



Sensing Reality!

LR-1B 2D LiDAR Sensor



Robotics

Security

Industrial

Intelligent logistics

Introduction

- ▶ LR-1B is a 2D LiDAR with compact structure and excellent performance. Its merits can be demonstrated by its performance, reliability, costs, dimension and flexibility, it meets most basic requirements of industrial applications, and is an important sensor for low speed navigation.
- ▶ LR-1B can be used for applications such as robots, security and surveillance, industrial automation, and logistics, etc. The users can select different versions based on the functional requirements of collision avoidance or navigation.
- ▶ Like other sensors from OLEI, this LiDAR has undergone rigorous inspection and verification processes through the calibration of professional calibration laboratories. OLEI strives to provide users reliable, high quality, rugged and robust sensor products.



Features

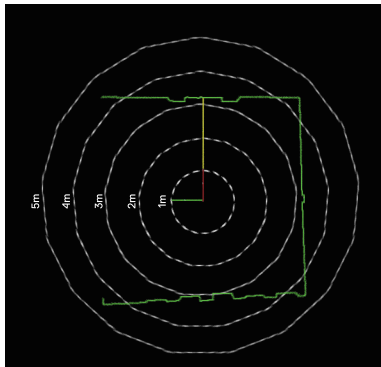
Safety Monitor & Point Cloud Data

- ▶ 16 Bank, 3 status Setting
- ▶ 4 Switching Output
- ▶ 4 Switching Input
- ▶ 100M Ethernet Communication and data transmission

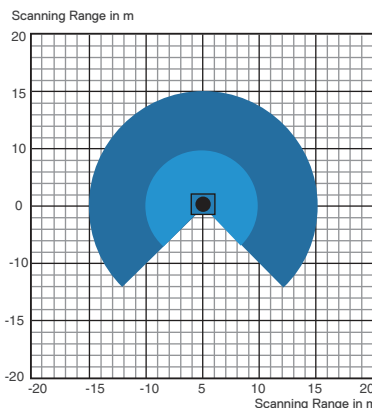
Robust & Reliable

- ▶ Six Reliability Tests: High and low temperature work, high and low temperature impact, vibration, drop, light, high temperature and high humidity
- ▶ Seven times mechanical strength: Rugged magnesium-aluminum alloy casing with a total weight of 0.7Kg, 7X higher than aluminum alloy strength
- ▶ Eight product certifications: EMC, Laser safety, RoHS, Anti-vibration, Impact resistance, Waterproof and Dustproof, CE, FCC

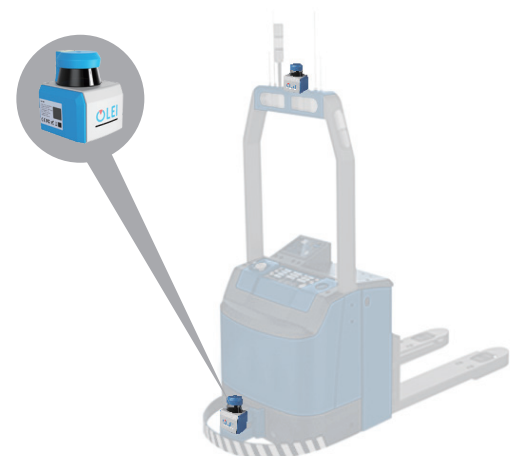
Sample Data



Scanning Range (LR-1BS1L3)



■ Scanning Range Max.: 15m ■ Scanning Range Typical: 5m
For Objects up to 10% Remission



LR-1B 2D LiDAR Sensor



Specification Table

Basic Specification:

Item	Unit	2D 270° LiDAR Sensor
Laser Wavelength	nm	905
Laser class		I
Channels		1
Scanning angle	°	270
Scanning Frequency	Hz	10~25
Field of View(Vertical)	°	---
Angular resolution	°	0.22@15Hz
Measurement range	m	0.05~15m@80% White Board Reflector
Response time	ms	130ms@10Hz 100ms@15Hz(Max)
Distance Resolution	mm	1
Accuracy	mm	Repeate: <±20mm

Output:

Item	Unit	Specification
Number of Bank fields	No.	16 Bank Fields
Ethernet Connection		100Mbps Ethernet
Reflection Data		0-100%
Identification of		Yes
Switching inputs	ea	Switch mode: NPN (9-30V) A total of 16 banks can be set Max. Iin≤5mA
Switching outputs	ea	Switch mode: NPN/PNP (9-30V) 3* Zone detection signals + 1 Fault detection signal Max. Iout≤100mA
Optical Indicators	types	RGB × 3

Mounting & Connection:

Item	Unit	Specification
Connector		Power Supply: 5-pin, M12x1 A-Coded Multi:12-pin, M12x1 A-Coded Ethernet: 8-pin, M12x1 A-Coded
Dimensions	mm	95×97×121
Operating voltage	VDC	10~32
Power consumption	W	6
Weight	g	<735g

Environment:

Item	Unit	Specification
Degree of protection		IP65
Operating temperature	°C	-30~+50
Storage temperature	°C	-30~+70
Ambient light limit	LUX	<80000
Air humidity	RH	<95%
Mounting		Back or Bottom

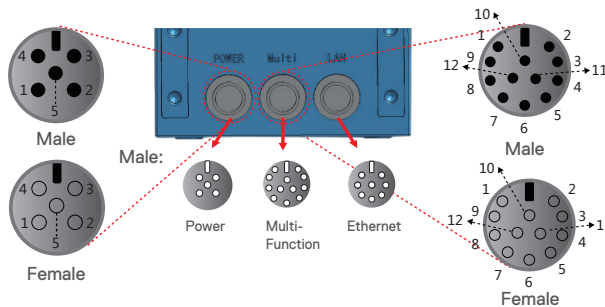
Compatible test standard:

Item	Unit	Specification
EMC		IEC 61000-6-2:2016-08 / IEC 61000-6-3:2006-07
Vibration resistance		IEC 60068-2-6:2007
Shock resistance		IEC 60068-2-27:2008

Electrical Definition

NO.	Definition	Color	Remark
1	GND	Black	
2	GND	Gray	
3		Blue	Do not connect
4		White	
5	VCC	Brown/Red	

Power



NO.	Definition	Wiring color
1	Input 0	Orange
2	Output 0	Brown
3	Output 1	Yellow
4	Output 2	Green
5	Output 3	Violet
6	GND	Gray
7	Input 3	Navy blue
8	Input 2	Wathet
9	Input 1	White
10	GND	Black
11	VCC	Pink
12	VCC	Red

Multi-Function

Outline and Mounting

