**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 0400 and higher

See product label for serial number

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**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

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**ACCESSORIES**

BA: Bracket accessory  
CA: Ceiling accessory  
RA: Rain accessory  
CDA: Curved door accessory

Retrofit interface  
Door bell + interface  
Smart Daisy Chain hub  
9 V battery
HOW TO USE THE LCD?

DISPLAY DURING NORMAL FUNCTIONING

- Opening impulse
- Negative display = active output
- To adjust contrast, push and turn the grey button simultaneously.

FACTORY VALUE VS. SAVED VALUE

NAVIGATING IN MENUS

- Push to enter the LCD-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
- Scroll values up-down

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

Fixation is compatible with the ACTIV8.

2 RADAR OUTPUT CONFIGURATION

RELAY OUTPUT
- NO: normally open
- NC: normally closed

FREQUENCY OUTPUT
for emergency exits

CURRENT SOURCE OUTPUT
for emergency exits

3 RADAR OPENING IMPULSE FIELD

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

WIDTH
- 4 m x 2 m (wide)
- 2 m x 2.5 m (narrow)
- field size: 9
- immunity: 2

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 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.

**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 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.

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

<table>
<thead>
<tr>
<th>Mounting height</th>
<th>Detection width</th>
<th>DIN 18650</th>
<th>EN 16005</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00 m</td>
<td>2.00 m</td>
<td>3.50 m</td>
<td>3.50 m</td>
</tr>
<tr>
<td>2.20 m</td>
<td>2.20 m</td>
<td>3.00 m</td>
<td>3.00 m</td>
</tr>
<tr>
<td>2.50 m</td>
<td>2.50 m</td>
<td>2.50 m</td>
<td>2.50 m</td>
</tr>
<tr>
<td>3.00 m</td>
<td>d max</td>
<td>2.00 m</td>
<td>2.00 m</td>
</tr>
<tr>
<td>3.50 m</td>
<td>d max</td>
<td>d max = 2.5 m</td>
<td>d max = 3 m</td>
</tr>
</tbody>
</table>

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

Choose one of the following presets 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

### 6 SETUP

**SETUP 1 (QUICK)**

reference picture

**SETUP 2 (ASSISTED)**

test of full door cycle + reference picture

**STEP OUT OF THE INFRARED FIELD!**

**TEST THE GOOD FUNCTIONING OF THE INSTALLATION BEFORE LEAVING THE PREMISES!**
OVERVIEW OF SETTINGS

BASIC

PRESETTINGS

RAD: FIELDSIZE

RAD: OUTPUT

IR: IMMUNITY

IR: DIRECTION

IR: HOLDTIME

IR: FREQUENCY

IR: WIDTH

IR: NUMBER

IR: PRESENCE TIME

IR: OUTPUT

RAD: IMMUNITY

RAD: DIRECTION

RAD: HOLDTIME

Advanced

RAD: OUTPUT

IR: IMMUNITY

IR: DIRECTION

IR: HOLDTIME

IR: FREQUENCY

IR: WIDTH

IR: NUMBER

IR: PRESENCE TIME

IR: OUTPUT

SMART DAISY CHAIN*

FACTORY RESET

DOOR BELL*

DIAGNOSTICS

ZIP CODE

ID #

ERROR LOG

IR: SPOTVIEW

IR: C1 ENERG

IR: C2 ENERG

BASIC ADVANCED DIAGNOSTICS

freq: frequency output

current: current output

NO: normally open

NC: normally closed

PRM: for persons with reduced mobility

AWAY: unidirectional motion away from sensor

auto: automatic adaptation of field size (small shops)

PRM

auto

PRM

auto

PRM

auto

PRM

auto

PRM

auto

PRM

auto

PRM

auto

PRM: for persons with reduced mobility

AWAY: unidirectional motion away from sensor

auto: automatic adaptation of field size (small shops)

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

factory value

Factory values for radar immunity, IR immunity, IR number and redirection.

Increased immunities, redirection = motion and presence.

