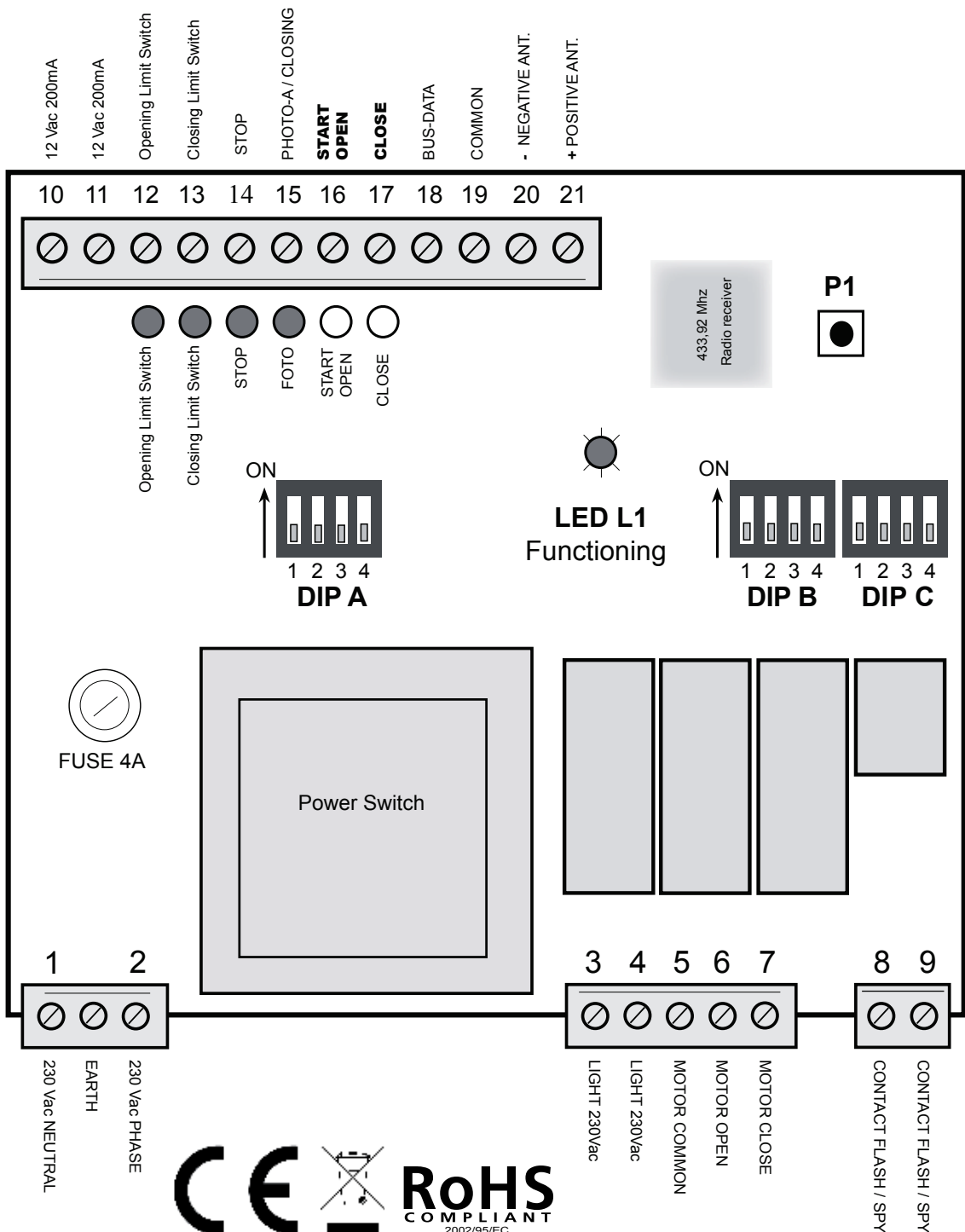


230 V Mono-phase control unit for rolling shutters, awnings, barriers.
 Time acquisition "real-time", radio receiver included (HCS rolling code),
 "Man present" function with remote control. Intervention of photocell when closing, Stop. Courtesy Light

230V AC Control Board

Manuals and warnings



Foreword

This manual provides all the specific information you need to familiarize yourself with and correctly operate your unit. Read it very carefully when you purchase the instrument and consult it whenever you have doubts regarding use and before performing any maintenance operations.

