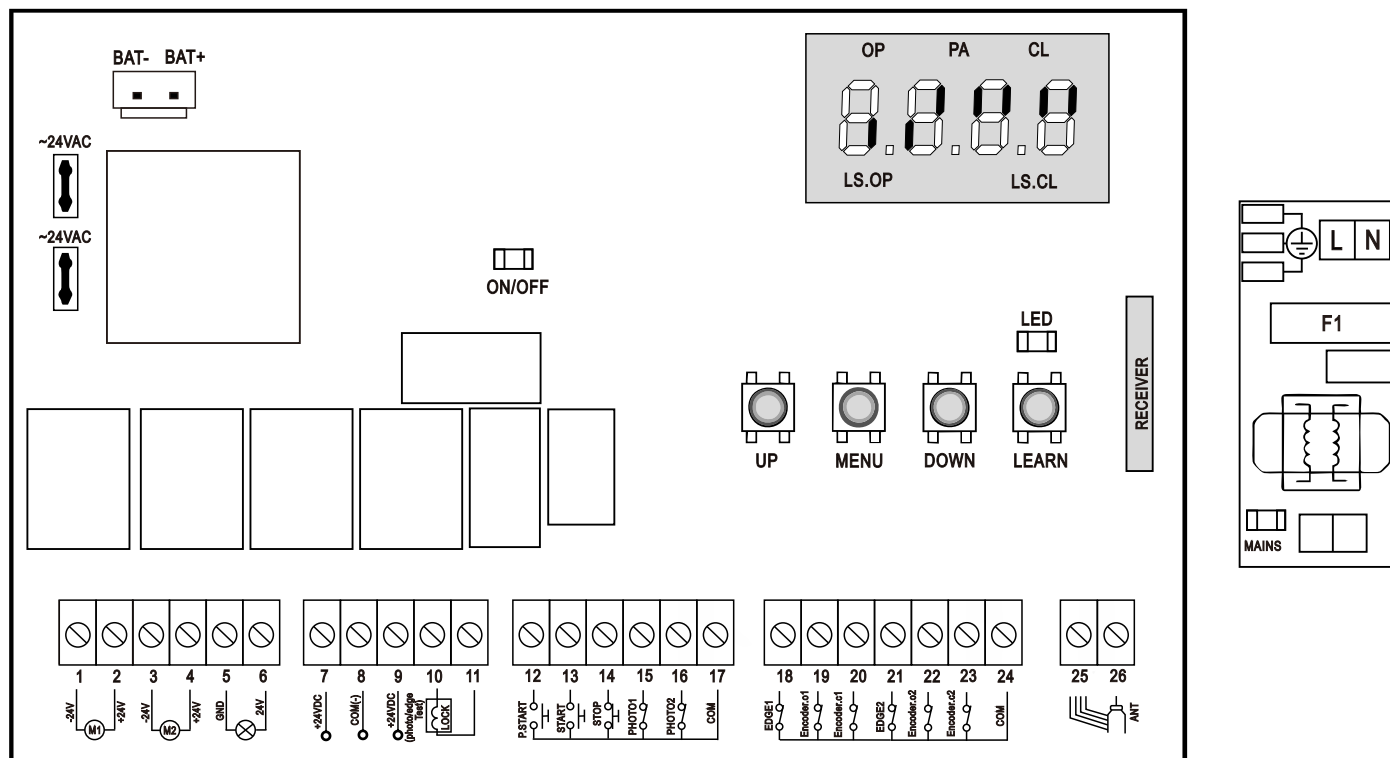




1	Motor 1 (-)	
2	Motor 1 (+)	
3	Motor 2 (-)	
4	Motor 2 (+)	
5-6	24V courtesy light or flashing light	
7	Power output 24Vdc for photocells and other accessories	
8	Common for accessories power supply	
9	Photocell/Edge TX power supply for functional test	
10-11	Electric Lock 12V	
12	PEDESTRIAN START command N.O. contact	
13	START command N.O. contact	
14	STOP command N.C. contact	
15	Photocell 1 N.C. contact	
16	Photocell 2 N.C. contact	
17	Common (-)	
18	Safety ribbon 1 (fixed) N.C. contact	
19	Motor 1 open limit switch N.C. contact	Motor 1 Encoder
20	Motor 1 close limit switch N.C. contact	

21	Safety ribbon 2 (mobile) N.C. contact	
22	Motor 2 open limit switch N.C. contact	Motor 2 Encoder
23	Motor 2 close limit switch N.C. contact	
24	Common (-)	
25	Antenna shield	
26	Antenna	
~24VAC	Transformer/toroidal secondary input	
BAT+	+ pole of the optional battery pack	
BAT-	- pole of the optional battery pack	
ON/OFF	It shows that the control unit is power on	
LED	It shows that the control unit learn function	
LS.OP	It shows that open limit switch activation	
LS.CL	It shows that close limit switch activation	
OP	Opening in process	
PA	Pause (gate opened)	
CL	Closing in process	

L	Power phase 230 VAC
N	Neutral 230 VAC
MAINS	It shows that the control unit is power supplied

MOTORS

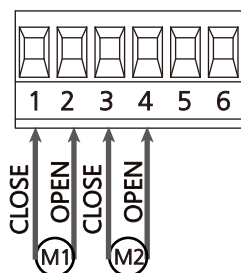
The control unit can control one or two 24V DC motors.

During the opening phase, motor **M1** is started first, motor **M2** starts after the time set for the parameter **[r.RP]** (opening delay). During the closing phase, motor **M2** is started first, motor **M1** starts after the time set for the parameter **[r.Ch]** (closing delay).

The time set for the parameters **[r.RP]** and **[r.Ch]** are used to avoid the doors colliding. If necessary, change the default values by accessing the programming menu:

NOTE: If the control unit needs to control one motor only, the cables must be connected to terminals of motor **M1**.

1. Connect motor **M1** cables as follows:
 - opening cable to terminal **2**
 - closing cable to terminal **1**
2. Connect motor **M2** cables as follows:
 - opening cable to terminal **4**
 - closing cable to terminal **3**



WARNING: In case motor **M2** is not connected, set menu **[L.RP2]** to **[0.0"]**.

CONTROL OF THE CORRECT PROCESS OF CLOSING LEAVES

If the control unit detect a wrong overlap action (leaf 1 reach the complete closed position before leaf 2). the gate is opened a slight distance so that it can close correctly.

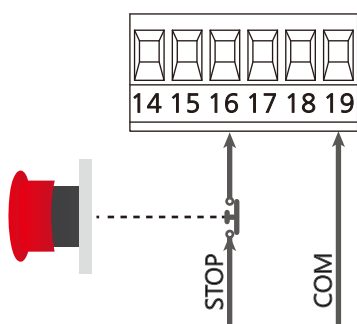
If the leaves do not overlap (e.g. in double swing gate), set to zero the opening door delay parameter in order to disable the control of the right closing process.

STOP

For more safety, you can install a STOP switch, when pressed, immediately stops the automation. The switch must have normal closed contact, when contact open it will active.

Connect the cables of the STOP switch between terminals **14 (STOP)** and **17 (COM)** of the control unit.

► To active the function, change the setting **[5LoP]**



NOTE: in case the stop switch is operated while the gate is open, the automatic closing function will always be disabled. To close the gate again, you will need a **START** command (if the start function in pause is disabled, it will be temporarily enabled to allow the gate release).

The stop switch function also can be active by press remote control **channel 3** which already stored on the control unit.

ACTIVATION INPUTS

The control unit have two activation input (**START** and **P.START**), which operation depends on the programmed operation modes **[5LrE]**.

Standard mode **[5LrE]**

START = START (it controls the total opening of the gate)

P.START = PEDESTRIAN START (it controls the partial opening of the gate)

Open/Close command **[RPCh]**

START = OPENING (it controls the opening of the gate)

P.START = CLOSING (it controls the closing of the gate)

Dead man operation **[PrES]**

START = OPENING (it controls the opening of the gate)

P.START = CLOSING (it controls the closing of the gate)

Timer mode **[orol]**

The function allows programming the gate opening time control by connect with an external timer.

START = START (it controls the total opening of the gate)

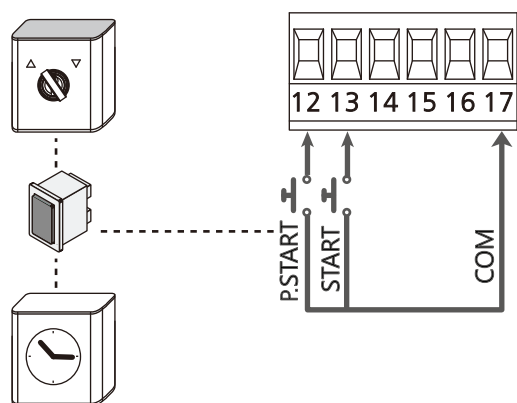
P.START = PEDESTRIAN START (it controls the partial opening of the gate)

The gate keep opening when the contact of the **START** or **P.START** keep closed; as soon as the contact release opened, the pause time count down will start, after pause time is finished, the gate will be closed again.

CAUTION: Automatic closing must be enable. (parameter **[Ch.RU]**)

NOTE: in all modes, input must be connected to devices having normal open contacts.

Connect cables for the first control device input between terminals **13 (START)** and **17 (COM)** of the control unit. Connect cables for the second control device input between terminals **12 (P.START)** and **17 (COM)** of the control unit.



The **START** function can also be active by pressing **UP** key in the control unit or by press remote control **channel 1** which already stored on the control unit.

The **P.START** function can also be active by press **DOWN** key in the control unit or by press remote control **channel 2** which already stored on the control unit.

PHOTOCELLS

The control unit can use with two kinds of photocells, depend on the terminal to which they are connected:

Photocell 1

Photocells installed on the gate inner side, which are active during the opening and the closing phase.

When photocell 1 interrupted, the control unit stops the gate; as soon as the photocell signal received, the control unit will open the gate completely.

WARNING: Photocell 1 must be installed so that it completely protect the gates working area.

Photocell 2

Photocells installed on the gate outer side, which are active during the closing phase only.

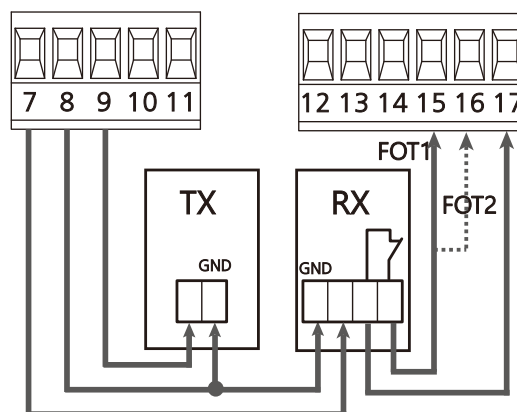
When photocell 2 interrupted, the control unit opens the gate immediately, without waiting photocell signal received.

The control unit supply a 24VDC power supply to photocells and it can perform a photocell test operation before starting the gate in opening phase.

NOTE: Photocell power terminals are protected by an electronics fuse that stops working in case of overload.

WARNING: The sensor cables must not be installed with the same conduit of the motor cables.

- Connect power supply cables of photocell transmitter between terminals **9** and **8** of the control unit.
- Connect power supply cables of photocell receiver between terminals **7** and **8** of the control unit.
- Connect the N.C. terminals of the photocell receivers of the **PHOTOCELL 1** between terminals **15** and **17**.
 - ▶ To active the function, change the setting [**F0E1**].
- Connect the N.C. terminals of the photocell receivers of the **PHOTOCELL 2** between terminals **16** and **17**.
 - ▶ Function is active on closing phase or gate is closed. To active the function, change the setting [**F0E2**].



