

User Manual

1. Overview

This sensor uses **5.8 GHz CW Doppler radar** to detect moving people/objects. It outputs a control signal upon motion detection. Ideal for lighting, security, and automation.

This product is suitable for a wide range of applications thanks to its 360° detection coverage, stable performance across varying temperatures, and ability to penetrate non-metallic materials.

Intelligent Lighting Control – Ideal for corridors, stairwells, restrooms, elevator lobbies, offices, conference rooms, underground parking garages, and courtyard pathways. It enables automatic "light on when motion is detected, light off or dim when vacant" functionality, significantly reducing energy waste.

Security and Automation – Can be used as an intrusion detector in warehouses, equipment rooms, or other unattended areas, triggering alarms or surveillance systems upon motion detection. It also works seamlessly with automatic doors, motion-activated switches, smart toilet lids, and motorized curtains for touch-free operation.

Smart Home and IoT Integration – Serves as a motion/presence sensing node that integrates with smart home systems. When movement is detected, it can trigger not only lighting but also HVAC systems, ventilation fans, smart speakers, and other connected devices, enabling fully automated scene-based experiences.

2. Key Specs

- **Frequency:** 5845 ± 20 MHz
- **Modulation:** CW

- **Power:** DC 12–24 V
- **Antenna Gain:** 0 dBi (microstrip)
- **Temp Range:** -30°C to +60°C
- **Detection Range:** ~5–15 m | **Angle:** ~120° (H) / 80° (V)

3. Wiring

Terminal	Function
VCC	DC 12–24 V (+)
GND	DC Ground (-)
OUT	Control output

4. Installation Tips

- Mount on stable, non-metal surface.
- Avoid metal shielding in front of antenna.
- Height: 2–6 m recommended.

5. Troubleshooting

Issue	Likely Fix
No motion output	Check orientation (movement toward/away works best)
False triggers	Remove nearby moving objects (fans, curtains)
Short range	Remove metal obstacles, check power supply

6.FCC statement

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

- 1) This device may not cause interference.
- 2) This device must accept any interference, including interference that may cause undesired operation of the device.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to

part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

--Reorient or relocate the receiving antenna.

--Increase the separation between the equipment and receiver.

--Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

--Consult the dealer or an experienced radio/TV technician for help.

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

FCC Radiation Exposure Statement

This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

1.This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body at all times.

2.This device has been evaluated to meet general RF exposure requirements and can be used in mobile exposure conditions without restriction.