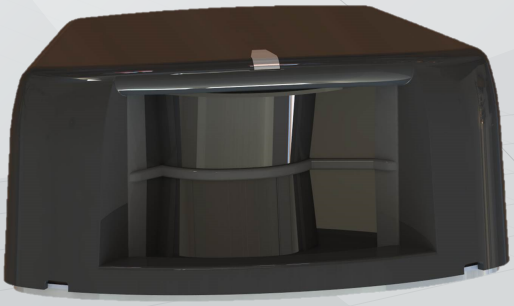
EN



LZR® -MICROSCAN U920

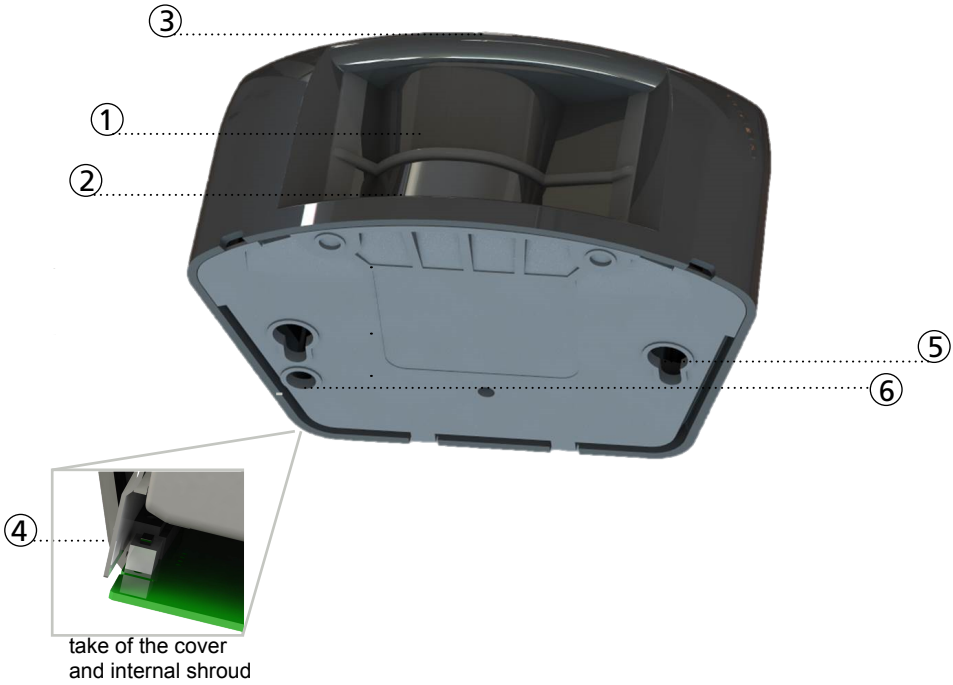
LASER MEASUREMENT DEVICE WITH BIDIRECTIONAL BUS COMMUNICATION

User's Guide for product version 0100 and more

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

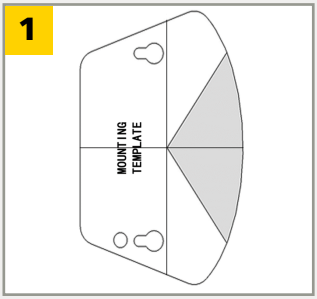


1. laser sweep emission
2. laser sweep reception
3. LED-signal
4. reset button
5. holes for M4 screws
6. cable conduit

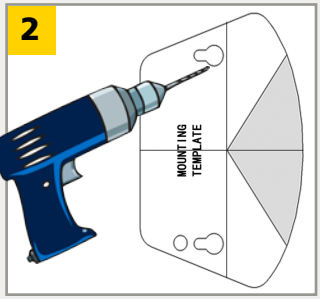
LED-SIGNAL

- Has been switched ON and keep running in measurement mode.
- In configuration mode
- error

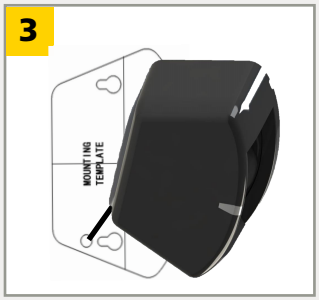
1 MOUNTING



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



Drill 2 holes as indicated on the mounting template. Make a hole for the cable.



Pass the cable through the cable hole.

Position the sensor and fasten the screws firmly.

Use M4 screws

2 WIRING *

Green		V+
Brown		V-
Yellow		RS485A(RX+)
Gray		RS485B(RX-)
Violet		RS485Z(TX-)
Pink		RS485Y(TX+)
Shield		GND

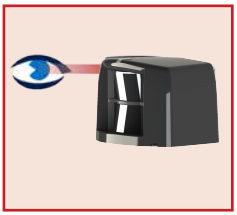
* For more information see application note LZR®-MICROSCAN U920 Protocol or contact BEA.

