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

EasyDetek易探

EDC196K Specification

5.8GHz Hollow Series

Product Features

- Selectable detection range, delay time, photosensitive threshold, standby time and standby brightness of the light sensor automatic on/off control
- Phase-locked loop with fixed operating frequency
- High-frequency plates with stable performance
- Match with infrared remote control, realize long-distance real-time control Full waterproof design (Waterproof rating IP65)
- Multi-mode output, support 0%-100% dimming
- With dimming circuit, can realize 0-10V dimming output

Electrical Parameters

Input Voltage	12±1V
Operating Current	25.8±2mA
Output Voltage	5V±0.2V
Output Signal	IO/PWM

Functional Parameters

Motion Sensing Radius ①	6-8m
Hanging height	Hanging height 6m
Delay time	30s (remote control adjustable)

Output Parameters

Center frequency	5.8GHz
3dB Beam Angle	97° (XZ plane) 99° (YZ plane)

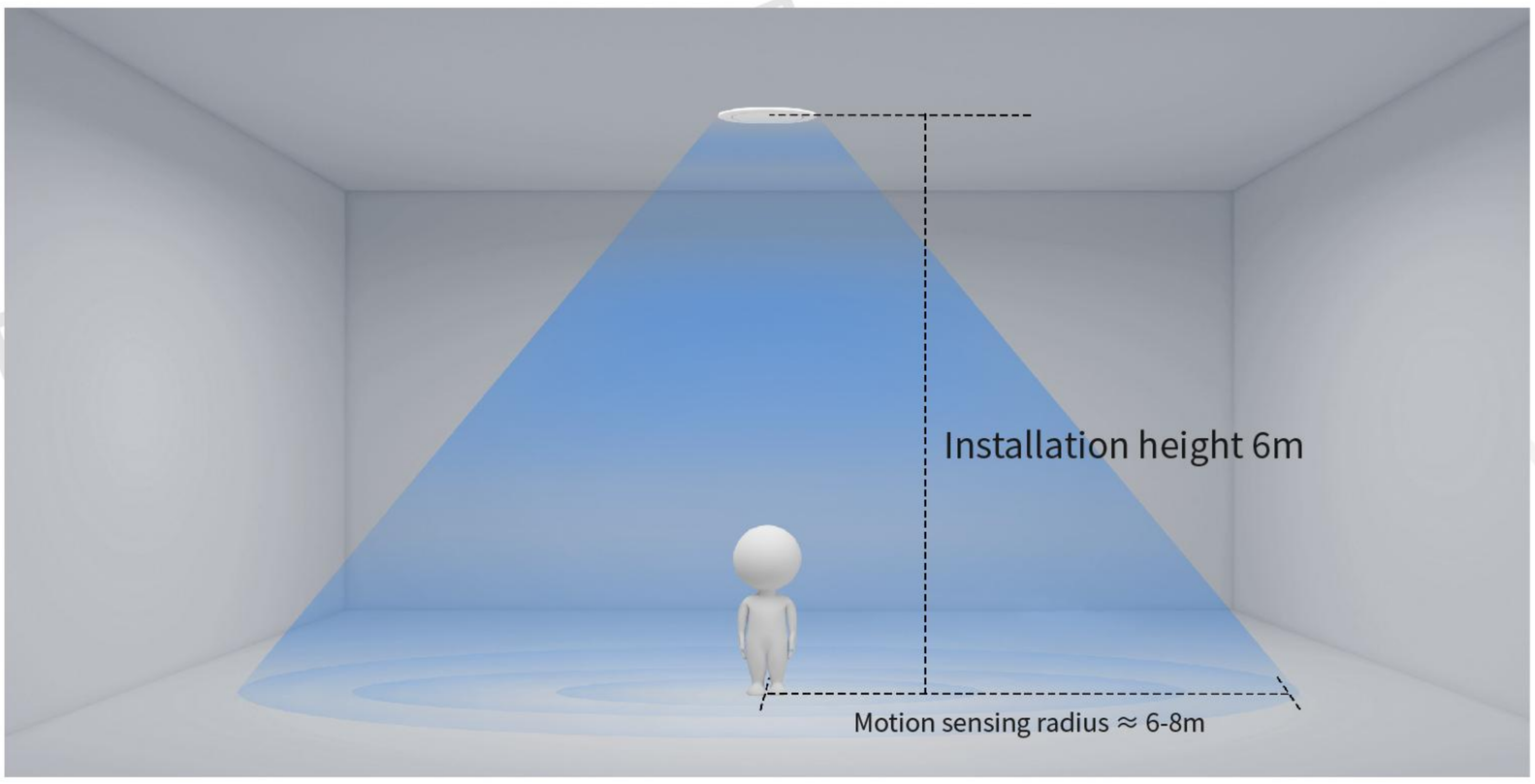
Environment & Lifespan

Operating Temperature	-20~+85°C
Storage Temperature	-20~+105°C

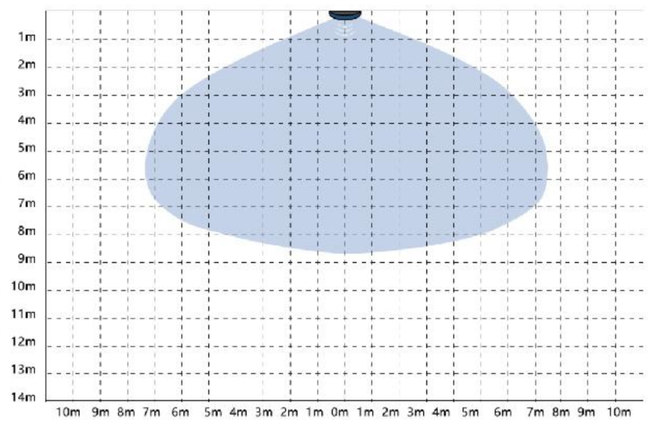
Remarks:

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

Detection Schematic



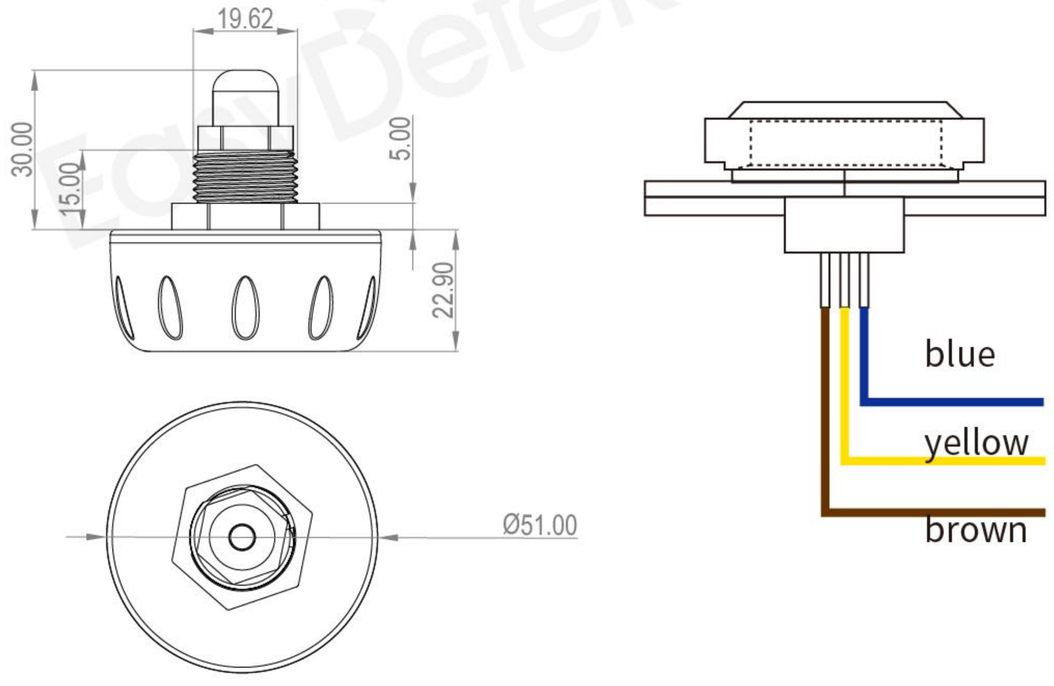
Radar Sensing Schematic



Motion sensing radius ≈ 6-8m

产品尺寸图/引脚说明

Size unit：mm

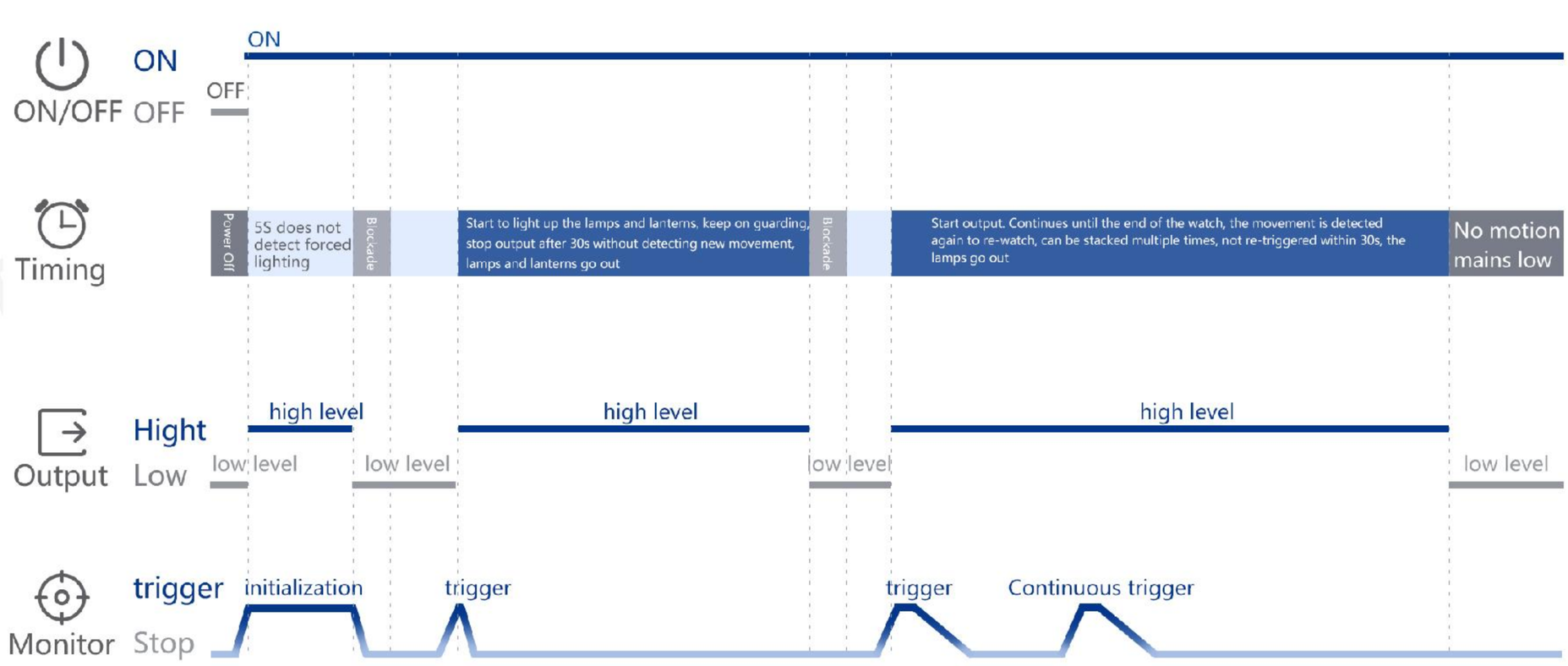


EDC196K Dimensional tolerance: ±0.2