WARNING:

- If several couples of same kind photocells are mounted, their outputs must be connected in series.
- In case of reflection photocells, power supply must be connected to terminals **9** and **8** of the control unit to carry out the operation test.

SAFETY EDGES

The control unit can use with two kinds of safety edges, depend on the terminal to which they are connected.

Safety Edge 1 (fixed)

They are mounted on walls or on other fixed obstacles that are approached by the gate doors allow working area.

When **safety edge 1** operate during the gate opening phase, the control unit will close the doors for 3 seconds then standstill; When **safety edge 1** operate during the gate closing phase, the control unit will standstill immediately.

The direction of the gate at next command of **START** or **PEDESTRIAN START** depends on the [**S0P**] setting (it reverse or continues of the last movement).

If the input **STOP** is disabled, the command makes the motion continue in the same direction. If the **STOP** input is disabled, the control unit restarts motion in the same direction it was traveled prior to the intervention of the edge.

Safety Edge 2 (mobile)

They are mounted to the door ends.

When **safety edge 2** operate during the gate opening phase, the control unit will standstill immediately; when **safety edge 2** operate during the gate closing phase, the control unit will open the doors for 3 seconds, then it will standstill.

The direction of the gate at next command of **START** or **PEDESTRIAN START** is depends upon the parameter **STOP** (it reverse or continue the motion). If the input **STOP** is disabled, the command makes the motion continue in the same direction. If the **STOP** input is disabled, the control unit restarts motion in the same direction it was traveled prior to the intervention of the edge.

Both the input can manage the classic safety edge with N.C. contact and the conductive rubber safety edge with 8.2Kohm normal resistance.

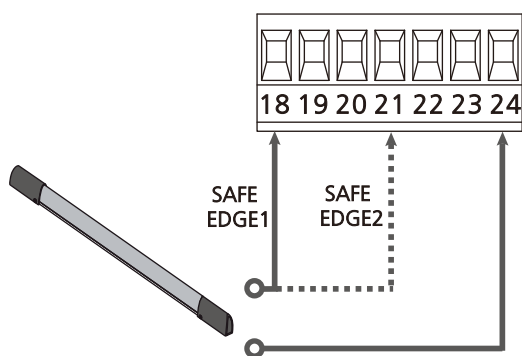
Change the setting [**C0S1**] and [**C0S2**] depend on the type of installed side of cables.

Contact **safety edge 1** cables between terminals **18** and **24**.

▶ To activate the function, change the setting [**C0S1**]

Contact **safety edge 2** cables between terminals **21** and **24**.

▶ To activate the function, change the setting [**C0S2**].



In order to meet the requirements of the EN12978 rules, it is necessary to install safety edges controlled by a control unit continues checking the proper working. If using control unit suited to the test by power outage, connect the power supply cables of the control unit between terminal **9** and **8** of the control unit.

Otherwise, connect them between terminal **7** and **8**.

WARNING:

- Make use of safety edges have outputs with normal close contact.
- Outputs same kind safety edge must be connect in series.

LIMIT SWITCHES

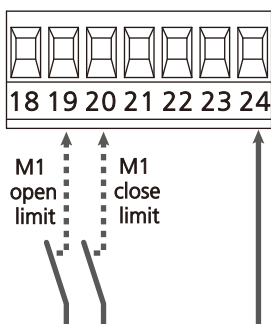
The control unit can control the gate run via limit switches.

The limit switches can used for indicated the limits of the run.

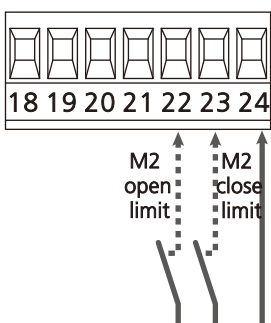
- ▶ To active the function, change the setting [F.C.Er]

Connect the limit switch to the control unit terminals as follow:

- Opening limit switch in door 1 between terminal **19** and **24**.
- Closing limit switch in door 1 between terminal **20** and **24**.



- Opening limit switch in door 2 between terminal **22** and **24**.
- Closing limit switch in door 2 between terminal **23** and **24**.



ENCODER

You can use encoder-equipped motors to control the precise position of the gates. Furthermore, the encoder allow you to detect if the gate panels jam in an improper position due to obstacles.

For correct operation of the encoders, it is essential that both gate leaves have a slight distance near a mechanical stop when in the closed position.

When the control unit power on, the first START command will closes the gate to realign the encoders (if automatic closing is active this operation occurs automatically).

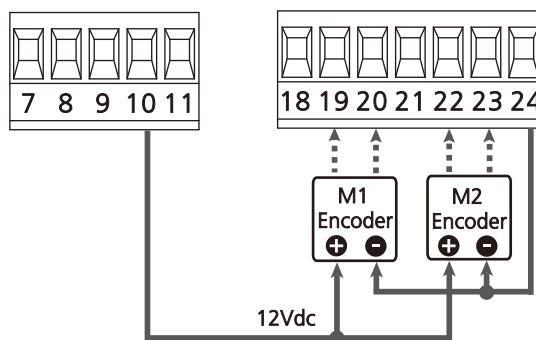
ATTENTION: Limit switches terminals also can connect the encoders. Therefore, it is not necessary connect same terminals with limit switches and encoders.

WARNING: The sensor cables must not be installed with the same conduit of the motor cables.

WARNING: The encoders must be connected as indicated below. Improper connection of the black cable may damage the device.

CONNECTION OF TWO MOTORS WITH ENCODERS

- Connect the negative feeds (BLACK cable) for both encoders to terminal **24**.
- Connect the positive feeds (RED cable) for both encoders to terminal **10**.
- Connect the motor 1 encoder signal cables (BLUE/WHITE) to terminal **19** and **20**.
- Connect the motor 2 encoder signal cables (BLUE/WHITE) to terminal **22** and **23**.
- ▶ To activate the function, change the setting [F.C.Er]



ELECTRIC LOCK

An electric lock can be installed on the gate, to ensure a good closing of doors. Make sure use 12V electric lock.

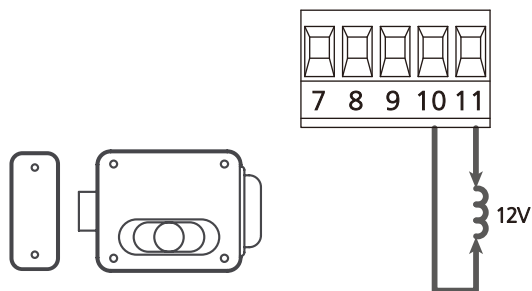
Connect electric lock cables to terminals **11** and **12**

- ▶ To modify the time of the electric lock action, check the follow parameters:

- [t.SEr] lock time
- [t.RSE] advanced lock time

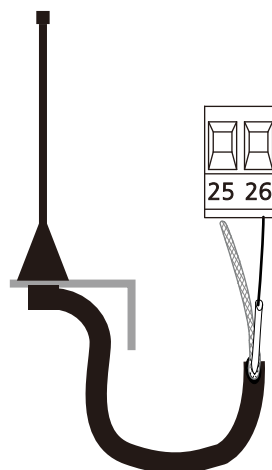
If the electric lock has difficult to lock or release in the early stage, there are functions to facilitate these operations:

- 1. Backlash time:** before starting opening phase, the motors are driven gate closing to facilitate the release of the lock.
 - To active this function, setting the time through [E.INU].
- 2. Fast closing time after slow down:** Once completed the show down stage, the control unit order closing at normal speed (without slow down) to facilitate lock of the gate.
 - To active this function, set the time through [E.CUE].



EXTERNAL ANTENNA

We suggest to use the external antenna in order to guarantee the maximum range.



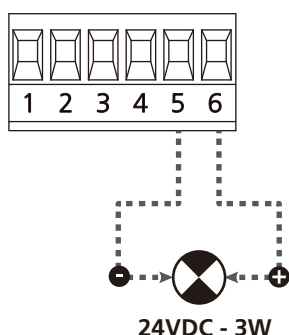
LOW VOLTAGE LIGHT

The control unit has a 24Vdc output that allows connections to a load up to 3W.

This output can be used to connect a signal light that indicates that status of the gate, or for a low voltage flashing light.

Connect the low voltage signal light or flashing light wires to terminal **5** and **6**.

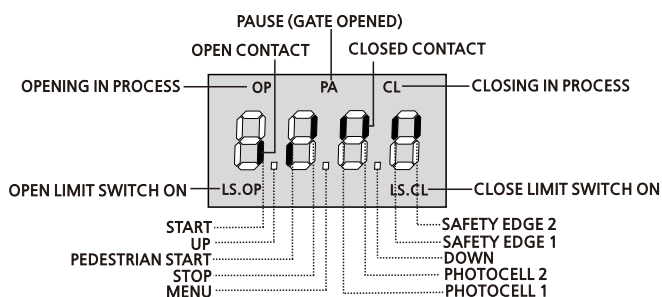
- To activated the function, change the setting of parameter [SP.R]



CAUTION: Pay attention to the polarity of the connected device if necessary.

CONTROL PANEL

When power is on, the control unit checks that display correctly operates by switching on all segments for 1.5 sec. **[8.8.8.8]**. Firmware version, e.g. **[P-1.3]**, will be view in the following 1.5 sec. Panel will be viewed upon completion of this test.



The digits on the display represents the physical status of the terminal board contacts and of the program mode keys ; if the upper vertical segment is on , the contact is close ; if the lower vertical segment is on , the contact is open (the above picture shows an instance where the inputs **START**, **P.START**, **STOP**, **PHOTO1**, **PHOTO2**, **EDGE1** and **EDGE2** have all been correctly connected)

Points being among display digits show the status of programming push-buttons : when a push-button is pressed, the correspond point turns on.

The lowest on the display show the status of the limit switch . For only one gate, **[LS.OP]** turn on when the gate is completely open, **[LS.CL]** turn on when the gate is completely close.

For two gates, **[LS.OP]/[LS.CL]** turn on when both of the gates are completely closed or completely opened.; **[LS.OP]/[LS.CL]** will blink only one gate reach its open or close limit switch.

The highest on the display show the gate status:

- The **[OP]** turns on when the gate run in opening phase. If it blinks, it means that the opening phase has been caused by a safety device or obstacle detect.
- The **[PA]** shows that the gate is on pause. If it blinks, it means that the time countdown for the automatic closing has been activated
- The **[CL]** turn on when the gate is run in closing phase. If it blinks, it means that the closing phase has been caused by a safe device or obstacle detect.

REMOTE LEARN FUNCTION

When press **[LEARN]** switch brief , then press any transmitter button , the **[LED]** will blink 2 times , the control unit now learn the transmitter code , it can learn up to 200 transmitter codes.

When press and hold **[LEARN]** switch over 10 seconds , all the transmitter codes in control board will erase. The **[LED]** will blink 10 times.

When the transmitter button already learned into control unit , the **[LED]** will blink 5 times, the code will not learn into control board.

