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ENGLISH

SpotScan

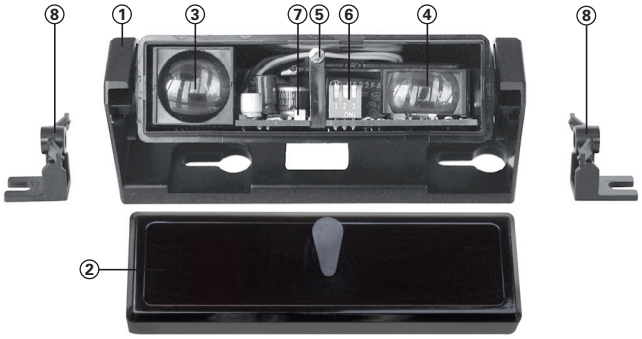
Active-Infrared-Presence Detector

Translation of the original instructions

1 Safety instructions

- Read these operating instructions thoroughly before putting the device into operation and keep them for future reference.
- This product is designed to be mounted above an overhead pedestrian door.
- Not a safety component in accordance with the EU Machinery Directive; must not be used for personal protection or EMERGENCY STOP function.
- Only trained and qualified personnel may install and initialize the device.
- Only authorized factory personnel may perform hardware/software changes or repairs to the product.
- Failure to follow these safety precautions may cause damage to sensor or objects, serious personal injury, or death.
- The sensor should only be operated from a safety extra low voltage (SELV) system with safe electrical separation according to EN 61558. The wiring must be protected against mechanical damage.
- Protect the sensor against rain and snow.
- Avoid touching any electronic and optical components.

2 Product overview

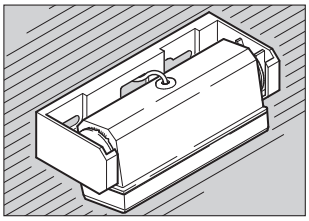


① Swivel bracket
② Front cover with optics window
③ Transmitter lens
④ Receiver lens
⑤ Scanning range adjustment screw
⑥ DIP switches 1–3
⑦ LED display
⑧ Bracket set (in lieu of swivel bracket)

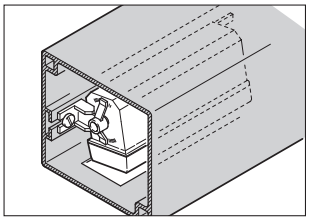
3 Installation

Stationary operating mode:
Max. mounting height of 3.2 m (10.5 ft) should not be exceeded

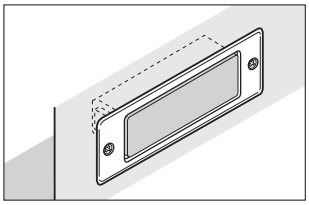
Swivel bracket with ratchet disc (e.g. surface-type installation)



Mounting bracket set (e.g. integration)



Recessed mounting frame (Special equipment for integration)

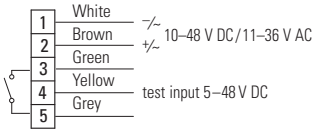


Further installation accessories available on request:

– Protective cover
– Flush-type inlet box
– Surface-type box
– Flush-type set
– Flush-type cover

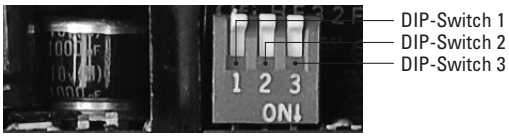
4 Electrical connections

SpotScan connection diagram



Instructions for testing input:
– Only use the test input when the sensor is operated in the stationary mode (background analysis). See also Sect. 5.2.
– Testing is only possible with DC power supply.

5 Settings



5.1 Frequecy switching (DIP switch 1)

1 2 3	OFF	Frequency 1
1 2 3	ON	Frequency 2

Sensors with small installation clearance (< 50 mm / 2") can interact. To avoid this, a choice can be made between two different transmission frequencies (1 and 2). These should be set alternately.

