ZiFiSense

ZETA®Low-Power Wide Area Networks

ZETA Motion Sensor

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1. Product Description

ZETA Motion Sensor is a low power infrared sensor which can sense human movements with its high-sensitivity amplifiers, anti-jamming devices, and differential inputs, so that the false detection is avoided.

2. Applications

Rooftops, computer rooms, important equipment rooms, illegal entry detection, operating position detection.

3. Features

- ✓ Wireless transmission
- ✓ Battery-powered, low power consumption
- ✓ Easy to install, high sensitivity
- ✓ Reliable detection
- ✓ Real-time transmission

4. Product parameters

Product No.	IRZ1ZT92	
Wireless Features	Transmission protocol	ZETA
	Frequency band	Sub-GHz, adjustable according to local regulations
	Output power	20dBm max, adjustable according to local regulations
Electrical Features	Power supply	Battery, 2*ER14505
	Battery capacity	2*2700 mAh
	Stand-by current	≤ 10 μA
	Working current	≤ 70 mA
Physical Features	Size	66*55*36 mm
	Enclosure material	ABS
	Waterproof level	IP30
	Antenna	External glue stick antenna
Sensor Characteristics	Sensing distance	3~5m
	Sensing angle	120°
Working Environment	Operating temperature	-20℃~+75℃
	Storage temperature	-30℃~+85℃

5. Packing List

Motion Sensor	1
Battery	2

6. Installation

There are three installation methods: Screw, 3M Adhesive and cable ties.

6.1. Screw

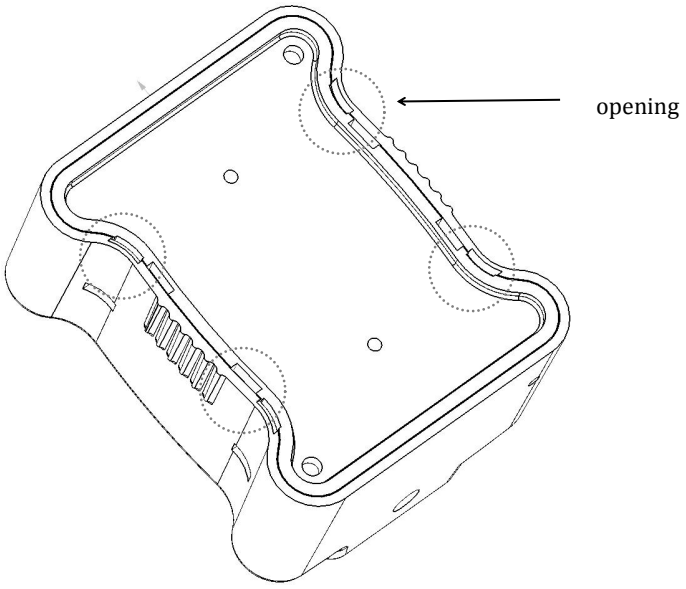
6.1.1.Auxiliary material

No.	Materials	Quantity
1	self tapping screw (M3*20)	2/device
2	#4 expanded plastic pipe	2
3	Percussion drill，#4 drill bit，hammer	1
4	slotted screwdriver, cross screwdriver	1

6.1.2.Installation instructions

- Open the device case

Use a slotted screwdriver to open the top cover from the bottom edge.

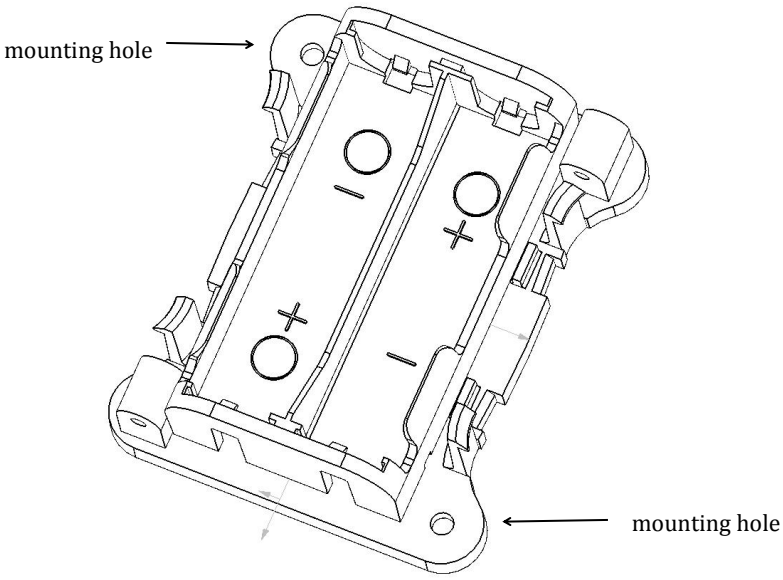


- Punching

Place the device in the mounting position, punch and insert the expanded plastic pipe.

