



Download the BEA DECODER app  
for a quick overview  
of settings



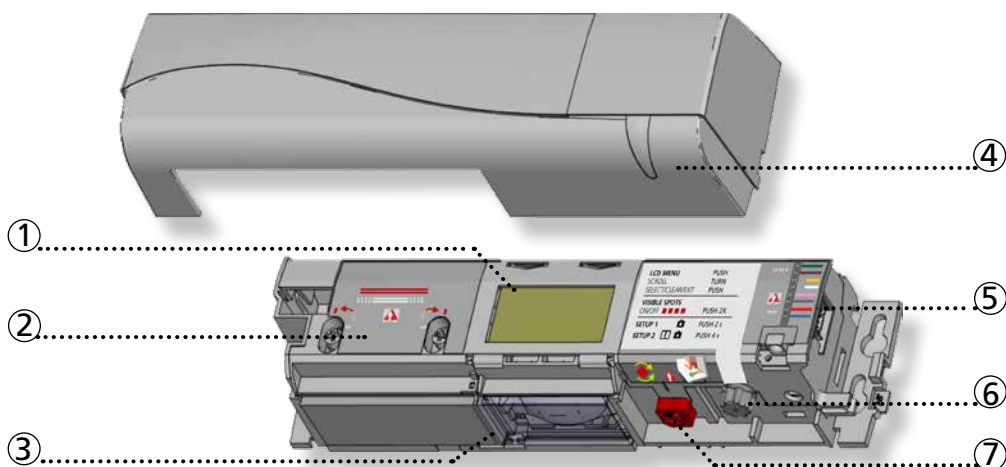
# IXIO-ST

Safety sensor  
for automatic sliding doors

(according to EN 16005 and DIN 18650)

User's Guide for product version 0403 and higher  
See product label for serial number

## DESCRIPTION



- |    |                             |    |                                  |
|----|-----------------------------|----|----------------------------------|
| 1. | LCD                         | 4. | cover                            |
| 2. | IR-curtain width adjustment | 5. | main connector                   |
| 3. | IR-lenses                   | 6. | main adjustment knob             |
|    |                             | 7. | IR-curtain angle adjustment knob |

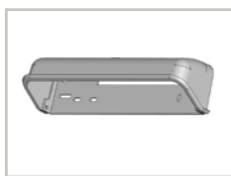
## ACCESSORIES



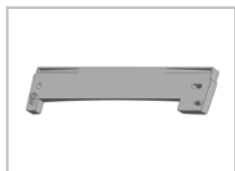
BA: Bracket accessory



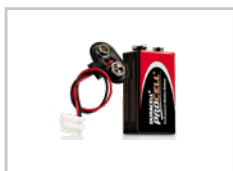
CA: Ceiling accessory



RA: Rain accessory



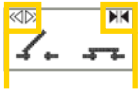
CDA: Curved door accessory



9 V battery

## HOW TO USE THE LCD?

### DISPLAY DURING NORMAL FUNCTIONING



Opening impulse

Safety



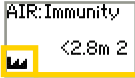
Negative display = active output



To adjust contrast, push and turn the grey button simultaneously.

*During normal function only.*

### FACTORY VALUE VS. SAVED VALUE



displayed value = factory value



displayed value = saved value

### NAVIGATING IN MENUS



Push to enter the LCD-menu



Enter password if necessary

*Not during the first minute after power-on of the sensor.*



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



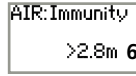
Push to select parameter



*current value is displayed*



Scroll values up-down



*more values are displayed*



Push to save new value

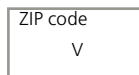
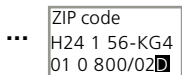
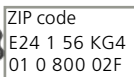


*new value is displayed*

### CHANGING A ZIP CODE



See application note on ZIP CODE

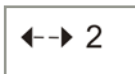


Validate the last digit in order to activate the new ZIP code:

- v = valid ZIP code, values will be changed accordingly
- x = invalid ZIP code, no values will be changed
- v/x = valid ZIP code, but from a different product.

Only available values will be changed.

