



PIR-230-E/BLE/WF PIR-231-E/BLE/WF

Motion, Temperature, and Humidity Sensor Module

Features

- Adjustable Time-Delay / Lux / Sensitivity (Lux/Sensitivity PIR-230 Only)
- 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
- Suitable for loads up to 1500 W (Incandescent) and 300 W (Fluorescent)
- Fluorescent (T8) Loading Capability
- Wide range of Communication Interfaces and Protocols
- Compatible with IEEE802.11b/g/n standards (PIR-230/PIR-231 Only)
- Support infrastructure and limit-AP modes for wireless networks (PIR-230-WF/PIR-231-WF Only)
- Ceiling or Surface-Mount Design



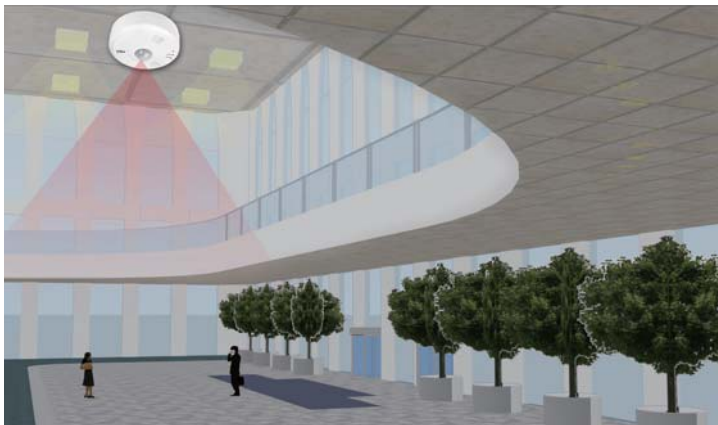
Introduction

PIR series modules have the ability to detect infrared waves generated by the human body within a diameter of approximately 8 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. A free Utility is also included that allows configuration information and data to be displayed in a powerful chart format that can be exported to Microsoft Excel.

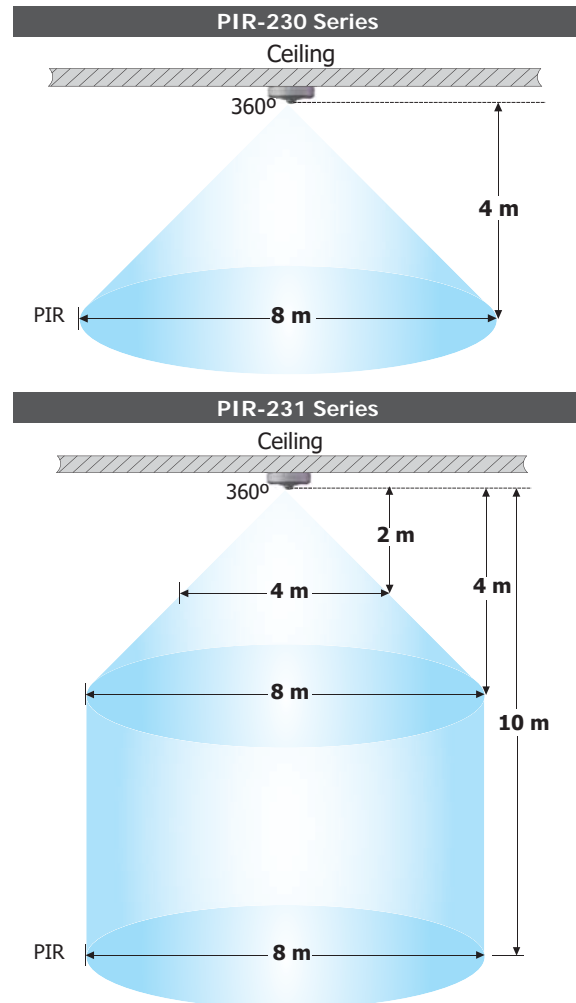
The screw-free quick-connect connector and the DIP and rotary switches make the modules easy to install, repair, and maintain. The casing of each module is made from UL94-V2 rated fireproof material, and the white minimalist exterior design ensures that it is easy to match with interior decoration.

