

Control system for garage doors

Installer's instruction manual





Product:

TVRPS868E01

Doc:

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1. PRODUCT DESCRIPTION

TVRPS868E01

Control unit with integrated radio receiver for the remote control of tubular motors up to 700W, with built-in limit switch, for rolling shutters and rolling doors.

FEATURES

Plastic case with easy fixing Front cover with up/stop/down buttons Integrated LED courtesy light Wireless control via radio transmitters

Wireless safety edge with auto-test

Bidirectional communication: door status is shown by the transmitter LED with different colour Socket for GSM module (GSM900), for the remote control of the system

Alarm function, in combination with shock sensor (TVSSH868A01 and BST25S) and integrated speaker

CONNECTIONS & FUNCTIONING

Wired inputs for safety edge (both resistive 8K2 and infrared)

Wired inputs for command push-button and emergency STOP push-button

Possibility to connect an external 240V~ courtesy light

2 Functioning modes: semi-automatic (automatic opening + hold-to-run closing) and automatic

Automatic closing with programmable pause time

Exclusion of the safety edge in the last part of the closure, in case of bumpy floor

"Holiday mode" to lock the control unit with the front cover





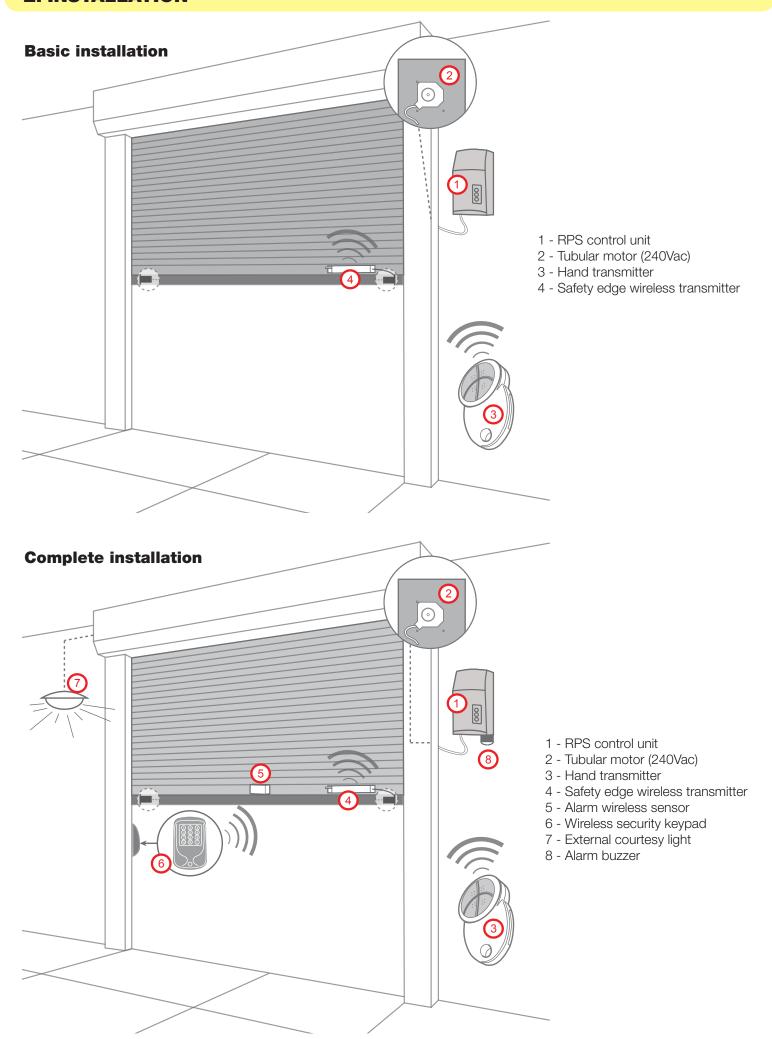




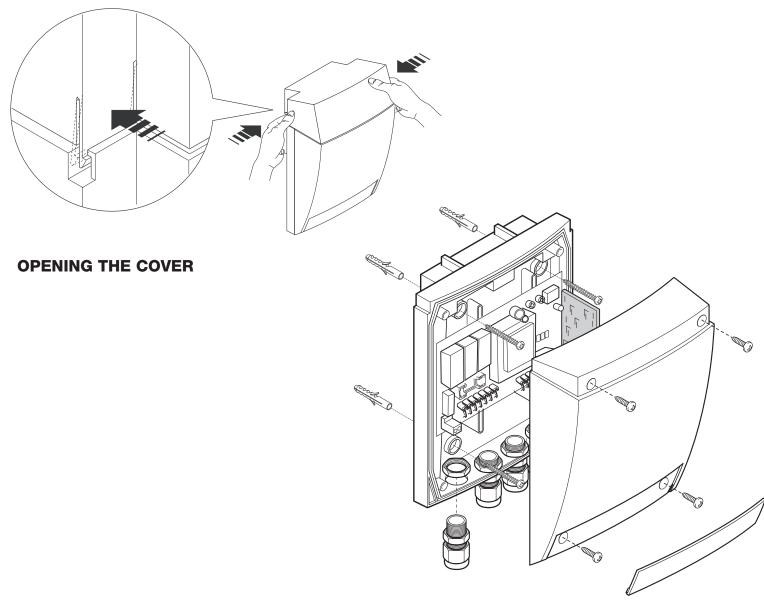




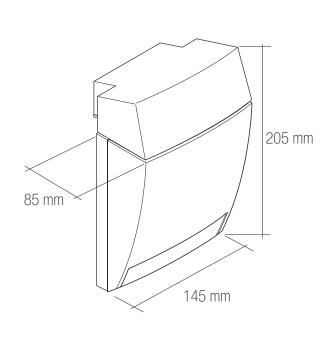
2. INSTALLATION

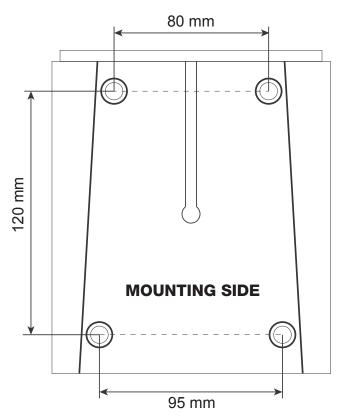


2.1 MOUNTING THE PRODUCT



BOX DIMENSIONS

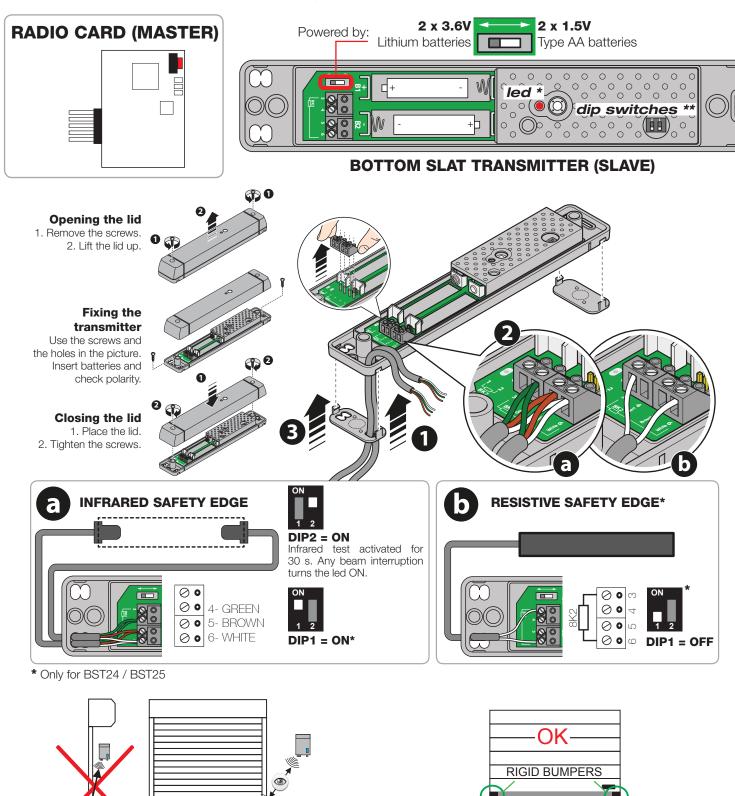




2.2 MOUNTING THE WIRELESS SAFETY SYSTEM (BST24/BST25/BST25S)

The system is composed by a radio card (MASTER), plugged in the control unit, and a wireless transmitter (SLAVE) mounted on the door, usually close to the bottom slat, connected to the safety device. The device has got infrared low-consumption barrier (both safety systems) or 8,2KOhm resistive barrier safety edge (only for BST24/BST25).

