Installation Instruction
User Guides

F-PE-WD-B-W / F-PE-WD

Wired TX and RX Infrared Beam

Version 1.0

I. Description

1.1 Overview

Our wired infrared beam safeguards electric door systems with intelligent real-time monitoring.

1.2 Features and Advantages

Real-Time Detection: High-accuracy infrared technology continuously checks for obstructions during door closure.

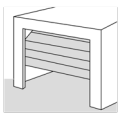
Enhanced Safety: Prevents accidents by detecting and reversing the door upon obstacle detection, ideal for homes & public areas.

Longevity: Robust design minimizes maintenance and replacement costs, ensuring extended product life.

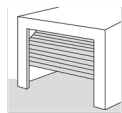
User-Friendly: Simple installation and maintenance, requiring no special skills.

Port Flexibility: Effortlessly switch between NO & NC ports to adapt to various security configurations.

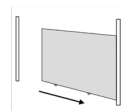
1.3 Scenarios of Use



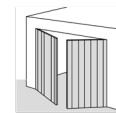
Sectional doors



Roller doors



Sliding gates



Swing gates

II. Technical Data

Model	F-PE-WD-B-W / F-PE-WD
PE input voltage	12-24V
Adjustable Angle for Tx and Rx	Horizontally (-90° ~ +90°)
Receiving range	Max 13m
Operating consumption	0.5W
NC/NO	Adjustable
IP grade	IP54
Operating temperature	-20°C ~ + 70°C

III. Product Composition Display

Photo Beam TX

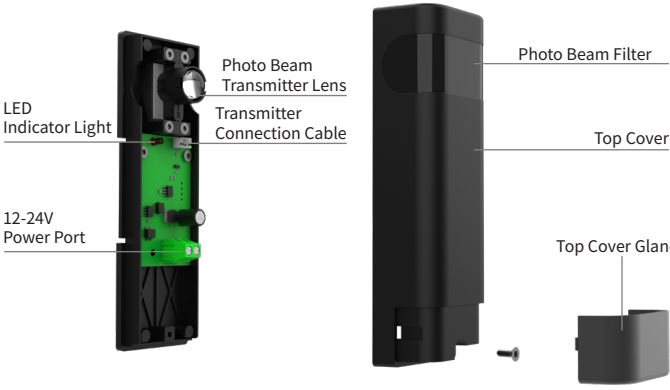
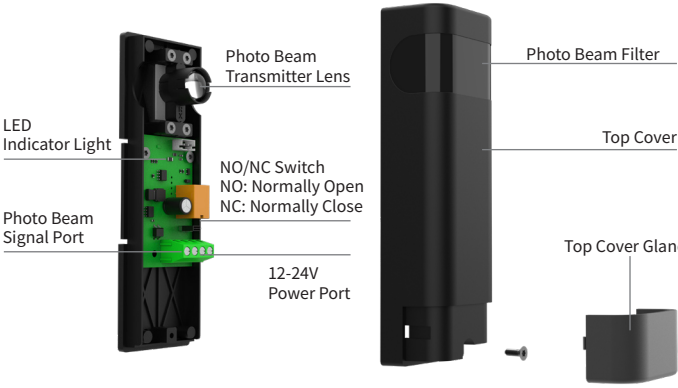


Photo Beam RX



IV. Installation and Configuration

4.1 Tools

For fast and safe installation of photo beam sensors, the following tools are recommended：

Pistol drill

Tape measure

Screwdriver

Pencil

4.2 Installation Steps and Operating Instructions

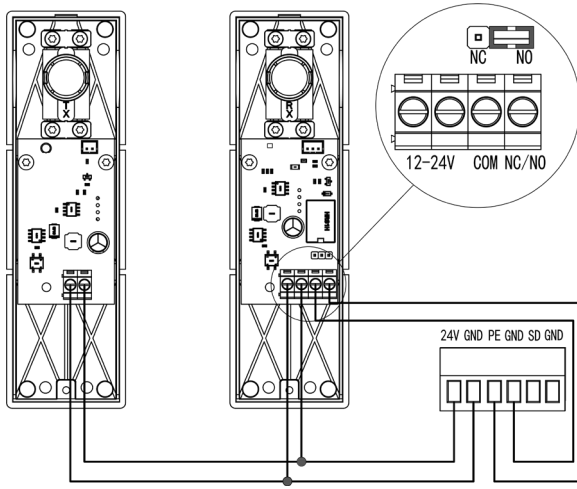
4.2.1 Prior to installation, first perform a coding test to ensure that the product functions properly and to avoid the inconvenience of coding after installation.

