V2 S.p.A.
Corso Principi di Piemonte, 65/67 - 12035 RACCONIGI (CN) ITALY
tel. +39 01 72 81 24 11 - fax +39 01 72 84 050
info@v2home.com - www.v2home.com

IL n. 170-1
EDIZ. 04/03/2009

CITY 1

INDEX

IMPORTANT REMARKS 26
CONFORMITY TO REGULATIONS 26
TECHNICAL SPECIFICATIONS 26
DESCRIPTION OF THE CONTROL UNIT 26
INSTALLATION 27
POWER SUPPLY 27
MOTORS 27
BLINKER 27
PHOTOCELLS 27
SAFETY RIBBONS 28
LOCK 28
END OF STROKE 28
ENCODER 28
STOP 28
ACTIVATION INPUTS 29
EXTERNAL AERIAL 29
PLUG IN RECEIVER 29
OPTIONAL MODULES 29
CONTROL PANEL 30
USE OF DOWN MENU AND UP KEYS FOR PROGRAMMING 30
QUICK CONFIGURATION 31
CONTROL UNIT CONFIGURATION 32
READING OF CYCLE COUNTER 43
OBSTACLE SENSOR OPERATION 43
CITY1 FUNCTION TABLE 44
ELECTRIC CONNECTIONS TABLE 46
CABLES TABLE 47
OPERATION DEFECTS 48

IMPORTANT REMARKS

For any installation problem please contact our Customer Service at the number **+39-0172.812411** operating Monday to Friday from 8:30 to 12:30 and from 14:00 to 18:00.

V2 has the right to modify the product without previous notice; it also declines any responsibility to damage or injury to people or things caused by improper use or wrong installation.

⚠ **Please read this instruction manual very carefully before installing and programming your control unit.**

- This instruction manual is only for qualified technicians, who specialize in installations and automations.
- The contents of this instruction manual do not concern the end user.
- Every programming and/or every maintenance service should be done only by qualified technicians.

AUTOMATION MUST BE IMPLEMENTED IN COMPLIANCE WITH THE EUROPEAN REGULATIONS IN FORCE:

EN 60204-1 (Machinery safety. electrical equipment of machines, part 1: general rules)
EN 12445 (Safe use of automated locking devices, test methods)
EN 12453 (Safe use of automated locking devices, requirements)

- The installer must provide for a device (es. magnetotermical switch) ensuring the omnipolar sectioning of the equipment from the power supply.
  The standards require a separation of the contacts of at least 3 mm in each pole (EN 60335-1).

- After making connections on the terminal board, use one hose clamp to fix dangerous voltage wires near the terminal board and another hose clamp to fix safety low voltage wires used for accessories connection; this way, in case of accidental detachment of a conducting wire, dangerous voltage parts will not come into contact with safety low voltage ones.

- The plastic case has an IP55 insulation; to connect flexible or rigid pipes, use pipefittings having the same insulation level.

- Installation requires mechanical and electrical skills, therefore it shall be carried out by qualified personnel only, who can issue the Compliance Certificate concerning the whole installation (EEC Machine Directive 89/392, Annex IIA).

- The automated vehicular gates shall comply with the following rules: EN 12453, EN 12445, EN 12978 as well as any local rule in force.

- Also the automation upstream electric system shall comply with the laws and rules in force and be carried out workmanlike.

- The door thrust force adjustment shall be measured by means of a proper tool and adjusted according to the max. limits, which EN 12453 allows.

- We recommend to make use of an emergency button, to be installed by the automation (connected to the control unit STOP input) so that the gate may be immediately stopped in case of danger.

- Always remember to connect the earth according to current standards (EN 60335-1, EN 60204-1).

DECLARATION OF CONFORMITY

V2 S.p.A. hereby declare that CITY1 products conform to the essential requirements established in the following directives:

- 89/336/CEE (EMC Directive in accordance with standards EN 55014-1, EN 55014-2, EN 61000-3-2, 61000-3-3)
- 2006/95/CEE (Low Voltage Directive in accordance with standards EN 60335-1 + EN 60335-2-103)
- 99/05/CEE (Radio Directive in accordance with standard EN 301 489-3)

Racconigi, 12/01/2009
V2 S.p.A. legal representative.
Antonio Cristina

TECHNICAL SPECIFICATIONS

	CITY1	CITY1-120V
Power supply	230VAC - 50Hz	120VAC - 60Hz
Max motors load	2 x 700W	2 x 500W
Duty clcle	40%	30%
Max accessories load 24V	10W	10W
Working temperature	-20 ÷ +60°C	-20 ÷ +60°C
Protection fuse	F1 = 5A	F1 = 8A
Dimensions	295 x 230 x 100 mm	
Weight	1600g	
Protection	IP55	

DESCRIPTION OF THE CONTROL UNIT

The digital control unit **CITY1** is an innovative V2 product that guarantees a safe and reliable automation of leaf swing or sliding gates.

CITY1 is provided with a display that, not only makes programming simple, but also allows a continuous monitoring of the input statuses; in addition, thanks to a menu structure, the working schedule and the operation logic can be set easily.

In compliance with the European standards concerning electrical safety and electromagnetic compatibility (EN 60335-1, EN 50081-1 and EN 50082-1) it has been equipped with the low voltage circuit total electric insulation (motors included) from the network voltage.

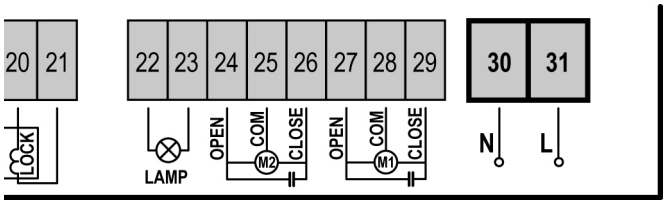
Other characteristics:
- Automatic control for the null current relay switch.
- Power adjustment with independent wave shutting on both the two motors.
- Obstacle detection by means of monitoring start condenser voltage.
- Automatic learning of the operation time.
- Operation by means of mechanical ends of stroke connected to the gearcase or connected in series to the motor.
- Tests for safety devices (photocells, safety ribbons and triacs) before each opening.
- Deactivation of safety inputs through the configuration menu: no jumper is required for terminals concerning safety devices that have not been installed, yet. You will only need to disable this function from its relevant menu.
- Control unit programming can be locked through the optional **CL1** key.
- Also available in the **CITY1-ECD** model (p/n 12G033), which allows you to control ENCODER-equipped 230V motors.

INSTALLATION

Installation of control unit and safety devices must be carried out with power disconnected.

POWER SUPPLY

The control unit must be fed by a 230V 50Hz (120V - 50/60Hz for the model **CITY1-120V**) electric line, protected by a differential magnetothermal switch complying with the law provisions in force.
Connect power supply cables to terminals **30** and **31** of **CITY1** control unit.

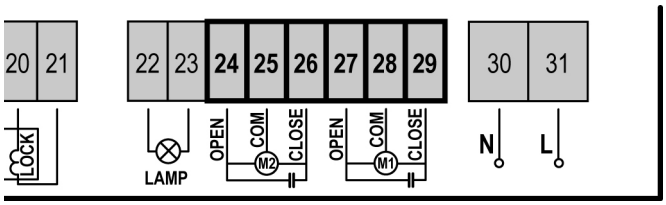


MOTORS

CITY1 control unit can control one or two alternate current asynchronous motors. If the control unit needs to control one motor only, the latter must be connected to terminals of motor 1.

Connect motor 1 cables as follows:
- opening cable to terminal **27**
- closing cable to terminal **29**
- common return cable to terminal **28**

Connect motor 2 (if any) cables as follows:
- opening cable to terminal **24**
- closing cable to terminal **26**
- common return cable to terminal **25**



CONTROL OF THE CORRECT ORDER OF CLOSING LEAVES

If the leaves of the gate overlap during the closing phase, it is necessary to connect the motor of the leaves that must start first at the motor 1 terminals, and to arrange the delays (parameters r.AP and r.Ch) so that collision is avoided.
If the control unit detects a wrong overlap order (leaf 1 gets to the closing position before leaf 2), the gate is opened a little again so that it can close correctly.
If the leaves do not overlap (e.g. in a double swing gate) set to zero the opening door delay parameter in order to disable the control of the right closing order.

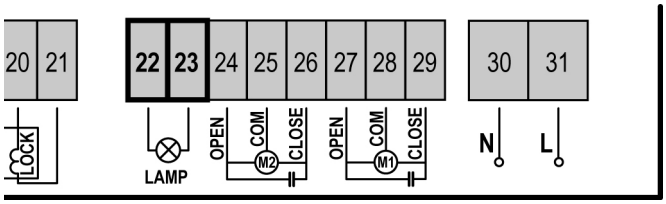
⚠ WARNING (USING HYDRAULIC MOTORS):
- If using hydraulic motors, the following function could not work properly: Soft start, Slowing down and Obstacle sensor. In this case, such functions should be disabled from menu.
- Read carefully the working times self-learning procedure, described in the paragraph "QUICK CONFIGURATION", paying particular attention to the points where the procedure to be followed in case of disabled obstacle sensor is described.

⚠ WARNING:
- In case it has not yet fitted, a start capacitor for each motor is required; connect the start capacitor for motor 1 between terminals **27** and **29** and start capacitor for motor 2 (if any) between terminals **24** and **26**.
- In case motor 2 is not connected, set menu **tAP2** to zero.

BLINKER

CITY1 control unit provides for a 230V 40W (120V – 40W for model **CITY1-120V**) blinker equipped with intermittence inside.

Connect blinker cables to terminals **22** and **23** of the control unit.



PHOTOCELLS

The control unit considers two kinds of photocells, depending on the terminal to which they are connected:

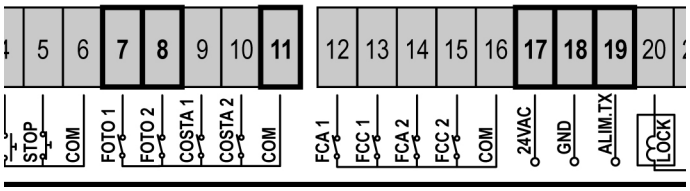
- **Photocell 1:** that is to say, photocells installed on the gate inner side, which are active both during the opening and the closing phase. When photocells 1 operate, the control unit stops the doors; as soon as the photocell beam is free, the control unit will open the gate completely.

- **Photocell 2:** that is to say, photocells installed on the external gate side and which are active during the closing phase only. When photocells 2 operate, the control unit opens the gate immediately, without waiting for release.

CITY1 control unit supplies a 24VAC power supply to photocells and it can perform a photocell operation test before starting the gate opening phase. Photocell power terminals are protected by an electronic fuse that stops current in case of overload.

- Connect power supply cables of photocells transmitter between terminals **19** and **18** of the control unit.
- Connect power supply cables of photocells receiver between terminals **17** and **18** of the control unit.
- Connect receiver output of photocells 1 between terminals **7** and **11** of the control unit and receiver output of photocells 2 between terminals **8** and **11** of the control unit.
  Use outputs having normally closed contact.

⚠ 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 **19** and **18** of the control unit to carry out the operation test.



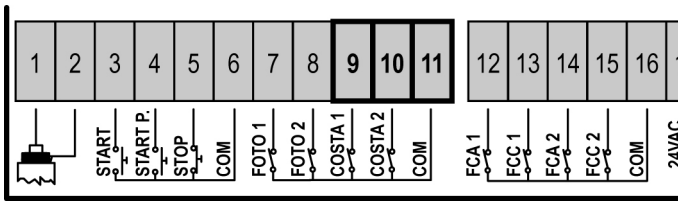
SAFETY RIBBONS

The control unit considers two kinds of safety ribbons, depending on the terminal to which they are connected:

- **Type 1 (fixed):** they are mounted on walls or on other fixed obstacles that are approached by the gate doors during the opening phase. When type 1 safety ribbons operate during the gate opening phase, the control unit will close the doors for 3 seconds, then it stands still; when type 1 safety ribbons operate during the gate closing phase, the control unit will stand still immediately. The direction of the gate at next command of START or PEDESTRIAN START depends upon the parameter STOP (it inverts or continues the motion). If the input STOP is disabled, the command makes the motion continue in the same direction.

