# LZR WIDESCAN BEA Sensors Instruction Manual



A Halma company

**LZR ® -WIDESCAN**
**OPENING, PRESENCE, & SAFETY SENSOR FOR INDUSTRIAL DOORS**
**MECHANICAL INSTALLATION**
**(MOUNTING & WIRING)**

**75.0047.05 LZR-WIDESCAN Mechanical Installation 20241029**

Contents



# TECHNICAL SPECIFICATIONS

## TECHNOLOGY / PERFORMANCE

| | |
|---|---|
| Technology | LASER scanner, time-of-flight measurement (7 laser curtains) |
| Detection mode | motion, presence, height, and speed |
| Max. detection field | width: 1.2 × mounting height depth: 1.2 × mounting height adjustable, depending on user settings |
| Thickness of first curtain | ¼ |
| Typ. mounting height | 6'6" – 32' |
| Min. reflectivity factor | > 2 % (of floor and object) (measured at max. 19'6" in safety fi eld) |
| Typ. min. object size | 6" at 19'6" (in proportion to object distance) |
| Testbody | 27 1⁄2" × 11 3⁄4"× 7 3⁄" |

**ELECTRICAL**
**Emission characteristics**

| | |
|---|---|
| IR laser: | wavelength 905 nm; output power 0.10mW (CLASS 1) |
| Red visible laser: | wavelength 635 nm; output power 0.95mW (CLASS 2) |
| Supply voltage | 12 – 24 VAC -10/+20% 12 – 30 VDC ±10% at sensor terminal |
| Power consumption | < 2.5 W (heating = OFF) < 10 W, max 15 W (heating = ECO or AUTO) |
| Response time | typ. 230 ms max. 800 ms (depending on immunity settings) |
| Output | 2 solid-state relays ( galvanic isolation, polarity free ) 24 VAC / 30 VDC (max. switching voltage) 100 mA (max. switching current) – in switching mode: NO/NC in frequency mode: pulsed signal (f= 100 Hz ±10%) 1 electro-mechanic relay (galvanic isolation, polarity free) 42 VAC/VDC ( max. switching voltage) 500 mA (max. switching current) |
| Input | 30 VDC (max. switching voltage) low < 1 V high > 10 V (voltage threshold) |
| Bluetooth communication | operating bandwidth: 2402 – 2480 MHz max. transmitted power: 12 dBm |

**PHYSICAL**

| | |
|---|---|
| Dimensions | 7 3⁄4” (H) x 6” (W) x 4” (D) (approx.) |
| Material / Color | PC, ASA / Black |
| Protection degree | NEMA 4 / IP65 |
| Temperature range | -22 – 140 °F |
| Rotation angles on bracket | 45° to the right 15° to the left (both directions lockable) |
| Tilt angles on bracket | -10 – 5° |
| LED signals | 2 tri-colored LED: output status / remote control response / error signals<br>1 blue LED: Bluetooth status |

**COMPLIANCE**

| | |
|---|---|
| Compliance | EN 300 328 V2.2.2, EN 301 489-1 V2.2.2, EN 301 489-17 V 3.2.0, EN 60825-1:2014, EN 62311:2008; CSA/UL62368-1 |

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

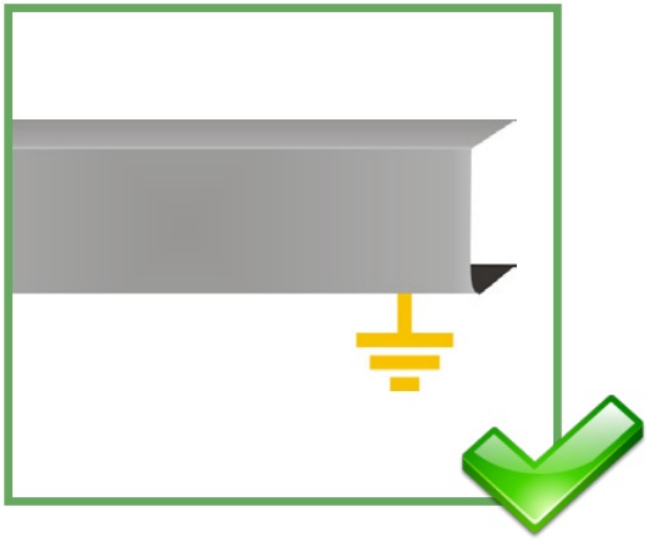
## INSTALLATION & MAINTENANCE TIPS


## SAFETY

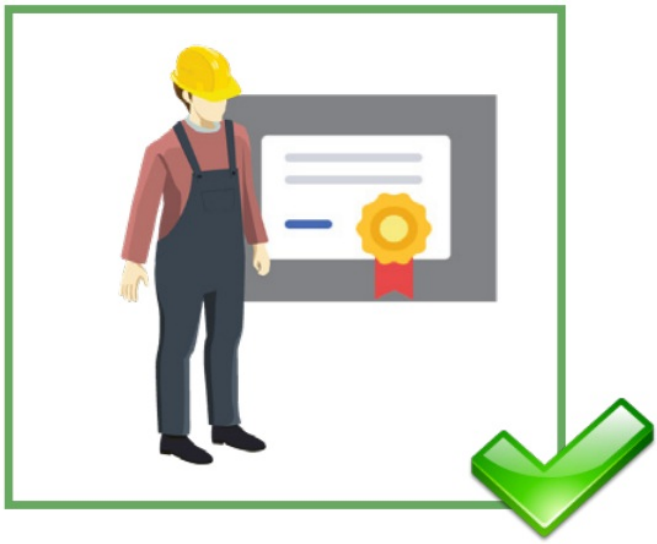
CLASS 1 LASER PRODUCT CLASS 2 LASER RADIATION DURING INSTALLATION DO NOT STARE INTO BEAM IEC 60825-1
The device emits invisible (IR) and visible laser radiations that can be activated during the installation process to adjust precisely the position of the detection field.
The visible laser beams are inactive during normal functioning. Do not stare into visible laser beams.