–– Step Instructions:

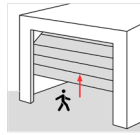
A. Use a screwdriver to open the wired photo beam cover and plug the power cable into the port to secure it.

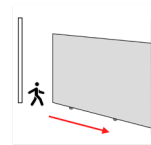
B. Connect the transmitting and receiving 12-24V power port to the 24V-GND port of the motor; connect the NO/NC - COM port to the PE - GND port of the motor.

C. Based on the motor used, select the appropriate NO (Normally Open) or NC (Normally Close) mode through jumper switch.



D. Test before installation. Keep the photo beam transmitter and receiver in a straight line. Block the infrared signal when the door is closing. If the door reverse that means the test and wired PE is working fine.





4.2.2 Wired Photo Beam Installation

–– Step Instructions:

A. Install the mounting bracket according to the position of the door, it is recommended that the bracket is 15-25cm from the ground and 10-15cm from the track.

Remark: The mounting bracket is only included in the kit of “F-PE-WD-B-W”

Photo beam installation drawing for garage door opener

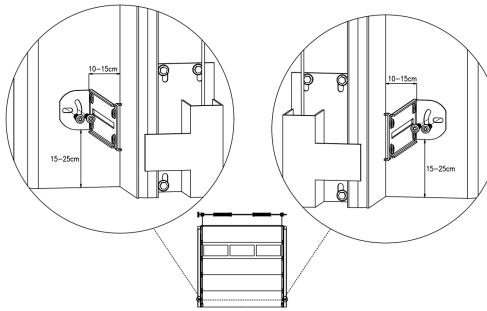
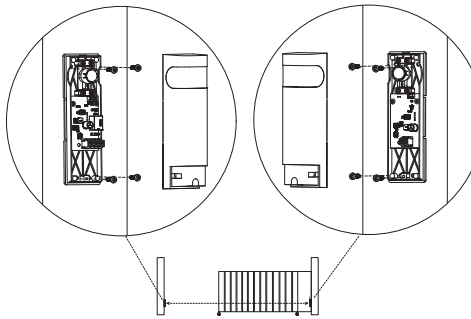


Photo beam installation drawing for sliding gate opener



B. Install the adjustment bracket
Step 1: Place two carriage screws into the adjustment bracket.(Fig.A)
Step 2: Secure the wireless photo beam to the adjustment mounting bracket. (Fig.B)
Step 3: Combine the two brackets to be mounted and secured with nuts.(Fig.C)

Remark: The mounting bracket is only included in the kit of “F-PE-WD-B-W”

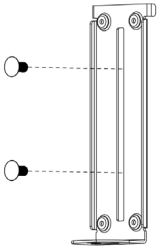


Fig. A

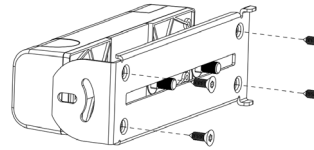


Fig. B

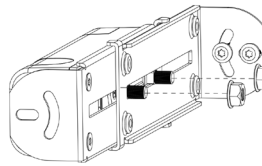


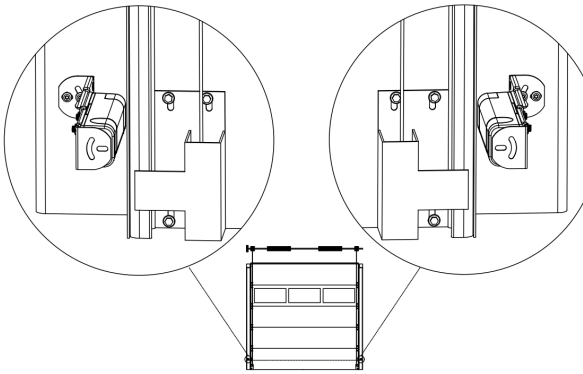
Fig. C

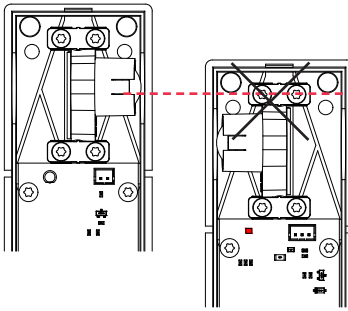
Available for single bracket mounting, or non bracket mounting!