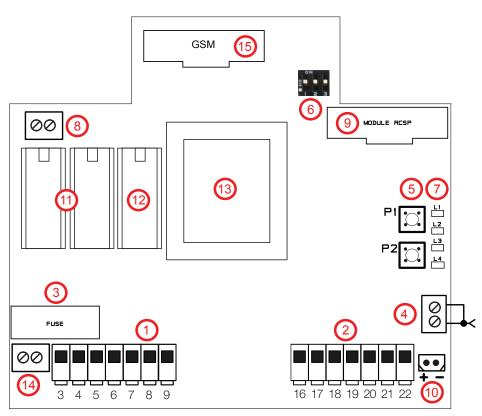
If an obstacle is detected during the closing, the SLAVE sends a signal to the MASTER that immediately stops the door and reverses its movement. The system performs an auto-test before any movement.



Install both the control unit and bottom slat transmitter **inside**. Make sure that there are no obstructions between devices. Check that the maximum distance between the devices is not more than **10m**.

We recommend to install at the base of the door, on both side of the safety edge, two **rigid bumpers**. In case of uneven floors, this can avoid an accidental activation of the safety edge. If it's not possible use the procedure 3.3.

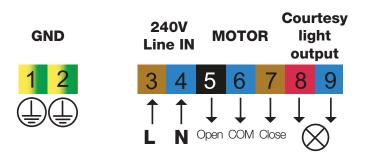
2.3 CONTROL UNIT DIAGRAM



- 1 High voltage terminals
- 2 Low voltage terminals
- 3 5A fuse
- 4 Aerial connection
- 5 Programming/command buttons
- 6 Dip switches
- 7 Status/alarm LED
- 8 LED courtesy light
- 9 Socket for radio card (MASTER)
- 10 Alarm buzzer output
- 11 Manoeuvre relays
- 12 Common relay
- 13 Transformer
- 14 Ground terminal
- 15 GSM module

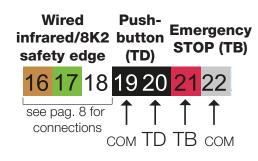
2.4 ELECTRICAL CONNECTIONS

High voltage terminals



#	CONNECTION
1	Motor Ground
2	240V~ Power supply - Ground
3	240V~ Power supply IN - LIVE
4	240V~ Power supply IN - NEUTRAL
5	Motor - OPEN
6	Motor - COMMON
7	Motor - CLOSE
8	240V~ COURTESY LIGHT
9	(300W max. lamp)

Low voltage terminals

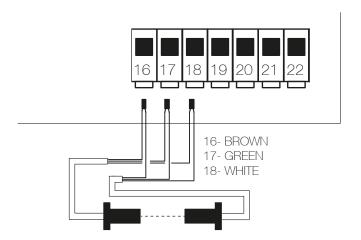


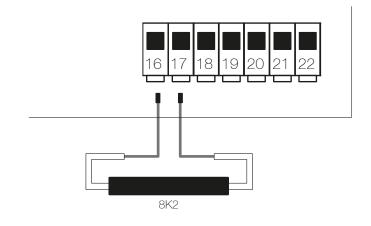
#	CONNECTION
16	Infrared/8K2 safety edge input (brown)
17	Infrared/8K2 safety edge input (green)
18	Infrared/8K2 safety edge input (white)
19	Push-button common (COM)
20	Push-button (step-by-step, N.O.)
21	Emergency STOP push-button (N.C.)
22	Emergency STOP push-button common

2.5 WIRED SAFETY DEVICE CONNECTIONS

Infrared (IR) safety edge

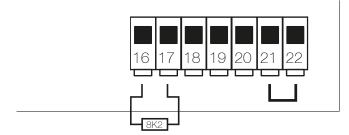
8.2Kohm resistive safety edge







If no wired safety edge is used, connect a 8K2 resistor between terminals 16 and 17.



NO WIRED SAFETY DEVICE CONNECTED

Connect a 8K2 resistor between terminals 16 and 17.

Terminals 21 and 22 must be closed by a jumper.

3. PRELIMINARY CHECK AND INITIAL START-UP

Step 1: motor limit switch setting

A proper connection box should be used to set the limit switch before wiring the motor in the control unit or follow the procedure described on par. 3.1.

Step 2: motor connection and powering the board up

Once the limit switches are set connect the motor to control unit and start the system up.