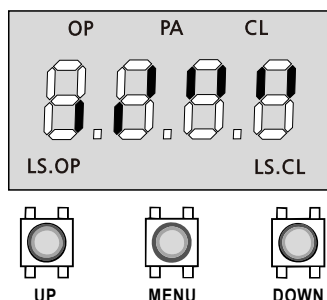


- CHANNEL 1 START
- CHANNEL 2 STOP
- CHANNEL 3 PEDESTRIAN START

TECHNICAL SPECIFICATIONS

Power supply	230V/50Hz
Max motor load	250W
Max load for each motor	150W
Duty cycle	40%
Max accessories load 24V	10W
Working temperature	-20°C ~ +60°C
Protection fuse	F1 = 2.5A

USE OF UP MENU AND DOWN KEYS FOR PROGRAMMING



Programming of the functions and times of the controller is performed using a special configuration menu that is accessed and explored using 3 keys, **UP**, **MENU** and **DOWN**, which are located below the display.

CAUTION: Except in the configuration menu, pressing the **UP** key activates a **START** command and pressing the **DOWN** key activates a **START PEDESTRIAN** command.

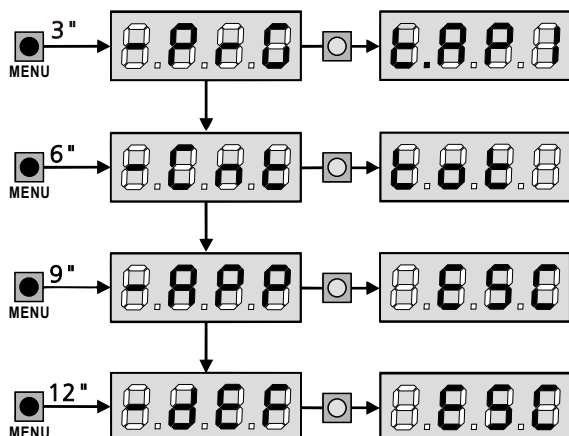
To activate the programming modes (the display must show the control panel), press and hold down the **MENU** key until [-Prg] appears on the display.

Hold down the **MENU** key to scroll through the 4 main menus:

- Prg CONTROLLER PROGRAMMING
- Cnt COUNTERS
- RPP SELF-LEARNING TIME AND FORCE
- dEF LOAD DEFAULT PARAMETERS

● key pressed

○ key released



To enter one of the four main menus, just release the **MENU** key when the menu you want appears on the display.

To move through the four main menus, press the **UP** and **DOWN** keys to scroll through the various items. Press the **MENU** key to display the current value of the selected item and change it if needed.

There are the following three kinds of menu items:

- Function menu
- Time menu
- Digital menu

Function menu setup

Function menus allow to select the available value to setup the function items. When you enter into a function item, the store value will be showed; you can scroll all available value through **UP** or **DOWN** key. By press the **MENU** key, you will keep the modify value to current function item and return to the configuration menu.

Time menu setup

Time menus allow setting function items with time parameter. When you enter into a time menu, the store value will be showed; the display mode depends on the current value:

- Time value lower than one minute will show as follow:



When you press **UP** key, current time value increase half a second; vice versa, when you press **DOWN** key, current time value decrease half a second.

- Time value between 1 to 10 minutes will show as follow:



When you press **UP** key, current time value increase 5 seconds; vice versa, when you press **DOWN** key, current time value decrease 5 seconds.

- Time value more than 10 minutes will show as follow:



When you press **UP** key, current time value increase half a minute; vice versa, when you press **DOWN** key, current time value decrease half a minute.

By holding the **UP** key, you can quickly increase the time value to reach the item maximum available value. Vice versa, by holding the **DOWN** key, you can quickly decrease the time value to reach [0.0"].

In some situation, setting the value to [0] means that the correspond function is disable, in this case, [no] will show instead of [0.0"].

By press **MENU** key, you will store the current display value and return to the configuration menu.

Digital menu setup

Digital menu are similar to time menu; however, the available value can be any number.

By holding the **UP** or **DOWN** key, the value will increase or decrease slowly.

QUICK CONFIGURATION

This paragraph concerns a quick procedure to set the control unit and set it at work immediately.

We recommend following these instructions, in order to check quickly the correct operation of control unit, motor and accessories, and then changing the configuration in case of any non-satisfactory parameter.

1. Load the default configuration.

NOTE: The DEFAULT configuration includes photocell connect to the [F0E2] input.

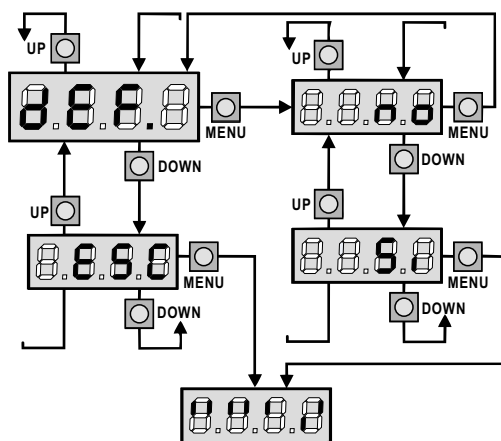
2. Set parameters [SEOP], [F0E1], [F0E2], [C0S1], [C0S2] according to the safety devices installed on the gate.
3. Check the connection of the motors is correct:
 - a. Feed the unit and active the automation with a **START** command: the motors must move in opening phase direction.
 - b. If the direction of the movement is wrong, invert the opening/closing motor cables to adjust move in reverse.
 - c. If the opening sequence of the doors is not correct, invert the connections of the two motors.
4. Start the self-learning cycle.
5. Check that the automation work properly and if necessary modify the configuration of the desired parameters.

LOADING OF DEFAULT PARAMETERS

If necessary, it is possible to restore all the parameters to their standard or default value (see table at the end)

WARNING: This procedure causes the loss of all the customized parameters.

1. Press and hold down the MENU key until the [-dEF] appears on the display
2. Release the MENU key: the display will show [ESC] (press the MENU key only if you want to leave this menu)
3. Press the DOWN key: [dEF.] will appear on the display.
4. Press the MENU key: [no] will appear on the display.
5. Press the DOWN key: [S.] will appear on the display.
6. Press the MENU key: All of the parameters are returned to their default values and the display shows the control panel



OBSTACLE SENSOR OPERATION

Control unit is equipped with a sophisticated system that allows detecting if there is any obstacle stopping the gate motion. This system is based on the measurement of the current absorbed by the motor: a sudden increase of the absorption indicates the presence of an obstacle.

CAUTION: The obstacle sensor is disabled by default and must be enabled using the specific menu items, [SEn1] and [SEn2].

Detection is performed at both normal speed and slow speed. The threshold of the sensor is automatically adjusted.

WARNING: if either the limit switches or the slowing down are disabled, when detected an obstacle the control unit stops the opening or closing phase without inverting the motion.

SELF-LEARNING OF WORKING TIME

This menu allows the automatic learning of the times necessary to open and close the gate.

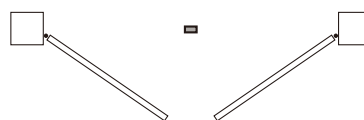
During this phase, the control unit memorizes also the forces necessary to open and close the gate: these values will be activated by using the obstacle sensor.

The encoder positions are also saved, if enabled.

ATTENTION: Before starting the procedure, it is necessary to check the following points:

- Limit switches and encoder: if these devices installed, must be enabled through setting the [FCEn] and [EnCo].
- STANDARD (DEFAULT) operation mode: the [SErE] must be setting [SEEn]

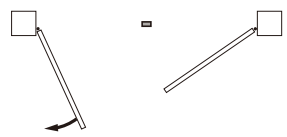
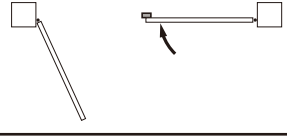
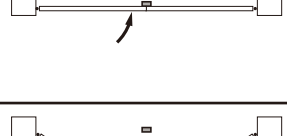
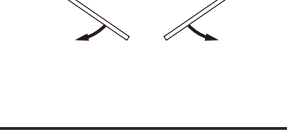
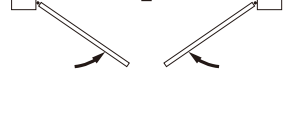
Place the doors, or door, at half run position and proceed with the following points:

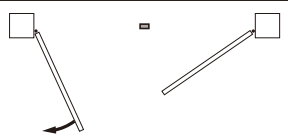
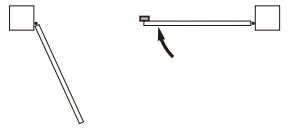
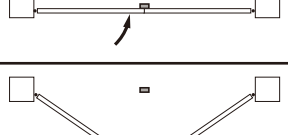
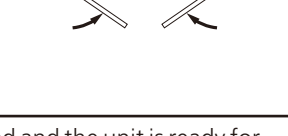


NOTE: If the gate has only one door, the opening time of motor 2 must be set at 0 ([E.RP2] = 0)

1. Press and hold down the **MENU** key until the [-RPP] appears on the display.
2. Release the **MENU** key: the display will show [ESC] (press the **MENU** key only if you want to leave this menu)
3. Press the **DOWN** key: [E. LRU] will appear on the display.
4. Press the **MENU** key to start the self-learning cycle for the work cycle times:

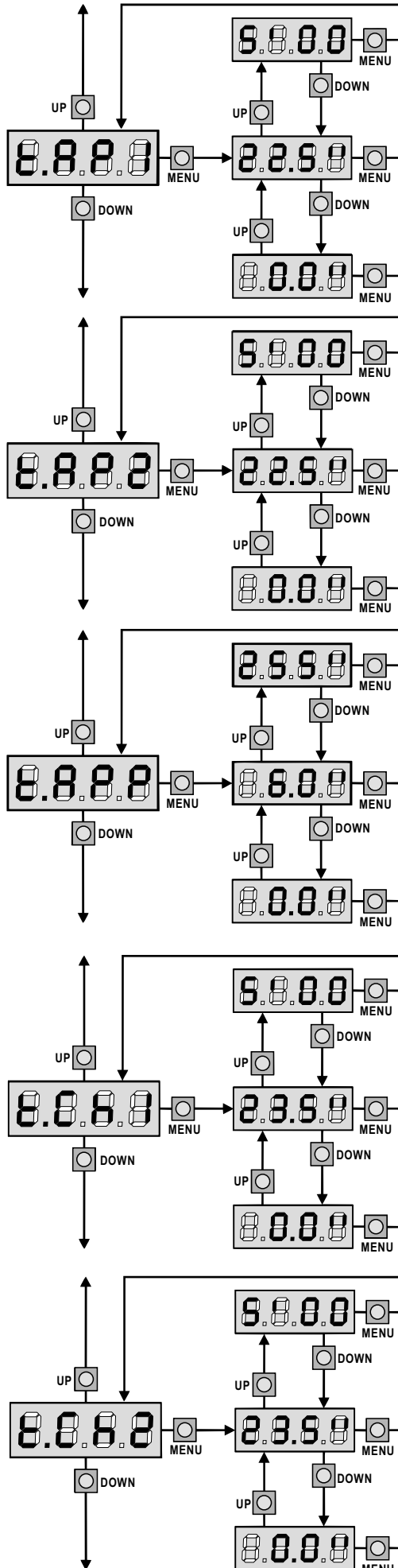
CAUTION: This procedure varies based on the number of gate panel and travel control devices installed (refer to the tables outlined on the following pages).

