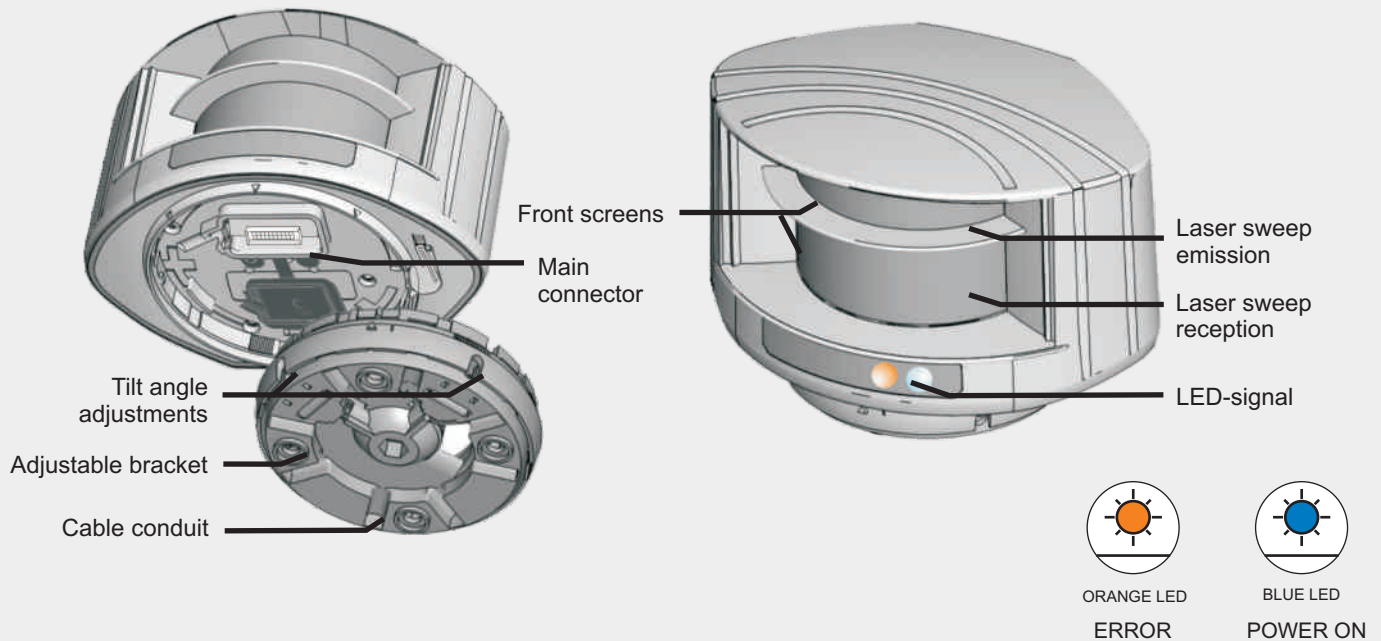


DESCRIPTION



SAFETY INSTRUCTIONS



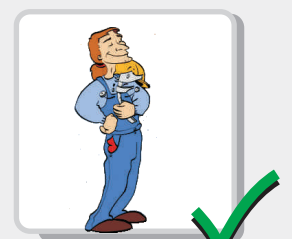
The device contains IR and visible red laser diodes.
IR laser (CLASS 1): wavelength 905nm
max. output pulse power 75W



Do not stare into the laser emitter.



Do not open the sensor. Warranty is void if opened.



The sensor should only be installed and adjusted by authorized and trained staff.



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

INSTALLATION TIPS



Wipe the front screens regularly with a clean and damp cloth.



Do not use aggressive detergents or abrasive cleaning agents to clean the front screens.



Fasten the sensor firmly to avoid vibrations.



Do not cover the front screens.



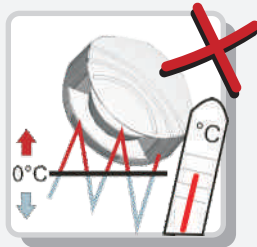
Avoid moving objects in the detection field.



Avoid all types of light sources in the detection field.



Avoid condensation.



Avoid exposing the sensor to sudden and extreme temperature changes.



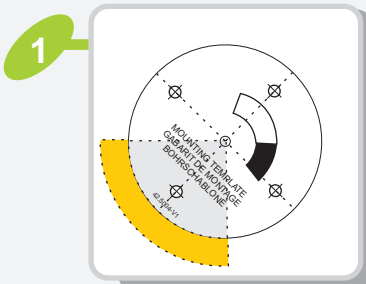
If the sensor is used in environments where the temperature can descend below 0°C, keep the sensor permanently powered.



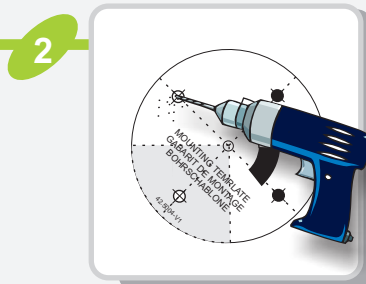
Smoke and fog may cause unwanted detections.

