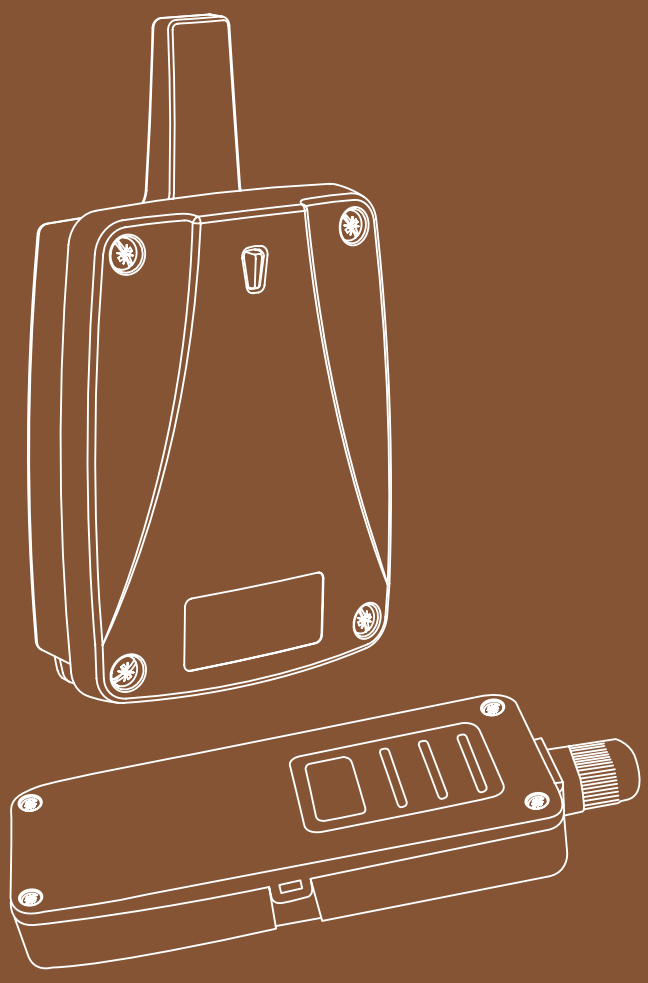
# WIRELESS **BAND**

INSTRUCTIONS MANUAL



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## DESCRIPTION

SMINN Wireless Band are developed with state-of-the-art electronics and technology. They provide a high degree of operating reliability and security.
A system made of a transmitter device connected to the safety edge and a receiver device connected to the motor controller. Communication between them is via radio using the 868 Mhz frequency.

Devices that are built using high quality materials and components and the latest technology. They are made taking into account the current regulations for the usage in residential, commercial and light industry enviroments.

CE

## INSTALLATION / CONNECTIONS

Install the transmitter following the technical manual and avoid placing metallic surfaces between the receiver and the transmitter.

1. Fix the back of the WBAND TX to the wall, using the supplied wall plugs and screws.
2. Pass the cables through the bottom of the transmitter.
3. Connect a resistive 8K2 safety edge directly to the B1 terminal and ensure that the safety edge is watertight.
4. Fix the front of the transmitter to the back with the supplied screws
5. Fix the back of the WBAND RX to the wall, using the supplied wall plugs and screws.
6. Install the receiver close to the door leaf and avoid metallic surfaces between the receiver and the transmitter.
7. Pass the cables through the bottom of the receiver.
8. Connect the power cables to the terminals of the printed circuit, following the indications of the connections diagram.
9. Program the WBAND TX transmitters following the programming structions.
10. Fix the front of the receiver to the back with the supplied screws.

**NOTE**: If a non-resistive element (with a NC contact) needs to be connected, the JP1 jumper must be bridged. This application does not comply with the EN12453 safety standard for the use of motorised garage doors, since the connection of the resistive element to the WBAND RX and/or WBAND TX is not checked.

## POLARIZED SELF-TEST

1. Check the self-test output on the control panel, in standby, to see whether the voltage is 0V (inverted test input) or 12/24V AC/DC (positive polarization).
2. Switch on the self-test signal of the panel and check that it has a maximum duration of 3 seconds.

| | AUTOTEST OUTPUT IN STANDBY | AUTOTEST OUTPUT ACTIVATED | POLARIZATION TYPE | JUMPER ATEST POL | ATEST 1 | ATEST 2 |
|---|---|---|---|---|---|---|
| WITH AUTOTEST | 0V | 12/24V | Positive | OFF | Connected* | Connected* |
| | 12/24V | 0V | Negative | ON | Connected* | Connected* |
| WITHOUT AUTOTEST | - | - | - | OFF | Not Connected* | Not Connected* |

* Connect only the used auto-test outputs.
** If auto-test is not used, the system is not checked at the start of the operation, which means that the EN 12453 security standard regarding the use of motorised garage doors is, in some cases, not complied with.

