


# PIR-234-E/PIR-234-WF
# PIR-234L-E/PIR-234L-WF

Motion, Temperature, and Humidity Sensor Module

## Features

- Adjustable Time-Delay
- 4 PIR Motion Sensors for increased sensitivity and range
- Internal Photosensor for Smart Switch Control
- LED Indicator for PIR/Temperature Sensor
- Temperature Sensor for Measuring Room Temperature
- Suitable as either Temperature or Fire Alarm
- Relay Output Can be Used to Control Light Via the PIR/Temperature Sensor
- Provide High Power Relay Output to turn ON/OFF the Lighting
  Support Lighting Module (Max.):
  - ☐ Incandescent Lamp: 40 W/ 220 VAC * 8 Sets
  - ☐ LED(Electronic ballast): 40 W/ 220 VAC * 10 Set
- Wide range of Communication Interfaces and Protocols
- Compatible with IEEE802.11b/g/n standards
  (PIR-234-WF, PIR-234L-WF Only)
- Support infrastructure and limit-AP modes for wireless networks
  (PIR-234-WF, PIR-234L-WF Only)
- Ceiling or Surface-Mount Design
- PIR-234-WF, PIR-234L-WF no CE ,FCC and UKCA Certification

## Introduction

PIR-234/PIR-234L series modules have 4 PIR Motion Sensors to increase sensitivity and the ability to detect infrared waves generated by the human body within a diameter of approximately 9 and 14 meters, with a coverage area of 360° for indoor motion detection. The modules can be configured to automatically switch on a light if motion is detected. The modules also contain a temperature and humidity sensor for measuring indoor temperature and humidity, or it can be configured to activate a fire alarm. A wide range of interface connections can be selected to suit individual needs, including RS-485/Ethernet/Wi-Fi, provide support for the DCON and Modbus RTU/TCP protocols, and can be easily integrated into existing HMI/SCADA/central control systems.

The screw-free quick-connect connector and the DIP and rotary switches make the modules easy to install, repair, and maintain. The casing of each module is made from UL94-V2 rated fireproof material, and the white minimalist exterior design ensures that it is easy to match with interior decoration.

## Applications

- Common lighting in staircases
- Garden lights
- Lighting for changing rooms in shops
- Lighting for Conference Room, Classroom, Pantry Room
- Corridor lighting, and many more situations





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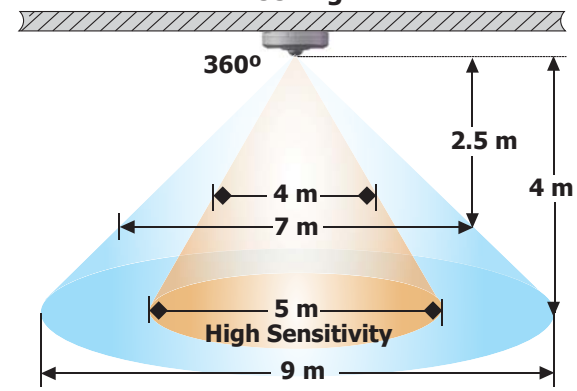
## Specifications

