

Installation Instruction User Guides



F-BOX

Receiver for wireless safety system

I. Description

1.1 Overview

The F-BOX is with a built-in WiFi module to allow the communication with a wireless position sensor for all sectional garage/industrial door control by "F-linX" APP through smart phones.

The F-BOX is able to wired-free to communicate with all safety devices that connecting with a sectional door/tilting door/sliding gate, such as wireless safety edge, wireless wicket door switch, wireless slack rope switch and wireless photo beam.

Linked with F-linX APP and working with Safety Center system to track all information about safety and security of the door and gates.

1.2 Features and Advantages

Built-in WiFi module: F-BOX has a built-in WiFi module, which enables it to easily connect to the Internet and realize remote control and monitoring functions.

Security Center Link: By linking with the "Security Center" in the "F-linX" APP, F-BOX can track all security information related to doors and gates in real time. By the intelligent security management system, prompt detection and protection from potential security risks are provided and guaranteed.

1.3 Use scenarios and functions

With F-BOX, it can enhance the functions of garage door openers, industrial door drives, and sliding gate motors, and realize intelligent upgrades to the IoT and wireless safety edges.

It can also realize the management of wireless photo beam, wireless wicket door, position sensor, wireless safety edge and slack rope switch. Provide the detailed analysis report and Push-Message by Security Center

II. Features and Technical Data

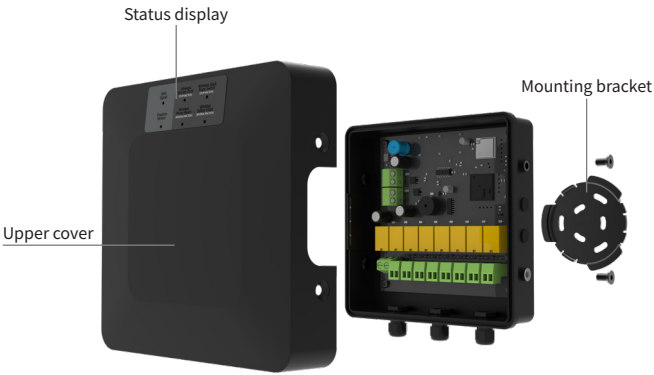
2.1 Features

- 4 relay outlets with selectable operating mode. Can behave like a safety contact for reversal function or stop function
- 3 relay outlets with OP/STP/CL contact
- 1 relay outlet with PB (open-stop-close) contact
- Low voltage port for flash light contact with 12-24V, high voltage port for flash light contact with 120- 230V
- Indicator LED lights for the status of WiFi position sensor and safety sensors
- Built-in trio frequency module for anti-interference
- Fast code buttons for wireless safety sensors and position sensor

2.2 Technical Data

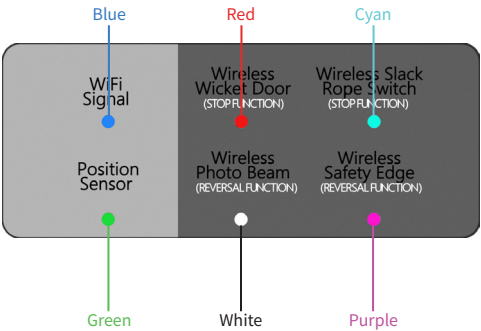
Model	F-BOX
Radio technology	Trio-Frequency technology
Frequency	Multi from 409.025 MHz – 458.4 MHz
Signal modulation	FSK
Signal range	20 meters
Power supply	12-24 V AC/DC
Number of relays	8 relays
Built-in WiFi format	2.4G
F-linX	Available
NC/NO	Adjustable
Operating temperature	-20°C - + 60°C

III. Product Composition Display



3.1 Status display LED description

By figure bellow for example of LED color to show working status wireless safety devices.



Different LED colors correspond to wireless safety device status:

LED Color \ Device Name	Green	Red	Cyan	Purple	White
Wireless Wicket Door	Device is not triggered	Device is triggered	Low battery and not triggered	Low battery and is triggered	Device is unconnected
Wireless Slack Rope Switch	Device is not triggered	Device is triggered	Low battery and not triggered	Low battery and is triggered	Device is unconnected
Position Sensor	Device is connected and working		Low battery		Device is unconnected
Wireless Photo Beam	Device is not triggered	Device is triggered	Low battery and not triggered	Low battery and is triggered	Device is unconnected
Wireless Safety Edge	Device is not triggered	Device is triggered	Low battery and not triggered	Low battery and is triggered	Device is unconnected

WiFi Signal

When powered on but not connected to the network, the WiFi signal LED will light up.