## LIGHT INDICATORS

| **WBAND RX** | In operation | In programming |
|---|---|---|
| Relay 1 LED | Normally off.<br>Indicates the status of the relay outputs<br>If R1 is not connected, on. | On. Indicates the channnel to be programmed. |
| Relay 1 LED | Normally off.<br>Indicates the status of the relay outputs<br>If R1 is not connected, on. | On. Indicates the channnel to be programmed. |

The receiver checks that all the programmed edges are working properly. If an edge is activated or if there is an error in its operation, the receiver deactivates the output relay.

## WBAND TX PROGRAMMING

If the receiver is in programming (see MANUAL PROGRAMMING below), press the transmitter button to program it into the receiver.

## PROGRAMMING WBAND RX - MANUAL PROGRAMMING

WBAND RX makes it possible to store 6 WBAND TX (3 on Relay 1 and 3 on Relay 2).

1. Press the receiver PROG button for 1s; a sound signal will be heard.
2. The receiver will start programming the first relay.
3. If the programming button is kept pressed, the receiver will start programming the second relay, switching cyclically from one relay to another.
4. Once the relay to program has been chosen for the transmitter you want to start using, send the programming code by pressing the transmitter.
5. Every time a transmitter is programmed, the receiver will emit a sound signal for 0.5s.
6. If 10 seconds pass without programming, the receiver will go out of programming mode, emitting two 1s sound signals.
7. If, when programming a transmitter, the receiver's memory is full, it will emit 7 sound signals lasting 0.5s and come out of programming.

**Note: For correct system operation, the transmitter has to be programmed in one receiver only.**

In case you need to replace a WBAND TX, it is necessary to reset the system (see TOTAL RESET) and reprogram all WBAND TX used in the installation.

## SYSTEM CHECK

This function is used to check the status and range of all the devices once the installation has been carried out.

1. Press the receiver's CHECK for at least 1 second button to enter check mode. The indicator light will come on and four beeps will be heard.
2. Perform a complete door opening and closing manoeuvre. During the system check a beep will be heard every 1,5 seconds.

## CORRECT SYSTEM OPERATION

If no other acoustic signal is heard on completing the manoeuvre, the system is functioning correctly. Either press the CHECK button again or wait 5 minutes and the WBAND RX will exit checking automatically, indicating with two beeps that the check procedure has finished correctly. The check indicator light will go out.

## DETECTION OF EDGE FAILURE

If the communication with a WBAND TX fails during checking, or the communication is deficient (for instance, too many communication retries or poor coverage), the WBAND RX emits three consecutive beeps, indicating that an error has occurred. Halt the door manoeuvre and press the installed safety edges to detect what has failed. If a single beep is heard on pressing an edge, this means that the edge is correct. If three consecutive beeps are heard on pressing the edge, this means that the edge has failed.

In this event, it is recommended changing the orientation of the transmitting-receiving aerials. On exiting check mode, seven consecutive beeps will be heard and the indicator light will flash continuously. Perform another system check until the result is correct.

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## SIGNAL COVERAGE

After pressing one of the installed edges, continuous flashes, ranging from 1 to 5, indicate the signal coverage for this edge at the time it was pressed.

## TOTAL RESET

1. In programming mode, keep the programming PROG button pressed down and make a bridge with the “MR” reset jumper for 3s.
2. The receiver will emit 10 warning sound signals and then more at a faster frequency, indicating that the operation has been carried out. The receiver will stay in programming mode.
3. If 10 seconds elapse without programming, or if you press the programming button quickly, the receiver will go out of programming mode, emitting two 1s sound signals.

## WBAND TX TRANSMITTER BATTERY LOW INDICATION

If the battery of a transmitter programmed into the receiver becomes low, it will give out 4 short signals every 20 seconds. If there is more than one transmitter programmed, the safety edge must be activated to check whether the receiver makes these 4 short signals. If this is the case, the transmitter connected to the activated safety edge will be the one with the low battery. Change it.

## CHANGING THE BATTERY

1. Remove the box cover. The batteries are positioned on the back of the cover.
2. Replace the two used batteries with new ones, taking into account the polarity indicated by the connector.
3. Check that the new batteries support the same temperature range as those they are replacing.