For conformity to EN 16005 or DIN 18650 at a mounting height of 2.8 m 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.

not allowed when the sensor is used in emergency exits.

min. value for DIN18650: 1 min

min. value for EN16005: 30 s

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.

service mode = no IR detection during 15 minutes (maintenance).

This value excludes conformity of the door system to EN 16005 and DIN 18650.

Factory values for radar immunity, IR immunity, IR number and redirection.

Increased immunities, redirection = motion and presence.

For conformity to EN 16005 or DIN 18650 at a mounting height of 2.8 m 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.

not allowed when the sensor is used in emergency exits.

min. value for DIN18650: 1 min

min. value for EN16005: 30 s

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.

not allowed when the sensor is used in emergency exits.

all parameter settings in zipped format

(see application note on ZIP CODE)

unique ID-number

last 10 errors + day indication

view of spot(s) that trigger detection

signal amplitude received on curtain 1

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

For more information see user's guide of accessory.
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>ORANGE LED flashes 1 x.</td>
<td>1 Replace sensor.</td>
</tr>
<tr>
<td>E2</td>
<td>ORANGE LED flashes 2 x.</td>
<td>1 Check power supply (in the diagnostics menu of the LCD). 2 Check wiring.</td>
</tr>
<tr>
<td>E3</td>
<td>ORANGE LED flashes 4 x.</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>E4</td>
<td>ORANGE LED flashes 5 x.</td>
<td>1 Slightly increase the angle of the IR-curtains.</td>
</tr>
<tr>
<td>E5</td>
<td>Faulty radar sensor output</td>
<td>1 Replace sensor.</td>
</tr>
<tr>
<td>E6</td>
<td>ORANGE LED flashes 7 x.</td>
<td>1 Launch a quick setup: 2 Change radar field angle or antenna. 3 If orange LED flashes again, replace sensor.</td>
</tr>
<tr>
<td>E7</td>
<td>ORANGE LED flashes 8 x.</td>
<td>1 Replace sensor.</td>
</tr>
<tr>
<td>E8</td>
<td>ORANGE LED flashes 9 x.</td>
<td>1 Replace sensor.</td>
</tr>
<tr>
<td>E9</td>
<td>ORANGE LED is on.</td>
<td>1 Cut and restore power supply. 2 If orange LED lights up again, replace sensor.</td>
</tr>
<tr>
<td></td>
<td>RED LED flashes quickly after an assisted setup.</td>
<td>1 Move the IR-curtains up again, replace sensor. 2 Install the sensor as close to the door as possible. 3 Launch a new assisted setup.</td>
</tr>
<tr>
<td></td>
<td>RED LED lights up sporadically.</td>
<td>1 Launch an assisted setup and adjust the IR angle.</td>
</tr>
<tr>
<td></td>
<td>The sensor encounters a memory problem.</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 during the assisted setup.</td>
<td>1 Increase the IR-immunity filter to value 3. 2 Select presetting 2 or 3.</td>
</tr>
<tr>
<td></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 Increase the radar-immunity filter.</td>
</tr>
<tr>
<td></td>
<td>The sensor is disturbed by external conditions.</td>
<td>1 Increase the radar-immunity filter.</td>
</tr>
<tr>
<td></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></td>
<td>The LED and the LCD-display are off.</td>
<td>1 Check wiring.</td>
</tr>
<tr>
<td></td>
<td>The reaction of the door does not correspond to the LED-signal.</td>
<td>1 Check output configuration setting. 2 Check wiring.</td>
</tr>
<tr>
<td></td>
<td>The LCD or remote control does not react.</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>

