

Installation Guide of FT-89R

PIR & MW Intelligent Detector

1. Introduction

FT-89R is the best indoor/outdoor motion detector with passive infrared and microwave. It's water proof and all weather resistant with two layer stable housings. FT-89R combines a variety of detection techniques which enable it to work in the most difficult environment where needs high security while maintaining immunity to false alarm. The infrared sensor adopts nice lens produce three-dimensional thermal imaging of the protected area. Combining the four-element microwave scanning contributes to an amazing detection capacity. Using this technique allows high sensitivity but lowest false alarm. FT-89R is equipped with unique protection mechanisms against any attempt to damage or to disable its operation.

From the detect distance 4m to 12m the detector with high sensitivity.

2. Specification

When power from external DC12V:

Standby current: $\leq 18\text{mA}$

Alarm current: $\leq 30\text{mA}$

The green LED light on for 3s after power on,

then flash for 2s and light off. Then red

LED flash for 15s. 3 minutes after power on,

detector enter stable work status.

Alarm mode: Red LED light on for 3s.

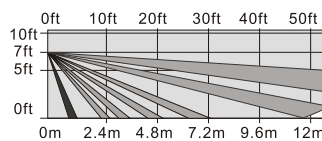
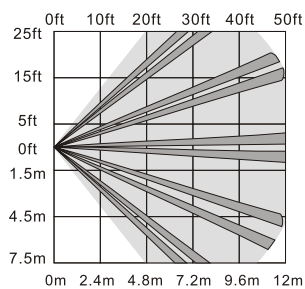
Relay output: N.C

Wireless distance: 150m (open air)

Wireless frequency: 433MHZ

Max current when recharge battery: $\leq 120\text{mA}$

Detect distance: 12m (25°C)



Power from built-in battery:

Alarm current: $\leq 18\text{mA}$

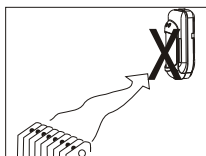
Standby current: $\leq 80\mu\text{A}$

Low battery alarm: when battery low voltage it will report low voltage. And when battery voltage recover, it will report battery recover again

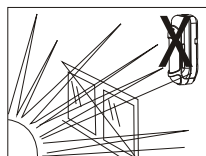
Relay output: N.O (If external power cut off the backup battery will change the relay output to N.O mode automatically 2 minutes after, Viceversa when change from backup battery to external power)

