MX14

OPERATION/PROGRAMMING MANUAL

PORTUGAL

EN

Motorline® PROFESSIONAL
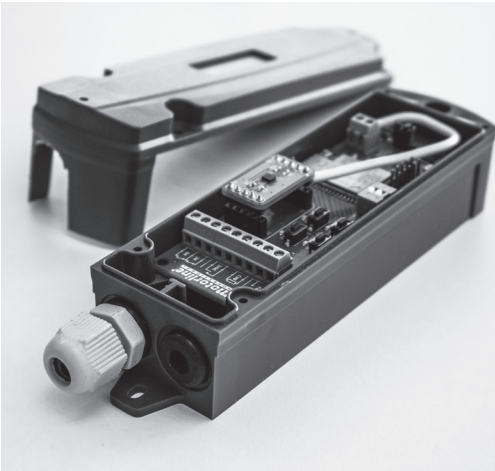
The MX14 is a emitter that communicates wirelessly with the MR14 receiver, up to 50m in the open, powered by batteries or rechargeable batteries by solar panel.
It allows the connection of an 8k2 safety rubber and a dry contact safety device, or the use of an accelerometer. When any of the connected devices is activated, this emitter sends a signal to the MR14 receiver.
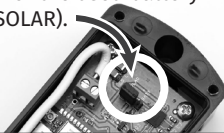
TECHNICAL CHARACTERISTICS

• **Power supply**	**3.6V AA batteries or 3.7V AA rechargeable batteries**
• **Solar panel**	**4V 150mA monocrystalline**
• **Working frequency**	**Self-adjusting 868 MHz**
• **Reach in open field**	**50m**
• **Dimension**	**150 x 42 x 40 (mm)**
• **Protection degree**	**IP65**
AES encryption	

ENERGY

Place the jumper in the position indicated for the used battery (BATT or SOLAR).

BATTERY DURATION:
2-3 years in ECO mode; In NORMAL mode the use of a solar panel is recommended.

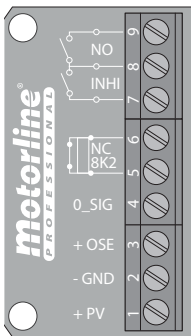**Battery Mode (BATT)**
3.6V lithium-ion batteries with category AA.

Solar Mode (SOLAR)
Rechargeable lithium-ion batteries, powered by the solar panel, with a rating of 3.7V with category AA.

ATTENTION: ALWAYS CHECK THE CORRECT ORIENTATION WHEN APPLYING THE BATTERY TO THE DEVICE.

## INPUTS / OUTPUTS

9 •	**NO**	Input for dry contact safety devices
8 •	**COM**	Common
7 •	**INHI**	NO input for inhibit signal
6 •	**8K2/NC**	Input for 8k2 resistive safety rubber.
5 •	**8K2**	**NOTE •** To use 8k2 Dipper 1 and 2 must be OFF. To use NC, Dipper 1 must be ON and Dipper 2 must be OFF.
4 •	**O_SIG**	Optical sensor signal
3 •	**+ OSE**	Optical sensor power supply
2 •	**GND**	Solar panel and optical sensor common
1 •	**+ PV**	Photovoltaic solar panel positive (max. 4V)

i It is possible to invert the polarity of the auto test channel inputs through the MR14 pin headers.

ACCELEROMETER - Inclination Sensor
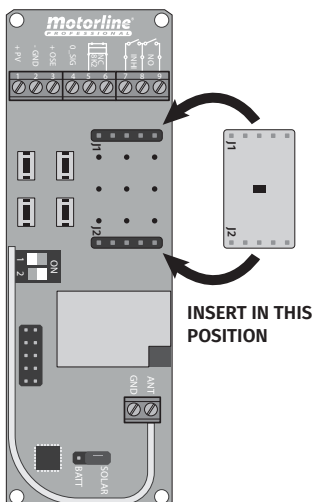
i The accelerometer is not included in the kit.

The accelerometer (tilt sensor) allows you to measure the level of tilt and speed of your vibrations, allowing you to detect obstacles during door or gate maneuvers.

⚠ To use this sensor, you must put Dipper2 to ON.

