

RK 30



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## Series RK 30 – Radar Motion Detectors with Microprocessor Technology

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## Function / Settings / Mounting

### 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

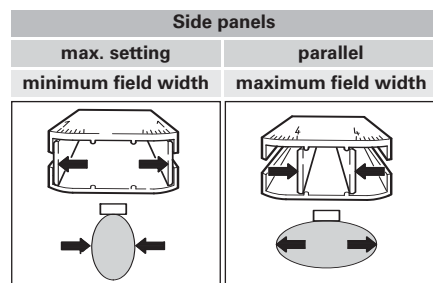
Interference signals from fluorescent lamps, rain, snow etc. are quickly suppressed by means of the variable digital filter function. This filter ensures that doors and industrial doors function to an optimum.

### Setting the detection area

The required field widths can be set by adjusting the side, funnel-type panels on the horn antenna. Each of the two side panels can be moved to the left or right until they are parallel with the centre – thus enabling asymmetric detection areas to be set.

#### • Important

The mechanical setting of the side panels is opposite (reciprocal) to the field formed on the ground.



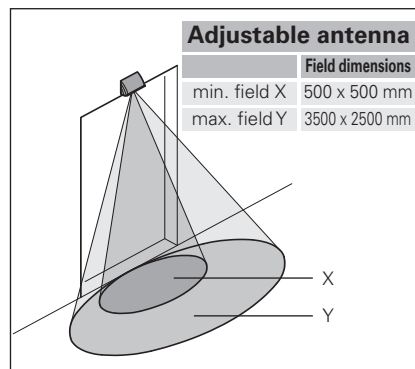
### Detection areas

#### Electrical settings

#### • Sensitivity

The response sensitivity is altered using the linearized potentiometer. The sensitivity of the device is depending on the surface structure and the surface dimensions of the object to be detected. The detection zones de-

finied by the position of the antenna are affected by the change in sensitivity. Thus the side panels of the antenna and the electrical sensitivity must be adjusted respectively, using a potentiometer to achieve the ideal setting of the detection area.



#### • Fall-delay time

The fall-delay time of the relay output can be set with a potentiometer.

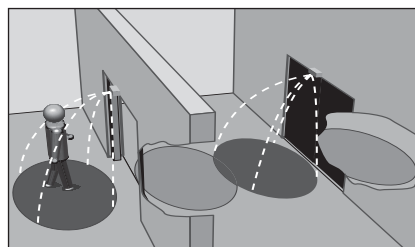
#### • Direction recognition switch

By means of a switch, either direction recognition mode (stereo) or direction independent mode (mono) can be selected. If direction recognition is activated (stereo), only signals towards the motion detector or away from it (depending on the switch «forward/backward») are evaluated. Sliding and draught-proof doors, elevators and vehicle doors etc. can thus be closed up to 50 % faster. Environmental awareness, energy and cost savings are no longer empty promises.

<b>With direction recognition</b>	Switch set to <b>stereo</b>
<b>Without direction recognition</b>	Switch set to <b>mono</b>

#### • Forward/backward switch

This switch affects detection with regard to direction recognition. If the direction recognition switch is set to «Stereo», the direction of detection can be defined with the forward/backward switch.



#### • Switching output switch

Depending on the «switching output switch» switch position, the output relay is either activated or deactivated at the detection of an object.

#### Switch set to Stereo / Forward

A movement towards the detector triggers a signal, a movement away from the detector does not.

#### Switch set to Stereo / Backwards

A movement away from the detector triggers a signal, a movement towards the detector does not.

### Mounting options

#### Surface-mounted unit with RK 31 C-PWH and RK 33C-PWH

- Protection against mechanical misalignment (vandalism)
- Weather-proof protection
- Design adaptation

#### Mounting bracket with RK 31C-P and RK 33C-P

- Supplied as standard
- For integrated installation

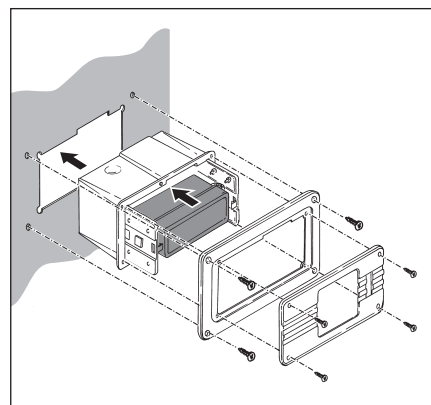
#### Surface-mounted swivel bracket for RK 31C-P and RK 33C-P

- Devices can be latched into position in the swivel bracket (optimum angle setting)

### Options

#### • Recessed ceiling mounting box

Set comprising box with retractable side panels (devices can be rotated internally), housing cover pervious to microwave and IR radiation, seal as well as cover frame for tidy mounting.

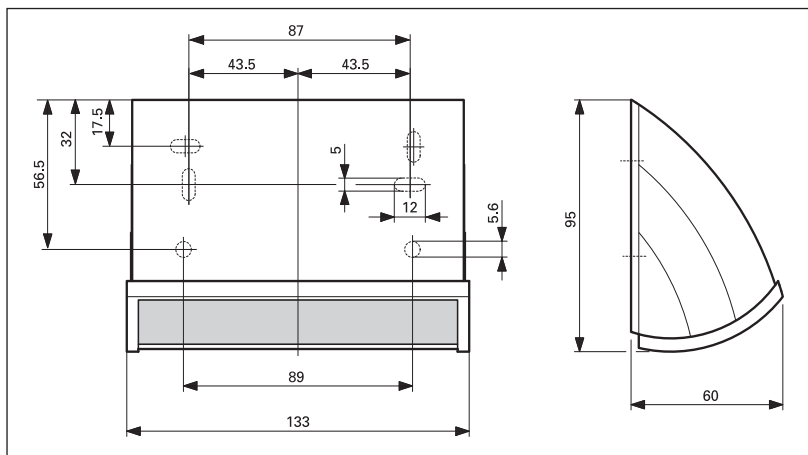


#### • Surface-mounted box IP65

Same box as for ceiling mounting, but without cover frame (devices can be rotated internally). Protection class IP65.

