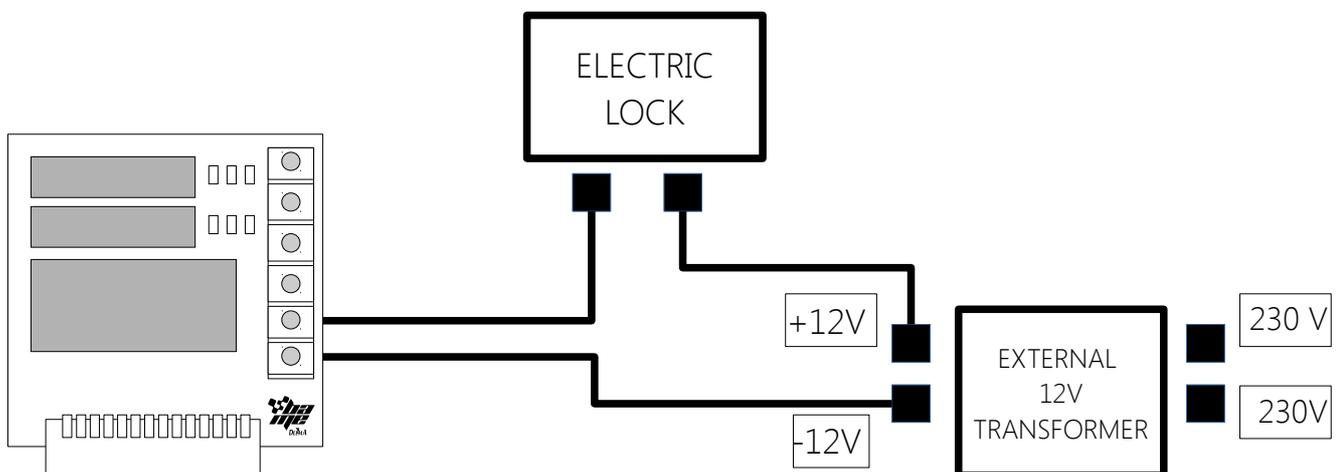
The SIRIO 4 – 24 V control unit is fitted with an automatic 13.7VDC battery charger, for which a 12V battery must be used, even for 24VDC motors. In this case, when there is no mains power the gate will travel at half normal speed and the accessories will be powered at 12VDC. The 12V 1.2Ah buffer battery allows a maximum of 5 reduced-speed manoeuvres should the mains power supply be cutoff (as long as the interruption occurred less than 24 hours earlier). The control unit can manage batteries up to 7Ah (20-30 complete manoeuvres). The flashing light, when present, only functions for the first 4 seconds of the manoeuvre. A solar panel can be directly connected to the control unit with a current regulator. The solar panel input is already protected by a diode.

8. EXTERNAL BOARDS

LIGHTS BOARD



ELECTRICK LOCK CONNECTIONS



9. LEDS

Yellow led SET:

- flashes for 5 seconds when turned on to indicate that it is possible to enter the Professional or Simplified Learning modes.
- lights up with a fixed light while Professional or Simplified Learning are carried out.
- is turned off when the control unit functions normally.

Red led ER:

- is turned off during normal control unit operations
- is alight (fixed light) when the control unit is blocked because it has failed the safety test or a motor is disconnected

Red led RAD:

- flashes briefly when a 433 MHz Multipass radio code is received
- is alight (fixed light) when radio codes are being memorised
- flashes rapidly when the control unit is switched on and the radio code memory is defective
- flashes rapidly during the cancellation of radio codes
- flashes slowly when there is an attempt to memorise new radio codes and the memory is full
- is switched off when the control unit is functioning normally and waiting to receive a command via radio.