⚠ **CAUTION!**
Use of controls, adjustments, or performance of procedures other than those specified herein may result in hazardous radiation exposure.

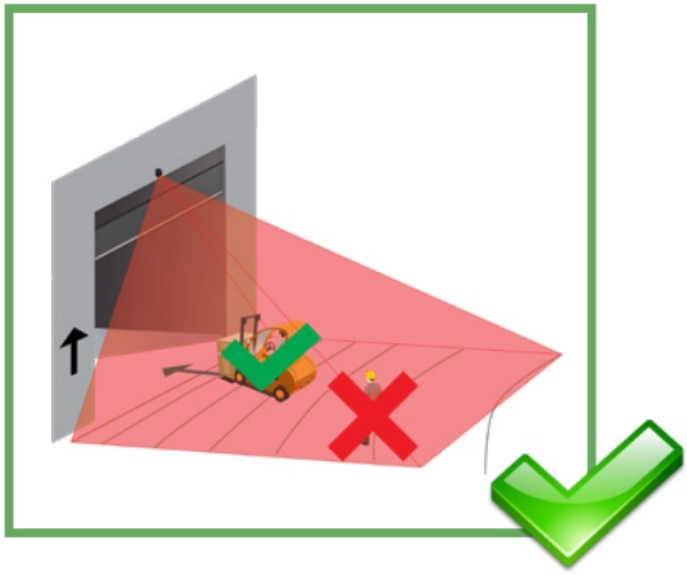
Do not look directly into the laser emitter or the visible red laser beams.



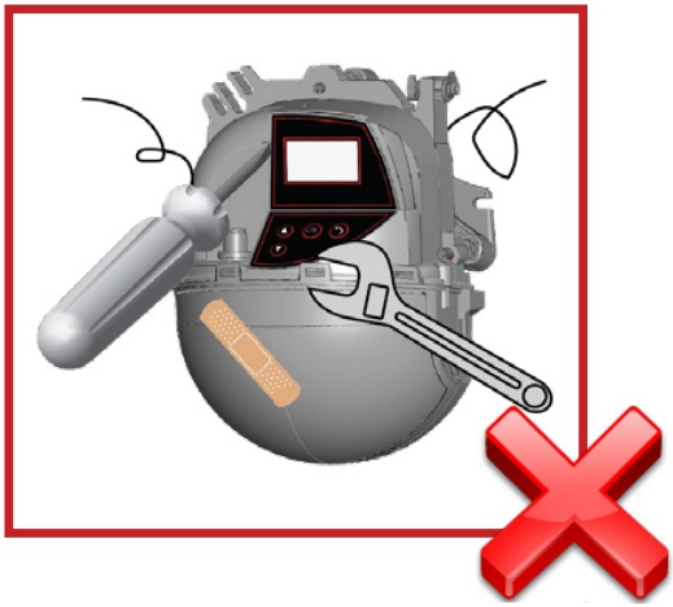
The door control unit and the header cover profile must be correctly grounded.



Only trained and qualified personnel are recommended to install and set up the sensor.

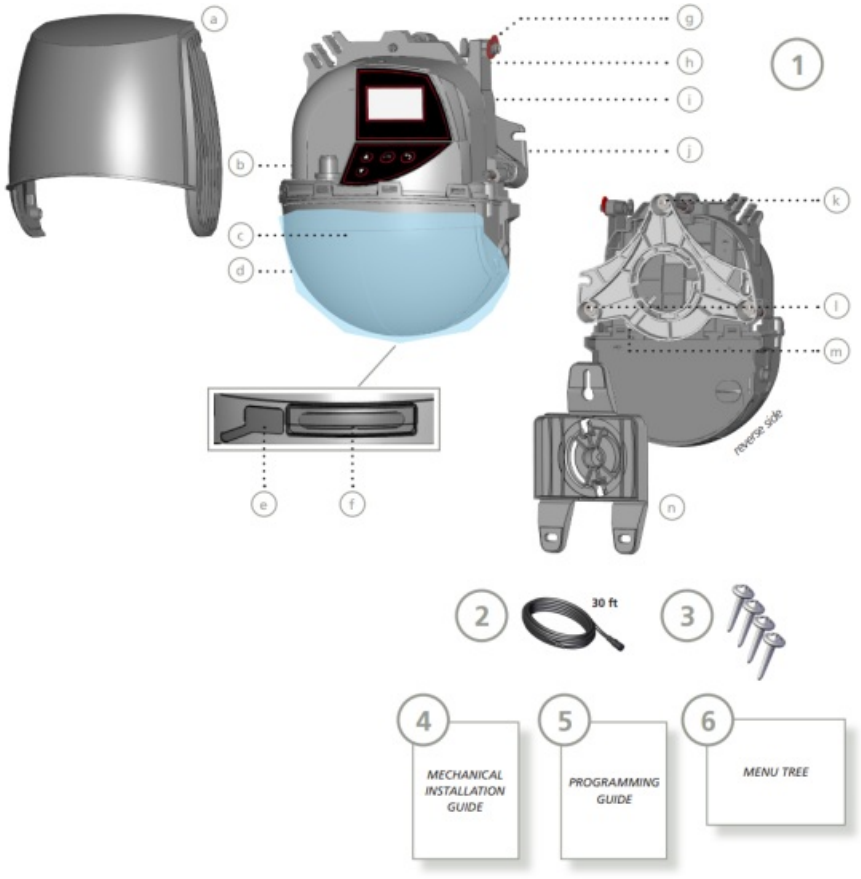


Following installation, always test for proper operation before leaving the premises.



The warranty is invalid if unauthorized repairs are made or attempted by unauthorized personnel.

