

# IXIO-DT3

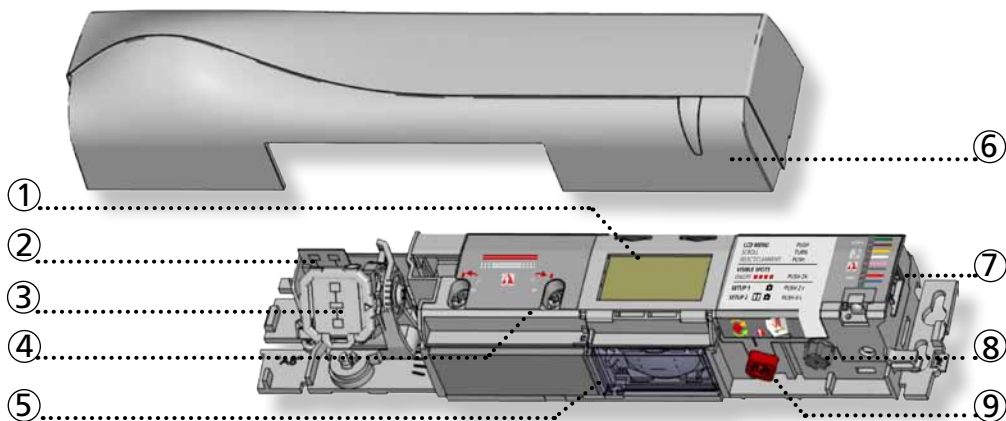
## Opening & safety sensor for automatic sliding doors

(according to EN 16005 and DIN 18650,  
including emergency exits)

User's Guide for product version 0300 and higher  
See product label for serial number



### DESCRIPTION



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

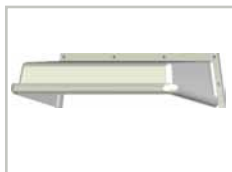
### ACCESSORIES



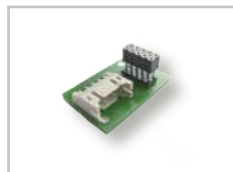
BA: Bracket Accessory



CA: Ceiling Accessory

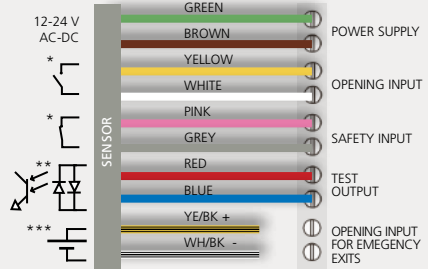


RA: Rain Accessory



Retrofit interface

# 1 MOUNTING & WIRING



**TIP!**

Fixation is compatible with the ACTIV8.

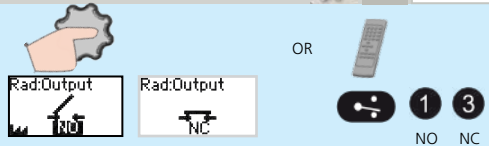
\* Output status when sensor is operational  
 \*\* For compliance with EN 16005 and DIN 18650, connection to door controller test output is required.  
 \*\*\*Current source output for emergency exits

# 2 RADAR OUTPUT CONFIGURATION

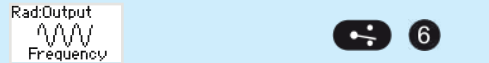
Choose the correct radar output:

**RELAY OUTPUT**

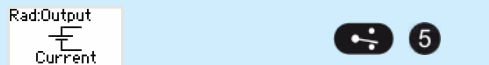
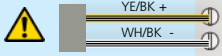
NO: normally open  
 NC: normally closed



**FREQUENCY OUTPUT**

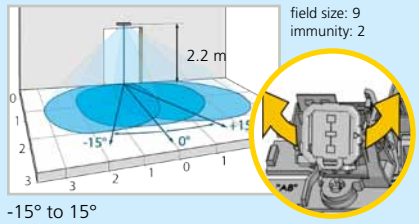
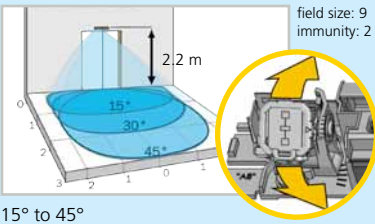