Safety precautions

Using the unit improperly and performing repairs or modifications personally will void the warranty.

Nologo declines any responsibility for damages due to inappropriate use of the product and due to any use other than the use the product was designed for. Nologo declines any responsibility for consequential damages except civil liability for the products.

Environmental protection measures

Information regarding the environment for customers within the European Union.

European Directive EC 2002/96 requires that units bearing this symbol on the unit and/or on the packaging be disposed of separately from undifferentiated urban wastes. The symbol indicates that the product must not be disposed of with the normal household wastes.



The owner is responsible for disposing of this product and other electrical and electronic equipment through specific waste collection facilities indicated by the government or local public agencies. Correct disposal and recycling help prevent any potentially negative impact on the environment and human health. To receive more detailed information regarding disposal of your unit, we recommend that you contact the competent public agencies, the waste collection service or the shop where you purchased the product.

Small dictionary

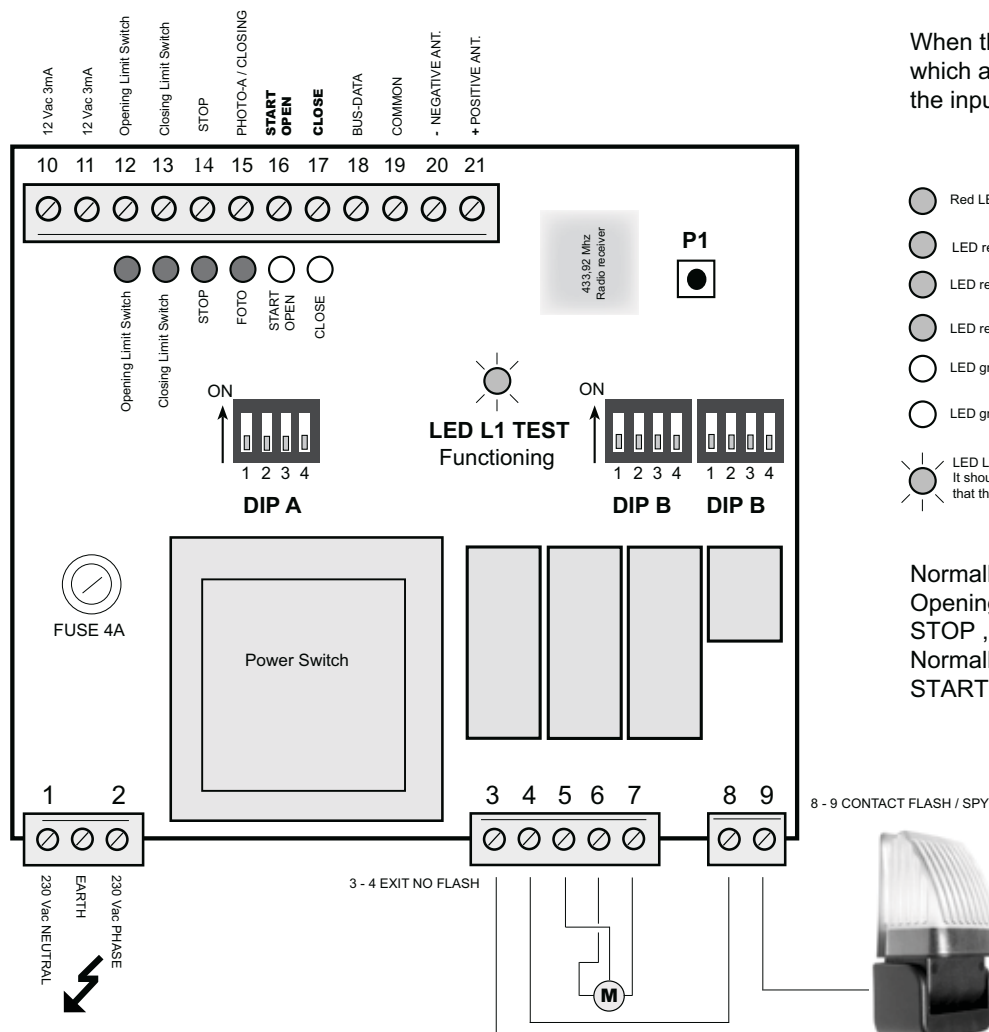
Vac	(alternate current)
Vdc	(direct current)
FCA or FCO	Opening Limit Switch
FCC	Closing Limit Switch
NC	Normally closed
NA	Normally open
Contatto pulito	Isolated contact

