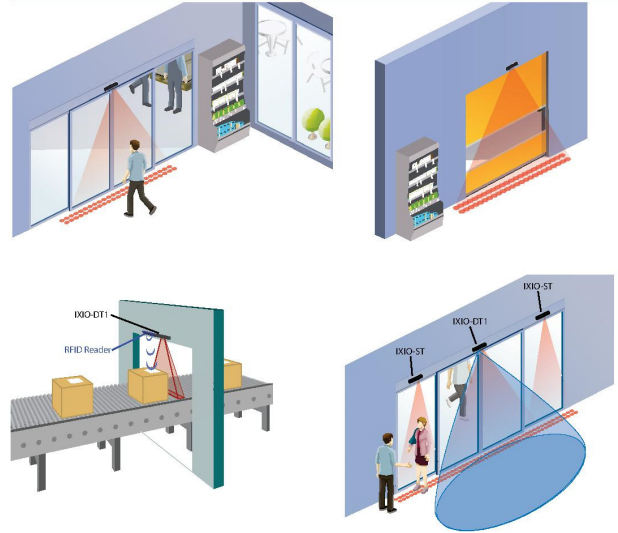# IXIO-ST INDUSTRIAL

SAFETY SENSOR FOR SMALL INTERIOR INDUSTRIAL DOORS

DESCRIPTION

IXIO-ST Industrial is an extremely effective, versatile and easy-to-use safety sensor for interior industrial doors, automatic sliding doors and off door industrial automation.

Precise infrared curtains coupled with visible alignment beams make the IXIO-ST Industrial extremely safe and easy to adjust. This state-of-the-art sensor features an onboard LCD screen that streamlines the installation and setup processes.

The IXIO-ST Industrial has earned a comprehensive list of additional credentials and certifications, including UL, FCC, and IP54.

FEATURES & BENEFITS

- Sidelite protection reduces liability

- Two 24 spot, high-density, infrared safety curtains providing precise presence detection

- Four visible red alignment spots are projected on the ground to assist in precise IR curtain adjustment

- Intelligent programming and troubleshooting via a menu-driven LCD

- Onboard microprocessor optimizes data analysis, monitors sensor performance and enables system integration

INDUSTRIAL DOORS

RFID APPLICATIONS

IXIO-DT1
RFID Reader

DUAL SLIDE SIDELITE PROTECTION

IXIO-ST
IXIO-DT1
IXIO-ST
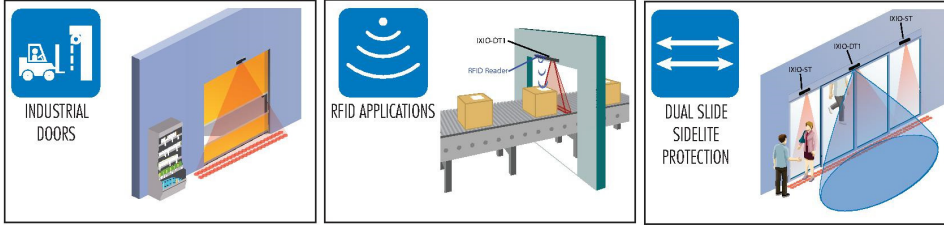
TECHNICAL SPECIFICATIONS

|	
Technology	Infrared
Detection mode	Safety
Transmitter Frequency	N/A
Transmitter Radiated Power	N/A
Transmitter Power Density	N/A
Spot Size	2 in x 2 in
Max. Number of Spots	24 per curtain
Max. Number of Curtains	2
Supply Voltage	12 to 24 VAC 50/60 Hz 12 to 30 VDC
Output	Solid-state-relay (potential and polarity free)
Max. Contact Current	400 mA
Max. Contact Voltage	42 VDC
Adjustable hold time	Microwave: 0.5 to 9 sec. Infrared: 0.3 or 1 sec.
Power Consumption	< 2.5 W
Mounting Height	6.5 ft – 11.5 ft
Temperature Range	Sensor: -31°F to +131°F LCD: 14°F to +131°F 0 to 95% relative humidity, non condensing
Protection Degree	IP54
Norm Conformity	R&TTE 1999/5/EC; EMC 2004/108/EC; MD 2006/42/EC; RoHS 2002/95/EC
Dimensions (D x W x H)	in x in x in
Cable Length	360 in
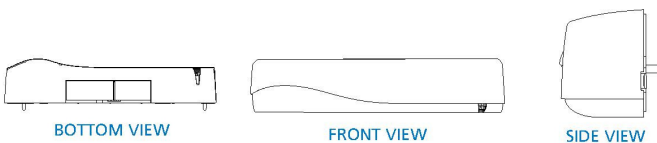
RELATED PRODUCTS

