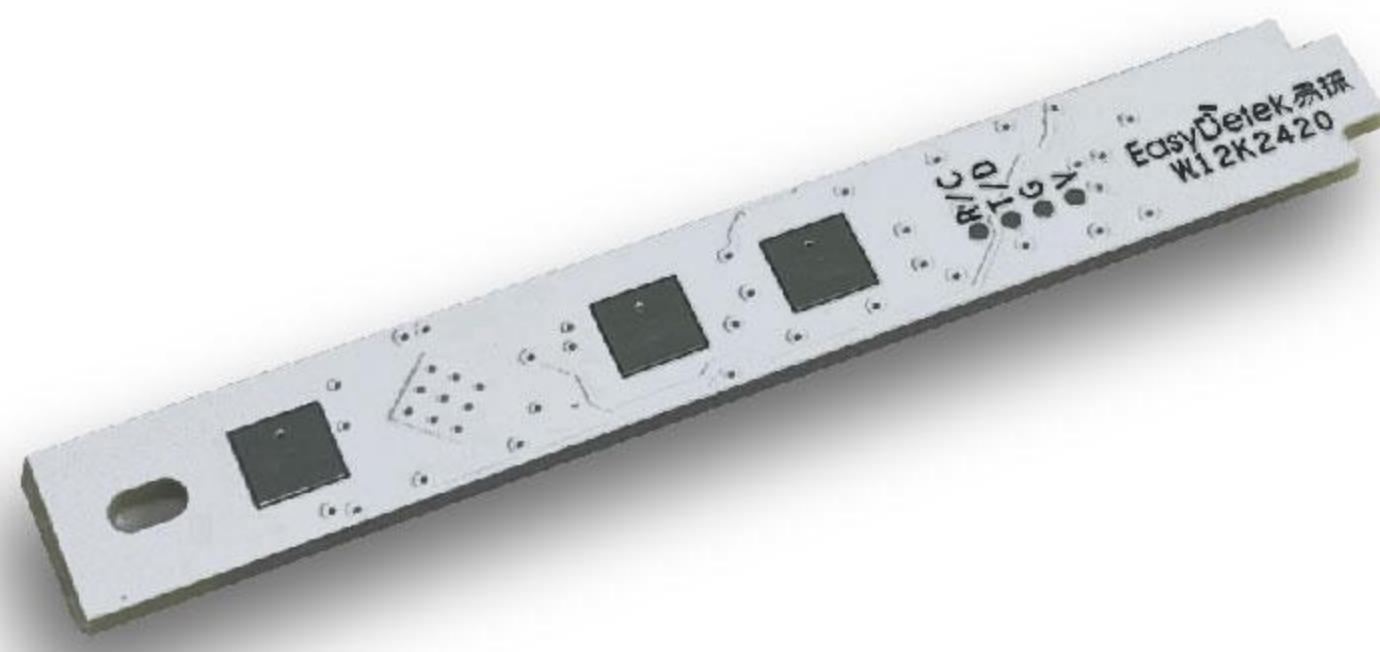


EDQ12K Specification

24GHz Side-mounted Application Series Module



Product Features

- **Multi-target recognition: detect multiple human targets in real time**
- **High sensitivity: supports human motion/presence detection**
- **Precise Positioning: Distance & Angle Measurement Assisted Positioning**
- **Small and Simplified: For Front-to-Application Products**

Electrical Parameters

Input voltage	3.3V / 5-8V compatibility
Operating current	25-40mA
Output voltage	3.3V
Output signal	UART/IO
Power consumption	<0.5W

Functional Parameters

Motion Sensing Radius ^①	0.2 - 5m adjustable@directly facing
Sensing radius of micromotion presence ^①	0.2 - 5m adjustable@directly facing
Hanging height	directly facing 0.5-1.2m
Delay time	10s
Distance Precision	±20cm
Number of targets identified	2-3 people