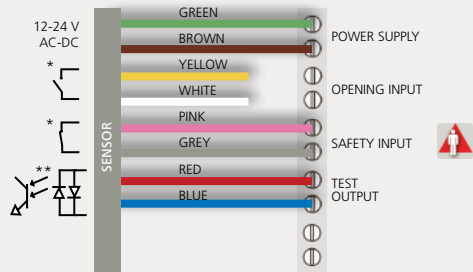
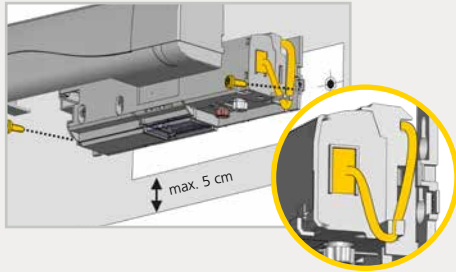
### VALUE CHECK WITH REMOTE CONTROL



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

Do not unlock first.

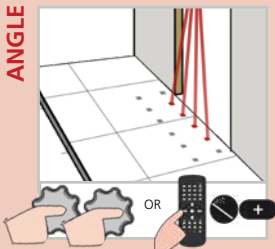
## 1 MOUNTING & WIRING



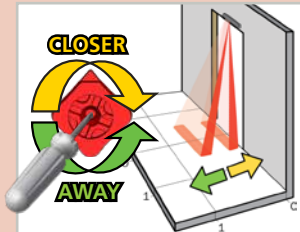
**TIP!**  
Wiring is compatible with the IRIS.

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

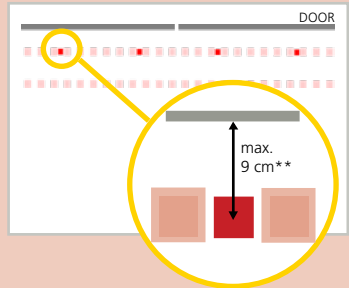
## 2 INFRARED SAFETY FIELD



Activate the visible\* spots to verify the position of the IR-curtain.

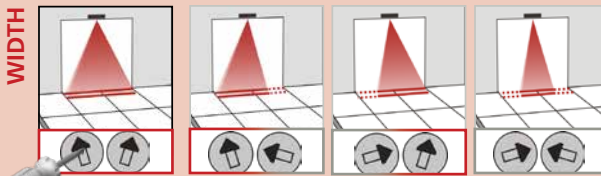


If necessary, adjust the IR-curtain angle (from  $-7^\circ$  to  $4^\circ$ , default  $0^\circ$ ).



\* 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.



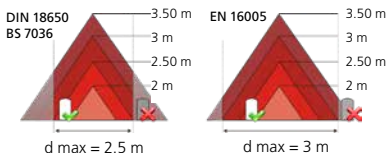
Part of the detection field can be masked to reduce it. The arrow position determines the width of the detection field.



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.

### 3 SETTINGS

Choose one of the following presettings or adjust the sensor manually (see p.5):



**STANDARD:** standard in- and outdoor installations

Presettings  
Standard



**CRITICAL ENVIRONMENT:** critical installations due to surroundings or weather

Presettings  
Critical env



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

Presettings  
Shopping str



### 4 SETUP



STEP OUT OF THE INFRARED FIELD!



#### SETUP 1 (QUICK)

reference picture



#### SETUP 2 (ASSISTED)

test of full door cycle +  
reference picture













TEST THE GOOD FUNCTIONING OF THE INSTALLATION BEFORE LEAVING THE PREMISES!

# OVERVIEW OF SETTINGS

	0	1	2	3	4	5	6	7	8	9		
<b>BASIC</b>												
Back												
More												
PRESETTINGS		standard	critical env.	shopping street	factory values for IR immunity and IR number increased immunity increased immunity, 1 curtain							
IR: 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.			
IR: FREQUENCY		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												
<b>ADVANCED</b>												
Back												
More												
IR: WIDTH											Always additionally adjust the arrow position on the sensor with a screwdriver.	
IR: 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.								
IR: PRESENCE 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	
IR: OUTPUT		NO NC	NC NO	NC NC	NO NO						NO: normally open NC: normally closed	
REDIRECTION	safety	safety + opening		0 presence detection on safety input 1 presence detection on safety and opening input								
FACTORY RESET									full reset	partial reset	partial: outputs are not reset	
More												
Back												
<b>DIAGNOSTICS</b>												
ZIP CODE		all parameter settings in zipped format (see application note on ZIP CODE)										
ID #		unique ID-number										
ERROR LOG		last 10 errors + day indication										
IR: SPOTVIEW		view of spot(s) that trigger detection										
IR: C1 ENERG		signal amplitude received on curtain 1										
IR: 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										
PASSWORD		LCD and remote control password (0000= no password)										
LANGUAGE		language of LCD-menu										
ADMIN		enter code to access admin mode										