- **Type 2 (mobile):** they are mounted to the door ends. When type 2 safety ribbons operate during the gate opening phase, the control unit will stand still immediately; when type 2 safety ribbons operate during the gate closing, the control unit will open the doors for 3 seconds, then it will stand still. The direction of the gate at next command of START or PEDESTRIAN START depends upon the parameter STOP (it inverts or continues the motion). If the input STOP is disabled, the command makes the motion continue in the same direction.

Connect type 1 safety ribbons cables between terminals **9** and **11** of the control unit.
Connect type 2 safety ribbons cables between terminals **10** and **11** of the control unit.



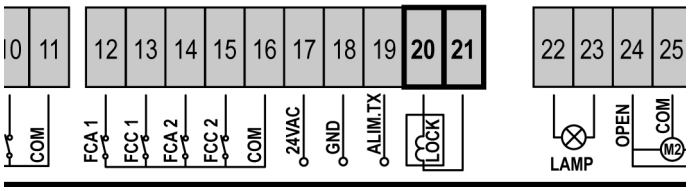
In order to meet the requirements of the EN12978 rules, it is necessary to install safety edges controlled by a control unit continuously checking the proper working. If using control units suited to the test by power outage, connect the power supply cables of the control unit between terminals 19 and 18 of the CITY1. Otherwise, connect them between terminals 17 and 18.

⚠ WARNING:

- Make use of safety ribbons having outputs with normally close contact.
- Outputs of same kind safety ribbons must be connected in series.

LOCK

An electric lock can be assembled on the gate, to ensure a good closing of doors. Make use of a 12V lock.
Connect lock cables to terminals **20** and **21** of the control unit.



END OF STROKE

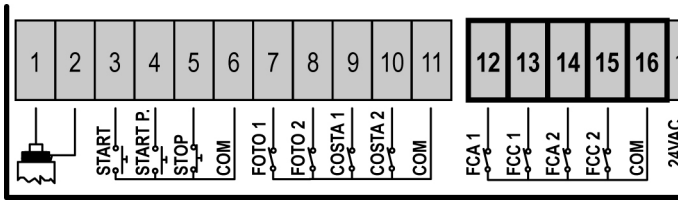
CITY1 control unit supports the two following kinds of end of stroke:

- end of stroke in series of motor winding.
- end of stroke equipped with a normally close switch that will be opened as soon as the door reaches its position desired.

The control unit automatically recognizes ends of stroke in-series of the motor windings so no connection or programming is required.

Ends of strokes equipped with a normally close switch must be connected to the control unit terminal board as follows:

- opening end of stroke in door 1 between terminal **12** and **16**.
- closing end of stroke in door 1 between terminal **13** and **16**.
- opening end of stroke in door 2 between terminal **14** and **16**.
- closing end of stroke in door 2 between terminal **15** and **16**.



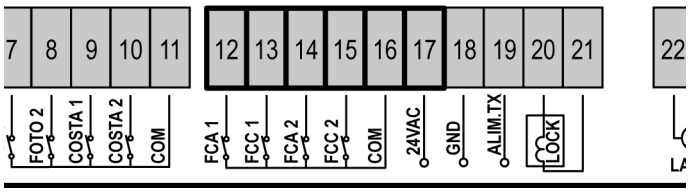
ENCODER (only for CITY1-ECD)

With CITY1-ECD, you can use encoder-equipped motors to control the exact position of the gates. Furthermore, the encoders allow you to detect if the gate panels jam in an improper position due to obstacles.

For encoder operation, when in the closed position, both gate panels must rest against a mechanical stop. Each time the controller is turned on the gate is closed until the gate panels touch the mechanical stop in order to realign the encoders.

The limit switch input terminals are used for the encoder connection. For this reason limit switches and encoders cannot be connected at the same time.

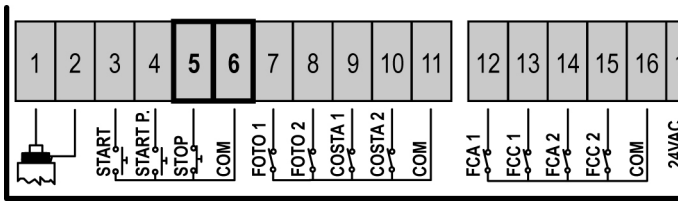
Connect the encoder signal cables for Motor 1 on terminals **14** and **15**.
Connect the encoder signal cables for Motor 2 on terminals **12** and **13**.
Connect the negative power supply pole for both encoders to terminal **16**.
Connect the positive power supply pole for both encoders to terminal **17**.



STOP

For a better safety, you can fit a stop switch that will cause the immediate gate stop when activated. This switch must have a normally close contact that will get open in case of operation. 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).

Connect the stop switch cables between terminal **5** and **6** of the control unit.



The stop switch function can be activated by means of a remote control stored on channel 3 (see relevant instructions of MR1 receiver). The command STOP from remote is operative also if the input STOP of the terminal board is disabled.

ACTIVATION INPUTS

CITY1 control unit is equipped with two activation inputs, whose operation depends on the programmed operation modes (see **Strt** item of programming menu):

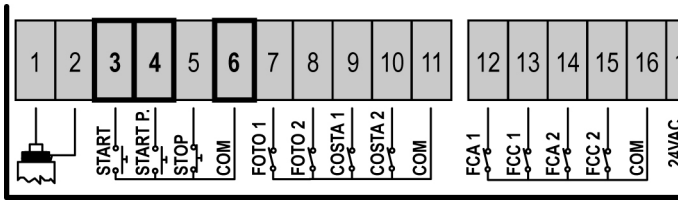
- **Standard mode:** a command being on the first input will cause the complete opening of both leaves (start); a command being on the second input will cause the partial opening of leaf 1 only (pedestrian start).

- **Open/Close command and manned operation:** a command on the first input always controls the gate opening, while a command on the second input always controls the gate closing.
  In Open/Close mode, there is an impulse command, that is to say that an impulse will cause the complete gate opening or closing.
  In manned operation, there is a monostable command, that is to say, the gate will be opened or closed as long as the contact is closed and it will immediately stop as the contact is open.

- **Timer mode:** it is similar to the standard mode but the gate stays open (completely or partially) while the contact is closed on input; as soon as the contact is open the pause time count down will start, after which the gate will be closed again. This function allows programming the gate opening time during the day, by making use of an external timer. Automatic closing must be enabled.

In all modes, inputs must be connected to devices having normally open contacts.

Connect cables of device controlling the first input between terminals **3** and **6** of the control unit.
Connect cables of device controlling the second input between terminals **4** and **6** of the control unit.

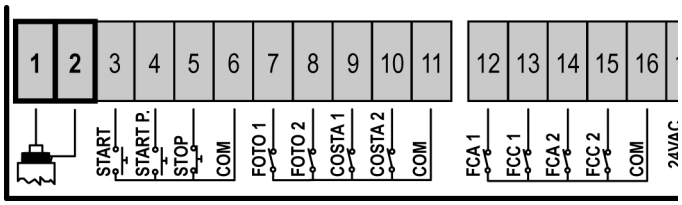


The first input function can also be activated by pressing UP key outside the programming menu or by means of a remote control stored on channel 1 (see relevant instructions of MR1 receiver).

The second input function can also be activated by pressing DOWN key outside the programming menu or by means of a remote control stored on channel 2.

EXTERNAL AERIAL

We suggest to use the external aerial (model ANSGP433) in order to guarantee the maximal range.
Connect the antenna hot pole to terminal **1** of the control unit and the braiding to terminal **2**.



PLUG IN RECEIVER

CITY1 control unit is suitable for plugging in a Personal Pass MR1 receiver having a high-sensitivity super-heterodyne architecture.

⚠ **WARNING:** it is necessary to turn off the control unit power before doing the operations mentioned here below.
Pay attention to the way you connect the removable modules.

MR1 module receiver is provided with 4 channels and each of them is suitable for a command of **CITY1** control unit:

- CHANNEL 1 → START
- CHANNEL 2 → PEDESTRIAN START
- CHANNEL 3 → STOP
- CHANNEL 4 → OPTIONAL MODULS OUTPUT

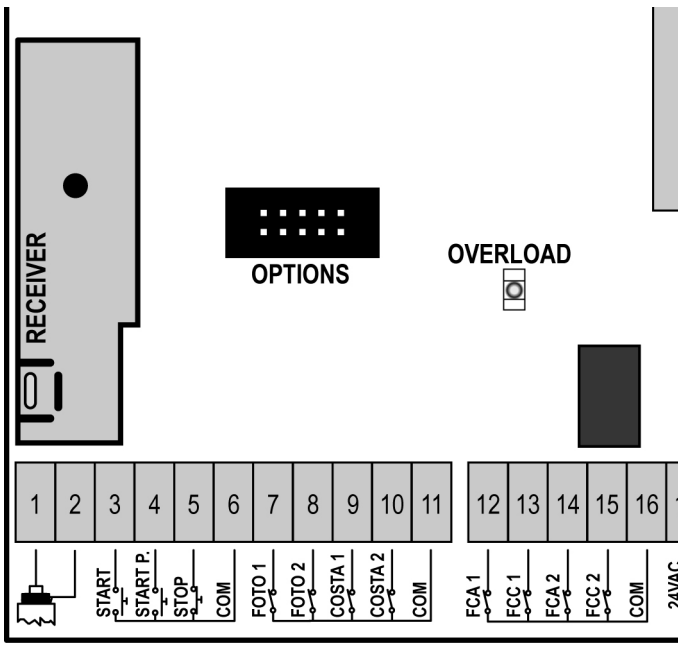
⚠ **WARNING:** Before programming 4 channels and function logics read carefully the instructions of MR1.

OPTIONAL MODULES

The **CITY1** digital control unit, besides its excellent versatility, provides for the final user with the possibility to add new functions by means of optional modules. Its dedicated connector has been placed over the word **OPTIONS**.

⚠ **WARNING:** Please read the instructions of each single module to install the optional modules.

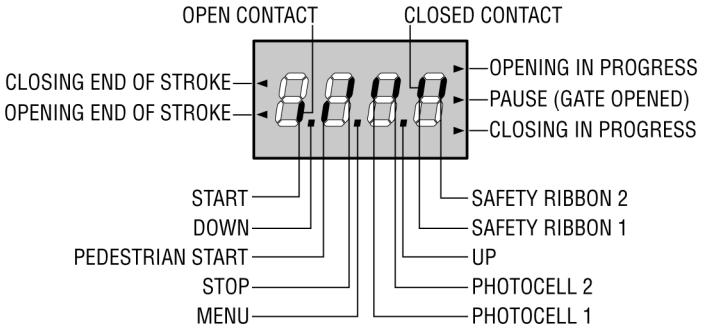
Connector for optional modules can also be used to plug in the programming lock key (cod. **CL1**), which prevents from any operation set-up change by non-authorized personnel.



ENGLISH

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. ***Pr 2.0***, will be viewed in the following 1.5 sec. Panel will be viewed upon completion of this test.



The control panel 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 closed; if the lower vertical segment is on, the contact is open (the above picture shows an instance where the inputs START, START P, FOTO 1, FOTO 2,COSTA 1, COSTA 2 and STOP have all been correctly connected).

Points being among display digits show the status of programming push-buttons: as soon as a push-button is pressed, its relevant point turns on.