2 MOTORS (LIMIT SWITCHES OR SENSOR OF OBSTACLES IS ENABLED)	
1. Door 1 is opened for a few seconds	
2. Door 2 is closed until the limit switches comes into action, or the sensor of obstacles detects that the door is locked	
3. Door 1 is closed until the limit switches comes into action, or the sensor of obstacles detects that the door is locked	
4. An opening movement for each door is carried out, the operation ends when the limit switches comes into action, or the sensor of obstacles detects that the door is locked	
5. A closing movement for each door is carried out, the operation ends when the limit switches comes into action, or the sensor of obstacles detects that the door is locked	
6. The display show [SEnI], hold down the DOWN key until [FinE] appear, press MENU key, select [5.] and press MENU key to exit programming and parameters are stored and the unit is ready for use.	

2 MOTORS (NO LIMIT SWITCHES AND SENSOR OF OBSTACLES IS DISABLED)	
ATTENTION: In this case the limits of the run must be operated with a START command	
1. Door 1 is opened for a few seconds	
2. Door 2 is closed until the unit receives a START command	
3. Door 1 is closed until the unit receives a START command	
4. An opening movement is carried out for each door, the operation ends when the unit receives a START command (the first START stops door 1, the second START stops door 2)	
5. A closing movement is carried out for each door, the operation ends when the unit receives a START command (the first START stops door 1, the second START stops door 2)	
6. The detected parameters are stored and the unit is ready for use	

1 MOTOR (LIMIT SWITCHES OR SENSOR OF OBSTACLES IS ENABLED)	
1. The door is closed until the limit switches comes into action, or the sensor of obstacles detects that the door is locked	
2. An opening movement is carried out, the operation ends when the limit switches comes into action, or the sensor of obstacles detects that the door is locked	
3. A closing movement is carried out, the operation ends when the limit switches comes into action, or the sensors of obstacles detects that the door is locked	
4. The display show [SEnI], hold down the DOWN key until [FinE] appear, press MENU key, select [5.] and press MENU key to exit programming and parameters are stored and the unit is ready for use.	

1 MOTOR (NO LIMIT SWITCHES AND SENSOR OF OBSTACLES IS DISABLED)	
ATTENTION: In this case the limits of the run must be operated with a START command	
1. The door is closed until the unit receives a START command	
2. An opening movement is carried out, the operation ends when the unit receives a START command	
3. A closing movement is carried out, the operation ends when the unit receives a START command	
4. The detected parameters are stored and the unit is ready for use	



Leaf 1 opening time

Motor 1 will be operated for the setup time in the opening phase; in case there is an obstacle or the end of stroke operates, the control unit can stop the opening phase before the relevant time expires.

Leaf 2 opening time

Motor 2 will be operated for the setup time in the opening phase; In case there is an obstacle or the end of stroke operates, the control unit can stop the opening phase before the relevant time expires.

WARNING: if motor 2 is not connected, this time must be set to zero; in this circumstance, the control unit will not consider all configurations of motor 2 and door phase difference times as well.

Partial opening time (pedestrian access)

When the control unit receives a **PEDESTRIAN START** command, it will open leaf 1 only, for a shorter time. Max allowed time to be setup is 1 minute.

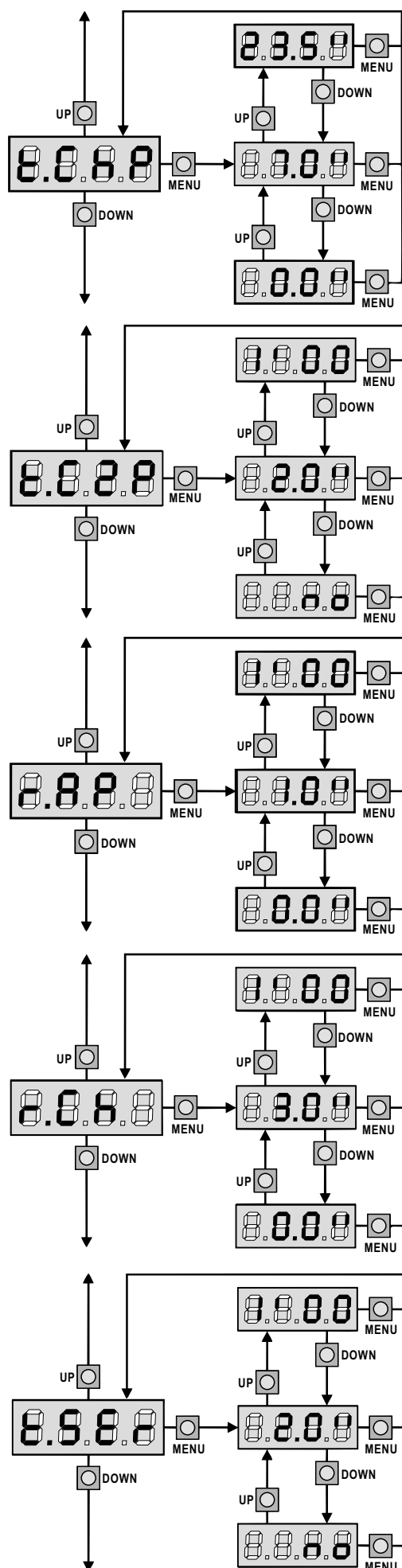
PLEASE NOTE: If [E.RP1] is less than 1 minute, the maximum time that may be set is equal to [E.RP1]

Leaf 1 closing time

Motor 1 will be operated for the setup time in the closing phase; In case there is an obstacle or the end of stroke operates, the control unit can stop the opening phase before the relevant time expires. To avoid that the door does not close completely, we recommend to setup a longer time than [E.RP1] opening time.

Leaf 2 closing time

Motor 2 will be operated for the setup time in the closing phase; the control unit can stop the opening phase before the relevant time expires, in case there is an obstacle or the end of stroke operates. To avoid that the door does not close completely, we recommend to setup a longer time than [E.RP2] opening time.



Partial closing time (pedestrian access)

When the control unit receives a **PEDESTRIAN START** command, it will use this time to close the gate. Max allowed time to be setup is 1 minute. To avoid that the door does not close completely, we recommend to setup a longer time than [E.RPP] opening time. Max allowed time to be setup is 1 minute.

Leaf 2 closing time during pedestrian cycle

During a partial opening cycle (pedestrian access) leaf 2 may move slightly because of the wind or its own weight; in this case at closing time leaf 1 could hit leaf 2 and the gate would remain not perfectly closed.

To avoid this, in the last seconds of the cycle a light closing force is applied to leaf 2 too. If the set time is greater than the time required to close leaf 1, leaf 2 is driven at reduced power all the closing time long.

Opening door delay

During the opening phase, leaf 1 must start moving before leaf 2, to avoid that both doors may collide, Leaf 2 opening will be delayed for the setup time.

If you set the opening door delay to zero, the control board does not execute the control of the correct leaves closing order.

Closing door delay

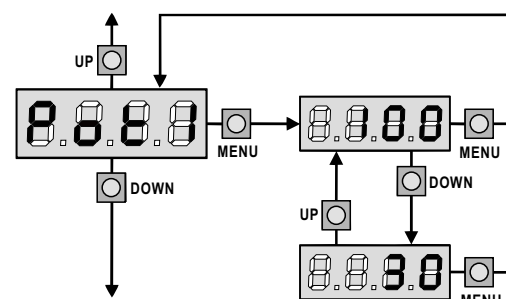
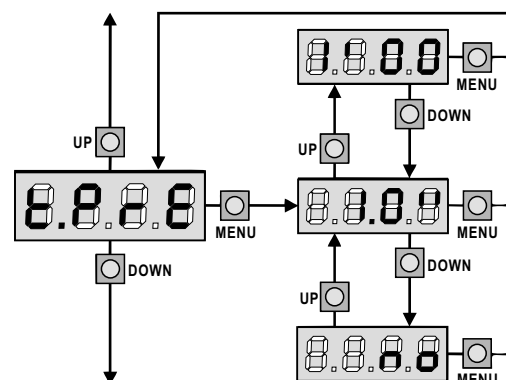
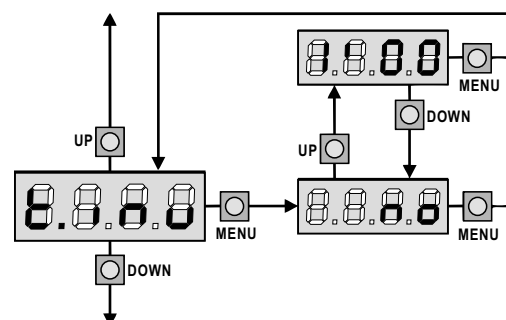
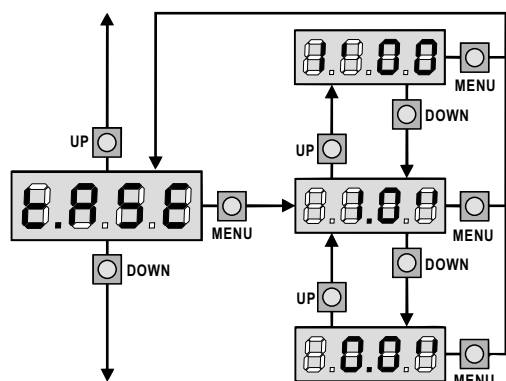
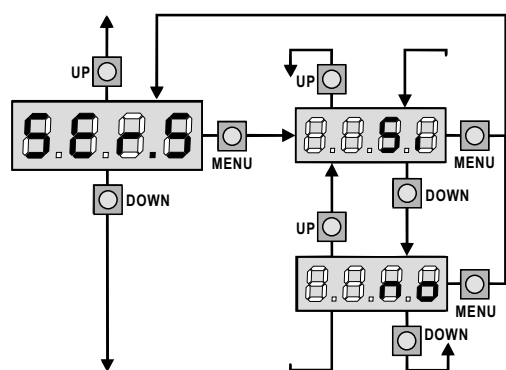
During the closing phase, leaf 1 must start moving after leaf 2, to avoid that both doors may collide. Door 1 closing will be delayed for the setup time.

Lock time

Before the opening phase begins, the control unit will energize the electric lock in order to release it and enable the gate motion.

[E.SEr] time will fix the energizing time.

WARNING: in case the gate has no electric lock, set the value 0 ([no] will appear on display).



Silent Locking Mode

This menu allows you to select the silent operation mode for the electric lock.

- 5, Silent Mode (100Hz)
no Standard Mode(50Hz)

CAUTION: In silent mode, the voltage supplied to the lock has a higher frequency in order to make the locking less noisy.

In some cases, there may be problems when unlocking. If problems should occur, select the Standard mode.

Lock advance time

While the electric lock is energized, the gate will stay standstill for **[1.85E]** time, to make its release easier.

In case [E.85E] is lower than [E.5E7], the lock energizing will go on while the doors will start moving.

WARNING: in case the gate has no electric lock, set the value [0.0"].

Backlash time

It could be useful to give a closing command to motors, to help the electric lock release.

The control unit controls the motors in reduced power in closing direction for the setup time.

The backlash precedes the electric lock release. It is possible to reverse the order by setting a lock advance time higher than the backlash one.

WARNING: in case the gate has no electric lock, set the value [no].

