(Antenna surface) EDC15F

Product Description

■ Longer sensing distance than infrared sensing module wider angle, no dead zone, lens and lens aging problems;

■ Not affected by temperature, humidity, airflow, dust, noise, light and dark, anti-interference ability;

■ Can penetrate acrylic, glass and thin non-metallic materials;

■ Built-in MCU, embedded multiple digital filtering algorithms, with a higher degree of immunity.

Electric performance

Operation frequency :	5835-5875MHz
Input voltage :	7-12V
Output High Level:	4.8V±0.3V
Output Low Level:	0-0.5V
3db Beam Angle:	91°（XZ plane） 93°（YZ plane）
Operation current:	18.5±1mA
Sensing Distance	4-6m
Delay time:	30s±2s
Working temperature:	-20... + 85℃
Savings temperature:	-20... + 105℃

Remarks: 1. The test distance range is based on the module hanging height 3m, indoor environment test, the tester's height is 170cm, the weight is 65-75kg, and the walking speed is 1m/s (2 steps per second). Different installation scenarios may cause range changes. Subject to actual test;

2. Due to the spectral characteristics of the photosensitive device, the threshold is uniformly tested under natural light conditions;

3. The delay time can be customized according to customer needs, with a delay tolerance of ±10%.

4.This product is suitable for scenarios where the installation height is less than 4m. If the installation height is greater than 4m, extreme conditions such as inability to sense may occur. If you need to exceed this height, please contact the relevant technical personnel.

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Typical application products


Downlight

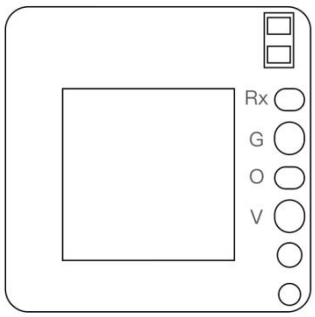

Tube


Ceiling Light


Panel Light

*These are typical applications and can be expanded to include more products.

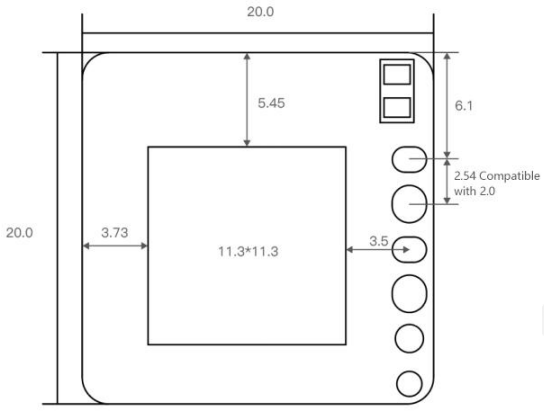
Pin description



EDC15F Pin Description

Pin	Description
RX	Reserve common IO port
VCC	7-12V power supply
OUT	Output signal
GND	Ground

Product size chart



EDC15F Dimensional tolerance: ±0.2mm (Pin welding hole: φ0.9mm Tolerance: ±0.05mm)

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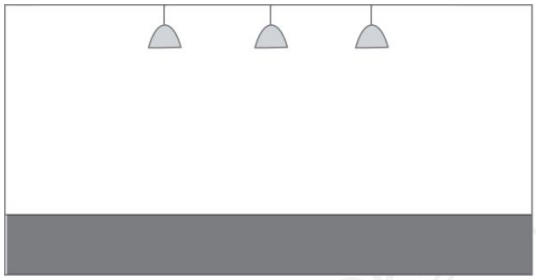
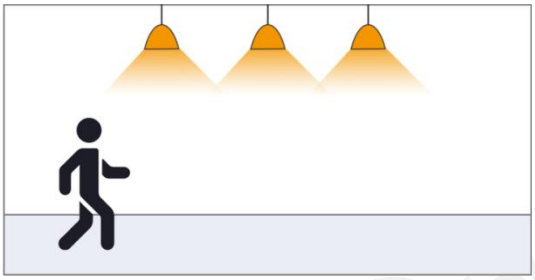
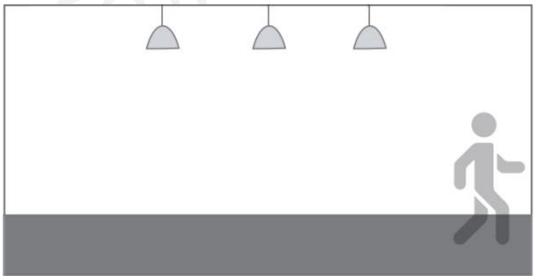
Function Description



If no moving objects can be detected, and the lamp goes out.



When the sensor detects a moving object, the light automatically lights up at 100% brightness and enters the preset delay time.