Applications

- Lighting and exhaust fans in public toilets
- Common lighting in staircases
- Lighting in parking areas
- Garden lights
- Lighting for changing rooms in shops
- Corridor lighting, and many more situations



Operating Distance

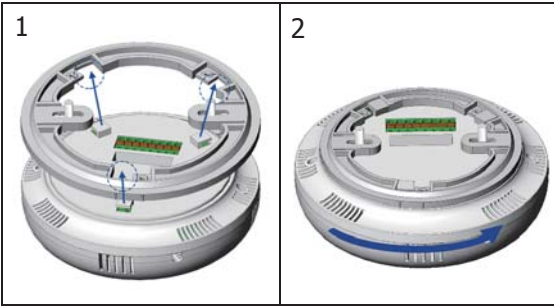


Specifications

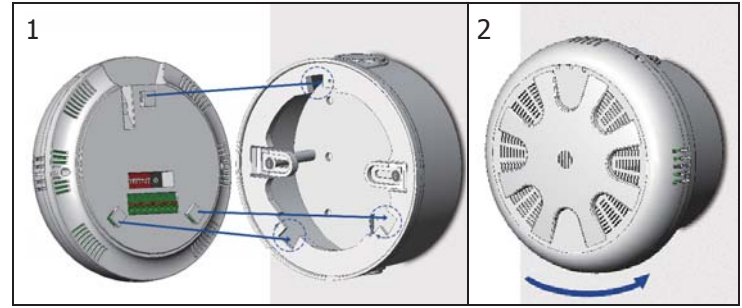
| Model | PIR-230-E | PIR-230-BLE | PIR-230-WF | PIR-231-E | PIR-231-BLE | PIR-231-WF |
|--------------------------------------|---|-------------|-------------------------------|-----------|-------------|-------------------------------|
| Motion and Occupancy Sensor | | | | | | |
| Delay Time | Hardware: 8-step Switch-selectable (seconds): 6, 16, 33, 66, 131, 262, 524, 1049 Software: 16-step (seconds): 2, 4, 6, 8, 16, 33, 49, 66, 131, 262, 393, 524, 1049, 2097, 3146, 4194 | | | | | |
| Lux Control Level | Hardware: 2 modes(Dawn and Dust) / Software: 5-step | | | - | | |
| Height Detection | 4 m Max. | | | 10 m Max. | | |
| Motion Detection Field of View | 360°; 8 m Diameter Max. | | | | | |
| Occupancy Detection Field of View | - | | | | | |
| PIR Response Time | 1 second | | | | | |
| Temperature Sensor | | | | | | |
| Measurement Range | -40 to +120°C | | | | | |
| Fire Alarm | 65°C (Programmable) | | | | | |
| Resolution | 0.01°C | | | | | |
| Accuracy | ±0.5°C (at 0 to 60°C) | | | | | |
| Relative Humidity Measurement | | | | | | |
| Range | 0 to 100% RH | | | | | |
| Resolution | 0.01% RH | | | | | |
| Accuracy | ±5% RH | | | | | |
| Digital Input | | | | | | |
| Channels | 2 | | | | | |
| Type | Wet | | | | | |
| On Voltage Level | 70 to 220 VAC | | | | | |
| Off Voltage Level | 20 VAC Max. | | | | | |
| Input Impedance | 68 KΩ, 1 W | | | | | |
| Relay Output | | | | | | |
| Channels | 1 | | | | | |
| Type | Power Relay, Form C | | | | | |
| Max. Load Current | NO: 10 A @ 250 VAC NC: 6 A @ 250 VAC | | | | | |
| Load Wattage | Incandescent Bulb: 1500 W Max.; Fluorescent Lamp: 300 W Max. | | | | | |
| Communication | | | | | | |
| Node Address | Hardware: 160 to 191 / Software: 1 to 255 | | | | | |
| Protocol | DCON, Modbus RTU, Modbus TCP, MQTT | | | | | |
| Wired Interface | Yes, RS-485 X 1 and Ethernet/PoE X1 | | | | | |
| Wireless Interface | - | Bluetooth | Wi-Fi | - | Bluetooth | Wi-Fi |
| Supported Standard | - | BT 4.0 | IEEE 802.11 b/g/n | - | BT 4.0 | IEEE 802.11 b/g/n |
| Wireless Mode | - | Slave | Infrastructure/ Limited AP | - | Slave | Infrastructure/ Limited AP |
| Wireless Security | - | AES 128 | WEP, WPA ,WPA2 | - | AES 128 | WEP, WPA ,WPA2 |
| Transmission Range | - | 20 m (LOS) | 50 m (LOS) | - | 20 m (LOS) | 50 m (LOS) |
| LED Indicators | | | | | | |
| LED Indicators | Yes,1 as Power/Communication Indicator. 1 as Alarm Indicator. | | | | | |
| EMS Protection | | | | | | |
| ESD (IEC 61000-4-2) | ±4 kV Contact for each Terminal, ±8 kV Air for Random Point | | | | | |
| EFT (IEC 61000-4-4) | ±4 kV for Power Line | | | | | |
| Power Requirements | | | | | | |
| Power Supply | 18 to 48 VDC, PoE | | | | | |
| Reverse Polarity Protection | Yes | | | | | |
| Consumption | 2 W | 2.5 W | 3 W | 2 W | 2.5 W | 3 W |
| Mechanical | | | | | | |
| Installation | Ceiling /surface mounted | | | | | |
| Protection Class | IP20 | | | | | |
| Dimensions (D x H) | Ø 150 mm x 53 mm | | | | | |
| Environment | | | | | | |
| Operating Temperature | 0 to +35°C | | | | | |
| Storage Temperature | -30 to +80°C | | | | | |
| Humidity | 10 to 90% RH, Non-condensing | | | | | |