## WHAT'S IN THE BOX




1. Sensor (10LZRWIDESCAN)
   a. cover (35.0245)
   b. main connector
   c. protection film
   d. laser window
   e. USB cap
   f. LED display

g. cover lock
h. cable passage
i. LCD screen
j. keypad
k. tilt angle adjustment screw (1)
l. parallel angle adjustment screw (2)
m. lateral angle lock screw (1)
n. mounting bracket (41.8838)

2. Power cable (35.1554)
3. Mounting screws (50.0048)
4. Mechanical Installation Guide (75.0047)
5. Programming Guide (75.0048)
6. LZR-WIDESCAN Menu Tree (78.8004)

**WHAT YOU'LL NEED**

Phillips head screwdriver


LZR-WIDESCAN mobile app (not required, but highly recommended)


BEA Remote Control

**LZR-WIDESCAN MOBILE APP**

BEA, Inc. highly recommends downloading the LZR-WIDESCAN mobile app.
The LZR-WIDESCAN mobile app is an incredibly useful tool for mechanical installation verification and setup/programming.

Available on the App Store

ANDROID APP ON Google play

Click or scan the QR code to visit our LZR-WIDESCAN MOBILE APP playlist on YouTube.

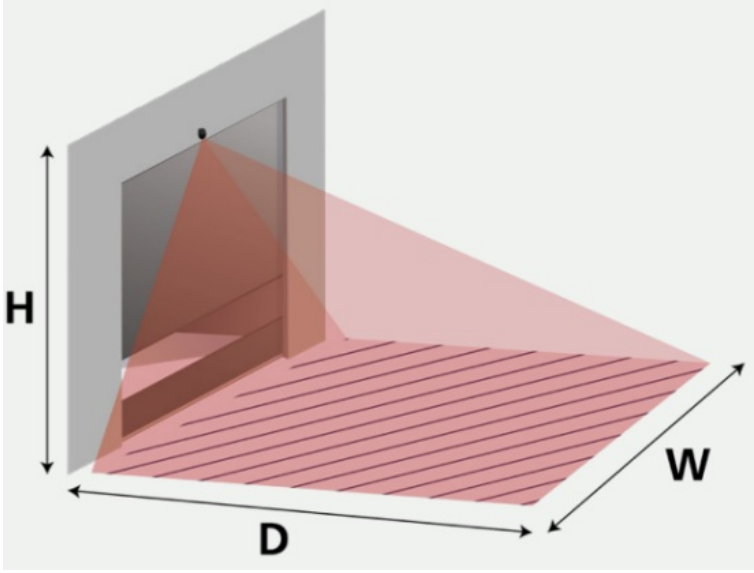
https://qrfy.io/z3qwUKIfip

## DETERMINE MOUNTING LOCATION

1. DETERMINE MINIMUM MOUNTING HEIGHT

   **Note:** Absolute minimum sensor mounting height is 6’6″. Determine desired width and depth of the detection area. WIDTH: _____ DEPTH: _____ Take whichever dimension is larger, and divide that by 1.2 (or multiply by 5⁄6).

   This is your minimum mounting height. MIN. MOUNTING HEIGHT: _____



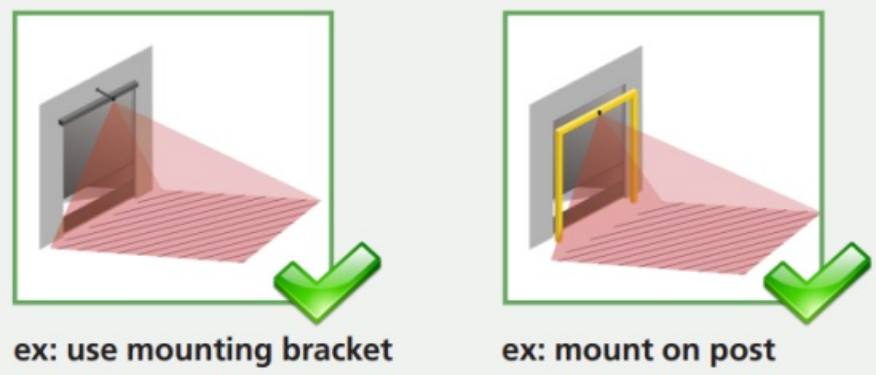

2. CHECK FOR OBSTRUCTIONS (If you can’t see the LZR-WIDESCAN, it can’t see you!) At or above the minimum mounting height, check for any obstructions such as door hardware, protective posts, signs, light fixtures, and even walls. Interruptions such as these will lead to masking and flatness errors during the teach-in process.


   If there are any obstructions, you can:

   • move the mounting location higher until the obstructions are no longer within the field of view of the sensor

   • choose a mounting bracket for your application (see page 2)

