Model Number

AIR30-8-HW-2500/38a/76a

Active infrared scanner
with 5 m fixed cable

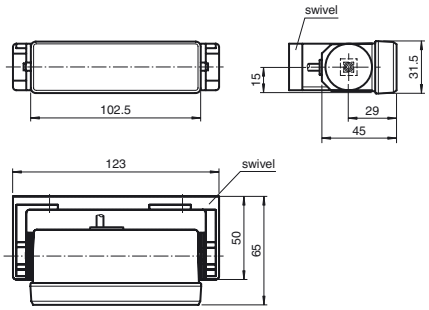
Features

- Single-beam light scanner
- Can be used to monitor both main and ancillary closing edges
- Closing edge safety on revolving doors and carousel doors
- Accurate beam alignment thanks to finely bundled light beam
- Background evaluation operating mode: uses the background as a reference for detecting difficult objects

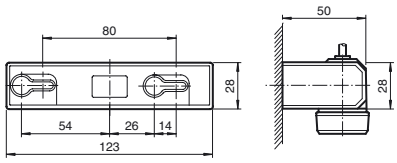
Product information

AIR30 is a series of active infrared scanners with excellent optical properties for monitoring closing edges in a wide range of door systems. The diverse range of housings and mounting options allow the devices to be adapted to suit a whole host of mounting conditions.

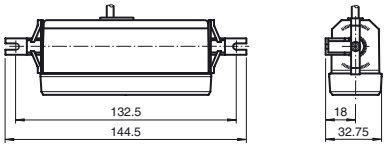
Dimensions



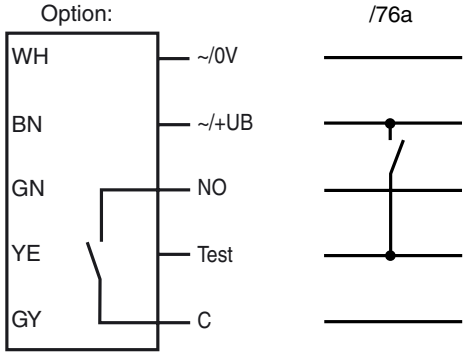
Mounting dimensions for swivel



Mounting dimensions with mounting bracket set AIR30



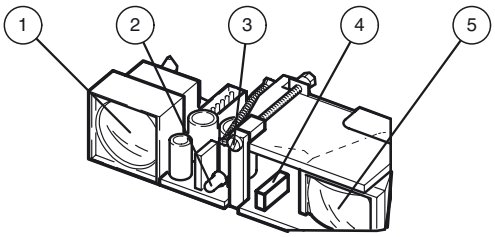
Electrical connection



Note:

Test input can not be used, if sensor is supplied with AC voltage!

Indicators/operating means



1	Transmitter
2	Indication-LED
3	Detection range adjuster
4	Light / Dark switch
5	Receiver

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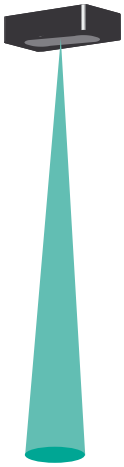
Technical data

General specifications		
Detection range min.		100 ... 1000 mm
Detection range max.		100 ... 2500 mm
Light source		IRED
Light type		modulated infrared light
Black/White difference (6 %/90 %)		≤ 400 mm at a distance of 2000 mm
Transmitter frequency		1800 Hz
Operating mode		Background evaluation
Diameter of the light spot		50 mm at 2000 mm sensor range
Angle of divergence		approx. 1.4 °
Accessories provided		Swivel bracket, Mounting bracket
Functional safety related parameters		
$MTTF_d$		1050 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		90 %
Indicators/operating means		
Function indicator		LED red: lights up when output is active
Control elements		Sensing range adjuster, light-on/dark-on changeover switch
Factory setting		light on
Electrical specifications		
Operating voltage	U_B	10 ... 48 V DC / 11 ... 36 V AC
No-load supply current	I_0	100 mA
Input		
Test input		emitter deactivation at $+U_B$
Output		
Switching type		light/dark on, switchable
Signal output		relay, 1 NO
Switching voltage		≤ 50 V AC / 24 V DC
Switching current		≤ 200 mA AC / 1 A DC
Response time		50 ms
De-energized delay	t_{off}	approx. 200 ms
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Storage temperature		-20 ... 75 °C (-4 ... 167 °F)
Mechanical specifications		
Degree of protection		IP52
Connection		5 m fixed cable
Material		
Housing		plastic
Optical face		Luran®
Mass		50 g
Compliance with standards and directives		
Directive conformity		
EMC Directive 2004/108/EC		EN 60947-5-2:2007+A1:2012
Standard conformity		
Product standard		EN 60947-5-2:2007+A1:2012 IEC 60947-5-2:2007 + A1:2012
Standards		EN 61000-6-2:2005 + AC:2005 excluding EN 61000-4-5, EN 61000-4-11 EN 61000-6-3:2007+A1:2011
Approvals and certificates		
CCC approval		Certified by China Compulsory Certification (CCC)

