Chuango PIR-926

Chuango PIR-926 Passive Outdoor Solar Infrared Motion Sensor User Manual

Model: PIR-926

1. Introduction

The Chuango PIR-926 is an advanced passive infrared (PIR) motion sensor designed for outdoor security applications. It features patented infrared technology, fuzzy logic, and a sophisticated algorithm to accurately detect human body movements while effectively reducing interference and false alarms. Its dual detection capability, combining infrared and microwave sensing, enhances reliability. Equipped with a solar panel and a waterproof housing, this sensor is ideal for various outdoor environments.

Figure 1: Chuango PIR-926 Motion Sensor Overview

2. Product Features

- Improved detection algorithm, preventing false alarms through integrated infrared and microwave sensors.
- Built-in solar charger and waterproof housing, making it suitable for outdoor installation.
- Wide detection range: 8 meters with a 110-degree angle.
- Powered by a rechargeable lithium battery: 3.7 V, 1800 mAh.
- Extended standby time of up to 150 days.
- Compact detector dimensions: 186 x 200 x 125 mm (L x W x H).
- Effective frequency range: up to 80 meters in open areas.

3. Components Overview

Familiarize yourself with the main components of the PIR-926 motion sensor before installation.

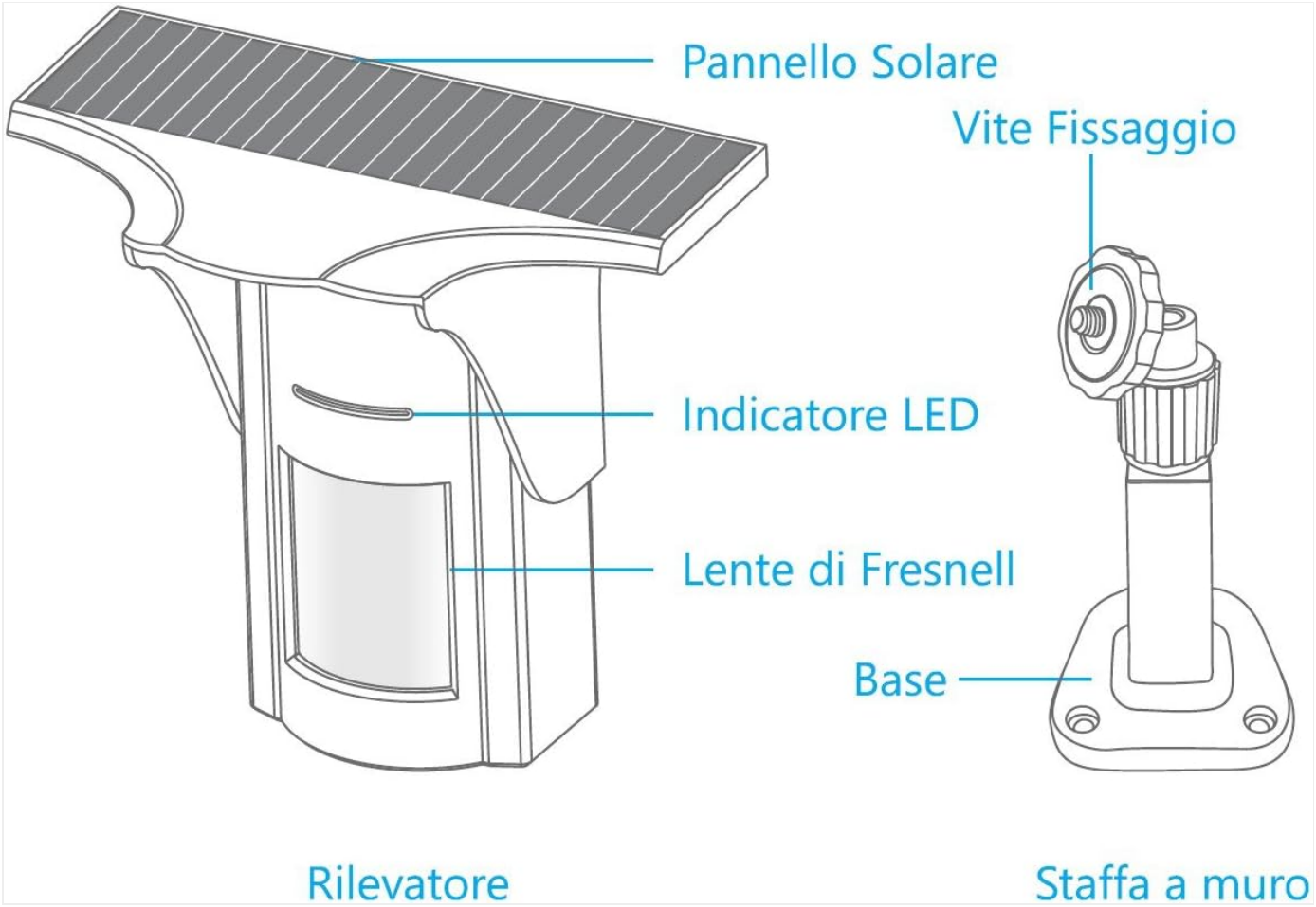


Figure 2: Sensor Components. Includes Solar Panel, Fixing Screw, LED Indicator, Fresnel Lens, Detector, Base, and Wall Bracket.

Solar Panel: Charges the internal battery.

LED Indicator: Provides status feedback.

Fresnel Lens: Focuses infrared radiation for detection.

Detector: Main sensing unit.

Base: Connects the detector to the mounting bracket.

Fixing Screw: Secures the sensor to the bracket.

Wall Bracket: Used for mounting the sensor to a wall or surface.

4. Setup and Installation

Proper installation is crucial for optimal performance and to minimize false alarms. Follow these steps carefully:

4.1 Wall Mounting

1. Select a suitable location on a wall, ensuring it is within the desired detection area and receives adequate sunlight for the solar panel.
2. Secure the wall bracket to the chosen surface using appropriate screws and anchors.
3. Attach the sensor unit to the wall bracket, ensuring it is firmly connected and can be adjusted for optimal angle.

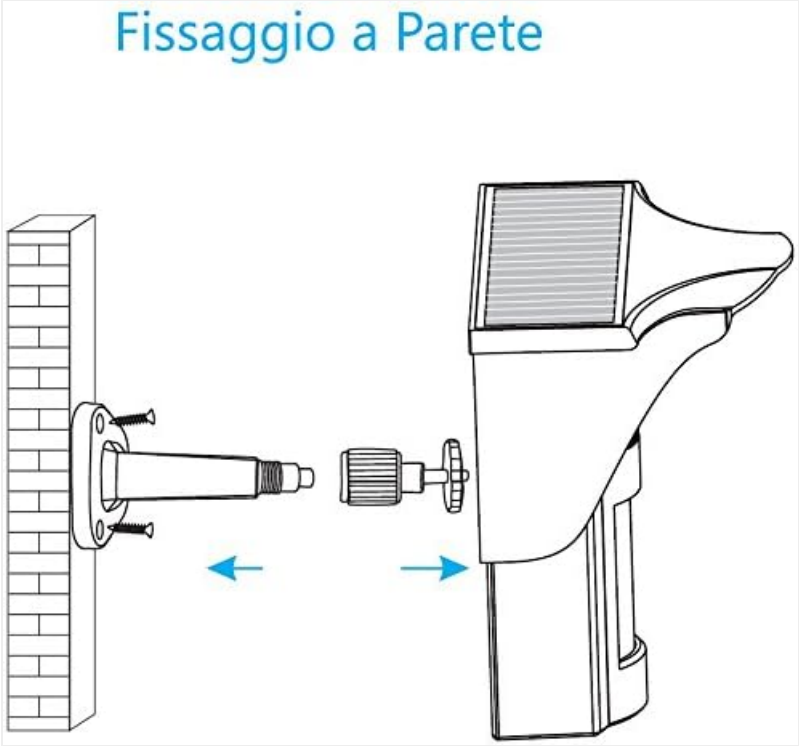


Figure 3: Wall Mounting Procedure. The sensor attaches to a bracket secured to the wall.

