



PIR 20

Passive infrared motion detectors for door applications

Integrable, small, precise

- Excellent integration options
- Field adjustment with accuracy to the centimetre
- Flexible range of applications

PIR 20

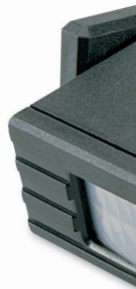
Passive infrared motion detector

Flexible and reliable

Passive infrared motion detectors (PIR) are infrared detectors that detect the movement of people or other thermally radiating objects and trigger electric, optical or acoustic indication signals. These motion detectors work with temperature-dependent pyro sensors that react to infrared light with a certain wavelength, meaning that they react to human body temperature or thermal radiation from vehicles.

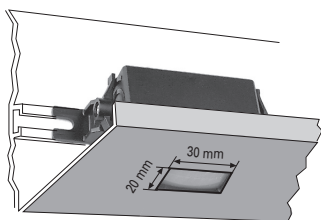
Excellent integration options thanks to compact dimensions

The small, compact design of PIR motion detectors makes them ideal for opening small doors designed for people and for activating escalators or lifts. Their structure allows both surface-mounting and recessed mounting.



Benefits

- Highly accurate detection zone
- Consistent detection beam: detection is only guaranteed if the temperature of the background is close to that of a human body, regardless of the outside temperature
- Not sensitive to airflows or sudden temperature fluctuations
- Not sensitive to outside interference from rain, snow, etc.



Easy to install and adjust

Field adjustment

The PIR 20 contains 12 fresnel lenses, which are installed in the housing cover directly. Each device is supplied with an additional two cover diaphragms (1 as a replacement). The diaphragm can be latched into the cover as required and can be broken out or cut to suit specific needs. This means that each open lens (= 1 field segment on the base) can be covered in a way that fits precisely.

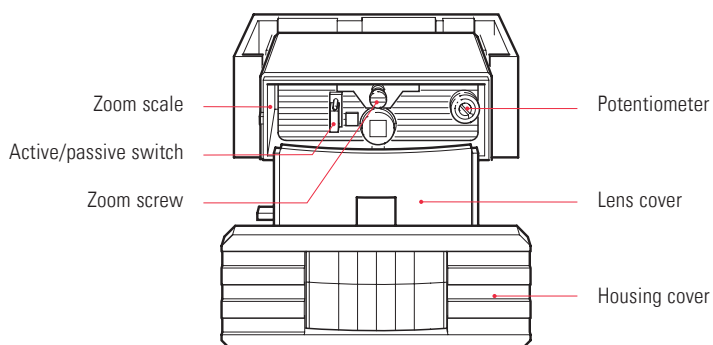
Zoom technique

The zoom screw enables continuous adjustment of the detection angle from position 0–10. The

detection areas defined by the open fresnel lenses can be adjusted with accuracy to the centimetre using the zoom adjustment function.

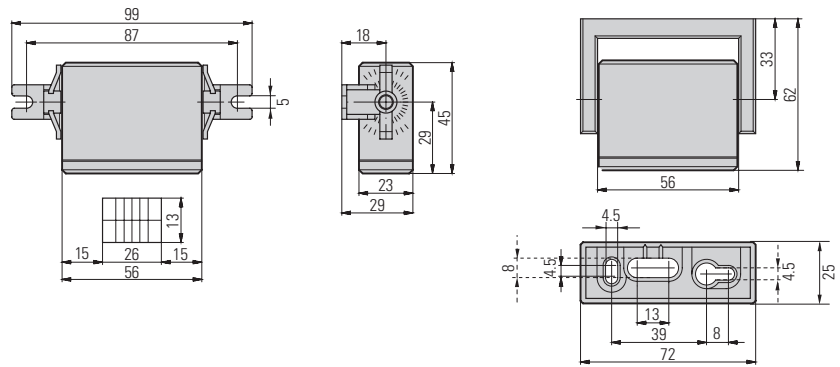
Electrical settings

- Active/passive switch (NO/NC)
- Potentiometer for changing the temperature threshold:
At maximum sensitivity, the required temperature difference in relation to the environment is approximately $\pm 0.5^\circ\text{C}$;
at minimum sensitivity, it is approximately $\pm 6^\circ\text{C}$.
- Drop-out delay fixed at 0.5 s