Output Parameters

operating frequency	24-24.25GHz

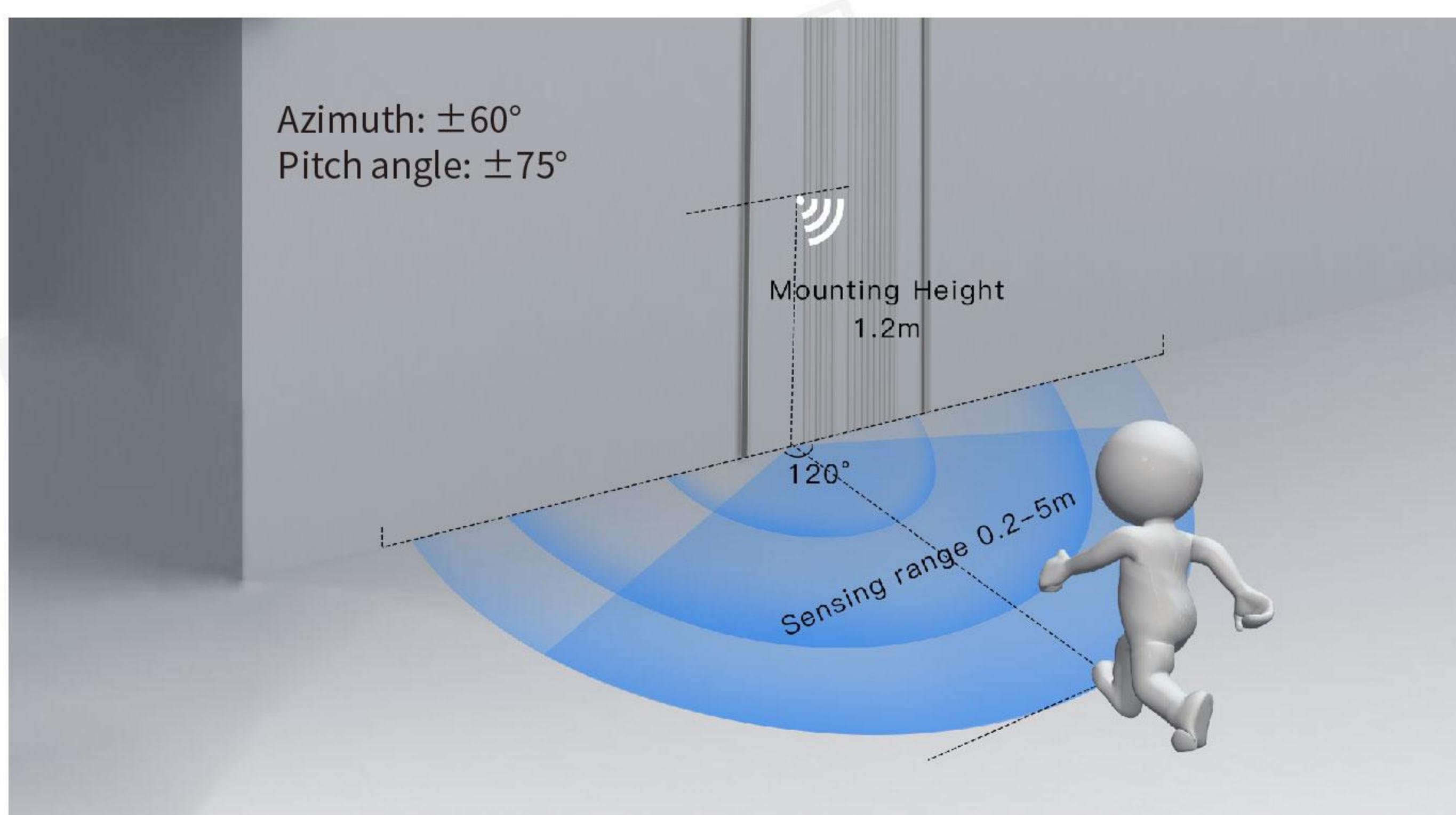
Environment & Lifespan

Operating temperature	-40~+85°C
Storage temperature	-20~+105°C

Remarks:

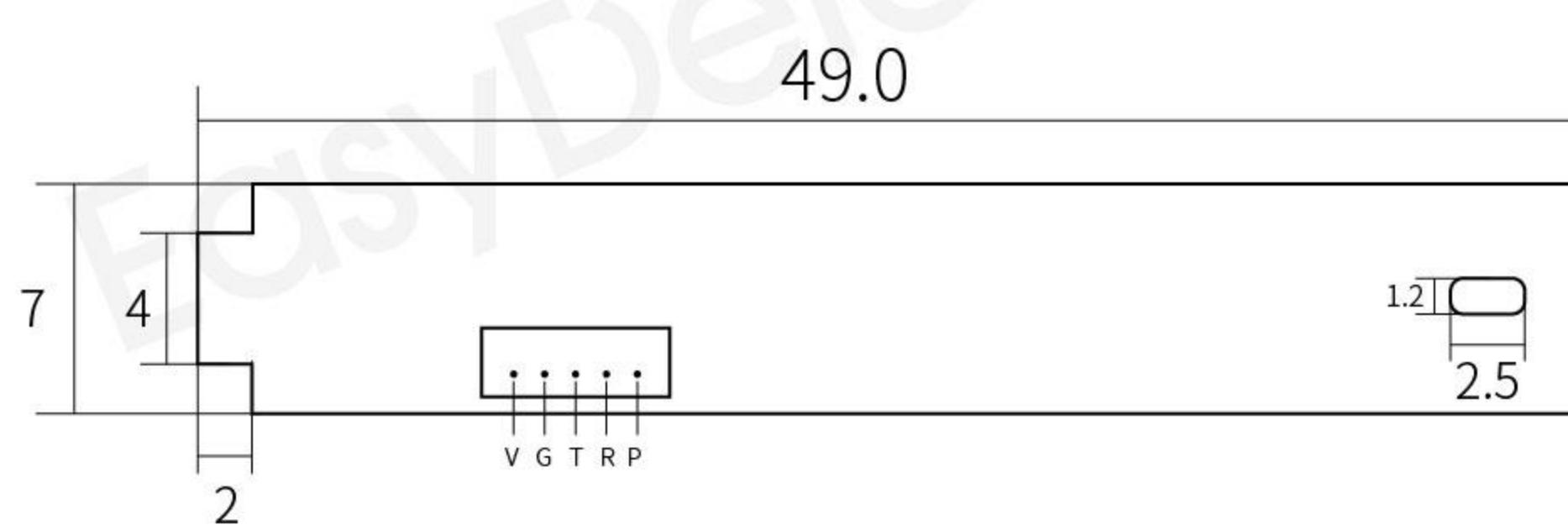
① The test distance range is based on the sensor hanging height of 3m, indoor installation environment test, the test person is 170cm tall, weight 65-75kg, walking speed 1m/s. Different scenes may cause changes in the range of installation, subject to actual testing.

