

1 Wiring

Axroll^{NS}

Radio receiver for rolling garage door

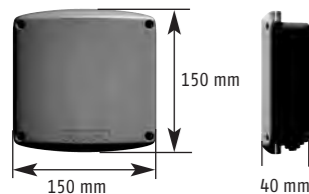


The **AXROLL** receiver is used to control a rolling garage door fitted with a 230V motor with mechanical built-in endstops using Keytis[®] 2/4 RTS, Telis 1/4 RTS, and radio wall switch. Different safety and signaling systems can be connected to the **AXROLL** (resistive, OSE Fraba type or ultrasonic safety edge, photocells, flashlights, area lighting).

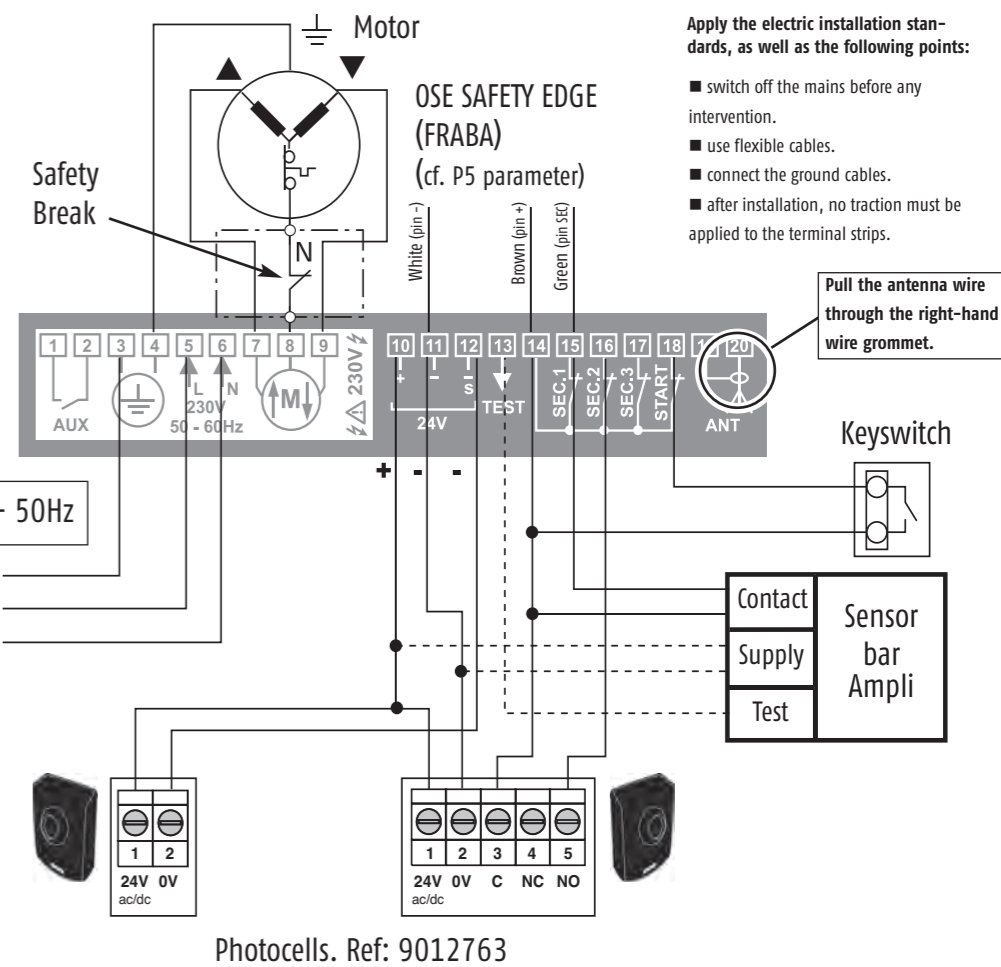
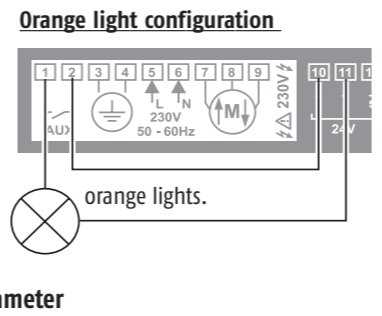
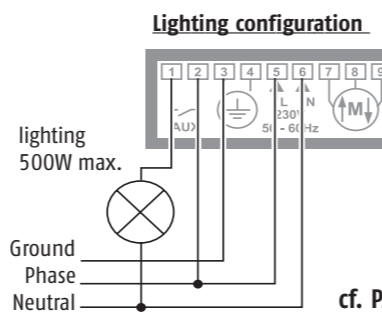
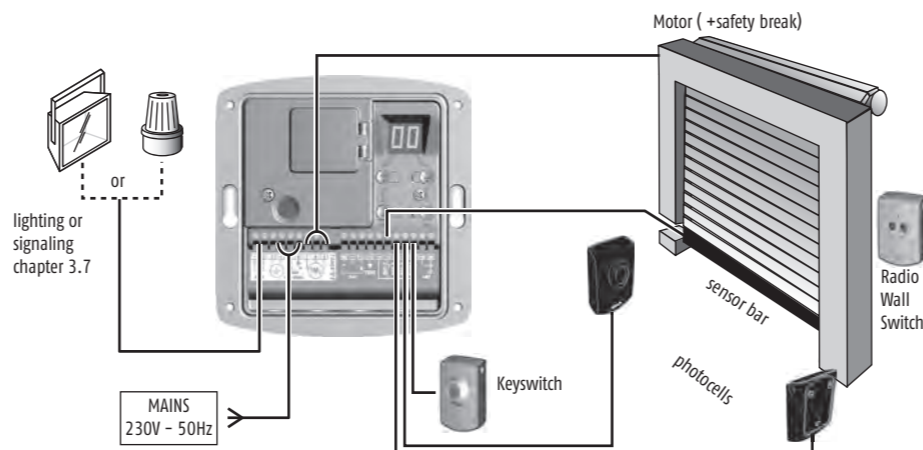
This product complies with the standard EN 60335-2-95. When installed as recommended in this instruction manual and in accordance with regulations in force, Axroll allows the installation to comply with EN 13241 and EN 12453 standards. Axroll must be installed inside the garage with a motor equipped by a manual override system.



