



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

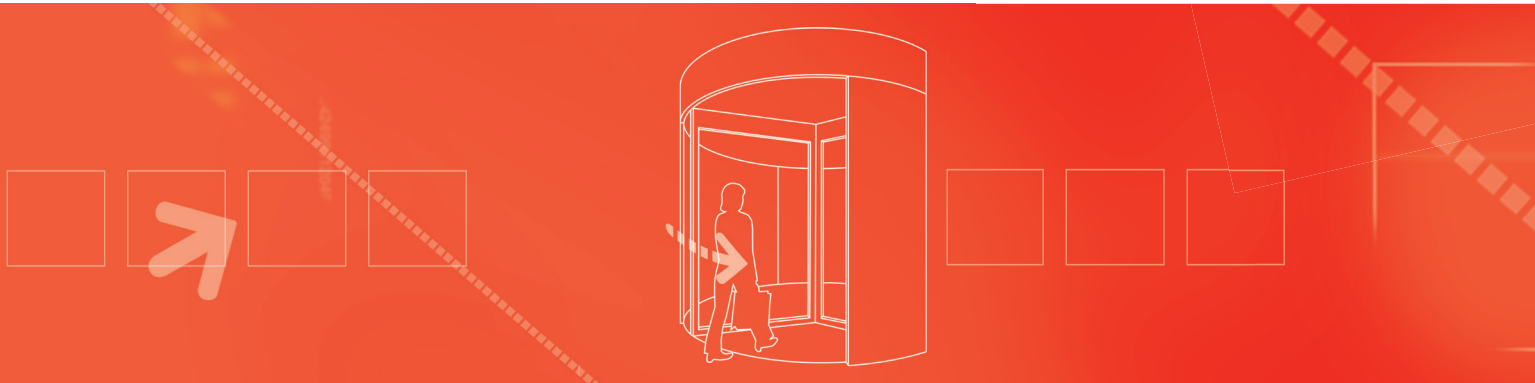
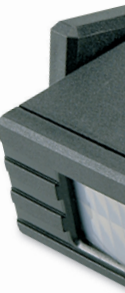
Passive infrared motion detector

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.

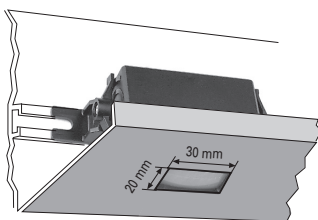
Excellent integration options thanks to compact dimensions

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.

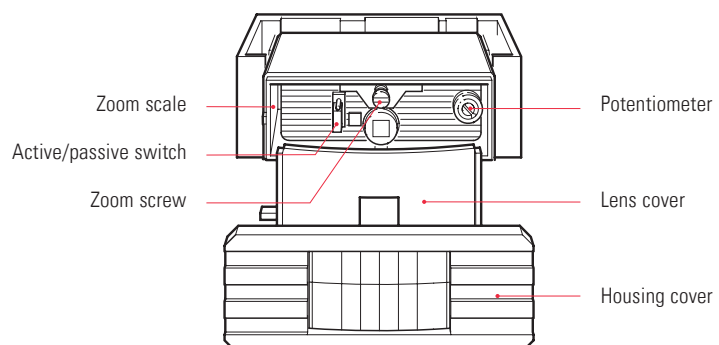
Zoom technique

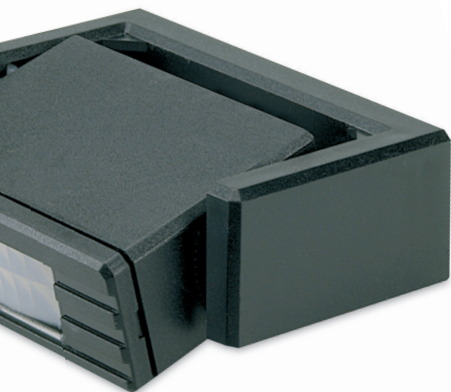
The zoom screw enables continuous adjustment of the detection angle from position 0–10. The

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

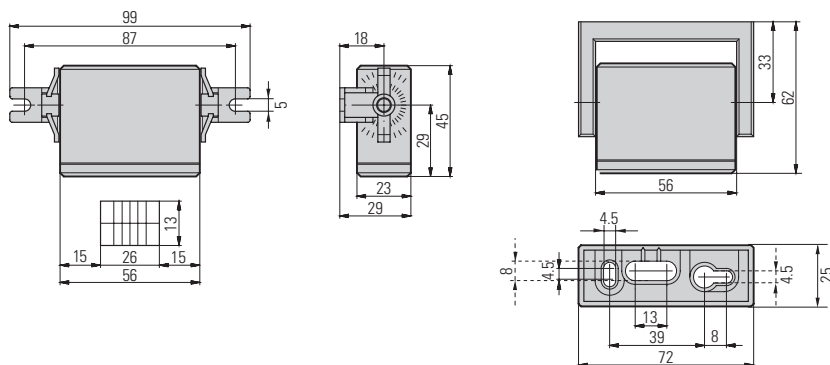
Electrical settings

- 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

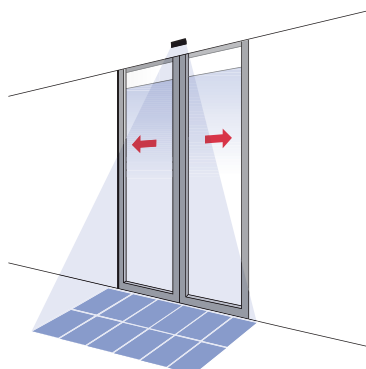


Applications

Situation

Activating short and tall sliding doors in walkways

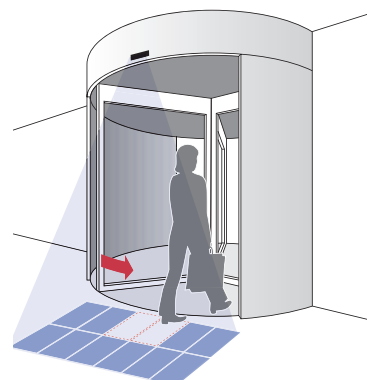
Reliable activation ensures the smoothest possible flow of people. Thanks to the compact design and flexible range of applications and settings, the field can be adjusted to suit each specific situation.



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

212827 **Protective cover**
IP65-compliant



212822 **Recessed mounting frame**
for PIR 20 / AIR 20



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