# IXIO-DT1

Opening & safety sensor
for automatic sliding doors
(according to EN 16005 and DIN 18650)

User's Guide for product version 0100 and higher
See product label for serial number

## DESCRIPTION
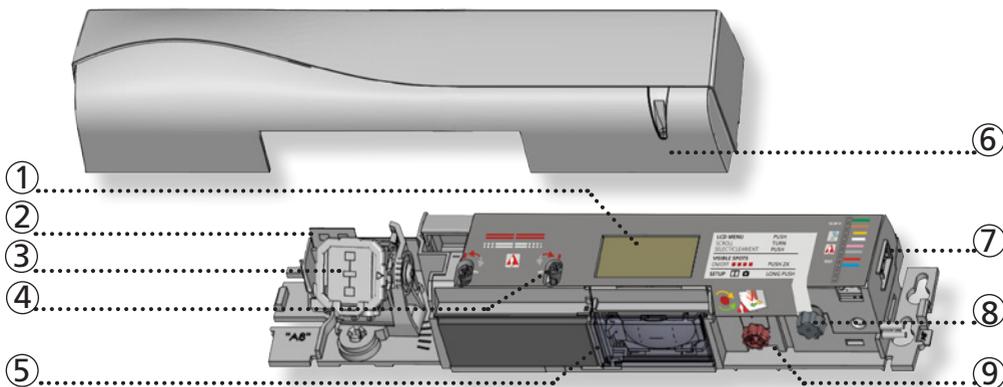
1.  LCD
2.  radar antenna (narrow field)
3.  radar antenna (wide field)
4.  AIR-curtain width adjustment
5.  AIR-lenses
6.  cover
7.  main connector
8.  main adjustment knob
9.  AIR-curtain angle adjustment knob

## ACCESSORIES

BA: Bracket Accessory

CA: Ceiling Accessory
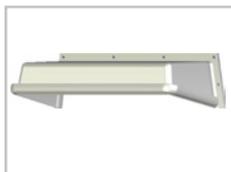
RA: Rain Accessory

# 1 MOUNTING & WIRING
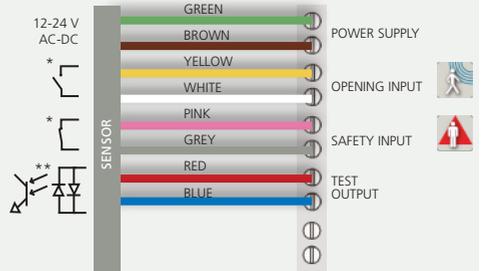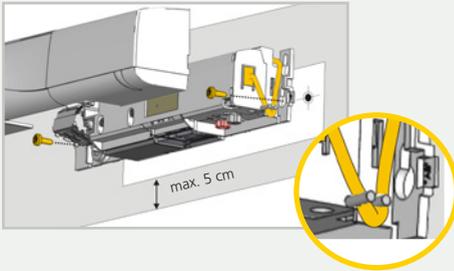


**TIP!**
Fixation and wiring are compatible with the ACTIV8.

max. 5 cm

| | | |
|---|---|---|
| GREEN | | |
| 12-24 V AC-DC | BROWN | POWER SUPPLY |
| * | YELLOW | |
| | WHITE | OPENING INPUT |
| * | PINK | |
| | GREY | SAFETY INPUT |
| ** | RED | TEST |
| | BLUE | OUTPUT |

SENSOR

\* Output status when sensor is operational
\*\* For compliance with EN 16005 and DIN 18650,
connection to door controller test output is required.

