Sensing Reality!

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



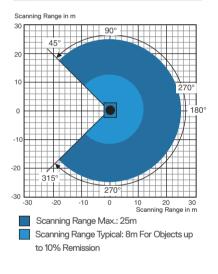
Introduction

- 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 dat 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 throug 100M Ethernet interface

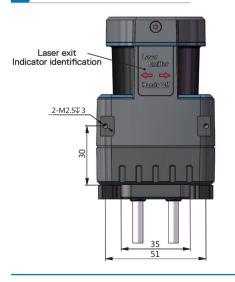
Scanning Range



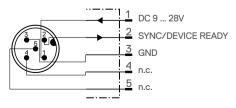




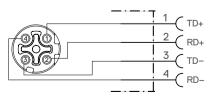
Electrical Definition



POWER connection Connection "Power" 5-pin M12 plug



Ethernet connection "Ethernet" connection M12 socket, D-encoded



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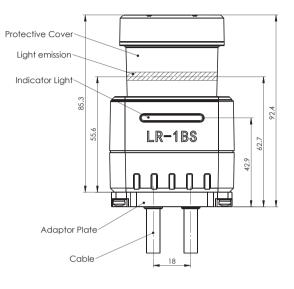


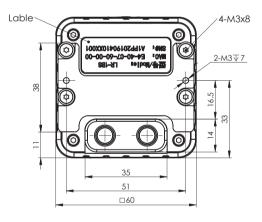
Specification Table

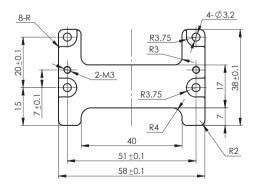
Laser Wavelengthnm905Laser classI (IEC 60825-1:2014)Channels1Scanning angle*Scanning FrequencyHzAngular resolution*Angular resolution*Measurement rangemMeasurement rangemScanning FrequencyMDistance ResolutionmmAccuracy (1)mmAccuracy (2)mmAccuracy (2)mmSignal strength-ProtocolImSignal strengthScores cable with SPin M12 connector, Code A, Male 0.2mSignal strengthseaOptical IndicatorstypesResonsentionScores cable with SPin M12 connector, Code A, Male 0.2mOptical IndicatorsTypesStorage temperatureYCStorage temperatureCOperating voltageYCOperating temperatureCMuntingMStorage temperatureCAmbient light limitLUXAmbient light limitLUXAmbient light limitEXMuntingFCStorage temperatureCAmbient light limitEXStorage temperatureCStorage temperatureCStorage temperatureCStorage temperatureCStorage temperatureCStorage temperatureCStorage temperatureCStorage temperatureCStorage temperatureCSto	ltem	Unit	LR-1BS5-C1 Mini 2D 270°
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Scanning FrequencyHz10~25Angular resolution°0.225Angular resolution°0.05~2@1.8% bw 0.05~2@1.8% bw 0.05~2010M 100Mbps Ethernet 100Mbps Ethernet	Channels		1
Angular resolution0.225Measurement rangem0.05-2g1.8% bw 0.05-25m@80% wbMeasurement rangem130ms@10Hz 100ms@15Hz(Max)Response timems130ms@10Hz 100ms@15Hz(Max)Distance Resolutionmm1Accuracy (1)mmAbsolute Accuracy:<±20mm Repeate accuracy: <tbr></tbr> touto Repeate accuracy: <tbr></tbr> touto Repeate accuracy: <tbr></tbr> touto Repeate accuracy: <tbr></tbr> touto Repeate accuracy: <tbr></tbr> touto t	Scanning angle	0	270
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Response time Ins 100ms@t5Hz(Max) Distance Resolution mm 1 Accuracy ⁽¹⁾ mm Absolute Accuracy:<±20mm	Measurement range	m	0.05~8m@10% bw
Accuracy (1)mmAbsolute Accuracy:<±20mm Repeate accuracy:<±20mmNumber of Bank fields-Ethernet Connection100Mbps EthernetProtocol0Protocol0Signal strength0Signal strength1Optical IndicatorstypesRGBx41Connection5 cores cable with 5Pin M12 connector,Code A,Male 0.2m 4 cores cable with 4Pin M12 connector,Code D,Female 0.2mDimensionsmmSignal strength5 cores cable with 5Pin M12 connector,Code D,Female 0.2mDimensionsmmVeight9Operating voltageVDCVeight9Storage temperature°CAmbient light limitLUXAmbient light limitLUXAmbient light limitLUXFMCIEC 61000-6-2:2016-08 /	Response time	ms	
Accuracy of Bank fields Imm Repeate 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 °C °C -10~+50 Storage temperature °C °C -30~+70 Ambient light limit LUX Mounting RH EMC IEC 61000-6-2:2016-08 /	Distance Resolution	mm	1
Ethernet Connection100Mbps EthernetProtocolUDP, TCP/IPSignal strength0-65535Switching outputsea1Optical IndicatorstypesRGB×4Connection5 cores cable with 5Pin M12 connector, Code A, Male 0.2m 4 cores cable with 4Pin M12 connector, Code D, Female 0.2mDimensionsmm≤60×60×92.4 (cable not included)Operating voltageVDC12~30Power consumptionW5Veightg350Operating temperature°C-10~+50Operating temperature°C-30~+70Ambient light limitLUX<120,000	Accuracy ⁽¹⁾	mm	