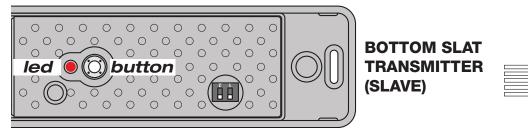
The buzzer emits 3 quick sounds if the memory is empty or 1 long sound if the memory has radio codes in.

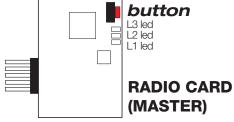
After the power-on, the control unit executes **only opening commands** until the door is fully opened. Check the direction of the door; if the door is travelling in the wrong direction:

- 1- STOP the manoeuvre
- 2- Switch the control unit off
- 3- Swap BLACK and BROWN motor wires over terminals 5 & 7
- 4- Power the board up again

Step 3: activation of the wireless safety device system

Check that the bottom slat transmitter (SLAVE) is supplied by the batteries, the voltage selector is in the right position and all the connections are correctly made, as decribed at par. 2.2.





- 1- Push the button of the radio card (MASTER) for 2 seconds, L1 and L2 led will flash.
- 2- Push the button of the bottom slat transmitter (SLAVE) for 2 seconds. Its led will flash. In case of correct memorization **L1 will costantly flash**.

Check the system pressing the button of the bottom slat transmitter (SLAVE) and keeping it pressed:

- Slave led solid ON = OK
- Slave led flashing = No wireless communication
- Master L1 led must costantly flash

In case of problem, the system can be totally excluded with the procedure 3.2.

Step 4: functioning mode





DIP2 **ON**:

AUTOMATIC mode.

OFF: SEMI-AUTOMATIC mode. Automatic opening and hold-to-run closing.

The automatic closure function is deactivated.



DIP2=DIP3

Automatic closure function activated. Default time is 30 sec. ON:

This function has effect only when the door is totally open.

DIP3 **OFF**: Automatic closure function **deactivated** (default setting).

In case of any problem, refer to the paragraph "Troubleshooting" (par. 9).

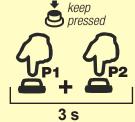
WARNING: the control unit executes a brief inversion of the movement (1 second) if any error occurs. In case that the safety devices (except for TB input) are defective or they have been activated, it is possible to operate the door anyway, keeping pressed the command button for more than 5 seconds. The control unit will automatically switch to hold-to-run mode.

3.1 Limit switches configuration

Factory setting: ACTIVATED

Procedure only with hold to run commands. Warning: The safety devices are excluded!











Press together P1 and P2 and keep them pressed for 3s. The buzzer makes one beep.











Open the door (in **hold-to-run** mode) in order to set up the upper limit switch.



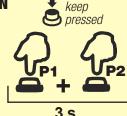






Close the door (in hold-to-run mode) in order to set up the down limit switch.

DEACTIVATION









Press together P1 and P2 and keep them pressed for 3s or wait **time out time** of 90s from the last button pression. The buzzer makes one beep.

3.2 Deactivation of wireless safety system

This function is possible ONLY within 30 seconds from the power on of the control unit.

Switch the unit on and move DIP1 to OFF within 30 seconds.









By default DIP1 is ON (system activated).

Press P1 button for 5 seconds and hold it down

The control unit will emit **6 beeps** if the system has been correctly deactivated.

It is possible activate the safety system again, moving DIP1 from OFF to ON within 30 seconds from power-on. After keeping pressed P1 button for 5 seconds, the control unit will emit **7 beeps**.

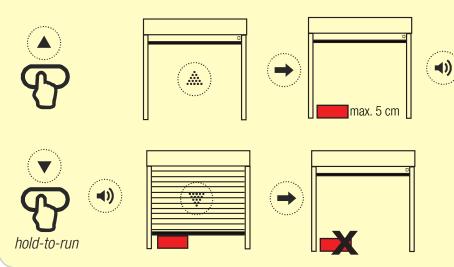
3.3 Exclusion of safety edge in the last 5 cm of the closure

In case of uneven floors, it could be necessary deactivating the safety edge in the last part of the closure (not more than 5 cm to comply with the standards) in order to avoid any accidental activation of the safety edge. This procedure must be performed by qualified installer only, who will take charge of its correct application.

WARNING: this procedure can be used only for doors which require more than 10 seconds each manoeuvre. The exclusion of the safety edge is applied only if the closure starts from the upper limit switch and it is not stopped.



