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PAS024AS(W)

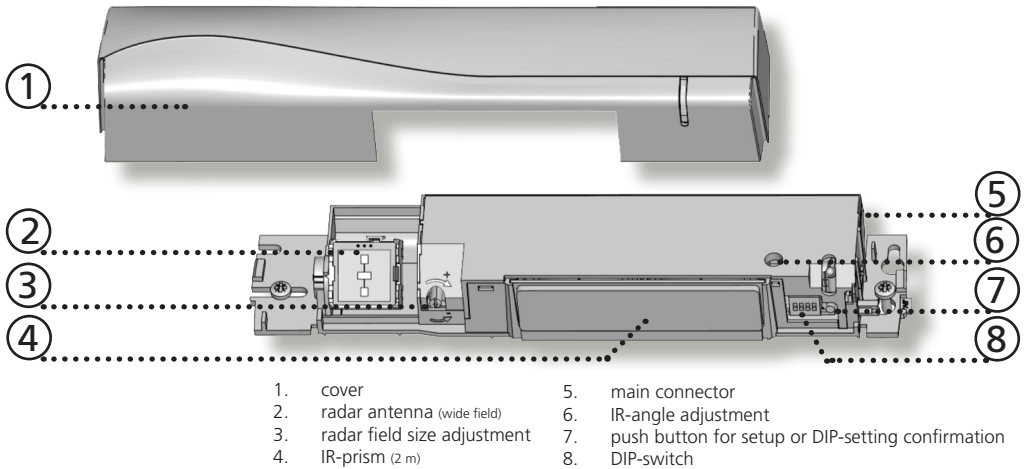## OPENING & SAFETY SENSOR
FOR AUTOMATIC SLIDING DOORS

PAS024ASW: energy-saving unidirectional sensor
PAS024AS: bidirectional sensor

DESCRIPTION

1. cover
2. radar antenna (wide field)
3. radar field size adjustment
4. IR-prism (2 m)
5. main connector
6. IR-angle adjustment
7. push button for setup or DIP-setting confirmation
8. DIP-switch

TECHNICAL SPECIFICATIONS

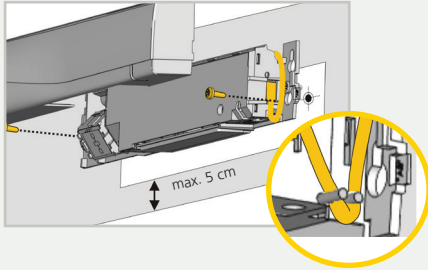|	
Supply voltage:	12 V - 30 V DC -5%/+10% (to be operated from SELV compatible power supplies only)
Power consumption:	< 2.2 W
Mounting height:	1.8 m to 3 m
Sensitivity of the test input:	< 1 V : Log. L; > 10 V: Log. H (max. 30 V)
Temperature range:	-25 °C to +55 °C
Degree of protection:	IP54
Noise:	< 70 dB
Expected lifetime:	20 years
Conformity:	EN 16005; EN 12978; EN IEC 62061SIL2, EN 61496-1 ESPE Type 2; EN ISO 13849-1 Pl «c» CAT.2 (under the condition that the door control system monitors the sensor at least once per door cycle)

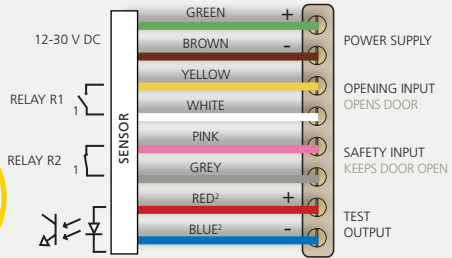|	GREEN LED	RED LED
Detection mode:	Motion Min. detection speed: 5 cm/s	Presence Typical response time: <256 ms
Technology:	Microwave doppler radar Transmitter frequency: 24.150 GHz Transmitter radiated power: < 20 dBm EIRP Transmitter power density: < 5 mW/cm2	Active infrared with background analysis Spot diameter: 0.1 m (typ) Number of spots: 24 Number of curtains: 2
Angle:	From 15 ° to 50 ° vertical (adjustable)	From -4 ° to +4 ° (adjustable)
Output:	Solid-state-relay (free of potential, free of polarity) Max. contact current: 100 mA Max. contact voltage: 42 V AC/DC	Solid-state-relay (free of potential, free of polarity) Max. contact current: 100 mA Max. contact voltage: 42 V AC/DC
Hold time output signal:	0.5 s	0.3 s to 1 s (not adjustable)
Response time on test request:		Typical: < 5 ms

Specifications are subject to changes without prior notice. All values measured in specific conditions.

