

PIR SENSOR A GOON IN SENSING

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ABSTRACT

We know that now a day's maximum projects are based on the sensing technology. So PIR is one of the sensing technologies. Due to its compact size and various types of PIR sensor it is flexible for a user to use it as per requirement according to the project. so the ease of its use increases and the sensing process becomes flexible.

INTRODUCTION

A PIR detector is a motion detector which senses the heat that living body emits. it is also fitted to security lights so that they will switch on automatically. They are very useful in home security systems. The sensor is called passive as in place of emitting a beam of light or microwave energy that must be interrupted by a passing person in order to "sense" that person, the PIR is very sensitive to the infrared energy emitted by every living thing. When something walks into the detector's field of vision, the detector "sees" a sharp increase in infrared energy. when a person approaches a PIR sensor light turns on, but will not react to a person standing still. The in this manner the

lights are designed. A moving person tends a sudden change in infrared energy, and motionless body emits a slower change. Slower changes may also caused by gradual fluctuations in the temperature of the environment. the light if sensitive to these slower changes then it would react to the sidewalk cooling off at night, in place of the motion of a burglar.

TYPES OF PIR

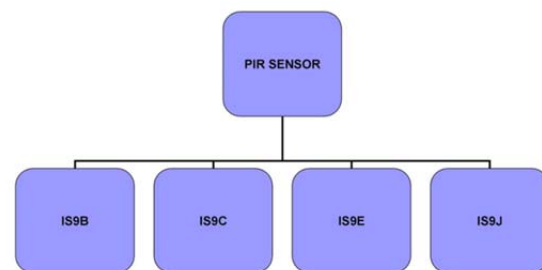


FIG:1: Tree of PIR

1 IS9B



FIG:1: Image of IS9B

- Rated Voltage : 230V AC 50Hz
- Load Wattage : Max.1500W incandescent bulb or Max.300W fluorescent lamp
- Detection Area : Max. 5 meters radius
- Detection Angle : 360° around
- Time delay: From 10±5 seconds to 4±1 minutes adjustable
- LUX Control Level : From daytime to darkness adjustable
- Protection Class : IP44

2 IS9C



FIG:3:Image of IS9C

- Rated Voltage : 230V AC 50Hz
- Load Wattage: Max. 300W incandescent bulb or Max. 150W fluorescent lamp
- Detection Area : Max. 8 meters
- Detection Angle : Max. 90°
- Time delay: From 10±5 seconds to 4±1 minutes adjustable
- LUX Control Level: From daytime to darkness adjustable
- Protection Class : IP44

3 IS9E



FIG:4:Image IS9E

- Rated Voltage : 230V AC 50Hz
- Load Wattage: Max. 1000W incandescent bulb or Max. 300W fluorescent lamp
- Detection Area : Max. 14 meters
- Detection Angle : Max. 120°
- Time-delay: From 10±5 seconds to 4±1 minutes adjustable
- LUX Control Level : From daytime to darkness adjustable
- Protection Class : IP44

4 IS9J



FIG:5:Image of IS9J

- Rated Voltage : 230V AC 50Hz

- Load Wattage : Max. 100W incandescent bulb or Max. 300W fluorescent lamp
- Detection Area : Max. 10 meters.
- Detection Angle : Max. 100°
- Time delay : From 60±5 seconds adjustable.
- LUX Control Level : At night or darkness
- Protection Class : IP44

- [3] . Hao Q, Hu F, Xiao Y (2009) Multiple human tracking and identification with wireless distributed pyroelectric sensors. IEEE Syst J 3:428–439
- [4] . Hao Q, Hu F, Lu J (2010) Distributed multiple human tracking with wireless distributed pyroelectric sensors. In: Proceedings of IEEE Conference on Sensors 946–950

CONCLUSION

From the above studies it is seen that the use of such effective tool like PIR Sensors will make the things simple and hence the result could be obtained with more ease. The detection will be simple. It is seen that the better system can be developed with PIR Sensor.

ACKNOWLEDGMENT

The work cannot be perfect without the helping hand of an experience person. The knowledge and experience helps a lot to overcome the problems while performing the task. I thank **Mr. U.B. Vaidya (prof. Electrical dept. at R.C.E.R.T Chandrapur)** and **Mr. P.S. Padewar (prof. Electronics dept. R.C.E.R.T, Chandrapur)** for their guidance and support .

REFERENCES

- [1] Data sheet of Aries industries.
- [2]. Hao Q, Brady DJ, Guenther BD, Burchett J, Shankar M, Feller S (2006) Human tracking with wireless distributed pyroelectric sensors. IEEE Sens J 6:1683–1696