## TROUBLESHOOTING

E1	 ORANGE LED flashes 1 x.	The sensor signals an internal fault.	<ol style="list-style-type: none"> <li>1 Replace sensor.</li> </ol>
E2	 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	 ORANGE LED flashes 4 x.	The sensor receives not enough IR-energy.	<ol style="list-style-type: none"> <li>1 Decrease the angle of the IR-curtains.</li> <li>2 Increase the IR-immunity filter (values &gt;2.8 m).</li> <li>3 Deactivate 1 curtain.</li> </ol>
E5	 ORANGE LED flashes 5 x.	The sensor receives too much IR-energy.	<ol style="list-style-type: none"> <li>1 Slightly increase the angle of the IR-curtains.</li> <li>2 Decrease the IR-immunity filter (values 1-3 &lt;2.8 m).</li> </ol>
E8	 ORANGE LED flashes 8 x.	IR power emitter is faulty.	<ol style="list-style-type: none"> <li>1 Replace sensor.</li> </ol>
	 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>
	 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 Move the IR-curtains away from the door.</li> <li>2 Install the sensor as close to the door as possible. If needed, use a bracket accessory.</li> <li>3 Launch a new assisted setup.</li> </ol>
	 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 IR angle.</li> </ol>
		The sensor is disturbed by external conditions.	<ol style="list-style-type: none"> <li>1 Increase the IR-immunity filter to value 3.</li> <li>2 Select presetting 2 or 3.</li> </ol>
	 The LED and the LCD-display are off.		<ol style="list-style-type: none"> <li>1 Check wiring.</li> </ol>
	The reaction of the door does not correspond to the LED-signal.		<ol style="list-style-type: none"> <li>1 Check output configuration setting.</li> <li>2 Check wiring.</li> </ol>
	 The LCD or remote control does not react.	The sensor is protected by a password.	<ol style="list-style-type: none"> <li>1 Enter the right password. If you forgot the code, cut and restore the power supply to access the sensor without entering a password during 1 minute.</li> </ol>

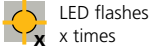
## LED-SIGNAL



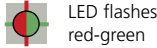
Presence detection



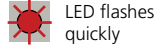
LED flashes



LED flashes  
x times



LED flashes  
red-green



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

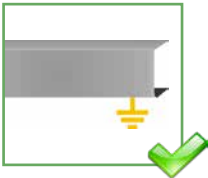


It is recommended to clean the optical parts at least once a year or more if required due to environmental conditions.



Do not use aggressive products to clean the optical parts.

## SAFETY



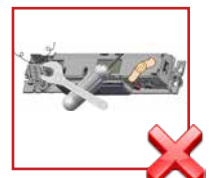
The door control unit and the door cover profile must be correctly earthed.



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 (according to the applicable laws and regulations)
Temperature range:	-25°C to +55°C; 0-95% relative humidity, non condensing
Degree of protection:	IP54
Noise:	< 70 dB
Expected lifetime:	20 years



Detection mode:	Presence Typical response time: < 200 ms (max. 500 ms)
Technology:	Active infrared with background analysis Spot: 5 cm x 5 cm (typ) Number of spots: max. 24 per curtain Number of curtains: 2
Output:	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
Test input:	Sensitivity: Low: < 1 V; High: > 10 V (max. 30 V) Response time on test request: typical: < 5 ms
Norm conformity:	EN 12978; EN 61000-6-2; EN 61000-6-3; EN ISO 13849-1 PL «C» CAT. 2 (under the condition that the door control system monitors the sensor at least once per door cycle); EN 62061; EN 61496-1 ESPE Type 2; EN 50581 EN 16005 Chapter 4.6.8; DIN 18650-1 Chapter 5.7.4; BS 7036-1 Chapter 8.1; EN 60825-1

Specifications are subject to changes without prior notice.  
All values are measured in specific conditions and in a temperature of 25°C.



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BEA hereby declares that the IXIO-ST is in conformity with the basic requirements and the other relevant provisions of the directives 2014/30/EU, 2006/42/EC and 2011/65/EU.

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

EC-type examination certificate number: 44 205 13089612

Angleur, September 2017 Pierre Gardier, authorized representative and responsible for technical documentation

The complete declaration of conformity is available on our website.

Only for EU countries: According to the European Guideline 2012/19/EU for Waste Electrical and Electronic Equipment (WEEE)