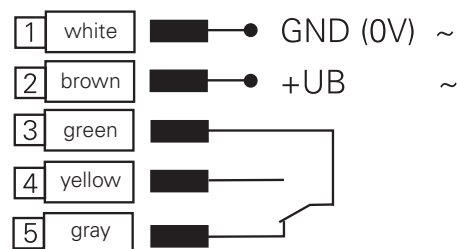
Technical details	RK 30 Series	Remarks
Field dimensions	500 x 500 mm to 3500 x 2500 mm	see Detection areas
Range	max. frontal range 12 m	
Mounting height	recommended max. mounting height 3.5 m	
Sensitivity adjustment	linearized potentiometer	
Antenna	adjustable horn antenna	EU Patent No. 307 351
Direction recognition	stereo/mono switchable	only at series 33
Operating voltage	12–30 V DC / 12–24 V AC (–0 % / +15 %)	
Residual ripple	max. 10 %	with DC operation
Current consumption	approx. 70 mA at 24 V AC	
Signal output	<b>Relay output/31</b> 1x changeover contact max. switching voltage 48 V AC/DC max. switching current 1 A at 30 V DC max. switching power 60 VA / 30 W	
Fall-delay time	0.5–6 s variable	
Switching mode	active / passive variable	
Function indication	LED red lights up on detection	
Connection type	RK 31C-P and RK 33C-P incl. 5 m cable RK 31C-PWH and RK 33C-PWH 5-pin plug-in screw terminal	
Protection class	IP52	
Housing material	ABS	
Operating temperature	–20° C to +60° C	
Electromagnetic compatibility	CE according to EMC directive	89/336 EEC, EN 50081-1 / EN 50082-2
Certification	BZT certification – no telecom fees	G 400 400 W / G 400 401 W

### Dimensions of RK 31C-PWH and RK 33C-PWH

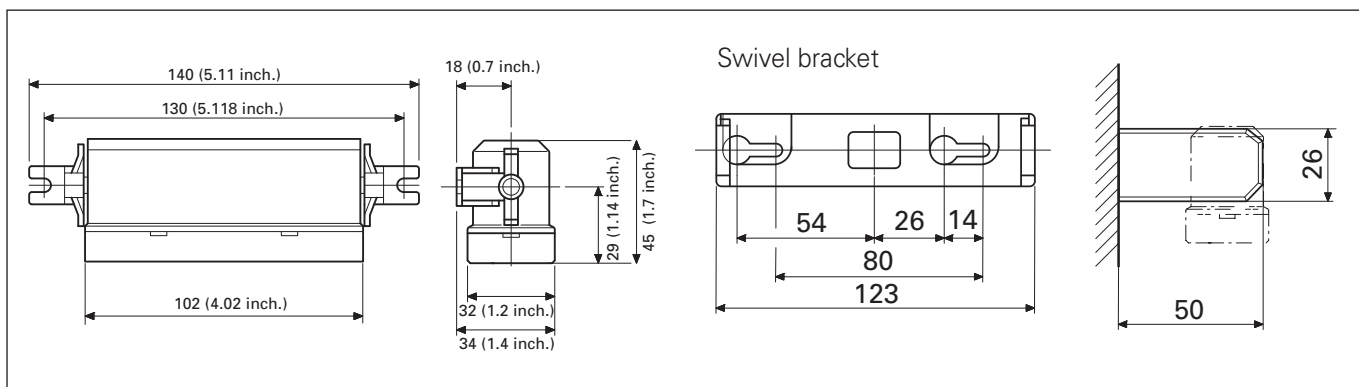


### Connection diagram

Relay output



### Dimensions of RK 31C-P and RK 33C-P



## Applications

### Automatic door installations

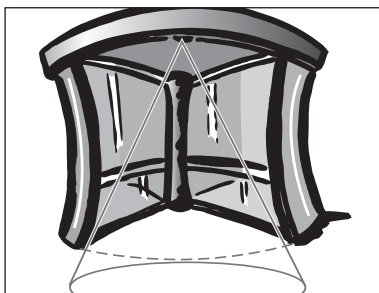
- Trigger sensor for sliding doors, revolving doors, semi-circular doors etc.

### Automatic industrial door installations / barriers

- Trigger sensor for high-speed industrial doors, swing doors, barrier systems etc.
- Opening command for barrier systems

### Elevators and escalators

- Cabin-access control
- Starting sensor for escalators



## Ordering information

Article no.	Designation	Specification	Scope of delivery
212578	RK 31C-P/31	anthracite, without direction recognition	Swivel bracket, mounting bracket
212606	RK 33C-P/31	anthracite, with direction recognition	5 m cable mounted
212564	RK 31C-PWH/31	anthracite, without direction recognition	Weather shield
212598	RK 33C-PWH/31	anthracite, with direction recognition	Weather shield

## Accessories

Article no.	Designation	Specification
213377	Surface-mounted swivel bracket	black
213379	Surface-mounted swivel bracket	white
212808	Weather shield	anthracite
212812	Weather shield	white
212785	Surface-mounted box IP65	black
212787	Surface-mounted box IP65	white
212788	Recessed mounting frame for surface-mounted box	black
212790	Recessed mounting frame for surface-mounted box	white

## Your contact

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