深圳市易探科技有限公司
Shenzhen EasyDetek Technology Co.,Ltd

EasyDetek易探

60GHz Sensors in the human body
EDV21C-K Specifications



EasyDetek Technology · Residential Surveillance Radar

EDV21C-K



Product Features

- Bluetooth Mini Programme Settings
- 60 GHz high-interference-resistance antenna
- DC 12~30V power supply
- Flush-mounted installation, standard cut-out diameter: 55 mm
- Supports KNX communication

Use cases



Bathroom



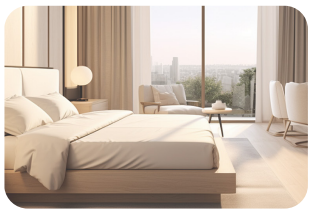
Kitchen



Study



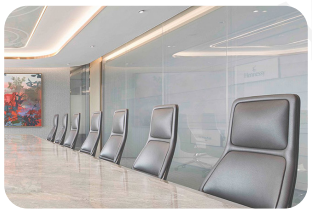
Office lighting



Smart home



Smart lighting



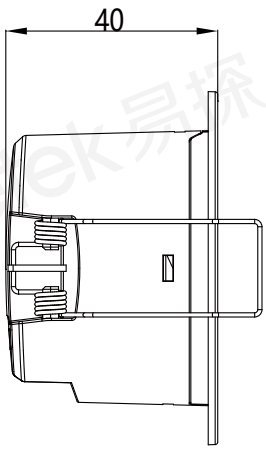
Smart Business

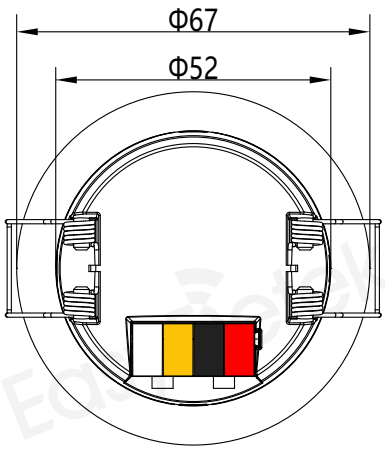


Healthcare and Wellness

Product dimensions diagram

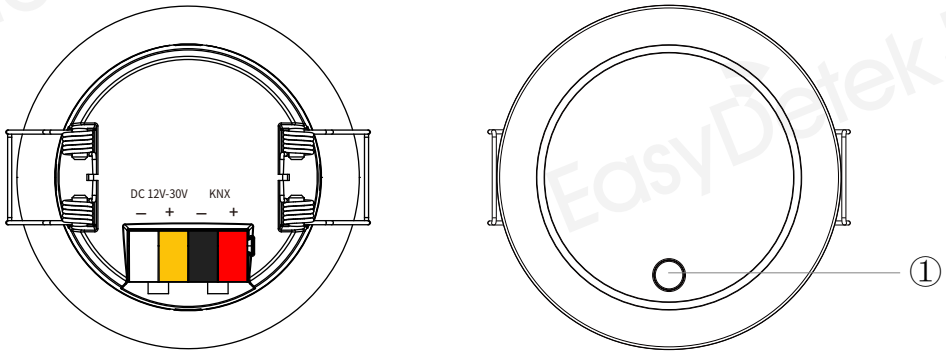
unit: (mm)





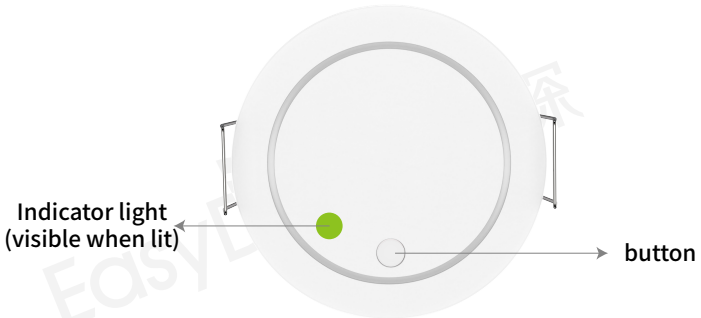
EDV21C-K Dimensional tolerances: ±0.2mm

Pin and Button Descriptions



Pin	Notes
KNX+(Red)	KNX +
KNX-(Black)	KNX -
V(Yellow)	12–30 V DC auxiliary power supply +
G(White)	12~30V DC -
①	Programming buttons