- Press P1 button ten times and keep it **■**0
- pressed for 5 seconds. The buzzer emits **■**) 3 beeps.



Open the door completely by means of a memorized transmitter. The buzzer emits a long beep when the upper limit switch is reached. Put on the floor, exactely under the door, a sturdy object not more than 5 cm high. Close the door (in hold-to-run mode), with no interruption. The door will stop at the obstacle and the control unit will make a long beep. Open the door completely and remove the object. Close the door to verify the correct application of the procedure.



4. Transmitter memorization

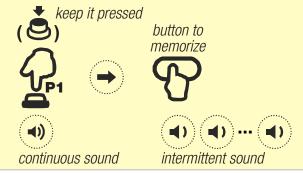
This operation should be done using the button P1. Please refer to the schematic diagram on page 7 in order to localize the position on the board.

4.1 Single channel memorization

OPEN - STOP - CLOSE ▶



Memorization of a **single button** of any transmitter, with function **OPEN - STOP - CLOSE**



Press **P1 once** and keep it pressed.

The buzzer emits a continuous sound.

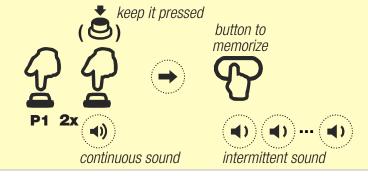
Press any button to memorize.

Once the memorization is successfully completed, the buzzer emits a fast intermittent sound.

4.2 Double channel memorization

OPEN (STOP) ► CLOSE (STOP) ► CLOSE (STOP) ►

Memorization of **two buttons** of any transmitter in one step, with function **OPEN (STOP) - CLOSE (STOP)**



Press P1 twice and keep it pressed.

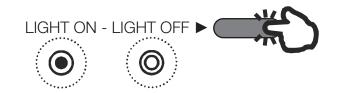
The buzzer emits a continuous sound.

Press any button of the pair to memorize.

Once the memorization is successfully completed, the buzzer emits a fast intermittent sound.

4.3 Single channel: courtesy light ON/OFF

Memorization of a **single button** of any transmitter, with function **LIGHT ON - LIGHT OFF**





continuous sound

Press P1 three times and keep it pressed.

The buzzer emits a continuous sound.

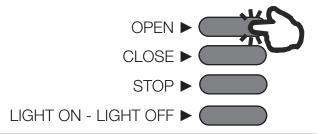
Press any button of the pair to memorize.

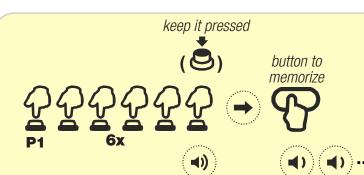
Once the memorization is successfully completed, the buzzer emits a fast intermittent sound.

intermittent sound

4.4 Four channels memorization

Memorization of **four button transmitter** in one step.





Press **P1 six times** and keep it pressed.

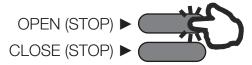
The buzzer emits a continuous sound.

Press **any button** of the transmitter to memorize.

Once the memorization is successfully completed, the buzzer emits a fast intermittent sound.

4.5 Remote memorization of the first transmitter

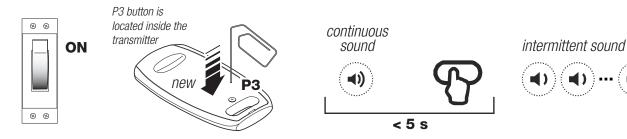
continuous sound



Warning: The memory must to be empty in order to perform this procedure.

intermittent sound

The added transmitter will have the double-channel function.

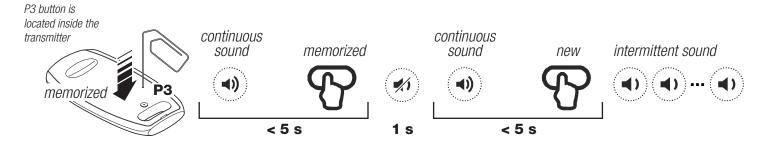


Press **once P3** button of a transmitter for 2 sec. **within 30 seconds** from power on. The buzzer emits a continuous sound.

Press any button of the pair to memorize. Once the memorization is successfully completed, the buzzer emits a fast intermittent sound.

4.6 Remote memorization of further transmitters

The added transmitter will have the same functions of the transmitter used for the memorization. This procedure is compatible with any type of transmitter.