Radio Technology Somfy



- Power supply voltage : 230Vac 50-60 Hz.
- Fuse : 250V 5A with timeout
- Max motor power : 230Vac 750W.
- Protection rating : IP 55.
- Ambient operating T° : -15°C to +55°C.
- Radio frequency : 433.42MHz
- Accessory power supply : 24Vcc (direct).
- Resistance values for resistive sensor bar : From 4 to 12KΩ
- Maximum current for accessories : 0.33A i.e. 8W max. (cells, keypads, loops, sensor bar, etc...)
- or 13W intermittent (orange light 10W + accessories 3W.)
- Orange light : 24V, 10W max or 230V 40W max
- Area lighting : 230Vac, 500W.
- Auxiliary output : Contact NO, 250Vac 500W.
- Operating class : 1, the ground must be connected.
- Number of maximum channels : 32



- Apply the electric installation standards, as well as the following points:
- switch off the mains before any intervention.
 - use flexible cables.
 - connect the ground cables.
 - after installation, no traction must be applied to the terminal strips.

Hereby, SOMFY, declares that this product (AXROLL) is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. A Declaration of Conformity is available at the web address www.somfy.com/CE. Usable in EU, CH.



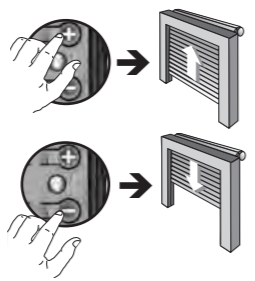
Ref. N1841034E V1 SOMFY SAS, capital 20 000 000 Euros, RCS Bonneville 303 970 230

2 Checking the motor's rotation direction

NB: If you want to check the motor's rotation direction, you have to set the parameter **P0 = 05** (chapter 3.1)

1 Powering on the product: the display indicates the value **C1**

2 Check the motor's rotation direction using the "+" and "-" keys. press and hold the "+" key to open the door. press and hold down the "-" key to close the door.



If the operation is reversed, power off the product, and revert the motor's wiring (terminals 7 and 9). Refer to the motor's installation manual to set the end stop system.

