

BAXS900

Control Unit for Rolling Shutters **6-1622623** /v.5 - 05/12/2022

1. PRODUCT DESCRIPTION

Control unit for rolling shutters with integrated radio receiver. BAXS900 can be controlled via radio, via wired buttons and through buttons on the front panel. Photocell inputs and safety edge (sensitive edge) are also available.

2. SAFETY WARNINGS



WARNING! This manual is for qualified personnel only

WARNING! The cover can be removed only by qualified personnel because inside there are live parts

WARNING! Before installation, disconnect the device from the power supply, connect the device only after having made all the electrical connections

3. DETAIL OF THE FRONT PANEL





WARNING! In case of malfunction of the edge / sensitive edge, the automation can be closed only with a DOWN COMMAND / DESCENT from the front panel in DEAD MAN mode.

4. INSTALLATION GUIDE AND ELECTRICAL CONNECTIONS

- 1. Disconnect the power supply to the control unit by disconnecting the power cable (Fig. 1 $^{lacksymbol{B}}$).
- 2. Fix BAXS900 to the wall, vertically, taking into account the assembly dimensions (Fig. 9). Use the screws provided. Be careful not to damage electrical parts.
- 3. Connect the engine as shown in the connection diagram respecting the colors (Fig. 3):
- BLUE (neutral), BLACK (closing phase), BROWN (opening phase), YELLOW / GREEN (ground).
- If the engine works in reverse, swap the BROWN and BLACK cables.
- 4. Connect the control buttons OPEN (OPEN) and CLOSE (CLOSE), or the key selector, type Normally Open (N.O), monostable, as shown in the link diagram (Fig. 2).
- 5. Connect the STOP button (STOP), bistable contact button Normally Closed (N.C.), (Fig. 2). In case you do not install a stop button, make a connection between terminal 5 and 6.
- 6. Properly close the strain relief (Fig. 1 (A)).
- 7. Carefully close the lid, making sure the gasket is positioned correctly (Fig. 1 🕑).



CONNECTIONS



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WARNING! When using R.CO.0 with plug-in connector, set the jumpers at **8k2**, the power supply jumper at **24V** and **DIP1 ON.** It is necessary to learn the transmitter (T.CO.0, mobile part) to the receiver. To learn the transmitter, briefly press the red "Prog/Reset" button on R.CO.0 and then transmit with the T.CO.0 button (Fig.7).



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EXAMPLE OF SPECIAL CONFIGURATION

CONNECTING THREE BAXS900 FOR SYNCHRONISED CONTROL VIA A SINGLE KEY SELECTOR



WARNING!

- Do not use control buttons that can simultaneously control the two directions of rotation.



- BAXS900 is equipped with a standard power supply cable (Fig. 1 ^B). If damaged it must be replaced, with one with the same characteristics, only by qualified personnel.

- The STOP input is to be considered only a contact for the control of a functional STOP. It is not suitable for connecting safety devices.

5. TRANSMITTERS LEARNING / PROGRAMMING 5.1) PROGRAMMING TECH3 PLUS (3 BUTTONS: OPEN - STOP - CLOSE). SET DIP 4 OFF POSITION

- 1. Press and release the "RADIO LEARN" button (top right of the control panel).
- The control panel will begin to emit intermittent acoustic signals to indicate the start of programming mode.
- Press and release sequentially (maximum 3 seconds between one key and the other) the keys 1, 2 and 3. At each press the control panel will confirm the programming with an acoustic signal. ATTENTION! The first button pressed will always be the OPEN/ ASCENT direction.
- Once the third button (CLOSE/DESCENT) is pressed, the control panel will give an extended beep.
- The control panel will give 2 short and close acoustic signals (which indicate the exit from the learning/programming moadality).
- 6. Repeat the procedure (steps 1 to 5) for all additional transmitters.



TECH3 PLUS



5.2) PROGRAMMING B.RO2WN. (2 BUTTONS: GO - STOP). SET DIP 4 ON POSITION

- 1. Press and release the "RADIO LEARN" button (top right of the control panel).
- The control panel will begin to emit intermittent acoustic signals to indicate the start of programming mode.
- Press and release sequentially (maximum 3 seconds between one key and the other) the keys 1 and 2. At each press the control panel will confirm the programming with an acoustic signal.
- Once the second button (STOP) is pressed, the control panel will give an extended beep.
- The control panel will give 2 short and close acoustic signals (which indicate the exit from the learning/programming moadality).
- 6. Repeat the procedure (steps 1 to 5) for all additional transmitters.









5.3) PROGRAMMING A NEW TRANSMITTER USING AN ALREADY LINKED TRANSMITTER

WARNING! If the hidden button is pressed for more than 1 second, ALL associated transmitters can be deleted.