Explanation of indicator light statuses



1	Power on for 5 seconds	The green light comes on once
2	Person detected	The green light flashes once every 5 seconds
3	MQTT connection successful	The red light flashes once
4	Restore factory settings	Press and hold the button

Electrical specifications

Input voltage	DC 12~30V
Operating current	＜800mA
Operating frequency	58-64GHz
3dB beamwidth	60°(xz plane) 60°(yz plane)
Standby power consumption	2.64W

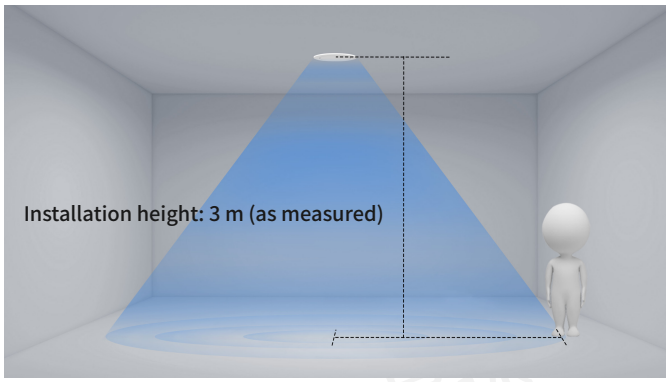
Technical Specifications

Detection range①	3m Max
Hanging height	Default: 3m

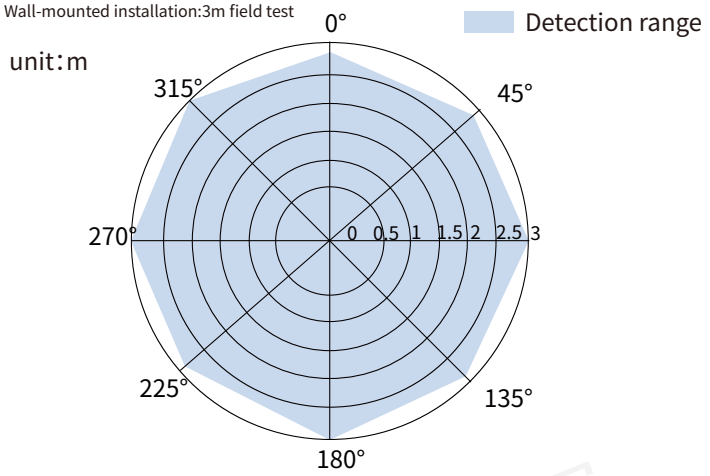
Ambient temperature

Operating temperature	-20~+60℃
Storage temperature	-20~+85℃

Schematic diagram of the detection process



Schematic diagram of the detection range①

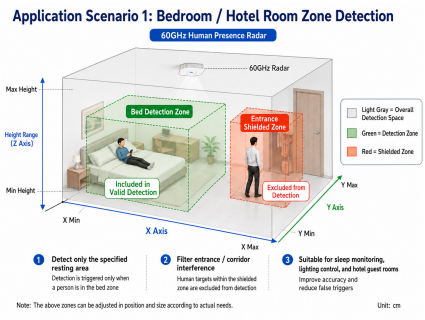


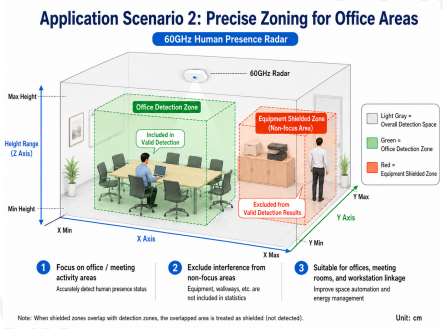
Note:

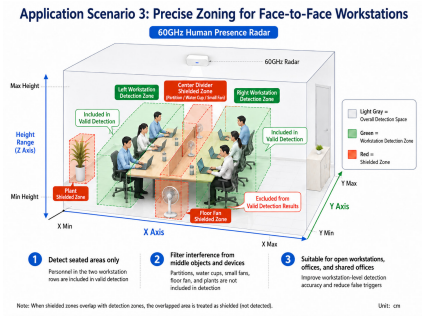
① The tested detection range is based on a sensor mounted at a height of 3 metres in an indoor environment, with a tester standing 170 cm tall, weighing between 65 and 75 kg, and walking at a speed of 1 m/s. The range may vary depending on the installation scenario; actual results may vary.

Function Description

The device supports 3D zone management, allowing users to configure detection zones and exclusion zones via the mini-programme. Each zone is defined as a 3D cuboid, with its boundaries determined by the minimum and maximum values of the X-axis, the minimum and maximum values of the Y-axis, and the minimum and maximum values of the height. Once the detection zones have been configured, the device will only perform valid detection and analysis on targets within these zones. Once exclusion zones have been configured, the device excludes targets within these zones from the valid detection results. This feature is designed to accommodate detection boundary requirements in different installation environments, thereby enhancing the accuracy of presence detection, people counting and trajectory output.

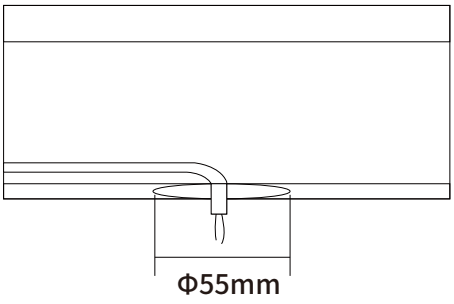




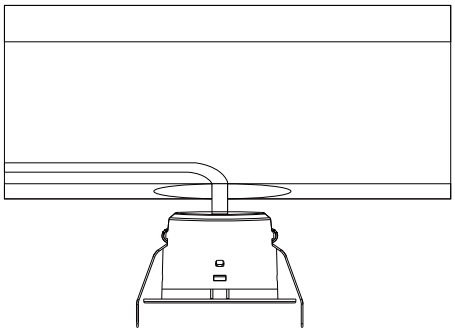


Installation diagram

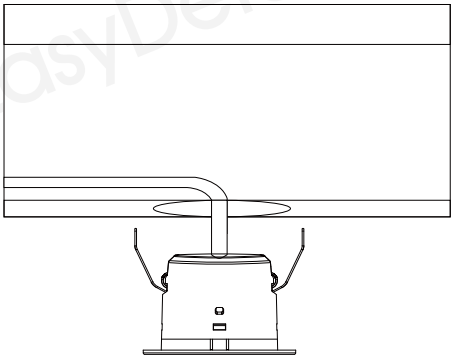
1、Drilling holes in the ceiling to allow for power cables



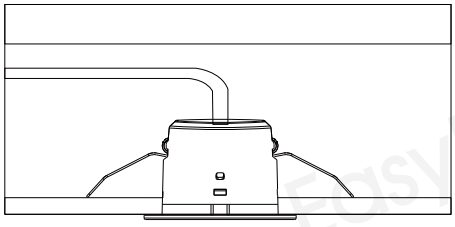
2、Connecting the device to the power cable