   • mount onto a protective post if one is available

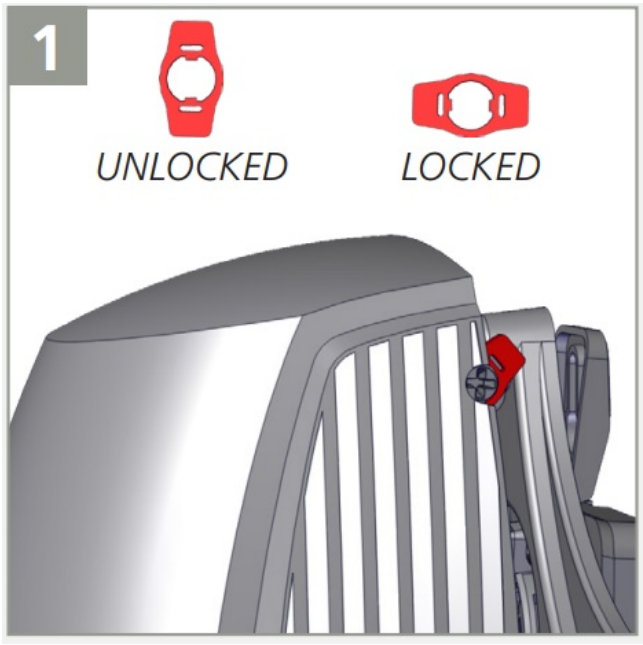



3. DETERMINE MOUNTING POSITION

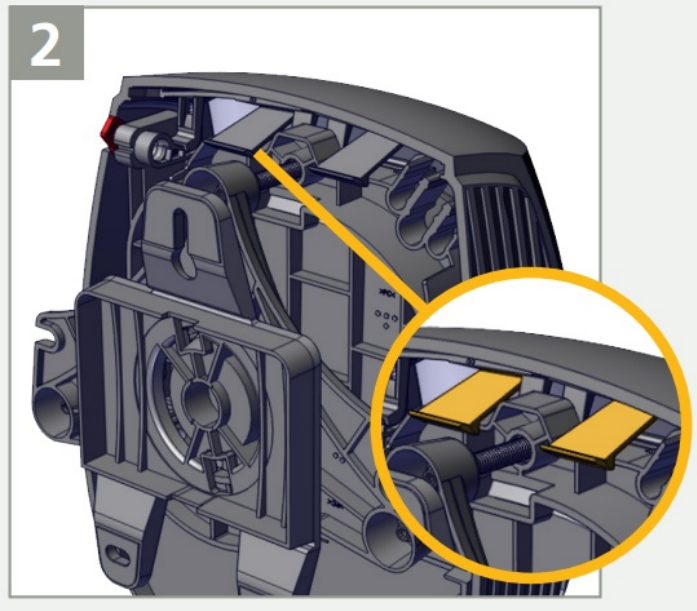
   **Options:** center (recommended) and off-center (left or right, left preferred if it must be off-center)

Check to make sure that the height and location will allow complete coverage of the door/opening.

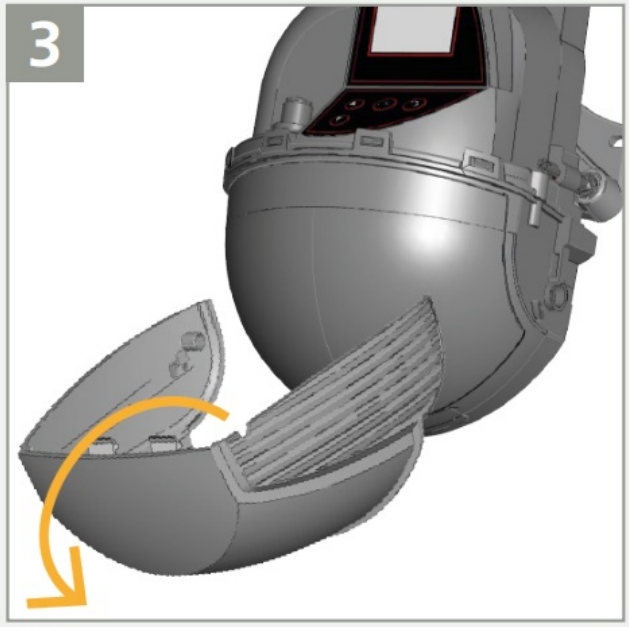
## OPEN THE SENSOR




Before opening the sensor, make sure the cover is not locked (red cover lock). Be sure to not turn the lock too far, because the lock can break.

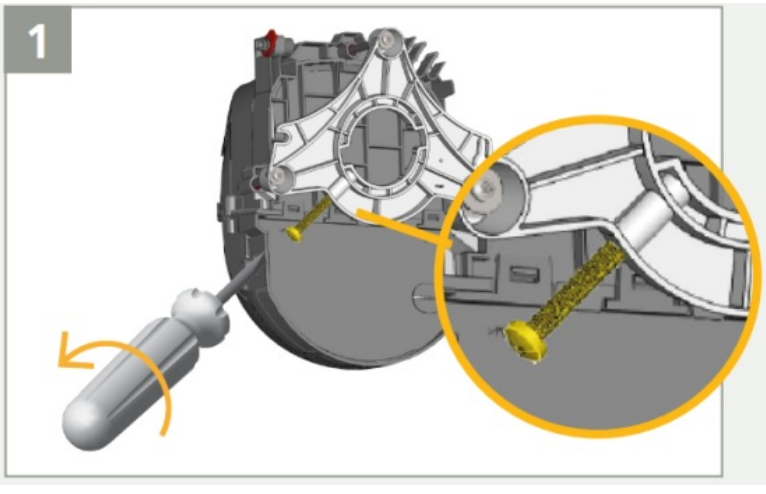



Pull the two legs on top in order to open the cover.

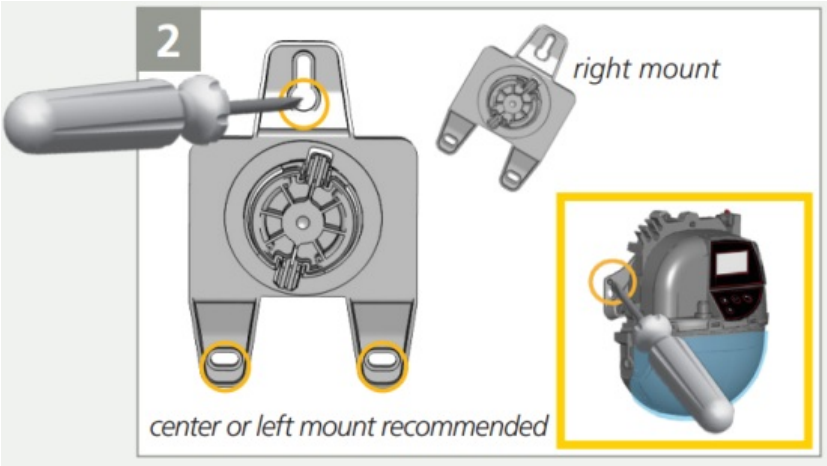



Remove the cover completely before installing the sensor.