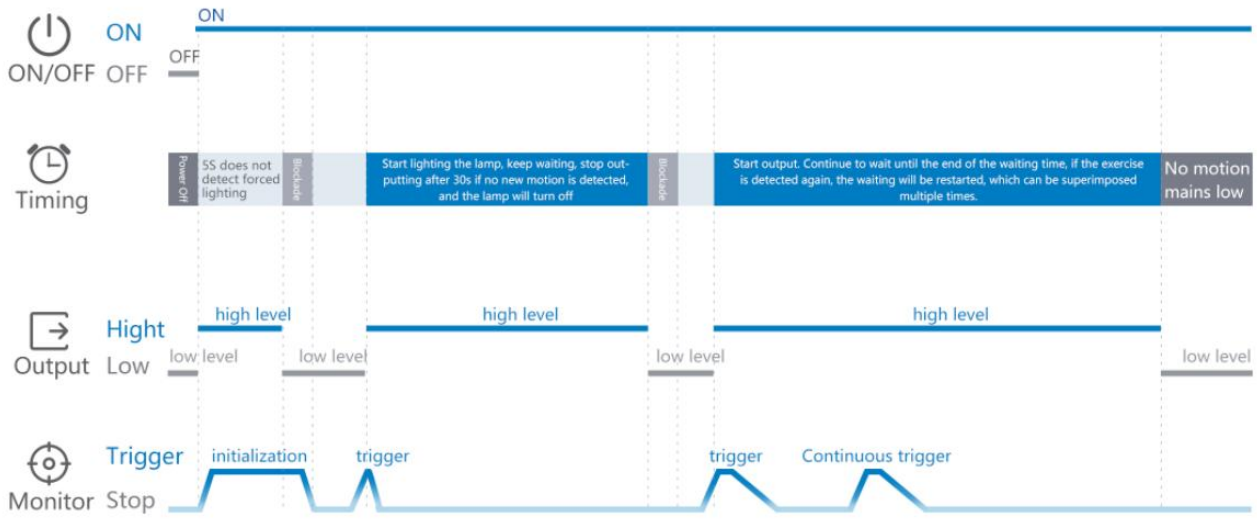


After the delay time, when the sensor cannot detect any moving objects, the lamp will be off.

Packaging Information

Support packaging:☑ Blister packaging ☑ Bubble bag packaging ☑ PE bag packaging

Timing Diagram



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Precautions

1. During product installation, the module is required to keep a certain height from the metal plane. It is recommended that the module should be controlled at 5-12mm from the metal plane and should not be close to or touch the metal plane, otherwise the product may not work normally!
2. The product has good penetration effect on plastic and wood. At the same time, avoid metal shielding in front of the antenna, which will reflect microwave and affect the actual induction effect.
3. The glass or ceramic in front of the antenna will bring reflection and penetration attenuation of electromagnetic wave and reduce the sensing distance of the sensor, and the attenuation will be more serious with the increase of thickness.
4. Please use the power supply with small ripple, especially the low-frequency ripple, which is easy to interfere with the work of the sensor, resulting in false alarm of the sensor. Recommended power supply output capacitance 470 UF; It is suggested that the power ripple should be within 100mV, and the effect is better when the ripple reaches 50mV.
5. The signal output of the sensor has weak load current capacity, and may not be able to directly drive the back-end equipment.
6. When multiple sensors are applied in the field, the recommended product installation spacing is greater than 1.5m. The installation distance is too close, which may cause individual cycle false alarms.
7. The antenna surface shall be protected from high current circuit coverage. The electromagnetic field generated by the circuit loop will interfere with the normal radiation of the antenna, resulting in false alarm or changing the induction range.
8. If microwave sensor and wireless communication module (Nb, Bluetooth, WiFi, 2.4G module) coexist, the installation spacing between IOT module antenna and microwave module antenna shall be enlarger and more. At the same time, try to shield or not receive the trigger signal of the microwave module during the communication of the Internet of things module; Microwave sensors or products with built-in microwave sensors will be interfered by wireless routers. It is recommended to keep a distance of more than 1m from routers, wireless hotspots and other high-power wireless communication equipment during installation.
9. The light sensor threshold is the test value under the conditions of sunny environment, no shadow and diffuse reflection of ambient light. The wavelength of light sensing detection light covers 400nm ~ 1100nm (including visible light, LED lamp and infrared light band). The illuminance value detected by light sensor may be different in different periods and different weather conditions.
10. The antenna surface of the microwave sensor shall avoid facing the AC driving power supply, and shall be far away from the rectifier bridge, transformer, switch MOSFET and other high-power devices of the driving power supply as far as possible, so as to avoid the power frequency signal interfering with the microwave module and causing false alarm.
11. In the practical application environment, the electromagnetic wave emitted by microwave sensor, the different reflectivity of obstacles will lead to different induction range, which is a normal phenomenon.
12. Product specifications and parameters may be upgraded without prior notice.

Product Naming Law

ED ED	Frequency section C	Product categories 1	Product subdivision 5	Product Number F	Time delay 30 Y	Serial number
	☐S 3GHz	☑1 Microwave sensor module	☐0 Ultra-low-power series	0-9，A-Z	☐Y Has light sensor	
	☐F 6GHz	☐2. Microwave radar switch	☐1 Flagship series		☑N no light sensor	
	☑C 5.8GHz	☐3 Radar antenna	☐2 Short-distance series		☐P programmable	
	☐Q 24GHz	☐4 MCU	☐3 Adjustable series			
	☐V 60GHz	☐5 Microwave power supply	☐4 External antenna series			
	☐W 77GHz	☐6 IC	☑5 General Series			
	☐X 10.5GHz	☐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

Revision	Date	Description	Remarks
V1.0	2023-07-13	First edition	

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