4.3 Parameter Selection and Commissioning

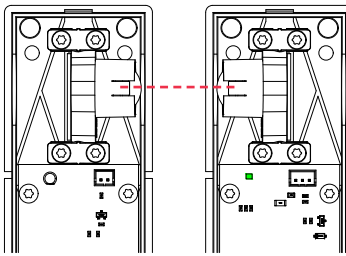
4.3.1 Installation and Tests:

Note: The height of the wired photo beam mounting bracket from the ground and the extension length of the bracket should be the same!

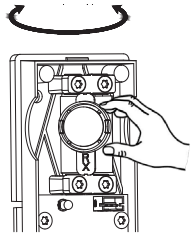




Wired photo beam transmitter and receiver are not working properly, wired photo beam receiver LED red light is on. (Need to adjust the receiver/transmitter until the butt light is off)



Wired photo beam transmitter and receiver are working properly, wired photo beam receiver LED green light on and off. (Test ok)



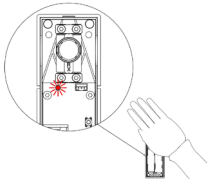
Wired photo beam transmitter and receiver, can rotate from -90° ~ +90° adjustment.

4.3.2 Actual closing test on the doors / gates

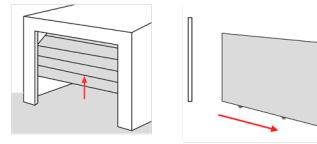
During normal door closing, the wired photo beam receiver's green LED lights up. Blocking the beam turns on the red LED, causing the door to reverse and open. This indicates a successful installation.

If the door fails to reverse, refer to steps 4.3.2 and 4.2.1B for troubleshooting until the issue is resolved.

Removing hand causes the red LED on the receiver to turn off, and the door closes as usual, confirming a successful installation.

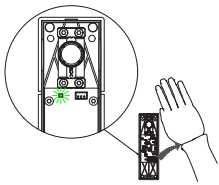


LED lights on



Door /Gate reversed

Take the hand away, the wired photo beam receiver LED red light off, and the door close normally, that means the installation is successful.

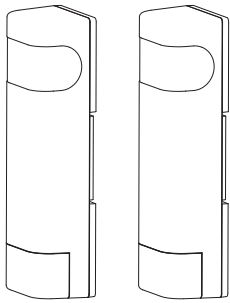


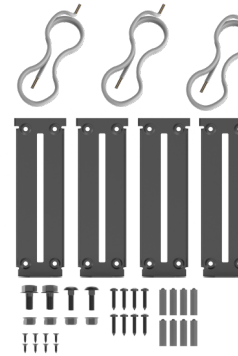
4.3.3 Installation and testing has been completed, install the top cover according to step 4.2.1A

V. Appendix

5.1 Packing List

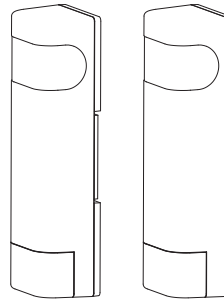
F-PE-WD-B-W





Description	Qty
Wired photo beam(TX & RX)	1
Mounting brackets	1
Screw pack	1
Manual	1
Cable	10m*3

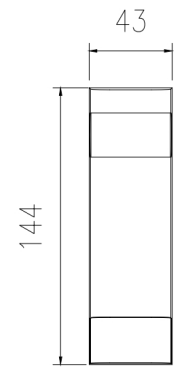
F-PE-WD



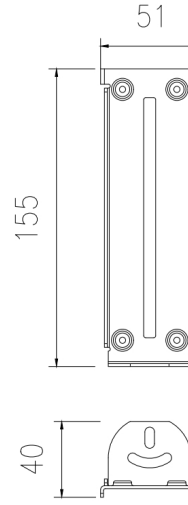
Description	Qty
Wired photo beam(TX & RX)	1
Screw pack	1
Manual	1

6.2 Actual Product Dimensions

Unit of Length: mm



Wired Photo Beam



Mounting Bracket