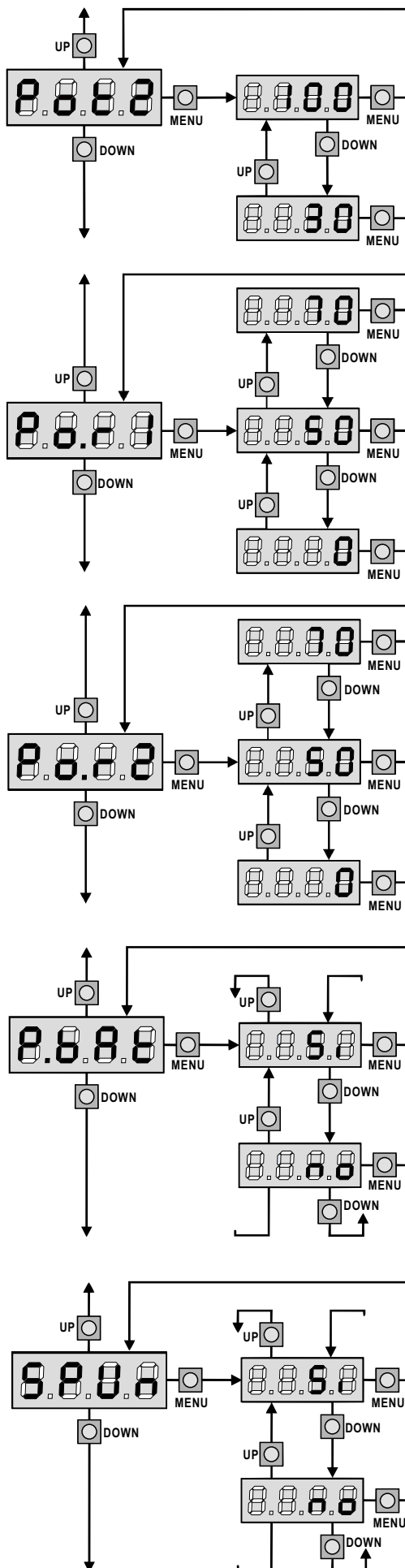
Pre-blinking time

Before any gate movement, blinker will be activated for $[t_{pre}]$ time, to warn about the incoming motion.

Motor 1 power

This menu allows adjusting the motor 1 power.

The displayed value is the percentage of max. motor power.



Motor 2 power

This menu allows adjusting the motor 2 power.
The displayed value is the percentage of max. motor power.

Power Motor 1 during slow-down phase

This menu allows you to regulate the power of motor 1 during the slow-down phase.
The value displayed represents the percentage of the maximum motor power.

Power Motor 2 during slow-down phase

This menu allows you to regulate the power of motor 2 during the slow-down phase.
The value displayed represents the percentage of the maximum motor power.

Maximum motor power during battery operation

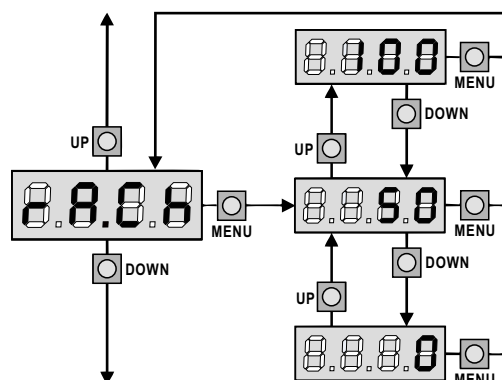
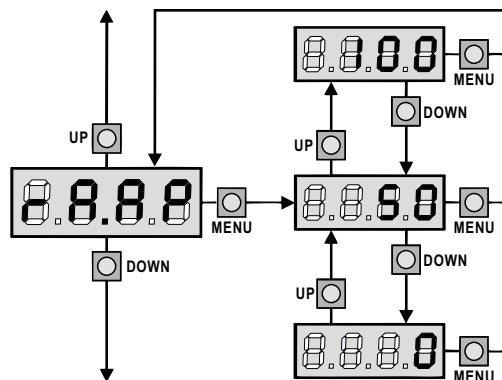
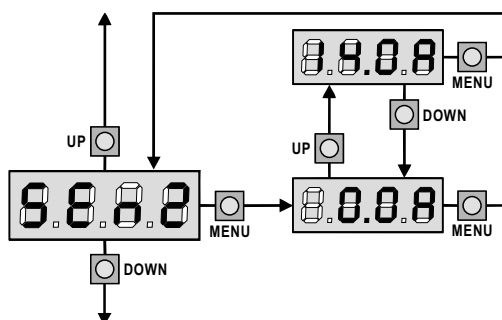
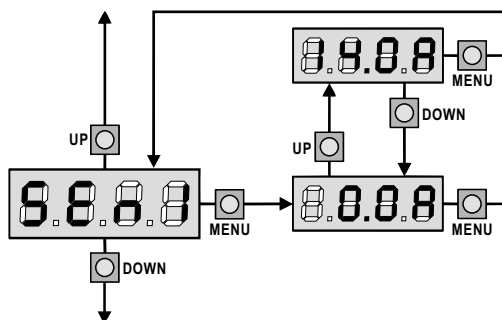
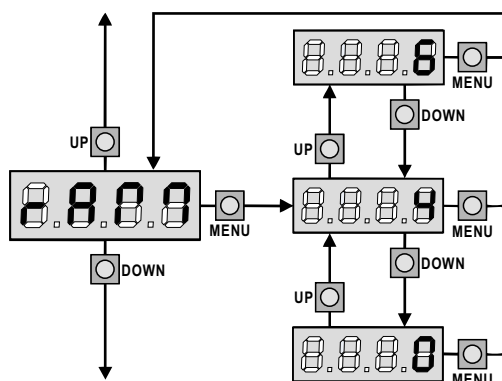
During battery operation, the controller is powered with a lower voltage compared to mains power. For this reason, the power of the motors is reduced compared to normal operation and may not be sufficient to move the gate panels effectively.

This menu allows you to activate the motors at their maximum power during battery operation

- 51 Maximum motor power
- no Motor power at the parameters set in the [P0E1] and [P0E2] menus.

Start off

When the gate is standstill and it begins moving, the initial inertia must be faced, therefore, if your gate is quite heavy, its doors could not move. In case the SPUn (pickup) function is activated, for the first 2 seconds of motion of each door, the control unit will ignore both [P0E1] and [P0E2] values and it will give motors the maximum power command in order to overcome the gate inertia.



Starting ramp

In order not to stress too much the motor, when the motion starts the power is gradually increased, until reached the set value or 100% if the take-off is enabled.

Higher is the set value, longer the length of time of the ramp, that is the time necessary to reach the value of nominal power.

Enable the Obstacle Sensor for Motor 1

This menu allows you to regulate the sensitivity of the obstacle sensor for motor 1. When the current absorbed by the motor exceeds the set value, the controller detects an alarm.

If set to [0.00], this function is disabled.

For the sensors operation, please see the paragraph dedicated to it.

Enable the Obstacle Sensor for Motor 2

This menu allows you to regulate the sensitivity of the obstacle sensor for motor 2. When the current absorbed by the motor exceeds the set value, the controller detects an alarm.

If set to [0.00], this function is disabled.

For the sensors operation, please see the paragraph dedicated to it.

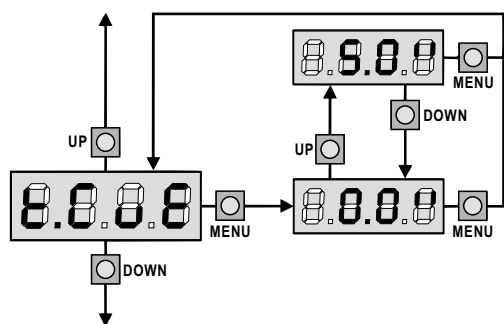
Slow Down in Opening

This menu allows regulating the percentage of the ride/drive that is carried out at reduced speed during the last opening stretch.

PLEASE NOTE: If the partial opening time, [t.APP], is less than [t.RPi], there is no slowing in the opening phase during the pedestrian cycle.

Slow Down in Closing

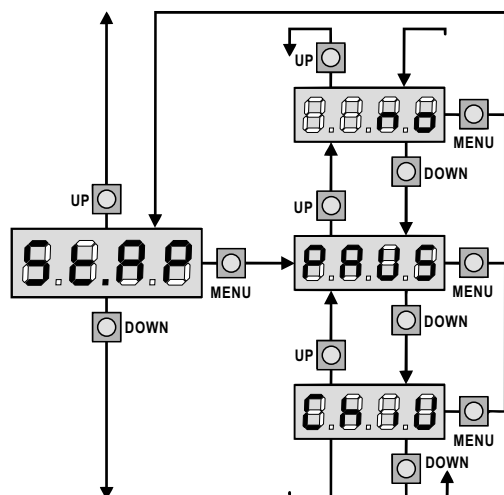
This menu allows regulating the percentage of the ride/drive that is carried out at reduced speed during the last closing stretch.



Fast closing time after slowing down

If a slowing time other than 0 is set up, it could be likely that the gate speed is not enough for the lock to fasten during the closing phase. In case this function is enabled, once the slowing down phase is finished, the control unit will give a normal speed command (that is to say, with no slowing down) for the set up time, and then it will open the gate for a second fraction, to avoid leaving the motor under stress.

WARNING: in case the gate has no electric lock, set the value [0.0].



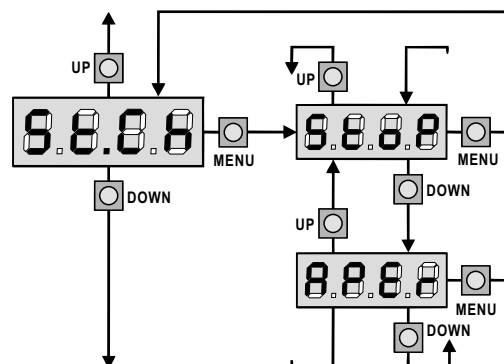
Start command during the opening phase

This menu allows fixing the control unit conduct in case it receives a **START** command during the opening phase.

- PAUS** The gate stops and goes to pause.
- CHU** The gate immediately starts closing.
- no** The gate go on with the opening phase (command is ignored).

Select option [PAUS], to set up the "step-by-step" operation logic.

Select option [no], to set up the 'always open' operation logic.



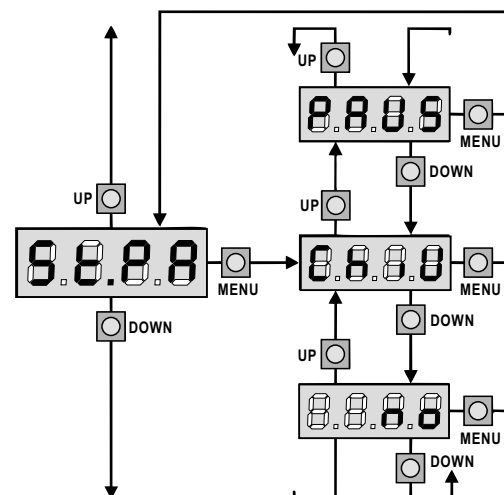
Start command during the closing phase

This menu allows fixing the control unit conduct in case it receives a **START** command during the closing phase.

- STOP** The gate stops and its cycle is considered as finished.
- RPEr** The gate opens again.

Select option [STOP], to set up the "step-by-step" operation logic.

Select option [RPEr], to set up the 'always open' operation logic.



Start command during the pause

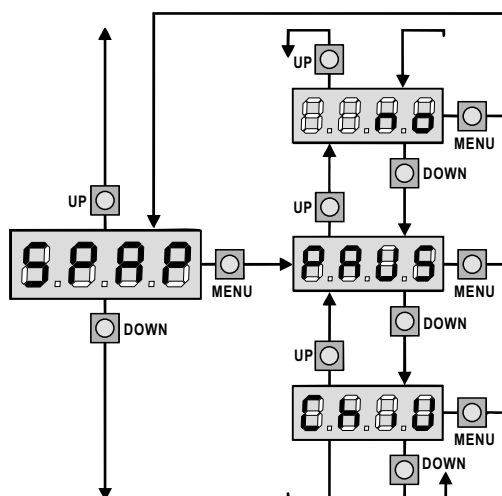
This menu allows fixing the control unit conduct in case it receives a **START** command when the gate is open during its pause phase.