SAFETY

The device contains IR and visible laser diodes.
IR laser: wavelength 905nm; max. output pulse power 75W
(Class 1 according to IEC 60825-1)

For more information see application note LZR®MICROSCAN-U920 Protocol.

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

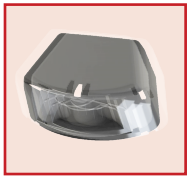


Do not look into the laser emitter directly for long time.

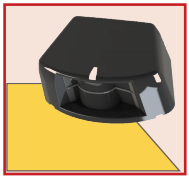
The warranty is void if unauthorized repairs are made or attempted by unauthorized personnel.

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

INSTALLATION AND MAINTENANCE

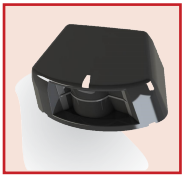


Avoid extreme vibrations.

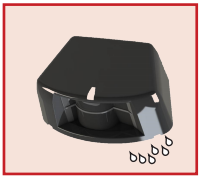


Do not cover the front screens.

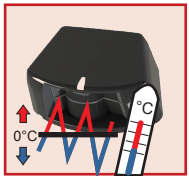
Avoid moving objects and light sources in the measurement field.



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



Avoid condensation.

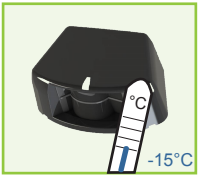


Avoid exposure to sudden and extreme temperature changes.

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 -15 °C.

TECHNICAL SPECIFICATIONS

Technology:	laser scanner, time-of-flight measurement
Measurement range:	max 10 m 3 m @ 5% remission factor, 10 m @ 55% remission factor
Number of planes:	max. 4*
Number of points/plane:	max. 40*
Angular resolution:	min. 2.56 °*
Angular coverage:	max. 100 °*
Rotating speed:	1500 turns/min
Scanning frequency:	25Hz
Remission factor:	> 2 %
Laser emission characteristics:	wavelength 905 nm max. output pulse power 75 W (CLASS 1)
Supply voltage:	12-24 VDC/AC (±10%)
Power consumption:	< 4 W
Peak current at power-on:	1.5 A (max. 30 ms @ 24 V)
Serial communication:	see AN LZR®-MICROSCAN U920 Protocol
Type	asynchronous
Interface	RS 422
Communication mode	half-duplex
Transmission speed	921600 bit/sec(default)
Topology	point to point
Symbol coding	1 start bit, 1stop bit, no parity bit
File type	8 bits
Cable length:	3 m
Vibrations:	< 2 G
Pollution on front screens:	max. 30 %; homogenous
Expected lifetime:	8 years
LED-signal:	1 bi-coloured LEDs: function status;
Dimensions:	118 mm (D) x 80 mm (W) x 54 mm (H)
Material:	PC/ABS
Colour:	black
Protection degree:	IP53
Temperature range:	-25 °C to +55 °C if powered; -15 °C to +55 °C unpowered
Humidity:	0-95 % non-condensing
Norm conformity:	2006/95/EC: LVD; 2011/65/EU: RoHS 2; 2004/108/EC: EMC IEC 60825-1:2007 Laser Class 1&3R EN 61000-6-2:2005 EMC - Industrial level EN 61000-6-3:2006 EMC - Commercial level

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

*PARAMETER ADJUSTMENT

These parameters can be configured via the RS 422 communication interface.
For more information on the existing parameters that can be configured, see AN LZR® MICROSCAN-U920 Protocol.

TROUBLESHOOTING

	No LED	There is no power.	1 Check cable and connections.
		LED is disabled.	1 Enable LED by command.
	The orange LED is on.	The power supply voltage is exceeding the acceptable limits.	1 Check the power supply voltage.
		The sensor exceeds its temperature limits.	1 Verify the outside temperature where the sensor is installed. Eventually protect the sensor from sunlight using a cover.
		Internal error	1 Wait a few seconds. If the LED remains ON, reset the power supply. If the LED turns on again, replace the sensor.
	The orange LED flashes 3 times.	EEPROM error	1 Open the cover. Keep pushing RESET button for more than 2 seconds. Repower the sensor.

NOTES

PLEASE KEEP FOR FURTHER USE
DESIGNED FOR COLOUR PRINTING

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BEA hereby declares that the LZR®-MICROSCAN U920 is in conformity with the basic requirements and the other relevant provisions of the directives 2006/95/EC, 2011/65/EU and 2004/108/EC.

Angleur, June 2013 Pierre Gardier, authorized representative

For EU countries: This product should be disposed of separately from unsorted municipal waste.

A Halma company