10IXIODT1 INDUS
STANDARD INDUSTRIAL SENSOR
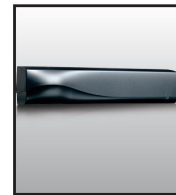
10IXIODT1V
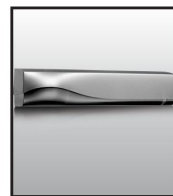STANDARD SENSOR WITH VIDEO
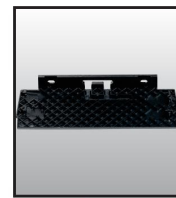
10IMB
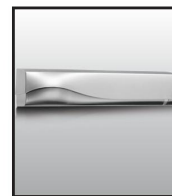MOUNTING BRACKET ADAPTER
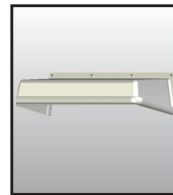
10WRC
DELUXE RAIN COVER

10ICA
FLUSH MOUNT CEILING ADAPTER

35.1286
BLACK REPLACEMENT COVER

35.1303
SILVER REPLACEMENT COVER

35.1302
WHITE REPLACEMENT COVER

10REMOTE
UNIVERSAL REMOTE CONTROL

DIMENSIONAL DRAWINGS

BOTTOM VIEW

FRONT VIEW

SIDE VIEW

IXIO-ST INDUSTRIAL   SAFETY SENSOR FOR SMALL INTERIOR INDUSTRIAL DOORS
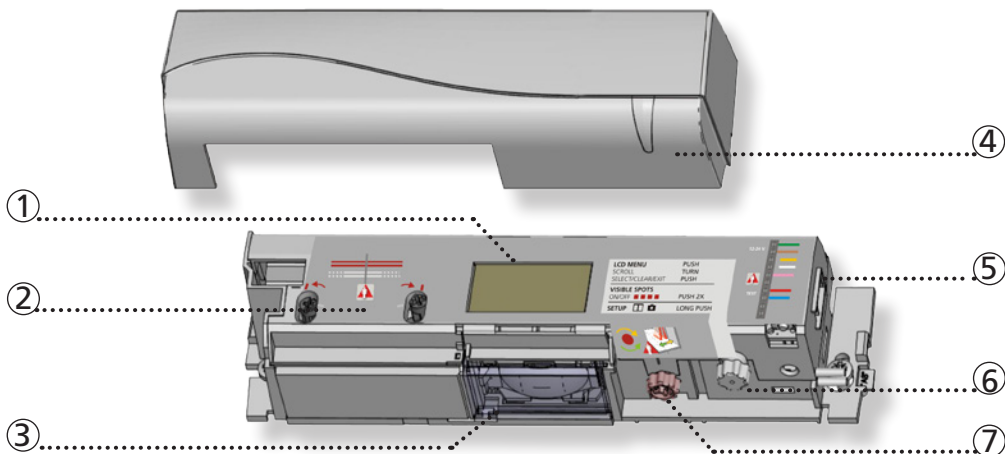
IXIO-ST

Safety sensor
for automatic sliding doors
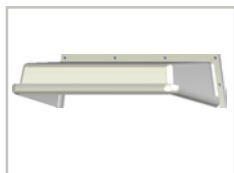(according to EN 16005 and DIN 18650)