	1	230 Vac NEUTRAL
		EARTH
	2	230 Vac PHASE
	3	LIGHT 230 Vac
	4	LIGHT 230 Vac
	5	MOTOR COMMON
	6	MOTOR OPEN
	7	MOTOR CLOSE
	8	CONTACT FLASH / SPY
	9	CONTACT FLASH / SPY
	10	12 Vac 200mA
	11	12 Vac 200mA
	12	FCA OPEN MOTOR
	13	FCC CLOSE MOTOR
	14	STOP
	15	PHOTO-A / CLOSING
	16	OPEN / START
	17	CLOSE
	18	BUS-DATA
	19	COMMON
	20	- NEGATIVE ANTENNA
	21	+ POSITIVE ANTENNA

1.00 Installation: Scheme of the control unit

I LED

When the control unit is powered, the LED, which are in the inputs, are turned on when the input common contact is closed:



- Red LED (normally closed) turned on: Opening Limit Switch close
- LED red (normally closed) turned on: STOP contact closed
- LED red (normally closed) turned on: STOP contact closed
- LED red (normally closed) turned on = FOTO contact closed
- LED green (normally open) : it turned on when the contact opens
- LED green (normally open) it turned on when the contact closes
- LED L1 TEST: it indicates the right functioning of the control unit. It should flash each second (twice when rolling code) and it indicates that the micro-processor is activated

Normally the red led on the inputs: Opening Limit Switches, Closing Limit Switches, STOP , FOTO are turned on.
Normally the green led in the inputs: START / OPEN are turned OFF

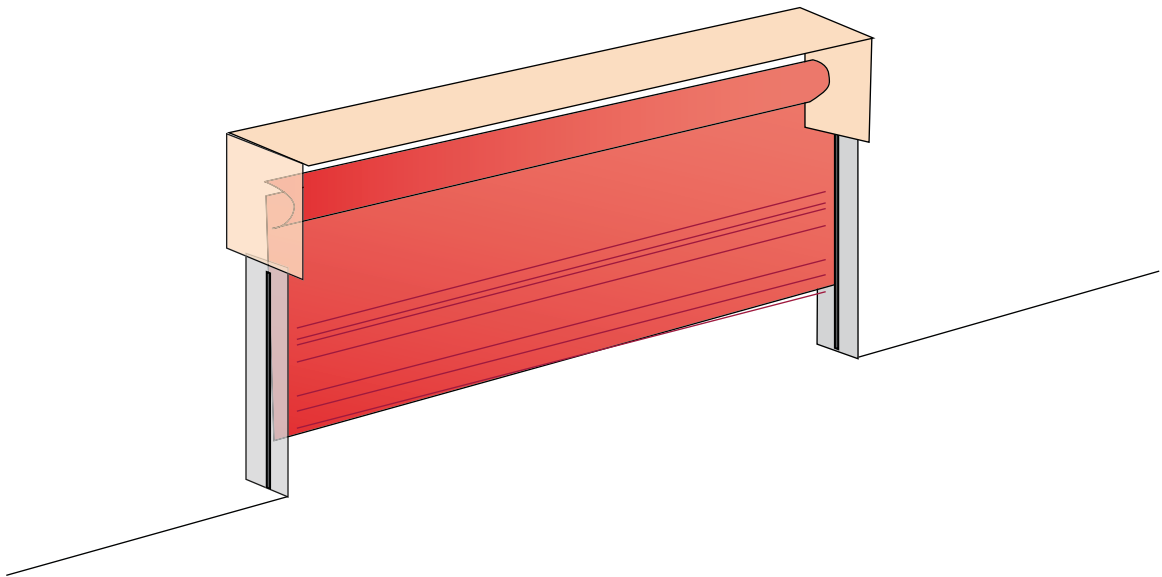
1	230 Vac neutral contact
	EARTH
2	230 Vac Phase
3	230 Vac output for lamp without electronic card . See paragraph 4.02
4	230 Vac output for lamp with electronic card . See paragraph 4.02
5	230Vac common motor
6	230Vac motor open
7	230 Vac motor closes
8	Output for isolated contact without flashing card or light
9	Output for isolated contact without flashing card or for light. 230Vac lamp with flashing card or with 230Vac card when gate is moving

