

LED-SIGNALS

	The RED or GREEN LED is ON sporadically.	Bad adjustment	<ol style="list-style-type: none"> 1 Check if the DIP-switch 4 is ON (uncovered zone). 2 Launch a calibration.
	The RED or GREEN LED is ON permanently.	Bad adjustment of the uncovered zone.	<ol style="list-style-type: none"> 1 Check if the DIP-switch 4 is ON (uncovered zone). 2 Launch a calibration.
	The sensor does not react, but a calibration can be launched.	The monitoring is activated, but the test input is not powered.	<ol style="list-style-type: none"> 1 Check wiring. <ul style="list-style-type: none"> - Door control with test: Connect RED and BLUE wires to test output. - Door control without test: Connect RED to 0 V and BLUE to +12 V - 30 V DC.
	The ORANGE LED is on permanently.	The sensor encounters a memory problem.	<ol style="list-style-type: none"> 1 Send the sensor back for a technical check-up.
	The ORANGE LED flashes quickly.	DIP-switch setting awaiting confirmation.	<ol style="list-style-type: none"> 1 Confirm the DIP-switch setting: long push on the push button.
	The ORANGE LED flashes 1 x every 3 seconds.	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 every 3 seconds.	Power supply is out of limit.	<ol style="list-style-type: none"> 1 Check power supply (tension, capacity). 2 Reduce the cable length or change cable.
	The ORANGE LED flashes 3 x every 3 seconds.	Communication error between modules.	<ol style="list-style-type: none"> 1 Check wiring between modules. 2 Launch a module count: long push on push button of MASTER.
	The ORANGE LED flashes 4 x every 3 seconds.	The sensor receives not enough IR-energy.	<ol style="list-style-type: none"> 1 Launch a new calibration. 2 Step out of the detection field. 3 Change angle of spots. 4 Switch off background (DIP 3: OFF).
	The ORANGE LED flashes 5 x every 3 seconds.	The sensor receives too much IR-energy.	<ol style="list-style-type: none"> 1 Launch a new calibration.
	The ORANGE LED flashes 5 x every 3 seconds.	Calibration error	<ol style="list-style-type: none"> 1 Check mounting height. 2 Change position of calibration screw. 3 Launch a new calibration.
		The sensor is disturbed by lamps or another sensor.	<ol style="list-style-type: none"> 1 Select a different frequency for each module (DIP 2). Launch a new calibration.



SAFETY INSTRUCTIONS

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 and if applicable, the machinery directive 2006/42/EC. 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.



BEA hereby declares that the 4SAFE ON SW is in conformity with the basic requirements and the other relevant provisions of the directives 2004/108/EC and 2006/42/EC.

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

Angleur, December 2010 Jean-Pierre Valkenberg, Authorized representative

The complete declaration of conformity is available on our website: www.bea.be



Only for EC countries: According to the European Guideline 2002/96/EC for Waste Electrical and Electronic Equipment (WEEE)

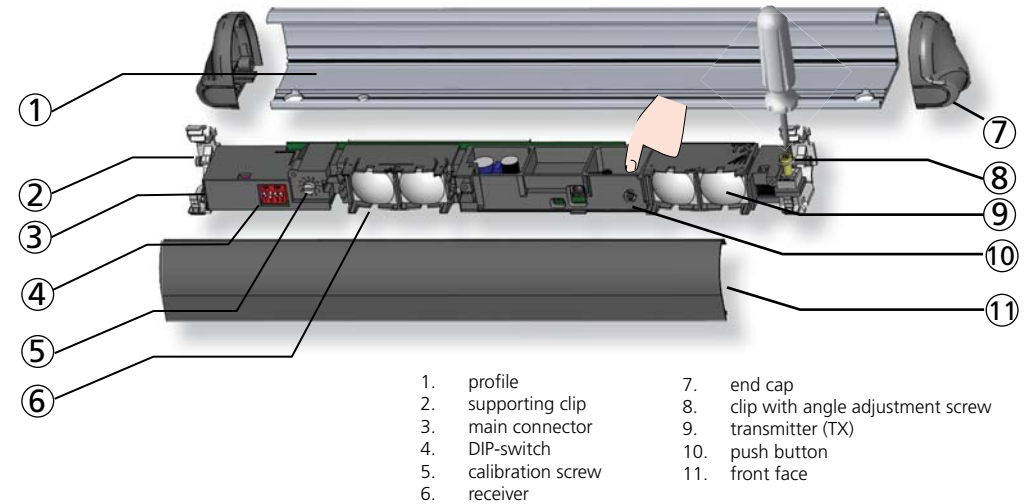


Other use of the device is outside the permitted purpose and can not be guaranteed by the manufacturer. The manufacturer cannot be held responsible for incorrect installations or inappropriate adjustments of the sensor.