1 MOUNTING & WIRING

max. 5 cm

12-30 V DC	GREEN +	POWER SUPPLY
	BROWN −	
RELAY R1	YELLOW	OPENING INPUT
	WHITE	OPENS DOOR
RELAY R2	PINK	SAFETY INPUT
	GREY	KEEPS DOOR OPEN
	RED[2] +	TEST
	BLUE[2] −	OUTPUT

SENSOR

The door control unit and the door cover profile must be correctly earthed.

[1] Output status when sensor is operational
[2] For compliance with EN 16005, connection to door controller test output is required.

2 RADAR FIELD - OPENING IMPULSE

GREEN LED

FIELD SIZE

MIN

2.2 m

1 x 0.5 m

MAX

2.2 m

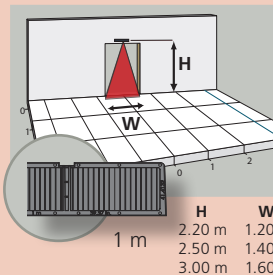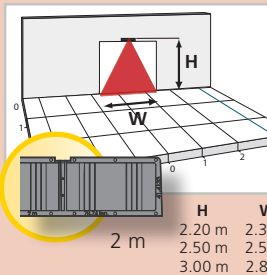4 x 2 m

ANGLE

2.2 m

15°
30°
45°

field size: max
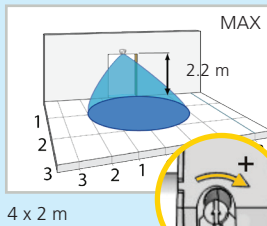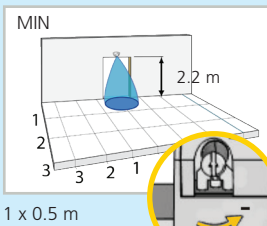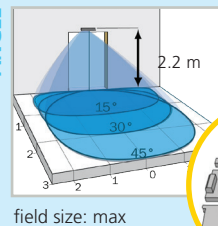
The size of the detection field varies according to the mounting height of the sensor.

3 INFRARED FIELD - SAFETY

RED LED

WIDTH

H
W

2 m

H	W
2.20 m	2.30 m
2.50 m	2.55 m
3.00 m	2.80 m

H
W

1 m

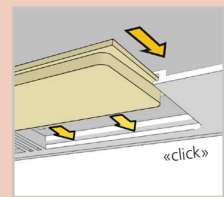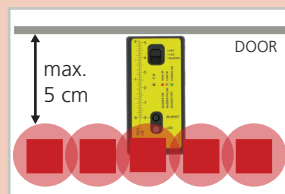| H	W
2.20 m	1.20 m
2.50 m	1.40 m
3.00 m	1.60 m

Available as accessory

«click»

Detection field width indicated according to conditions defined in EN 16005 and including dimension of test body CA.
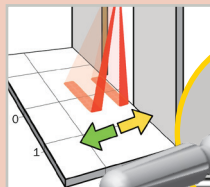
ANGLE

max. 5 cm

DOOR

Check position of IR-curtains with Spotfinder and adjust if necessary.

ORANGE

@ 2.2 m:
Depth of curtain : 8-10 cm
Depth of safety field: 25 cm*

* in standard presetting

CLOSER

AWAY

4 | SETTINGS (by DIP-switch)

	PRESETTINGS		ENVIRONMENT	RELAY R1 ACTIVATION

ON DIP
1 2 3 4

PRESETTINGS		ENVIRONMENT	RELAY R1 ACTIVATION
1 2 critical environment	**1 2** hospital[2]	**3** extreme[3]	**4** motion or presence[4]
1 2 standard	**1 2** shopping street[1]	**3** standard	**4** motion

[1] Can only be used if DIP 4 is OFF.
[2] Not available on VIO-DT2. If selected, the presetting «standard» is applicable.
[3] Enhanced IR-immunity which excludes EN 16005-conformity of the door system.
[4] The opening relay (R1) is activated in case of detection in the radar **or** infrared field.

standard: standard environments (factory setting)

critical environment: enhanced immunity (rain, snow, lamps...) and only 1 IR-curtain activated.

shopping street: optimized for narrow sidewalks > the opening relay (R1) is activated in case of detection in radar + IR-field.

hospital: optimized for persons with reduced mobility (PRM)

+
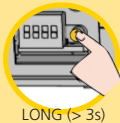
ORANGE   LONG (> 3s)   OFF

After changing a DIP-switch, the orange LED flashes.
A LONG push on the push button confirms the setting.