Dimensions

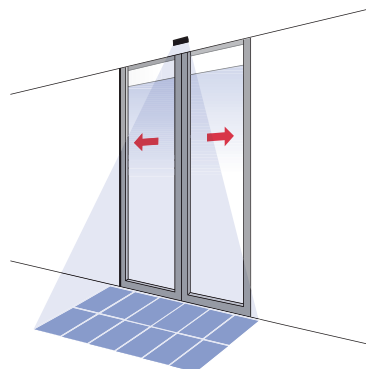


Applications

Situation

Activating short and tall sliding doors in walkways

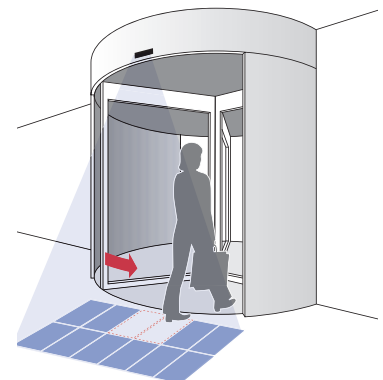
Reliable activation ensures the smoothest possible flow of people. Thanks to the compact design and flexible range of applications and settings, the field can be adjusted to suit each specific situation.



Situation

Activating revolving and semi-circular doors

The PIR 20 features small detection areas that can be selected with precision. Early, reliable and contact-free detection ensures the smoothest possible flow of people.



Technical data

Mechanical data

| | |
|-----------------|-----------------------------|
| Material | ABS |
| Dimensions | 99 × 62 × 29 mm (L × W × D) |
| Weight | Approx. 40 g without cable |
| Connection type | Plug-in screw terminals |
| Colour | Black/white |

Electrical data

| | |
|---------------------|--|
| Operating voltage | 12–24 V AC 12–30 V DC (–0%/+15%) |
| Current consumption | Approx. 15 mA at 24 V AC |
| Power consumption | Approx. 350 mW at 24 V AC |
| Signal output | Potential-free relay with changeover contact |
| Switching voltage | 48 V AC/DC |
| Switching current | 1 A |
| Switching capacity | Max. 30 W / 60 VA |
| Drop-out delay | 0.5 s, fixed |
| Switching mode | Active/passive (NO/NC) by means of internal switch |
| Function indication | Red/green LED – red: lights up when output is active |

Technological data

| | |
|-----------------------------|--|
| Technology | Passive infrared |
| Optics/lens | 12 fresnel lenses and zoom technique |
| Recommended mounting height | Max. 3.5 m |
| Frontal range | Max. 12 m |
| Field dimensions | Precisely adjustable using diaphragms and zoom technique |
| Sensitivity | Potentiometersetting |

Ambient conditions

| | |
|-----------------------|---------------------------|
| Protection class | IP52 |
| Operating temperature | –40 °C to +60 °C |
| Air humidity | < 95% rel. non-condensing |





Electromagnetic compatibility standards

| | |
|------------|---|
| Directives | RoHS 2011/65/EU, WEEE 2012/19/EU, EMC 2014/30/EU, Commission Delegated Directive (EU) 2015/863 |
| Immision | EN 61000-6-1:2007, EN 61000-6-2:2005 |
| Emission | EN 61000-6-3:2007/ A1:2011/AC:2012, EN 61000-6-4:2007/ A1:2011 |

Note

Technical details and recommendations concerning our products are based on experience and are an aid for the orientation of the user. Details stated in our brochures and data sheets do not guarantee special properties of the products. This does not apply to special product properties confirmed by us in writing or individually. Subject to technical alterations.

Ordering information

| Article no. | Description | |
|--|---|---|
| 212657 | PIR 20/31 Passive infrared motion detector Relay output, black |  |
| 212658 | PIR 20/31 Passive infrared motion detector Relay output, white |  |
| Scope of delivery: 2 mounting brackets (for integration), 1 swivel bracket (for surface-mounting), 2 lens diaphragms, 2 adhesive strips (double-sided) | | |
| Accessories | | |
| 212808 | Protective cover IP65-compliant |  |
| 212822 | Recessed mounting frame for PIR 20 / AIR 20 |  |

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