# 2 OPENING IMPULSE FIELD

**ANGLE**
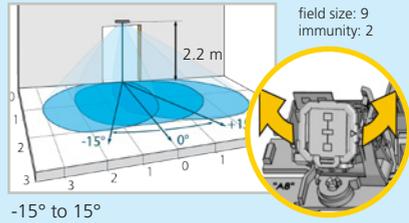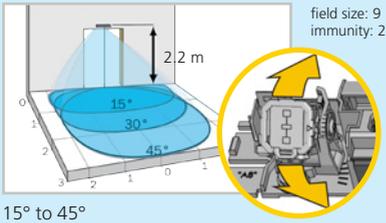


field size: 9
immunity: 2

2.2 m

15°
30°
45°

15° to 45°



field size: 9
immunity: 2

2.2 m

-15°  0°  +15°

-15° to 15°

**WIDTH**



field size: 9
immunity: 2

2.2 m

4 m x 2 m (wide)



field size: 9
immunity: 2

2.2 m

2 m x 2.5 m (narrow)
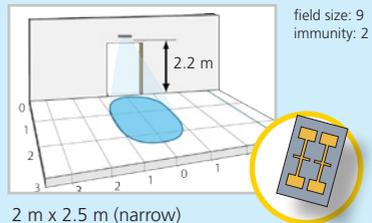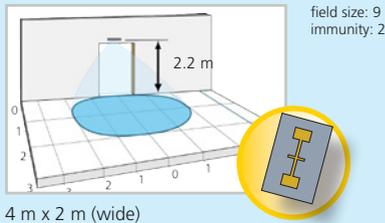
The size of the detection field varies according to the mounting height of the sensor.

# 3 SAFETY FIELD

DOOR

max. 9 cm**

**CLOSER**

**AWAY**

DOOR

max. 5 cm**

**TIP!** Alternatively, the Spotfinder can help locating the position of the curtains.

PUSH 2X

OR
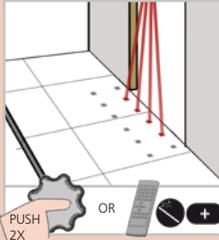
Activate the visible spots.*
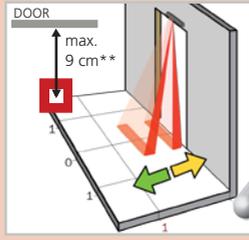
If necessary, adjust the AIR-curtain angle (from -7° to 4°).

\* Visibility depends on external conditions
\*\* The distance between the inner curtain of the inside door sensor and the inner curtain of the outside door sensor should always be smaller than 20 cm. The distance to the door leaf depends therefore on the thickness of the door leaf.

**WIDTH**

**TIP!** Additional adjustments are possible by LCD or remote control (see p. 5)
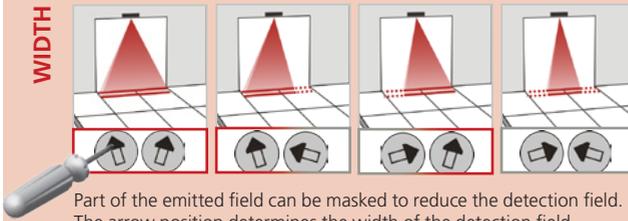
Part of the emitted field can be masked to reduce the detection field. The arrow position determines the width of the detection field.
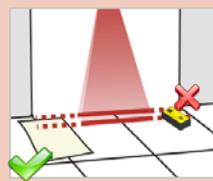
Always verify the actual detection field width with a piece of paper and not the Spotfinder, which detects the whole emitted field.

| Mounting height | Detection width |
|---|---|
| 2.00 m | 2.00 m |
| 2.20 m | 2.20 m |
| 2.50 m | 2.50 m |
| 3.00 m | d max |
| 3.50 m | d max |

DIN 18650
BS 7036

3.50 m
3 m
2.50 m
2 m

d max = 2.5 m

EN 16005

3.50 m
3 m
2.50 m
2 m

d max = 3 m
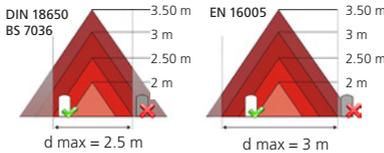
The size of the detection field varies according to the mounting height of the sensor. The full door width must be covered.