Press **once P3** button (twice if within 30 seconds from power on) of a memorized transmitter for 2 sec. The buzzer emits a continuous sound.

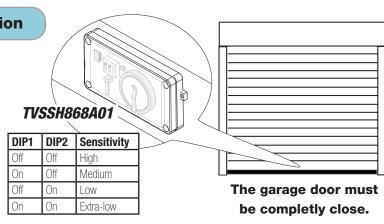
Press the button of a transmitter already memorized. The buzzer stops for 1 second, then sound continously again. Press the button of a new transmitter to memorize with the same functions. Once the memorization is successfully completed, the buzzer emits a fast intermittent sound.

4.7 Alarm function: shock sensor memorization

Only for TVSSH868A01 (with BST25S is not necessary the shock sensor memorization).

The wireless shock sensor (optional) detects any attempt of breaking or entering and send a signal to the control unit that will activate the speaker (optional) for 1 minute. It is possible to set the sensor sensitivity by means of the dip switches (see at side). Sending any opening or closing door command will stop the alarm.

Warning: optional speaker must be connected!







Press P1 eight times and keep it pressed.

The buzzer emits a continuous sound.

Activate the shock sensor.

Once the memorization is successfully completed, the buzzer emits a fast intermittent sound.



continuous sound intermittent sound

4.8 Single channel: door status request ("ASK")

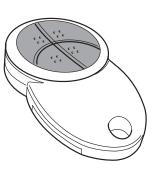
In case of using **bidirectional transmitters** it's possible to receive a feedback about the door status, shown by means of the transmitter's LED:

- Red led: open door - Blue led: closed door

missing feedback - Flashing led:

Warning: the remaining free buttons of the transmitter should be memorized using the procedures 4.1, 4.2 or 4.3.

DOOR STATUS REQUEST ("ASK")



(CH4)

TRTXP868x04

TRTXI868xx04



continuous sound

intermittent sound

Press **P1 seven times** and keep it pressed.

The buzzer emits a continuous sound.

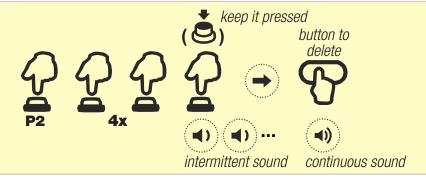
Press any button of TRTXP or CH4 of TRTXI.

Once the memorization is successfully completed, the buzzer emits a fast intermittent sound.

5. TRANSMITTERS DELETION

This operation should be done using the button P2. Please refer to the schematic diagram on page 7 in order to localize the position on the board.

5.1 Deleting a single transmitter



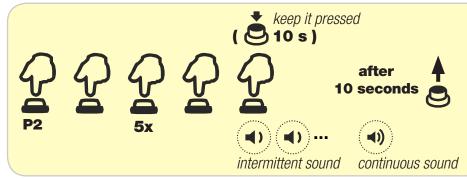
Press **P2 four times** and keep it pressed.

The buzzer emits an intermittent sound.

Press the button of the transmitter to delete.

Once the deletion is successfully completed, the buzzer emits a continuous sound.

5.2 Deleting all the transmitters

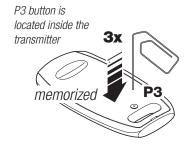


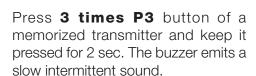
Press **P2** five times and keep it pressed for at least **10** seconds.

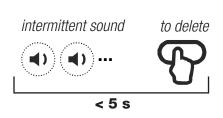
The buzzer emits an intermittent sound.

Release the button once the sound becomes continuous.

5.3 Remote deletion of a transmitter







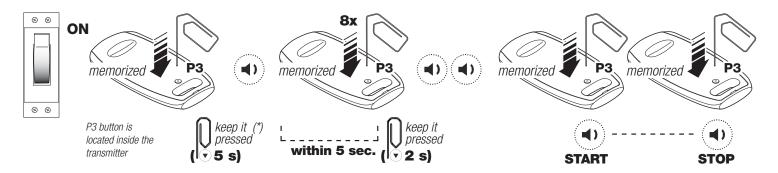
Press the button of the transmitter to delete within 5 sec.



Once the deletion is successfully completed, the buzzer emits a continuous sound.

6.1 Auto close time setting

This procedure configures the time lapse between complete opening and the automatic closure (if enabled). The default time is **30 seconds**. It is possible to set the time from 5 seconds to 180 seconds.