**CURRENT SOURCE OUTPUT**

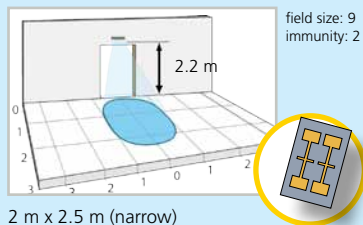
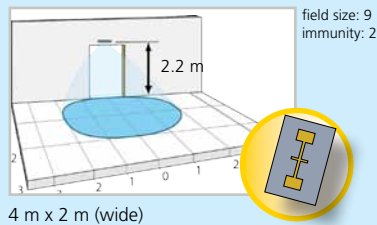


# 3 RADAR OPENING IMPULSE FIELD

**ANGLE**



**WIDTH**

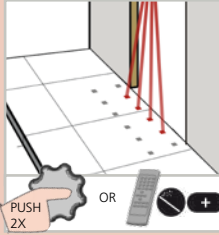


The size of the detection field varies according to the mounting height of the sensor. In emergency exits the full door width must be covered.

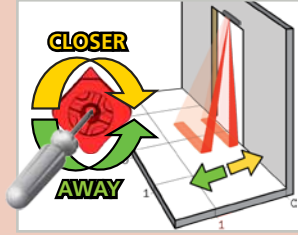
## 4 INFRARED SAFETY FIELD



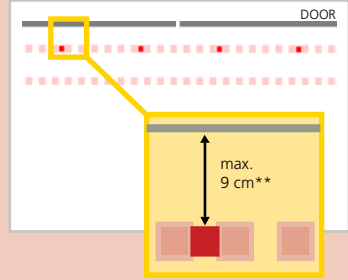
ANGLE



Activate the visible spots.\*

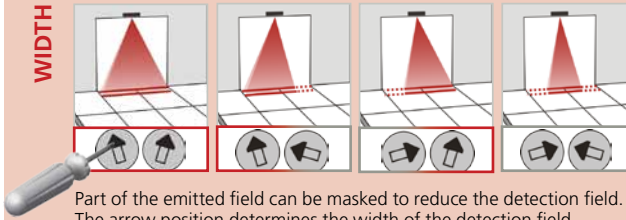


If necessary, adjust the AIR-curtain angle (from  $-7^\circ$  to  $4^\circ$ ).

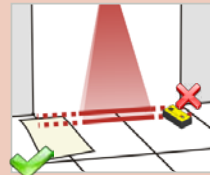


\* Visibility depends on external conditions. When spots are not visible, use the Spotfinder to locate the curtains.  
 \*\* The distance between the inner curtain of the inside door sensor and the inner curtain of the outside door sensor should always be smaller than 20 cm. The distance to the door leaf depends therefore on the thickness of the door leaf.

WIDTH



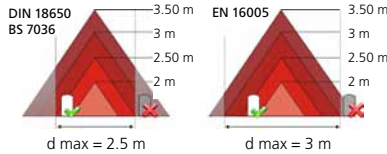
Part of the emitted field can be masked to reduce the detection field. The arrow position determines the width of the detection field.



**TIP!**  
 Additional adjustments are possible by LCD or remote control (see p. 5)

Always verify the actual detection field width with a piece of paper and not the Spotfinder, which detects the whole emitted field.

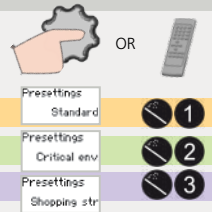
Mounting height	Detection width
2.00 m	2.00 m
2.20 m	2.20 m
2.50 m	2.50 m
3.00 m	d max
3.50 m	d max



The size of the detection field varies according to the mounting height and the settings of the sensor. The full door width must be covered.