Detection Schematic



Dimension Drawing / Pinout

Dimensions in mm

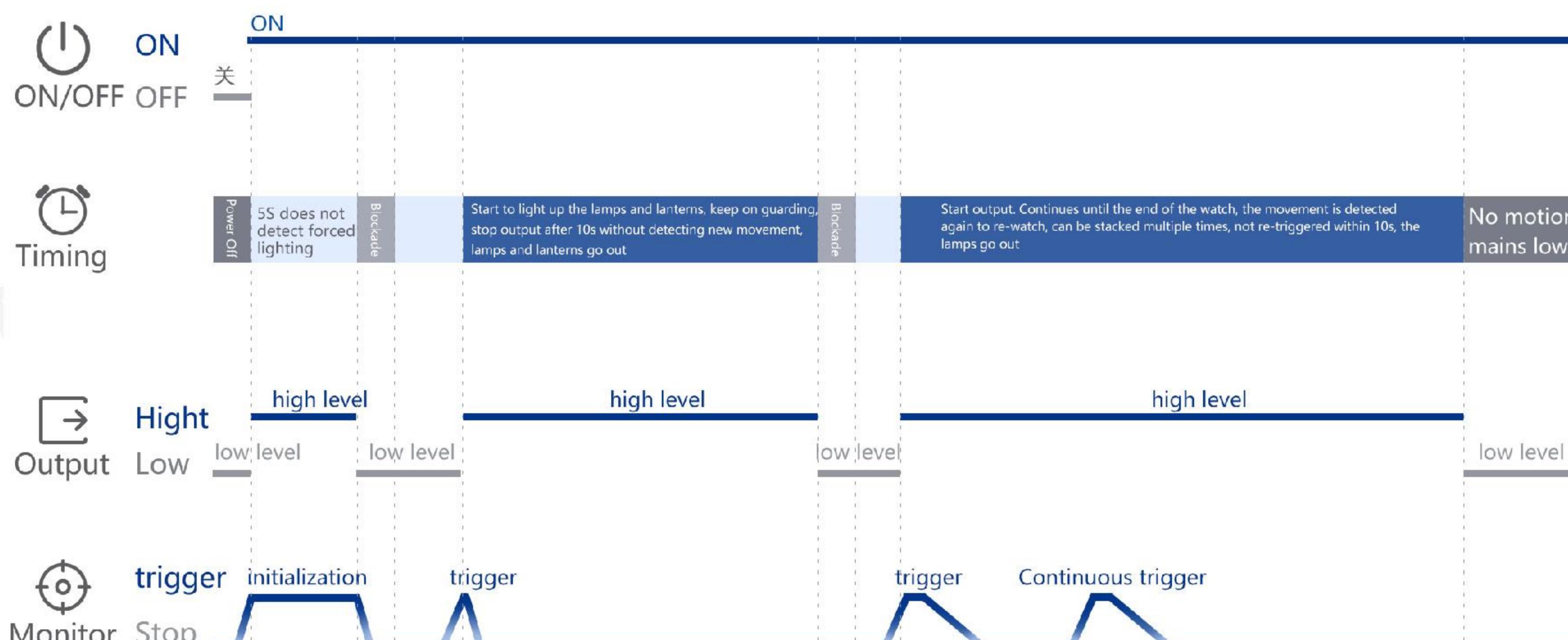


EDQ12K Dimensional tolerance: ± 0.2

Pin Description

Pin	Description
V	Power supply port, 3.3V supply. Supports 5-8V supply with LDOs
G	GND ground port
T/D	multiplexing the serial port TX function. Burning the SWDIO pin function
R/C	multiplexing the serial port RX function. Burning the SWCLK pin function
P	High and low level output ports

