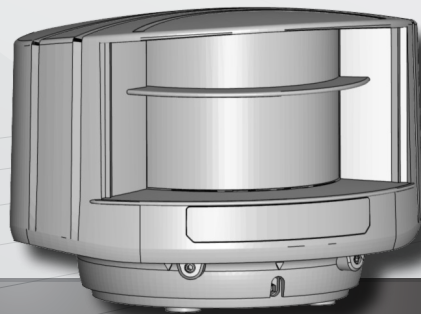




EN



LZR[®] - U922

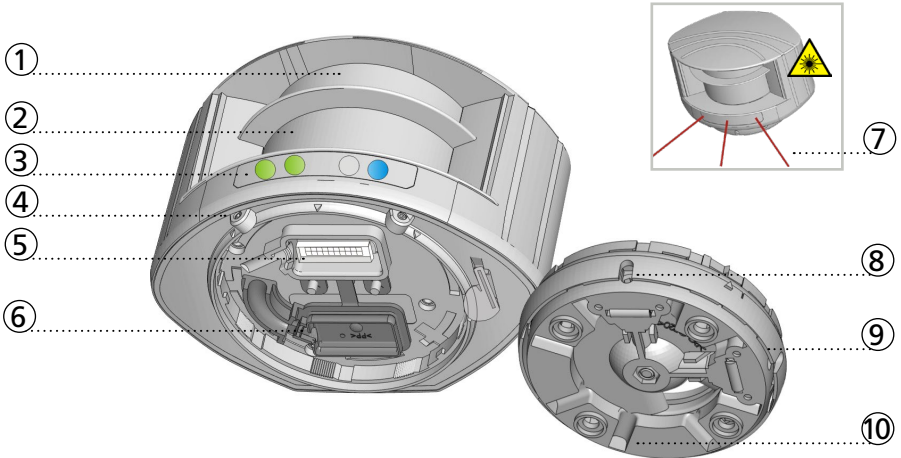
LASER MEASUREMENT DEVICE
WITH BIDIRECTIONAL BUS COMMUNICATION

User's Guide for software version 0500 and higher
(refer to tracking label on product)

LASER MEASUREMENT DEVICE

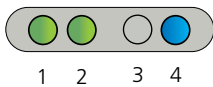
Other use of the device is outside the permitted purpose and can not be guaranteed by the manufacturer. The manufacturer cannot be held responsible for incorrect installations or inappropriate adjustments of the device.

DESCRIPTION





- | | |
|---------------------------------|--|
| 1. laser sweep emission | 6. protection cover |
| 2. laser sweep reception | 7. visible laser beams (3) |
| 3. LED-signals (4) | 8. notches for tilt angle adjustment (2) |
| 4. screws for position lock (2) | 9. adjustable bracket |
| 5. connector | 10. cable conduits (4) |

LED-SIGNAL





1 2 3 4

LED 1

-  LZR is switched ON and running
-  LZR is in configuration mode

LED 2


-  LZR is transmitting distance data
-  LZR is idle and transmits heartbeat message

- 1. LED 1
- 2. LED 2
- 3. Error LED
- 4. Power LED

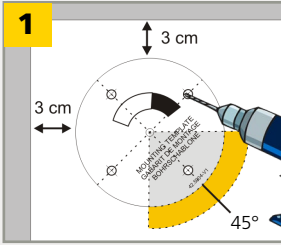
ERROR LED

-  error
-  no error

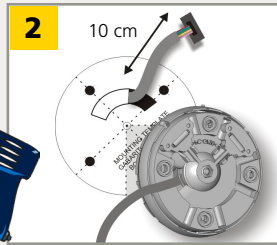
POWER LED

-  power
-  no power

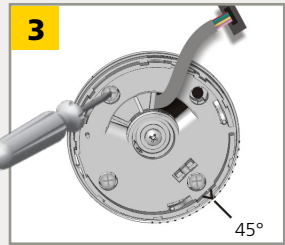
1 MOUNTING



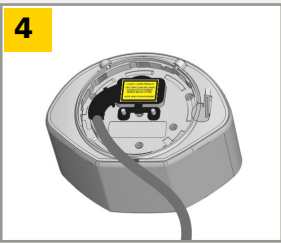
Use the mounting template to position the sensor correctly. The grey area indicates the detection range. Drill 4 holes and make a hole for the cable if possible.



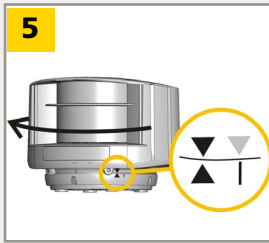
Pass the cable +/- 10 cm through the cable opening. If drilling an opening is not possible, use the cable conduits on the back side of the bracket.



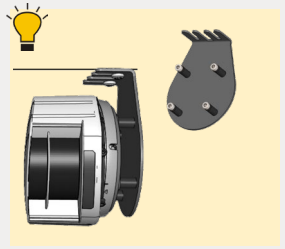
Position the bracket and fasten the 4 screws firmly in order to avoid vibrations.



Open the protection cover, plug the connector and position the cable in the slit. Close the protection cover and fasten it firmly.