Always launch a setup after changes of the DIP-settings.

5 | SETUP

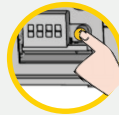⚠ Step outside of the infrared field before launching a setup.

QUICK SETUP

RED-GREEN   OFF

SHORT

ASSISTED SETUP

OPEN+CLOSE + RED-GREEN   OFF

LONG (> 3s)

TIP: Launch an **ASSISTED SETUP** to verify wiring, position of the curtains and correct functioning of the sensor.

⚠ **SAFETY INSTRUCTIONS**

- Test the good functioning of the installation before leaving the premises.
- The device cannot be used for purposes other than its intended use. All other uses cannot be guaranteed by the manufacturer of the sensor.
- The manufacturer of the door system is responsible for carrying out a risk assessment and installing the sensor and the door system in compliance with applicable national and international regulations and standards on door safety.
- The manufacturer of the sensor cannot be held responsible for incorrect installations or inappropriate adjustments of the sensor.
- Only trained and qualified personnel may install and setup the sensor.
- The warranty is void if unauthorized repairs are made or attempted by unauthorized personnel.
- Avoid touching any electronic and optical components, avoid vibrations, do not cover the sensor and avoid proximity to neon lamps or moving objects.
- It is recommended to clean the optical parts at least once a year or more often if required due to environmental conditions.

LED-SIGNALS

	Signal	Cause	Solution
	The ORANGE LED flashes quickly.	A DIP-switch was changed without confirmation.	**1** Confirm the DIP-settings by a long push on the push button.
	The ORANGE LED flashes 1 x.	The sensor signals an internal fault.	**1** Cut and restore power supply. **2** If orange LED flashes again, replace sensor.
	The ORANGE LED flashes 2 x.	Irregularities in the power supply	**1** Check power supply. **2** Check wiring.
	The ORANGE LED flashes 4 x.	The sensor receives not enough IR-energy.	**1** Use the 1 m prism if possible (accessory). **2** Check the angle of the IR-curtains.
	The ORANGE LED flashes 5 x.	The sensor receives too much IR-energy.	**1** Use a low energy prism if possible (accessory). **2** Check the angle of the IR-curtains.
	The ORANGE LED is on.	The sensor encounters a memory problem.	**1** Cut and restore power supply. **2** If orange LED lights up again, replace sensor.
	The RED LED flashes quickly after an assisted setup.	The sensor sees the door during the assisted setup.	**1** Check the angle of the IR-curtains. **2** Launch a new assisted setup. *Attention: Do not stand in the detection field!*
	The RED LED lights up sporadically.	The sensor vibrates.	**1** Check if the sensor is fastened firmly. **2** Check position of prism and cover.
		The sensor sees the door.	**1** Launch an assisted setup and adjust the IR angle.
		The sensor is disturbed by lamps or another sensor.	**1** Choose the critical environment presetting (DIP 1+2).
		The sensor is disturbed by the rain.	**1** Choose the critical environment presetting (DIP 1+2).
	The GREEN LED lights up sporadically.	The sensor is disturbed by rain and/or leaves.	**1** Choose the critical environment presetting (DIP 1+2).
		Ghosting	**1** Change radar antenna angle.
		The sensor vibrates.	**1** Check if the sensor is fastened firmly. **2** Check position of cable and cover.
		The sensor sees the door or other moving objects.	**1** Remove the objects if possible. **2** Change radar field size.
	The LED is off.		**1** Check connections to test output. **2** If your door controller is not able to test the sensor, connect the red and blue cable to the power supply.*
	The reaction of the door does not correspond to the LED-signal.		**1** Change the activation mode of relay R1 (DIP 4).

*excludes EN 16005-conformity of the door system

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