The arrows on the display left side show the status of the ends of stroke. As for a one door-gate, arrows turn on when its end of stroke shows that the gate is completely closed or completely open.

As for a two-door gate, arrows turn on when both the ends of stroke show that both the doors are completely closed or completely open; the arrow will blink in case only one door reaches its end of stroke.

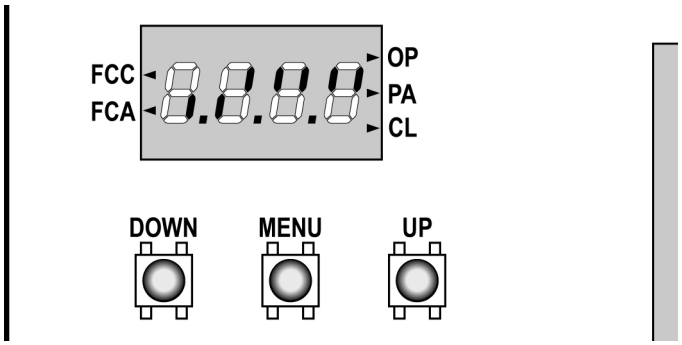
WARNING: these functions have not been activated in case of ends of stroke being connected in series to the motor.

The arrows on the display right side show the gate status:

- The highest arrow turns on when the gate is into its opening phase. If it blinks, it means that the opening has been caused by a safety device (border or obstacle detector).
- The central arrow shows that the gate is on pause. If it blinks, it means that the time countdown for the automatic closing has been activated.
- The lowest arrow blinks when the gate is into its closing phase. If it blinks, it means that the closing has been caused by a safety device (border or obstacle detector).

USE OF DOWN MENU AND UP KEYS FOR PROGRAMMING

Control unit time and function programming is made within a special configuration menu, to which you can access and where you can shift through **DOWN, MENU** and **UP** keys placed under the display.



Hold down the MENU key until **dEF** appears on display, to activate the programming mode while display views the panel.

Configuration menu consists of a list of configurable items; the wording appearing on display will show the current selected item.

By pressing DOWN, you will pass to the next item; by pressing UP, you will return to the previous item.
By pressing MENU, you can view the current value of selected item and possibly change it.

The last menu item (**FinE**) allows storing the carried out changes and going back to the control unit normal operation. You must exit from programming mode through this menu item if you do not want to lose your configuration.

WARNING: in case no operation is carried out for more than one minute, the control unit exits from the programming mode without saving any of your setups and changes, which will get lost.

By holding down the DOWN key, configuration menu items will scroll fast, until item **FinE** is viewed. Viceversa, by holding down the UP key, items will scroll fast backwards until item **dEF** is viewed. In this way, you can quickly reach either the top or bottom of the list.

There are the following three kinds of menu items:

- Function menu
- Time menu
- Value menu

Function menu setup

Function menus allow selecting a function from among a group of available options. When you enter into a function menu, the current active option will be viewed; you can scroll all available options through DOWN and UP keys. By pressing the MENU key, you will activate the option viewed and you will return to the configuration menu.

Time menu setup
Time menus allow setting a function duration. When you enter into a time menu, the current setup value will be viewed; the display mode depends on the current value:

- times being lower than one minute will be viewed as follows:



each time you press UP key, current time value increases of half a second; vice versa, each time you press the DOWN key, current time value decreases of half a second.

- Times between 1 and 10 minutes will be viewed as follows:



each time you press UP key, current time value increases of 5 seconds; vice versa, each time you press the DOWN key, current time value decreases of 5 seconds.

- Times being more than 10 minutes will be viewed as follows:



each time you press UP key, current time value increases of half a minute; vice versa, each time you press the DOWN key, current time value decreases of half a minute.

By holding down the UP key, you can quickly increase the time value, up to reach the max. value allowed for this item. Vice versa, by holding down the DOWN key, you can quickly decrease the time value down to reach **0.0"**.

In some circumstances, setting the value to 0 means that the relevant function is disabled, in this case, '**no**' will appear instead of **0.0"**.

By pressing on MENU you will confirm the displayed value and you will return to the configuration menu.

Value menu setup
Value menus are similar to time menus; however, the setup value can be any number.
By holding down UP or DOWN keys, 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.

WARNING: The self-learning procedure must be performed when the encoder (CITY1-ECD) is to be used.

Please refer to the paragraph "Control unit configuration" for the item position inside the menu, as well as for the available options for each item.

1. Call up a default configuration (item **dEF.**).
   Select **AntE** for a door-gate, select **Scor** for other configurations (sliding, rolling, sectional, etc.).
2. If you have a door gate with only one motor, set **t.AP2** opening time to zero.
3. In case there is no electric lock on the gate, set **t.SEr**, **t.ASE** and **t.CvE** values to zero.
4. Set items **StoP**, **Fot1**, **Fot2**, **CoS1**, **CoS2** e **FC.En** according to the safety devices installed on the gate.
5. Start the self-learning cycle (item **APPr**).

This last operation will close the configuration menu and store set up parameters.

Self-learning procedure if there are two motors:
- In case the ends of stroke, the encoder or the obstacle sensor have been enabled, the doors will be activated in closing direction until the stop end or the closing end of stroke is reached. Be sure that the leaves do not overlap.
- In case NEITHER the ends of stroke NOR the obstacle sensor have been enabled, be sure that the doors are completely closed when the procedure starts.
- The doors will be activated in opening direction until the stop end or the opening end of stroke is reached.
- In case the sensors have not been enabled, or if you realize that they do not signal the position to the control unit, you must send a first START command when leaf 1 reaches its max. opening position and then a second START command when leaf 2 completes its opening phase.
- The doors will be activated in closing direction until the stop end or the closing end of stroke is reached
- In case the sensors have not been enabled, or if you realize that they do not signal the position to the control unit, you must send a first START command when leaf 1 reaches its fully closed position and then a second START command when leaf 2 completes its closing phase.

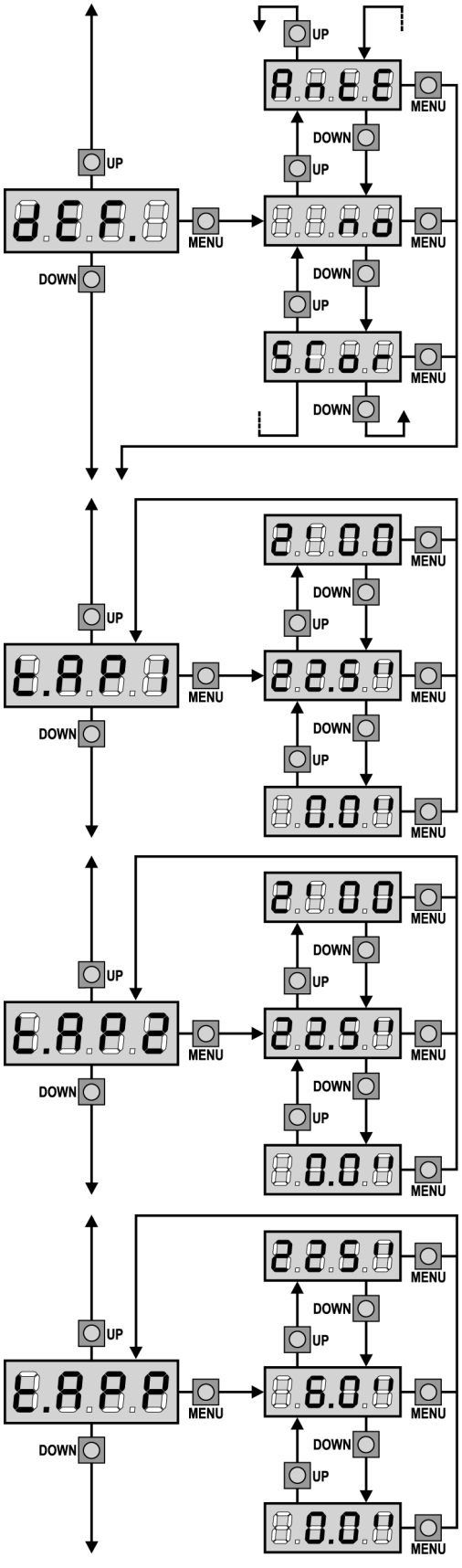
Self-learning procedure if there is one motor:
- In case the end of stroke, the encoder or the obstacle sensor has been enabled, the door will be activated in closing direction until the stop end or the closing end of stroke is reached.
- In case NEITHER the ends of stroke OR the obstacle sensor have been enabled, be sure that the door is completely closed when the procedure is started up.
- The door will be activated in opening direction until the stop end or the opening end of stroke is reached.
- In case the sensors have not been enabled, or if you realize that they do not signal the position to the control unit, you must send a START command when the door reaches its max. opening position.
- The door will be activated in closing direction until the stop end or the closing end of stroke is reached.
- In case the sensors have not been enabled, or if you realize that they do not signal the position to the control unit, you must send a START command must be sent when the door reaches its fully closed position.

CONTROL UNIT CONFIGURATION

This paragraph concerns the step-by-step procedure to set all operation parameters of **CITY1** control unit. You can either follow all procedure steps and perform a complete control unit configuration or select and adjust interesting items only.

As for both cases, you will have to perform the right exit procedure through item **FinE**, in order to activate your new configuration.

CITY1 control unit provides for a self-learning procedure of working times; therefore, we recommend that you set up a standard configuration first (see previous paragraph), then you carry out the self-learning and finally you change any unsatisfactory items.



Default value loading

The value of all menu items can be brought to a standard value (see final recap table) by means of only one command. There are two sets of values available:

AntE Values for a two-leaf gate equipped with a lock.
SCor Values for a one-leaf sliding gate without lock.

After loading default values, the other menu items can be scrolled and each parameter can be changed; exit from default menu will cause the automatic selection of the next item.

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.

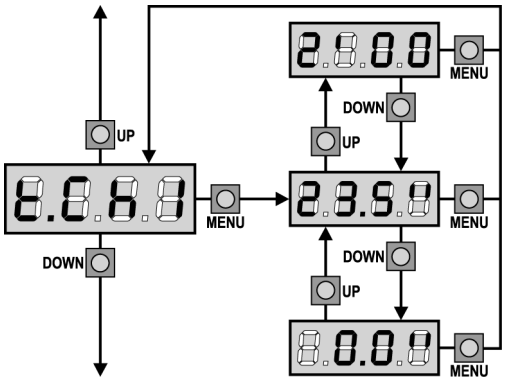
Leaf 2 opening time

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.

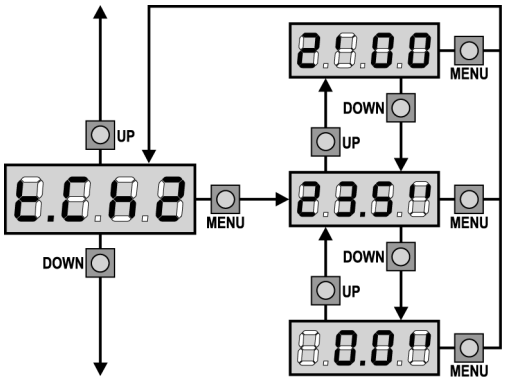
Partial opening time (pedestrian access)

When the control unit receives a Start Pedestrian command, it will open leaf 1 only, for a shorter time. Max allowed time to be setup is **t.AP1**.



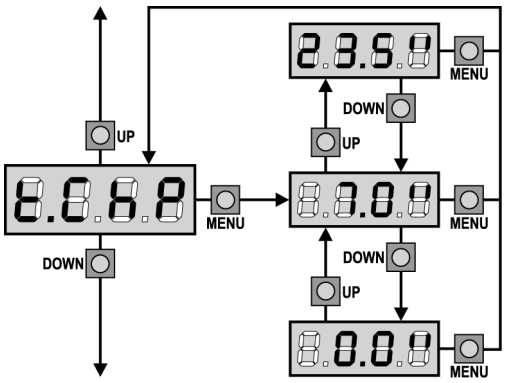
Leaf 1 closing time

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 **t.AP1** opening time.