## 5 SETTINGS

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



**STANDARD:** inside installations

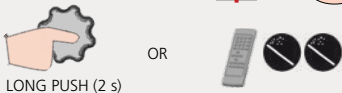
**CRITICAL ENVIRONMENT:** critical or outside installations

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

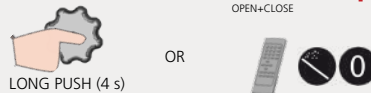
## 6 SETUP

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

SETUP 1 (QUICK) =



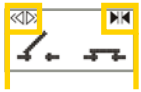
SETUP 2 (ASSISTED) = +



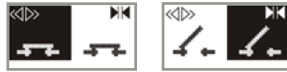
**IMPORTANT!** Test the good functioning of the installation before leaving the premises.

## HOW TO USE THE LCD?

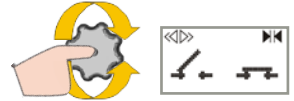
### DISPLAY DURING NORMAL FUNCTIONING



Opening impulse      Safety impulse

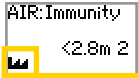


Negative display = active output



To adjust contrast, push and turn the grey button simultaneously.  
*During normal function only.*

### FACTORY VALUE VS. SAVED VALUE



displayed value = factory value



displayed value = saved value

### NAVIGATING IN MENUS



Push to enter the LCD-menu



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



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



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

### CHANGING A VALUE



SCROLL MENU UP-DOWN



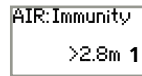
PUSH TO SELECT PARAMETER



current value is displayed



SCROLL VALUES UP-DOWN



more values are displayed

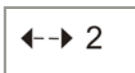


PUSH TO SAVE NEW VALUE



new value is displayed

### VALUE CHECK WITH REMOTE CONTROL



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

# OVERVIEW OF SETTINGS

	0	1	2	3	4	5	6	7	8	9			
Back More													
PRESETTINGS		standard	critical env.	shopping street		factory values	increased immunities + 1 curtain	increased immunities + redirection = motion and presence					
RAD: FIELD SIZE	small	>	>	>	>	>	>		>	large			
RAD: OUTPUT/AIR	NO NC	NC NO	NC NO	NO NO	current NC	freq NC	NO: normally open NC: normally closed	freq: frequency output current: current output					
IMMUNITY		low	normal	< 2.8 m high	higher	highest	> 2.8 m normal	high	For conformity to EN 16005 or DIN 18650 at a mounting height of 2.8 or more, use values 6 and 7.				
AIR: FREQ	A	B	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, use values 6 and 7.					
More Back													
excludes conformity to EN 16005 / DIN 18650 / BS 7036 of the door system													
<b>IMPORTANT!</b> The auto mode of the detection direction is not allowed when the sensor is used in emergency exits.													
Back More													
RAD: IMMUNITY		low		>	>	>	>	>	>	high			
RAD: DIRECTION	radar off	bi	uni	uni PRM	uni AWAY	bi auto	uni auto	PRM auto	PRM: for persons with reduced mobility AWAY: unidirectional motion away from sensor auto: automatic adaptation of field size (small shops)				
RAD: HOLD TIME	0.5 s	1 s	2 s	3 s	4 s	5 s	6 s	7 s	8 s	9 s			
AIR: WIDTH												Always additionally adjust the arrow position on the sensor with a screwdriver.	
AIR: NUMBER	service mode	1	2	service mode = no IR detection during 15 minutes (maintenance). This value excludes conformity of the door system to EN 16005 and DIN 18650.									
AIR: PRE TIME	motion	15 s	30 s	1 min	2 min	5 min	10 min	20 min	60 min	infinite	min. value for DIN18650: 1 min min. value for EN16005: 30 s		
AIR: OUTPUT		NO NC	NO NO	NC NC	NO NO	current NC	freq NC	NO: normally open NC: normally closed	freq: frequency output current: current output				
REDIRECTION	motion	motion or presence	motion and presence	opening output is active in case of:			0	1 motion detection 2 motion or presence detection motion and presence detection					
FACTORY RST	restore to factory values												
DOOR BELL	off	1 s	2 s	3 s	4 s	5 s	6 s	7 s	8 s	9 s	see application note DOOR BELL for more information		
More Back													