- CHU** the gate starts closing.
- no** command is ignored.
- PAUS** The pause time is reset (CH.RU)

Select option [CHU], to set up the "step-by-step" operation logic.

Select option [no], to set up the 'always open' operation logic.

ATTENTION: Apart from selected option, the **START** command lets the gate close if it has been stopped by a **STOP** command or if the automatic closing was not enabled.

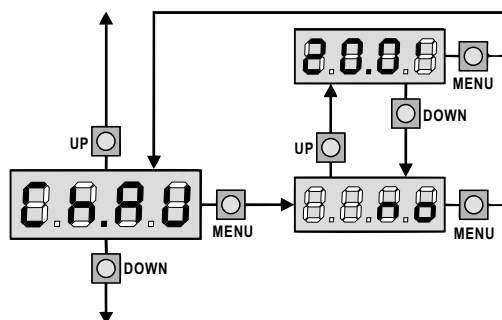


Pedestrian Start during the partial opening phase

This menu allows fixing the control unit conduct in case it receives a **PEDESTRIAN START** command during the partial opening phase.

- PRU5 The gate stops and goes to pause.
- CHU The gate immediately starts closing.
- no The gate goes on with the opening phase (command is ignored).

WARNING: A **START** command in any phase of partial opening will cause the total opening; the **PEDESTRIAN START** command is always ignored during a total opening.



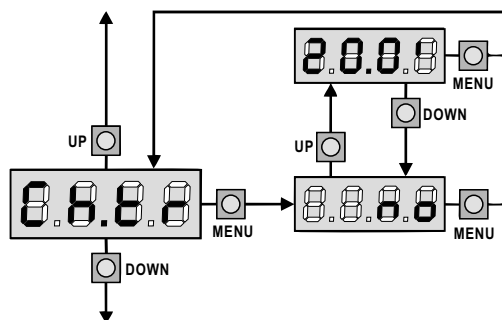
Automatic closing

In automatic mode, the control unit automatically re-closes the gate on expiry of the time limit set in this menu.

The **START** command, if enabled by [SE.PR] menu, allows closing the gate before the set up time expires.

In semi-automatic operation, that is to say, if the automatic closing function is disabled by setting the value to zero ([no] will be displayed) the gate can be closed through the **START** command only: in this case, [SE.PR] menu setup will be ignored.

If the control unit receives a **STOP** command when the gate is, in pause it will automatically pass to the semi-automatic operation.



Closing after transit

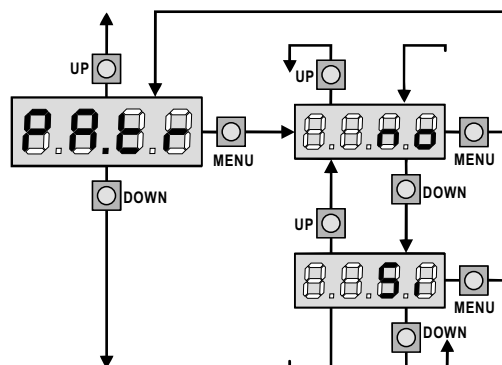
During the automatic operation, the pause count down starts from the set up value each time a photocell operates during the pause.

If the photocell operates during the opening time, this time will be immediately stored as pause time.

This function allows having a fast closing as soon as transit through the gate is completed, therefore, a time shorter than [CH.RU] is generally used.

[CH.RU] will be used when [no] is set up.

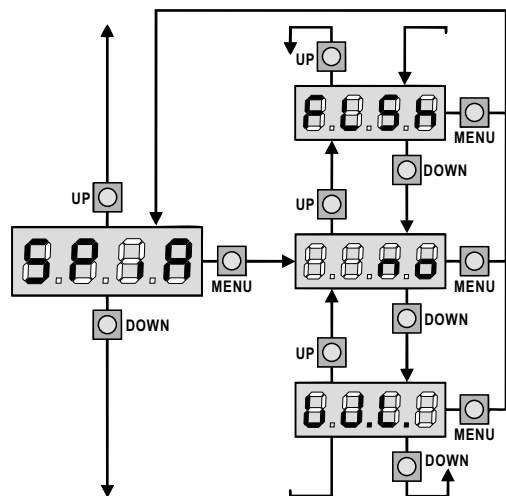
As for semi-automatic operation, this function is not active



Pause after transit

In order to let the gate open for the shortest possible time, it is possible to stop the gate once the passage before the photocells is detected. If the automatic working is enabled, the time of the pause is [CH.Tr].

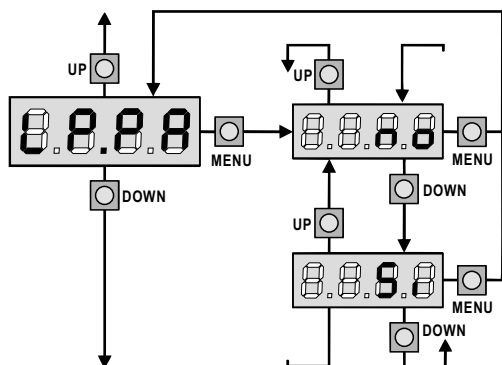
If the photocells are type 1 and type 2, the gate enters the phase of pause only after the detections before both the photocells.



Low Voltage Output Setup

This menu allows you to set the operation of the low voltage output.

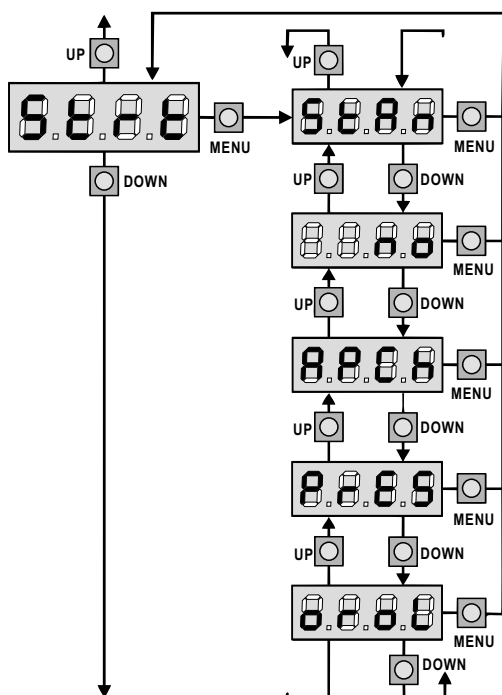
no	Not used
FLASH	Flasher operation (fixed frequency)
W.L.	Indicator light operation: Indicates the status of the gate in real-time. The type of blinking indicates the four possible conditions: - GATE STOPPED: Light off - GATE IN PAUSE: the light is on, fixed - GATE OPENING: the light blinks slowly (2 Hz) - GATE CLOSING: the light blinks quickly (4 Hz)



Blinker during pause time

Blinker usually operates during the gate motion only; however, if this function is enabled, blinker will be on during the pause time too (gate open with automatic closure active).

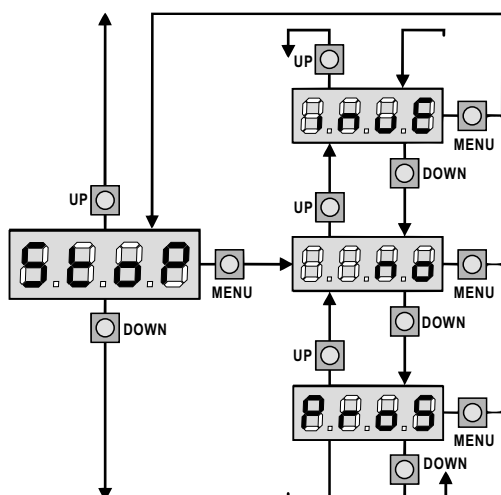
The flasher connected to the low voltage output (setting the **[FLSH]** parameter in the **[SPR]** menu).



Start input function

This menu allows selecting input operation modes (see paragraph "Activation inputs"):

SEAn	START and PEDESTRIAN START input standard operation, according to menu setups.
no	START inputs from terminal board are disabled. Radio inputs operate in StAn mode.
RPCh	START impulse always controls the opening phase, PEDESTRIAN START always controls the closing phase.
PREs	Manned operation: the gate will open as long as the START input stays closed and it will close as long as PEDESTRIAN START stays closed.
orOL	Timer-operation: the gate stays open while the START input or PEDESTRIAN START input is closed; as soon as the contact opens, the pause count down will start.



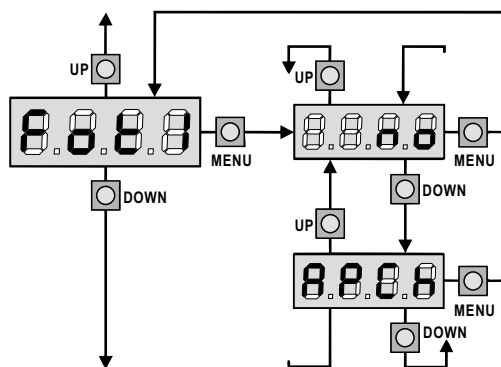
Stop Input

This menu permits to select the functions associated to the command of **STOP**.

- no** The input **STOP** is not available.
- ProS** The input **STOP** stops the gate: pressing the command **START** the gate continues the motion.
- invE** The command **STOP** stops the gate: at the next **START** the gate starts moving in the opposite direction.

The setting of parameter [SEOP] determines also in which direction the gate will move at the next **START**, if it has stopped because of an intervention of the safety edges or the obstacle sensor. If you set [no], the **START** command restarts the motion in the same direction.

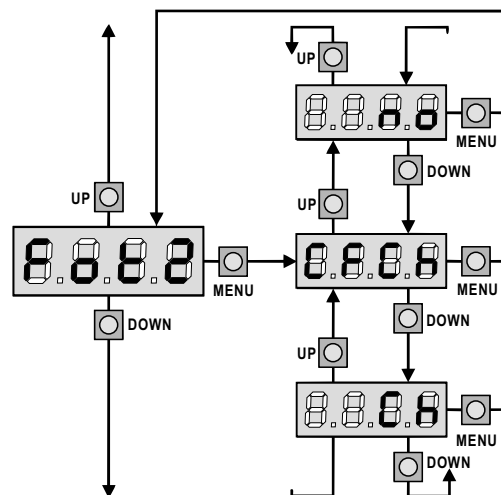
NOTE: during the pause, the **STOP** command will stop the pause time count, the next **START** command will always close the gate.



Photocell 1 input

This menu allows enabling the input for type 1 photocells, that is to say, photocells active both during the opening and closing phase (see paragraph "Installation").

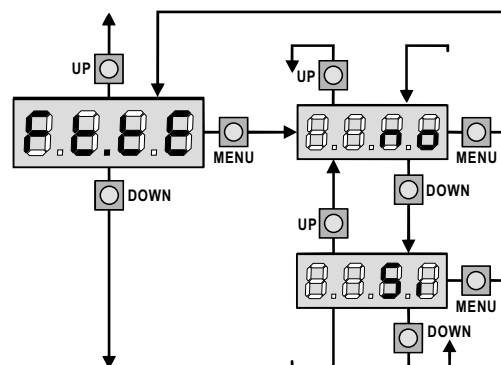
- no** Input disabled (ignored by the control unit).
No jumper with the common is required.
- APCh** Input enabled.



