

RK31CP-WH/31

Radar motion detector

RK31CP-WH/31

with terminal compartment

CE

- ◆ Adjustable field dimensions
- ◆ Interference suppression
- ◆ Exact switch points due to high field sharpness
- ◆ Adjustable sensitivity
- ◆ Microwave technology
- ◆ Weatherproof housing for outside applications



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General specifications

Effective detection range	max. 12 m
Detection field	min. 500 mm x 500 mm max. 3500 mm x 2500 mm at 2200 mm installation height
Approvals	BZT approved, no postal fee
Marking	CE approval

Indicators/operating means

Function display	LED red: illuminates upon detection
Operating elements	Setting for off-delay, adjustable antenna changeover switch for normally open/normally closed

Electrical specifications

Operating voltage	12 ... 24 V AC +15 % / 12 ... 30 V DC
No-load supply current I_0	approx. 70 mA

Output

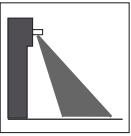
Switching type	light/dark ON, switchable
Signal output	Relay, 1 alternator
Switching voltage	48 V AC/DC
Switching current	1 A

Ambient conditions

Ambient temperature	-20 ... 60 °C (253 ... 333 K)
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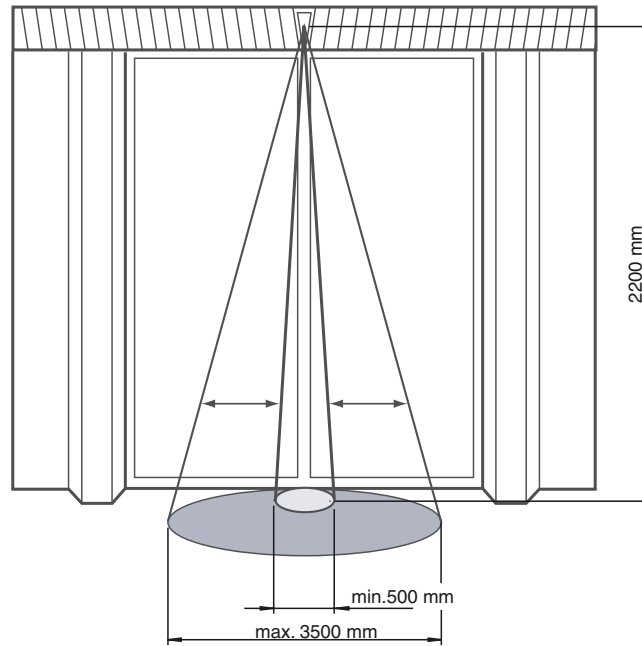
Mechanical specifications

Mounting height	2.2 m
Protection degree	IP52
Connection	terminal strip
Material	
Housing	ABS, anthracite, weather hood
Mass	400 g