(*)The procedure can be executed only **within 30 seconds from power on**.

Press **P3** button of a memorized transmitter and keep it pressed for **5 seconds**. The buzzer will emit one beep.

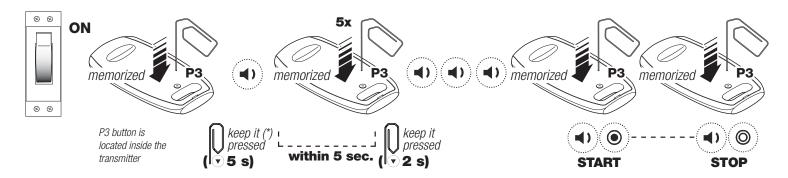
Release and press it again **eight times within 5 seconds** and keep it pressed for **2 seconds**. The buzzer will make **two** beeps at the end. In case of time-out, the control unit will sound four beeps and exit the procedure automatically.

Press once **P3** to start the counting of time. The buzzer will make one beep.

Press again **P3** to stop the counting after the desired lapse. The value will be memorized by the control unit.

6.2 Courtesy light time setting

This procedure configures the time of activation of the courtesy light (internal and external, if present). The default time is **90 seconds**. It is possible to set the time from 60 seconds to 12 hours.



(*)The procedure can be executed only within 30 seconds from power on.

Press **P3** button of a memorized transmitter and keep it pressed for **5 seconds**. The buzzer will emit one beep.

Release and press it again **five times within 5 seconds** and keep it pressed for **2 seconds**. The buzzer will make **three** beeps at the end. In case of time-out, the control unit will sound four beeps and exit the procedure automatically.

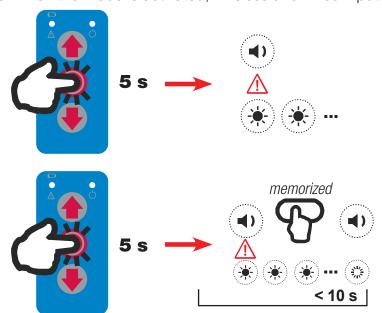
Press once **P3** to start the counting of time. The buzzer will make one beep.

Press again **P3** to stop the counting after the desired lapse. The value will be memorized by the control unit.

7.1 "Holiday mode"

The "Holiday mode" allows the user to temporarily lock the front cover buttons.

Note: when the mode is activated, wireless and wired input commands are still enabled.



ACTIVATION

Press the **STOP** button in the front cover and keep it pressed for **5 seconds**.

The buzzer makes one beep.

DEACTIVATION

Press **STOP** button in the front cover and keep it pressed for 5 seconds.

The buzzer makes one beep and LED \triangle starts to flash faster.

Press any button of any memorized transmitter within 10 seconds. The buzzer makes one beep and LED turns off.

8. TECHNICAL SPECIFICATIONS

Power supply $240V \sim \div 50Hz$ Operating temperature range $-20^{\circ}C \div +50^{\circ}C$

IP rating IP20

Motor characteristics:

Voltage 240V~ Maximum power 700W

Maximum output power for flashing light 300W - resistive load (240V~)

Reception frequency 868.3MHz

Radio memory capatibility (transmitters) 32

Wireless safety system BST25

Functioning range 10m
Answering time in manoeuvre < 100ms
Carrier frequency 2.4GHz

Power supply 2 x 1.5V AA or 2 x 3.6V lithium batteries

Consumption when transmitting 13mA

The manufacturer, Teleco Automation s.r.l, declares that the type of radio equipment is compliant with Directive 2014/53/EU. The full text of the EU compliance declaration is available at the following Internet address: www.telecoautomation.com/ce.

8.1 WARNINGS

The above mentioned product must be installed only by qualified technical personnel in compliance with the standards of automatic openings. All connections must be rated for a single-phase power supply of 240V. For the disconnection from the power line, use an all-pole switch with contact with an opening of at least 3.5 mm. Only suitable materials for the connections must be used to guarantee insulation that complies with current standards on the subject of electrical safety. All the necessary safety devices are to be seen separately. Incorrect wiring will cause incorrect functioning impairing the safety purpose for which the product has been designed so that people injuries could occur; failure to follow instructions can cause personal injury and/or property damage. The correct functioning of the product must be checked once a year. Keep the 240V wires separately from the low voltage safety wires. The earth-wires must be fixed with an additional fastening on the terminals; this fastening has to be done by qualified technical personnel during the installation phase. The appliance has been tested with a power supply wire type H05VV-F; the power supply wires for outdoor use have not to be lighter than the ordinary wires type H05RN-F. The safety devices have to be in conformity with EN12978. The installation of the control unit has to be done by fixing the box vertically with the cable glands downwards. The product is in conformity with the RAEE and RoHS directive. The earth wire must be longer than the other wires because it must be the last to break off if the cable clamps are slack. Remember that there are specific standards that must be complied with both as regarding the safety of the electrical systems and as regarding the remote control of tubular motors for roller blind.