## USE OF THE SYSTEM

These devices are intended to be installed with a safety edge in garage doors installations. Their use is not guaranteed for directly activating other systems than that specified.The manufacturer reserves the right to change the specifications of the equipment without prior warning.

## IMPORTANT APPENDIX

Disconnect the power supply before handling the equipment.In accordance with the European low voltage directive, you are informed of the following requirements:

1. For permanently connected equipment, an easily accessible connection device must be incorporated into the cabling.
2. This equipment must be installed in a vertical position and firmly fixed to the structure of the building.
3. This equipment may only be handled by a specialized installer, by maintenance staff or by a properly instructed operator.
4. The instructions for use of this equipment must always remain in the possession of the user.
5. Terminals with a maximum section of 3.8mm2 must be used to connect the cables.

The frequency of the Radioband system does not interfere in any way with the 868 MHz remote control systems. However a signal centered at 868,9MHz may cause a delay on the reaction of the system.

## CE DECLARATION OF CONFORMITY

| | |
|---|---|
| The company | ELSON SISTEMAS, S.L<br>Pol. Torrelarragoiti, P6-A3-1ª<br>48170 Zamudio - Vizkaia (SPAIN) |
| Declares | |
| The product: | WBAND TX and WBAND RX |
| Manufactures by | ELSON ELECTRÓNICA, S.A. |
| Under the trademark: | SMINN |
| For use in: enviroments. | Residential, Commercial or light industry |

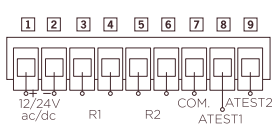
This device meets the provisions contained in the article 3 of the R&TTE 1999/05/CE Regulation, as long as its usage is compilant to what was envisaged, having applied the following regulations:

| | |
|---|---|
| Telecommunications: | Directive R&TTE 1999/05 - Art.3 |
| Electromagnetic compatibility: | 89/336/CEE |
| Low Voltage | 73/23/CEE - 93/68/CEE |
| FCC rules | Part 15 |

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2010-03-30 Zamudio

Jose Miguel Blanco Perez
Chief Technical Officer




1- 12/24V AC/DC power input (+)
2- 12/24V AC/DC power input (-)
3, 4- R1: Connection to the safety band input of the control panel (resistive contact 8.2kΩ) with jumper in position BS1 (see CONNECTIONS Figure 1). Or to the control panel safety contact input (NC) with jumper in position CS1 (see CONNECTION Figure 2)
5, 6- R2: Connection to a second safety band input of the control panel (resistive contact 8.2kΩ) with jumper in position BS2. Or to the control panel safety contact input (NC) with jumper in position Cs2.
7- AUTOTEST: Common connection safety self-test (-). See CONNECTIONS Figure 3 and table POLARIZED SELFTEST.
8- AUTOTEST: Self-test connection for R1. See CONNECTIONS Figure 3 and table POLARIZED SELF-TEST.
9- AUTOTEST: Self-test connection for R2. See CONNECTIONS Figure 3 and table

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**Elson Sistemas**
T.+34 944 525 120
www. sminn.com
info@sminn.com
Pol. Torrelarragoiti, P6 - A3 - 1º
48170 Zamudio Bizkaia
SPAIN

## TECHNICAL CHARACTERISTICS

| WBAND TX | |
|---|---|
| Radio frequency | 868.90 MHz |
| Power supply | 3V DC (2 X 1.5V LR=AA) |
| Consumption | 12 mA |
| Radiated power | <25 mW |
| Working temp. | -20 / +850 C |
| Watertightness | IP 65 |
| Dimensions | 1160x53x20 mm |
| Range (Guaranteed) | 10 m |
| Battery life | 2 years |
| Min. delay between uses (to comply with R&TTE directive) | 7 min. |

| WBAND RX | |
|---|---|
| Frequency | 868.90 MHz |
| Memory | 6 WBAND TX<br>(3 in Relay 1, 3 in Relay 2) |
| Relay | 2 relays |
| Power | 12/24 V AC/DC |
| Power range | 9/35 V DC<br>8/28 V AC |
| Relay contacts | 1A |
| Consumption standby / working | 18 mA / 80 mA |
| Autotest inputs | 2 0/12/24V AC/DC inputs<br>With variable polarity |
| Radiated power | <25 mW |
| Working temp. | -20 / +85 0C |
| Watertightness | IP 54 (IP65 with cable glands) |
| Case dimensions | 100x130x50 mm<br>(Antenna not included) |
| Range (Guaranteed) | 10 m |

