OLEI
Sensing Reality!

2D 270° Navigation
LR-1BS5-C1 Mini LiDAR Sensor

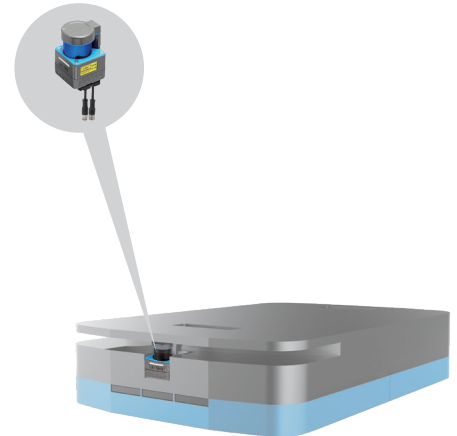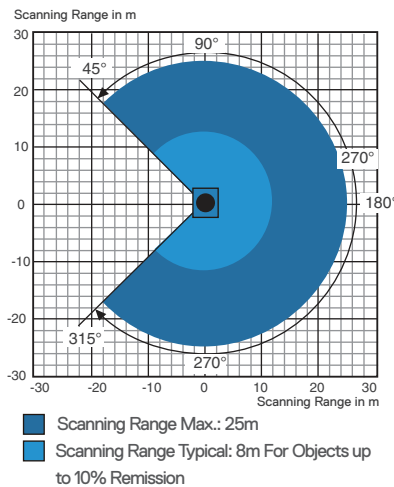**Robotics** | **Security** | **Industrial** | **Intelligent logistics**

Introduction

▶ LR-1BS5-C1 is based on our proven 1B development platform to meet developed in the industrial and commercial industries for cost and size requirements. It can satisfy the vast majority need for mobile robots and automatic guided vehicles (AGV) for safe obstacle avoidance.

▶ LR-1BS5-C1 is suitable for application needs in different industries, such as robotics, security and surveillance, industrial automation and smart logistics.
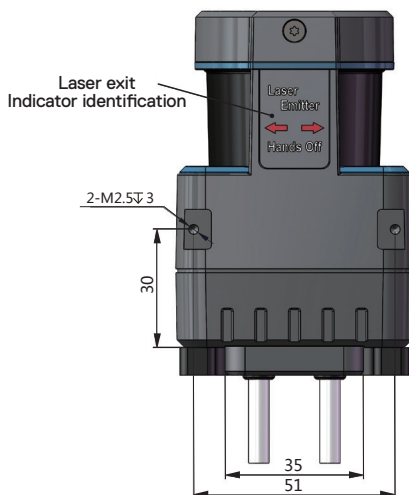
Features

▶ Mini-type LiDAR that provides point cloud data output

▶ Designed according to industry standards, tested and certified for multiple reliability

▶ Compact structure size, height is only 85mm

▶ 270°scanning angle, up to 25m effective detection distance (80% reflectivity white board)

▶ Communication and data transmission through 100M Ethernet interface

Scanning Range

Scanning Range in m

■ Scanning Range Max.: 25m
■ Scanning Range Typical: 8m For Objects up to 10% Remission

Electrical Definition

Laser exit
Indicator identification

2-M2.5↧3
30
35
51

POWER connection
Connection "Power"
5-pin M12 plug

1 DC 9 … 28V
2 SYNC/DEVICE READY
3 GND
4 n.c.
5 n.c.
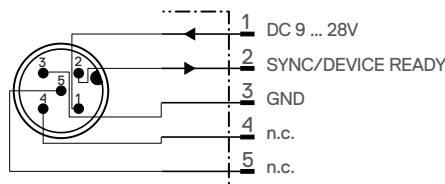
Ethernet connection
"Ethernet" connection
M12 socket, D-encoded

1 TD+
2 RD+
3 TD−
4 RD−

Specification Table

Item	Unit	LR-1BS5-C1 Mini 2D 270°
Laser Wavelength	nm	905
Laser class		Ⅰ (IEC 60825-1:2014)
Channels		1
Scanning angle	°	270
Scanning Frequency	Hz	10~25
Angular resolution	°	0.225
Measurement range	m	0.05~2@1.8% bw 0.05~8m@10% bw 0.05~25m@80% wb
Response time	ms	130ms@10Hz 100ms@15Hz(Max)
Distance Resolution	mm	1
Accuracy [1]	mm	Absolute Accuracy:<±20mm Repeat accuracy :<±20mm
Number of Bank fields		-
Ethernet Connection		100Mbps Ethernet
Protocol		UDP, TCP/IP
Signal strength		0-65535
Switching outputs	ea	1
Optical Indicators	types	RGB×4
Connection		5 cores cable with 5Pin M12 connector,Code A,Male 0.2m 4 cores cable with 4Pin M12 connector,Code D,Female 0.2m
Dimensions	mm	≤60×60×92.4（cable not included）
Operating voltage	VDC	12~30
Power consumption	W	5
Weight	g	350
Degree of protection		IP66
Operating temperature	℃	-10~+50
Storage temperature	℃	-30~+70
Ambient light limit	LUX	＜120,000
Air humidity	RH	<95%
Mounting		Bottom Side or Back Side
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
Basic Software		OLAMViewer

(1) Technical data, such as measurement error and scan range, only guarantees a scan range of 0.5m or more at a target reflectance of 10% to 80%.

Outline and Mounting

OLEI is constantly striving to improve its high-quality products, the Specification subject to change without notice.

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