10	12 Vac 200mA Output
11	12 Vac 200mA Output
12	FCC Opening Limit Switch
13	FCC Closing Limit Switch
14	STOP input
15	PHOTOCELL–A input only activated when closing, if it is working, reverse totally and stop.
16	OPENING output / START control
17	CLOSING input / it makes the following cycle: CLOSE-STOP-CLOSE
18	Bus - data system
19	Common contact for services and BUS
20	- Antenna negative pole
21	+ Antenna positive pole

1.01 Type of electrical wires

Depending on the installation, the type and number of devices installed, the number of cables needed can vary. The table below shows the cables needed for a typical installation. The cables used in the installation must be IEC 60335 compliant.

⇒	Power supply line	Cable 3x1,5 mm ²
⇒	Motor cable (if not equipped)	Cable 4 x 1,5 mm ²
⇒	Flashing signal	Cable 2x1,5 mm ²
⇒	Antenna	Shielded cable type RG58
⇒	Key selector	Cable 3x0,5 o 0,75 mm ²
⇒	Photocell receiver	Cable 4x0,5 o 0,75 mm ²
⇒	Photocell transmitter	Cable 2x0,5 o 0,75 mm ²



1.02 Notes of connections

To guarantee operator safety and to prevent damaging the components, never make connections or insert wireless receiver boards while the control unit is powered. Power the control unit through a 3 x 1.5 mm² cable.

If the distance between the control unit and the ground system connection is more than 30 m, a ground plate must be installed in proximity to the control unit.

- If the motors do not have a cable, use the 4 x 1.5 mm² cable (open + close + common + ground).
- In connecting the part with an extremely low safety voltage, use cables with a minimum section of 0.5 or 0.75 mm².
- Use shielded cables if the length exceeds 30m and connecting the ground braid only from the side of the control unit.
- Do not connect the cables in underground cases even if they are water-tight.
- If they are not used, the inputs to the Normally Closed (NC) contacts must be jumpered to the common”
- If the same input has more than one contact (NC), they are placed in series.
- If they are not used, the inputs to the Normally Open (NO) contacts are left loose.
- If the same input has more than one contact (NO), they are to be placed in series.
- The contacts must be mechanical and free of any potential.

Remember that systems for automatic gates and doors must be installed by highly qualified technicians only and in full compliance with current law.

230V AC Control Board

The kit version includes

Box for Control Unit 115mm x 165mm x 65mm

Control Card

2 Channel receiver (START/OPEN and CLOSE)

2.00 Connection of the motor

Pay attention not to invert the poles OPEN and CLOSE.

In case of doubts, put the gate manually in the middle.

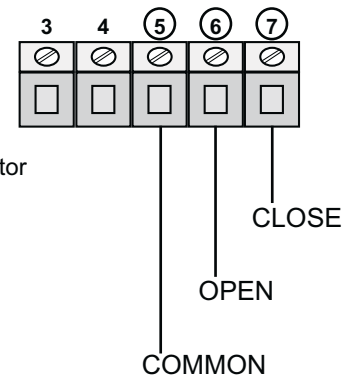
Be ready to stop the gate with a STOP control.

Make sure that the control OPEN is really OPEN,

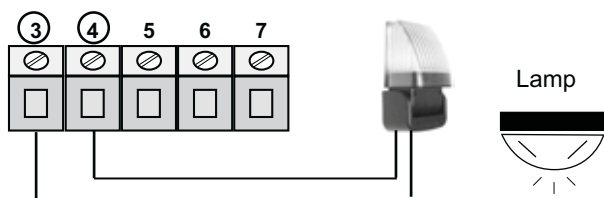
try to interrupt the photo-beams: if the gate starts closing,

the connection is not correct and you need to reverse the cables OPEN and CLOSE of the motor

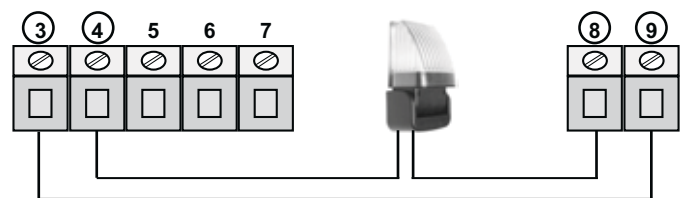
Please note that you can hear the relay even if it is not connected, while opening it sounds very fast, while closing it sounds very slowly.