# 4 SETTINGS

Adjust the sensor by LCD or remote control (see p. 4 and 5) or choose one of the presettings:

OR

**STANDARD:** inside installations

Presettings
Standard

❶

**CRITICAL ENVIRONMENT:** critical or outside installations

Presettings
Critical env

❷

**SHOPPING STREET:** installations in narrow streets with pedestrian traffic

Presettings
Shopping str

❸
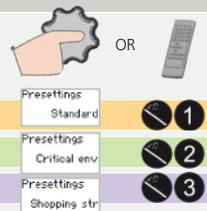
# 5 SETUP

QUICK SETUP =

ASSISTED SETUP =

OPEN+CLOSE

**IMPORTANT!** Step out of the detection field before launching a setup.

OR

LONG PUSH (> 3 S)

0

**IMPORTANT!** Test the good functioning of the installation before leaving the premises.

# HOW TO USE THE LCD?

## DISPLAY DURING NORMAL FUNCTIONING
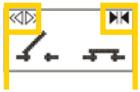
Opening impulse    Safety
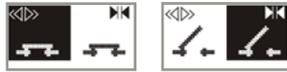
Negative display = active output
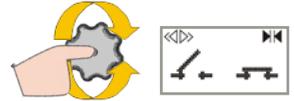
To adjust contrast, push and turn the grey button simultaneously.
*During normal function only.*

## FACTORY VALUE VS. SAVED VALUE

AIR:Immunity
<2.0m 2
displayed value = factory value

AIR:Immunity
>2.8m 4
displayed value = saved value

## NAVIGATING IN MENUS

Push to enter the LCD-menu

English
Deutsch

Select your language before entering the first LCD-menu.
*During the first 30 seconds after power-on of the sensor or later in the diagnostics menu.*

Scroll menu items

Back
More
Select **Back** to return to previous menu or display.

Back
More
Presettings
Select **More** to go to next level:
- basic settings
- advanced settings
- diagnostics

## CHANGING A VALUE

AIR:Immunity
<2.8m 2

SCROLL MENU UP-DOWN

PUSH TO SELECT PARAMETER

AIR:Immunity
<2.8m 2
current value is displayed

SCROLL VALUES UP-DOWN
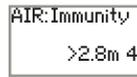
AIR:Immunity
>2.8m 4
more values are displayed
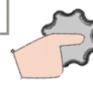
PUSH TO SAVE NEW VALUE

AIR:Immunity
>2.8m 4
new value is displayed

## VALUE CHECK WITH REMOTE CONTROL

←-→ 2
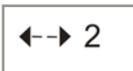
Pressing a parameter symbol on your remote control, displays the saved value directly on the LCD-screen.

# OVERVIEW OF SETTINGS

## BASIC

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| PRESETTINGS | | standard | critical env. | shopping street | | factory values / increased immunities + 1 curtain / increased immunities + redirection = motion and presence | | | | |
| RAD: FIELDSIZE | small | > | > | > | > | > | > | ▣ | > | large |
| AIR: IMMUNITY* | | low | normal < 2.8 m | high < 2.8 m | normal > 2.8 m | high > 2.8 m | | | | |
| AIR: FREQ | | A | B | | | | | | | |

For conformity to EN 16005 and DIN 18650 at a mounting height of 2.8 m or more, values 2 and 3 are not allowed.

Sensors mounted close to each other should have a different frequency.

\* For conformity to BS 7036 at a mounting height of 2.2 m or more, values 2 and 3 are not allowed.

## ADVANCED

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| RAD: IMMUNITY | | low | ▣ | > | > | > | > | > | > | high |
| RAD: DIRECTION | | bi | uni | uni MTF | uni REV | bi auto | uni auto | MTF auto | | |
| RAD: HOLDTIME | 0.5 s | 1 s | 2 s | 3 s | 4 s | 5 s | 6 s | 7 s | 8 s | 9 s |
| RAD: OUTPUT | | NO / NC | NC / NO | NC / NC | NO / NO | | | | | |
| AIR: WIDTH | (icons) | | | | | | | | | |
| + | | | | | | | | | | |
| AIR: NUMBER | service mode | 1 | 2 | | | | | | | |
| AIR: PRESTIME | motion | 15 s | 30 s | 1 min | 2 min | 5 min | 10 min | 20 min | 60 min | infinite |
| AIR: OUTPUT | | NO / NC | NC / NO | NC / NC | NO / NO | | | | | |
| REDIRECTION | motion | motion **or** presence | motion **and** presence | | | | | | | |