Mounting

Ceiling Mounting



Wall Mounting (+ External Wall Box EWB-C150)

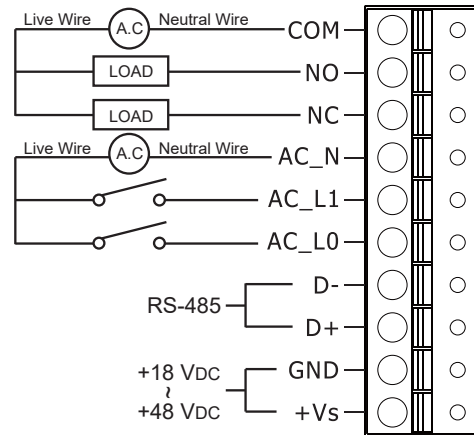


DIP Switch Settings

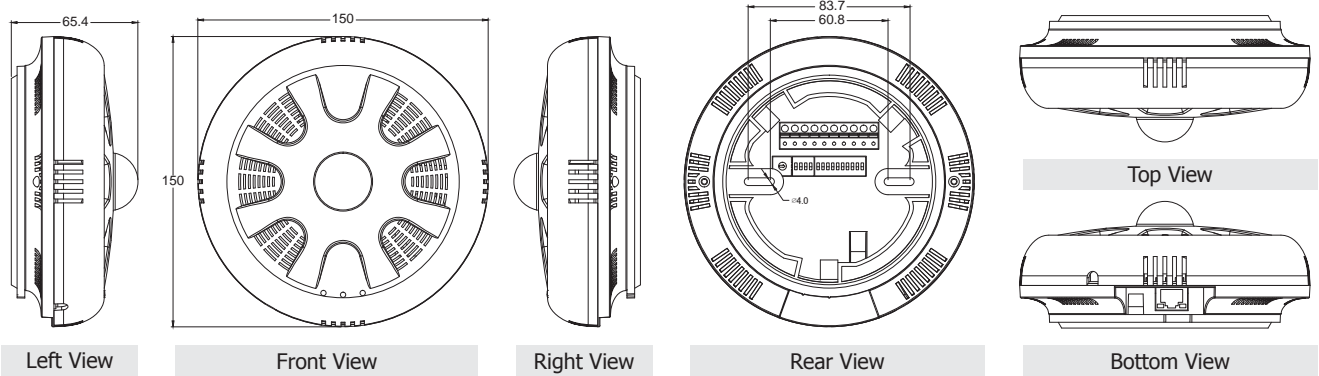
| | | | |
|----|------------|-----------------|------------|
| | SW1 | ON | OFF |
| | 1 | DCON | Modbus |
| | 2 | SW Config. | HW Config. |
| | 3 | High Node | Low Node |
| | 4 | INIT | Run |
| | 5* | Dawn | Dust |
| | 6* | Sensitivity | |
| | 7* | | |
| | 8 | ON Time Control | |
| | 9 | | |
| 10 | | | |

* (5, 6, 7 for PIR-230 Series Only)

Pin Assignments



Dimensions (Units: mm)



Ordering Information

| | |
|--------------------|--|
| PIR-230-E | PIR Motion Sensor (4 m), Temperature and Humidity Sensor Module (Ethernet) |
| PIR-230-BLE | PIR Motion Sensor (4 m), Temperature and Humidity Sensor Module (Bluetooth) |
| PIR-230-WF | PIR Motion Sensor (4 m), Temperature and Humidity Sensor Module (WiFi) |
| PIR-231-E | PIR Motion Sensor (10 m), Temperature and Humidity Sensor Module (Ethernet) |
| PIR-231-BLE | PIR Motion Sensor (10 m), Temperature and Humidity Sensor Module (Bluetooth) |
| PIR-231-WF | PIR Motion Sensor (10 m), Temperature and Humidity Sensor Module (WiFi) |

Accessories

| | | |
|---------------------|--|--------------------------------------|
| EWB-C150 | | External Wall Box for PIR-200 series |
| 4PCA-RJ45-04 | | RJ45 Cable, Male-Female, 30cm |