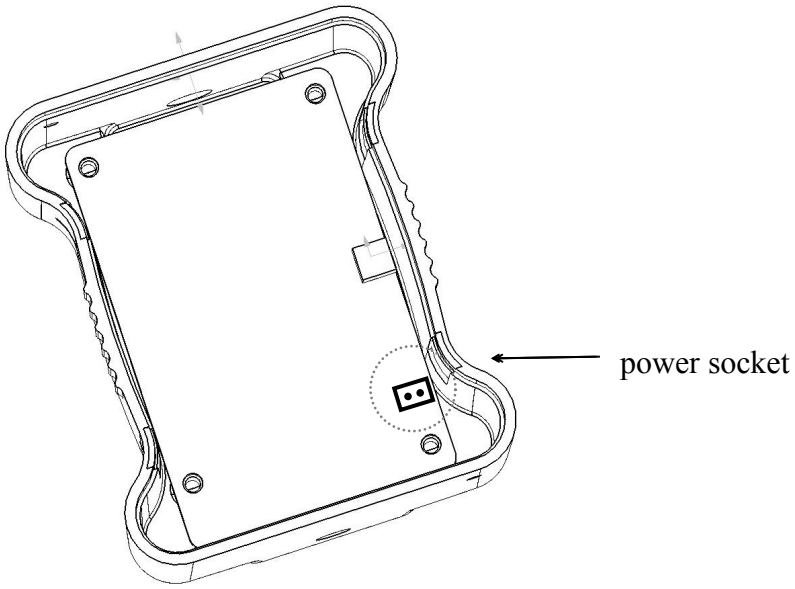
- Fixation

Use the self-tapping screws to secure the device in the mounting position.



- Power on

Insert the power plug into the upper power socket, install two 14505 batteries (remove the insulation sheet for the existing battery), and close the upper cover.



6.2. Adhesive 3M

6.2.1.Auxiliary material

No.	Materials	Quantity
1	3M seamless thickened double-sided adhesive	5CM
2	Slotted screwdriver, utility knife	2

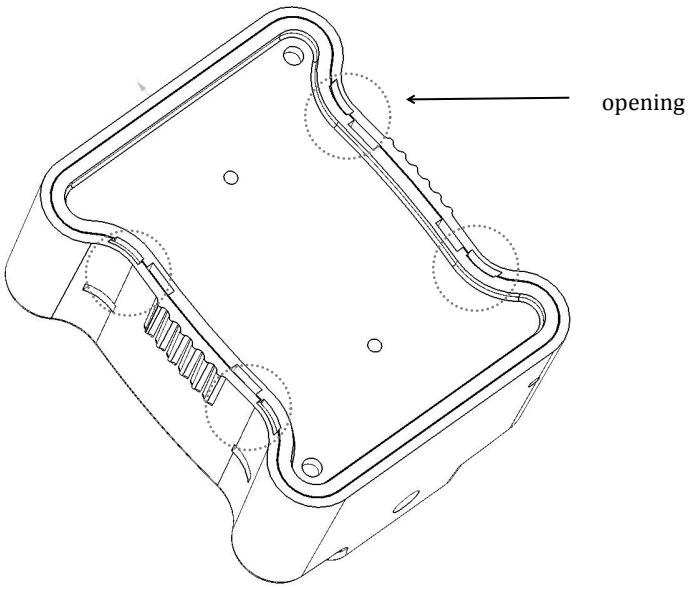
6.2.2.Installation instructions

- Installation position

Select a flat mounting position, and clean it up.