Fig.1

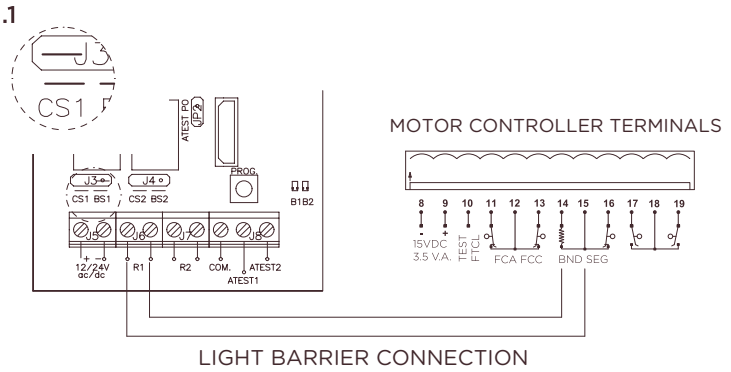



Fig.2

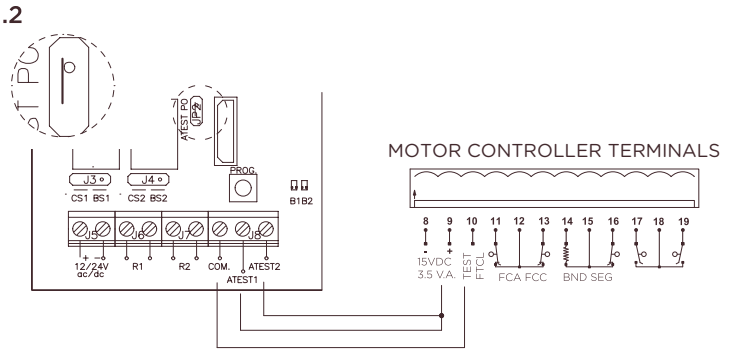



Fig.3

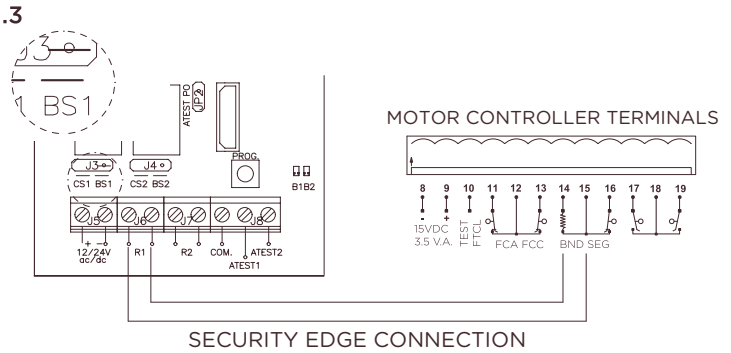
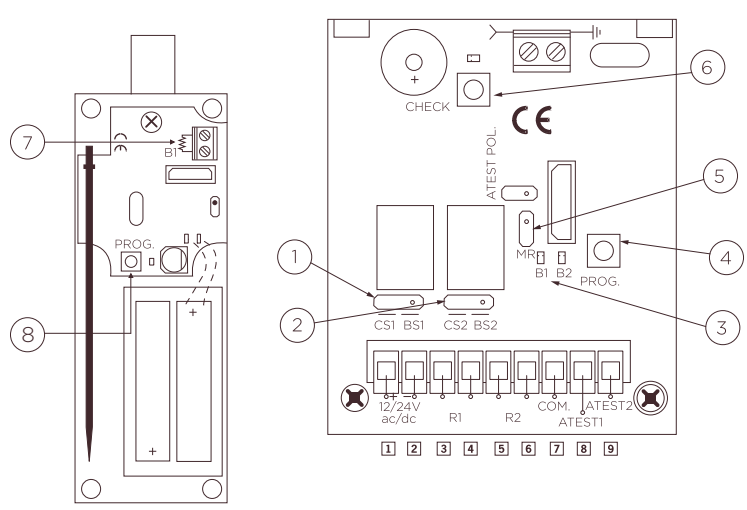



Fig.4

WBAND RX




1. R1 Selector bridge
2. R2 Selector bridge
3. Relay activated indicator lights
4. Programming button
5. MR total reset bridge
6. Check led and chek button
7. Safety edge connection
8. Programming button