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

DESCRIPTION

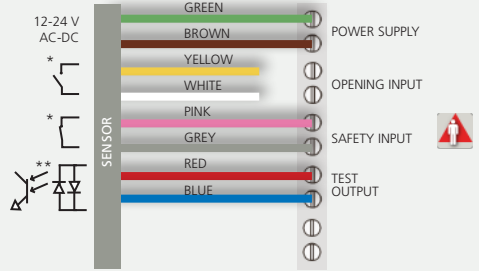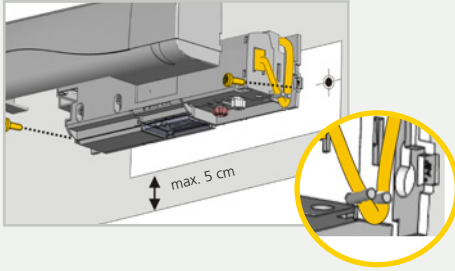|	
1. LCD	4. cover
2. AIR-curtain width adjustment	5. main connector
3. AIR-lenses	6. main adjustment knob
	7. AIR-curtain angle adjustment knob

ACCESSORIES

BA: Bracket Accessory   RA: Rain Accessory

1 MOUNTING & WIRING

12-24 V AC-DC

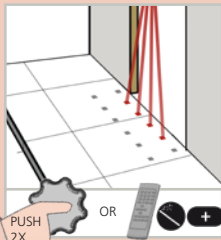|		
GREEN		
BROWN		POWER SUPPLY
* YELLOW		
WHITE		OPENING INPUT
PINK		
GREY		SAFETY INPUT
* RED		TEST
** BLUE		OUTPUT

SENSOR

max. 5 cm

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.
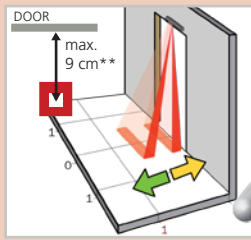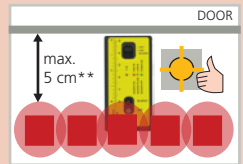
2 SAFETY FIELD

ANGLE

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.
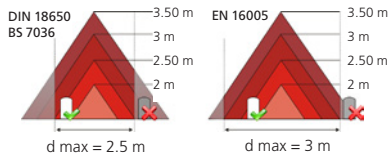
WIDTH
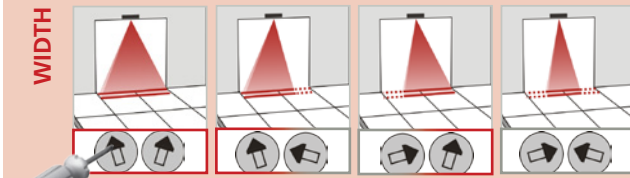
Part of the emitted field can be masked to reduce the detection field. The arrow position determines the width of the detection field.
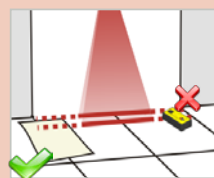
TIP!
Additional adjustments are possible by LCD or remote control (see p. 5)

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

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.

3 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

CRITICAL ENVIRONMENT: critical or outside installations

Presettings
Critical env

SHOPPING STREET: installations in narrow streets with pedestrian traffic

Presettings
Shopping str

4 SETUP

QUICK SETUP =

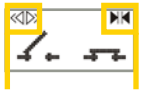ASSISTED SETUP =   +

OPEN+CLOSE

OR

LONG PUSH
(> 3 S)

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

⚠ **IMPORTANT!**   Test the good functioning of the installation before leaving the premises.
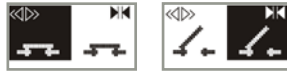
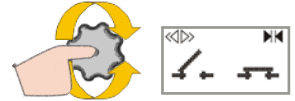# HOW TO USE THE LCD?