3. Installation

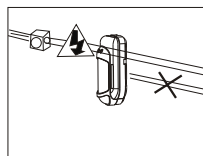
3.1 Guide



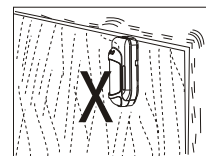
Do not face to cold or heat source



Do not face to sun light



Keep away from high-voltage wire



Installation base should be stable

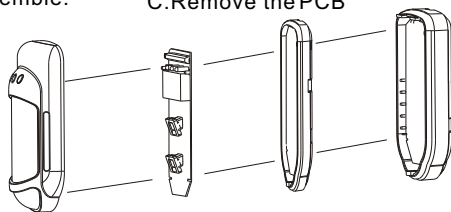


Do not face to metal wall

3.2 Installation steps

1. Disassemble:

C. Remove the PCB

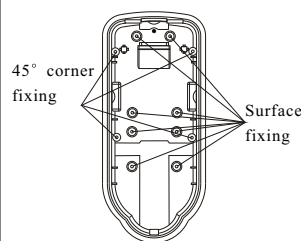


B. Pull out the bottom of the cover

D. Remove the middle-case

A. Loose screw

2. Installation base



Suggest corner mount

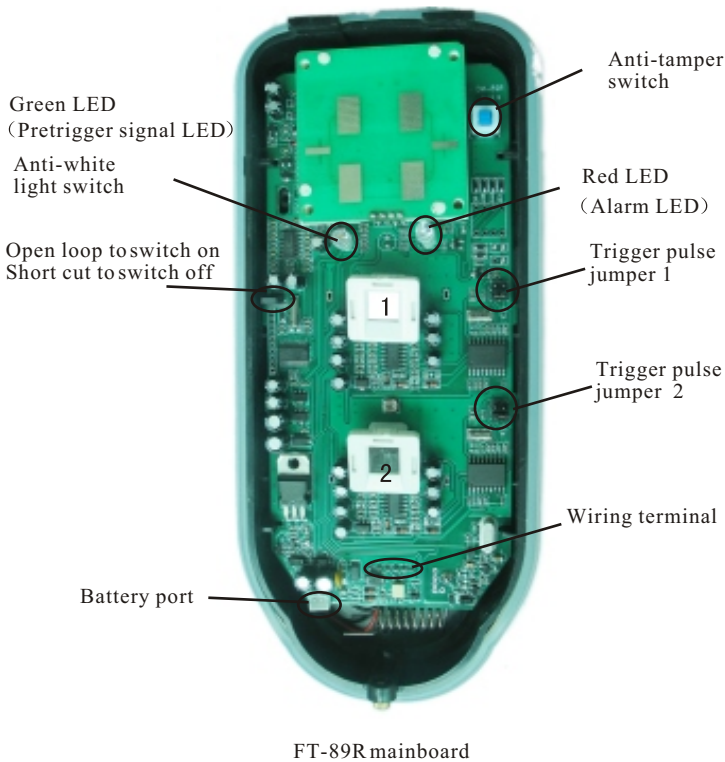
A. Mark the drilling points and make holes.

B. Draw the cable from back channel

C. Fix the base cover on the wall with two screws.

D. Put the PCB back on the cover with clips and fasten screws.

3.3 About mainboard:



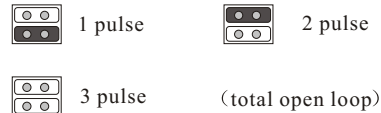
FT-89R mainboard

3.6 Wireless coding

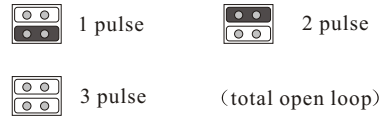
Set the alarm control panel at coding mode, then press the anti-tamper switch of FT-89R for 3s then release. You will hear the alarm panel sound code successfully.

3.4 About pulse jumper:

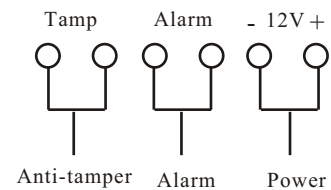
Trigger pulse jumper 1 set the #1 IR sensor



Trigger pulse jumper 1 set the #1 IR sensor



3.5 Wiring terminal

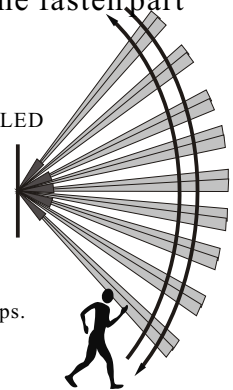


Alarm: After external power keep for 2-10 minutes, alarm output will be N.C mode.

Alarm: After external power cut off for 2-10 minutes, alarm output will change to N.O. and keep working under low consumption wireless mode.

3.7 Perform motion test to the detection area: install the cover and close the fasten part (refer to the right diagram)

1. Start the test at least 2 minutes after power supply
2. Crossing to any direction of the detection area, your walking with 0.75m/s between 3m distance will cause the LED indicator to light for 2-3 seconds (refer to the right diagram)
3. Perform motion test from contrary directions in order to confirm the boundary of two sides. Make confirmed that detection center pointing to the center of protected area. lower limit of PIR detection. Do the same step to confirm the upper limit.
4. the center of detection zone should not uphill incline. To obtain a good detection range, please adjust the vertical detection range, ensure the detector is in a correct position.
5. After MW sensitivity or detection angle are adjusted, walking test must be performed according to the above steps.



3.8. Stand-by battery replacing and using

When battery is lower power, it will send related signal to control panel, so user should replace battery with same spec. (as right fig.)
On BUS working mode, if this model of detector more than 4pcs in the system, you need put battery inside to assure the system will not overload.