INSERT IN THIS POSITION

AUTOMATIC SENSOR PROGRAMMING:
1 • Press the PROG button for 5 seconds to enter the programming mode.
2 • Carry out opening and closing maneuvers.
3 • After closing, you can change the FORCE and/or TILT values by pressing the respective button as many times as necessary until reaching the desired value (the level is identified by the number of times the respective LED flashes).
4 • Press the PROG button again to exit the programming mode.

CHANGE THE SENSOR'S FORCE AND TILT VALUES:
1 • Press the PROG button once.
2 • Pressing the FORCE and/or TILT button as many times as necessary until reaching the desired value (the level is identified by the number of times the respective LED flashes)
3 • Press the PROG button again to exit programming mode.

RECHARGEABLE BATTERIES

Rechargeable batteries may be dead if they are not used for some time. In this case, the first time they are used, it is necessary to wait for the solar panel to recharge them.

DIPPER

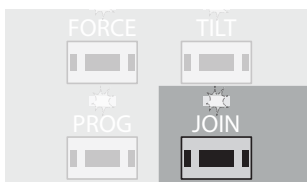|	DIPPER 1	DIPPER 2
• 8K2	OFF	OFF
• NC	ON	OFF
• Accelerometer	OFF	ON
• Optical sensor	ON	ON

The dippers allow you to select the operation of the MX14 with 8K2, NC, NO, OSE sensor or tilt sensor.

NOTE • If you change the dippers with the device already running or powered on, you must briefly shunt the reset pins for the changes to be recognized.

BUTTONS AND LEDS

JOIN → SEND SIGN

• BUTTON
> When pressed, the device emits a programming signal to store in an MR14.
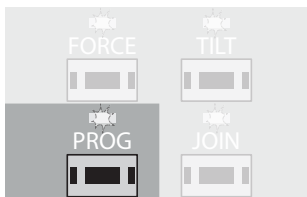> To delete, press the button for 5 seconds.

• LED
> The LED lights up whenever the device sends a programming signal to MR14.
NOTE • Even if it is programmed on an MR14, the LED will remain off to save energy.
> When you start the device, the LED flashes once to indicate that it has power. If it is stored in an MR14, the PROG LED will also flash.

PROG → AUTOMATIC PROGRAMMING OF FORCE AND TILT VALUES FOR ACCELEROMETER

OPERATION: This menu is used to automatically record the maximum values FORCE and TILT during the movement of the gate.

• BUTTON
> Press button for 5 seconds to enter Programming Mode.
> When programming is complete, press once to confirm and exit this mode.
NOTE • If you press and release immediately, you will enter the programming mode to change only the FORCE and TILT values, keeping the programming of the door.
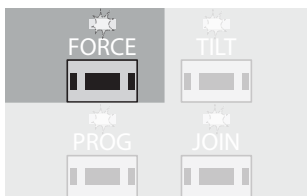
WARNING • You can only enter Programming Mode if Dipper2 is ON (Accelerometer mode)

• LED
ON - Programming mode active
OFF - Inactive programming mode

FORCE → DEFINITION OF FORCE / MAXIMUM SENSOR TILT SPEED (8 LEVELS)

OPERATION: Whenever the force / speed of the incline is greater than the defined level, the device will send a signal to the MR14.

• BUTTON
> Press PROG once
> Press FORCE the necessary times until you reach the desired level
> Press PROG once to exit programming mode
WARNING • You can only enter Programming Mode if Dipper2 is ON (Accelerometer mode)
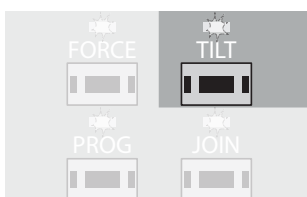
• LED
> Each LED flash represents 1 power level.
Example: FORCE LED flashes 4 times, indicates the force/speed level is 4.

TILT → SENSOR MAXIMUM ANGLE DEFINITION (8 LEVELS)

OPERATION: Whenever the degree of inclination is higher than the defined level, the device will send signal to the MR14.
Each level is approximately one degree (1st) of inclination.

• BUTTON
> Press PROG once
> Press FORCE as often as necessary until you reach the desired level
> Press PROG once to exit programming mode

WARNING • You can only enter Programming Mode if Dipper2 is ON (Accelerometer mode)

• LED
> Each LED flashing represents 1 level of the tilt angle.
Example: TILT LED flashes 4 times, indicating that the tilt level is 4.