2.01 Connection of the signal light or lamp



Connect the lamp LUCE -1 230vAC with flashing card.
Or a lamp with fix light when the gate is moving.
For courtesy light see paragraph 4.02 .



Connect the lamp LUCE -0230 without flashing card.

2.02 Connection of the photocell FOTO-A inverting only when closing

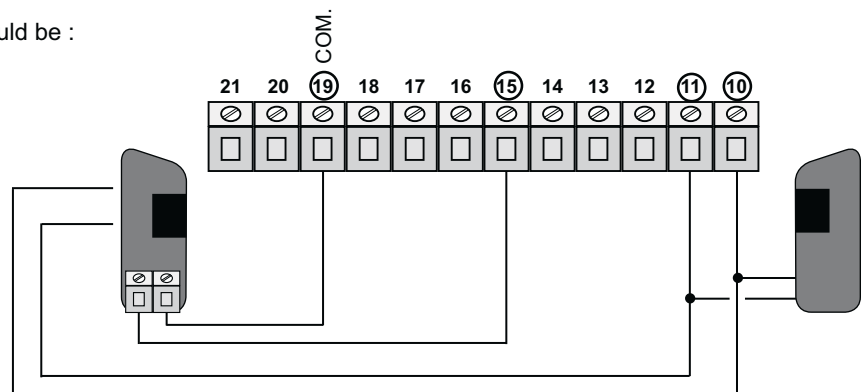
The contact of the receiver of the photo-beam should be :

- Isolated from power tensions
- NORMALLY CLOSED

If you use more couples of photo-beams, the connections should be serial.

The photo-beams interfere only when closing provoking a total inversion.

If the input FOTO is not used, put the DIP 4 in ON and exclude FOTO in the DIPA

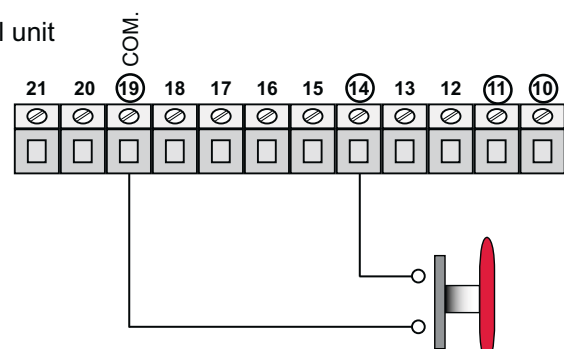


2.03 Connection of the STOP with immediately intervention

BUTTON: stop and forbid for a while the function of the control unit until a new control.

SWITCH: keep the gate closed until a new control.
The connections of the safety devices prevue any button or a normally closed contact .

In case of more safety devices, connect in serial.
If the input STOP is not used, put the DIP 3 in ON and exclude STOP in the DIPA

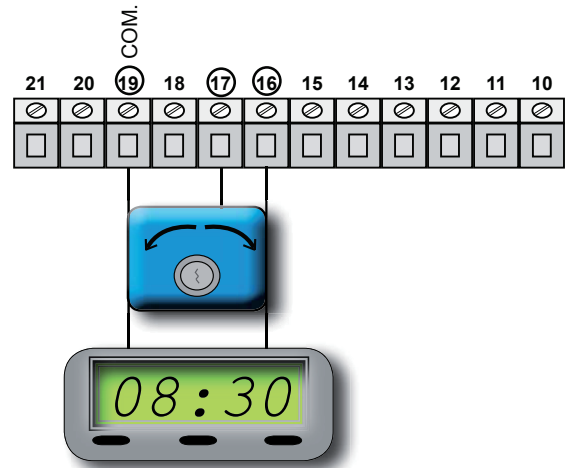


2.04 Connection of the control OPENING AND CLOSING

The connection of the opening control START (16-19) or closing (17-19) can be done with any button or with a normally open contact. In case of more devices, they should be serial connected.

If you use the terminal board START (16-19) it is possible to connect a TIMER to program the opening of the gate. It is possible to use a timer with automatic re-closing or in step-by-step function (see TIMER WITH STEP-BY-STEP FUNCTION)

The contact of the TIMER should be normally open, and the contact should be closed when the gate is opening. If the opening connection is available, the terminal board no.16 should be parallel connected.