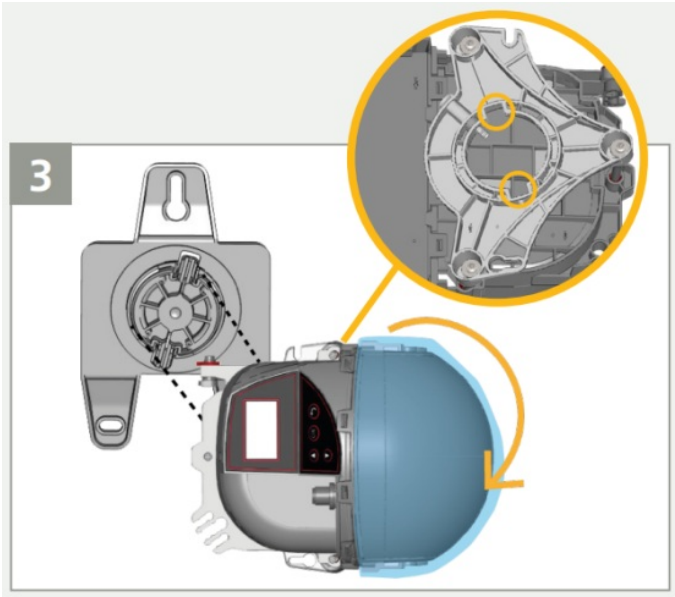
**MOUNTING**



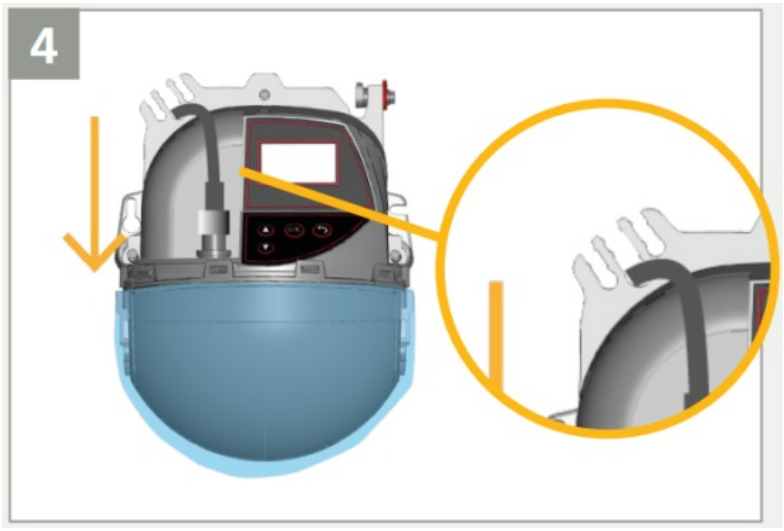
Verify that the angle lock screw is positioned as indicated. Unscrew slightly if necessary.




Remove the mounting bracket from the sensor by twisting CCW until the sensor detaches, and then secure the bracket to the wall. If using a right-mount position, the bracket must be positioned at a ~30° angle.
You can also install the sensor directly without using the mounting bracket (see inset, not recommended).



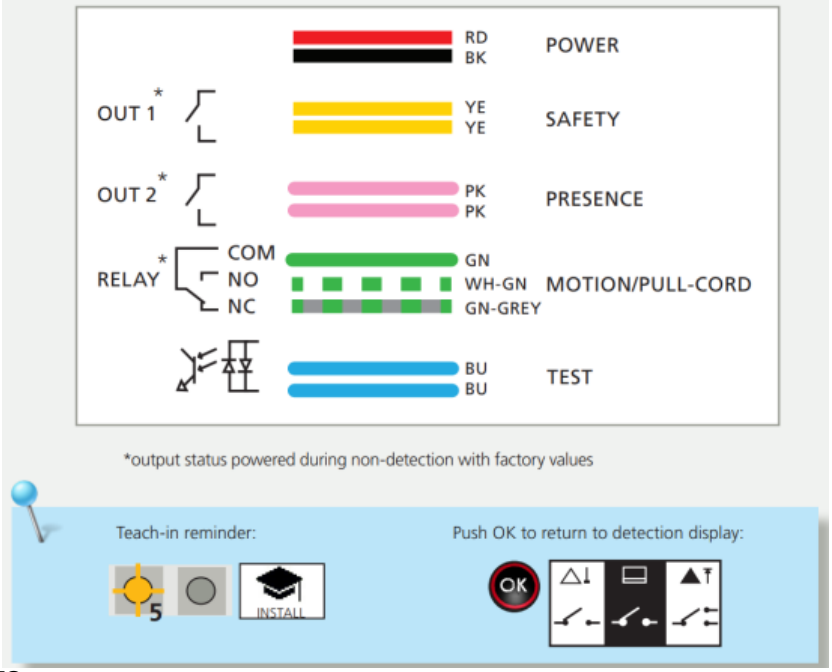

Tilt the sensor on its left side, align the tabs on the bracket with the notches on the back bracket of the sensor, and then rotate the sensor CW until the sensor is securely attached.



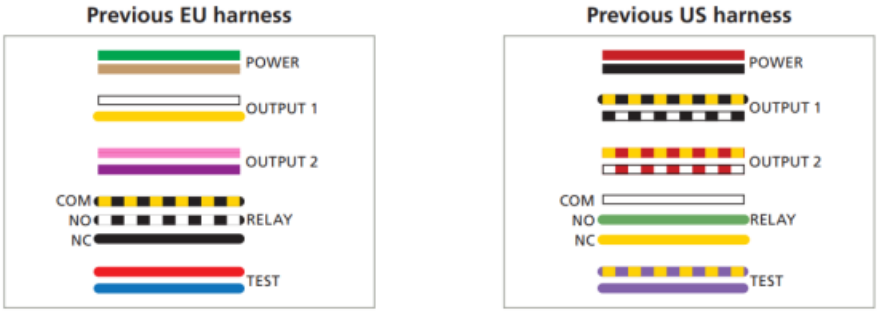
Plug in the connector and pass the cable (PN 35.1554) through the cable passage without making a loop.