DELETE EMITTER:
1 • Press the emitter's JOIN button until the transmitter's JOIN LED flashes once.

NOTE • To delete when there is no communication between devices (MR14):
1 • Press SEL button to select the position you want to delete.
2 • Press the JOIN button to open the selected position (the position LED will flash quickly).
3 • Press the JOIN button again to delete the emitter from that position.
4 • The position LED stops flashing and goes off, signaling the success of the operation.

INSTALLATION MAP
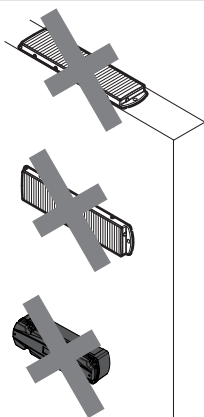
8k2 safety edge

Solar panel

MX14

⚠ The MX14 and the solar panel can only be installed vertically. Failure to comply with this indication can lead to water infiltration, harmful to the components of the devices.


PRODUCT INSTALLATION

1 • Unscrew and remove the cover.
2 • Unscrew and remove the control board.
3 • Drill a hole for the cables to pass, in the places indicated for this purpose.
4 • Advice: Place the glands or rubbers.

⚠ The use of rubbers or glands is optional.
You can use any of the options, depending on the level of waterproofing you want.
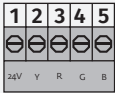
5 • Route the cables and make the connections.
6 • Place the control board in the box and tighten.
7 • Secure in the desired location.
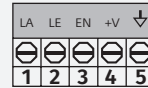**8 •** Put the cap on and tighten.