| Model | PIR-234-E | PIR-234-WF | PIR-234L-E | PIR-234L-WF |
|---|---|---|---|---|
| **EMS Protection** | | | | |
| EFT (IEC 61000-4-4) | ±4 kV for Power Line | | | |
| ESD (IEC 61000-4-2) | ±4 kV Contact for each Terminal, ±8 kV Air for Random Point | | | |
| **LED Indicators** | | | | |
| Status | Yes,1 as Power/Communication Indicator. 1 as Alarm Indicator. | | | |
| **PIR** | | | | |
| Sensor | 4 | | | |
| Delay Time | Hardware: 8-step Switch-selectable (seconds): 6, 16, 33, 66, 131, 262, 524, 1049<br>Software: 16-step (seconds): 2, 4, 6, 8, 16, 33, 49, 66, 131, 262, 393, 524, 1049, 2097, 3146, 4194 | | | |
| Detection Height | 4 m Max. | | | |
| Detection Field of View | 360°; 9 m Diameter Max. | | 360°; 14 m Diameter Max. | |
| PIR Response Time | 1 second | | | |
| **Temperature Measurement** | | | | |
| Range | -40 to +120°C | | | |
| Fire Alarm | 65°C (Programmable) | | | |
| Resolution | 0.01°C | | | |
| Accuracy | ±0.5°C (at 0 to 60°C) | | | |
| **Humidity Measurement** | | | | |
| Range | 0 to 100% RH | | | |
| Resolution | 0.01% RH | | | |
| Accuracy | ±5% RH | | | |
| **Wi-Fi** | | | | |
| Transmission Distance (LoS) | - | 50 m (LOS) | - | 50 m (LOS) |
| Standard Supported | - | Wi-Fi: IEEE 802.11 b/g/n | - | Wi-Fi: IEEE 802.11 b/g/n |
| Mode | - | Infrastructure/Limited AP | - | Infrastructure/Limited AP |
| Encryption | - | WEP, WPA ,WPA2 | - | WEP, WPA ,WPA2 |
| **Relay Output** | | | | |
| Channels | 2 | | | |
| Type | Power Relay, Form A (SPST N.O.) | | | |
| Contact Rating | 16 A @ 250 VAC or 16 A @ 30 VDC | | | |
| Number of Lighting Fixture | (1).Incandescent Lamp: 40W/ 220VAC * 8 Sets<br>(2).LED(Electronic ballast): 40W/ 220VAC *10 Sets | | | |
| **COM Ports** | | | | |
| Ports | RS-485 X 1 and Ethernet/PoE X1 | | | |
| Baud Rate | 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 | | | |
| Protocol | DCON, Modbus RTU, Modbus TCP, MQTT | | | |
| Node Address | Hardware: 160 to 191 / Software: 1 to 255 | | | |
| **Power** | | | | |
| Reverse Polarity Protection | Yes | | | |
| Input Range | 10 to 48 VDC, PoE | | | |
| Consumption | 2 W | 3 W | 2 W | 3 W |
| **Mechanical** | | | | |
| Dimensions (mm) | Ø150 x 53 (Ø x H) | | | |
| Installation | Ceiling /surface mounted | | | |
| Ingress Protection Rating | IP20 | | | |
| **Environment** | | | | |
| Operating Temperature | 0 to +35°C | | | |
| Storage Temperature | -30 to +80°C | | | |
| Humidity | 10 to 90% RH, Non-condensing | | | |

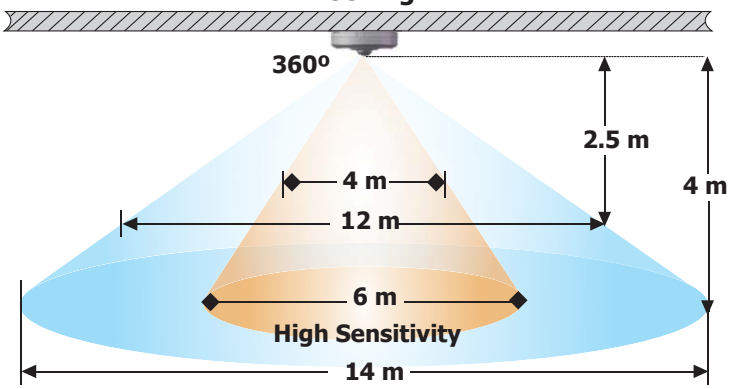
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## Operating Distance