Typical applications

- Monitoring closing edges and crushing points on revolving doors and carousel doors
- Door monitoring system in local public transportation

Detection area



Accessories

UP-Einbaurahmen
Mounting frame for sensors in the AIR30 and PROSCAN series

Flush Mounting AIR30
Installation cover for AIR30 series sensors

Wetterhaube AIR30
Weather hood for series AIR30

Other suitable accessories can be found at www.pepperl-fuchs.com

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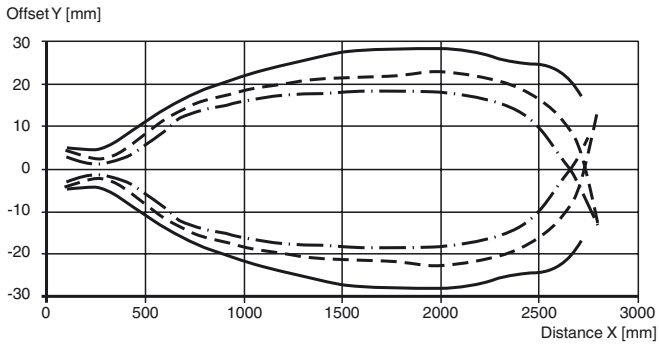
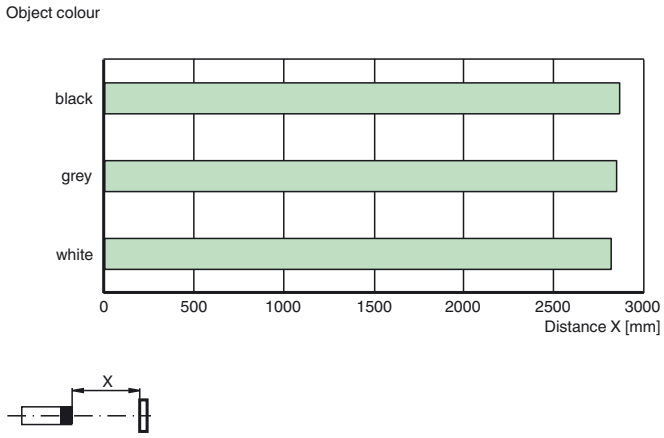
Curves/Diagrams

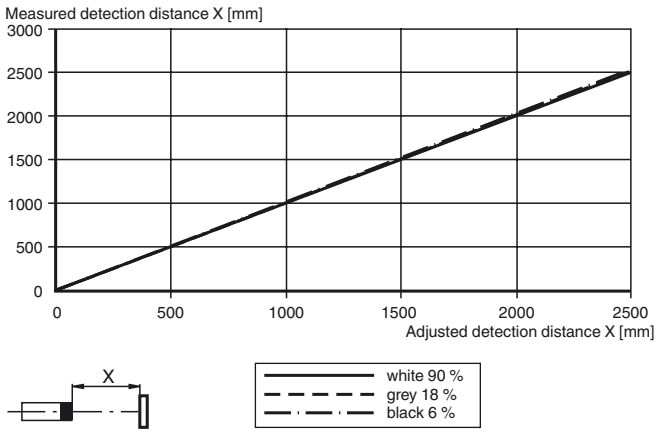
Characteristic response curve



Detection ranges



Difference in detection distance



Operating principle

Active infrared scanners detect people and objects using short-wave infrared radiation according to the triangulation principle. A switch signal is tripped if the infrared beam emitted is reflected by an object within the specified sensing range. Where background evaluation is activated, the background (e.g. ground) is used as a reflector.
This allows reflective or shiny objects, such as vehicles and objects located close to the surface, to be detected reliably and in full.

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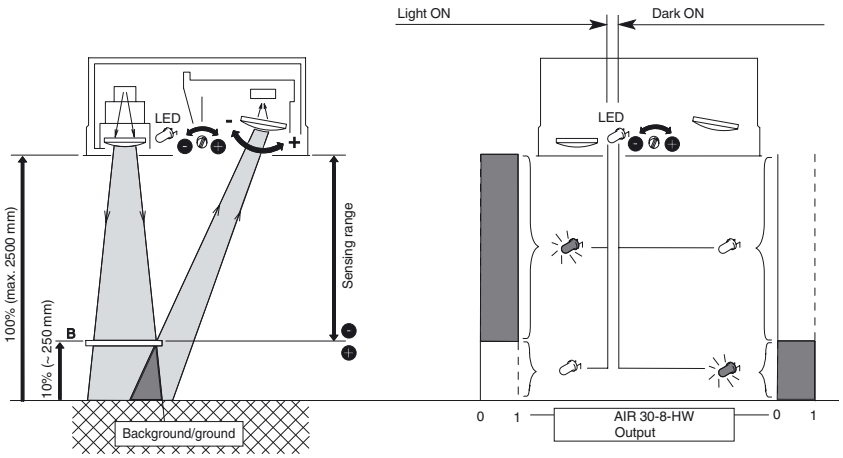
Operating principle
Background evaluation

Object in sensing field:



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