



VIO-DT 1&2

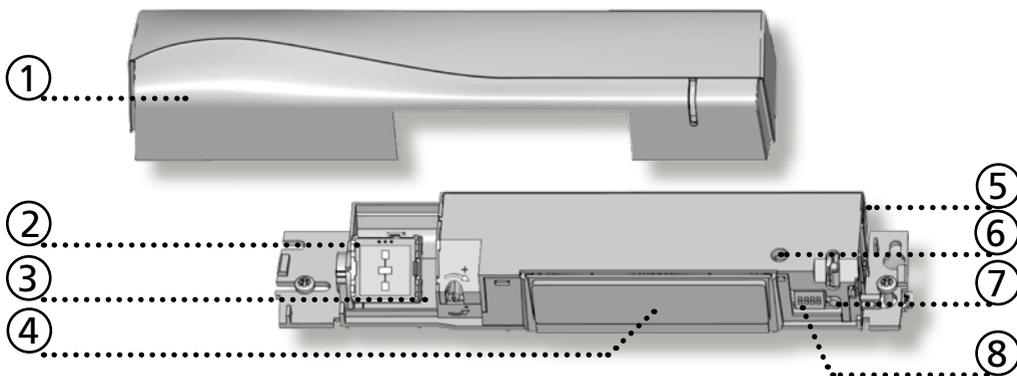
OPENING & SAFETY SENSOR FOR AUTOMATIC SLIDING DOORS

VIO-DT1: energy-saving unidirectional sensor
VIO-DT2: bidirectional sensor



DESCRIPTION

The VIO-DT 1&2 are opening and safety sensors for automatic sliding doors. They combine a motion radar sensor for opening the door with a double failsafe active infrared curtain for the protection of users.



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

TECHNICAL SPECIFICATIONS

Supply voltage*:	12 V - 30 V DC -5%/+10%
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 (IEC/EN 60529)
Noise:	< 70 dB

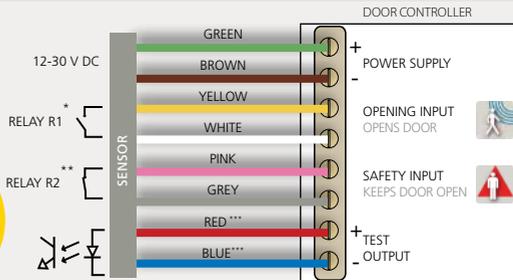
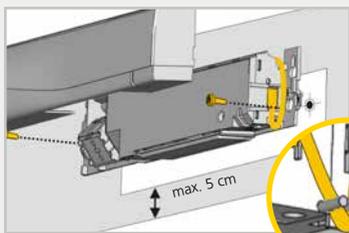


Detection mode:	Motion Min. detection speed: 5 cm/s	Presence Typical response time: <256 ms
Technology:	Microwave doppler radar Transmitter frequency: 24.150 GHz Transmitter radiated power: < 20 dBm EIRP Transmitter power density: < 5 mW/cm ²	Active infrared with background analysis Spot diameter: 0.1 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 DC/AC peak	Solid-state-relay (free of potential, free of polarity) Max. contact current: 100 mA Max. contact voltage: 42 V DC/AC peak
Hold time output signal:	0.5 s	0.3 s to 1 s (not adjustable)
Response time on test request:		Typical: < 5 ms
Safety Standards:		EN ISO 13849-1 Performance level «c» CAT2 (under the condition that the door control system monitors the sensor at least once per door cycle); EN 61508 (SIL2); EN 12978; EN 16005

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

* External electrical sources must be within specified voltages, max 15W and ensure double insulation from primary voltages.

1 MOUNTING & WIRING



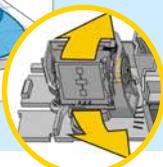
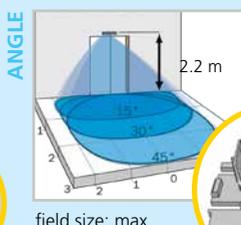
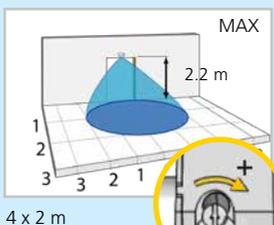
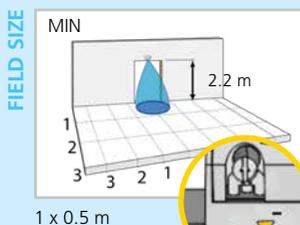
The door control unit and the door cover profile must be correctly earthed.



Mount the sensor securely.