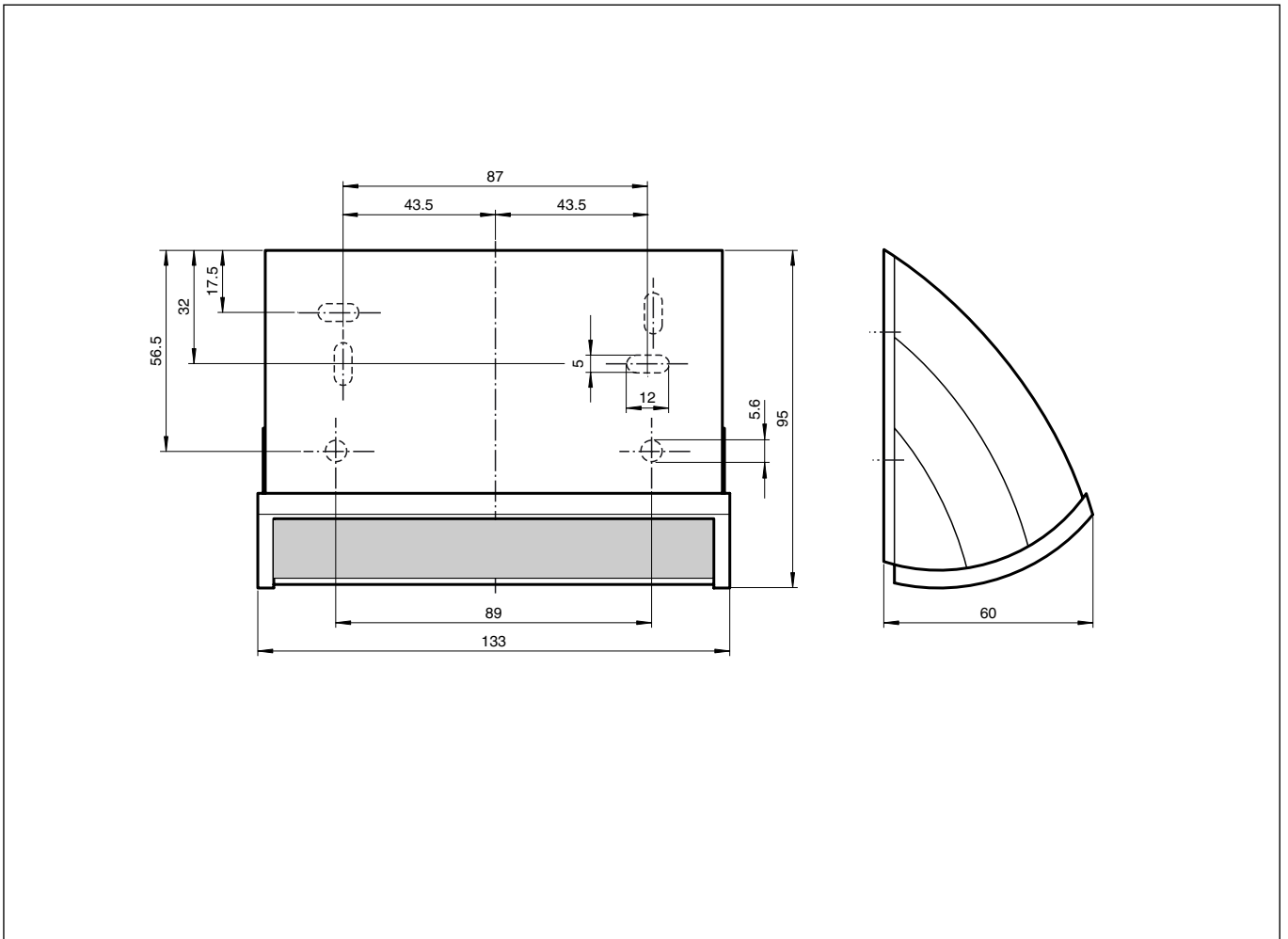


Curves/Diagrams

Monitored area

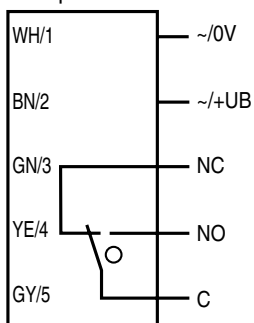


Dimensions



Electrical connection

Option:



○ = light on, ● = dark on

Function description

Function

Radar motion detectors basically work on microwave technology. Within the defined detection zone, movements of at least 10 cm/s and max. 5 m/s (persons and/or objects such as shopping trolleys, vehicles etc.) are detected. Persons or objects, however, that are not moving are also not detected.

Greater depth of field:

The new, integrated controller with powerful microprocessors enables moved objects to be detected even more reliably and with even greater precision. The switching points, which are limited exactly, ensure a constant and steady response behaviour.

Linearized potentiometer:

Optimal field dimension setting thanks to the linearized potentiometer.

Interference masking:

Various interfering ambient influences are masked automatically with this innovative technology.

Digital filter functions:

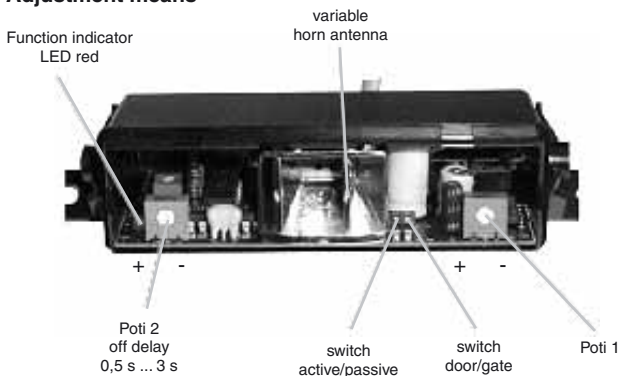
Interference signals from fluorescent lamps, rain, snow etc. are quickly suppressed by means of the variable digital filter function. This filter ensures that doors and industrial doors function to an optimum.

Mounting instructions

- The device must be installed in such a way that it is not directly exposed to atmospheric influences.
- No obstructions in front of the detector.
- Take care that no fluorescent lamps are located in the viewing direction of the sensor.
- The sensor is designed for stationary installation, it is not suited for mobile installations.
- There must not be any moving parts in the detection area.

Adjustment instructions

Adjustment means



Adjusting the detection field



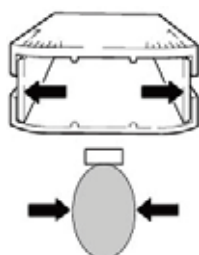
Mechanical field adjustment on the front with locking in place:

The rotation rings and support brackets lock into positions that are each 5 angular degrees apart, thus making it possible to swivel the devices in these increments. The movable door winds must not be allowed to move into the detection field.

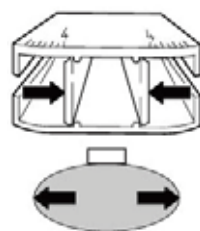
Mechanical field adjustment with variable horn antenna:

Adjusting the side funnel walls of the horn antenna affects the radiation angles of the microwaves and thus generates the desired field widths. Each of the two side walls can be rotated left and right up to parallel – asymmetrical detection fields are thus possible as well.

minimum field width



maximum field width



Sensitivity setting

The response sensitivity can be changed with Potentiometer 1 (Poti 1), i.e. the two most important variables, surface (for example persons or vehicles) and speed (slow or fast movements) of the object in motion can be taken into consideration. The detection ranges defined by the antenna setting are affected by the change in electrical sensitivity.

Off delay

Potentiometer 2 (Poti 2) is used to adjust the decay delay of the relay output from 0.5 ... 3 s.

Door/gate changeover switch:

Door	normal sensitivity	mounting height up to 3.5 m
Gate	high sensitivity	mounting height up to 3.5 m

Device output changeover switch

The device output can be programmed as normally open (no) or normally closed (nc).