MR8534/MR8570/MR8590

CAME

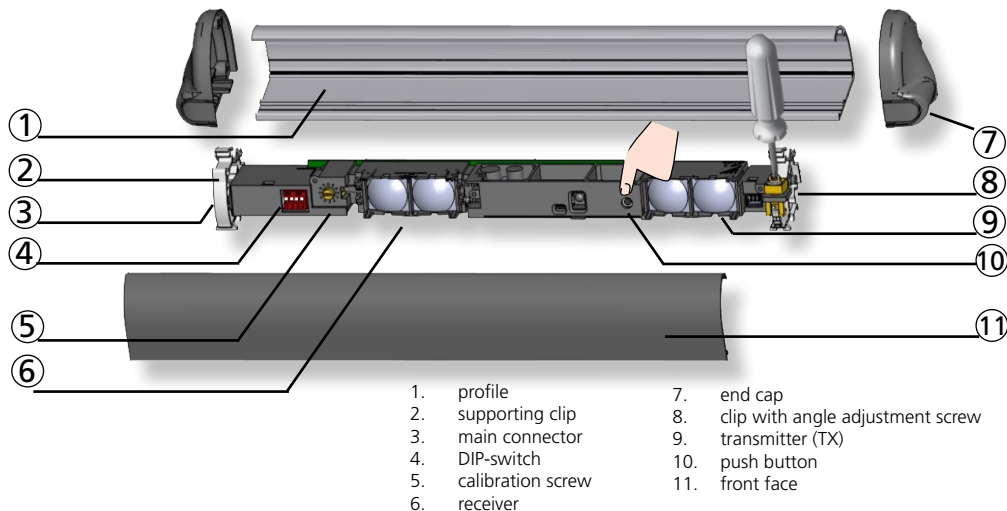EN 16005 · DIN 18650 · TÜV NORD Zertifizierung Baumuster geprüft

SAFETY SENSOR
FOR AUTOMATIC REVOLVING DOORS

User's Guide for product version 0500 and higher
See product label for serial number

DESCRIPTION

Is a safety sensor for automatic revolving doors based on active infrared technology. It secures the area in front of the moving door leaf. To do so, modules must be installed on the top rail of the door leaf.


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

TECHNICAL SPECIFICATIONS

Technology:	active infrared with background suppression
Emission field:	400 mm (W) x 70 mm (D) (at 2 m mounting height; 4 spots active)
Mounting height:	1.3 m to 3.5 m
Reaction time:	64 ms (typ)
Max. presence time:	1 minute
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:	95 mA @ 24 V AC/ 70 mA @ 24 V DC; 170 mA @ 12 V AC/ 130 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) / 42 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:	IP54
Temperature range:	-25 °C to +55 °C; 0-95% relative humidity, non condensing
Expected lifetime:	20 years
Conformity:	DIN 18650-1: ch. 5.7.4; EN 16005 ch. 4.6.8; EN 12978; IEC/EN 61508 (SIL2) 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)

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

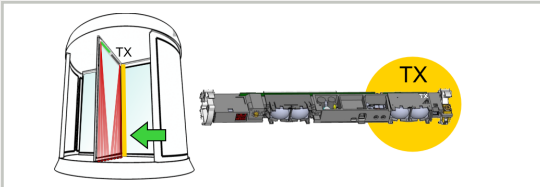## 1 MOUNTING THE PROFILE

2 cm

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.
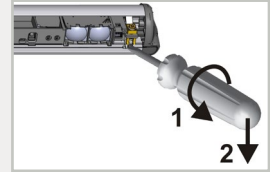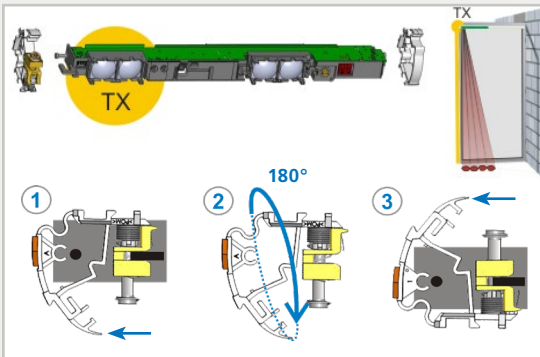

To loosen the modules, please use a screwdriver.

2 POSITIONING THE MODULES

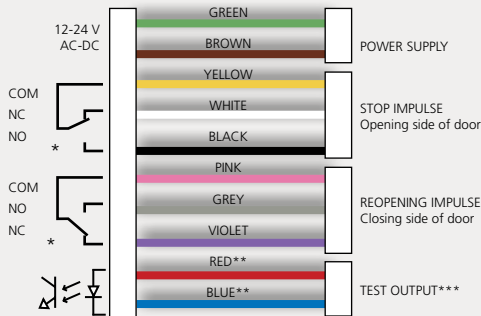Place the transmitter (TX) next to the door edges that needs to be protected.