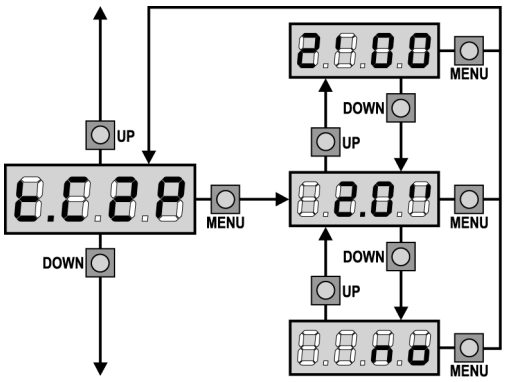
Leaf 2 closing time

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 **t.AP2** opening time.



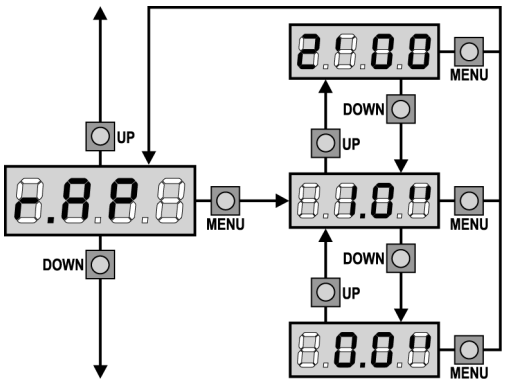
Partial closing time (pedestrian access)

When the control unit receives a Start Pedestrian command, it will use this time to close the gate. Max allowed time to be setup is **t.CH1**. To avoid that the door does not close completely, we recommend to setup a longer time than **t.APP** opening time.



Leaf 2 closing time during pedestrian cycle

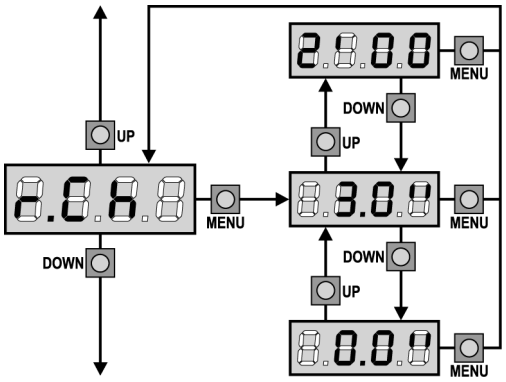
During a partial opening cycle (pedestrian access) leaf 2 may move slightly because of the wind or its own weight; in this case at closing time leaf 1 could hit leaf 2 and the gate would remain not perfectly closed.
To avoid this, in the last seconds of the cycle a light closing force is applied to leaf 2 too. If the set time is greater than the time required to close leaf 1, leaf2 is driven at reduced power all the closing time long.



Opening door delay

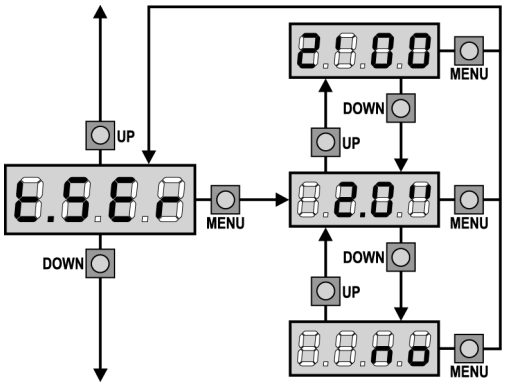
During the opening phase, leaf 1 must start moving before leaf 2, to avoid that both doors may collide. Leaf 2 opening will be delayed for the setup time.

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

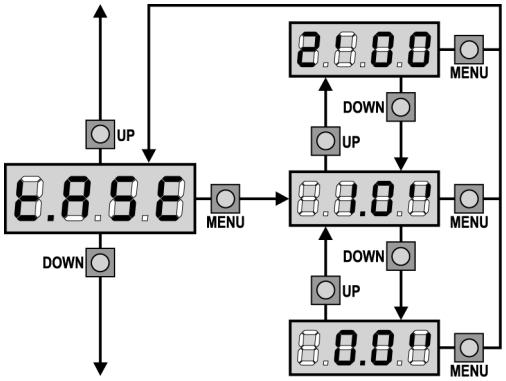
During the closing phase, leaf 1 must start moving after leaf 2, to avoid that both doors may collide. Door 1 closing will be delayed for the setup time.



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.
t.SEr time will fix the energizing time.

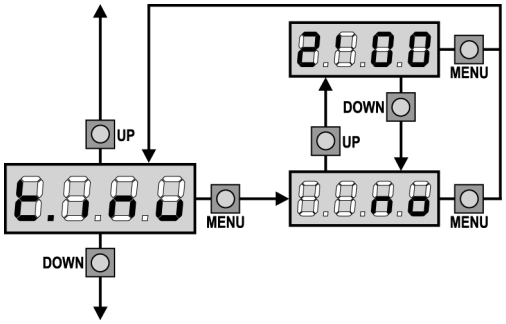
⚠ **WARNING:** in case the gate has no electric lock, set the value 0 ('**no**' will appear on display).



Lock advance time

While the electric lock is energized, the gate will stay standstill for **t.ASE** time, to make its release easier.
In case **t.ASE** is lower than **t.SEr**, the lock energizing will go on while the doors will start moving.

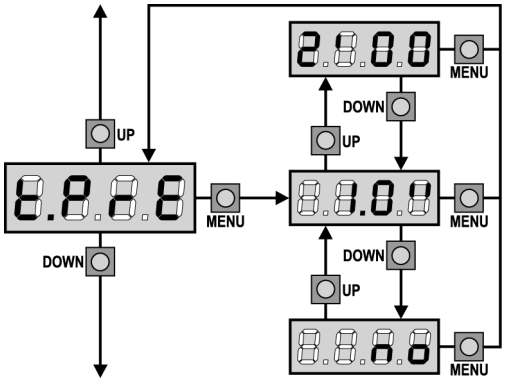
⚠ **WARNING:** in case the gate has no electric lock, set the value 0.



Backlash time

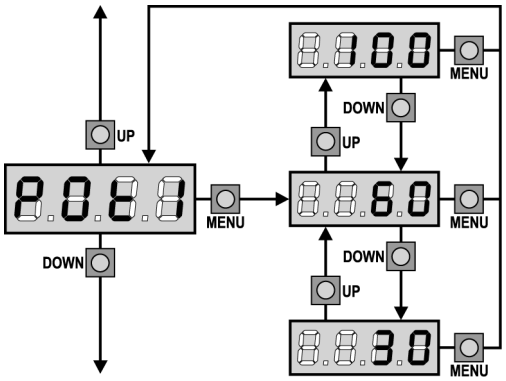
It could be useful to give a closing command to motors, to help the electric lock release.
The control unit controls the motors in reduced power in closing direction for the setup time.
The backlash precedes the electric lock release. It is possible to reverse the order by setting a lock advance time higher then the backlash one.

⚠ **WARNING:** in case the gate has no electric lock, set the value 0.



Pre-blinking time

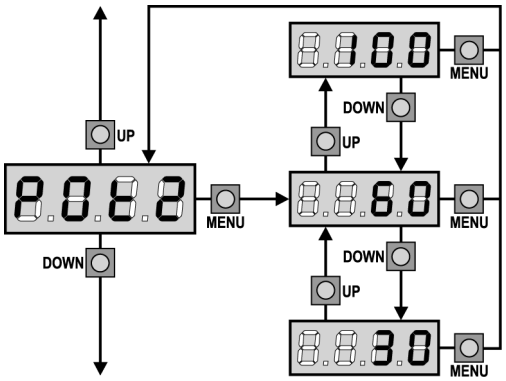
Before any gate movement, blinker will be activated for **t.PrE** time, to warn about the incoming motion.



Motor 1 power

This menu allows adjusting the motor 1 power.
The displayed value is the percentage of max. motor power.

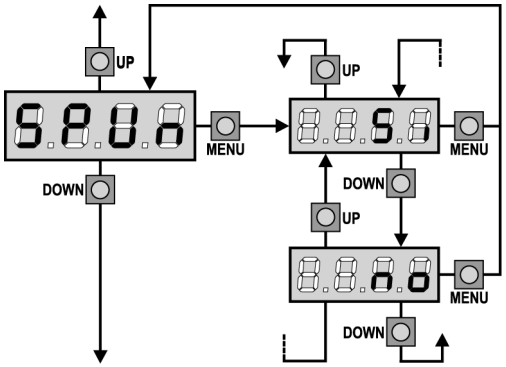
⚠ **WARNING:** In case an hydraulic motor is used, set value 100.



Motor 2 power

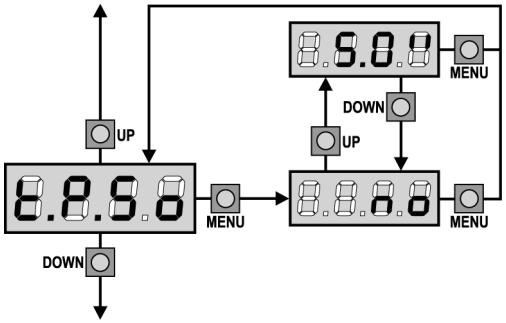
This menu allows adjusting the motor 2 power.
The displayed value is the percentage of max. motor power.

⚠ **WARNING:** In case an hydraulic motor is used, set value 100.



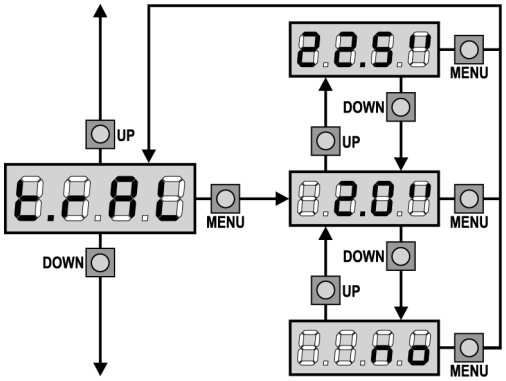
Start off

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 **Pot1** and **Pot2** values and it will give motors the maximum power command in order to overcome the gate inertia.



Soft start (slowed down)

In case this function is enabled, during the first seconds of motion of each door, the control control unit will give motors a reduced power command, for a softer start.

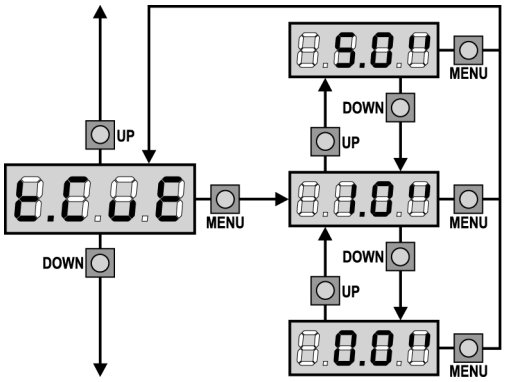


Slowing down time

In case this function is enabled, during the last seconds of motion of each door, the control unit will give motors a reduced power command, to avoid a strong impact with the stop end. **t.AP1** is the max. allowed time.

