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› DEWENWILS Outdoor Motion Sensor Light Switch Instruction Manual

DEWENWILS WLS01+MST01

DEWENWILS Outdoor Motion Sensor Light Switch Instruction Manual

Model: WLS01+MST01

PRODUCT OVERVIEW

The DEWENWILS Outdoor Motion Sensor Light Switch is a wireless kit designed to automate lighting based on motion detection. It consists of a detachable motion sensor and a receiver, offering flexible installation and control for various outdoor and indoor lighting applications. This system is ideal for enhancing convenience and energy efficiency in areas such as patios, garages, driveways, and porches.

Key features include a wide 240° sensing angle, up to 50ft detection range, adjustable sensing modes (PIR, NTM, D2D, RND), and an IP65 weatherproof rating for the sensor. The system operates wirelessly, eliminating the need for complex wiring, and offers an adjustable auto-off delay for energy saving.



Image: The DEWENWILS Outdoor Motion Sensor Light Switch kit, showing the motion sensor unit and the wired receiver module.

PACKAGE CONTENTS

Upon opening the package, verify that all components are present and undamaged.

- 1 x Wireless Motion Sensor (Transmitter)
- 1 x Receiver Module

- Mounting Screws and Anchors
- Instruction Manual (this document)

Note: 3 x AAA batteries for the motion sensor are not included and must be purchased separately.

SPECIFICATIONS

Parameter	Value
Model Number	WLS01+MST01
Operating Voltage	120 Volts AC
Current Rating	15 Amps / 1875 Watts (Max)
Motion Sensor Detection Range	Up to 50 ft (adjustable 10-60 ft)
Motion Sensor Sensing Angle	240° (160° vertical, 180° horizontal adjustable)
Wireless RF Range	Up to 100 ft (line of sight)
Time Delay Adjustment	10 seconds to 30 minutes
Motion Sensor Power Source	3 x AAA Batteries (not included)
Receiver Power Source	AC 100-125V
IP Rating (Sensor & Receiver)	IP65 Weatherproof
Material	Plastic
Dimensions (Product)	6.1 x 4.53 x 3.54 inches

SAFETY INFORMATION

Please read and understand all safety instructions before installation and operation. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **WARNING:** To avoid fire, shock, or death, turn off power at the circuit breaker or fuse box and test that the power is off before wiring.
- Installation should be performed by a qualified electrician if you are unsure about electrical wiring.
- Do not exceed the maximum electrical ratings of 15 Amps or 1875 Watts.
- Ensure the motion sensor is installed in a location where it is protected from direct impact and extreme temperatures.
- Keep batteries out of reach of children. Dispose of used batteries properly according to local regulations.

SETUP AND INSTALLATION

1. Motion Sensor Battery Installation

1. Rotate the battery cover at the bottom of the motion sensor to "unlock" and remove it.
2. Take out the black battery holder. Insert 3 new AAA NiMH batteries into the holder, ensuring correct polarity (+/-).

3. Insert the loaded battery holder back into the battery box.
4. Insert the battery cover and rotate it to "lock".



Image: Step-by-step guide for installing AAA batteries into the motion sensor unit.

2. Motion Sensor Mounting

The motion sensor can be mounted on a wall or other suitable surface using the included bracket and screws. Choose a location that provides the desired detection coverage and is within 100 feet of the receiver.

1. Use the included screws to secure the transmitter mounting bracket to the desired location.
2. Install the sensor onto the fixed bracket.
3. Adjust the sensor's angle:
 - Vertically: Adjust the sensor up and down (up to 160°) to cover the required detection area.
 - Horizontally: Adjust the sensor left and right (up to 180°) to fine-tune the detection zone.



Use the included screws to secure the transmitter mounting bracket to the desired location.



Install the sensor on the fixed bracket.



Depending on the required detection area, you can adjust the sensor by turning it up and down



Depending on the required detection area, you can adjust the sensor by turning it left and right

Image: Visual guide demonstrating how to mount the motion sensor and adjust its vertical and horizontal angles for optimal coverage.



Image: Detailed steps for securing the mounting bracket and attaching the sensor, including angle adjustment.

3. Receiver Wiring and Installation

The receiver module connects between your power source (AC 100-125V) and the lighting fixture you wish to control. It is compatible with standard weatherproof or electrical junction boxes.