3 Measure the motor operating time using permanent running (e.g. 20sec. for rising), then set the **T0** parameter (motor operating time, chapter 3.8) with a value slightly above the time observed (about +3 sec.).

3 Configuration

■ The Axroll control box is fully and easily configured to achieve optimum operation matching the types of accessories connected, as well as the operation mode required by the user. The various parameters proposed are not mandatory, and browsing the menus imposes no particular sequence.



Use the "↑" or "↓" keys to browse the menu and display the parameter required. One second after releasing the key, the screen indicates the parameter value to change. (display blinks) Use the "+" or "-" keys to change the value of the parameter. The last value is recorded automatically (the display is fixed when pressing the keys).

To return to the menu, press the "↑" or "↓" keys to return to value C1 (or any other value indicating the product's operation: see S 4) or after a one-minute waiting time.

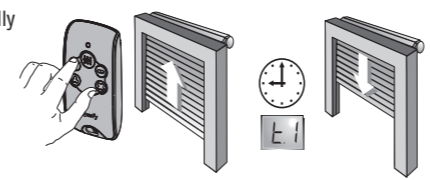
3.1 Configuring the operating mode: parameter **P0** (PLANT VALUE = 02)

Certain operating modes impose connecting safety accessories (european standards EN 12453). Non compliance with these rules can lead to a facility hazardous for its users.

The Axroll has six operating modes:

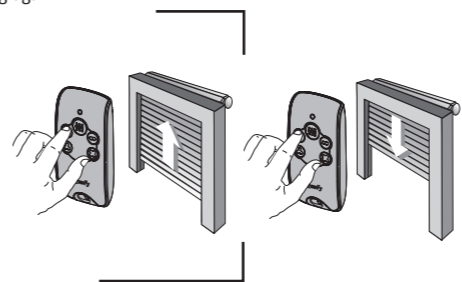
P0 = 00 : Automatic mode ⚠ Mandatory installation of safety accessories

Pressing the remote control opens and closes automatically after timeout **T1** (chapter 3.8). During closing, pressing the remote control again or the detection of an obstacle reopens the door.



P0 = 01 : Semi-automatic mode

Pressing the control triggers opening or closing. Pressing again during opening has no effect. Pressing during closing reopens the door.



P0 = 02 : Sequence mode (default mode)

Cyclic operation (up / stop / down / stop...). Pressing during opening or closing stops without reversion.

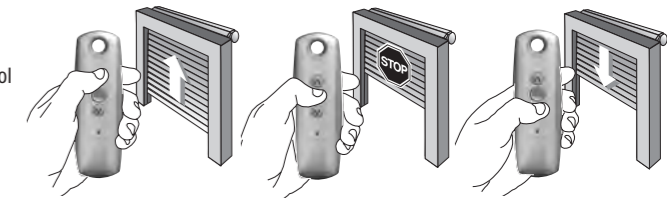


P0 = 03 : Sequential mode + Timeout ⚠ Mandatory installation of safety accessories

Similar to the sequential mode, but with automatic closing after timeout **T1** (chapter 3.8).

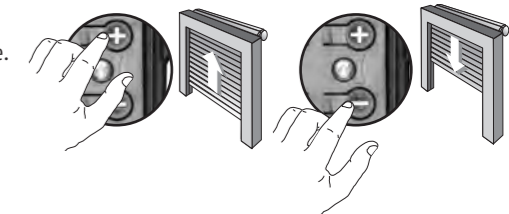
P0 = 04 : 3-button mode

This mode is used to set a separate control for opening, closing, and stopping the door.



P0 = 05 : Forced mode with + & - keys on the keyboard ⚠ in this mode, the safety devices are deactivated

This mode is used to control the door using the "+" and "-" keys on the Axroll box in the endstop adjustment phase. Press and hold "+" to open. Press and hold "-" to close.



3.2 Safety input function: parameters P1 P2 P3

- When using a resistive sensor bar, the latter must be wired onto safety input 1.
- The opening safety device stops then recloses partially (non configurable action).