Photocell 2 input

This menu allows enabling the input for type 2 photocells, that is to say, photocells non active during the opening phase.

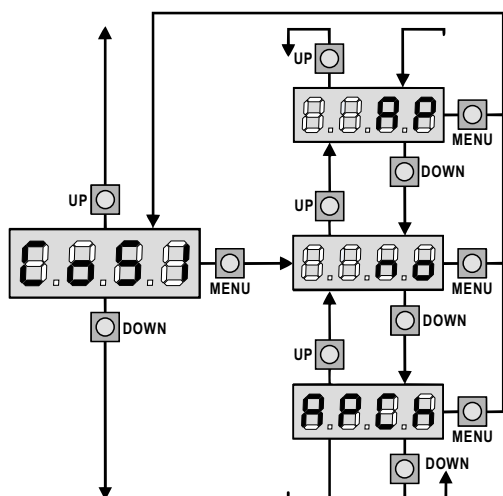
- no** Input disabled (ignored by the control unit).
No jumper with the common is required.
- CFCh** Input enabled even at standstill gate too: the opening movement does not start if photocell is interrupted.
- Ch** Input enabled for the closing phase only.
Warning: if you select this option, you must disable photocell test.



Test of the photocells

In order to achieve a safer operation for the user, the unit performs a photocells operational test, before a normal working cycle. If no operational faults are found, the gate starts moving. Otherwise, it will stand still and the flashing light will stay on for 5 sec. The whole test cycle lasts less than one second.

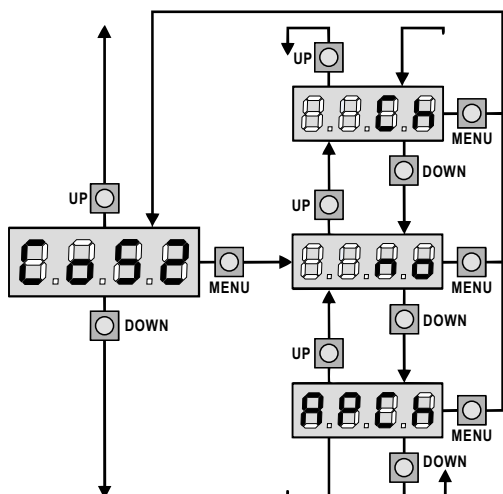
WARNING: We suggests to keep activated the test of the photocells in order to grant a higher safety of the system.



Safety ribbon 1 input

This menu allows enabling the input for type 1 safety ribbon, that is to say, fixed ribbons.

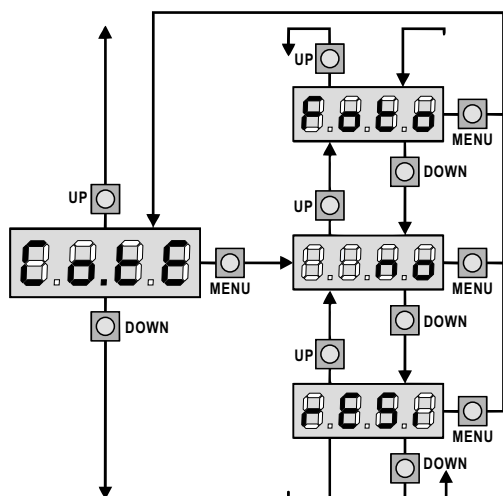
- no input disabled (ignored by the control unit).
- RP Input enabled during the opening and disabled during the closure.
- RPC Input enabled in opening and closure.



Safety ribbon 2 input

This menu allows enabling the input for type 2 safety ribbon, that is to say mobile ribbons.

- no input disabled (ignored by the control unit).
No jumper with the common is required.
- Ch Input enabled during closure and disabled during opening.
- RPC Input enabled in opening and closure.

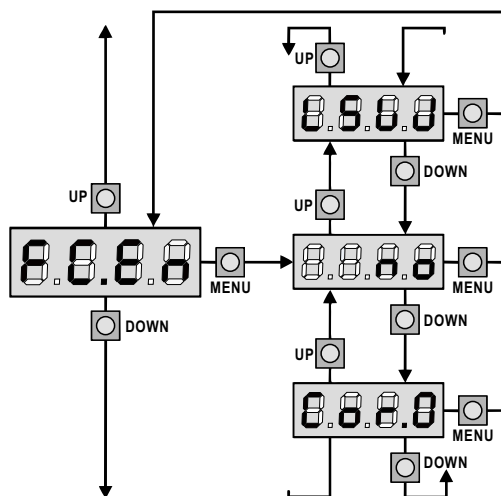


Test of the safety edges

This menu allows setting the method of control of the safety edges working.

- no Test disabled.
- Foto Test enabled for optical safety edges.
- rES Test enabled for conductive rubber safety edges.

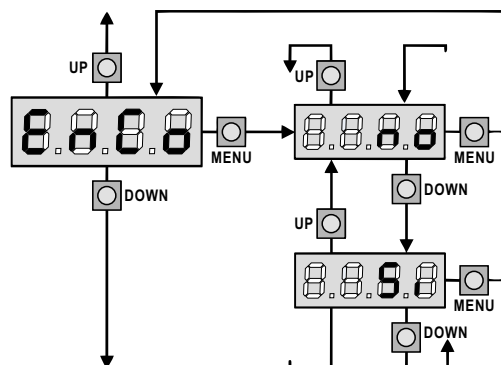
WARNING: We suggests to keep activated the test of the photocells in order to grant a higher safety of the system.



End of Stroke Inputs

The controller permits the connection of 4 normally closed (NC) limit switches that are activated by the gates movement and indicate to the controller if the gate has reached the completely open or closed position.

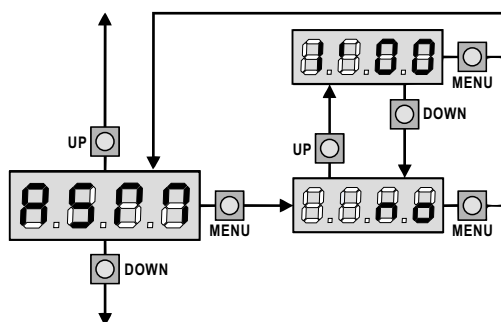
- no End of stroke inputs are disabled.
- LSW End of stroke inputs equipped with a normally close switch.
- Cor.0 End of stroke inputs in series of motor winding.



Encoder Input

The controller allows connection to encoders that provide the controller with the position of the gate panels

- Si The encoder inputs are enabled.
- no The encoder inputs are disabled.

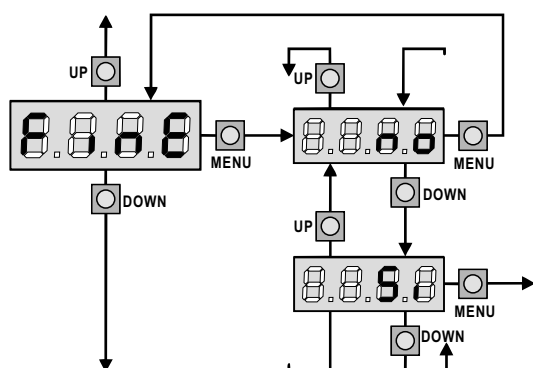


Anti-skid

When an opening or closing operation is interrupted by a command or for the intervention of the photocell, the set-up time for the opposite movement would be excessive, so the control unit operates the motors only for the time necessary to recover the actually covered journey. This could be not sufficient, particularly in the case of very heavy gates, as because of the inertia at the inversion moment the gate runs an extra space in the previous direction that the control unit is not able to take into account.

If after an inversion the gate does not return exactly to the starting position, it is possible to set an anti-skid time that is added to the time calculated by the control unit in order to recover the inertia.

WARNING: When the encoders are installed and enabled, it is not necessary to enable the anti-skid as the controller is able to detect when the gate is in the maximum open or closed position.



End of Programming

This menu allows to finish the programming (both default and personalized) saving the modified data into memory.

- no Further corrections to carry out: do not quit the programming.
- Si Changes complete: when programming is complete and the data is saved, the display shows the control panel.

THE INSERTED DATA HAVE BEEN MEMORIZED: THE CONTROL UNIT IS READY TO BE USED.

READING OF CYCLE COUNTER

Control unit counts the completed opening cycles of the gate and, if requested, it shows that service is required after a fixed number of cycles.

There are two counters available:

- A totalizing counter for completed opening cycles that cannot be zeroed (option [E0E] of item [-CnE])
- A downward counter for the number of cycles before the next request for service (option [SEFu] of item [-CnE]). This counter can be programmed according to the desired value.

The scheme hereafter shows how to read the totalizing counter, how to read the number of cycles before the next service is required as well as how to program the number of cycles before the next request for service (as for the example shown. the control unit completed 12451 cycles and there are 1300 cycles before the next service request.

Area 1 is the reading of the total number of completed cycles; through Up and Down keys, you can alternate the display of thousands or units.

Area 2 is the reading of the number of cycles before the next request for service: its value is rounded down to the hundreds.

Area 3 is the setup of this latter counter; if you press once **UP** or **DOWN** key, the current counter value will be rounded up or down to thousands, any following pressure will have the setup be increased or decreased of 1000 units. The previous displayed count will get lost.