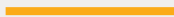

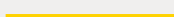





Position the housing on the bracket and turn the sensor until the two triangles are face to face.



Use the LBA accessory if needed.

2 WIRING

PWR +	
PWR -	
GND	
RS485B	
RS485A	
ISSD1 PIN1	
ISSD1 PIN2	

TECHNICAL SPECIFICATIONS

Technology:	laser scanner, time-of-flight measurement
Measurement range:	max 65 m 10 m @ 2% remission factor, 30 m @ 10% remission factor
Number of planes:	max. 4*
Number of points/plane:	max. 274*
Angular resolution:	max. 0.3516 °*
Angular coverage:	max. 96 °*
Rotating speed:	900 turns/min
Scanning frequency:	15 Hz
Remission factor:	> 2 %
Laser emission characteristics: (IEC/EN 60852-1)	wavelength 905 nm; output power < 0.10 mW (CLASS 1) wavelength 635 nm; output power <1 mW (CLASS 2)
Supply voltage:	10-35 V DC @ sensor side (to be operated from SELV compatible power supplies only)
Power consumption:	< 5 W
Peak current at power-on:	1.8 A (max. 80 ms @ 35 V)
Serial communication:	see AN LZR®-U92x Protocol (available for download on our website)
Type	asynchronous
Interface	RS 485
Communication mode	half-duplex
Transmission speed	460800 bit/sec (max: 921600 bit/sec)
Topology	point to point
Symbol coding	1 start bit, 1 stop bit, no parity bit
File type	8 bits
Cable length:	3 m
Input:	1 optocoupler (galvanic isolated - polarity free)
Max. contact voltage:	30 V DC (over-voltage protected)
Voltage threshold:	Log. H: >8 V DC; Log. L: <3 V DC
LED-signal:	2 bi-coloured LEDs: function status; 1 blue LED: power-on status; 1 orange LED: error status
Dimensions:	125 mm (D) x 93 mm (W) x 76 mm (H)
Material:	PC/ASA
Colour:	black & white
Protection degree:	IP65
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
Conformity:	IEC 60825-1 EN 61000-6-2 EMC - Industrial level - immunity EN 61000-6-3 EMC - Commercial level - emission

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

* These parameters can be configured via the RS 485 communication interface.
For more information on the existing options, see AN LZR®-U92x Protocol.

PARAMETER ADJUSTMENT

For more information on the existing parameters that can be configured, see AN LZR®-U92x Protocol.

SAFETY



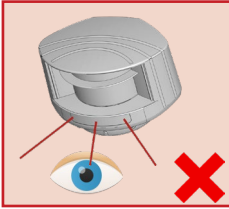
The device contains IR and visible laser diodes.
IR laser: wavelength 905nm; output power 0.10mW
(Class 1 according to IEC 60825-1)
Visible laser: wavelength 635nm; output power 0.95mW
(Class 2 according to IEC 60825-1)

The visible laser beams are inactive during normal functioning.
The user can activate the visible lasers if needed.
For more information see application note LZR®-U920/-U921 Protocol.

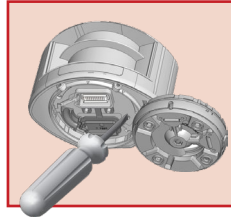


CAUTION!

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



Do not look into the visible laser beams.

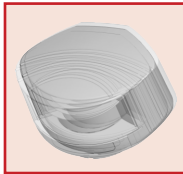


The warranty is void if unauthorized repairs are made or attempted by unauthorized personnel.

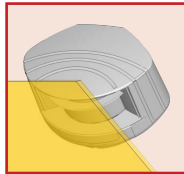


Only trained and qualified personnel may install and adjust the sensor.

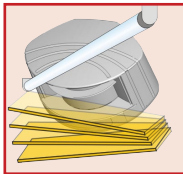
INSTALLATION AND MAINTENANCE



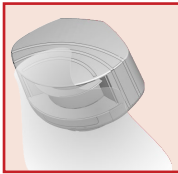
Avoid extreme vibrations.



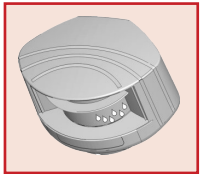
Do not cover the front screens.



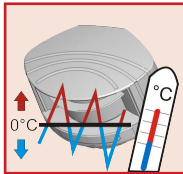
Avoid moving objects and light sources in the measurement field.



Avoid the presence of smoke and fog in the measurement field.



Avoid condensation.



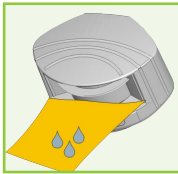
Avoid exposure to sudden and extreme temperature changes.



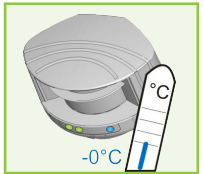
Avoid direct exposure to high pressure cleaning.



Do not use aggressive products to clean the front screens.



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



Keep the sensor permanently powered in environments where the temperature can descend below 0°C.



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BEA hereby declares that the LZR®-U922 is in conformity with the European directives 2011/65/EU and 2014/30/EU.



The complete declaration of conformity is available on our website

This product should be disposed of separately from unsorted municipal waste