

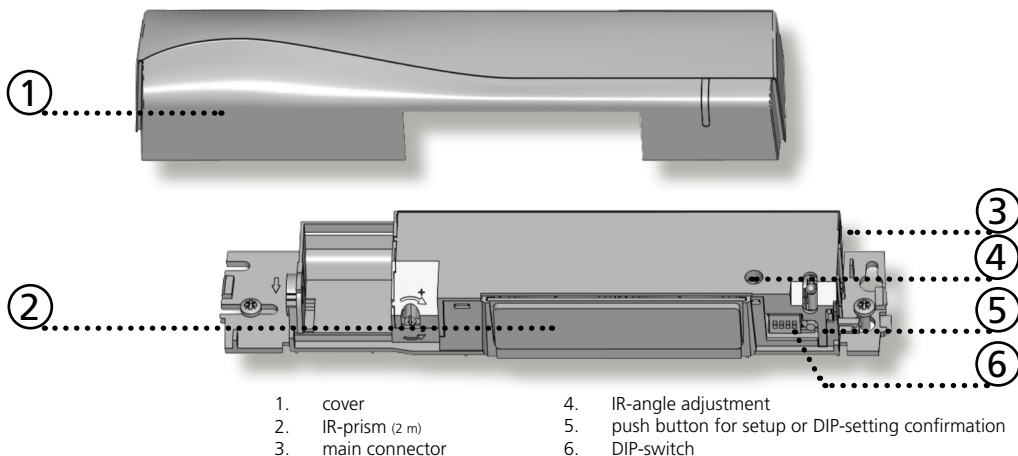


VIO-ST

SAFETY SENSOR FOR AUTOMATIC SLIDING DOORS

DESCRIPTION

The VIO-ST is a safety sensor for automatic sliding doors. It provides a double failsafe active infrared curtain for the protection of users.

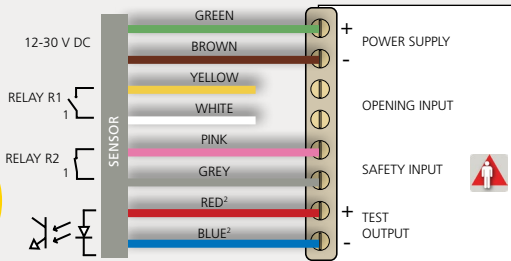
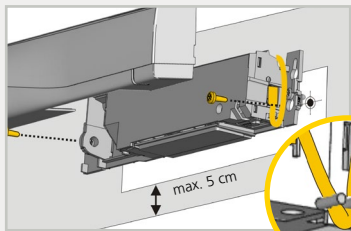


- | | |
|-------------------|--|
| 1. cover | 4. IR-angle adjustment |
| 2. IR-prism (2 m) | 5. push button for setup or DIP-setting confirmation |
| 3. main connector | 6. DIP-switch |

TECHNICAL SPECIFICATIONS

| | |
|--------------------------------|--|
| Supply voltage: | 12 V - 30 V DC -5%/+10% (to be operated from SELV compatible power supplies only) |
| Power consumption: | < 1.6 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 61000-6-2; EN 61000-6-3; EN ISO 13849-1 Performance level «c» CAT.2 (under the condition that the door control system monitors the sensor at least once per door cycle); EN 61508 (SIL 2); EN 61496-1 (ESPE Type 2); EN 12978; EN 16005 |
| Detection mode: | Presence Typical response time: <256 ms Max. presence time: 30 sec |
| Technology: | Active infrared with background analysis Spot diameter: 0.1 m (typ) Number of spots: 24 Number of curtains: 2 |
| Angle: | 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 |
| Hold time output signal: | 0.3 s to 1 s (not adjustable) |
| Response time on test request: | Typical: < 5 ms |

1 MOUNTING & WIRING



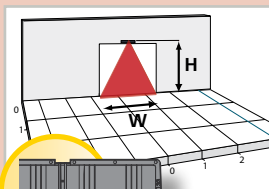
The door control unit and the door cover profile must be correctly earthed.

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

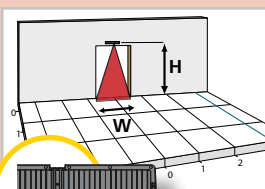
2 INFRARED FIELD - SAFETY



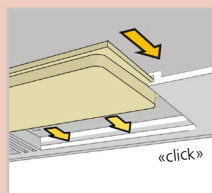
WIDTH



| 2 m | H | W |
|-----|--------|--------|
| | 2.20 m | 2.30 m |
| | 2.50 m | 2.55 m |
| | 3.00 m | 2.80 m |

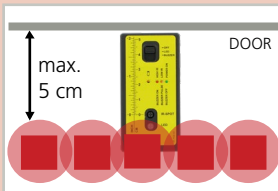


| 1 m | H | W |
|-----|--------|--------|
| | 2.20 m | 1.20 m |
| | 2.50 m | 1.40 m |
| | 3.00 m | 1.60 m |



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

ANGLE

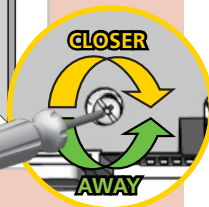
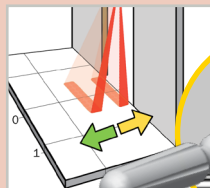


Check position of IR-curtains with Spotfinder and adjust if necessary.



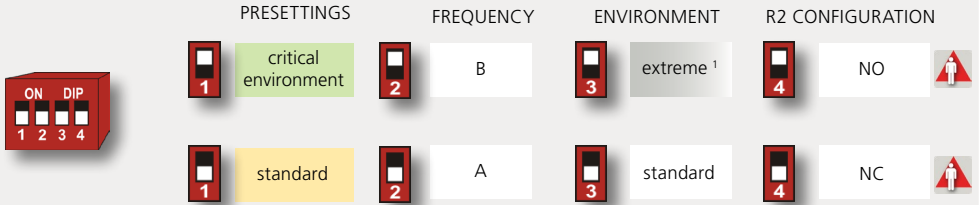
@ 2.2 m:
 Depth of curtain : 8-10 cm
 Depth of safety field: 25 cm*

* in standard presetting



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

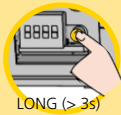
3 SETTINGS (by DIP-switch)



¹ Enhanced IR-immunity which excludes EN 16005-conformity of the door system.

standard: standard environments (factory setting)

critical environment: enhanced immunity for critical environments (rain, snow, lamps...). Only 1 IR-curtain activated.



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.

4 SETUP

Step outside of the detection field before launching a setup.

QUICK SETUP



ASSISTED SETUP



LONG (> 3s)



The yellow and white wires have to be connected to launch an assisted setup.



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 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 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 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



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 a different frequency (DIP 2).

The sensor is disturbed by the rain.

1 Choose the critical environment presetting (DIP 1).



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 output configuration (DIP 4).

*excludes EN 16005-conformity of the door system



Hereby, BEA declares that the VIO-ST is in compliance with European directives EMC 2014/30/EU, RoHS 2011/65/EU and Machinery 2006/42/EC.

Notified Body for EC inspection: 0044 - TÜV NORD CERT GmbH, Langemarckstr. 20, D-45141 Essen

EC-type examination certificate number: 44 205 13089601

Estelle Graas, Angleur, April 2019

The complete declaration of conformity is available on our website.



This product should be disposed of separately from unsorted municipal waste