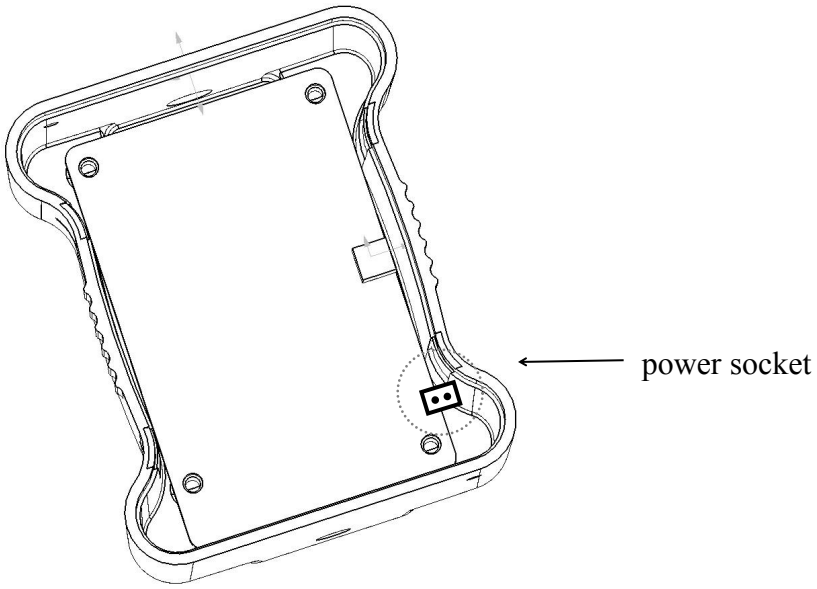
- Open the device case

Use a slotted screwdriver to open the top cover from the bottom edge.



- Power on

Insert the power plug into the upper power socket, install two 14505 batteries (remove the insulation sheet for the existing battery), and close the upper cover.



➢ Adhesive device

Take the appropriate amount of 3M adhesive, attach it to the back of the sensor, remove the protective film of the 3M adhesive, and install the device to the specified position.

6.3. Cable Ties

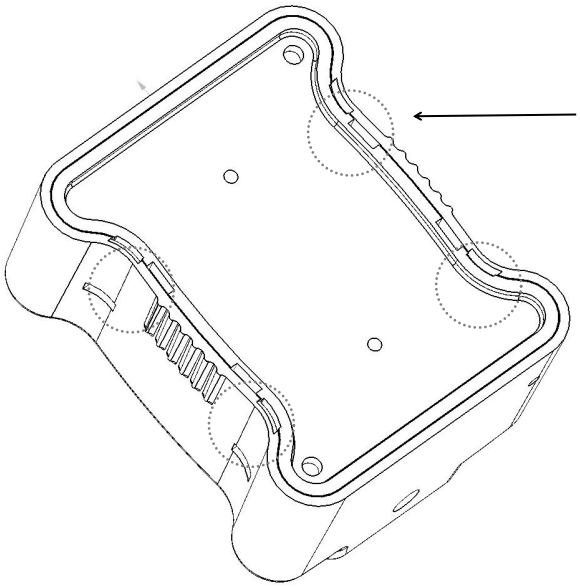
6.3.1.Auxiliary material

No.	Materials	Quantity
1	Metal cable ties（5*300mm)	2
2	Slotted screwdriver, utility knife	