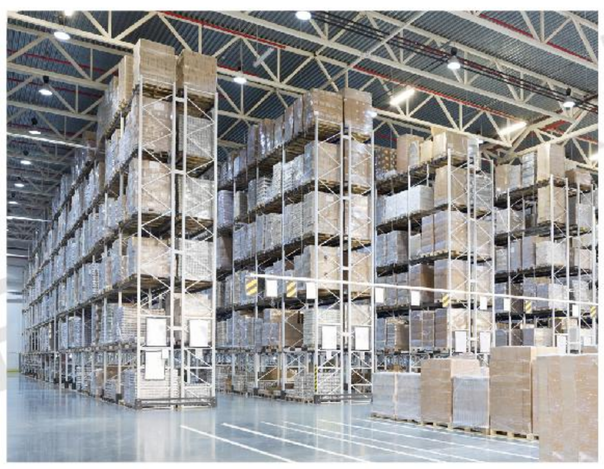
Pin Description

Line color	Description
brown	GND
yellow	Power supply 12V DC
blue	PWM Output

Timing Diagram

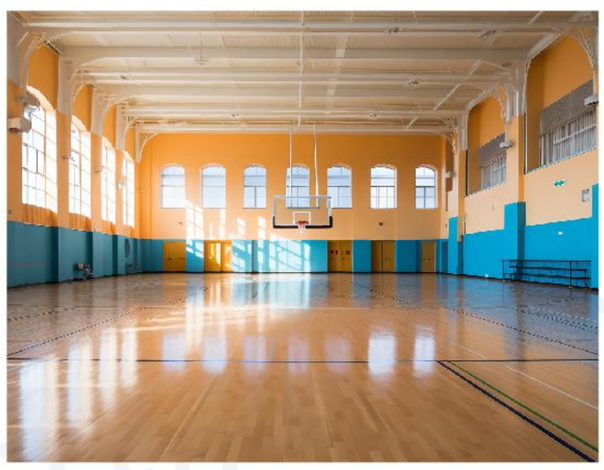


Application Scenarios/Products



warehouse

factory floor

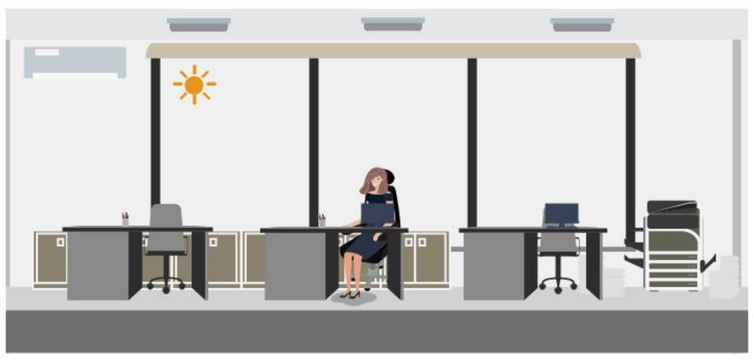


gymnasiums