⚠ **WARNING:**

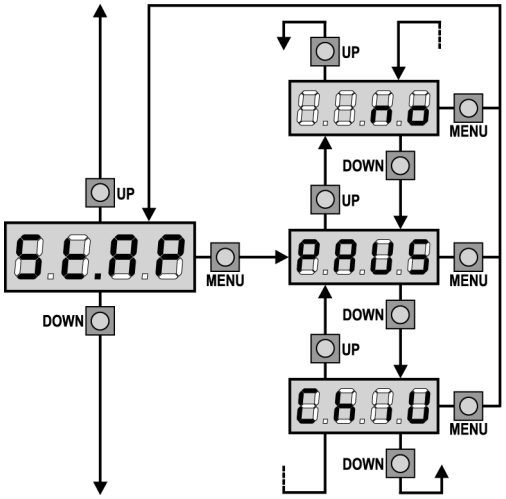
- In case the self-learning function of working times is NOT used, we recommend disabling the slowing down function in order to measure both opening and closing times, and to enable it again once the setup has been carried out. The control unit will automatically consider the working time delay caused by the slowing down.
- If partial opening time t.APP is shorter than t.AP1, there will be no slowing down during the pedestrian cycle opening.



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.

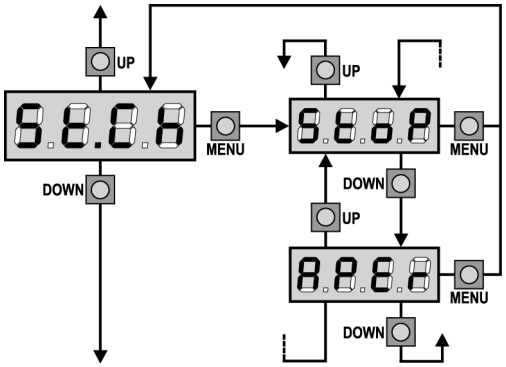


Start command during the opening phase

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.
ChiU 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.

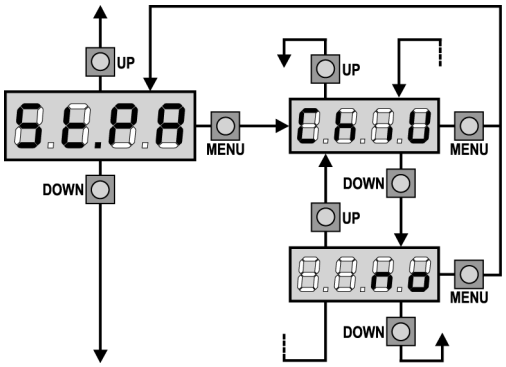


Start command during the closing phase

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.
APEr The gate opens again.

Select option **StoP**, to set up the "step-by-step" operation logic.
Select option **APEr**, to set up the 'always open' operation logic.

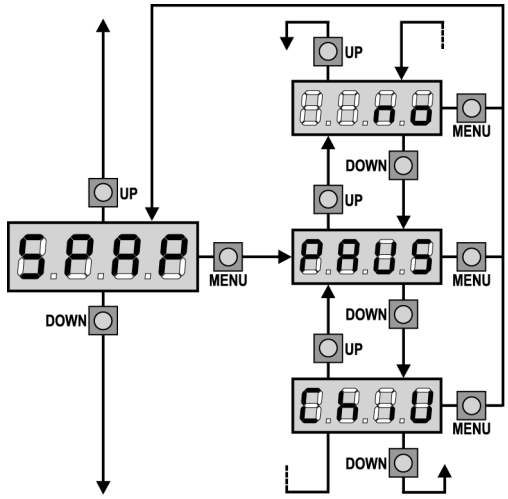


Start command during the pause

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

ChiU the gate starts closing.
no command is ignored.

Select option **ChiU**, to set up the "step-by-step" operation logic.
Select option '**no**', to set up the 'always open' operation logic.
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.

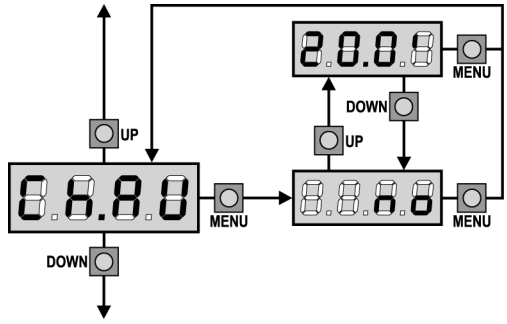


Pedestrian Start during the partial opening phase

This menu allows fixing the control unit conduct in case it receives a Pedestrian Start command during the partial opening phase.

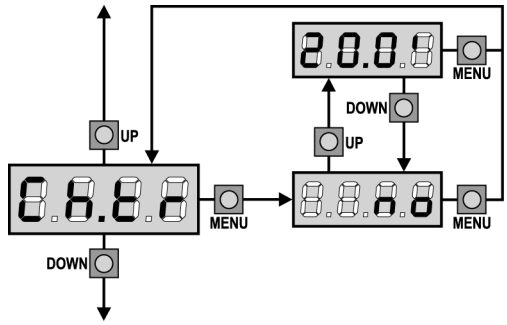
PAUS The gate stops and goes to pause.
ChiU the gate immediately starts closing.
no the gate goes on with the opening phase (command is ignored).

⚠ **WARNING:** a Start command in any phase of partial opening will cause the total opening; the Start Pedestrian command is always ignored during a total opening.



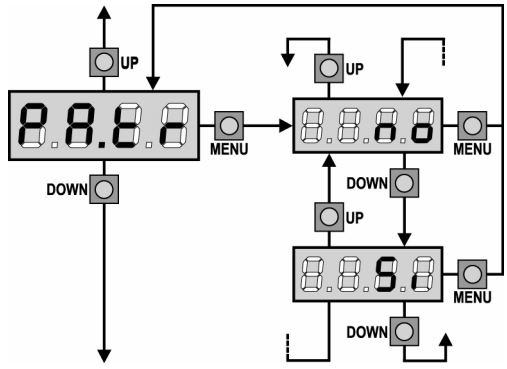
Automatic closing

During the automatic operation, the control unit will automatically close the gate when a set-up time expires.
The Start command, if enabled by **St.PA** 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, **St.PA** 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.



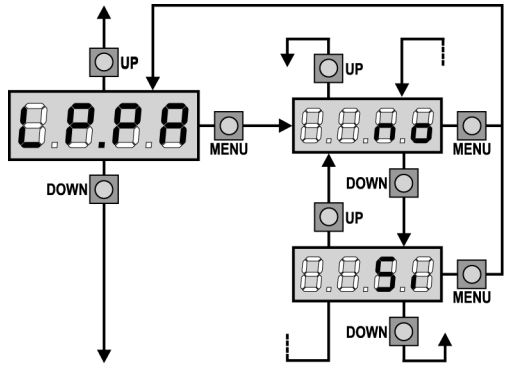
Closing after transit

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.AU** is generally used.
Ch.AU will be used when '**no**' is set up.
As for semi-automatic operation, this function is not active.



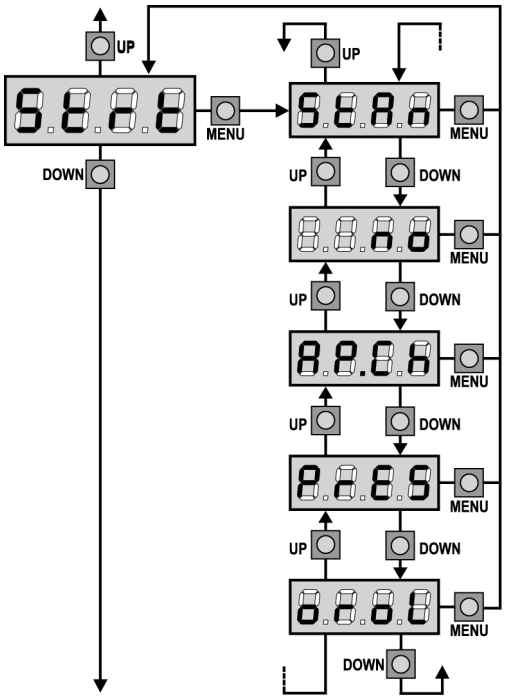
Pause after transit

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.



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.



Start input function

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

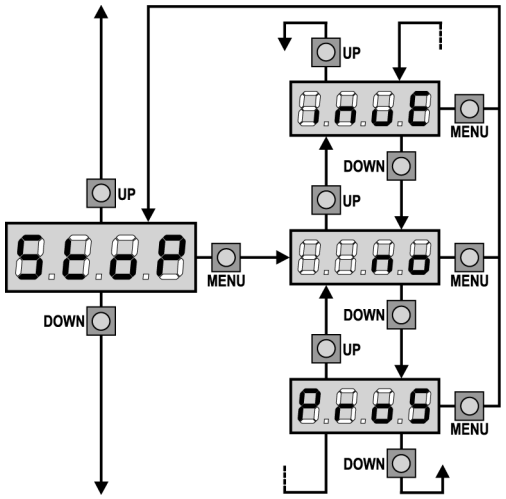
StAn Start and Pedestrian Start input standard operation, according to menu setups.

no Start inputs from terminal board are disabled. Radio inputs operate in **StAn** mode.

AP.CH 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.



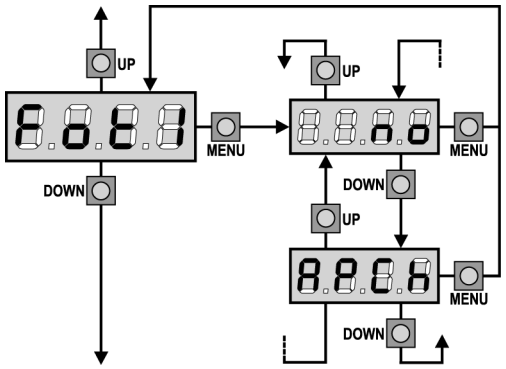
Stop Input

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 STOP 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.

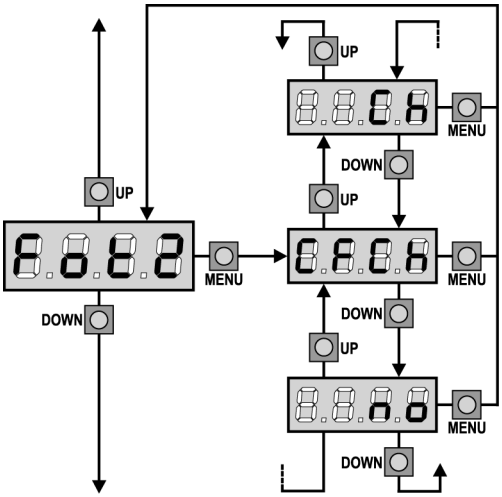
NOTE: during the pause, the STOP command will stop the pause time count, the next START command will always close the gate.



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").

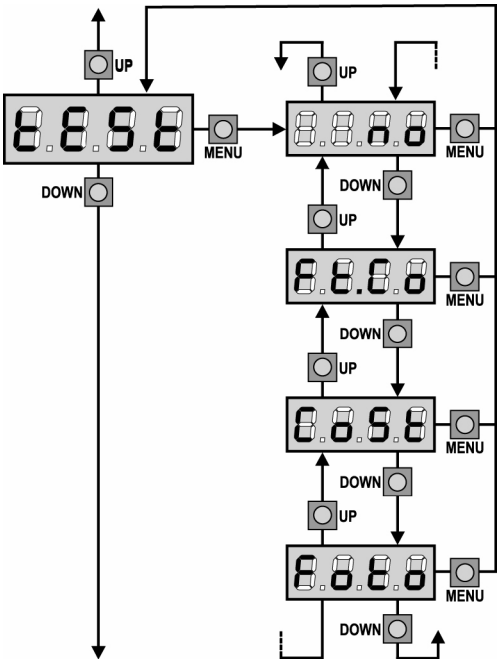
no Input disabled (ignored by the control unit). No jumper with the common is required.
AP.CH Input enabled.



Photocell 2 input

This menu allows enabling the input for type 2 photocells, that is to say, photocells non active during the opening phase (see paragraph "Installation").

no Input disabled (ignored by the control unit). No jumper with the common is required.
CF.CH 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.