Or
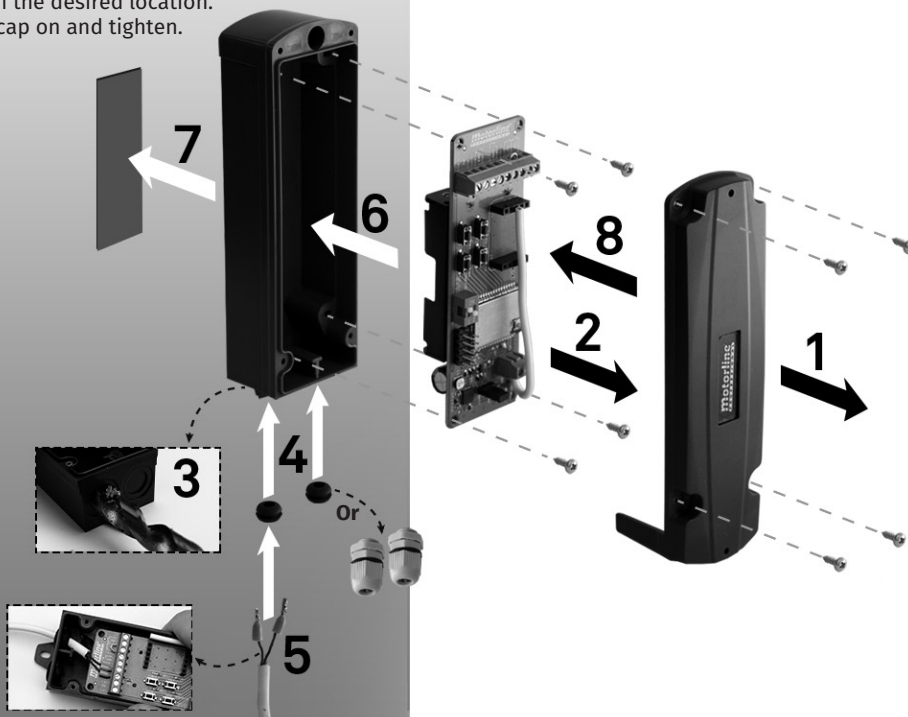
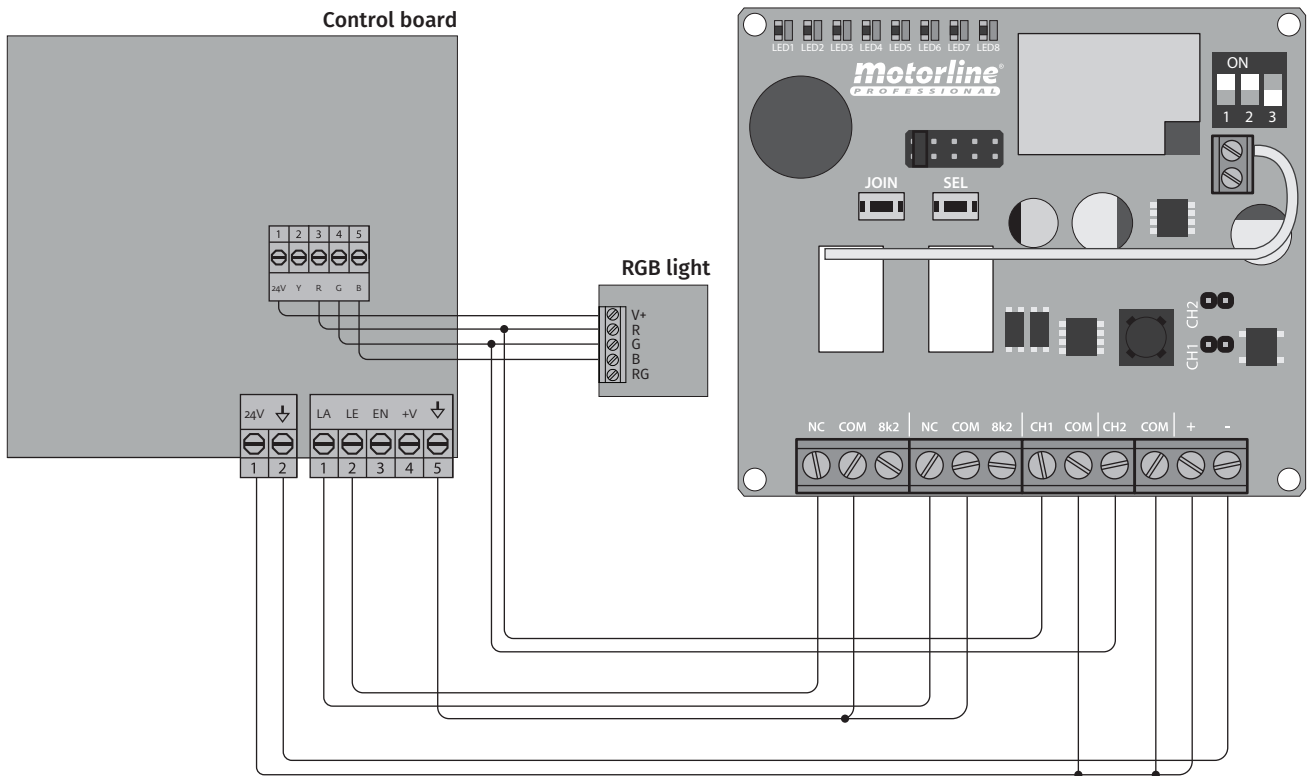⚠ Check the manual for your control board to identify the entries corresponding to the one indicated in the diagram.

1 2 3 4 5
24V Y R G B

1 • 24V → 24V output
2 • (not used)
3 • **R** → 0V output - activated during closing maneuvers
4 • **G** → 0V output - activated during opening maneuvers
5 • **B** → 0V output - activated during pause time

24V ⏚
1 2

1 • 24V output (minimum → 100mA)
2 • COM

LA LE EN +V ⏚
1 2 3 4 5

1 • **LA** → Safety edge input
2 • **LE** → Photocells input
3 • (not used)
4 • (not used)
5 • COM

Control board

1 2 3 4 5
24V Y R G B

RGB light
V+
R
G
B
RG

24V ⏚
1 2

LA LE EN +V ⏚
1 2 3 4 5

LED1 LED2 LED3 LED4 LED5 LED6 LED7 LED8

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ON
1 2 3

JOIN SEL

CH1 CH2

NC COM 8k2 | NC COM 8k2 | CH1 COM CH2 | COM + -

Dry contact safety devices NO

Signal inhibitor
• When closed (NC), the emitter will ignore signals from inputs 8k2 NO/NC and optical sensor.

MX14

9 NO
8
7 INHI

6
5 NC 8k2
4 0_SIG
3 + OSE
2 - GND
1 + PV

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ON
1 2

ANT
GND

SOLAR
BATT

Optical sensor

8k2 or NC resistive safety rubber
• To use, remove the resistance that comes from the factory at inputs 5 and 6.

Solar panel