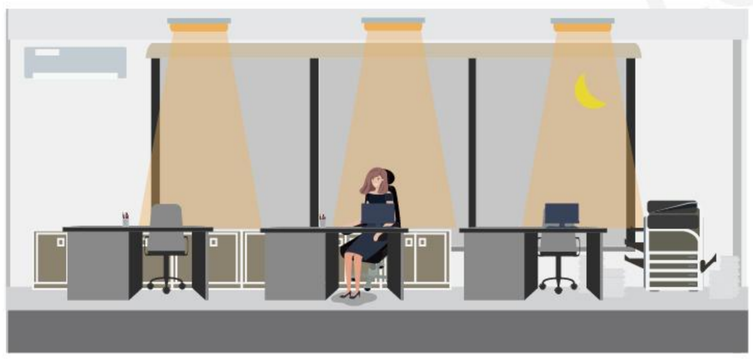
high bay light

high ceiling light

Functional Description



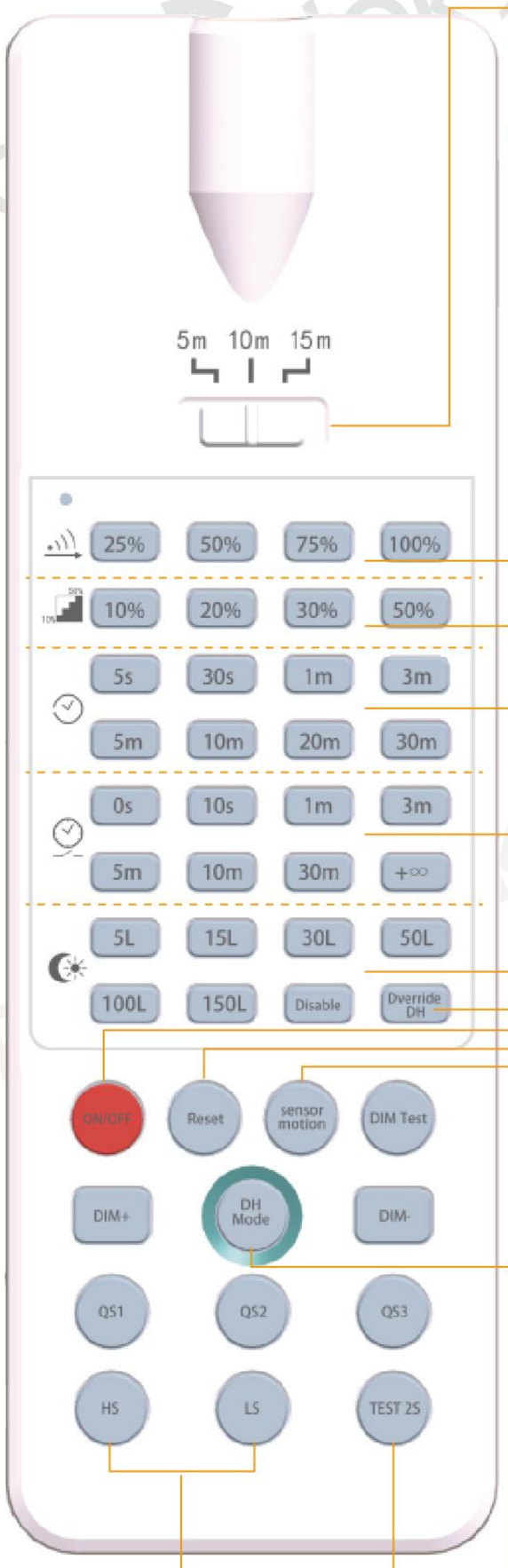
After initialization is complete, when the ambient light is sufficient, the sensor detects moving objects and the light will not automatically turn on