Configuration of safety input 1 (sensor bar*): parameter P1 (PLANT VALUE = 02)

- P1 = 00 No accessories connected to safety input 1 (default mode)
- P1 = 01 Accessory connected to safety input 1 enabled when opening the door
- P1 = 02 ACCESSORY CONNECTED TO SAFETY INPUT 1 ENABLED WHEN CLOSING THE DOOR
- P1 = 03 ADMAP** safety: active upon closing + forbids starting at opening
- P1 = 04 Contact for connecting an emergency stop device

Configuration of safety input 2 (photocell*): parameter P2 (PLANT VALUE = 00)

- P2 = 00 NO ACCESSORIES CONNECTED TO SAFETY INPUT 2 (DEFAULT MODE)
- P2 = 01 Accessory connected to safety input 2 enabled when opening the door
- P2 = 02 Accessory connected to safety input 2 enabled when closing the door (recommendation when using photocells)
- P2 = 03 ADMAP** safety: active upon closing + forbids starting at opening
- P2 = 04 Contact for connecting an emergency stop device

Configuration of safety input 3: parameter P3 (PLANT VALUE = 00)

- P3 = 00 NO ACCESSORIES CONNECTED TO SAFETY INPUT 3 (DEFAULT MODE)
- P3 = 01 Accessory connected to safety input 3 enabled when opening the door
- P3 = 02 Accessory connected to safety input 3 enabled when closing the door
- P3 = 03 ADMAP** safety: active upon closing + forbids starting at opening
- P3 = 04 Contact for connecting an emergency stop device

* If the connection of accessories matches the diagram in chapter 1.
 **Area Dangerous for Movement Accessible to the Public.

3.3 Safety action upon closing: parameter P4 (PLANT VALUE = 01)

- The safety action at opening (P1, P2, or P3 = 01) is not configurable (stopage followed with partial door reopening). However, safety actions upon closing (P1, P2, or P3 = 02) can be configured:

- P4 = 00 Stop the door.
- P4 = 01 STOP, THEN TOTAL REOPENING OF THE DOOR
- P4 = 02 Stop then partial reopening of the door (2 seconds operation)

Ensure you configure the safety input used for the appropriate self-test:

safety 1: P1+P5
safety 2: P2+P6
safety 3: P3+P7

Once the safety accessories are connected and the safety inputs configured, check manually the proper operation of the accessories before the final start up of the facility.

3.4 Configuration of the self-testing function: parameters P5 P6 P7

- The self-test function is used to check proper operation of the safety accessories automatically at the end of closing.

Self-testing safety input 1: parameter P5 (PLANT VALUE = 03)

- P5 = 00 No self-test of the accessory connected (default mode)
- P5 = 01 Self-test for photocells by power supply cutting. (caution, the transmitting cell must be supplied on terminals 10/12 and the receiver cells on terminals 10/11).
- P5 = 02 Self-test for accessory fitted with a TEST input (cells or sensor bar).
- P5 = 03 SELF-TEST FOR RESISTIVE SENSOR BAR (VALUE COMPRISED BETWEEN 4 AND 12 KΩ).
- P5 = 04 Self-test for OSE sensor bar Fraba type (without ampli).
- P5 = 05 Self-test for ultrasonic sensor bar without ampli (non-available).

Self-testing safety input 2: parameter P6 (PLANT VALUE = 00)

- P6 = 00 NO SELF-TEST OF THE ACCESSORY CONNECTED (DEFAULT MODE)
- P6 = 01 Self-test for photocells by power supply cutting. (caution, the transmitting cell must be supplied on terminals 10/12 and the receiver cells on terminals 10/11).
- P6 = 02 Self-test for accessory fitted with a TEST input (cells or sensor bar).

Self-testing safety input 3: parameter P7 (PLANT VALUE = 00)

- P7 = 00 NO SELF-TEST OF THE ACCESSORY CONNECTED (DEFAULT MODE)
- P7 = 01 Self-test for photocells by power supply cutting. (caution, the transmitting cell must be supplied on terminals 10/12 and the receiver cells on terminals 10/11).
- P7 = 02 Self-test for accessory fitted with a TEST input (cells or sensor bar).

3.5 Programming remote controls: parameter P8

According to the type of operation chosen in chapter 3.1, the value of the P8 parameter does not produce the same effects.

Automatic, semi-automatic, or sequence modes.

- P8 = 00 OPENING/CLOSING COMMAND (DEFAULT MODE).
- P8 = 03 Auxiliary output control (driving the accessory connected to the AUX output).