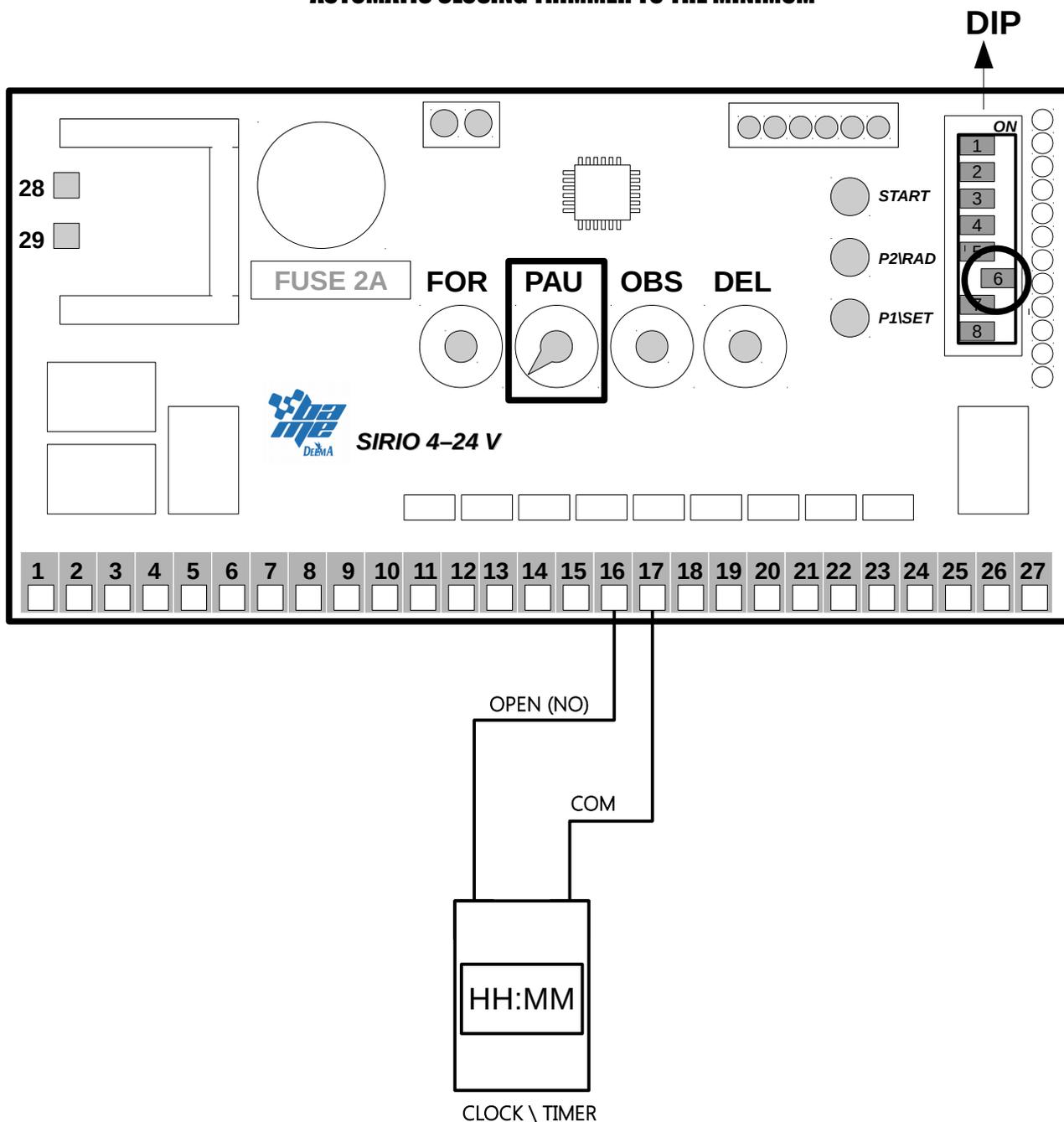
!!!ATTENTION!!!

IN CASE THE OPERATOR RELEASE THE MOTOR AND OPEN IT MANUALLY
BE SURE, WHEN LOCK AGAIN, TO SET THE GATE IN THE SAME POSITION AS
IT WAS BEFORE RELEASE OPERATION

10. CONNECTION OF A TIMER \ CLOCK

This function allow to connect a clock\timer to keep the gate opened for a range of time e close it when the switch will be released, by automatic closing

To enable this function, set the
DIP 6 ON
AUTOMATIC CLOSING TRIMMER TO THE MINIMUM



WARNING

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, ASTENING 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 fulfilment 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 fulfilled. 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.



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