- 1. Position a few meters from the control panel, within reach of the radio receiver integrated to it.
- 2. Press and drop the hidden button on the already stored transmitter, located in the small hole at the bottom right of TECH3 PLUS and at the bottom left of B.RO 2WN, see figures below.
- 3. The control panel will begin to emit intermittent acoustic signals to indicate the start of programming mode.
- 4. Learn the new transmitter by repeating steps 3 to 6 of the previous paragraphs (5.1 and 5.2).



WARNING! Pressing the hidden button of an already stored transmitter is equivalent to pressing the learning button "RADIO LEARN", it is therefore necessary to be within the range of the control unit to activate the radio memory.



Pressing the hidden button of an already stored transmitter activates the memory of the radio receiver. Pressing the hidden button is equivalent to pressing the "LEARN RADIO" button on board the control panel.



Press in sequence the buttons of the **new** transmitter, TECH3 PLUS or B.RO2WN, see previous paragraph.

6. TOTAL DELETION OF RADIO MEMORY, DELETION OF ALL TRANSMITTERS

- 1. Switch off power to the BAXS900.
- 2. Press and hold the "RADIO LEARN" button.
- 3. Turn on power to the control unit BAXS900 always holding down the key "RADIO LEARN", never release it.
- 4. The control panel emits a sequence of acoustic signals indicating the current cancellation.
- 5. Once the continuous beep has finished, release the "RADIO LEARN" button.
- 6. Radio memory has been erased completely, confirmation is by means of two close acoustic signals.

7. ASSEMBLY INSTRUCTIONS

To fix the center to the wall see the dimensions with the various drilling distances (Fig. 9) and the correct fixing points in the four corners of the box (Fig. 10).



8. CONTROL UNIT CONFIGURATIONS 8.1 DIP SWITCH FUNCTIONS

DIP 1	OFF - DEAD MAN OPEN ON - IMPULSE OPEN	 Opening only while holding the button (radio or panel) Opening with single pulse of the open button (radio or panel)
DIP 2	OFF - DEAD MAN CLOSE ON - IMPULSE CLOSE	 Closing only while holding the button (radio or panel) Closing with single pulse of the open button (radio or panel)
DIP 3	OFF - ELECTRONICALLY CONTROLLED ON - INFINITE WORKING TIME	 Working time detected and limited by the control unit Move the motor in open or close direction until it receive a stop command. WARNING! Don't set ON when using UPS
DIP 4	OFF - OPEN FUNCTION (for three buttons transmitter, TECH3 PLUS)	 1st OPEN (and interrupts closing) 2nd STOP 3rd CLOSE (and interrupts opening)
	(for two buttons transmitter, B.RO2WN)	- 1st GO (OPEN and GLOSE IN sequence) - 2nd STOP
DIP 5	ON - PHOTO TEST ON OFF - PHOTO TEST OFF	 PHOTOCELLS TEST ON (functional test of photocells before every move; see fig.11 to connection diagram. PHOTOCELLS TEST OFF
DIP 6	ON - SAFETY EDGE INSTALLED OFF - SAFETY EDGE UNUSED	 Obstacle on detected edge (wireless system T.CO.O - R.CO.O or optional board for resistive edge required, see pag. 3) Safety Edge not installed

8.2 WORKING TIME

BAXS900 has as an integrated function the automatic detection of working time by monitoring the motor current.

By setting DIP 3 to OFF, the control unit interrupts the power supply to the engine when it does not detect current due to the intervention of the internal limit switches inside the engine, placing itself in OPEN or CLOSED state according to the last movement.
 By setting DIP 3 to ON, the power plant continues to power the engine even when automation physically reaches opening and closing. The power supply is interrupted only with a stop command.

ATTENTION! In this mode it is possible the unintentional opening of the automation due to the intervention of the photocells or safety edge with the automation in closed position.

8.3 PHOTOCELLS

Connect contact Rx (receiver) photocell to contact NC input PHOTO. The interruption of the beam during the closing causes the complete and immediate reopening of the automation. If at least one of the two DIP-SWITCHES (1 or 2) is in the OFF position, the reopening will be partial (2 seconds of work).

8.4 PHOTOCELLS TEST

BAXS900 has the photocell test function, the test (if active) is performed before each closing movement. To enable the test, with the photocells present, place DIP 5 in position ON and connect the photocell feed as shown in Fig. 11.



8.5 SAFETY EDGE (OPTIONAL)

BAXS900 is compatible with the optional wireless system T.CO.0 - R.CO.0, whose fixed part R.CO.0 is to be inserted on the main board via the connector (see Fig. 5 page 3) or with the optional interface card to wire a resistive edge (only wired resistive edge), to be inserted alternatively on the same connector (see Fig. 6 page 3). The installation of a safety edge allows to control the automation via radio transmitter, according to EN12453.