After the network is successfully configured, the WiFi signal LED will remain on.

3.2 Device wiring instruction

Connect the warning light port of the circuit board 120-230V 50-60Hz



Connect the warning light port of the circuit board 12-24V

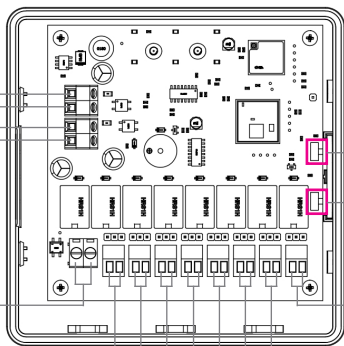


Input Voltage 12-24V

Connecting circuit board OP and GND/COM

Connecting circuit board CL and GND/COM

Connecting circuit board ST and GND/COM



WiFi RESET



Pairing button

Connecting circuit board SF and GND/COM

Connecting circuit board SL and GND/COM

Connecting circuit board PE and GND/COM

Connecting circuit board SD and GND/COM

Connecting circuit board PB and GND/COM

12-24V =>Input voltage 12-24V

OP =>Open the door

CL =>Close the door

ST =>Stop

PB =>Single key cycle--open/close/stop

SD =>Wireless Wicket Door

SENSOR =>Position sensor

PE =>Through-beam photo cell

SL =>Slack rope switch

SF =>Safety edge

NC =>Port normally closed

NO =>Port normally open

FLA/AC220V



=> Connect circuit board warning light AC 220V 50-60Hz

FLA/12-24V



=> Connect circuit board warning light DC12-24V



Note:

For FLA AC220V and FLA12-24V ports, one of the ports must be connected to the warning light port on motor circuit board with corresponding correct voltage, otherwise the wireless photo beam and wireless safety edge will not work properly.

Please ensure that the motor warning light port functions properly and the warning light flashes when the motor is running.

When the 12-24V port is connected, the WiFi Signal LED indicator should flash or stay on. If the LED indicator is not on, please check the 12-24V wiring connection.

IV. Installation and Configuration

4.1 Tools

For fast and safe installation of F-Box, the following tools are recommended:



Pistol drill



Tape measure



Screwdriver



Pencil

4.2 Installation Steps and Operating Instructions

4.2.1 Before installation, first perform a coding test to ensure the product functions and also bring convenience of coding procedure after installation.

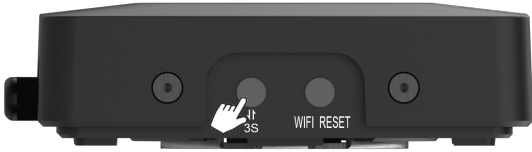
— Step Instructions:




Step A


Open the upper cover, use a screwdriver to open the F-Box shell, connect 12-24V and FLA/12-24V or FLA/AC 220V to the motor port according to the manual 3.2, and observe that the WiFi Signal indicator lights up.

Step B



Find the  button on the device and press it for 3 seconds and then release it. All peripheral lights (except the WiFi light) will light up in white and the buzzer will sound a short beep, indicating that the device has entered the pairing mode.



Press and hold the  button of the wireless security device you are pairing with until all peripheral lights of the F-Box (except the WiFi signal light) flash twice quickly, the buzzer will beep twice quickly, and the corresponding wireless device indicator lights up according to the status.

Support pairable devices:

- Position Sensor
- Wireless Wicket Door
- Wireless Slack Rope
- Wireless Safety Edge
- Wireless Photo Beam

(For detailed device pairing information, scan the QR code on the last page of this manual)

Step C

Try to trigger the wireless security device paired with, check the color of the wireless device indicator light (see 3.1 for the indicator light color), and hear the sound of the relay closing, which means the pairing is successful and device is working correctly.

Step D

Complete pairing all wireless safety devices.