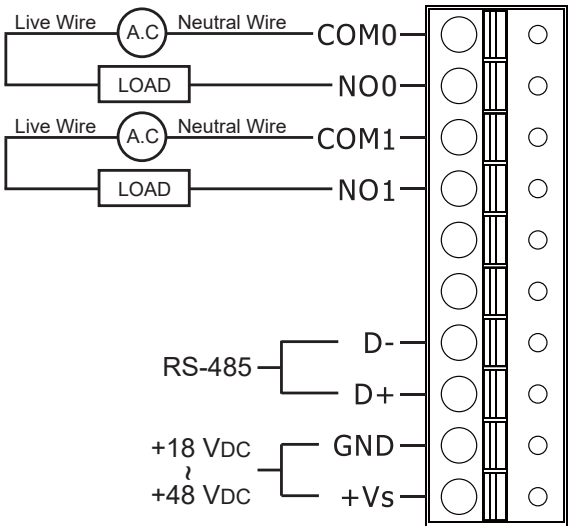
**PIR-234 Series**



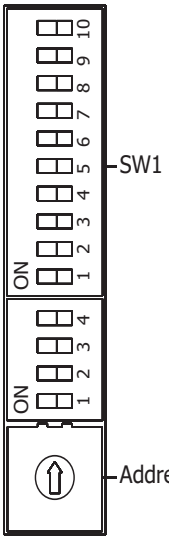

**PIR-234L Series**




## Pin Assignments



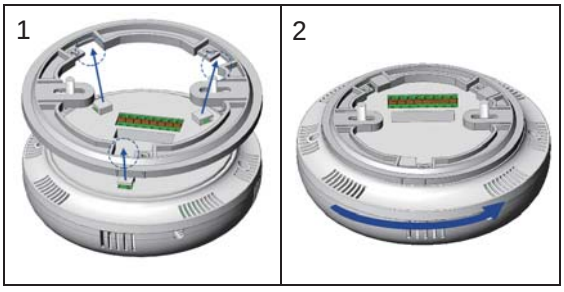

## DIP Switch Settings




| SW1 | ON | OFF |
|---|---|---|
| 10 | ON Time Control | |
| 9 | | |
| 8 | | |
| 7 | DO Control | |
| 6 | | |
| 5 | | |
| 4 | INIT | Run |
| 3 | High Node | Low Node |
| 2 | SW Config. | HW Config. |
| 1 | DCON | Modbus |
| 4 | Enable PIR | Disable PIR |
| 3 | | |
| 2 | | |
| 1 | | |