To use the safety edge, place DIP 6 in position ON. Configure the wireless system by referring to the instructions of the system T.CO.0 - R.CO.0, keep the same at hand.

- Resistive output 8.2k0hm
- Direct polarity test enabled

The presence of an obstacle during the closing movement of the automation implies the immediate and total reopening of the same. If at least one of DIP 1 or DIP 2 is in position ON (MAN PRESENT), the reopening will be partial (2 seconds of work). If a safety edge is not used, place DIP 6 in OFF position.

For details regarding the functionality of the wireless system T.CO.0 - R.CO.0 please refer to the system instructions.

8.6 INPUT CONFIGURATIONS

BAXS900 can be controlled through:

- Local controls (front panel)
- Wired remote controls / wires (buttons, key selector or or other)
- Radio transmitters

The opening control is configurable through DIP 1 (MAN OPENING PRESENT / IMPULSE OPENING) and through DIP 4 (OPEN FUNCTION / GO FUNCTION). This configuration **is binding on all control modes** (central panel, remote control lines, radio transmitters).

The closing control is configurable through DIP 2 (MAN PRESENT CLOSING/ IMPULSE CLOSING) and through DIP 4 (OPEN FUN-CTION/ GO FUNCTION). This configuration is binding on all control modes (central panel, remote control lines, radio transmitters).

WARNING! In case the control unit identifies a problem on the safety devices (photocells, safety edges), the closing movement will be allowed only by a local control (front panel) and in DEAD MAN mode.

WARNING! In case a safety edge is not used, the closing movement will be allowed only by the local control (front panel) or by the remote closing control but only in DEAD MAN mode.

WARNING! Configure a type of use in accordance with EN12453, reducing the risk related to the use of automatic doors.

9. COURTESY LIGHT / WARNING

BAXS900 has an output dedicated to a courtesy light. In the BAXS900 the courtesy light is integrated.

COURTESY LIGHT FUNCTION: The light stays on for 2 minutes after each movement. BLINKER FUNCTION:

1 second ON / 1 second OFF	Opening test phase or pre-opening		
0,5 seconds ON / 0,5 seconds OFF	Closing test phase or pre-closing		
0,25 seconds ON / 0,25 seconds OFF	Safety Error		

10. REDUCED RISK FOR A MOTORIZED OPENING SYSTEM

Configure the system so that it complies with the minimum level of risk protection required by EN12453, depending on the type of use you intend to make. If the system is controlled in DEAD MAN mode, the control devices shall be positioned at a minimum height of 1,5 m and positioned outside the operating area in such a way that they are fully visible.

If the OPEN and CLOSE controls are located in an easily accessible area, use a key selector or similar device to prevent unauthorised or inadequately trained persons from being used.

	Use of the closing system				
Type of activation control	Group 1 Qualified persons. (use in private area)	Group 2 Qualified persons. (use in public area)	Group 3 Unqualified persons. (public and private area)		
Dead man mode	A	В	Not possible		
Radio transmitter and visible closing system	C or E	C or E	C and D, or E		
Radio transmitter and closing system not visible	C or E	C and D, or E	C and D, or E		
Automatic control (e.g. timed closure)	C and D, or E	C and D, or E	C and D, or E		
Table 1 - Minimum level of protection to be considered according to UNI EN12453					

Protection A	The closure is activated by	v the dead man command	that is holding to move	(hold-to-run)
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- Protection B The closure is activated by the dead man command, through a key selector or similar device to prevent unauthorized use
- Protection C Limitation of the forces generated by the shutter / door / gate
- Protection D Devices, such as photocells, to detect the presence of persons or obstacles
- Protection E Sensitive devices, such as non-material barriers, to detect the presence of a person

11. AUTOTEST

BAXS900 is designed according to safety standards, and the same include some tests before movement. During these tests BAXS900 activates the "**SAFETY CHECK**" led on the front panel and performs a series of flashes on the courtesy light. This condition informs the user of the next automation movement.

WARNING! The AUTOTEST procedure slightly delays movement but is NECESSARY for user safety.

WARNING! The courtesy light also acts as a motion detector, so if you have a device without the built-in courtesy light, you need to install a light connected to the COURTESY LIGHT output, placing it visibly from the areas of movement.

12. RJ11 SOCKET FOR UPS MODE

The UPS mode allows to give a consent to a UPS (Uninterruptible Power Supply) in case of blackout.

- Connect 230Vac UPS output to network input L, N and GND of the control unit BAXS900, see 230Vac terminal block (Pag. 2).
- Connect the UPS to a 13A socket.
- Connect the RJ11 control cable to the socket on the BAXS900 and the other end to the RJ11 input socket on the back of the UPS.