Timing Diagram



Application Scenarios/Products



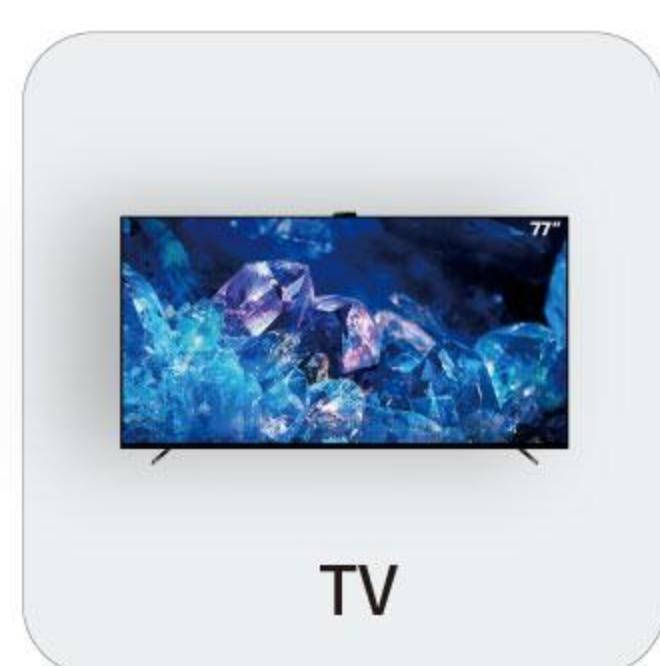
smart home



Hotel Rooms



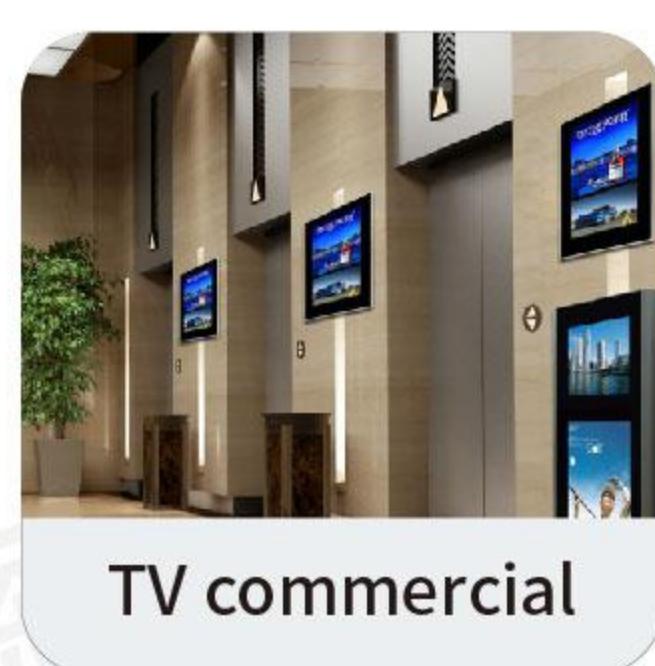
restrooms



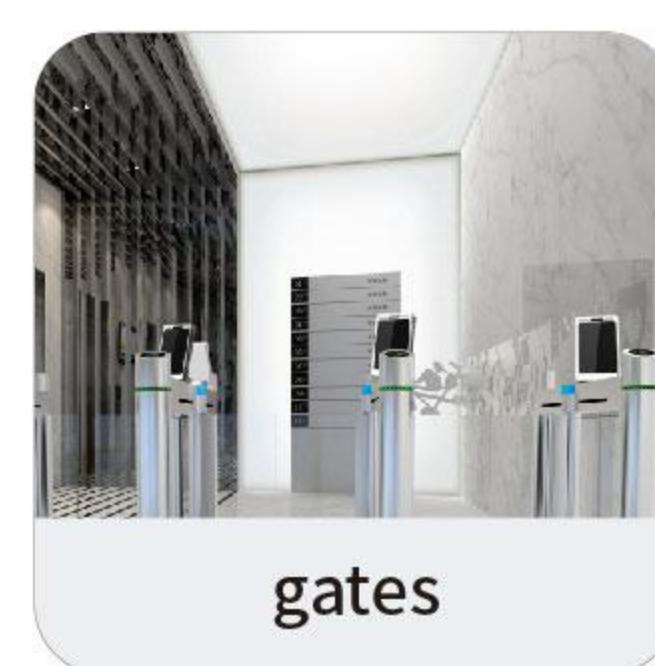
TV



mirror



TV commercial



gates

Functional Description



When the sensor detects a moving object,
The light will automatically turn on and
enter the set delay time



After the delay time has elapsed
When the sensor does not detect a moving object,
the luminaire goes out.

Product Naming Law

ED	Frequency Band	Product Categories	Product Subdivision	Product Number	Delay Time	Serial number
ED	Q	1	2	K	Y	
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

【Hardware】:

【Software】:

History Revision Record

Versions	Time	Description	Note
V1.0	2024-06-18	First Edition	-
V1.1	2024-07-12	Updated Sensing Distance and Detection Schematic	-

⌚ Precautions

1. When the product is installed, it is recommended that the antenna plate keep a distance of 5-12mm from the metal plane, and can not be close to or touch the metal plane.
2. Products on plastic, wood material penetration effect is better. It is recommended not to install metal, glass, ceramic in front of the antenna, so as not to affect the actual induction effect.
3. power supply, please use a small ripple power supply, to avoid interference with the sensor and false alarms, it is recommended that the power supply ripple is guaranteed to be within 50mV-100mV.
- 4, more than one radar sensor in the same site application, recommended product installation distance greater than 2m, the installation distance is too close to individual sensors may occasionally false alarms.
- 5, the antenna radiation surface to avoid high current circuit coverage, so as not to interfere with the normal radiation antenna, resulting in false alarms or change the induction range.
- 6, such as microwave sensors and wireless communication modules (NB, Bluetooth, WIFI, 2.4G module) coexisting applications, should be spaced apart. Recommended installation and routers, wireless hotspots and other high-power wireless communication equipment to maintain a distance of 1m or more.
- 7, the light-sensitive threshold is in a sunny environment, no shadows, ambient light diffuse reflection conditions of the test value.
- 8, microwave sensor antenna surface should avoid facing the drive power supply, while trying to drive away from the power supply rectifier bridge, transformer, switching tubes and other high-power devices, so as not to trigger false alarms.
- 9, Eprobe is committed to providing customers with high quality and better experience of radar sensors. Product version updates and iterations without notice.