3-button mode

- P8 = 00 Open command
- P8 = 01 Close command
- P8 = 02 Stop command
- P8 = 03 Auxiliary output control (driving the accessory connected to the AUX output).

Remark: It is also possible to control Axroll with a 3-buttons wired command connected to the inputs: START (14/18 pins) for the Open command, SEC2 (14/16 pins) for the Close command, SEC3 (14/17 pins) for the Stop command if and only if the SEC2 and SEC3 inputs are set as non-connected: P2=00 and P3=00 (chapter 3.2)

1 Choose the remote control key's function to program.

Display the value of the function to program using the "+" and "-" keys on the Axroll.

2 Save the code (Axroll can save maximum 32 channels)

Press simultaneously the remote control key to program and the key "+" on the Axroll for three seconds until dashes appear "--".

3.6 Clearing remote controls: parameter P9

Clearing all remote controls is performed by pressing and holding for 3 seconds the key "+" until dashes appear "--".

3.7 Configuration of auxiliary accessories: parameter PA

- The auxiliary contact is a dry contact. A single accessory can be connected and power supplied according to the use configured.

- PA = 00 Contact to drive an electric latch (The latch must be supplied with an outside power supply)
- PA = 01 Contact to drive an electromagnetic latch
- PA = 02 Contact to drive an Orange flashlight without notice (only during the door's operation)
- PA = 03 Contact to drive an Orange flashlight with notice (before starting and during door's operation)
- PA = 04 CONTACT TO DRIVE A ZONE LIGHTING (DEFAULT MODE, AUTOMATIC SWITCH OFF AFTER TIMEOUT T3 § 3.8)
- PA = 05 Contact to drive an open door indicator
- PA = 06 Contact of the stable mono relay type to drive an automation system
- PA = 07 Contact of the bi-stable relay type to drive an automation system

3.8 Configuring the operating mode: parameters T0 to T3

T0 Motor operating time
 00 → 00 (Increment of 1 sec.)
 Adjust a time slightly longer than the actual operating time.

T1 Time for reclosing the door
 00 → 99 (Increment of 1 sec.) PLANT VALUE = 05
 Enabled in automatic operating modes (§ 3.1)

T2 Waiting time before motor reversion
 Particular case of motors not accepting reversion of the rotation direction without stopping phase.
 00 → 90 (Increment of 1 sec.) PLANT VALUE = 00

T3 Area lighting time after cycle end
 00 → 10 (Increment of 1 min.) PLANT VALUE = 02

i To return to the menu, press the "↑" or "↓" keys to return to value C1 (or any other value indicating the product's operation: see § 4) or after a one-minute waiting time.

4 Operating information

- List of operating information displayed by Axroll used to view and an easy diagnostic of the facility's status.

EVENT CODES

- C1 Axroll waiting for a command
- C2 Opening door
- C3 Wait before closing the door
- C4 Closing door
- C5 Open cell hidden
- C6 Close cell hidden
- C7 ADMAP cell hidden
- C8 Door movement forced by keypad
- C9 Emergency stop triggered
- CA Self-testing safety
- CB Permanent contact on "START" input
- CC Wait before motor reversion

FAULT CODES

- E1 Safety fault at opening (contact always open)
- E2 Safety fault at closing (contact always open)
- E3 ADMAP safety fault (contact always open)
- E4 Self-test failed on safety input 1
- E5 Self-test failed on safety input 2
- E6 Self-test failed on safety input 3
- E7 Intensity exceeded on 24V power supply (too many accessories connected)
- E8 Operating time "T0" too short or motor endstop not reached

For the fault codes from E1 to E3: Once the fault is corrected, it is not required to clear the fault code of the log to return to normal operation.

For defect codes from E4 to E8: Once the fault is corrected, you must clear the defect code for the log to return to normal operation.

CYCLE COUNTERS

- U0 Tens and units
- U1 Thousands and hundreds
- U2 Hundred and tens of thousands

Log of the last 10 faults
 d0 ... d9 See fault code above.

Reinitialise the Axroll after a fault

ACCESSORY CONSUMPTION

W3 power consumed in Watts
 "0" to "99" Watts
 To clear the fault codes, select the parameter W3 and press and holding the "+" key for 3 seconds until dashes appear "--".