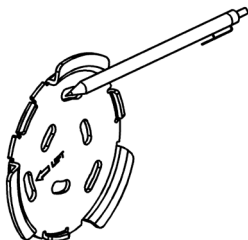
Step E

When the door/gate motor is running, F-Box will wake up all the safety devices and test whether the wireless safety devices can work properly or not.

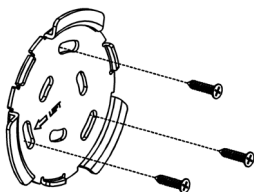
Step F

When the door/gate motor stops, the F-Box will put all safety devices into sleep mode. At this time, no safety devices will respond if triggered (except for wicket door and slack rope switch).

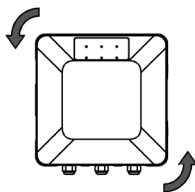
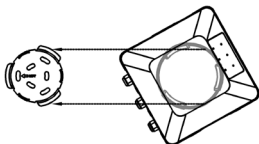
4.2.2 F-Box installation



1. Make the arrow pointing direction to left, use the mounting bracket to mark right position for drilling holes.



2. Put expansion screws into holes, install the metal bracket and secure it with screws.



3. Place the F-Box into the mounting bracket at a right angle and rotate it until it is securely fixed.

4.3 Test with door operation

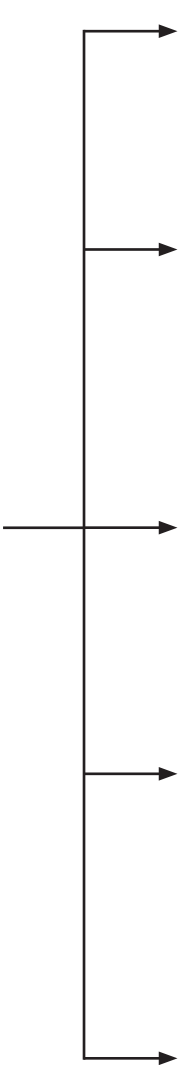
Complete the wiring connection between the F-Box and the door/gate motor port according to 3.2 of the manual

During the door closing process, trigger the safety device to check whether the door/gate motor reverses or stops, and whether the F-Box light indicates or not.

V. Service Devices



F-box



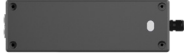
Position Sensor



Wireless Wicket Door



Wireless Photo Beam



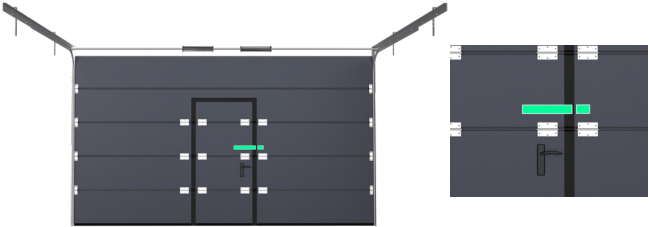
Wireless safety edge transmitter junction box (for residential)



Wireless safety edge transmitter junction box (for industrial)

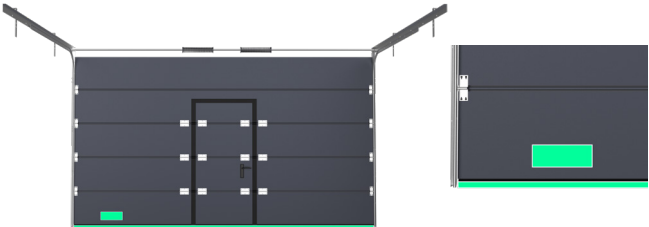
VI. Benefits from wireless safety accessories

Wireless Wicket Door



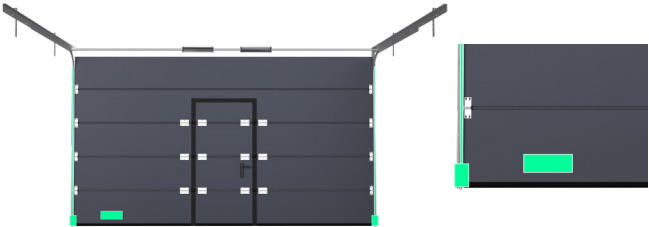
In order to ensure that the door will not be damaged when the door/gate is running, it is necessary to detect the status of the door (open or closed):
When the wicket door is closed, the wireless wicket door device is not triggered and the full door can operate.
When the wicket door is opened, the wireless wicket door device is triggered and the full door can not be operated to avoid any damage to the full door.

