

Fall Monitoring Radar Sensor EDV25P Specification



EDV25P



Product Features

- Using millimeter-wave radar technology, it supports fall detection, human presence determination, and regional activity monitoring, with local data processing and rapid response.
- Real-time reporting of personnel status (occupied/unoccupied) and fall events, supporting linkage with alarm systems or nursing platforms.
- The camera-free design strictly complies with GDPR and related privacy regulations, and does not generate or leak private data.
- It is not affected by the environment such as light, temperature, humidity, smoke, etc. and operates stably around the clock.
- Supports customization of parameters such as detection area, sensitivity, and reporting frequency to adapt to different scenario requirements.
- Supports Bluetooth Low Energy (BLE) communication, based on the GATT protocol, and supports device configuration and data reporting.
- Support serial UART communication, reserve WIFI and 485 communication

Core technology

■ Millimeter-wave radar sensing technology

With millimeter resolution, it supports micro-motion detection to recognize sudden movements such as falls.

■ Supports multiple communication methods

Support Bluetooth BLE, TuyaZigbee, UART, 485 communication.

■ Multi-area detection

Independent switching of left front, right front, left rear and right rear detection areas.

Monitoring Performance

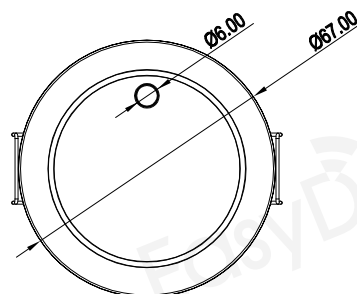
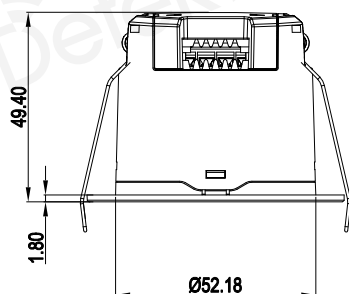
Detection distance	Maximum presence radius 5 meters (adjustable, recommended within 3 meters), height range 0-3.0 meters (high and low points available) Fall radius 0-2.5 meters
Detection target	Single target presence detection, fall detection
Fall detection response time	≤30s
Presence detection time	More than 95% accuracy of moving target detection (normal activity scenario)
Measurement accuracy	90% accuracy of fall detection
Update time	1-600s adjustable (default 60s),report changes in real time
Resolution	Millimeter human motion detection

Operating conditions

Working voltage of the whole machine	220V AC
Operating current of the whole machine	100mA- 1A
Standby power consumption	Average less than 1.8W, peak ≤ 3W
Radar emission frequency	Radar 60-64 GHz
Radar transmitting power	Maximum value ≤15dBm
WIFI transmitting frequency	Maximum value ≤20dBm
Operating temperature of the whole machine	-20 to 70°C
Storage temperature of the whole machine	-20°C to 85°C
Communication method	Bluetooth BLE 4.0 (supports GATT services), Tuya Zigbee

Product Size

Size:mm



EDV25P Dimensional Tolerance: ±0.2

Application scenario



bedroom



hospital



nursing home



bathroom

Functional specifications

1.fall detection

- Fall events are recognized by characteristic actions and fall status is reported, including suspected and confirmed falls.

2.presence detection

- Real-time reporting of occupied/unoccupied status.

3.area detection configuration

- Supports independent switching of the four detection area switches, left front, right front, left rear and right rear, with the default fully open.

- Presence detection radius, height range, and mounting height can be set.

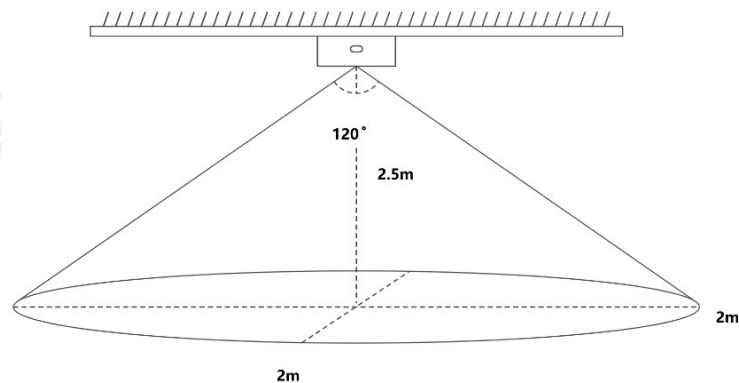
4. parameter configuration

- Trigger sensitivity: 10 adjustable steps, default 5 steps (motion detection).
- Presence sensitivity: 10 adjustable steps, default 5 steps.
- Fall sensitivity: 10 adjustable steps, default 5 steps.
- Status reporting frequency: 1-600 seconds can be set, default 60 seconds.
- Presence delay: 1-65535 seconds, default 30 seconds.
- Presence detection switch
- Radar enable switch
- Restore Factory Settings

5. mounting and interfacing

- Installation: ceiling mount
- Interface: AC power 220V

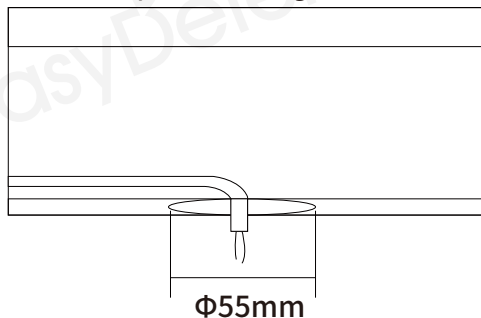
6.The detection range diagram is as follows:



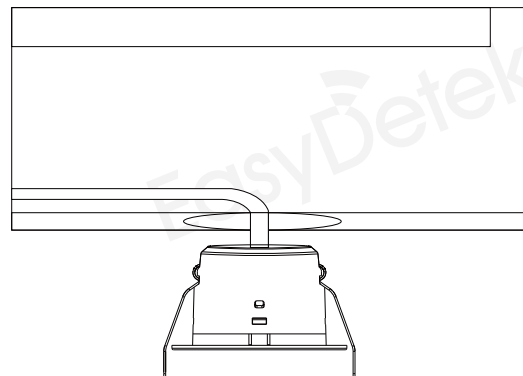
Installation Description

The top-mounted diagram is shown below:

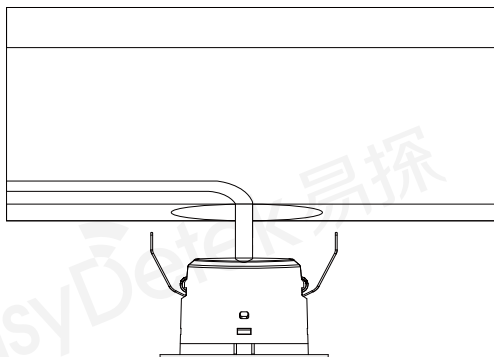
1. Drill holes in the ceiling and reserve space for wiring.



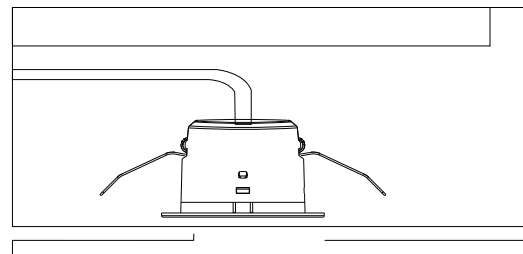
2. Equipment and wire connections



3. Adjust the mounting clips

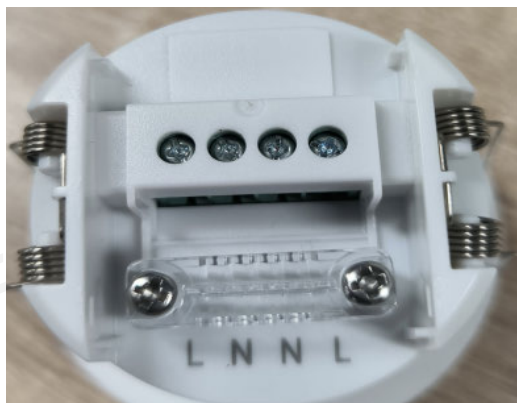


4. Embed and secure; installation complete.



For specific installation and configuration, please refer to the "EDV25P Customer Configuration Operation Guidance Notes" document.

Interface Description



The first port on the right is connected to the live wire, and the second port on the right is connected to the neutral wire

Access Description

- o Provide standard applet access
- o Access through the Tuya App

Indicator Status

Power on and power on is always on for 5s, and blinks 1 time for 10s in normal operation. Long press the distribution key for 5 seconds, enter the distribution mode 1s to flash 4 times, every 3s in the distribution network flashes 1 time.

Product Naming Law

ED	Frequency Band	Product Categories	Product Subdivision	Product Number	Delay & photosensitive	Serial number
ED	V	2	5	P	Y	01
EasyDetek	C 5.8GHz	1 Microwave sensor module	0 Ultra-low-power series	0-9, A-Z	Y Has light sensor	
	X 10.5GHz	2. Microwave radar switch	1 Flagship series		N no light sensor	
	Q 24GHz	3 Radar antenna	2 Short-distance series		P programmable	
	V 60GHz	4 MCU	3 Adjustable series			
	W 77GHz	5 Microwave power supply	4 External antenna series			
		6 IC	5 General Series			
		7 Other	6 To be defined			
		8 Networking	7 To be defined			
			8 Basic series			
			9 High altitude series			

Configuration Version Description

【Part Number】: EDV25PY-01

【PCB Version Number】: EDV25PCTL-VC20250902

【Software Version Number】: EDV25P-SW-V1.05

Historical Revision Record

Version	Time	Description	Note
V1.0	2025-07-11	First Edition	-
V1.1	2025-10-18	Add technical core components and update certain parameters	-

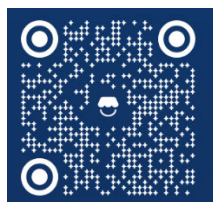
Precautions

1. After installation of this product, continuous vibration interference should be avoided in the area, otherwise it may cause self excitation false triggering of sensor detection, and it may be impossible to enter unmanned areas for a long time. At the same time, large areas of metal in front of the sensor should be avoided to prevent self excitation caused by metal reflection;
2. It usually takes 30 seconds to 1 minute for initialization data calibration to start up and power on;
3. When a person maintains silence to the point where the radar detects very little activity, it will not be tracked as an active target after a period of time, and the target can be detected after resuming movement;
4. The speed of detecting targets may vary in different environments, such as areas with more metal and electromagnetic wave reflections that may cause target detection errors;
5. The radar module has strict requirements for power and grounding quality, requiring a stable and interference free power supply, and avoiding voltage fluctuations and external noise (especially power noise from peripheral equipment). Grounding is crucial because ground noise may affect its performance, reducing detection distance or increasing false alarms.
6. This product is currently used for ceiling installation. If a metal tripod is used to simulate ceiling installation facing downwards during testing, there may be occasional false targets on the side near the metal tripod. This can be eliminated through time or shielding zones, and can be eliminated in actual scenarios. If there are more than 7 people in the conference room scene and the middle aisle is narrow, and multiple people leave at the same time, the trajectory may not be updated in real time.
7. EasyDetek Technology is committed to providing customers with high-quality and better experience radar sensors. Product version updates and iterations will not be notified separately. If needed, please contact our sales team to obtain the latest product information.

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