## WIRING

Connect the wires according to door manufacturer recommendations. The output functions can be configured if necessary (see page 9). See Appendix A (page 17) for old harness wiring diagrams.



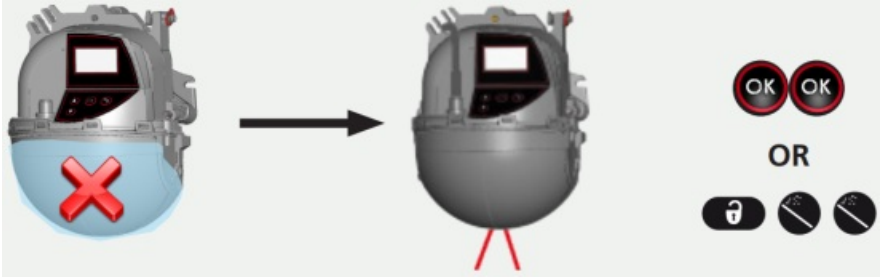

FORMER HARNESSES




## POSITION THE DETECTION FIELD

1. Remove the blue protection film from the laser window and then activate the two visible laser spots by pressing the OK button twice.

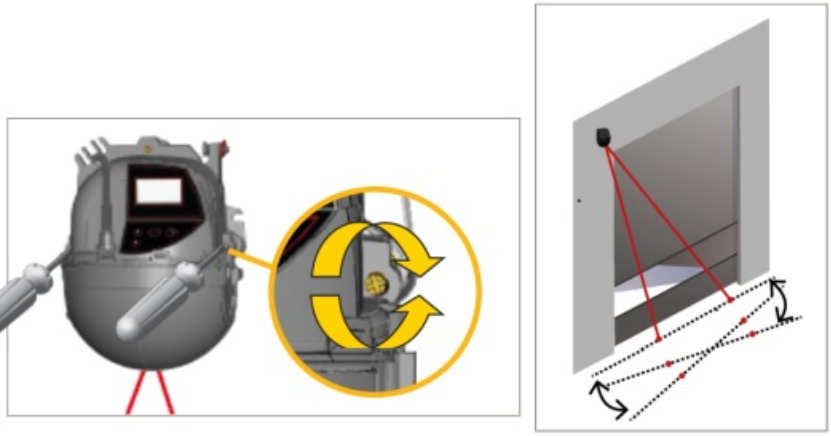
   You can also press UNLOCK > MAGIC WAND > MAGIC WAND on the remote control.




2. ADJUST THE PARALLEL ANGLE

   To make the curtain parallel to the door, adjust one or both screws on the side of the sensor.

   If using the app, verify angle setting.

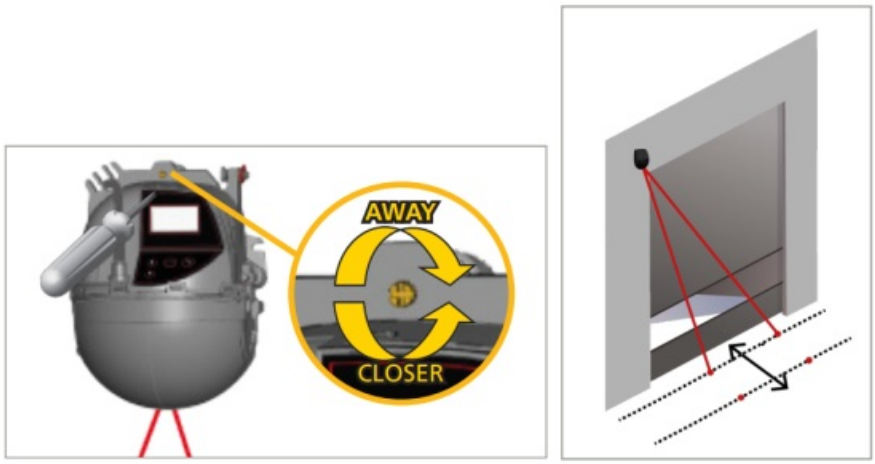


3. ADJUST THE TILT ANGLE

   To position the curtain closer or farther away from the door, adjust the screw at the top of the senso r.

   If using the app, verify angle setting.

   **NOTE:** When the safety function is required, position the red spots as close to the door as possible. Negative angles reduce the maximum possible depth of the detection fields.

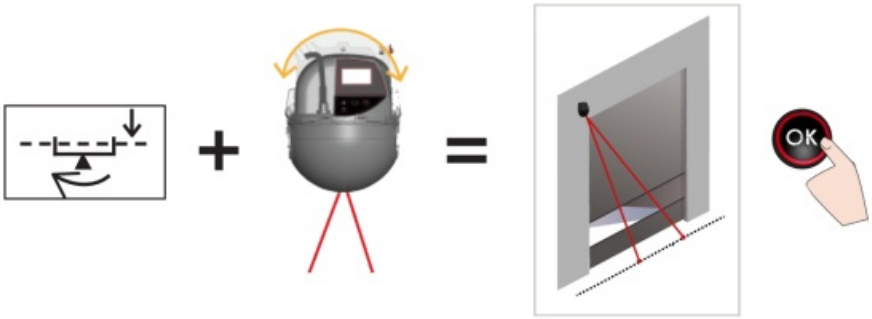



4. ADJUST THE LATERAL ANGLE

   Using the following instructions, launch the Position Wizard to position the detection field correctly in front of the door. This feature is required for any off-center mounting positions, but also useful for a center-mount to verify the centered position.