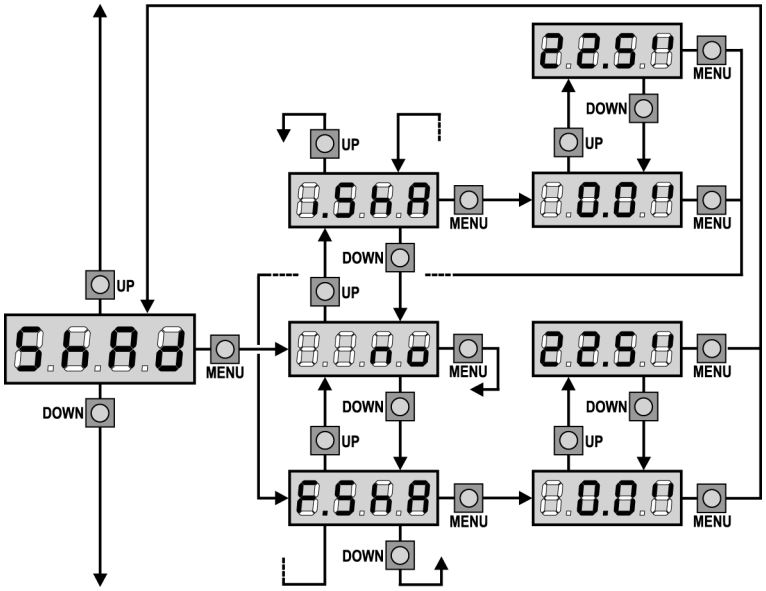
Test of safety devices

In order to achieve a safer operation for the user, the unit performs a safety devices 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 onfor 5 sec. The whole test cycle lasts less than one second.

no function not active
Foto test enabled only for photocells
CoSt test enabled only for safety edges
Ft.Co test enabled either for photocells or for safety edges

⚠ **WARNING:** The Test of safety devices should be working in order to grant more safety during installation and programming.

⚠ **WARNING:** it is possible to test safety edges only if a control unit specially provided for this function has been installed.



Photocell 2 Shadow Zone

In some installations it may occur that the gate door passes before the photocells, so breaking their beam. In this case, the gate cannot complete its closing cycle. Through this function, photocells can be temporarily disabled, so allowing the door passage. Only those photocells which are connected to the Photocell type 2 input can be disabled, this function being therefore activated in the closing phase only.
The door travel, during which photocells are not active, is measured in seconds from the beginning of the door 1 closing and starting from the max. opening position.

Please comply with the following procedure to setup the shadow zone limits:

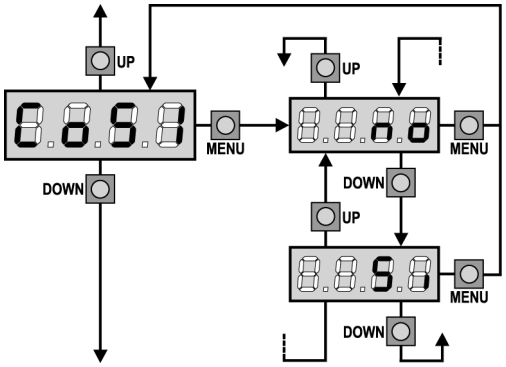
- Completely open the gate with the disabled function, then activate its closing and see after how many seconds the photocell operates.
- Set up a slightly lower time into i.ShA menu and a slightly higher time into F.ShA menu.

- During the time between i.ShA and F.ShA, photocells(FOTO2) will not be active during the closing phase.

⚠ **WARNING:** This function is active in case the ends of stroke have been fitted and enabled and if the START IN OPENING has been disabled.

⚠ **WARNING:** any improper use of this function may jeopardize the gate safe use. V2 recommends what follows:

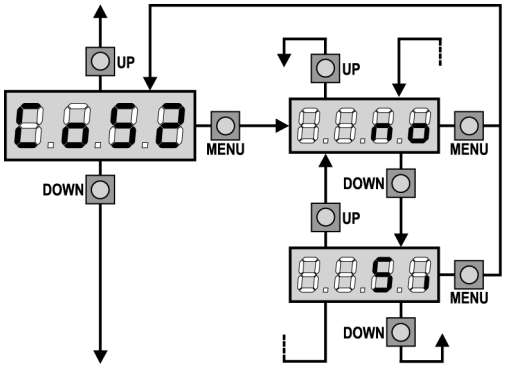
- Make use of this function only in case the door passage before the photocells is actually unavoidable.
- Set up the shadow zone limits as tight as possible, complying with the necessary margins to compensate any possible door speed difference.



Safety ribbon 1 input

This menu allows enabling the input for type 1 safety ribbon, that is to say, fixed ribbons (see paragraph "Installation").

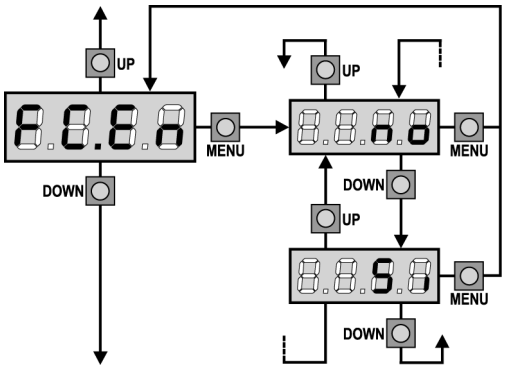
no Input disabled (ignored by the control unit). No jumper with the common is required.
Si Input enabled.



Safety ribbon 2 input

This menu allows enabling the input for type 2 safety ribbon, that is to say mobile ribbons (see paragraph "Installation").

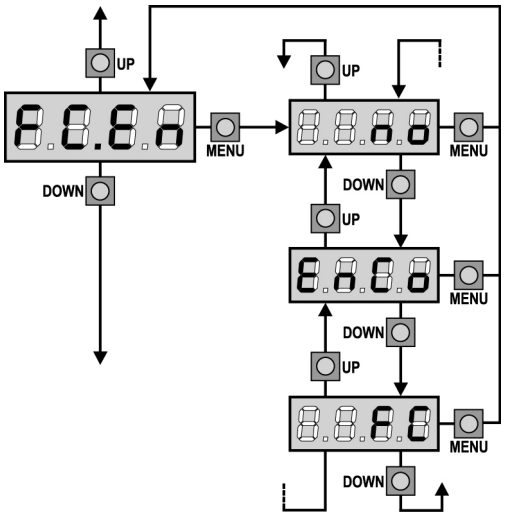
no Input disabled (ignored by the control unit). No jumper with the common is required.
Si Input enabled.



End of Stroke Inputs

CITY1 control unit allows connecting four mechanical ends of stroke (normally closed contacts) which are activated by the door motion and showing to the control unit that each door reached its position of complete opening or closing.

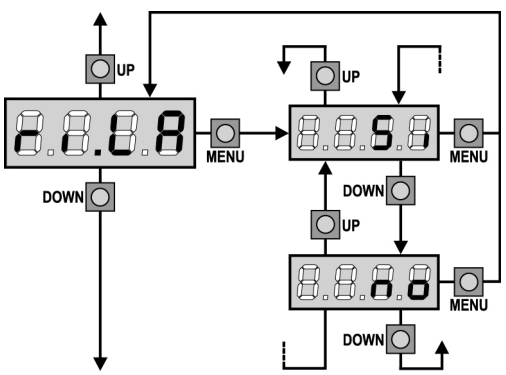
no End of stroke inputs are disabled.
Si End of stroke inputs are enabled.



Limit switch / Encoder input (only CITY1-ECD)

The CITY1-ECD controller allows you to connect four mechanical limit switches (normally closed contacts) or two encoders.
The limit switches are activated by the gate panel motion and inform the controller that each gate has reached the totally open or closed position.
The encoders inform the controller of the exact position of each gate.

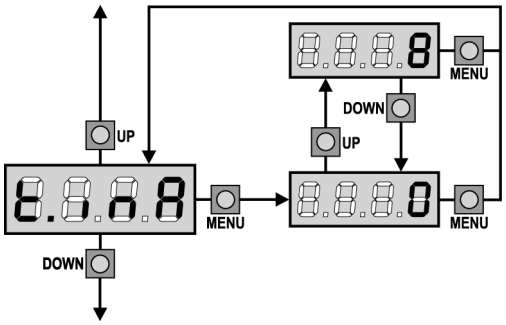
no Inputs disabled (the controller ignores them). It is not necessary to jumper with neutral.
EnCo Inputs enabled as encoders
FC Inputs enabled as limit switches.



Motor Release on Mechanical Stop

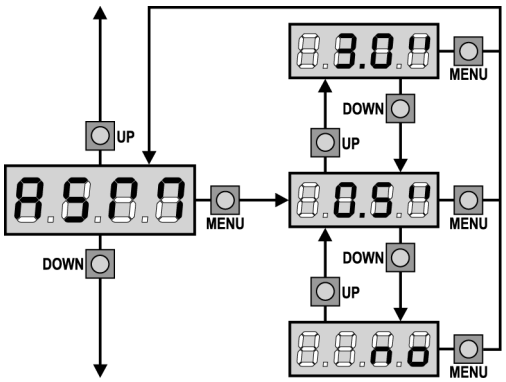
When the gate halts against the mechanical stop, the motor is controlled for a fraction of a second in the opposite direction, decreasing the motor gear tension.

Si Function enabled
no Function disabled



Max. Gate Quiescent Time

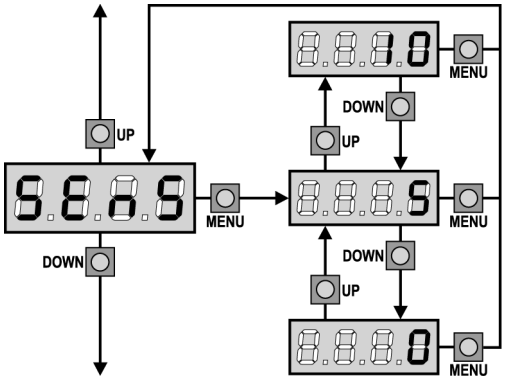
Some types of actuators (hydraulic actuators, mainly) tend to be loosened after some hours of quiescent time, jeopardizing the gate mechanical closing.
Such menu allows setting the max. gate quiescent time from 1 to 8 hours. By setting on 0, this function will be disabled.
In case the gate stays quiescent (closed) for a time longer than the set time, **CITY1** will close the gate for 10 seconds, so restoring an effective closing.



Anti-skid

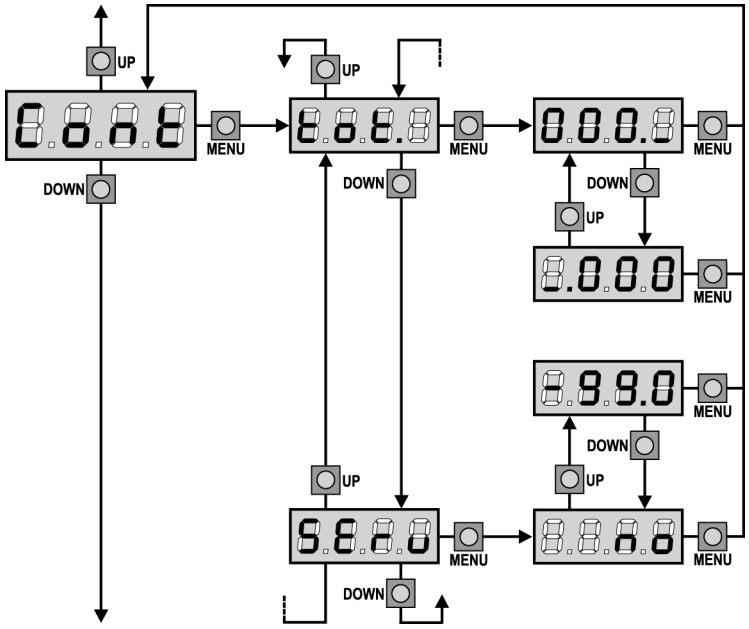
When an opening or closing operation is interrupted by a command or for the intervention of the photocell, the set-up time for the opposite movement would be excessive, so the control unit operates the motors only for the time necessary to recover the actually covered journey. This could be not sufficient, 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:** If function ASM is disabled, the gate goes backward until it comes to the end stops. In this phase the control unit does not activate the slow down function before the end stops are reached and any obstacle that comes across after the inversion is considered as an end of stroke.