1. **Turn off power at the circuit breaker before beginning any wiring.**
2. Connect the receiver's wires as follows:
 - **Black wire (L)** from receiver to Live (L) wire from power input.
 - **White wire (N)** from receiver to Neutral (N) wire from power input.
 - **Red wire (L)** from receiver to Live (L) wire of the lighting fixture.
 - **Blue wire (N)** from receiver to Neutral (N) wire of the lighting fixture.
 - Ensure proper grounding if applicable (Green wire from power input to ground).
3. Secure the receiver within a suitable junction box, ensuring all connections are tight and insulated.
4. Once wiring is complete, restore power at the circuit breaker.

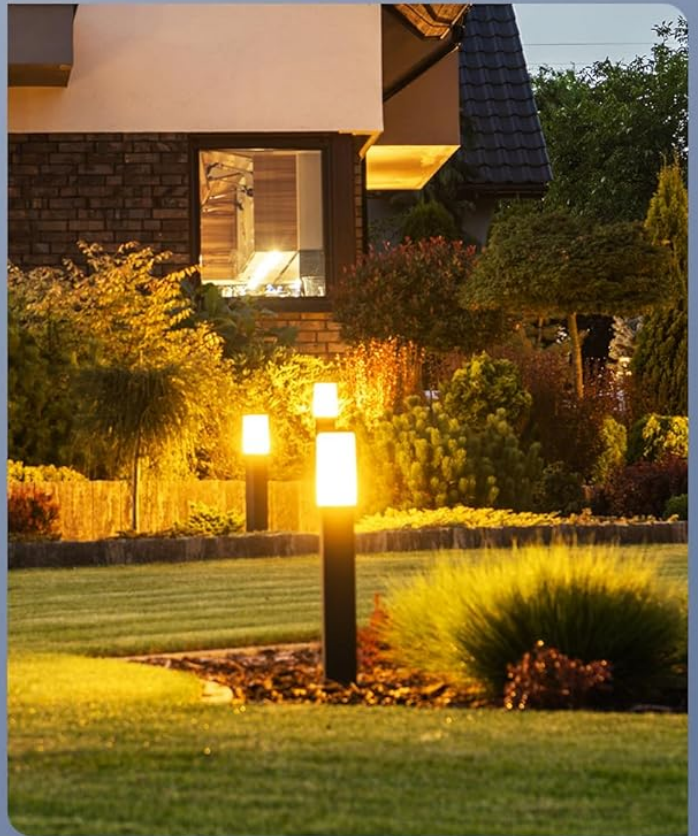
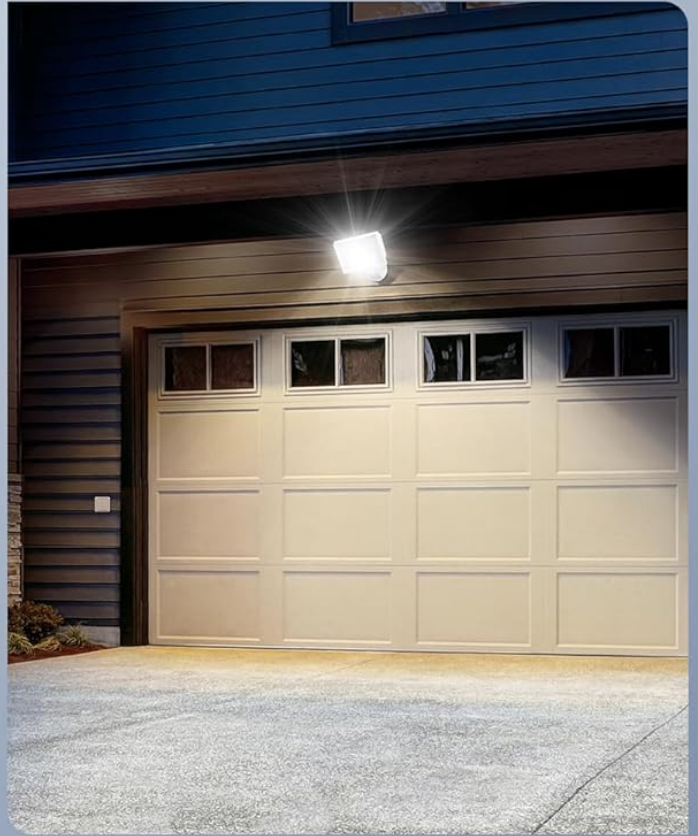


Image: Diagram illustrating the wiring connections for the receiver module, showing input from power and output to light fixtures, along with product dimensions.



