

GC-SR501 Pyroelectric Body Infrared Sensor Module Instruction

V20190426

**Product Parameter**

Working voltage:	DC4.5—20V
Static current:	50 μ A
Level output:	high 3.3V , low 0V
Output duration time:	adjustable (3 seconds—660 seconds)
Induction blocking time:	5 seconds
Trigger mode:	L is non-repeatable , H is repeatable
Sensing range:	sensing distance is adjustable (3 meters—7meters), angle<120°
Working temperature:	-15℃ to +70℃
PCB size:	32*24mm

Using instructions

- 1、 Sensor module will have about 1minute's initialization time after switch on. During this period, the module may output 0-3 times of malfunctions at intervals, and enter the standby mode after a minute.
- 2、 Lights and other interference sources should be avoided as far as possible to the lens on the surface of the module directly. So as to avoid the interference signals to cause malfunctions; the using environment should avoid the wind, it will also interfere the sensor.
- 3、 The window of the probe is rectangular, and the unit doublet (unit A unit B) is located at both longer sides, When the human body walks from left to right, the infrared spectra reached the unit doublet time; Distance has difference value, the bigger value, the sensor more sensitive. Conversely, when the human body is headed toward the probe or walks from top to bottom or from bottom to top, unit doublet does not detect the change in the infrared spectral distance, and there is no difference, so the induction is insensitive or not working; therefore, when installing the sensor, Make the direction of the unit doublet of the probe parallel with the direction of the most active human body, and make sure the human body passes through the unit doublet probe. In order to increase the range of sensing angles, this module uses a circular lens, which also makes the probes on all four sides, but the left and right sides still have a larger sensing range than the upper and lower directions, and with strong sensitivity. The installation should follow the above requirements.

Product description :

Fresnel lens



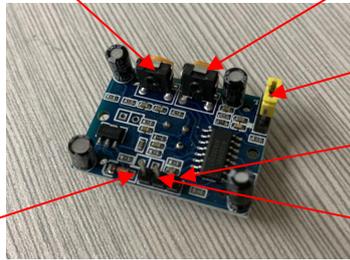
CDS Photoresistance

PIR probe

RT temperature compensating resistance

Output continuous time can adjust potentiometer, clockwise output time is longer, counterclockwise is reduced relatively.

Inductive distance is to adjust potentiometer, clockwise sensing distance is longer, counterclockwise is shorter



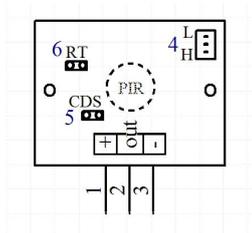
Jumper selection trigger mode

GND -

VDD +

Output port

Module external schematic diagram :

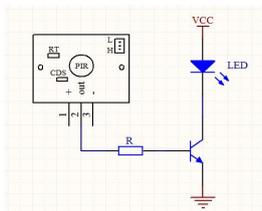


Description :

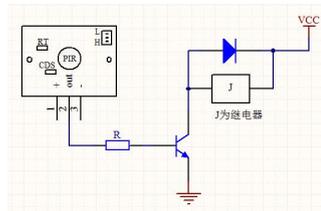
- 1、VDD (4.5V~20V)
- 2、Output port (Output high level=3.3V)
- 3、GND
- 4、L is non-repeatable trigger, H can be repeatable trigger
- 5、CDS Photoresistance

Classic application circuit diagram :

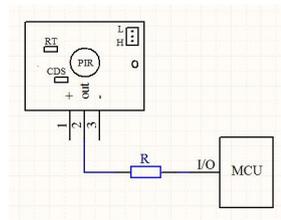
Output control LED light



Output control relay



Output signal to MCU



Application range:

1. Human Body Sensing Lamps/Toys
2. Security Products
3. Industrial Automation Control
4. Automatic Induction Device Settings
5. Automatic Control of Battery Power Supply etc

Output through the optocoupler to control the AC load

