Download the BEA DECODER app for a quick overview of settings

**IXIO-DT1**

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

User’s Guide for product version 0400 and higher
See product label for serial number

**DESCRIPTION**

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

AIR: Immunity

Displayed value = factory value

AIR: Immunity

Displayed value = saved value

NAVIGATING IN MENUS

Push to enter the LCD-menu

Password

Enter password if necessary

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

Select your language before entering the first LCD-menu.

Select More to go to next level:

- basic settings
- advanced settings
- diagnostics

NAVIGATING IN MENUS

Select Back to return to previous menu or display.

Selecting Back to return to previous menu or display.

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

ZIP code E24 1 56 KG4 01 0 800 02F

ZIP code E24 1 56 KG4 01 0 800 02F

ZIP code E24 1 56 KG4 01 0 800 02F

ZIP code H24 1 56-KG4 01 0 800/02F

ZIP code H24 1 56-KG4 01 0 800/02F

... ZIP code E24 1 56 KG4 01 0 800 02F

ZIP code H24 1 56-KG4 01 0 800/02F

Validating 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

Fixation is compatible with the ACTIV8.

MOUNTING & WIRING

2 RADAR OPENING IMPULSE FIELD

ANGLE

field size: 9  immunity: 2
from 15° to 45°, default 30°

field size: 9  immunity: 2
from -15° to 15°, default 0°

The size of the detection field varies according to the mounting height of the sensor.

WIDTH

field size: 9  immunity: 2
4 m x 2 m (wide)

field size: 9  immunity: 2
2 m x 2.5 m (narrow)
3 INFRARED SAFETY FIELD

Activate the visible* spots to verify the position of the IR-curtain.
If necessary, adjust the IR-curtain angle (from -7° to 4°, default 0°).

* 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 detection field can be masked to reduce it.
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.

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.

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

STANDARD: standard in- and outdoor installations
CRITICAL ENVIRONMENT: critical installations due to surroundings or weather
SHOPPING STREET: installations in narrow streets with pedestrian traffic

5 SETUP

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

- **RAD: IMMUNITY**
  - low
  - normal
  - high
  - higher
  - highest

- **IR: IMMUNITY**
  - low
  - normal
  - high
  - higher
  - highest

- **RAD: DIRECTION**
  - off
  - uni
  - PRM
  - AWAY
  - auto

- **RAD: OUTPUT**
  - NO
  - NC
  - PRM

- **IR: WIDTH**
  - service mode
  - motion
  - presence

- **IR: NUMBER**
  - motion
  - 15 s
  - 30 s
  - 1 min
  - 2 min
  - 5 min
  - 10 min
  - 20 min
  - 60 min
  - infinite

- **IR: PRESENCE TIME**
  - motion
  - 15 s
  - 30 s
  - 1 min
  - 2 min
  - 5 min
  - 10 min
  - 20 min
  - 60 min
  - infinite

- **IR: OUTPUT**
  - NO
  - NC
  - PRM

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

- **FACTORY RESET**
  - full reset
  - partial reset

- **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

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For conformity to EN 16005 or DIN 18650 at a mounting height of 2.8 or more, use values 6 and 7.

For conformity to BS 7036 at a mounting height of 2.2 m or more, use values 6 and 7.

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

Excludes conformity of the door system according to EN 16005 / DIN 18650 / BS 7036. IR Immunity on values 4 or 5 is incompatible with IR presence time on value 0.

Always additionally adjust the arrow position on the sensor with a screwdriver.
## TROUBLESHOOTING