- DIAGNOSTICS
- ZIP
  - ID #
  - ERROR LOG
  - AIR: SPOTVIEW
  - AIR: C1 ENERG
  - AIR: C2 ENERG

all parameter settings in zipped format  
 unique ID-number  
 the last 10 errors  
 view of spot(s) that trigger detection  
 signal amplitude received on curtain 1  
 signal amplitude received on curtain 2

- POWERSUPPLY
- OPERATING TIME
- RESET LOG
- RC PASSWORD
- LANGUAGE
- ADMIN

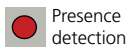
supply voltage at power connector  
 power duration since first startup  
 delete all saved errors  
 password for remote control login  
 language of LCD-menu  
 enter code to access admin mode

## TROUBLESHOOTING

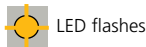
E1	 The ORANGE LED flashes 1 x.	The sensor signals an internal fault.	<ol style="list-style-type: none"> <li>1 Cut and restore power supply.</li> <li>2 If orange LED flashes again, replace sensor.</li> </ol>
E2	 The ORANGE LED flashes 2 x.	The power supply is too low or too high.	<ol style="list-style-type: none"> <li>1 Check power supply (in the diagnostics menu of the LCD).</li> <li>2 Check wiring.</li> </ol>
E4	 The ORANGE LED flashes 4 x.	The sensor receives not enough AIR-energy.	<ol style="list-style-type: none"> <li>1 Check the angle of the AIR-curtains.</li> <li>2 Increase the AIR-immunity filter (values &gt;2.8 m).</li> </ol>
E5	 The ORANGE LED flashes 5 x.	The sensor receives too much AIR-energy.	<ol style="list-style-type: none"> <li>1 Check the angle of the AIR-curtains.</li> <li>2 Decrease the AIR-immunity filter (values 1-3 &lt;2.8 m).</li> </ol>
E6	 The ORANGE LED flashes 6 x.	The radar sensor output is faulty.	<ol style="list-style-type: none"> <li>1 Replace sensor.</li> </ol>
E7	 The ORANGE LED flashes 7 x.	The internal test of the radar is disturbed.	<ol style="list-style-type: none"> <li>1 Change radar field angle.</li> <li>2 If orange LED flashes again, replace sensor.</li> </ol>
E8	 The ORANGE LED flashes 8 x.	The AIR power emitter is faulty.	<ol style="list-style-type: none"> <li>1 Replace sensor.</li> </ol>
E9	 The ORANGE LED flashes 9 x.	The internal reference of the radar is faulty.	<ol style="list-style-type: none"> <li>1 Replace sensor.</li> </ol>
	 The ORANGE LED is on.	The sensor encounters a memory problem.	<ol style="list-style-type: none"> <li>1 Cut and restore power supply.</li> <li>2 If orange LED lights up again, replace sensor.</li> </ol>
	 The RED LED flashes quickly after an assisted setup.	The sensor sees the door during the assisted setup.	<ol style="list-style-type: none"> <li>1 Check the angle of the AIR-curtains.</li> <li>2 Launch a new assisted setup. <b>Attention: Do not stand in the detection field!</b></li> </ol>
	 The RED LED lights up sporadically.	The sensor vibrates.	<ol style="list-style-type: none"> <li>1 Check if the sensor is fastened firmly.</li> <li>2 Check position of cable and cover.</li> </ol>
		The sensor sees the door.	<ol style="list-style-type: none"> <li>1 Launch an assisted setup and adjust the AIR angle.</li> </ol>
		The sensor is disturbed by external conditions.	<ol style="list-style-type: none"> <li>1 Increase the AIR-immunity filter to value 3.</li> <li>2 Select presetting 2 or 3.</li> </ol>
	 The GREEN LED lights up sporadically.	The sensor is disturbed by rain and/or leaves.	<ol style="list-style-type: none"> <li>1 Select presetting 2 or 3.</li> <li>2 Increase radar-immunity filter.</li> </ol>
		Ghosting created by door movement.	<ol style="list-style-type: none"> <li>1 Change radar field angle.</li> </ol>
		The sensor vibrates.	<ol style="list-style-type: none"> <li>1 Check if the sensor and door cover is fastened firmly.</li> <li>2 Check position of cable and cover.</li> </ol>
		The sensor sees the door or other moving objects.	<ol style="list-style-type: none"> <li>1 Remove the objects if possible.</li> <li>2 Change radar field size or angle.</li> </ol>
	 The LED and the LCD-display are off.  The reaction of the door does not correspond to the LED-signal.		<ol style="list-style-type: none"> <li>1 Cut and restore power supply.</li> <li>2 Check wiring.</li> </ol>
			<ol style="list-style-type: none"> <li>1 Check output configuration setting.</li> <li>2 Check wiring.</li> </ol>