ProtocolUDP, TCP/IPSignal strength0-65535Switching outputsea1Optical IndicatorstypesRGB×4Connection5 cores cable with 5Pin M12 connector, Code A, Male 0.2m 4 cores cable with 4Pin M12 connector, Code D, Female 0.2mDimensionsmm≤60×60×92.4 (cable not included)Operating voltageVDC12~30Power consumptionW5Weightg350Operating temperature°C-10~+50Storage temperature°C-30~+70Ambient light limitLUX<120,000	Number of Bank fields		-
Signal strength0-65535Switching outputsea1Optical IndicatorstypesRGB×4Connection5 cores cable with 5Pin M12 connector,Code A,Male 0.2m 4 cores cable with 4Pin M12 connector,Code D,Female 0.2mDimensionsmm≤60×60×92.4 (cable not included)Operating voltageVDC12~30Power consumptionW5Weightg350Degree of protectionIP66Operating temperature°C-10~+50Storage temperature°C-30~+70Ambient light limitLUX<120,000	Ethernet Connection		100Mbps Ethernet
Switching outputsea1Optical IndicatorstypesRGB×4Connection5 cores cable with 5Pin M12 connector,Code A,Male 0.2m 4 cores cable with 4Pin M12 connector,Code D,Female 0.2mDimensionsmm≤60×60×92.4 (cable not included)Operating voltageVDC12~30Power consumptionW5Weightg350Degree of protection°C-10~+50Operating temperature°C-30~+70Ambient light limitLUX<120,000	Protocol		UDP, TCP/IP
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Connection5 cores cable with 5Pin M12 connector,Code A,Male 0.2m 4 cores cable with 4Pin M12 connector,Code D,Female 0.2mDimensionsmm≤60×60×92.4 (cable not included)Operating voltageVDC12~30Power consumptionW5Weightg350Degree of protectionIP66Operating temperature°C-10~+50Storage temperature°C-30~+70Ambient light limitLUX<120,000	Switching outputs	ea	1
Connection4 cores cable with 4Pin M12 connector,Code D,Female 0.2mDimensionsmm≤60×60×92.4 (cable not included)Operating voltageVDC12~30Power consumptionW5Weightg350Degree of protectionIP66Operating temperature°C-10~+50Storage temperature°C-30~+70Ambient light limitLUX<120,000	Optical Indicators	types	RGB×4
Operating voltageVDC12~30Power consumptionW5Weightg350Degree of protectionIP66Operating temperature°CC-10~+50Storage temperature°CAmbient light limitLUXAir humidityRHGottom Side or Back SideFMCIEC 61000-6-2:2016-08 /	Connection		
Power consumptionWPower consumptionWWeightgDegree of protectionIP66Operating temperature°COperating temperature°C°C-30~+70Ambient light limitLUXAir humidityRHRH<95%MountingIEC 61000-6-2:2016-08 /	Dimensions	mm	\leq 60×60×92.4 (cable not included)
Weight g Degree of protection IP66 Operating temperature °C -10~+50 Storage temperature °C -30~+70 Ambient light limit LUX <120,000 Air humidity RH <95% Mounting IEC 61000-6-2:2016-08 /	Operating voltage	VDC	12~30
Degree of protectionIP66Operating temperature°C-10~+50Storage temperature°C-30~+70Ambient light limitLUX<120,000	Power consumption	W	5
Operating temperature °C -10~+50 Storage temperature °C -30~+70 Ambient light limit LUX <120,000	Weight	g	350
Storage temperature °C -30~+70 Ambient light limit LUX <120,000	Degree of protection		IP66
Ambient light limit LUX <120,000	Operating temperature	°C	-10~+50
Air humidity RH <95% Mounting Bottom Side or Back Side FMC. IEC 61000-6-2:2016-08 /	Storage temperature	°C	-30~+70
Mounting Bottom Side or Back Side FMC IEC 61000-6-2:2016-08 /	Ambient light limit	LUX	<120,000
EMC IEC 61000-6-2:2016-08 /	Air humidity	RH	<95%
EMC	Mounting		Bottom Side or Back Side
	EMC		
Vibration resistance IEC 60068-2-6:2007	Vibration resistance		IEC 60068-2-6:2007
Shock resistance IEC 60068-2-27:2008	Shock resistance		IEC 60068-2-27:2008
Basic Software OLAMViewer	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







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