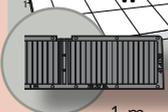
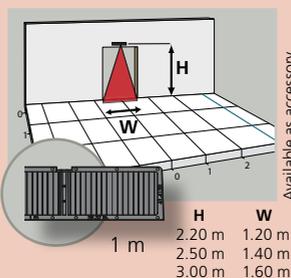
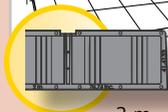
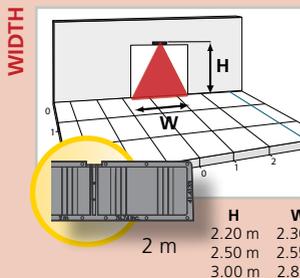
- * Normally open
- ** Normally closed
- *** For compliance with EN 16005, connection to door controller test output is required.

2 RADAR FIELD - OPENING IMPULSE

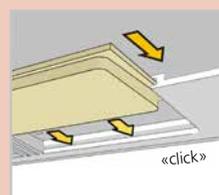


The size of the detection field varies according to the mounting height of the sensor.

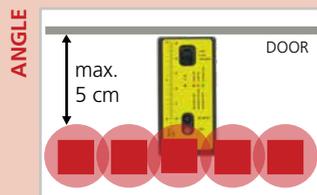
3 INFRARED FIELD - SAFETY



Available as accessory



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

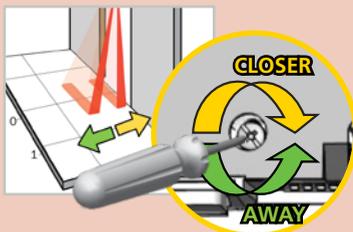


Check position of IR-curtains with Spotfinder and adjust if necessary.



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

* in standard presetting



4 SETTINGS (by DIP-switch)



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)



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.

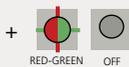
5 SETUP

Step outside of the infrared field before launching a setup.

QUICK SETUP



ASSISTED SETUP



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 sensor cannot be used for purposes other than its intended use.
- The manufacturer of the door system incorporating the sensor is responsible for compliance of the system to applicable national and international regulations and safety standards.
- The manufacturer of the sensor cannot be held responsible for injury or damage resulting from incorrect use, installation or inappropriate adjustment of the sensor.
- The installer must read, understand and follow the instructions given in this manual. Improper installation can result in improper sensor operation.
- 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

PLEASE KEEP FOR FURTHER USE – DESIGNED FOR COLOUR PRINTING

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	The ORANGE LED flashes quickly.	A DIP-switch was changed without confirmation.	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1 Check power supply. 2 Check wiring.
	The ORANGE LED flashes 4 x.	The sensor receives not enough IR-energy.	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 1 Check the angle of the IR-curtains. 2 Launch a new assisted setup. <i>Attention: Do not stand in the detection field!</i>
	The RED LED lights up sporadically.	The sensor vibrates.	<ol style="list-style-type: none"> 1 Check if the sensor is fastened firmly. 2 Check position of prism and cover.
		The sensor sees the door.	<ol style="list-style-type: none"> 1 Launch an assisted setup and adjust the IR angle.
		The sensor is disturbed by lamps or another sensor.	<ol style="list-style-type: none"> 1 Choose the critical environment presetting (DIP 1+2).
		The sensor is disturbed by the rain.	<ol style="list-style-type: none"> 1 Choose the critical environment presetting (DIP 1+2).
	The GREEN LED lights up sporadically.	The sensor is disturbed by rain and/or leaves.	<ol style="list-style-type: none"> 1 Choose the critical environment presetting (DIP 1+2).
		Ghosting	<ol style="list-style-type: none"> 1 Change radar antenna angle.
		The sensor vibrates.	<ol style="list-style-type: none"> 1 Check if the sensor is fastened firmly. 2 Check position of cable and cover.
		The sensor sees the door or other moving objects.	<ol style="list-style-type: none"> 1 Remove the objects if possible. 2 Change radar field size.
	The LED is off.		<ol style="list-style-type: none"> 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.		<ol style="list-style-type: none"> 1 Change the activation mode of relay R1 (DIP 4).

*excludes EN 16005-conformity of the door system

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BEA hereby declares that the VIO-DT1&2 is in conformity with European directives : RED 2014/53/EU, RoHS 2011/65/EU, Machinery 2006/42/EC.
EC-type examination certificate from TÜV NORD CERT: 44 205 13089601.



The complete declaration of conformity is available on our website.
This product should be disposed of separately from unsorted municipal waste.



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