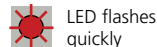
Motion detection



Presence detection



LED flashes



LED flashes quickly



LED is off

## INSTALLATION



The sensor should be fixed firmly to 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

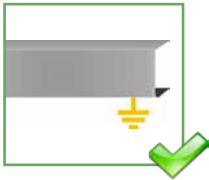


It is recommended to clean the optical parts at least once a year or more if required due to environmental conditions.



Do not use aggressive products to clean the optical parts.

## SAFETY



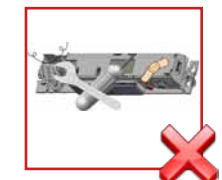
The door control unit and the door cover profile must be correctly earthed.



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
Noise:	< 70 dB
Expected lifetime:	20 years
Applicable directives:	R&TTE 1999/5/EC; MD 2006/42/EC; LVD 2006/95/EC; ROHS 2 2011/65/EU



Detection mode:	Motion Min. detection speed: 5 cm/s	Presence Typical response time: < 200 ms (max. 500 ms)
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Technology:	Microwave doppler radar Transmitter frequency: 24.150 GHz Transmitter radiated power: < 20 dBm EIRP Transmitter power density: < 5 mW/cm²	Active infrared with background analysis Spot: 5 cm x 5 cm (typ) Number of spots: max. 24 per curtain Number of curtains: 2
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Output:	Solid-state-relay (potential and polarity free) Max. contact current: 100 mA Max. contact voltage: 42 V AC/DC  Frequency output: Pulsed signal (f= 100 Hz +/- 10%)  Current source output: Galvanically isolated current source No detection: current source ON Open circuit voltage: 6.5 V Output voltage available at 10 mA: 3 V min. Typical load: up to 3 optocouplers in series Detection: current source OFF Open-circuit remained voltage: < 500 mV	Solid-state-relay (potential and polarity free) Max. contact current: 100 mA Max. contact voltage: 42 V AC/DC Holdtime: 0.3 to 1 s
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Test input:	Sensitivity: Low: < 1 V; High: > 10 V (max. 30 V) Response time on test request: typical: < 5 ms
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Norm conformity:	EN 12978 EN ISO 13849-1:2008 PL «d» CAT. 2 EN 16005:2012 Chapter 4.6.8; DIN 18650-1:2010 Chapter 5.7.4; AutSchR BS 7036-1:1996 Chapter 7.3.2 (only applicable for frequency and current source output)	EN 12978 EN ISO 13849-1:2008 PL «C» CAT. 2 (under the condition that the door control system monitors the sensor at least once per door cycle) IEC 61496-1:2012 ESPE Type 2 EN 16005:2012 Chapter 4.6.8; DIN 18650-1:2010 Chapter 5.7.4 BS 7036-1:1996 Chapter 8.1
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Specifications are subject to changes without prior notice.  
All values measured in specific conditions.



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BEA hereby declares that the IXIO-DT3 is in conformity with the basic requirements and the other relevant provisions of the directives 1999/5/EC and 2006/42/EC.

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

EC-type examination certificate number: 44 205 12 405836-001

Angleur, June 2013

Pierre Gardier, authorized representative and responsible for technical documentation

The complete declaration of conformity is available on our website: [www.bea-pedestrian.be](http://www.bea-pedestrian.be)



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