4.2 Optimal Placement Guidelines

To ensure accurate detection and prevent false alarms, adhere to the following placement recommendations:

- **Mounting Height:** Install the sensor at approximately 2 meters (6.5 feet) from the ground for optimal detection coverage.
- **Detection Area:** Position the sensor to cover the desired area, typically up to 8 meters with a 110-degree angle. Ensure the detection path is clear of obstructions.
- **Sunlight Exposure:** Mount the sensor in a location that receives direct sunlight for several hours a day to ensure the solar panel can effectively charge the internal battery.
- **Avoid Obstructions:** Do not install the sensor where large objects like trees, bushes, or structures might block its field of view or cause false triggers due to movement.
- **Pet Immunity:** While the sensor has advanced algorithms, avoid placing it at heights or angles where pets might frequently trigger it, especially if they are large.
- **No Direct Heat Sources:** Avoid pointing the sensor directly at heat sources, reflective surfaces, or areas with rapid temperature changes, as this can lead to false alarms.

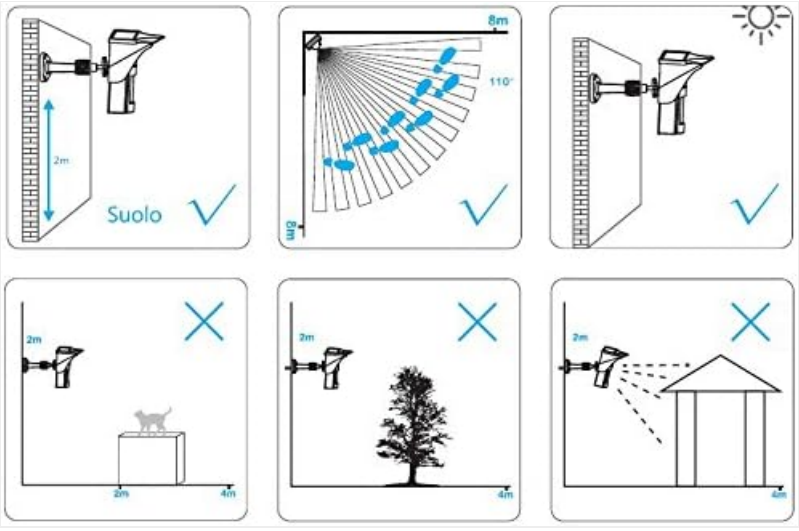


Figure 4: Installation Best Practices. Shows correct mounting height (2m), detection pattern (8m, 110°), sunlight exposure, and incorrect placements (pets, trees, direct light/heat sources).

5. Operating Instructions

Once installed, the PIR-926 operates automatically. The solar panel continuously charges the internal battery, ensuring continuous operation.

- **Activation:** The sensor is designed to be always active, detecting motion within its specified range.
- **Detection:** When motion is detected, the sensor will trigger an alarm signal to a compatible security system. The LED indicator may flash briefly upon detection.
- **Power Management:** The integrated solar panel charges the 3.7V 1800mAh lithium battery during daylight hours. The sensor can operate for up to 150 days on standby without direct sunlight once fully charged.

6. Maintenance

Regular maintenance ensures the longevity and reliable operation of your PIR-926 sensor.

- **Clean Solar Panel:** Periodically wipe the solar panel with a soft, damp cloth to remove dust, dirt, or debris that may hinder charging efficiency.
- **Clean Fresnel Lens:** Gently clean the Fresnel lens with a soft, dry cloth to ensure clear detection. Avoid abrasive cleaners.
- **Check Mounting:** Ensure the sensor remains securely mounted and its angle has not shifted due to weather or external factors.
- **Battery Life:** The internal lithium battery is designed for long life. If the sensor's performance degrades significantly despite adequate sunlight, the battery may need replacement by a qualified technician.