RAD: DIRECTION — MTF: for persons with reduced mobility; REV: unidirectional motion away from sensor; auto: automatic adaptation of field size (small shops)

RAD: OUTPUT — NO: normally open; NC: normally closed

AIR: WIDTH — Always additionally adjust the arrow position on the sensor with a screwdriver.

AIR: NUMBER — service mode = no IR detection during 15 minutes (maintenance). This value excludes conformity of the door system to EN 16005 and DIN 18650.

AIR: PRESTIME — min. value for DIN18650: 1 min; min. value for EN16005: 30 s

REDIRECTION — opening output is active in case of: 0 motion detection; 1 motion **or** presence detection; 2 motion **and** presence detection

FACTORYRST — restore to factory values

## DIAGNOSTICS

| | |
|---|---|
| ZIP | all parameter settings in zipped format |
| ID # | unique ID-number |
| ERROR LOG | the last 10 errors |
| AIR: SPOTVIEW | view of spot(s) that trigger detection |
| AIR: C1 ENERG | signal amplitude received on curtain 1 |
| AIR: C2 ENERG | signal amplitude received on curtain 2 |
| POWERSUPPLY | supply voltage at power connector |
| OPERATINGTIME | power duration since first startup |
| RESET LOG | delete all saved errors |
| RC PASSWORD | password for remote control login |
| LANGUAGE | language of LCD-menu |
| ADMIN | enter code to access admin mode |

| | | | | |
|---|---|---|---|---|
| **E1** | The ORANGE LED flashes 1 x. | The sensor signals an internal fault. | **1** Cut and restore power supply.<br>**2** If orange LED flashes again, replace sensor. |
| **E2** | The ORANGE LED flashes 2 x. | The power supply is too low or too high. | **1** Check power supply (in the diagnostics menu of the LCD).<br>**2** Check wiring. |
| **E4** | The ORANGE LED flashes 4 x. | The sensor receives not enough AIR-energy. | **1** Check the angle of the AIR-curtains.<br>**2** Increase AIR-immunity filter to value 4 or 5 (> 2.8 m). |
| **E5** | The ORANGE LED flashes 5 x. | The sensor receives too much AIR-energy. | **1** Check the angle of the AIR-curtains.<br>**2** Decrease the AIR immunity filter to value 1, 2 or 3. |
| **E8** | The ORANGE LED flashes 8 x. | The AIR power emitter is faulty. | **1** Replace sensor. |
| | The ORANGE LED is on. | The sensor encounters a memory problem. | **1** Cut and restore power supply.<br>**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 AIR-curtains.<br>**2** Launch a new assisted setup.<br>*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.<br>**2** Check position of cable and cover. |
| | | The sensor sees the door. | **1** Launch an assisted setup and adjust the AIR angle. |
| | | The sensor is disturbed by external conditions. | **1** Increase the AIR-immunity filter to value 3.<br>**2** Select presetting 2 or 3. |
| | The GREEN LED lights up sporadically. | The sensor is disturbed by rain and/or leaves. | **1** Select presetting 2 or 3.<br>**2** Increase radar-immunity filter. |
| | | Ghosting created by door movement. | **1** Change radar field angle. |
| | | The sensor vibrates. | **1** Check if the sensor and door cover is fastened firmly.<br>**2** Check position of cable and cover. |
| | | The sensor sees the door or other moving objects. | **1** Remove the objects if possible.<br>**2** Change radar field size or angle. |
| | The LED and the LCD-display are off. | | **1** Cut and restore power supply.<br>**2** Check wiring. |
| | The reaction of the door does not correspond to the LED-signal. | | **1** Check output configuration setting.<br>**2** Check wiring. |

| Motion detection | Presence detection | LED flashes | LED flashes quickly | LED is off |
|---|---|---|---|---|