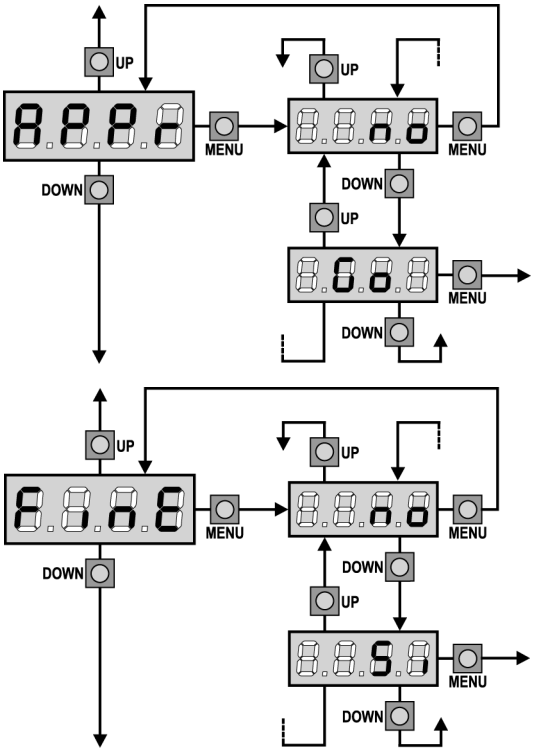
Obstacle Sensor Enabling

This menu allows the sensitivity adjustment of the obstacle sensor over 10 levels, from 1 to 10. By setting up "0", sensors will be disabled, increasing the value the sensivity increase.
The control unit automatically adjusts the sensor on the most suitable level, according to each motor set up power.
In case the safety operation is deemed not to be fast enough, the sensitivity level can be slightly increased.
If the gate stops where no obstacles are present, you should reduce the sensitivity level.
(See paragraph "Obstacle sensor operation" hereafter).



Counter viewing

This menu allows viewing the counter of completed opening cycles and it also enables the final user to set up the times of service required (see paragraph "Reading of cycle counter" below).



Automatic Learning of the Operation Time

This menu will activate a procedure enabling the control unit to automatically find the best duration of the operation time.
(See paragraph "Quick Configuration").
When you select **Go**, configuration menu closes and the learning cycle starts.

⚠ **WARNING:** The procedure of the operation time automatic learning can be starter only if the Start inputs are set up on the STANDARD mode (**StAn**).

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 End of programming.

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

READING OF CYCLE COUNTER

CITY1 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.

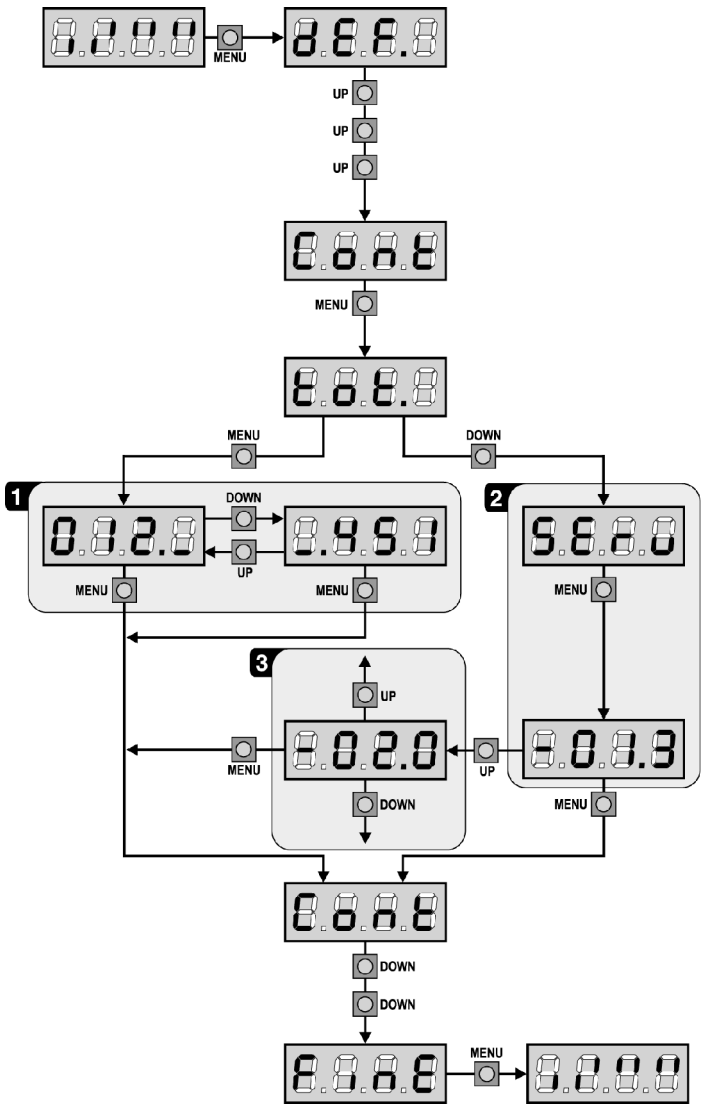
There are two counters available:
- A totalizing counter for completed opening cycles that cannot be zeroed (option "**tot**" of item "**Cont**")
- A downward counter for the number of cycles before the next request for service (option "**SErv**" of item "**Cont**"). This counter can be programmed according to the desired value.

The side scheme 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 no. 12451 cycles and there are no. 1322 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.

⚠ **WARNING:** service operations shall be carried out by qualified staff only. 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 signalling function for the service request will be disabled and no signal will be repeated anymore.

OBSTACLE SENSOR OPERATION

CITY1 control unit is equipped with a sophisticated system that allows detecting if there is any obstacle stopping the door motion. The sensitivity of this system can be adjusted through the **Sens** menu: the higher is the setup value, the prompter will be the control unit intervention if there is any obstacle. If you set on 0, obstacle detection will be disabled.

⚠ **WARNING:** apart from any setup sensitivity value, this system will detect an obstacle only if the door is stopped; therefore, no obstacle braking the door without stopping it will be detected. In addition, this system does not work when the doors moves at slowed down speed.

The control unit reaction in case an obstacle is detected depends on the **t.rAL** menu setup and on the moment when such obstacle is detected.

Slowing down disabled
The door motor on which an obstacle is detected will stop pushing and, for a second fraction, it will be given the command to go backwards, so not to keep its gears under stress. If **t.SEr** menu is set to '**no**' (that is to say, no electric lock) and an obstacle is detected during the last 3 seconds of the closing phase, there will be no reversal, to allow the gate completing its closing.

Slowing down enabled
Obstacle detection will be performed only if the door moves at a normal speed. Both doors will stop and they will be given the command to go backwards for 3 seconds, to take out the obstacle detected. The following Start command will let the former door motion start again. In case the slowing down phase has already begun, no obstacle will be detected and this kind of situation cannot be considered as dangerous since the motor, when working according to its slowing down function, will push the obstacle with a very low pressure.