! TIMER WITH STEP-BY-STEP FUNCTION (DIP B 1 OFF - 2 ON)

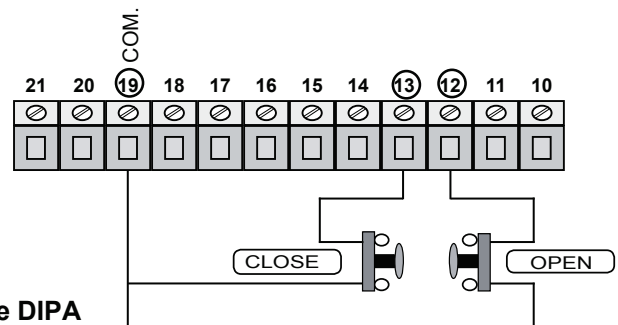
If you connect a timer in the input START (no.16-no.19), the gate closes when the timer contact is in OFF position (open contact) but only in case the gate is open and the timer is connected for more than 10 seconds .

2.05 Connection of the opening limit switches and closing limit switches

In the picture the limit switches are shown, but in this control unit you can use separately. So you can use for example "Opening limit switch" or "Closing limit switch".

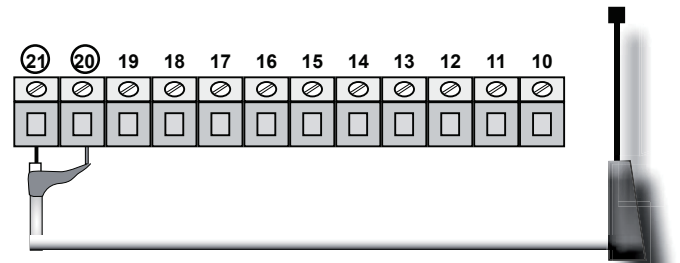
The contacts of the limit switches are normally closed.

If the input of the FCA (opening limit switches) and FCC (closing limit switches) are not used, put the DIP 1 and 2 in ON and exclude FCA and FCC in the DIPA



2.06 Connection of the antenna

If you use only a small cable for the antenna, for the frequency 433.92 Mhz, cut it at 17cm and connect it to the terminal board no.21



2.07 Check of the connection

Check the exactly tension in the terminal boards, all NC red l.e.d. should be turned on. When the control unit is powered , the lights L.E.D. which are in the inputs, are turned on when there is a closing common contact.

Normally the red led in the inputs STOP-FOTO-FCC –FCA are always turned on. Normally the green led in the control START – PARTIAL OPENING are turned off.

Look LED L1TEST when correct programmed, should flashes constantly or with a single/double flashing. Check the safeties, the gate should go in the right direction, it should open firstly.

3.00 Remote control: cancellation of the memory

The control unit dispose of a button **PULSANTE P1** for different operation, one is the cancellation of all codes inside the memory. To cancel make the following two steps.

The output of the control boards are not activated , eventually lights connections should be turned off.
This operation is possible only when the gate is closed.

1	Press and keep pressed the button PULSANTE P IN THE CONTROL UNIT, LED L1 is lit up.
2	After 6 seconds LED L1 will turned off and you can release the button P1. LED L1 will flash for 4 times then it will flash regularly to memorize fixed code. (1 regular flash only see next paragraph) . The memory has been cancelled.

3.01 Remote controls: code managing

To choose: which remote control should I memorize?

How will the receiver manage the codes?

START S2XL can manage fix and HCS rolling code, you can see how to memorize in the different ways.

The ouput of the control unit should be deactivated, eventually light connections should be turned off.
This operation is possible only when the gate is closed.

1	Press and release the button PULSANTE P1 , LED L1 will lit for 6 seconds. Then
2	In 6 seconds press and release button PULSANTE P1 again, LED L1 will flash once and it will lit for 6 seconds. Then
3	In 6 seconds press and release button PULSANTE P1 again, LED L1 flashes twice and then regularly as under described

LED L1	LED L1 Only for compatible fixed code
1 regular flash	<p>The included receiver in the START S2XL can manage the major branded codes up to 96bit, it memorize only the fixed part of the codes. Once you memorize the first code, it can manage only the same type of code.</p> <p>If the first remote control is a 12 bit (for example dip-switch), the receiver will accept only 12 bit codes of the same type. The HCS rolling code cannot be memorized.</p>

3.02 Remote controls: memorization of the codes

The control unit dispose of a button PULSANTE P1 to program the working time and to memorize the code of the remote controls. If you use a new FIXED CODE remote control like SMILE-C, make sure that all buttons have a code otherwise you need to create a code.