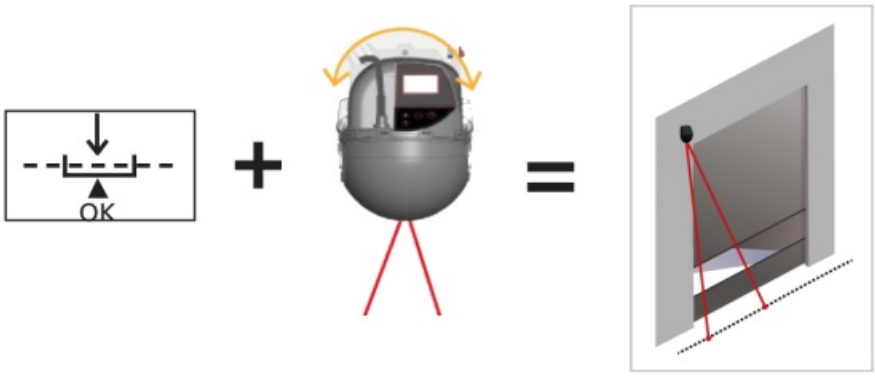
   a. Press and hold the OK button. The LCD will display the following image.


   b. While observing the LCD screen, rotate the sensor to align the center of the red spots with the center of the door, then press the OK button.




c. While observing the LCD screen, rotate the sensor until the arrow and triangle are aligned.

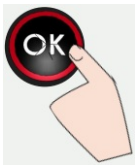
**NOTE:** Visible spots may no longer be centered during this step.



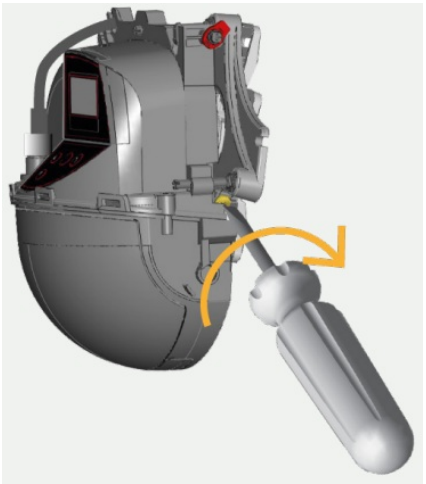

Small movements can make big changes! Rotate sensor slowly and stand back between adjustments to allow sensor to see the ground.

d. Check that you are not interfering with the pattern and that the red spots are on the floor with no interference. Press the OK button to set the angle.

If using the app, verify angle setting.




e. Lock the sensor position by tightening the angle lock screw.

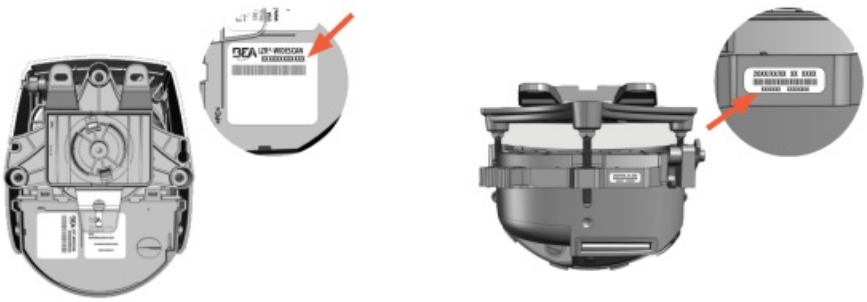


**TROUBLESHOOTING**

| | | |
|---|---|---|
|  E1: CPU-XXX | The sensor encounters an internal problem | Replace sensor. |
|  E2: XXX PWR | The internal power supply is faulty | Verify that you are using the correct power supply. Replace sensor, if necessary. |
| E2: IN SUPPLY | The power supply is too low or too high | Verify power supply (Diagnostics > LCD). |
| E2: TEMP | The internal temperature is too low or too high | Verify the sensor temperature (Diagnostics >LCD). |
| | | Protect the sensor from direct exposure to heat or cold. |
|  E6: FQ OUT | Faulty sensor output 1 | Replace sensor. |
|  E8: … | Faulty detection engine | If internal temperature is lower than 68 °F, wait until the heating process is completed. |
| | | If temperature is higher than -4 °F, replace the sensor. |
|  ORANGE LED is on | The sensor encounters a memory problem | Replace sensor. |
|  No power at startup | Incorrect wiring | Check connections at box and at the sensor. |
| | Faulty sensor or harness | Try connection with a different known, good sensor. If still no power at startup, try using a different known, good harness. |
|  Sensor does not react to remote control | Sensor is password-protected | Enter correct password. If you forgot the code, cut and restore power supply in order to access the sensor without entering a password during 1 minute. |
| | Bad remote / Bad batteries | Check batteries in remote. Replace remote, if necessary. |
| | Too far away from sensor | Stand directly underneath the LZR-WIDESCAN and point remote at bottom of LED window. |
| Red spots turned on, but not visible on ground | Sensor is obstructed | Use BEA brackets to extend the sensor past the obstructions. |
| | Environmental conditions are too bright | Change the mounting location (left, right, center) to avoid the obstruction. |
| | | Use a piece of white paper to locate spots. |
| Sensor won't adjust far enough on the bracket to center lasers over opening | Bracket installation position | Try rotating the bracket clockwise to allow for more rotation. |
| | Center of opening is too far away | Re-position sensor on bracket. |

| | | |
|---|---|---|
| Visible spots won't position correctly | Sensor is obstructed | Ensure there is nothing obstructing the visible spots. |
| | Sensor is too far away from center of entrance | Make adjustments to the three adjustment screws. If still unable to position spots, the sensor location may need changed. |
| | Lateral angle too extreme | Make adjustments to the lateral angle. If still unable to position spots, the sensor location may need changed. |
| Cover opens | Cover is not locked | Close cover and lock. |
| | Environmental issues | Check for ice. If present, use the heating function, if possible. |

Can't find your answer? Visit **BEAsensors.com** or scan QR code for Frequently Asked Questions!
Before contacting BEA Technical Support, locate the serial and CAN numbers of your sensor.