5.2 Operating mode (DIP switch 2)

1 2 3	OFF	Stationary mode (background analysis)
1 2 3	ON	Mobile mode (background suppression)

Choice between **stationary** and **mobile** operating mode:

Mobile = background is ignored (background suppression).

Stationary = background may not change (background analysis). Only fixed mounting possible.

The testing function only works with the stationary operating mode.

5.3 Output switching mode (DIP-switch 3)

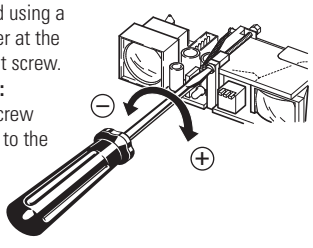
1 2 3	OFF	**Active** when stationary mode **Passive** when mobile mode
1 2 3	ON	**Passive** when stationary mode **Active** when mobile mode

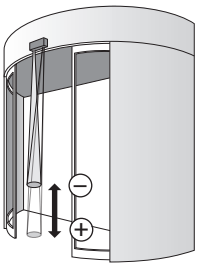
Active or **passive** switching mode. Definitions:
Active = output is activated, when an object is detected in the detection range
Passive = output is activated when no object is detected in the detection range

Important: Active/passive is the opposite way around with stationary and mobile operating mode. See also Sect. 5.2 for the operating mode.

6 Adjusting the scanning range

The scanning range is adjusted using a screwdriver at the adjustment screw.
Attention:
Turn the screw **smoothly** to the end stop.





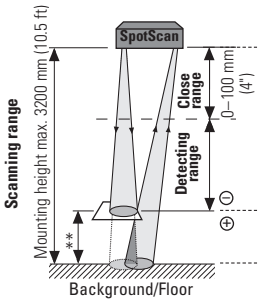
7 Setting the switching point

1. Turn the adjusting screw smoothly clockwise to the end stop (= maximum scanning range)
2. Turn the adjusting screw anti-clockwise until the state of the LED display changes. As soon as the LED state changes, the switching point is set directly over the floor.
   – When making adjustments do not reach into the detection beam with the hand, any part of the body or with the screwdriver, etc. (hold the screwdriver slightly diagonally upright).
3. To avoid false detection by subsequent changes of the background, set the switching point back to approx. 250 mm (10") above the floor for indoor installations and approx. 350mm (14") for outdoor installations
   – To do so, turn the adjusting screw a little further in the anti-clockwise direction.
   – The switching point can be easily located from below by hand or using a sheet of paper: The LED display changes its state, as soon as the hand or the piece of paper reaches the switching point.
4. Close the cover and check the settings once more. If necessary, make further adjustments.

8 Switching state

The following diagrams show the switching state of the output and of the LED display, when an object is captured in the detecting range. There will be differences in the active and passive switching mode of the output. The definitions in Sect. 5.3 should be observed!

8.1 Stationary operating mode (DIP switch 2 = OFF)

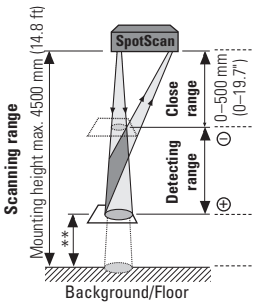


The close range is not meant for the object recognition

Active switching mode		Passive switching mode	
Output	**LED display**	**Output**	**LED display**
ON	☼	OFF	○
OFF	○	ON	☼

* approx. 250mm (10") for indoor installations
** approx. 350mm (14") for outdoor installations

8.2 Mobile operating mode (DIP switch 2 = ON)



The close range is not meant for the object recognition

Active switching mode		Passive switching mode	
Output	**LED display**	**Output**	**LED display**
ON	☼	OFF	○
OFF	○	ON	☼

* approx. 250mm (10") for indoor installations
** approx. 350mm (14") for outdoor installations

9 Testing function

The correct functioning of the sensor is checked using the testing function.
Whilst the testing is in operation (the test input is subjected to electrical tension), the transmitter is switched off. This simulates an object in the detection area (detection) and causes the switching state of the output to change. **Important: Testing is only possible in the stationary operating mode. See sect. 4 for the allowed voltage levels and further instructions on the use of the testing function.** The table shows the switching state of the output and the LED display when the test input is activated.