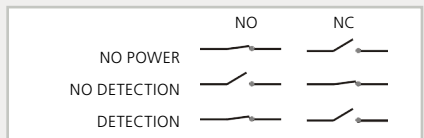Position the angle adjustment clip next to the transmitter.

If necessary, turn the module and reposition the clips as indicated.

1. Detach the clips
2. Turn them by 180°
3. Reattach

180°

3 WIRING

12-24 V AC-DC	GREEN	POWER SUPPLY
	BROWN	
COM NC NO	YELLOW	
	WHITE	STOP IMPULSE Opening side of door
	BLACK	
	PINK	
COM NO NC	GREY	REOPENING IMPULSE Closing side of door
	VIOLET	
	RED**	
	BLUE**	TEST OUTPUT***

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

	NO	NC
NO POWER		
NO DETECTION		
DETECTION		

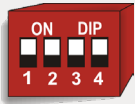Plug the SLAVE CABLE between the modules in one of the two placements.
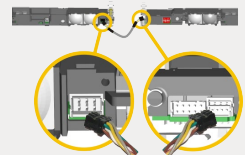
* Output status when sensor is operational
** For compliance with EN 16005 and DIN 18650, connection to door controller test output is required.
*** If door controller is not tested: connect BLUE to 0 V and RED to +12 V - 30 V DC.

4 SETTINGS

|		MOUNTING SIDE	FREQUENCY	BACKGROUND	UNCOVERED ZONE
	ON	RELAY 1 STOP 🔴	FREQ A	ON	HIGH*
	OFF	RELAY 2 REOPENING 🟢	FREQ B	OFF	LOW

FACTORY VALUE

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 2 m: high= 40 cm, low = 15 cm

* Recommended for most applications. Mounting height > 2.7 m: set to LOW for EN 16005 and DIN 18650-conformity.

ORANGE   GREEN **X**   OFF
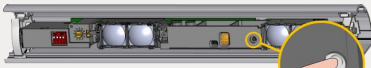
After changing a DIP-switch, the orange LED flashes.

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!

RED-GREEN

OFF

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

GREEN

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

RED

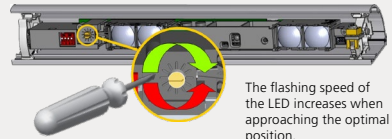The detection zone is too long: turn the screw anticlockwise.

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

ORANGE **4**

Step out of the detection field.
If necessary, change angle or switch off background (DIP 3 = OFF).
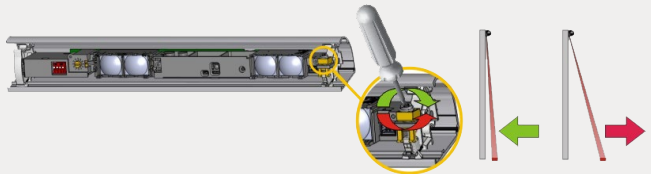
5

Launch a new calibration.

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**.

LED-SIGNALS

	Signal	Problem	Solution
🔴🟢	The RED or GREEN LED is ON sporadicly or permanently.	Bad calibration	**1** Launch a calibration.
		Bad adjustment of the uncovered zone.	**1** Check if the DIP-switch 4 is in correct position. **2** Launch a calibration.
		The sensor is disturbed by lamps or another sensor.	**1** Select a different frequency for each module (DIP 2). **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.	**1** Chech wiring.
			- Door control with test:
			  Connect RED and BLUE wires to test output.
			- Door control without test:
			  Connect BLUE to 0 V and RED to +12 V - 30 V DC.

🟡	The ORANGE LED is on permanently.	The sensor encounters a memory problem.	**1** Send the sensor back for a technical check-up.
🔆	The ORANGE LED flashes quickly.	DIP-switch setting awaiting confirmation.	**1** Corfirm the DIP-switch setting: long push on the push button.
🔆1	The ORANGE LED flashes 1 x every 3 seconds.	The sensor signals an internal fault.	**1** Cut and restore power supply. **2** If orange LED flashes again, replace sensor.
🔆2	The ORANGE LED flashes 2 x every 3 seconds.	Power supply is out of limit.	**1** Check power supply (tension, capacity). **2** Reduce the cable length or change cable.
🔆3	The ORANGE LED flashes 3 x every 3 seconds.	Communication error between modules.	**1** Check wiring between modules. **2** Launch a module count: long push on push button of MASTER.
🔆4	The ORANGE LED flashes 4 x every 3 seconds.	The sensor receives not enough IR-energy.	**1** Launch a new calibration and step out of the detection field. **2** Change angle of spots. **3** Switch off background (DIP 3: OFF).
🔆5	The ORANGE LED flashes 5 x every 3 seconds.	Calibration error	**1** Check mounting height. **2** Change position of calibration screw. **3** Launch a new calibration. **4** Switch off background (DIP3: OFF)

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