

PIR Vs. Microwave Sensors

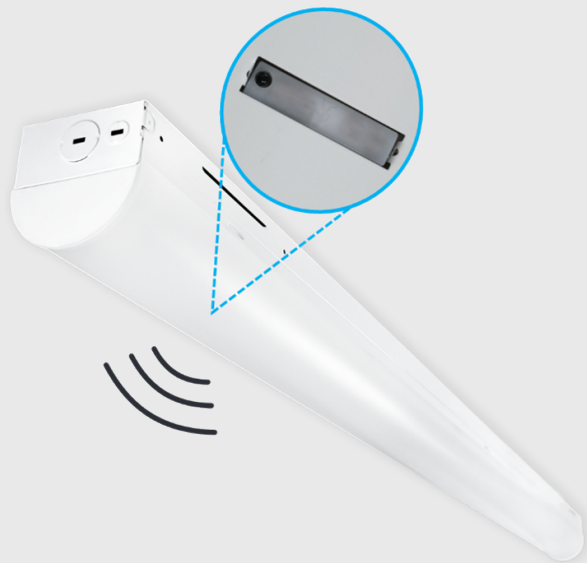


PIR Sensors

PIR (Passive Infrared) sensors detect heat and react to changes in temperature.

This sensor technology tracks movement within a defined field of vision, so it cannot detect through or around obstacles.

PIR sensor technology is passive, which means it is not actively looking for a signal. It simply waits for a movement to cross the line of sight before reacting and triggering.

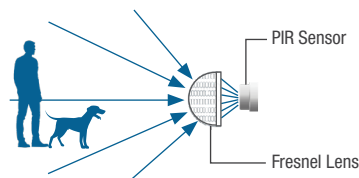


Microwave Sensors

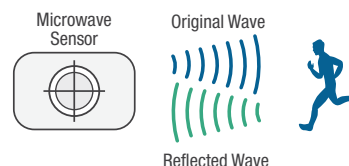
Microwave sensors work by constantly emitting microwave signals and measuring how long it takes for the signal to reflect back to the sensor, making it an active technology.

When movement occurs within the detection range of the sensor, these signals become disrupted. The sensor then recognizes this change in the signals and triggers the luminaire to turn on.

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PIR Sensors



Microwave Sensors

Ideal Applications*

Aisle warehouse spaces
Offices
Corridors
Basements
Changing rooms
Restrooms

Open warehouse spaces
Conference rooms
Parkades
Restaurants
Stairwells

Limitations

High-temperature environments and applications

Applications in proximity to high vibrations, such as large machinery, fans, HVAC systems and motors, large metal objects and surfaces, as well as the movement of small objects within the environment (ex. tree branches, curtains, etc.) can cause false triggering

Sensitivity

Low sensitivity in high temperature environments

Highly sensitive and stable detection in all temperatures

Coverage

Limited

Large

Detection

The target or movement must pass through the sensor's field of vision in order to be detected

Can detect movement through walls and other non-metallic obstacles

Environment

Smaller and more defined spaces

Extended area applications

Trigger Method

Changes in temperature/heat signals

Changes in reflected wave signals

Sensor Installation

Must be installed on the outside of a luminaire

Can be installed behind the lens of a luminaire

* These ideal applications are provided for reference only. Sensor performance and overall sensor technology appropriateness may vary depending on the specific elements present in each application. Please refer to the Limitations section above for more details.