Image: A detailed diagram showing how to install the DEWENWILS receiver between the power source and the lighting fixture, highlighting the maximum power rating.

OPERATING INSTRUCTIONS

The motion sensor features several adjustable settings to customize its operation.

Adjustable Knobs on Motion Sensor



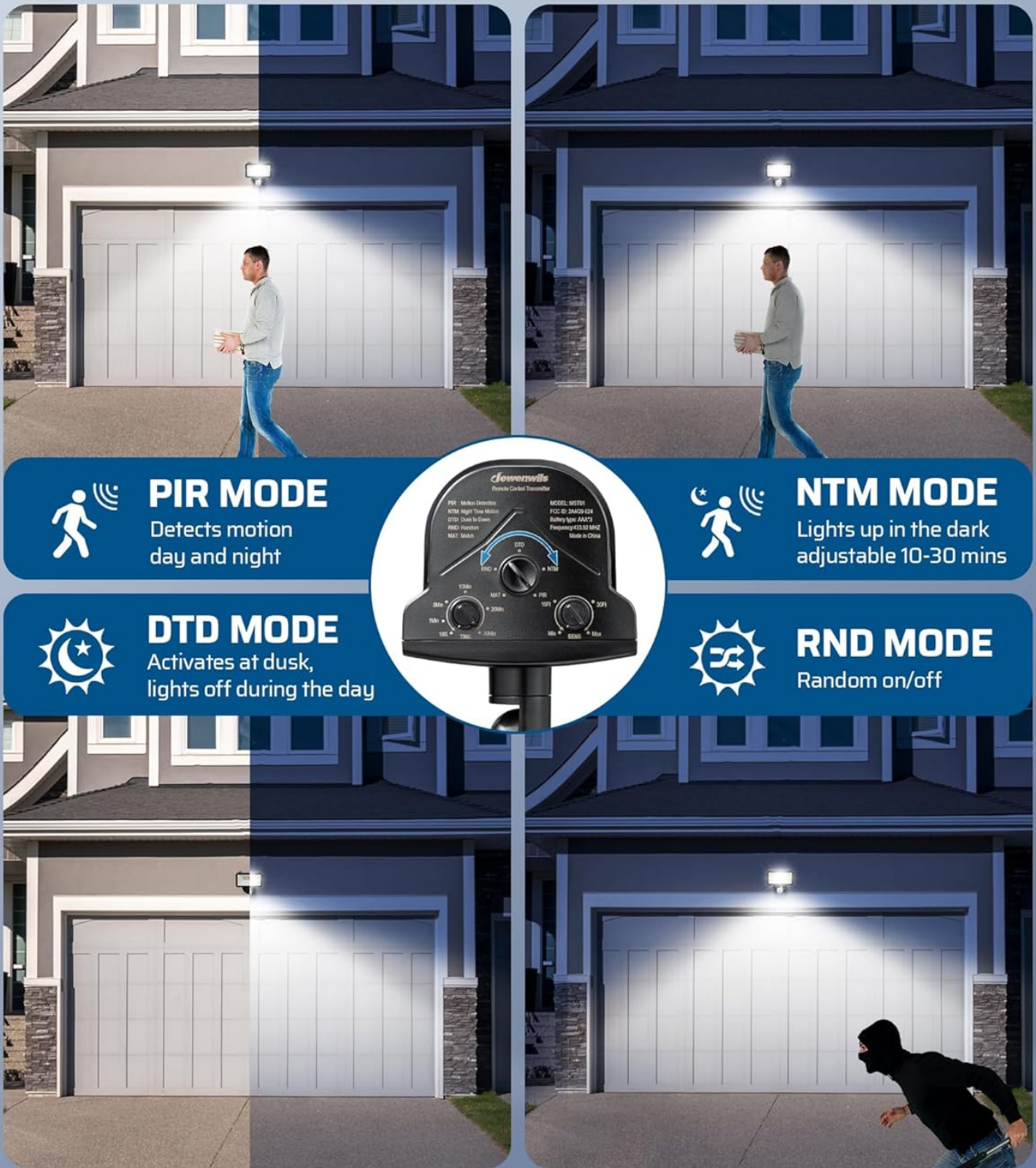
Image: Close-up view of the motion sensor unit, highlighting the Function knob switch, Delay knob switch, and Sensitivity knob switch.