<table>
<thead>
<tr>
<th>LED Flash Pattern</th>
<th>Description</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E1</strong> ORANGE LED flashes 1 x.</td>
<td>The sensor signals an internal fault.</td>
<td>1 Replace sensor.</td>
</tr>
<tr>
<td><strong>E2</strong> ORANGE LED flashes 2 x.</td>
<td>The power supply is too low or too high.</td>
<td>1 Check power supply (in the diagnostics menu of the LCD). 2 Check wiring.</td>
</tr>
<tr>
<td><strong>E4</strong> ORANGE LED flashes 4 x.</td>
<td>The sensor receives not enough IR-energy.</td>
<td>1 Decrease the angle of the IR-curtains. 2 Increase the IR-immunity filter (values &gt;2.8 m). 3 Deactivate 1 curtain.</td>
</tr>
<tr>
<td><strong>E5</strong> ORANGE LED flashes 5 x.</td>
<td>The sensor receives too much IR-energy.</td>
<td>1 Slightly increase the angle of the IR-curtains.</td>
</tr>
<tr>
<td><strong>E8</strong> ORANGE LED flashes 8 x.</td>
<td>The sensor is disturbed by external elements.</td>
<td>1 Eliminate the cause of disturbance (lamps, rain cover, door controller housing properly grounded).</td>
</tr>
<tr>
<td>ORANGE LED is on.</td>
<td></td>
<td>1 Replace sensor.</td>
</tr>
<tr>
<td>RED LED flashes quickly after an assisted setup.</td>
<td>The sensor sees the door during the assisted setup.</td>
<td>1 Cut and restore power supply. 2 If orange LED lights up again, replace sensor.</td>
</tr>
<tr>
<td>RED LED lights up sporadically.</td>
<td>The sensor vibrates.</td>
<td>1 Check if the sensor is fastened firmly. 2 Check position of cable and cover.</td>
</tr>
<tr>
<td></td>
<td>The sensor sees the door.</td>
<td>1 Launch an assisted setup and adjust the IR angle.</td>
</tr>
<tr>
<td></td>
<td>The sensor is disturbed by external conditions.</td>
<td>1 Increase the IR-immunity filter to value 3. 2 Select presetting 2 or 3.</td>
</tr>
<tr>
<td>GREEN LED lights up sporadically.</td>
<td>The sensor is disturbed by rain and/or leaves.</td>
<td>1 Select presetting 2 or 3. 2 Increase radar-immunity filter.</td>
</tr>
<tr>
<td></td>
<td>Ghosting created by door movement.</td>
<td>1 Change radar field angle.</td>
</tr>
<tr>
<td></td>
<td>The sensor vibrates.</td>
<td>1 Check if the sensor and door cover is fastened firmly. 2 Check position of cable and cover.</td>
</tr>
<tr>
<td></td>
<td>The sensor sees the door or other moving objects.</td>
<td>1 Remove the objects if possible. 2 Change radar field size or angle.</td>
</tr>
<tr>
<td>The LED and the LCD-display are off.</td>
<td></td>
<td>1 Check wiring.</td>
</tr>
<tr>
<td>The reaction of the door does not correspond to the LED-signal.</td>
<td></td>
<td>1 Check output configuration setting. 2 Check wiring.</td>
</tr>
<tr>
<td>The LCD or remote control does not react.</td>
<td>The sensor is protected by a password.</td>
<td>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.</td>
</tr>
</tbody>
</table>
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.

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.

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**

<table>
<thead>
<tr>
<th>Supply voltage:</th>
<th>12 V - 24 V AC +/-10%; 12 V - 30 V DC +/-10% (to be operated from SELV compatible power supplies only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power consumption:</td>
<td>&lt; 2.5 W</td>
</tr>
<tr>
<td>Mounting height:</td>
<td>2 m to 3.5 m (according to the applicable laws and regulations)</td>
</tr>
<tr>
<td>Temperature range:</td>
<td>-25°C to +55°C; 0-95% relative humidity, non condensing</td>
</tr>
<tr>
<td>Degree of protection:</td>
<td>IP54</td>
</tr>
<tr>
<td>Noise:</td>
<td>&lt; 70 dB</td>
</tr>
<tr>
<td>Expected lifetime:</td>
<td>20 years</td>
</tr>
<tr>
<td>Applicable directives:</td>
<td>RED 2014/53/EU; MD 2006/42/EC; ROHS 2 2011/65/EU</td>
</tr>
</tbody>
</table>

Detection mode:

- Motion
  - Min. detection speed: 5 cm/s
- Presence
  - Typical response time: < 200 ms (max. 500 ms)

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

Output:

- Solid-state-relay (potential and polarity free)
  - Max. contact current: 100 mA
  - Max. contact voltage: 42 V AC/DC
- 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 PL «c» CAT. 2
  (under the condition that the door control system monitors the sensor at least once per door cycle)
- IEC 61496-1 ESPE Type 2
- EN 16005 Chapter 4.6.8;
- DIN 18650-1 Chapter 5.7.4
- BS 7036-1 Chapter 8.1

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

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BEA hereby declares that the IXIO-DT1 is in conformity with the basic requirements and the other relevant provisions of the directives 2014/53/EU, 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 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 EC countries. According to the European Guideline 2012/19/EU for Waste Electrical and Electronic Equipment (WEEE)