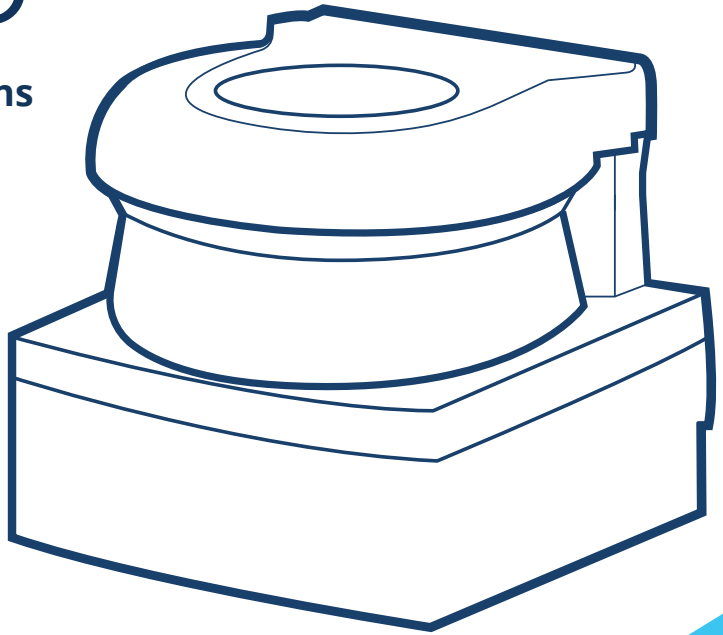
LZR®

VISIOSCAN RD

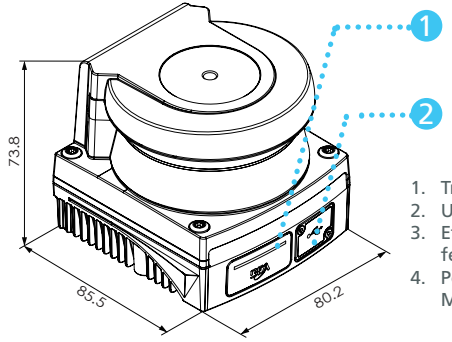
Factory & Logistic Automation Solutions

Quick guide

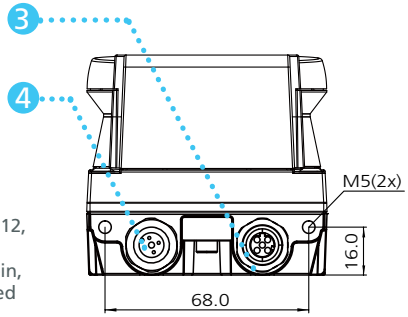


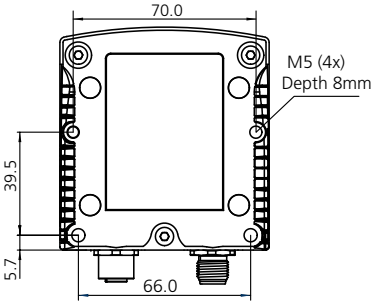
① Description

The LZR®-VISIOSCAN RD is a laser scanner that scans a single curtain over a scanning angle of 275°. The scanner outputs accurate measurement data at a high scanning frequency through Ethernet communication, which can be processed to achieve various applications in factories and logistic automation solutions, such as navigation and obstacle avoidance for AGV/AMRs.



1. Tri-colour LEDs
2. USB port, Type-C
3. Ethernet, 4-pin, M12, female, D-coded
4. Power/output, 5-pin, M12, male, A-coded



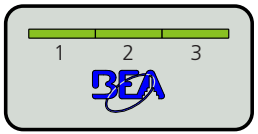


② Safety

- The device emits Class 1 laser radiations (certified according to IEC/EN 60825-1). The laser is eye-safe.
- Only trained and qualified personnel may install and adjust the sensor.
- Do not open the housing.
- Keep the optical window clear.

- Do not use aggressive products to clean the optical window.
- Fix the USB covers firmly after installation to ensure IP67 ingress protection.
- Ensure functional grounding via the shield of the connection cable.

③ LED Indication



1. Power Status
2. Ethernet Connectivity
3. Error Status

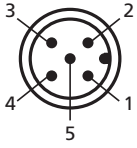
LED1/2/3 flashs 1 time/second, contamination warning on the left/centre/right side of the optical window.

LED1/2/3 flashs 3 times/second, contamination error on the left/centre/right side of the optical window.

LED 1	LED 2	LED 3
Power off. No supply voltage.	No ethernet connection.	Power off. No supply voltage.
Power on.	Ethernet connection established, no measure-ment data transfer.	Normal operation, no error.
External power supply error.	× 3 Ethernet measurement data transmission (default off).	Internal error.
		Fatal error.

④ PIN Assignment

Power/output: A-coded



1	VIN+	Brown
2	OUT1	White
3	GND	Blue
4	OUT2	Black
5	Not Connected	

Ethernet: D-coded

1	TX+
2	RX+
3	TX–
4	RX–

Ethernet Connection
Default IP address: 192.168.1.2
Port: 3050

⑤ Technical Specifications

Technology	Laser scanner, time-of-flight measurement;
	Output power < 0.1 mW; Class 1 (IEC/EN 60825-1)
Scanning range	0.08 – 25 m; 7 m @ 1.8% reflectivity; 15 m @ 10% reflectivity;
Scanning angle	275°
Angular resolution	0.2° @ 80 Hz, 0.1° @ 40 Hz
Operating voltage*	12 – 24 V DC, - 10% / + 30%
Measurement accuracy	
Systematic error	± 20 mm**
Statistical error (1σ)	≤ 6 mm (0.08 – 7 m); ≤ 10 mm (7 – 10 m); ≤ 15 mm (10 – 15 m)*
	≤ 6 mm (0.08 – 25 m) for reflectors
Ambient conditions	
Ambient light immunity	100,000 lux ambient light; 3,000 lux (IEC/EN 61496-3)
Operating temperature	- 30 °C to + 60 °C
Enclosure	IP67 (IEC/EN 60529)
Ethernet	TCP / UDP
USB	USB 2.0, Type-C

* External electrical sources must ensure double insulation from primary voltages.
** Typical value at 10% reflectivity up to 7 m scanning range or as specific; real values depends on ambient conditions and the target object.

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

User guide

Product page

LinkedIn account

BEA SA / LIEGE SCIENCE PARK / ALLÉE DES NOISETIERS 5 - 4031 ANGLEUR / BELGIUM
T +32 (0) 361 65 65 | F +32 (0)4 361 28 58| E INFO-EU@BEASENSORS.COM | WWW. BEASENSORS.COM

This product should be disposed of separately from unsorted municipal waste.waste.