- **Function Knob Switch:** Selects the operating mode.
- **Delay Knob Switch:** Adjusts the time the light stays on after motion is detected.
- **Sensitivity Knob Switch:** Adjusts the detection range of the motion sensor.

Operating Modes

The motion sensor offers four distinct operating modes, selectable via the Function knob:

4 WORKING MODES



PIR MODE

Detects motion
day and night



NTM MODE

Lights up in the dark
adjustable 10-30 mins



DTD MODE

Activates at dusk,
lights off during the day



RND MODE

Random on/off

Image: Visual representation of the four operating modes: PIR (motion detection day and night), NTM (lights up in the dark, adjustable 10-30 mins), D2D (activates at dusk, lights off during the day), and RND (random on/off).

- **PIR Mode (Motion Detection):**

In this mode, the sensor detects motion both during the day and at night. The light will turn on when motion is detected and stay on for the set delay time.



Image: Illustration of PIR mode, showing the sensor detecting movement during both day and night, activating the light.

• **NTM Mode (Night Time Motion):**

The sensor detects activity when the ambient light reaches a certain activation brightness in the evening. The light will only turn on with motion detection during low-light conditions and stay on for the set delay time (adjustable 10-30 minutes).



Image: Illustration of NTM mode, where the sensor activates lights based on motion only during night time or low-light conditions.

• **D2D Mode (Dusk to Dawn):**

In this mode, the product stays off during the day and automatically turns on when it detects sufficient darkness at dusk. The light will remain on until dawn, regardless of motion.



Image: Illustration of D2D mode, showing the light off during the day and automatically turning on at dusk.

- **RND Mode (Random On/Off):**

This mode provides a random on/off function, simulating occupancy for security purposes. The light will turn on and off at irregular intervals.



Image: Illustration of RND mode, depicting the light turning on and off randomly, useful for deterring intruders.