4SAFE ON SW

Safety sensor
for automatic swing doors

DESCRIPTION



- | | |
|----------------------|-------------------------------------|
| 1. profile | 7. end cap |
| 2. supporting clip | 8. clip with angle adjustment screw |
| 3. main connector | 9. transmitter (TX) |
| 4. DIP-switch | 10. push button |
| 5. calibration screw | 11. front face |
| 6. receiver | |

TECHNICAL SPECIFICATIONS

Technology:	active infrared with background suppression
Detection field:	400 mm (W) x 70 mm (D) (at 2 m mounting height; 4 spots active)
Mounting height:	1.1 m to 3 m (according to floor reflectivity)
Reaction time:	64 ms (typ)
Max. presence time:	infinite
Supply voltage:	12 V - 24 V AC +/-10% ; 12 V - 30 V DC -5%/+10% (to be operated from SELV compatible power supplies only)
Max current consumption:	110 mA @ 24 V AC / 70 mA @ 24 V DC; 190 mA @ 12 V AC / 145 mA @ 12 V DC (MASTER) 85 mA @ 24 V AC / 60 mA @ 24 V DC; 180 mA @ 12 V AC / 113 mA @ 12 V DC (other modules)
Output:	2 relays (free of potential contact)
Max. contact voltage	42 V AC/DC
Max. contact current	1 A (resistive)
Max. switching power	30 W (DC) / 60 VA (AC)
Input:	1 optocoupler (free of potential contact)
Max. contact voltage:	30 V
Voltage threshold:	high: >10 V DC; low: <1 V DC
Max. number of modules:	4 (up to 6 if 24 V DC)
Reflectivity:	min. 5% at IR-wavelength of 850 nm
Degree of protection:	IP53
Temperature range:	-25 °C to +55 °C; 0-95% relative humidity, non condensing
Expected lifetime:	5 years
Norm conformity:	EMC 2004/108/EC; MD 2006/42/EC; EN 12978 EN ISO 13849-1:2008 Performance Level «c» CAT. 2 (under the condition that the door control system monitors the sensor at least once per door cycle)

1 MOUNTING THE PROFILE



Mount the profiles as close as possible to the closing edge. Leave 2 cm for the black end caps.

Take the position of the white clips into account before drilling and fastening the screws.

2 POSITIONING THE MODULES

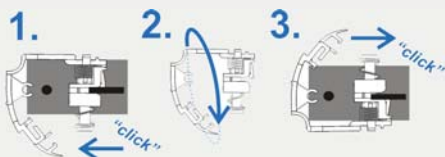


The transmitter (TX) should be placed next to the door edges that need to be protected.

The angle adjustment clip should be next to the transmitter.



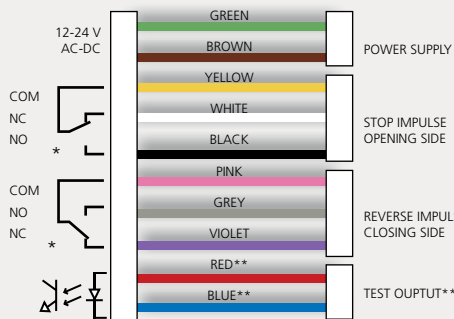
Turn the module if necessary.



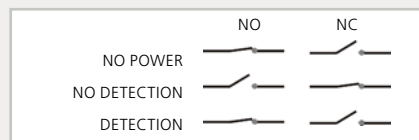
When a module needs to be turned:

1. detach the clips
2. turn them by 180°
3. reattach

3 WIRING



The module connected to the door controller becomes the **MASTER**.



Plug the SLAVE CABLE between the modules in one of the two placements.



* Output status when sensor is operational
 ** For compliance with DIN 18650, connection to door controller test output is required.
 *** If door controller is not tested: connect BLUE to 0 V and RED to +12 V - 30 V DC.

4 SETTINGS

	MOUNTING SIDE	FREQUENCY	BACKGROUND	UNCOVERED ZONE
ON	RELAY 1 OPENING SIDE	FREQ A	ON	35 cm*
OFF	RELAY 2 CLOSING SIDE	FREQ B	OFF	15 cm

LED during detection:
 R1 > RED
 R2 > GREEN

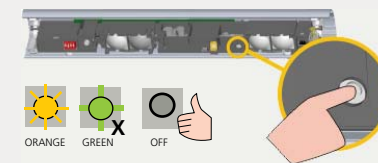
Set different frequencies on modules close to each other.

Not enough background reflectivity: switch to OFF

Approximate values at 1.8 m.

Mounting height > 2.7 m: switch to ON to allow for DIN 18650-conformity

* Recommended for most applications



After changing a DIP-switch, the orange LED flashes.

A LONG push on the push button of the **MASTER** confirms the settings of ALL MODULES.

Afterwards, a number of green flashes (x) indicates the number of connected modules.

5 CALIBRATION



A SHORT push on the button of the **MASTER** launches a calibration on ALL MODULES.

Do not stand in the detection field!



When the LED is off on all modules, the detection zone is OK.



The detection zone is too short: turn the screw clockwise.



The detection zone is too long: turn the screw anticlockwise.



Step out of the detection field. If necessary, change angle or switch off background (DIP 3 = OFF).



Launch a new calibration.



The flashing speed of the LED increases when approaching the optimal position.

6 DOOR SAFETY CHECK

IMPORTANT: Test the good functioning of the installation before leaving the premises.

If necessary, position spots closer to or away from the door and **relaunch a calibration**.