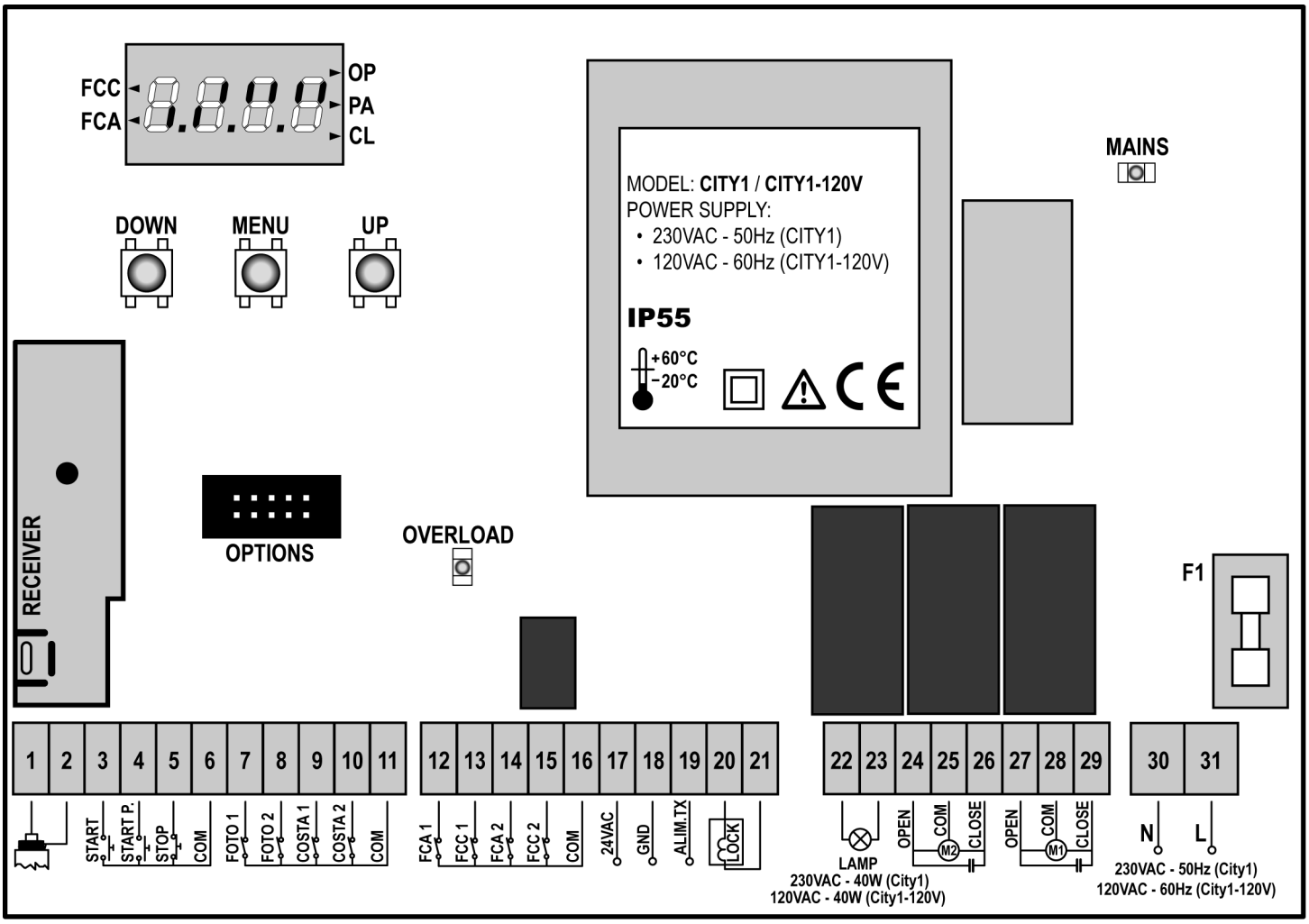
CITY1 FUNCTION TABLE

DISPLAY	DATA	DESCRIPTION	DEFAULT SCor	DEFAULT AntE	MEMO DATA
dEF.	**no**	It does not load the V2 standard data	**no**	**no**	
	SCor	Predefined programming for a typical sliding gate.			
	AntE	Predefined programming for a typical two-door gate			
t.AP1	**0.0" ÷ 2.0'**	Gate 1 opening time	**22.5"**	**22.5"**	
t.AP2	**0.0" ÷ 2.0'**	Gate 2 opening time	**0.0"**	**22.5"**	
t.APP	**0.0" ÷ t.AP1**	Opening time of pedestrian gate	**6.0"**	**6.0"**	
t.Ch1	**0.0" ÷ 2.0'**	Gate 1 closing time	**23.5"**	**23.5"**	
t.Ch2	**0.0" ÷ 2.0'**	Gate 2 closing time	**0.0"**	**23.5"**	
t.ChP	**0.0" ÷ t.Ch1**	Closing time of pedestrian gate	**7.0"**	**7.0"**	
t.C2P	**0.5" ÷ 2.0'**	Leaf 2 closing time during pedestrian cycle	**no**	**2.0"**	
	no	- Function disabled			
r.AP	**0.0"÷ 2.0'**	Gate delay during opening	**1.0"**	**1.0"**	
r.Ch	**0.0" ÷ 2.0'**	Gate delay during closing	**3.0"**	**3.0"**	
t.SEr	**0.5" ÷ 2.0'**	Electrical lock operation time	**no**	**2.0"**	
	no	- Lock is not energized (it corresponds to 0)			
t.ASE	**0.0" ÷ 2.0'**	Lock advance time	**0.0"**	**1.0"**	
t.inv	**0.5" ÷ 3.0"**	Backlash time	**no**	**no**	
	no	- Backlash disabled (it corresponds to 0)			
t.PrE	**0.5" ÷ 2.0'**	Pre-flashing time	**1.0"**	**1.0"**	
	no	- Pre-flashing disabled (it corresponds to 0)			
Pot1	**30 ÷ 100%**	Motor 1 power	**60**	**60**	
Pot2	**30 ÷ 100%**	Motor 2 power	**-**	**60**	
SPUn	**no/Si**	Start off	**no**	**Si**	
t.P.So	**0.5" ÷ 3.0"**	Slowed down starting time	**1.5"**	**no**	
	no	- Slowed down starting disabled			
t.raL	**0.5"÷22.5"**	Slow down time	**2.0"**	**2.0"**	
	no	- Slow down disabled			
t.CVE	**0.0" ÷ 3.0"**	Fast closing time after slowing down during closing	**0.0"**	**1.0"**	
St.AP		Start in opening	**PAUS**	**PAUS**	
	no	- Start command is not available			
	ChiU	- Command close gate			
	PAUS	- Stop the gate and goes in pause			
St.Ch		Start in closing	**StoP**	**StoP**	
	Stop	- Start command stop the gate			
	APEr	- Start command open the gate			
St.PA		Start in pause	**ChiU**	**ChiU**	
	no	- Start command is not available			
	ChiU	- Start command closes the gate			
SPAP		Pedestrian in opening	**PAUS**	**PAUS**	
	no	- Pedestrian start command is not available			
	ChiU	- Pedestrian start command closes the gate			
	PAUS	- Gate goes in pause			
Ch.AU		Automatic closing	**no**	**no**	
	no	- The automatic closing is not active (it corresponds to 0)			
	0.5"÷ 20.0'	- The gate closes after the setup time			
Ch.tr		Closing after passage	**no**	**no**	
	no	- Closing after passage disabled			
	0.5"÷ 20.0'	- Gate stop for a time to be set between 0.5" to 20'			
PA.tr	**no/Si**	Pausa dopo il transito	**no**	**no**	
LP.PA	**no/Si**	Flashlight in pause	**no**	**no**	

CITY1 FUNCTION TABLE

DISPLAY	DATA	DESCRIPTION	DEFAULT SCor	DEFAULT AntE	MEMO DATA
St.rt		Operation modes	**StAn**	**StAn**	
	no	- Start inputs from terminal board are disabled			
	StAn	- Standard operation			
	AP.CH	- Separated opening and closing commands			
	PrES	- Manned operation			
	oroL	- Timer operation			
StoP		STOP input	**no**	**no**	
	no	- STOP input not available			
	invE	- STOP command stops the gate: START command starts			
		moving in the opposite direction			
	ProS	- STOP command stops the gate: pressing the START command			
		gate continues the motion			
Fot 1		PHOTO 1 input	**APCH**	**no**	
	APCh	- Input is available for the connection of the photocell			
	no	- Not available			
Fot 2		PHOTO 2 input	**CFCh**	**CFCh**	
	CFCh	- Photocell is active in closing and also when the gate is still			
	no	- Not available			
	Ch	- Photocell is active during the closing			
tESt		Test of safety devices	**no**	**no**	
	no	- Function not active			
	Foto	- Test enabled only for photocells			
	CoSt	- Test enabled only for safety edges			
	Ft.Co	- Test enabled either for photocells or for safety edges			
ShAd		Photocell 2 shadow zone	**no**	**no**	
	no	- Function disabled			
	F.ShA	- FOTO2 disabling higher time			
	i.ShA	- FOTO2 disabling lower time			
CoS1	**no/Si**	Border 1 input (fixed border)	**no**	**no**	
CoS2	**no/Si**	Border 2 input (mobile border)	**no**	**no**	
FC.En	**no/Si**	End of stroke inputs (CITY1 only)	**Si**	**no**	
FC.En		Limit switch / Encoder input (only CITY1-ECD)	**no**	**no**	
	no	- Inputs disabled (the controller ignores them)			
	EnCo	- Inputs enabled as encoders			
	FC	- Inputs enabled as limit switches			
riLA	**Si/no**	Motor Release on Mechanical Stop	**Si**	**Si**	
t.inA	**0 ÷ 8**	Max. gate quiescent time	**0**	**0**	
ASM	**0.5" ÷ 3.0"**	Anti-skid	**0.5"**	**0.5"**	
	no	- Function disabled			
SEnS	**0 ÷ 10**	Obstacle sensor level	**5**	**5**	
Cont		Counter viewing	**tot**	**tot**	
	tot.	- Total number of completed cycles (views in thousands or in units)			
	Man	- Number of cycles before the next request for service (such a number			
		has been rounded off to hundreds and it can be set up on 1000-step;			
		in case it is set up on 0, the request will be disabled and no will be viewed)			
APPr		Automatic learning of the operation time	**no**	**no**	
	no	- Function disabled			
	Go	- Start up of the automatic learning procedure			
FinE		End of programming	**no**	**no**	
	no	- It does not exit from the program menu			
	Si	- It exits from the program menu by storing the setup parameters			

ELECTRIC CONNECTIONS TABLE



1	Antenna	
2	Antenna shield	
3	Opening control for the connection of control devices with N.O. contact	
4	Opening controls for pedestrian access for the connection of control devices with N.O. contact	
5	Stop command. N.C. contact	
6	Common (-)	
7	Photocells type 1. N.C. contact	
8	Photocells type 2. N.C. contact	
9	Safety ribbons type 1 (fixed). N.C. contact	
10	Safety ribbons type 2 (mobile). N.C. contact	
11	Common (-)	
12	End of stroke in door 1 opening phase. N.C. contact	Encoder motor 2 (CITY1-ECD only)
13	End of stroke in door 1 closing phase. N.C. contact	
14	End of stroke in door 2 opening phase. N.C. contact	Encoder motor 1 (CITY1-ECD only)
15	End of stroke in door 2 closing phase. N.C. contact	
16	Common (-)	
17 - 18	Power output 24 VAC for photocells and other accessories	

18 - 19	Photocell TX power supply for functional test
20 - 21	Electric lock 12VAC
22 - 23	Flashing light 230VAC 40W (CITY1) 120VAC 40W (CITY1-120V)
24	Motor 2 opening
25	Motor 2 common
26	Motor 2 closing
27	Motor 1 opening
28	Motor 1 common
29	Motor 1 closing
30	Neutral 230 VAC / 120 VAC
31	Power phase 230 VAC / 120 VAC
F1	5A (CITY1) / 8A (CITY1-120V)
OPTIONS	Optional modules connector
MAINS	It shows that the control unit is power supplied
OVERLOAD	It shows that there is an overload on accessories power supply
FCC	It shows the opening end of stroke activation
FCA	It shows the closing end of stroke activation
OP	Opening in progress
PA	Pause (gate opened)
CL	Closing in progress

CABLES TABLE

For the wiring to the control unit refer to the following table:

CONNECTION	SUITABLE CABLE [N° WIRES PER SECTION]	SUITABLE CABLE GLAND
NETWORK	3 x 1.5 mm^2	PG9: For cables with external Ø from 5 to 8 mm
ACTUATOR	4 x 1 mm^2	PG9: For cables with external Ø from 5 to 8 mm
EXTERNAL ANTENNA	SCREENED RG58	PG9: For cables with external Ø from 5 to 8 mm
FLASHING LIGHT	2 x 1.5 mm^2	PG9: For cables with external Ø from 5 to 8 mm
ELECTRO LOCK	2 x 1.5 mm^2	PG9: For cables with external Ø from 5 to 8 mm
OTHER WIRINGS	MULTIPOLAR n x 0.25 - 0.5 mm^2 (n) depending on the number of wirings to be made	PG9: For cables with external Ø from 5 to 8 mm PG11: For cables with external Ø from 7 to 10.5 mm PG13.5: For cables with external Ø from 9 to 12.5 mm

⚠ **WARNING:** To assemble a PG cable gland higher than 9 it is necessary to enlarge the pierce on the plastic shell. Instead of the cable gland, it is possible to use flexible pipes with IP55 connection.

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 **CITY1** 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.

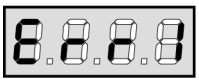
OVERLOAD led is on

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

1. Remove the extractable part containing terminals 12 to 21. 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.

Error 1

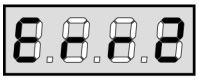
The following writing appears on display when you exit from programming:



It means that changed data could not be stored.
This kind of defect has no remedy and the control unit must be sent to V2 for repair.

Error 2

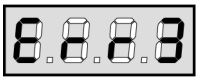
When a Start command is given and the gate does not open and the following writing appears on display:



It means that triac test failed.
Before sending the control unit to V2 for repair, be sure that motors have been properly connected.
In case motor 2 is not connected, be sure that **t.AP2** menu item is on **0.0**".

Error 3

When a Start command is given and the gate does not open and the following writing appears on display:

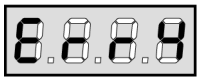


It means that the photocell test failed.

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 **Fot2** menu item is on **CF.CH**.
4. Be sure that photocells are powered and working; when you interrupt their beam, you should hear the relay tripping.

Error 4

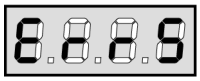
After few centimeters during the opening phase the gate stops and the display shows:



It means that the limit switches in closing phase have not been released. Make sure that the limit switches are correctly connected and the gate, opening, let the limit switch open.

Error 5

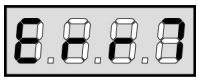
Once given a start control, the gate does not open and the display shows:



It means that the test of the safety edges failed. Make sure that the control unit driving the safety edges is correctly connected and properly working. Make sure that the safety edges enabled by menu are actually installed.

Error 7

This indicates an error in the encoders' operation.

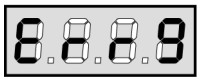


There are three possible causes:

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 **12** with **13**, or **14** with **15**
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.

Error 9

When you are trying to change the control unit setups and the following writing appears on display:
It means that programming was locked by means of the



programming lock key (code **CL1**). In order to enter the configuration menu, you will have to insert this key into the special OPTIONS connector.

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.



V2 S.p.A.

Corso Principi di Piemonte, 65/67 - 12035 RACCONIGI (CN) ITALY

tel. +39 01 72 81 24 11 fax +39 01 72 84 050

info@v2home.com www.v2home.com