Adjusting Detection Range and Time Delay

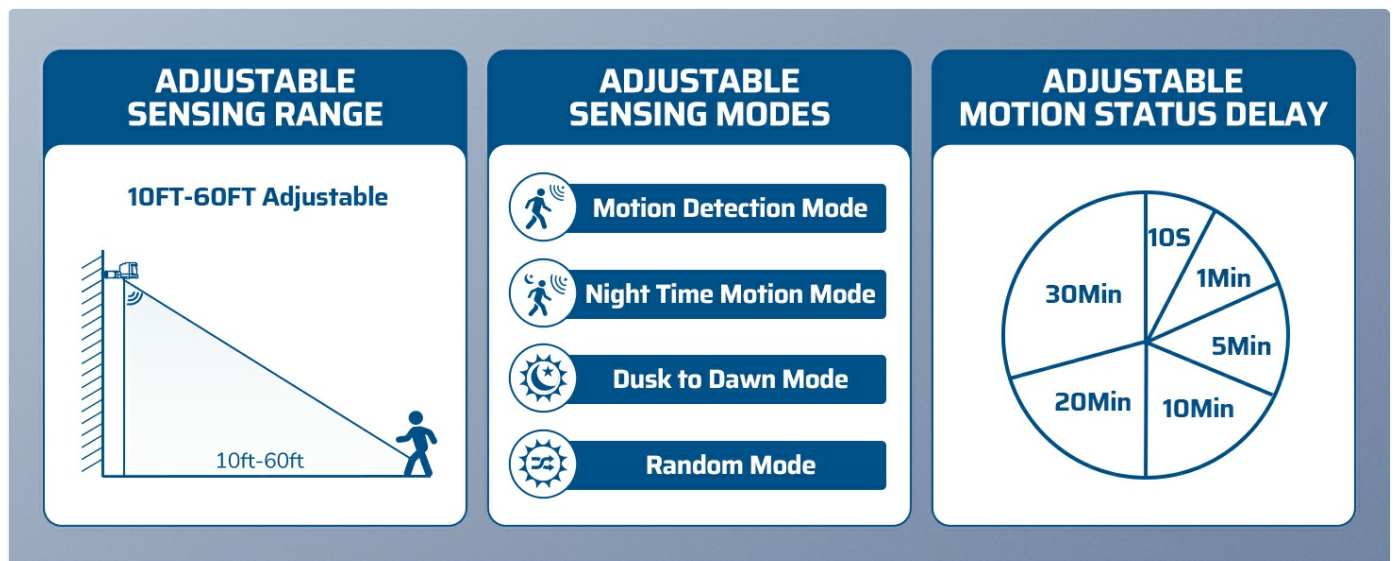


Image: Diagram showing the adjustable sensing range (10-60ft), the four sensing modes, and the adjustable motion status delay (10s to 30min).

- **Sensing Range (Sensitivity Knob):** Rotate the sensitivity knob to adjust the detection range from 10 feet to 60 feet. A higher setting increases the detection distance.
- **Time Delay (Delay Knob):** Rotate the delay knob to set how long the light remains on after motion is no longer detected. Options typically range from 10 seconds to 30 minutes. This feature helps conserve energy.

MAINTENANCE

- **Cleaning:** Periodically wipe the motion sensor lens and housing with a soft, damp cloth to remove dust and debris. Do not use abrasive cleaners or solvents.
- **Battery Replacement:** When the motion sensor's performance degrades (e.g., reduced detection range or inconsistent operation), replace the 3 AAA batteries. Always use fresh, high-quality batteries.

- **Inspection:** Regularly inspect the wiring connections of the receiver for any signs of wear, corrosion, or damage. Ensure the sensor's mounting is secure.
- **Weather Protection:** Although the sensor and receiver are IP65 weatherproof, ensure they are not submerged in water or exposed to extreme conditions beyond their rating.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Light does not turn on with motion.	<ul style="list-style-type: none"> ◦ No power to receiver. ◦ Incorrect wiring. ◦ Motion sensor batteries are dead or low. ◦ Motion sensor is out of range of receiver. ◦ Sensitivity setting is too low. ◦ Obstruction in detection path. ◦ Incorrect operating mode selected (e.g., D2D during day). 	<ul style="list-style-type: none"> ◦ Check circuit breaker and power connections. ◦ Verify wiring according to the diagram in the Setup section. ◦ Replace motion sensor batteries. ◦ Move sensor closer to receiver (max 100ft). ◦ Increase sensitivity setting. ◦ Clear any objects blocking the sensor's view. ◦ Adjust operating mode as needed.
Light stays on continuously.	<ul style="list-style-type: none"> ◦ Constant motion in detection area. ◦ Time delay set to maximum or D2D mode selected. ◦ Sensor malfunction. 	<ul style="list-style-type: none"> ◦ Adjust sensor angle or sensitivity to exclude unwanted motion sources. ◦ Adjust time delay to a shorter duration or switch to PIR/NTM mode if D2D is not desired. ◦ Contact customer support if problem persists.
Light turns on randomly.	<ul style="list-style-type: none"> ◦ Interference from other RF devices. ◦ RND mode is selected. ◦ False triggers from environmental factors (e.g., swaying branches, small animals). 	<ul style="list-style-type: none"> ◦ Ensure no other strong RF signals are nearby. ◦ Switch to PIR, NTM, or D2D mode if random operation is not desired. ◦ Adjust sensitivity or reposition sensor to minimize false triggers.
Short detection range.	<ul style="list-style-type: none"> ◦ Sensitivity setting is too low. ◦ Motion sensor batteries are low. ◦ Obstruction. 	<ul style="list-style-type: none"> ◦ Increase sensitivity setting. ◦ Replace motion sensor batteries. ◦ Ensure clear line of sight for the sensor.

WARRANTY AND SUPPORT

DEWENWILS products are designed and manufactured to the highest quality standards. For warranty information, technical support, or customer service inquiries, please contact DEWENWILS directly.

Visit the official DEWENWILS store for more information: [DEWENWILS Store](#)

Please have your model number (WLS01+MST01) and purchase date available when contacting support.

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