3. Adjust the mounting clips



4. Securely fixed in place; installation complete



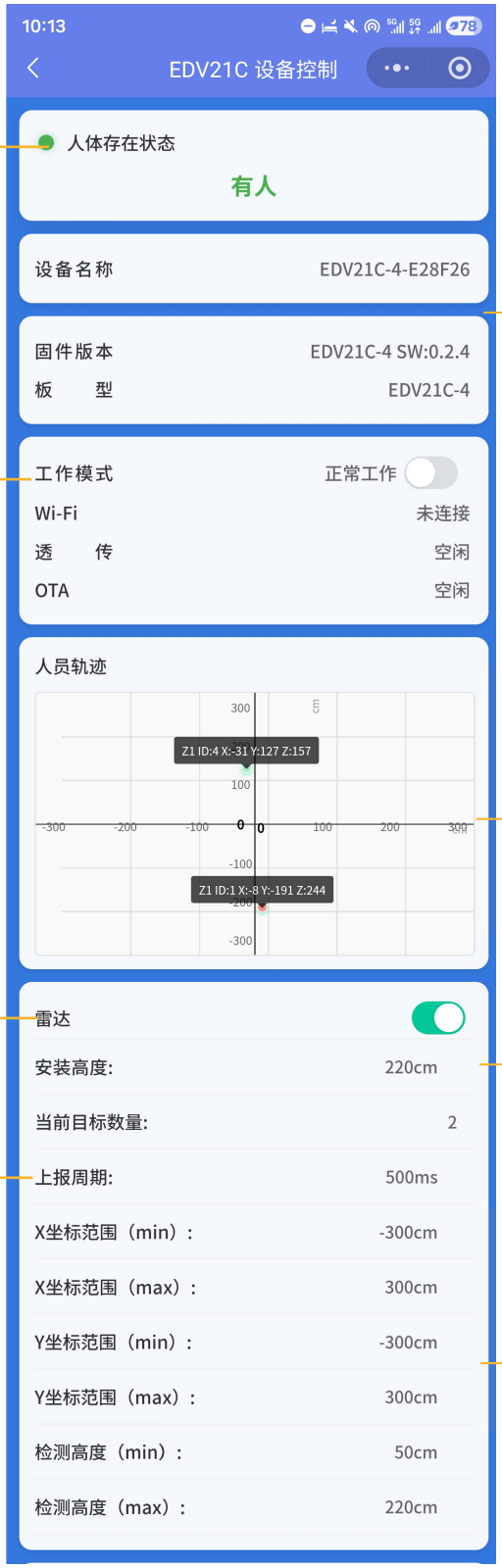
Bluetooth Mini-Programme Feature Description

Human Presence Indicator: The mini-programme' s home page displays the human presence status, providing a clear distinction between 'occupied' and 'unoccupied', enabling a quick assessment of whether there are people present within the current detection area.

Operating and connection status display: Supports the display of operational information such as operating mode, Wi-Fi connection status, pass-through status and OTA status, making it easy to determine the device' s current operating status.

Radar switch control: Allows the radar detection function to be enabled or disabled within the mini-programme.

Reporting cycle settings: Allows you to configure the data reporting cycle to control the frequency at which coordinates, target counts and status data are reported.



Device information display: Supports the display of basic information such as device name, firmware version and board type, facilitating after-sales support, debugging and version verification.

Object Trajectory Display: Supports the display of object trajectories and positions in the form of a coordinate graph, shows the current number of objects, and allows users to view the X/Y coordinate information of each object.

Installation height settings: Allows you to set the installation height; measurements are displayed in centimetres to suit the actual installation environment.

Detection range settings: Supports setting the minimum and maximum values for the X-coordinate range, the minimum and maximum values for the Y-coordinate range, and the minimum and maximum values for the detection height

Bluetooth Mini-Programme Feature Description

Wi-Fi configuration: Supports the configuration of Wi-Fi SSIDs and passwords, and allows Wi-Fi settings to be saved for device network access.