To memorize the first channel of the remote control with the control OPEN (START) .

This works with the logic DIP B 1 and 2 see “ Function logic”.

1	Press and release the button PULSANTE P1 in the control unit, LED L1 will lit for 6 seconds. Then
2	In this 6 seconds push the button of the remote control which is associated to the control OPEN (START), we suggest the 1st channel. To confirm the right operation LED L1 will flash for 5 times and then regularly as at the beginning. The control OPEN has been memorized

To memorize the control “ CLOSE” in the second channel

This operation is possible only in this sequence: CLOSE-STOP-CLOSE which it cannot be changed.


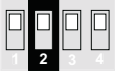


1	Press and release the button PULSANTE P1 in the control board, LED L1 will lit for 6 seconds. Then
2	In these 6 seconds press and release the button PULSANTE P1 again, LED L1 will lit for 6 seconds. Then
3	In these seconds press the button of the remote control which should be associated to the control CLOSE, we suggest the 2nd channel. This function is only possible in this sequence: CLOSE-STOP-CLOSE and it cannot be changed. To confirm the right procedure LED L1 will flash for 5 times and then regularly as at the beginning. The code CLOSE has been memorized.

If LED L1 will not flash immediately for 5 times, it means that the memory is full and it cannot accept other codes. Concerning the 20bit codes, the memory can learn maximum 22 different codes, if you need to learn more codes we suggest you to put an additional receiver RX2 or RX4 with a capacity of 200/3000 codes.

If you are not sure that the memorization has been correctly start from point no.1 but before cancel the previous codes in the receiver. See previous chapter “ cancellation of the memory”




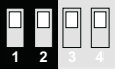
4.00 Program of the DIPA to exclude the connections

The control unit dispose of micro-switches DIPA and DIP B and DIPC which can activate or deactivate different functions to give more safety.

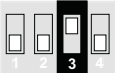



	Dip 1	ON	It excludes the connection of the Opening Limit Switch . And vice versa
	Dip 2	ON	It excludes the connection of the Closing Limit Switch. And vice versa
	Dip 3	ON	It excludes the connection of STOP. And vice versa
	Dip 4	ON	It excludes the connection of PHOTO-BEAMS. And vice versa

4.01 Program of the DIP B for the sequence START



This sequence is for the control START connected to the terminal board no.16 and for the programming of the remote controls. To deepen go to the chapter "REMOTE COLTROLS"

	Dip 1 ON	Dip 2 OFF	COLLECTIVE USE	When opening and in pause time it doesn't accept any other control. It recloses automatically at the end of the pause time
	Dip 1 OFF	Dip 2 ON	PARTIALLY AUTOMATIC	Each control the sequence is: open-stop-close-stop-open ETC. It doesn't reclose automatically.
	Dip 1 OFF	Dip 2 OFF	AUTOMATIC 1	Each control it inverts: open-close It reclose automatically at the end of the pause time.
	Dip 1 ON	Dip 2 ON	AUTOMATIC 2	Each control the sequence is open-stop-close-stop-open. It recloses automatically at the end of the pause time.

To memorize the working time and the pause time with time acquisition "real time " see chapter " Memorization of the working time "

	Dip 3	ON	It activate the " Man Present " Up function (with a remote control ,too)
	Dip 3	OFF	It deactivate the " Man Present " and it works the working sequence of the dip1 and 2.
	Dip 4	ON	It activate the standard working time at 90 seconds with a pause time of 10 seconds.
	Dip 4	OFF	It deactivate the standard working time and it use the working time previously programmed .

4.02 Program of the DIPC for BUS-DATA SYSTEM. Courtesy light

	Dip 1 - 4		Free program to create an address to control the control unit, For Bus data System see next chapters.
	Dip 1	ON	IN the output of the terminal board no. 3 and 4 there is tension available from the beginning of the closing up to 2 minutes after closing. It is important to power the courtesy light.

5.00 Turning on and learning of the control unit

If everything has been correctly connected, when turning on the red light of LED L1 TEST should flash, while STOP, FOTO, FCA(opening Limit Switch), FCC (Closing Limit Switch) should lit up (if the gate is closed and if the closing limit switch is connected, it should turned off) . LED START and PED (partial opening) are turned off.