MOUNTING

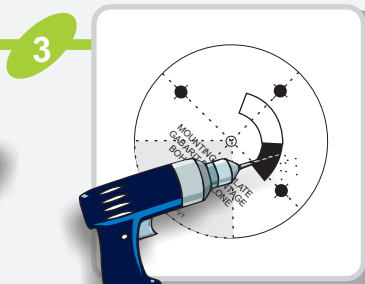
1



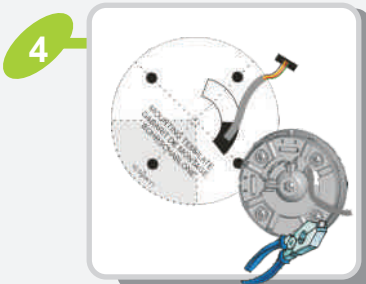
Use the **adhesive mounting template** to position the sensor correctly. The grey area indicates the detection range.



Drill 4 holes as indicated on the mounting template.



Make a **hole for the cable** if possible.



Pass the cable at least 8-10 cm through the **cable opening**. If drilling an opening is not possible, use the cable conduits on the back side of the bracket.



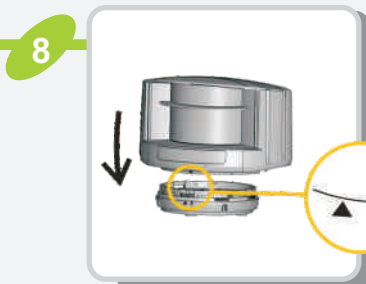
Position the **bracket** and **fasten the 4 screws** firmly in order to avoid vibrations.



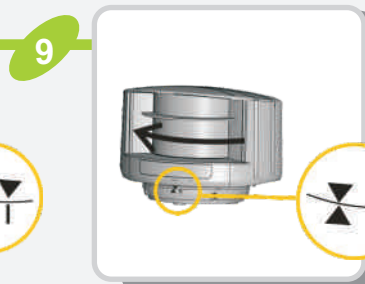
Plug the connector and position the cable in the slit.



Close the protection sheath and fasten it firmly.



Position the housing on the bracket.



Turn the sensor until the two triangles are face to face.

WIRING

2



CORRECT POSITIONING

3



1 Adjust the lateral position.

2 Adjust the tilt angle of the sensor.

3 Lock the position of the bracket to avoid malfunctioning. To unlock, use a screwdriver.

TROUBLESHOOTING

SYMPTOMS

LED

POSSIBLE CAUSES

CORRECTIVE ACTION

No blue LED



There is no power.

Check cable and connexion.

Orange LED is ON.



The power supply voltage is exceeding the acceptable limits.

Check the power supply voltage.



The sensor exceeds its temperature limits.

Verify the outside temperature where the sensor is installed. Eventually protect the sensor from sunlight using a cover.



Internal error

Wait a few seconds. If the LED remains ON, reset the power supply. If the LED turns on again, replace the sensor.

TECHNICAL SPECIFICATIONS

Technology:	laser scanner, time-of-flight measurement
Measurement range:	10 m x 10 m @ 2 % remission factor
Nbr of planes:	4
Nbr of points/plane:	274
Angular resolution:	0.3516°
Angular coverage:	96.3281 °
Rotating speed:	900 turns/min
Remission factor:	> 2 %
Emission characteristics:	
IR laser (CLASS 1)	wavelength 905 nm; max. output pulse power 75 W
Supply voltage:	10 V - 35 V DC @ sensor terminal
Power consumption:	< 5 W
Peak current at power-on:	1.8 A (max. 80 ms @ 35 V)
Serial communication*:	
Type	asynchronous
Interface	RS 485
Communication mode	half-duplex
Transmission speed	460800 bit/sec
Topology	point to point
Symbol coding	1 start bit, 1 stop bit, no parity bit
File type	8 bits
LED-signal:	1 blue LED: power-on status; 1 orange LED: error status
Dimensions:	125 mm (D) x 93 mm (W) x 70 mm (H) (mounting bracket + 14 mm)
Material:	PC/ASA
Colour:	black
Mounting angles on bracket:	-45 °, 0 °, 45 °
Rotation angles on bracket:	-5 ° to +5 ° (lockable)
Tilt angles on bracket:	-3 ° to +3 °
Protection degree:	IP65 (avoid direct exposure to high pressure cleaning)
Temperature range:	-30 °C to +60 °C if powered -10 °C to +60 °C unpowered
Humidity:	0-95 % non-condensing
Vibrations:	< 2 G
Pollution on front screens:	max. 30 %; homogenous
Expected lifetime:	designed for a lifetime of min. 5 years
Norm conformity:	2006/95/EC: LVD; 2004/108/EC: EMC; 2002/95/EC: RoHS; EN 60529; EN IEC 60825; EN 60950-1; EN 61000-6-2: EMC - Industrial level; EN 61000-6-3: EMC - Commercial Level

Specifications are subject to change without prior notice.

* see application note LZR®-U901 Protocol (request by mail, phone or download on the internet)



BEA hereby declares that the LZR®-U901 is in conformity with the basic requirements and the other relevant provisions of the standard 2004/108/EC.

Liege, June 2010

Jean-Pierre Valkenberg, R&D Manager (Authorized representative)

The complete declaration of conformity is available on our website: www.bea.be