When the ambient light is insufficient, the sensor detects moving objects and the light automatically lights up

The moving object leaves, and after a preset delay, t he light will automatically turn off

Remote Control Description



5m 10m 15m	Remote Control Distance Toggle to set the distance range at which the remote controls the sensor.
	Detection range can be set Detection range: 25%/50%/75%/100%.
50% 10%	Brightness can be set: 10% / 20% / 30% / 50%
	delay time Set the time to maintain 100% brightness 5S/30S/1min/3min/5min/10min/20min/30min.
	Watchdog delay time You can set the low light delay time 0S/10S/1min/3min/5min/10min/30min/+∞
	Light sensing value can be set light sensing value:5Lux/15Lux-/30Lux/50Lux/100Lux/
Dverride DH ambient brightness	Press and hold 3S this key, the sensor automatically learns to recognize the current ambient brightness and automatically saves this ambient brightness value as the light sensing threshold setting.This function enables the sensor to avoid the mutual interference of natural light and light in various installation environments, and effectively turn on/off the lamps and lanterns with the overall ambient brightness as the reference value.
ON/OFF ON/OFF	Press the "ON/OFF" button, the load lamp enters the mode of always on or always off, and the sensing function is canceled.
Reset reset button	Press "Reset" to return all settings to the default state.
Sensor motion Function Conversion	Press the "Sensor motion" key to change from constant on/off mode to sensor mode (the function returns to the last setting).
DIM Test Dimming Test	Effective in always-on mode, linear dimming
DIM+ DIM- Dimmer Key	Effective in always-on mode, default 100%, 1-10 level increment, press DIM-, PWM-10%, press DIM+,PWM+10%
DH Mode Optical control adaptive	N/A
QS1 QS2 QS3	N/A
TEST 2S Test Key	After pressing the test button, enter the sensing distance default 100%, photosensitive invalid, delay 2s, no second-order brightness, exit after 2min, or exit after power-off
HS high sensibility LS low sensibility	N/A

Product Naming Law

ED	Frequency Band	Product Categories	Product Subdivision	Product Number	Delay Time	Serial number
ED	C	1	9	6K		
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

【material number】: EDC196K-Y-01

【hardware】:

【software】:

Historical Revision Record

Version	Time	Description	Note
V1.0	2025-01-21	First edition	-

Precautions

1. When installing the product, it is recommended to maintain a distance of 5-12mm between the antenna board and the metal plane, and not to tightly adhere or touch the metal plane.
2. The product has good penetration effect on plastic and wood materials. It is recommended not to install metal, glass, or ceramic in front of the antenna to avoid affecting the actual sensing effect.
3. Please use a power supply with low ripple to avoid sensor interference and false alarms. It is recommended to ensure that the power supply ripple is within 50mV-100V.
4. When multiple radar sensors are applied in the same site, it is recommended that the installation distance of the product be greater than 2m. Installing too close may result in occasional false alarms from individual sensors.
5. The radiation surface of the antenna should avoid being covered by high current circuits to prevent interference with the normal radiation of the antenna, leading to false alarms or changes in the sensing range.
6. When microwave sensors are used in conjunction with wireless communication modules (NB, Bluetooth, WIFI, 2.4G modules), they should be spaced apart. It is recommended to maintain a distance of at least 1m from high-power wireless communication devices such as routers and wireless hotspots during installation.
7. The light sensitivity threshold is the test value under clear weather conditions, no shadows, and diffuse reflection of ambient light.
8. The antenna surface of microwave sensors should avoid facing directly towards the driving power supply, and should also be kept as far away as possible from high-power components such as rectifier bridges, transformers, and switching tubes of the driving power supply to avoid false alarms.
9. 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.