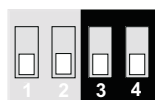
The working time procedure is as follow. To execute such operation you can use START (open) or any device connected to the terminal board 19-16 to open with START control or with a remote control (previous memorized)

During the programming you can hear the relay even it is not connected, when opening it sounds fastly (1-2 seconds) when closing it sounds slowly (1 second)

If the flashing light has been connected (terminal board no. 3-4-8-9), it flashes fastly when opening (1-2 seconds) and slowly when closing (1 second).

5.01 Working time with or without limit switches

DIP B



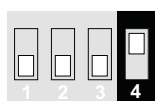
Turn off the control unit, close the gate, put in OFF the terminal board no. 3 and 4 of DIPB and power the control unit again.

1	Put in OFF the micro-switches 3 and 4 of the DIP B.	The gate is closed
2	Power the control unit.	The gate is closed.
3	Push the control START (everything connected to the input 16 or to the first channel of the remote control) from now it starts counting.	The gate opens, the relay sounds fastly. The control unit counts.
4	Push the button PULSANTE P1 and from now it memorize the working time.	
5	When the gate opens at the choosen point, press button PULSANTE P1. If you use the limit switch you don't need to press P1.	The gate stops.
6	Let the time goes for the opening time.	The gate is in PAUSE TIME: The relay light stops.
7	Press the button PULSANTE P1 to start closing.	The gate starts closing, the relay sounds slowly.
8	Wait until the gate stops automatically. The gate is closed.	The gate is closed.
9	Program the dip for the personalized program again.	Programming is over.

Go forward with the personalized programming see previous chapter 4.01

5.02 Time programming with limit switches

DIP B



When you use the limit switches you can use the standard working time of the control unit.

The programming can be activated with micro-switch 4 of DIP B.

Fixed working time up to 90 seconds. Fixed pause time up to 10 seconds.

As mentioned, if you need to personalized the pause time it is necessary to programm as described in the chapter 5.01. Then to personalized the pause time see the chapter 4.01.

6.00 Declaration of CE conformity

(according to EC Directive 98/37, Attachment II, part B)

The undersigned **Ernestino Bandera**,
Administrator

DECLARES THAT:



Company:

EB TECHNOLOGY SRL

Address:

Corso Sempione 172/5
21052 Busto Arsizio VA Italia

Product's name:

START-S2XL
230 Vac mono-phase
control unit

THE PRODUCT COMPLIES

with what is outlined in the European Community directive:

EC 98/37 (EEC 89/392 modified)

EC DIRECTIVE 98/37 ISSUED BY THE EUROPEAN PARLIAMENT AND COUNCIL on June 22, 1998 harmonizing the legislation of the member countries regarding machinery.

Reference: Attachment II, part B (EC Declaration of Conformity issued by the manufacturer).

THE PRODUCT COMPLIES

with what is outlined in the following European Community directives, as modified by EEC Directive 93/68 issued by the EUROPEAN COUNCIL on July 22, 1993

73/23/CEE

EEC DIRECTIVE 73/23 ISSUED BY THE EUROPEAN COUNCIL on February 19, 1973 harmonizing the legislation of the member countries regarding electric materials for use within certain voltage limits.

Reference to harmonized standards: EN 60335-1

89/336/CEE

EEC DIRECTIVE 89/336 ISSUED BY THE EUROPEAN COUNCIL on May 3, 1989, harmonizing the legislation of the member countries regarding electromagnetic compatibility.

Reference to harmonized standards: EN 61000-6-2 EN 61000-6-3

THE PRODUCT COMPLIES

with the essential requirements of article 3 of the following European Community Directive, for the use for which the product is designede

1999/5/CE

EC DIRECTIVE 1999/5 ISSUED BY THE EUROPEAN PARLIAMENT AND COUNCIL on March 9, 1999 regarding wireless units and telecommunications terminals and their reciprocal recognition.

Referring to the standard norms: ETSI EN 300 220-3 ETSI EN 301 489-1 ETSI EN 301 498-3

The directive 98/37/Ce remind that it is not allowed the function of the product until the machine, for which the product is included, is not indentify and declared conformed to the 98/37/ce directive.

Busto Arsizio, li 05 april 2010

The Administrator
Ernestino Bandera

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