**SERIAL NUMBER**
view: back of sensor
**CAN NUMBER**
view: top of sensor

## APPENDIX A

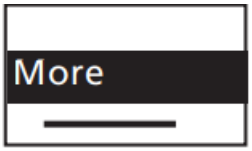
### HOW TO USE THE LCD

SHORT PRESS
Enter the LCD menu.
Select a folder, parameter, or value.
Confirm a value and exit edit mode.

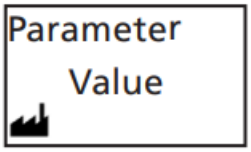
**PRESS 2X**
Activate red spots on floor.

**LONG PRESS**
Launch POSITION WIZARD.


Select your Language before entering the first LCD menu.
Within the first 30 seconds of power-on of the sensor or later in the diagnostics menu.

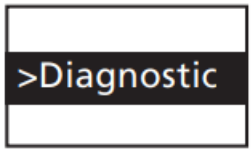



Access advanced adjustments.

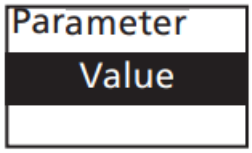



Displayed value = Factory value


Enter a Password if necessary.

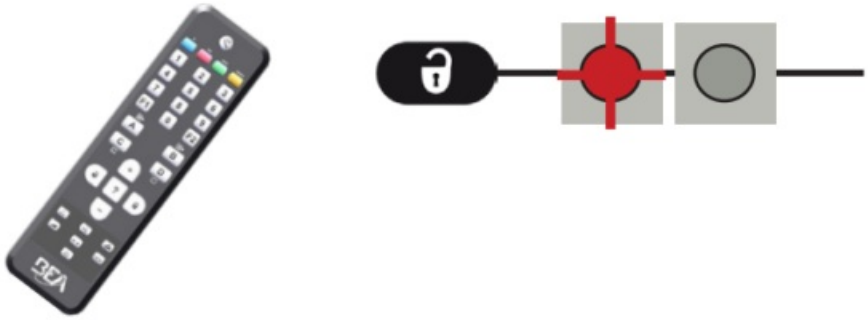



Displayed value = Saved value




Go to the Diagnostics menu.

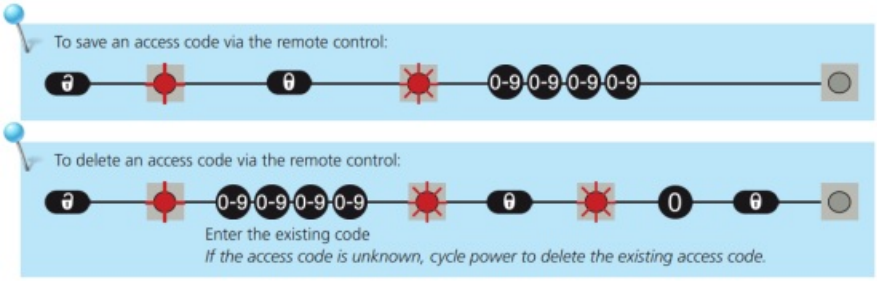
**HOW TO USE THE REMOTE CONTROL**



After unlocking, the red LED flashes and the sensor can be adjusted by remote control.


If the red LED flashes quickly after unlocking, enter an access code from 1 to 4 digits. If you do not know the access code, cycle power.

To end an adjustment session, always lock the sensor.




**APPENDIX B**
**Accessories and Replacements Parts**
**ACCESSORIES**

**10INDBRACKET**
Industrial mounting bracket

**10MINIBRACKET**
Short adjustable mounting bracket

**10.1311**
LZR-WIDESCAN adapter kit *

**10WBA**
Universal mounting bracket arm

**10WBAMOUNT**
Universal mounting bracket plate

**10REMOTE**
Universal remote control

**35.1555**
Power cable, 50 ft.

* required for use with Industrial Bracket and Mini Bracket
**REPLACEMENT PARTS**

**35.0245**
Replacement cover for
LZR-WIDESCAN

**41.8838**
Replacement base for
LZR-WIDESCAN

**35.1554**
Power cable, 30 ft.

**BEA, INC. INSTALLATION/SERVICE COMPLIANCE EXPECTATIONS**

BEA, Inc., the sensor manufacturer, cannot be held responsible for incorrect installations or incorrect adjustments of the sensor/device; therefore, BEA, Inc. does not guarantee any use of the sensor/device outside of its intended purpose.

BEA, Inc. strongly recommends that installation and service technicians be AAADM-certified for pedestrian doors, IDAcertified for doors/gates, and factory-trained for the type of door/gate system.

Installers and service personnel are responsible for executing a risk assessment following each installation/service performed, ensuring that the sensor/device system performance is compliant with local, national, and international regulations, codes, and standards.

Once installation or service work is complete, a safety inspection of the door/gate shall be performed per the door/gate manufacturer's recommendations and/or per AAADM/ANSI/DASMA guidelines (where applicable) for best industry

practices. Safety inspections must be performed during each service call – examples of these safety inspections can be found on an AAADM safety information label (e.g. ANSI/DASMA 102, ANSI/DASMA 107, UL294, UL325,

and International Building Code).
Verify that all appropriate industry signage, warning labels, and placards are in place.

Visit website for available languages of this document.
https://www.qrfy.com/Xt-_KNzamT

Download the installation app!
https://www.qrfy.com/M9au_KzQSp
Tech Support: 1-800-407-4545
Customer Service: 1-800-523-2462
General Tech Questions: techservices-us@BEAsensors.com
www.BEAsensors.com

## Documents / Resources

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## References

- **User Manual**