7. Troubleshooting

Problem	Possible Cause	Solution
Frequent False Alarms	◦ Sensor pointed at moving objects (trees, bushes). ◦ Direct sunlight or heat sources (vents, reflective surfaces). ◦ Large pets frequently entering detection zone. ◦ Loose mounting.	◦ Adjust sensor angle to avoid obstructions. ◦ Relocate sensor away from heat sources or reflective surfaces. ◦ Adjust mounting height or angle to minimize pet detection. ◦ Re-secure the sensor mounting.
No Detection / Poor Detection	◦ Sensor lens is dirty. ◦ Battery low or not charging. ◦ Obstruction in detection path. ◦ Incorrect mounting height or angle.	◦ Clean the Fresnel lens. ◦ Ensure solar panel receives adequate sunlight. ◦ Clear any obstructions from the detection area. ◦ Verify mounting height is approx. 2m and angle covers desired area.
Battery Not Holding Charge	◦ Insufficient sunlight exposure. ◦ Dirty solar panel. ◦ Battery has reached end of life.	◦ Relocate sensor to a sunnier spot. ◦ Clean the solar panel. ◦ Contact support for battery replacement options.

8. Specifications

Attribute	Value

Attribute	Value
Model Number	PIR-926
Detection Technology	Passive Infrared (PIR) and Microwave
Detection Range	8 meters (approx. 26 feet)
Detection Angle	110 degrees
Power Source	Solar Powered / Battery Powered
Battery Type	Rechargeable Lithium Battery
Battery Capacity	3.7 V, 1800 mAh
Standby Time	Up to 150 days
Dimensions (L x W x H)	186 x 200 x 125 mm (7.3 x 7.9 x 4.9 inches)
Item Weight	340 g (0.75 lbs)
Wireless Frequency Range	≤ 80 m (262 feet) in open areas
Operating Environment	Outdoor (Waterproof Housing)

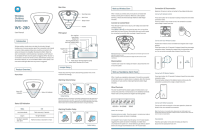
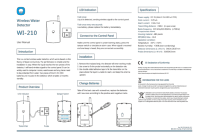
9. Warranty and Support

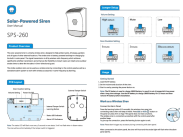
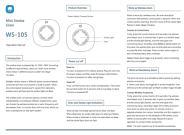
For warranty information, technical support, or service inquiries regarding your Chuango PIR-926 motion sensor, please refer to the documentation provided at the time of purchase or visit the official Chuango website. Keep your purchase receipt as proof of purchase.

For general inquiries, you may contact Chuango customer support through their official channels. Always provide your product model number (PIR-926) when seeking assistance.

Official Website: www.chuango.com *(Please note: This link is for illustrative purposes and may not be the exact support page.)*

Related Documents - PIR-926

	CHUANGO WS-280 Wireless Outdoor Strobe Siren User Manual User manual for the CHUANGO WS-280 wireless outdoor strobe siren. Provides detailed instructions on installation, operation as a wireless siren or standalone panel, zone settings, and technical specifications.
	Chuango WI-210 Wireless Water Detector User Manual Comprehensive user manual for the Chuango WI-210 Wireless Water Detector. Learn about installation, operation, specifications, and troubleshooting for this smart home water leak sensor.

	[Chuango DML-100 Multipurpose Sensor User Manual] User manual for the Chuango DML-100 Multipurpose Sensor, detailing its features, setup, installation, and specifications. Learn how to connect to Wi-Fi, use the DreamCatcher Life app, and optimize sensor placement for home security and automation.
	[Solar-Powered Siren SPS-260 User Manual] User manual for the Chuango SPS-260 Solar-Powered Siren, detailing its features, installation, and operation as a wireless siren or alarm panel.
	[Chuango WS-105 Mini Strobe Siren: Operation Manual & Features] Comprehensive guide to the Chuango WS-105 Mini Strobe Siren. Learn about its features, setup, wireless connectivity, standalone alarm capabilities, and specifications for home security systems.
	[CHUANGO RV-500 Robot Vacuum Cleaner User Manual] This user manual provides comprehensive instructions for operating and maintaining the CHUANGO RV-500 Robot Vacuum Cleaner. It includes safety guidelines, setup procedures, operational details, care instructions, troubleshooting tips, and technical specifications.