6.3.2.Installation instructions

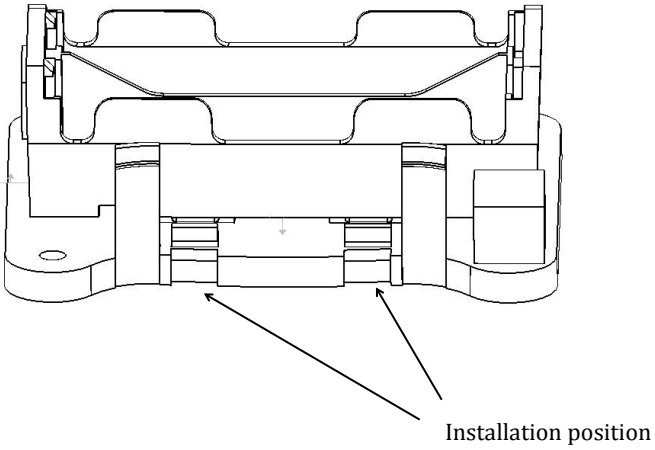
➢ Open the device case

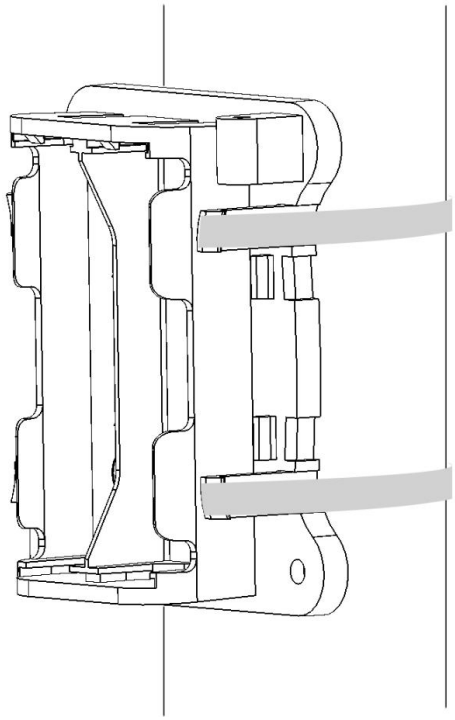
Use a slotted screwdriver to open the top cover from the bottom edge.



- Fixation

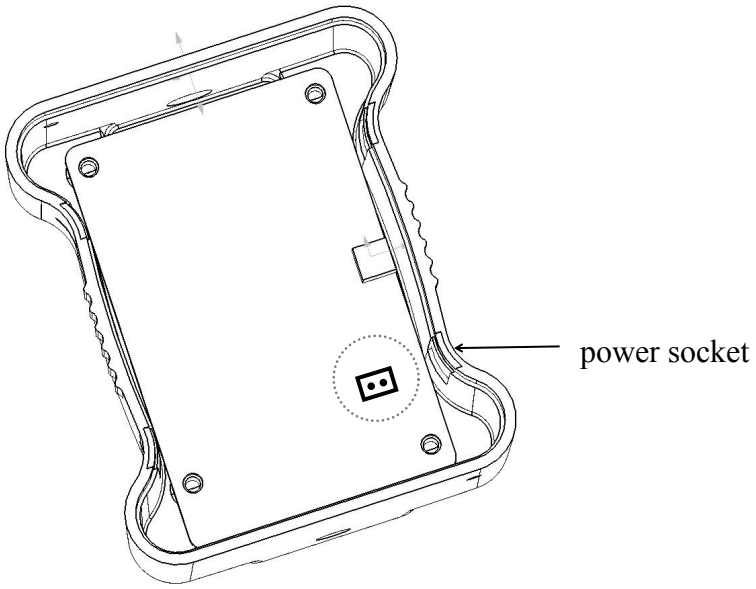
Pass the 2 cable ties through the device and secure to the installation rod





- Power on

Insert the power plug into the upper power socket, install two 14505 batteries (remove the insulation sheet for the existing battery), and close the upper cover.



7. Use of Device

The sensor detection distance is about about 3 meters without occlusion. The detection is based on the amount of change in infrared detection to determine whether there is the motion, so it is unable to detect a stationary person.

7.1. Power on

Place the device within the coverage of the ZETA network, install the battery, and wait for the device to go online. After the device is online, the current device status is reported. You can set the threshold for motion detected and the threshold for no motion detected according to the usage scenario.

7.2. Support function

- Status report: Reports motion/no motion detected status.
- Set threshold for motion detected: within the detection time range, the sensor reaches the required number of triggers is determined as motion detected. (Default setting for motion detected is: triggered 2 times in 5 seconds.)
- Set threshold for no motion detected: When the current status is Motion Detected, and if the number of triggers is 0 within the detection time range, it will be determined as No Motion. (Default setting for no motion detected is, triggered 0 times in 20 seconds.)
- Query device status:Query the current threshold status for motion detected/no motion set by the device.

8. Common faults and handling

- Ensure ZETA signal coverage
- Ensure that the device is powered on, and the ZETA network device management platform can observe that the ZETA module is on line
- Check the battery usage of the device. When the battery is low, replace the battery in time.

FCC WARNING

Any Changes expressly or modifications not approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference,

and (2) this device must accept any interference received, including interference that may cause undesired operation.

Shanghai, China

Room B, 20th Floor, No. 1098
Dongdaming Road (Pujiang
International Financial Plaza),
Hongkou District, Shanghai
+86 (0) 21-61320820

Xiamen, China

Room 803, Building A-05,
Software Park Phase III, Jimei
Distric, Xiamen, P.R. China

+86 (0) 592 6070310

Cambridge, UK

3 Charles Babbage Road,
Cambridge, CB3 0GT
United Kingdom

+44(0) 1223 491 099