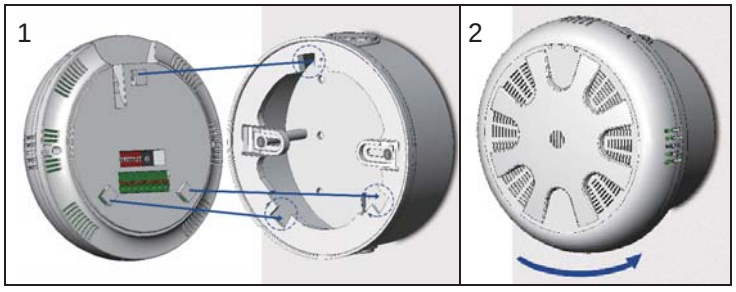
## Mounting

### Ceiling Mounting

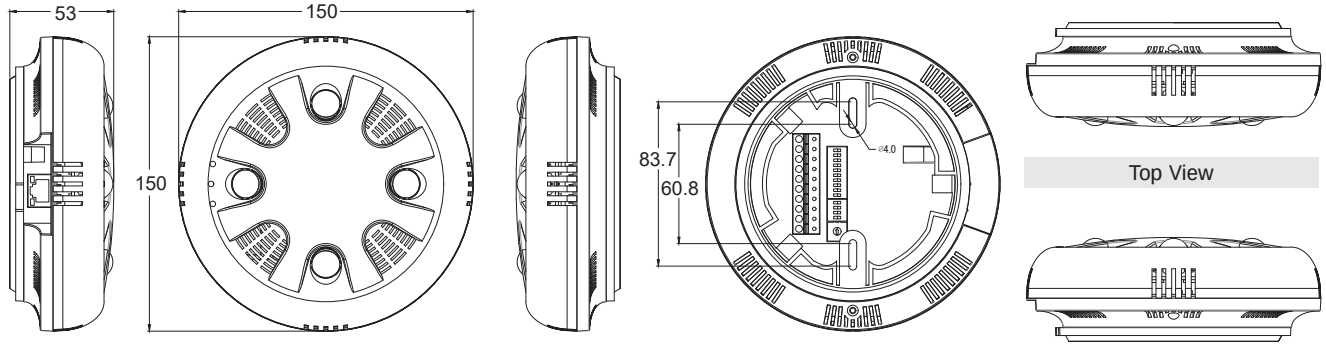



### Wall Mounting (+ External Wall Box EWB-C150)






## Dimensions (Units: mm)




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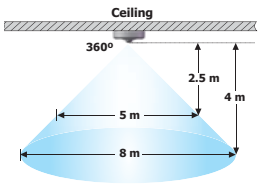
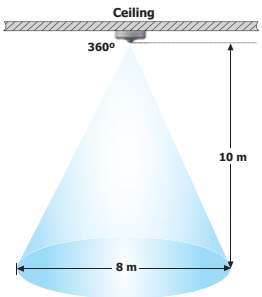
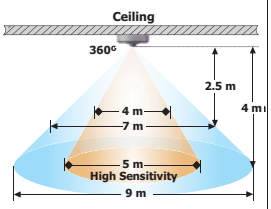
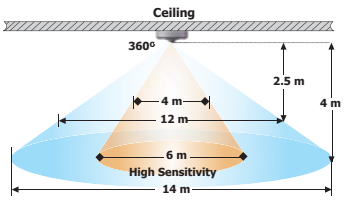
## Ordering Information

| | |
|---|---|
| **PIR-234-E CR** | PIR Motion Sensor, Temperature and Humidity Sensor Module(High Sensitivity / Height 4 m / Diameter 9 m)(Ethernet) (RoHS) |
| **PIR-234-WF CR** | PIR Motion Sensor, Temperature and Humidity Sensor Module(High Sensitivity / Height 4 m / Diameter 9 m)(Wi-Fi)(Asia Only) (RoHS) |
| **PIR-234L-E CR** | PIR Motion Sensor, Temperature and Humidity Sensor Module(High Sensitivity / Height 4 m / Diameter 14 m)(Ethernet) (RoHS) |
| **PIR-234L-WF CR** | PIR Motion Sensor, Temperature and Humidity Sensor Module(High Sensitivity / Height 4 m / Diameter 14 m)(Wi-Fi)(Asia Only)(RoHS) |

## Accessories

| | |
|---|---|
| EWB-C150  | External Wall Box for PIR-200 series |
| CA-RJ45-04  | RJ45 Cable, Male-Female, 30cm |

## Selection Guide

| | Human Motion Detection | | | Human Presence Detection | |
|---|---|---|---|---|---|
| Model | **PIR-130-AC<br>PIR-130-DC** | **PIR-230-E<br>PIR-230-WF** | **PIR-231-E<br>PIR-231-WF** | **PIR-234-E<br>PIR-234-WF** | **PIR-234L-E<br>PIR-234L-WF** |
| |  |  |  |  |  |
| Applications | Corridors, Toilet, Stairwells, Shoe Changing Area/ Entrance Area | | Hotel, Labby, High-Ceiling Factory/Warehouse | Meeting Room, Bedroom, Living Room, Locker Room, Pantry Room | Conference Room, Classroom |
| Sensitivity | standard | | standard | High | High |
| Detection Height Max. | 4 m | | 10 m | 4 m | 4 m |
| Diameter Max. | 8 m | | 8 m | 9 m | 14 m |
| Operating Distance |  | |  |  |  |