Switching mode	Output	LED display
active	ON	○
passive	OFF	☼

10 Trouble shooting

– Check operating voltage and electrical connections → Sect. 4
– Interaction influence of sensors → Sect. 5.1
– Maximum mounting height / scanning range of 3.2 m (10.5 ft) / 4.5 m (14.8 ft) exceeded?
– Is the floor recognized as an object? Is the switching point correctly adjusted? → Sect. 7 and 8

11 Technical data

	SpotScan	Remarks
Scanning range	max. 3200 mm (10.5 ft) max. 4500 mm (14.8 ft)	= max. stationary mounting height for active infrared presence detectors (DIP 2 = off stationary) = max. mobile mounting height for active infrared activation detectors (DIP 2 = on moving)
Scanning range adjustment	1000–4500 mm (3.3–14.8 ft) with mechanical adjusting screw	triangulation principle
Detecting range	100 – approx. 3200 mm (4"–126") 500 – approx. 4500 mm (19.7"–177")	stationary mode mobile mode
Temperature dependence of detecting range	at +60°C (140°F): +10% / at –20°C (–4°F): -10%	linear deviation from 20°C (68°F) with ref. to the switching point set
Black/white difference	< 400 mm (15.75")	at 2000 mm (6.5 ft) scanning range
Detection field	approx. 50 x 50 mm (2" x 2")	light beam cross-section at 2000 mm (6.5 ft) scanning range
Type of light	pulsed, intermittent IRED	2 frequencies selectable with DIP switch
Operating voltage	10-48 V DC or 11-36 V AC, 50/60 Hz	
Residual ripple	max. 10%	with DC operation
Current / power consumption	max. 100 mA / approx. 3 W / 3 VA	
Operating mode	stationary or mobile	selectable with DIP switch
Output switching mode	active or passive	selectable with DIP switch

	SpotScan	Remarks
Signal output	– relay, 1 contact normally open – max. switching voltage 48 V AC / V DC – max. switching current 0.5A AC / 1 A DC – max switching capacity 55 VA / 24 W	– to SpotScan: relay contact electrically isolated – nominal current (ohmic load) 1 A / 24 V DC for ind./cap. load, – provide spark quenching – ohmic load
Response time	approx. 35 ms / approx. 100 ms	with detection / with test signal
Drop-out time	max. 20 ms / max. 20 ms	with stationary mode / with mobile mode
Test input	5–48 V DC	only with DC operating voltage and stationary mode
Function display	LED red	illuminates when output is ON
Type of connection	cable 5 m (16.4 ft) / 5 x 0.25 mm² (AWG 24)	with plug-in connector, circuit board side
Protection class	IP52	with protective cover accessory IP65
Housing material, colour	ABS black / Lexan	housing / optics window in front cover
Dimensions	– sensor only: 102x45x32 mm (4.01" x 1.77" x 1.97") – incl. swivel bracket: 123x45x50 mm (4.84" x 1.77" x 1.97") – incl. bracket set: 140x45x34 mm (5.51" x 1.77" x 1.34")	L x W x H
Operating temperature range	–20°C to +60° C (–4°F to 140°F)	
Humidity	max. 90% relative humidity	non-condensing
Weight	approx. 340 g (12 oz)	incl. packing and scope of supply

12 EU Declaration of Conformity

CE See attachment

13 WEEE



Devices with this symbol must be treated separately during disposal. This must be done in accordance with the laws of the respective countries for environmentally sound disposal, processing and recycling of electrical and electronic equipment.

14 Contact

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