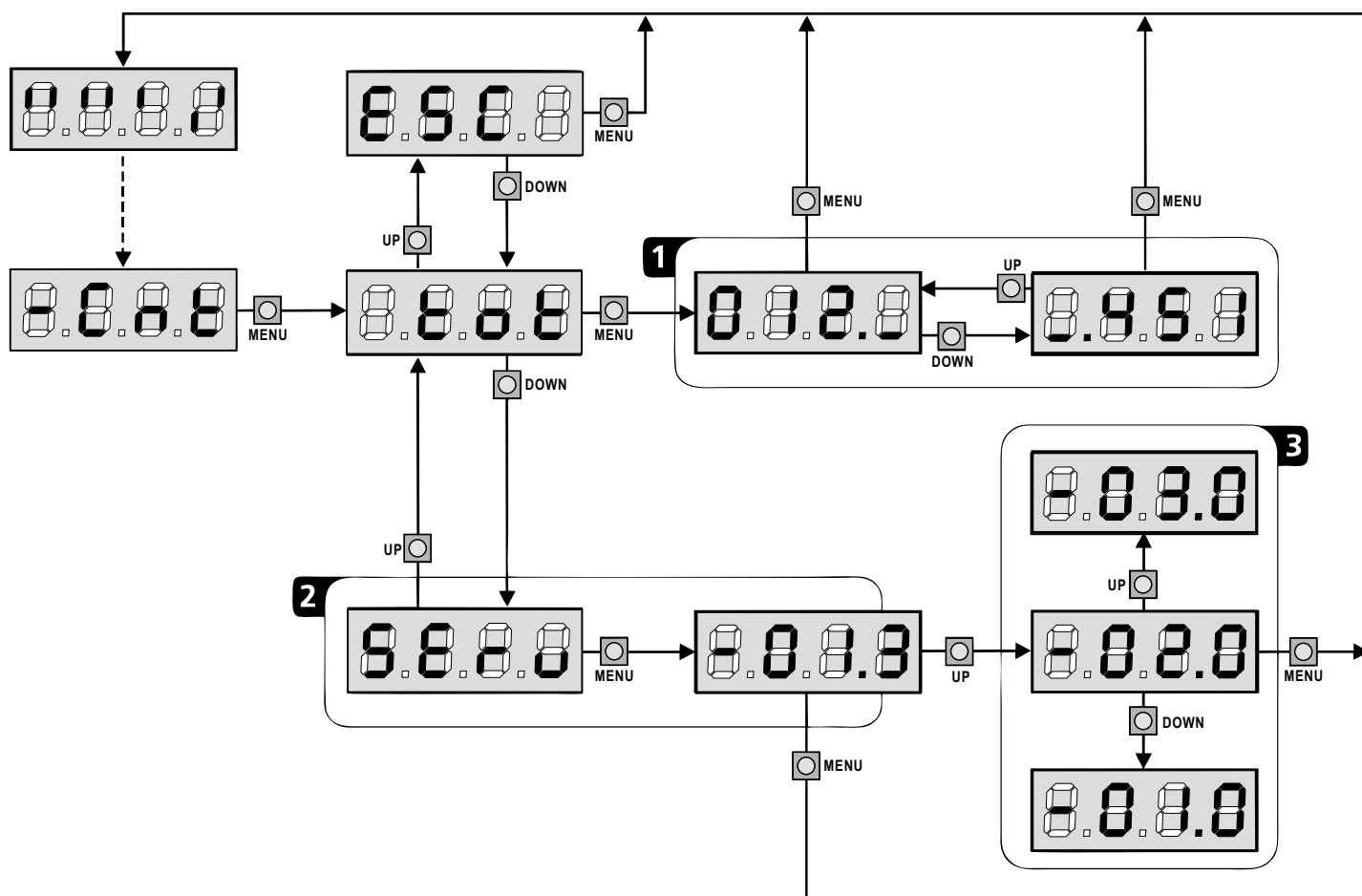
Signal of service required

As soon as the counter of cycles before the next request for service is zero, the control unit shows the request for service through an additional 5-second pre-blinking.

This signal will be repeated at each opening cycle, until the installer enters into the counter reading and setup menu, and possibly programs the number of cycles after which the next service will be requested.

In case no new value is setup (that is to say that the counter value is left at zero), the signaling function for the service request will be disabled and no signal will be repeated anymore.

WARNING: service operations shall be carried out by qualified staff only.



DISPLAY	DATA	DESCRIPTION	DEFAULT	NOTE
t.RP1	0.0" - 5.0'	Open time gate panel 1	22.5"	
t.RP2	0.0" - 5.0'	Open time gate panel 2	22.5"	
t.RPP	0.0" - 1.0'	Open time pedestrian gate	6.0"	
t.Ch1	0.0" - 2.0'	Close time gate panel 1	23.5"	
t.Ch2	0.0" - 2.0'	Close time gate panel 2	23.5"	
t.ChP	0.0" - 1.0'	Close time pedestrian gate	7.0"	
t.C2P	0.5" - 2.0'	Close time gate panel 2 during pedestrian cycle	2.0"	
	no	- Function disabled		
r.RP	0.0" - 1.0'	Open gate delay	1.0"	
r.Ch	0.0" - 1.0'	Close gate delay	3.0"	
t.SEr	0.5" - 1.0'	Electric lock activation time	2.0"	
	no	- The lock is not excited (corresponds to a value of 0)		
SEr.S	S1 / no	Silent Locking Mode	S1	
t.RSE	0.0" - 1.0'	Advance lock time	1.0"	
t.inu	0.5" - 1.0'	Pressure surge time	no	
	no	- Pressure surge disabled (corresponds to a value of 0)		
t.PrE	0.5" - 1.0'	Advance Blinking Time	1.0"	
	no	- Advance blinking disabled (corresponds to a value of 0)		
PoEt1	30 - 100%	Power motor 1	100	
PoEt2	30 - 100%	Power motor 2	100	
Po.r1	0 - 70%	Power motor 1 during slow-down phase	50	
Po.r2	0 - 70%	Power motor 2 during slow-down phase	50	
P.bRE	S1 / no	Maximum motor power during battery operation	S1	
SPUn	S1 / no	Start off	S1	
rRM	0 - 6	Starting ramp	4	
SEn1	0.0R - 14.0R	Obstacle Sensor for Motor 1	0.0R	
SEn2	0.0R - 14.0R	Obstacle Sensor for Motor 2	0.0R	
rRRP	0 - 100%	Slow Down in Opening	25	
rRCh	0 - 100%	Slow Down in Closing	25	
t.CuE	0.0" - 3.0"	Fast close time after slow-down during closure	0.0"	
St.RP		Start on open	PAUS	
	no	- The START command is not received		
	ChU	- The gate closes		
	PAUS	- The gate goes into pause		
St.Ch		Start on close	StoP	
	StoP	- The gate finishes the cycle		
	RPEr	- The gate opens again		
St.PR		Start on pause	ChU	
	no	- The START command is not received		
	ChU	- The gate closes		

DISPLAY	DATA	DESCRIPTION	DEFAULT	NOTE
SPAP		Pedestrian start on open	PRUS	
	no	- The P.START command is not received		
	Ch.U	- The gate closes		
	PRUS	- The gate goes into pause		
Ch.RU		Automatic re-close	no	
	no	- Automatic re-close is activated (corresponds to a value of 0)		
	0.5" - 20.0'	- The gate re-close after the set time		
Ch.Er		Closure after passage	no	
	no	- Closure after passage disabled (load Ch.RU)		
	0.5" - 20.0'	- The gate re-close after the set time		
PR.Er	no / Si	Pause after passage	no	
SP.R		Low Voltage Output Setup	no	
	no	- Not used		
	FLSh	- Flashing light operation		
	W.L.	- Indicator light operation		
LP.PR	no / Si	Flasher in pause	no	
St.r.t		START Input	St.Rn	
	no	- Inputs from terminal strip disabled		
	St.Rn	- Standard operation		
	RP.Ch	- Separate open and close commands		
	Pr.ES	- Manned operation		
	oroL	- Timer Operation		
St.oP		STOP Input	no	
	no	- The input is disabled: the STOP command is not received		
	inuE	- The STOP command stops the gate: The next START inverts the direction		
	ProS	- The STOP command stops the gate: The next START does not invert the direction		
For1		PHOTO 1 Input	no	
	RPCh	- Acts like active photocell on open and close		
	no	- Disabled		
For2		PHOTO 2 Input	CFCh	
	CFCh	- Acts like active photocell on close and with gate stopped		
	no	- Disabled		
	Ch	- Functions like active photocell only on close		
Fl.tE	no / Si	Photocells test	no	
CoS1		Safety device 1 input (stationary safety device)	no	
	no	- Input not enabled		
	RP	- Input active only on open		
	RPCh	- Input active on open and close		
CoS2		Safety device 2 input (mobile safety device)	no	
	no	- Input not enabled		
	Ch	- Input active only on open		
	RPCh	- Input active on open and close		

DISPLAY	DATA	DESCRIPTION	DEFAULT	NOTE
Co.tE		Operational test of safety devices	no	
	no	- Test disabled		
	FoEtO	- Test enabled for optical safety devices		
	rESi	- Test enabled for resistive rubber safety devices		
FC.En		End of strokes inputs	no	
	no	- End of stroke inputs are disabled		
	LSW	- End of stroke inputs equipped with a normally close switch		
	Cor.O	- End of stroke inputs in series of motor winding		
EnCo	no / Si	Encoder Input	no	
ASM	0.5" - 3.0"	Anti-skid	no	
	no	- Function disabled		
FinE		End of programming	no	
	no	- Do not exit programming menu		
	Si	- Exit from programming menu and save the parameters set		

OPERATION DEFECTS

This paragraph shows some possible operation defects, along with their cause and applicable remedy.

MAINS led does not switch on

It means that there is no voltage on control unit card.

1. Before acting on the control unit, disconnect through the disconnecting switch on the power line and remove the power supply terminal.
2. Be sure that there is no voltage break upstream the control unit.
3. Check whether the fuse is burnt-out, if so replace it with same value.

OVERLOAD led is on

It means that there is an overload on accessory power supply.

1. Remove the extractable part contact terminals **7** to **11**, **18** to **24**, OVERLOAD led will switch off.
2. Remove the overload cause.
3. Reinsert the terminal board extractable part and check that this led is not on again.

Too long pre-blinking

When a **START** command is given and the blinker switches on immediately but the gate is late in opening, it means that the setup cycle count down expired and the control unit shows that service is required.

Error 0

When a **START** command is given, the gate does not open and the display shows the message:



This means that the buffer batteries do not have sufficient power to open the gate. It is necessary to wait for the return of mains power, or to replace the drained batteries with new ones.

Error 1

The following writing appears on display when you exit from programming:

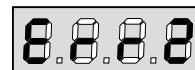


It means that changed data could not be stored.

This kind of defect has no remedy and the control unit must be sent back for repair.

Error 2

When a **START** command is given and the gate does not open and the display shows:



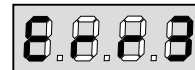
It means that MOSFET test failed.

Before sending the control unit back for repair, be sure that motors have been properly connected.

If only one motor is used, connect it to output M1 and set [E.AP2] to [0.0"].

Error 3

When a **START** command is given and the gate does not open and the display shows:

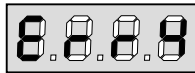


It means that the photocell test failed.

1. Be sure that no obstacle interrupted the photocell beam when the **START** command was given.
2. Be sure that photocells, as enabled by their relevant menus, have been installed actually.
3. If you have photocells 2, be sure that [FoEt2] menu item is on [CFCh].
4. Be sure that photocells are powered and working; when you interrupt their beam, you should hear the relay tripping.
5. Ensure the photocells are connected correctly.

Error 4

When a **START** command is given and the gate does not open (or does a partial opening) and the display shows:



It means that the end of stroke is damaged or that the wiring that connects the sensor to the control unit is broken.

- Change the end of stroke sensor or the broken wiring. If the error persists send the control unit back for repair.
- If limit switches have not been connected, check that the **[F.C.En]** function is set to **[no]**.

Error 5

Once given a start control, the gate does not open and the display shows:



It means that the test of the safety edges failed.

Check that the menu of the test of safety edges **[C.o.t.E]** have been set correctly.

Check that the safety edges enabled from the menu are installed.

Error 7

This indicates an error in the encoders' operation.



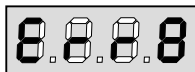
There are three possible causes:

1. With the encoders connected, even if they are not enabled, for a few instants after movement of a gate panel. This means that the connection to the encoder for that gate panel is reversed. Exchange terminal **19** with **20**, or **22** with **23**.
2. With the encoders enabled, once a **START** command is received: This means that the encoders have not been initialized. For the encoders to operate correctly, the self-learning procedure must be performed.
3. With the encoders enabled and initialized, a few seconds after movement begins: This means that an encoder is NOT correctly operating. Encoder malfunction or broken connection.

PLEASE NOTE: Check the connection is in line with the motor instructions.

Error 8

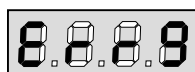
When executing a self-learning function the control is refused and the display shows:



It means that the setting of the control unit is not compatible with the requested function. In order to execute the self-learning it is necessary that the Start inputs are enabled in standard mode (**[S.E.r.t]** menu set to **[S.E.Rn]**); to survey the currents of the motor it is also necessary that the length of the opening and closure are at least of 7.5 second.

Error 9

When you are trying to change the control unit setups and the display shows:



It means that programming was locked.