Wireless Safety Edge



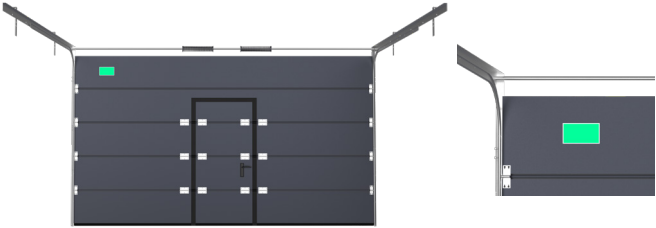
The device can detect in real time whether the door is pressed against an object to ensure safety during door operation.
If it detects that the gate is pressing against an object, the safety system will immediately stop or reverse to avoid injury or damage.

Wireless Slack Rope Switch



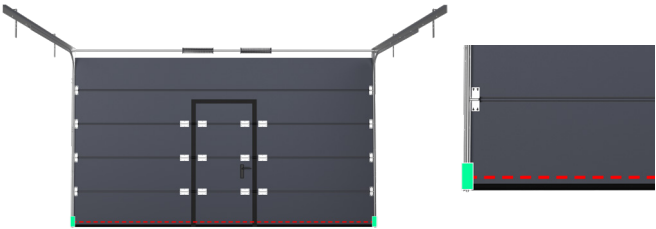
In order to ensure the safe operation of the door, it is necessary to detect whether the rope/cable of the door is loose:
If the wire rope/cable becomes loose, the safety system will give an alarm to take corresponding measures for safety.

Position Sensor



Installed on the door, it can monitor the movement and position of the door in real time.

Wireless Photo Beam

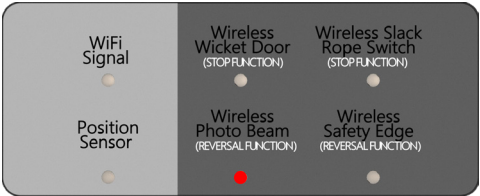


During the door closing process, the device can monitor in real time whether someone passes through the door to ensure safety during door operation. When it detect the obstacle pass through, the door will automatically stop and reverse to the open limit position.

Notes:

During the operation, if the buzzer beeps once per second and lasts for 1 minute, it means that the wireless photo beam has been triggered for too longtime.

Please check the wireless photo beam indicator status on F-BOX and check whether there is any abnormality in the wireless photo beam.



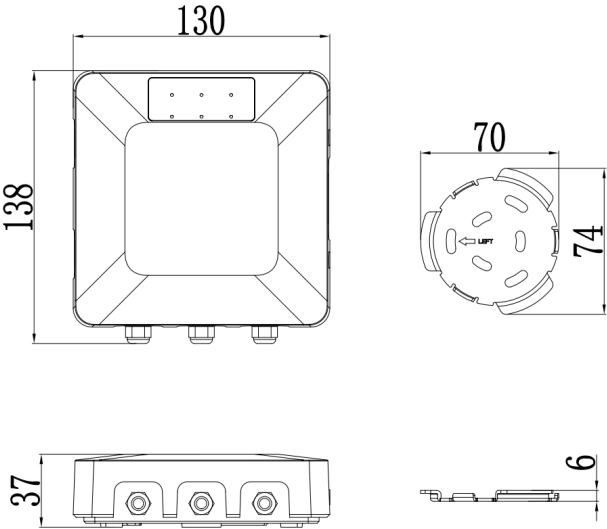
VII . Appendix

7.1 Packing List

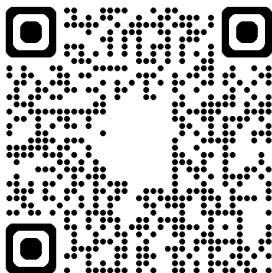
Description	Qty
F-BOX	1
Mounting bracket	1
M4*20mm screw	5

7.2 Actual Product Dimensions

Unit of Length: mm



Instruction of coding with safety devices



Instruction of WiFi network connection

