

PIR sensors

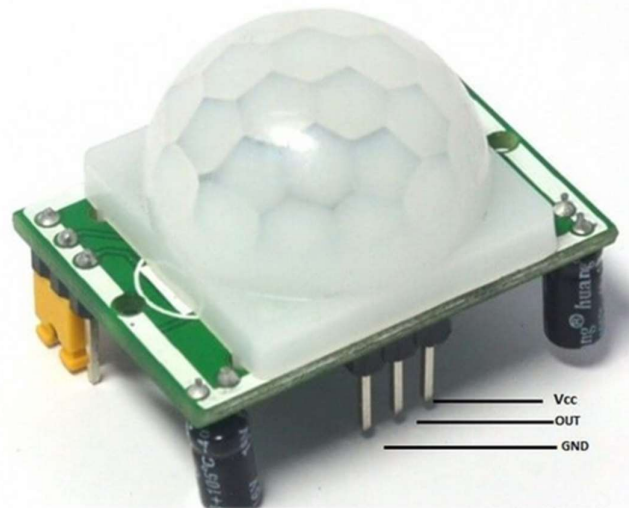
Working principal

A passive infrared sensor is an electronic sensor that measures infrared light radiation from objects.

A person or an object which emit heat energy in the form of radiation can be detected by this sensor and the radiation can be altered depending upon the different surface characters.

The most commonly used PIR sensors have an effective range of 10 meters and a field of view less than 180 degrees.

PIR Sensor - (Motion Sensor or Motion Detector)



ALTERNATIVE OF PIR SENSORS

Microwave sensors can be used as an alternative for PIR sensors because in PIR sensors they require some movement across the infrared beam and PIR sensors generally do not have a wide angle whereas microwave sensors are ideal for large spaces

ADVANTAGES

1. They are used for security purposes.
2. They can be used in automatic door and light sensors.
3. PIR sensors are affordable.
4. It can even recognize the change in surface.

DISADVANTAGES

1. It can not determine who or what moved.
2. PIR sensors can be affected by climatic changes.
3. Most of these sensors cover very less area.
4. To get a detailed information we have to use an active IR sensor.
5. It can easily be fooled by the intruders.

APPLICATIONS

1. They can be used for residential security purpose.
2. Human detection robot using PIR sensor.
3. It can be used for automatic light and doors.