WARNING! DO NOT set "Infinite working time" (DIP 3 = ON) when using UPS mode.

WARNING! The autonomy and functionality of the UPS depends on the technical characteristics of the UPS itself. Keep UPS instructions handy if used. Allmatic does not provide UPS.

13. WARNING/DIAGNOSIS SIGNALS

For warnings and error states of the BAXS900, follow these steps:

Type of anomaly found		Leds		Problem	Solution
Safety check / Safety Error / Motor ON	3 blinks		SAFETY ERROR	Led verification during the start up phase	
Safety check / Safety Error /	Fast blinking			Autotest failure	If an R.CO.O card is installed, check $DIP1 = 0N$ and restart BAXS900
Safety check / Safety Error /	Blinking during start up phase			Radio memory damaged	Need to delete all transmitters
Safety check / Safety Error /	Blinking			Software autotest failure	Restart BAXS900
Safety check / Safety Error / Motor ON	5 seconds fast blinking			Software autotest failure	BAXS900 automatic restart
Motor ON	Blinking			Intervention of thermal protection	Wait for the control unit to be reactivated
Safety Error / Motor ON	Blinking			Autotest circuit damaged	Check motor connection, if it is ok, please contact service

14. TECHNICAL SPECIFICATIONS

Power Supply	Voltage	230Vac
	Frequency	50/60Hz
	Protection Fuse (F1)	6.3A FAST
Motor	Voltage	230Vac
	Frequency	50/60Hz
	Туре	ACIM 2-phases
	Power (Max)	1000W
Courtesy Light (Integrated)	Voltage	230Vac
	Frequency	50/60Hz
	Power	2W
	Туре	E14 Led
Courtesy Light (Additional)	Voltage	230Vac
	Frequency	50/60Hz
	Power (Max)	500W
Output Aux	Voltage	24Vdc
	Power (Max)	6W
Remote Command	Voltage of control	24Vdc (isolated) SELV
Radio Reciever	Frequency	433.92MHz
	Modulation	00K
	Type of Code	Rolling CODE - 66bit
Operating Temperature		-10°C+55°C
Degree of Protection Box		IP65

15. CE DECLARATION OF CONFORMITY

Manufacturer: Allmatic srl Address: Via dell'Artigiano, 1 - 32026 Borgo Valbelluna (BL) Italia Telephone: +39 0437 751175 E-mail: info@allmatic.com Web Site: www.allmatic.com Declares that: BAXS900 complies with the provisions of Community Directives 2006/42/EC - Machinery Directive 89/106/EEC - (CPD) Construction Product Directive (305/2011/EU Regulation) 2014/35/EU - Low Voltage Directive 2014/30/EU - Electromagnetic Compatibility Directive 2014/53/UE - Radio Equipment Directive

This product cannot work independently and is designed to be integrated into a system with other devices. It complies with Article 6.2 of Directive 2006/42/EC (Machinery) and subsequent modifications, therefore the device cannot be put into operation before it has not been declared compliant in the total context of use in accordance with the provisions of the Directive. This statement is provided in a shorter form for graphic reasons. The full version is available by contacting the manufacturer.

16. UNIT DIMENSIONS (mm)





17. PRODUCT DISPOSAL

This product is an integral part of automation, and therefore must be disposed of together with it. As with installation operations, even at the end of the life of this product, dismantling operations must be carried out by qualified personnel. This product consists of various types of materials: some can be recycled, others must be disposed of. Find out about the recycling or disposal systems required by the regulations in force in your territory for this category of product.



WARNING! - certain parts of the product may contain pollutants or dangerous substances which, if dispersed in the environment, could have harmful effects on the environment and human health.

As indicated by the symbol on the side, it is forbidden to throw this product into household waste. Then perform the "separate collection" for disposal, according to the methods provided by the regulations in force in your territory, or return the product to the seller when buying a new equivalent product.

WARNING! - the regulations in force at local level may provide for heavy penalties in case of improper disposal of this product.

18. WARRANTY

The manufacturer's warranty is valid from the date stamped on the product and is limited to the repair or replacement free of charge of the parts recognized by the same as defective due to lack of essential quality in the materials or lack of processing. The warranty does not cover damage or defects due to external agents, maintenance deficiency, overload, natural wear, choice of incorrect type, assembly error, or other causes not attributable to the manufacturer. Tampered products will not be guaranteed or repaired. The data given are purely indicative. No liability may be charged for reductions in scope or malfunctions due to environmental interference. The liability of the manufacturer for damage caused to anyone by accidents of any nature caused by our defective products, are only those that derive from the Italian law.

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