In the view of a constant development of their products, the manufacturer reserves the right for changing technical data and features without prior notice.

9. TROUBLESHOOTING (What to do if...)

Acoustic signals from the control unit

Sequence	Meaning	Solution
1 costant beep	Faulty control unit	Replace the control unit
(continuous or		
intermittent)		
2 beeps	Motor problem	- Set the limit switches
		- The thermal protection could be activated. Wait while the
		motor cools down.
		- Check the motor connection
		- Test the motor separately by means of a proper tool
3 beeps at	Radio receiver is empty	Memorize at least one transmitter
startup		
4 beeps	Radio receiver is full	Max. number of transmitters exceeded
5 beeps	Safety test failure: wired	- Check the rubber profile general condition
(L2 = ON)	safety edge	- Check photocells alignment and the connections
5 beeps	Safety test failure:	Control unit checks
(see also the 1	wireless safety edge	- The radio card (master) must be correctly inserted in the
led on the front	system	plug: check all the pins
cover)		- The radio card (master) must be paired with the bottom slat
,		transmitter (slave)
		Bottom slat transmitter checks
		- Check type, polarity and charge level of the batteries
		- Check functionality by pressing the button
		- Check the DIP1 position (at par. 2.2)
		- Check wiring between bottom slat transmitter and sensitive
		edge (terminals and wire colour)
		Sensitive edge checks
		- Check the rubber profile general condition
		- Check the functionality by means of the testing procedure
		with DIP2 (at par. 2.2)
5 quick beeps	Low batteries in the	Replace the batteries as soon as possible. Pay attention to
every 5 seconds	bottom slat transmitter	the polarity.
6 beeps	Safety test failure:	Check the safety device connected and the connections
(L3 = ON)	emergency STOP (TB)	
8 beeps	Limit switch error: the	Check the limit switches and, in case, set them again
	manoeuvre exceeded	
	the working time.	
9/10 beeps	One of the relay is	Replace the control unit
	defective (see the	
	diagram at page 7)	

Led in the front cover



Led 1

ON: safety alarm activate (see the specific alarm).

OFF: normal functioning.

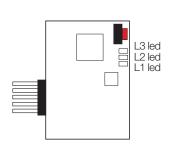
1 flash - pause: keypad locked (holiday mode).

Flashing slowly: low batteries in the bottom slat transmitter (TCSP)

Led (b)

ON: The control unit is powered.

Radio card (MASTER)



L1 led Flashing: normal functioning.

ON: transmission error or drained batteries.

L2 led **ON**: activated safety alarm, transmission error or

drained batteries.

OFF: normal functioning.

L3 led Not used.

Other possible issues

Problem	Solution
None of the previous signals, but	Command an opening manoeuvre until the top limit has reached.
the door doesn't move downward	
In the closure, the door hits the	- The bottom limit could be too low, adjust it upwards
floor and opens again	- In case of uneven floor use the procedure 3.2 to deactivate the safety
	edge in the last part of the closure. It is necessary to command the
	closure starting from the upper limit switch in order to be effective.
The door can be operated but the	Check the motor direction. If wrong, swap brown and black motor wires
safety systems don't activate	over (terminals 5 & 7)
The control units responds to the	
commands sent by transmitters,	- If the 🛆 led is flashing once per second, the "holiday mode" is
but the front cover is not	activated (see page 15)
functioning	((((
The fuse blows while operating	Check again the wirings
the door	

WARNING: in case that the safety devices (except for TB input) are defective or they have been activated, it is possible to operate the door anyway, keeping pressed the command button for more than 5 seconds. The control unit will automatically switch to hold-to-run mode.



Branches:

Teleco Automation France - France info@telecofrance.com

Teleco Automation Srl - Italy info@telecoautomation.com

Headquarters:

Teleco Automation GmbH - Germany info.de@telecoautomation.com