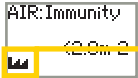## DISPLAY DURING NORMAL FUNCTIONING

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

AIR:Immunity
<2.8m 2

current value is displayed

AIR:Immunity
>2.8m 4

more values are displayed

AIR:Immunity
>2.8m 4

new value is displayed

SCROLL MENU UP-DOWN

PUSH TO SELECT PARAMETER

SCROLL VALUES UP-DOWN
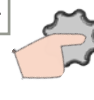
PUSH TO SAVE NEW VALUE

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

■□□

- Back
- More
- PRESETTINGS
- AIR: IMMUNITY*
- AIR: FREQ
- More
- Back

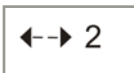|	0	1	2	3	4	5	6	7	8	9
PRESETTINGS		standard	critical env.	shopping street	factory values / increased immunity / increased immunitiy + 1 curtain					
AIR: IMMUNITY*		low	normal < 2.8 m	high < 2.8 m	normal > 2.8 m	high > 2.8 m	For conformity to EN 16005 and DIN 18650 at a mounting height of 2.8 m or more, values 2 and 3 are not allowed.			
AIR: FREQ		A	B				Sensors mounted close to each other should have a different frequency.			

PRESETTINGS colours:
- factory values
- increased immunity
- increased immunitiy + 1 curtain

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

ADVANCED

□■□

- Back
- More
- AIR: WIDTH
- +
- AIR: NUMBER
- AIR: PRESTIME
- AIR: OUTPUT
- REDIRECTION
- FACTORYRST
- More
- Back

	0	1	2	3	4	5	6	7	8	9	
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: PRESTIME	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	NC / NO	NC / NC	NO / NO							
REDIRECTION	safety	safety + opening	0 presence detection on safety input / 1 presence detection on safety and opening input								

FACTORYRST — restore to factory values

DIAGNOSTICS

□□■

ZIP	all parameter settings in zipped format	POWERSUPPLY	supply voltage at power connector
ID #	unique ID-number	OPERATINGTIME	power duration since first startup
ERROR LOG	the last 10 errors	RESET LOG	delete all saved errors
AIR: SPOTVIEW	view of spot(s) that trigger detection	RC PASSWORD	password for remotre control login
AIR: C1 ENERG	signal amplitude received on curtain 1	LANGUAGE	language of LCD-menu
AIR: C2 ENERG	signal amplitude received on curtain 2	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. **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). **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. **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. **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. **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. **2** Launch a new assisted setup. *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. **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. **2** Select presetting 2 or 3.
	The LED and the LCD-display are off.		**1** Cut and restore power supply. **2** Check wiring.
	The reaction of the door does not correspond to the LED-signal.		**1** Check output configuration setting. **2** Check wiring.

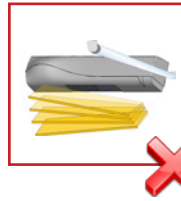LED flashes   LED flashes quickly   LED is off

INSTALLATION

Avoid extreme vibrations.
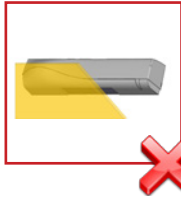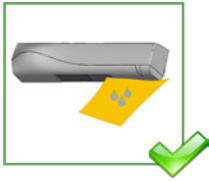
Do not cover the sensor.

Avoid moving objects and light sources in the detection field.

Avoid highly reflective objects in the infrared field.
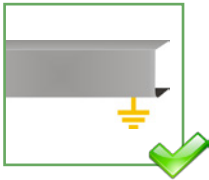
MAINTENANCE

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

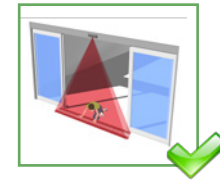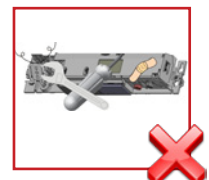Do not use aggressive products to clean the optical parts.

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:	EMC 2004/108/EC; MD 2006/42/EC; RoHS 2002/95/EC
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
Outputs:	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 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) EN 16005:2012 Chapter 4.6.8; DIN 18650-1:2010 Chapter 5.7.4 BS 7036-1:1996 Chapter 8.1

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

BEA
OPEN UP NEW HORIZONS

CE