MQTT configuration: Supports configuration of the MQTT host, MQTT port, MQTT polling interval and MQTT enable/disable settings, and allows MQTT parameters to be saved for data transmission via Wi-Fi.

Sensor Zone Management: Supports adding new sensor zones, synchronising sensor zones from devices, and displaying the current number of sensor zones; used to define the valid detection area.

Motion sensitivity settings: Set the motion sensitivity using the slider.

Radar delay/target fade-out delay settings: Supports the configuration of radar delay and target fade-out delay.



Transparent mode debugging: Supports configuring the transparent mode host and port, as well as writing data to the transparent mode and switching modes, and reverting to normal network mode.

Communication parameter configuration: Supports configuration of Wi-Fi, MQTT and transparent transmission parameters; if RS485/KNX-related interfaces are retained, they should be subject to version-based access control to prevent incorrect configuration in versions other than the current one.

Mute Zone Management: Supports adding new mute zones, synchronising mute zones from devices, and displaying the current number of mute zones; used to block out areas with strong interference or where detection is not required.

Presence sensitivity settings: Presence sensitivity can be adjusted using a slider.

Save/Import/Synchronise/Disconnect: Supports saving and importing configurations, synchronising device settings, and disconnecting, facilitating batch debugging, on-site maintenance and the reuse of configurations.

Product Naming Rules

ED	Frequency Band	Major Product Category	Product Subcategor	Serial Feature Code	Function Extension		Running Number
ED	V	2	1	C	K		
EasyDetek	C 5.8GHz	1 Microwave module	0 Ultra-low-power series	0-9, A-Z	Y With light sensor	A Matter	1 Cat 1
	X 10.5GHz	2 Standalone sensor	1 Flagship series		N No light sensor	C Casambi	2 2.4G
	Q 24GHz	3 Antenna / component	2 Side-mounted series		G Dry contact	D Dali	4 RS-485
	V 60GHz	4 MCU	3 External adjustable series		S AC switch	K KNX	B Bluetooth
	S Ecological Products	5 Accessory	5 General-purpose series			M Mijia	P PLC
		6 IC	6 Outdoor			T Tuya	R RF433
		7 AI sensor	7 TBD				W WiFi
		8 Networking	8 Basic series				Z Zigbee
		9 TBD	9 High-ceiling series				

Configuration version description

【Part number】: EDV21C-K

【PCB version number】:

【Software version number】:

【Other related documents】: 1. EDV21C MQTT Data Transmission Protocol Documentation;
2. EDV21C RS485 Data Transmission Protocol Documentation;
3. EDV21C KNX Data Transmission Protocol Documentation; 4. EDV21C-K Mini-Program User Guide

Revision history

Version	Time	Description	Notes
V0.9	2026-07-23	Prototype version	-

Important Notes

1. The sensor is powered by the mains supply; installation and removal should be carried out by qualified personnel. Ensure the power supply is disconnected before installation or removal.
2. The sensor should not be installed in spaces with large areas of metal covering.
3. When multiple radar sensors are used in the same location, installing them too close together may cause false alarms in individual sensors; a minimum installation distance of 2 metres is recommended.
4. When the sensor is used in conjunction with wireless communication modules (such as NB-IoT, Bluetooth or Wi-Fi modules), sufficient spacing should be maintained. It is recommended to keep a distance of at least 1 metre from high-power wireless communication devices such as routers and wireless hotspots during installation.
5. The sensor’ s light sensitivity threshold is a test value obtained under sunny conditions, with no shadows and diffuse ambient light.
6. When installing the sensor, it should be positioned as far as possible from sources of vibration, such as metal surfaces, air conditioning units and exhaust fans, to prevent false readin
7. EasyDetek Technology is committed to providing customers with high-quality radar sensors and an enhanced user experience. Product versions may be updated or revised without prior notice. Should you require the latest product documentation, please contact our sales team.

For further information, please visit

WeChat Official Account

WeChat Store