<table>
<thead>
<tr>
<th>Detection mode:</th>
<th>Motion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. detection speed:</td>
<td>5 cm/s</td>
</tr>
<tr>
<td>Presence:</td>
<td>Typical response time: &lt; 200 ms (max. 500 ms)</td>
</tr>
<tr>
<td>Technology:</td>
<td>Microwave doppler radar</td>
</tr>
<tr>
<td>Transmitter frequency:</td>
<td>24.150 GHz</td>
</tr>
<tr>
<td>Transmitter radiated power:</td>
<td>&lt; 20 dBm EIRP</td>
</tr>
<tr>
<td>Transmitter power density:</td>
<td>&lt; 5 mW/cm²</td>
</tr>
<tr>
<td>Output:</td>
<td>Solid-state-relay (potential and polarity free)</td>
</tr>
<tr>
<td>Max. contact current:</td>
<td>100 mA</td>
</tr>
<tr>
<td>Max. contact voltage:</td>
<td>42 V AC/DC</td>
</tr>
<tr>
<td>- in switching mode:</td>
<td>NO/NC</td>
</tr>
<tr>
<td>- in frequency mode:</td>
<td>pulsed signal (f= 100 Hz +/- 10%)</td>
</tr>
<tr>
<td>Galvanically isolated current source</td>
<td></td>
</tr>
<tr>
<td>No detection:</td>
<td>current source ON</td>
</tr>
<tr>
<td>Open circuit voltage:</td>
<td>6.5 V</td>
</tr>
<tr>
<td>Output voltage available at 10 mA:</td>
<td>3 V min.</td>
</tr>
<tr>
<td>Typical load:</td>
<td>up to 3 optocouplers in series</td>
</tr>
<tr>
<td>Detection:</td>
<td>current source OFF</td>
</tr>
<tr>
<td>Open-circuit remained voltage:</td>
<td>&lt; 500 mV</td>
</tr>
<tr>
<td>Test input:</td>
<td>Sensitivity: Low: &lt; 1 V; High: &gt; 10 V (max. 30 V)</td>
</tr>
<tr>
<td>Response time on test request:</td>
<td>typical: &lt; 5 ms</td>
</tr>
<tr>
<td>Norm conformity:</td>
<td>EN 12978</td>
</tr>
<tr>
<td>EN ISO 13849-1 PL «d» CAT. 2</td>
<td></td>
</tr>
<tr>
<td>EN 16005 Chapter 4.6.8;</td>
<td></td>
</tr>
<tr>
<td>DIN 18650-1 Chapter 5.7.4; AutSchR</td>
<td></td>
</tr>
<tr>
<td>BS 7036-1:1996 Chapter 7.3.2</td>
<td></td>
</tr>
<tr>
<td>(only applicable for relay output in frequency mode and current source output)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Detection mode:</th>
<th>Presence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. detection speed:</td>
<td>Typical response time: &lt; 200 ms (max. 500 ms)</td>
</tr>
<tr>
<td>Technology:</td>
<td>Active infrared with background analysis</td>
</tr>
<tr>
<td>Spot:</td>
<td>5 cm x 5 cm (typ)</td>
</tr>
<tr>
<td>Number of spots:</td>
<td>max. 24 per curtain</td>
</tr>
<tr>
<td>Number of curtains:</td>
<td>2</td>
</tr>
<tr>
<td>Output:</td>
<td>Solid-state-relay (potential and polarity free)</td>
</tr>
<tr>
<td>Max. contact current:</td>
<td>100 mA</td>
</tr>
<tr>
<td>Max. contact voltage:</td>
<td>42 V AC/DC</td>
</tr>
<tr>
<td>Holdtime:</td>
<td>0.3 to 1 s</td>
</tr>
<tr>
<td>Test input:</td>
<td>Sensitivity: Low: &lt; 1 V; High: &gt; 10 V (max. 30 V)</td>
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<tr>
<td>Response time on test request:</td>
<td>typical: &lt; 5 ms</td>
</tr>
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<td>Norm conformity:</td>
<td>EN 12978</td>
</tr>
<tr>
<td>EN ISO 13849-1 PL «c» CAT. 2</td>
<td></td>
</tr>
<tr>
<td>(under the condition that the door control system monitors the sensor at least once per door cycle)</td>
<td></td>
</tr>
<tr>
<td>IEC 61496-1 ESPE Type 2</td>
<td></td>
</tr>
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<td>EN 16005 Chapter 4.6.8;</td>
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</table>

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