## INSTALLATION

Avoid extreme vibrations.
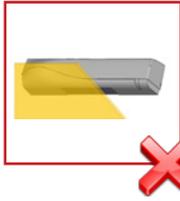
Do not cover the sensor.
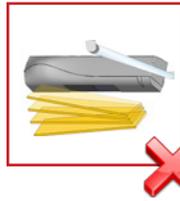
Avoid moving objects and light sources in the detection field.
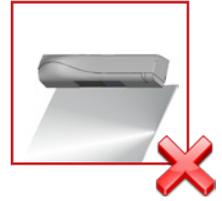
Avoid highly reflective objects in the infrared field.

## MAINTENANCE
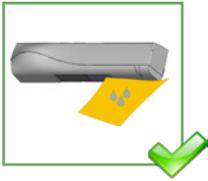
It is recommended to clean the optical parts at least once a year or more if required due to environmental conditions.

Do not use aggressive products to clean the optical parts.

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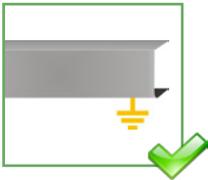
The door control unit and the door cover profile must be correctly earthed.

Only trained and qualified personnel may install and setup the sensor.
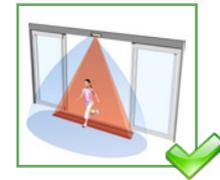
Always test the good functioning of the installation before leaving the premises.
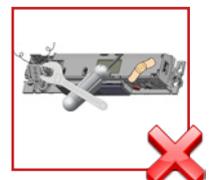
The warranty is invalid if unauthorized repairs are made or attempted by unauthorized personnel.

⚠️
- 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.

## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Supply voltage: | 12 V - 24 V AC +/-10% ; 12 V - 30 V DC +/-10% (to be operated from SELV compatible power supplies only) |
| Power consumption: | < 2.5 W |
| Mounting height: | 2 m to 3.5 m (local regulations may have an impact on the acceptable mounting height) |
| Temperature range: | -25°C to +55°C; 0-95% relative humidity, non condensing |
| Degree of protection: | IP54 |
| Expected lifetime: | 20 years |
| Applicable directives: | R&TTE 1999/5/EC; EMC 2004/108/EC; MD 2006/42/EC; RoHS 2002/95/EC |

| | | |
|---|---|---|
| Detection mode: | Motion<br>Min. detection speed: 5 cm/s | Presence<br>Typical response time: < 200 ms (max. 500 ms) |
| Technology: | Microwave doppler radar<br>Transmitter frequency: 24.150 GHz<br>Transmitter radiated power: < 20 dBm EIRP<br>Transmitter power density: < 5 mW/cm² | Active infrared with background analysis<br>Spot: 5 cm x 5 cm (typ)<br>Number of spots: max. 24 per curtain<br>Number of curtains: 2 |
| Output: | Solid-state-relay<br>(potential and polarity free)<br>Max. contact current: 100 mA<br>Max. contact voltage: 42 V AC/DC | Solid-state-relay<br>(potential and polarity free)<br>Max. contact current: 100 mA<br>Max. contact voltage: 42 V AC/DC<br>Holdtime: 0.3 to 1 s |
| Test input: | | Sensitivity: Low: < 1 V; High: > 10 V (max. 30 V)<br>Response time on test request: typical: < 5 ms |
| Noise: | < 70 dB | |
| Norm conformity: | | EN 12978<br>EN ISO 13849-1:2008 PL «c» CAT. 2<br>(under the condition that the door control system<br>monitors the sensor at least once per door cycle)<br>EN 16005:2012 Chapter 4.6.8;<br>DIN 18650-1:2010 Chapter 5.7.4<br>BS 7036-1:1996 Chapter 8.1 |

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

**BE∆**
OPEN UP NEW HORIZONS

CE