LIDAR GUIDANCE SCANNER

Compact, reliable and rugged Navigation Lidar for automated guided vehicles

ToF technology on infrared laser

2D Measurement data for natural or marker navigation

360° measurement for all-round scanning

Differentiation between natural objects and reflectors

Compact design for easy mechanical integration

Simple and quick configuration and monitoring

- High precision and reliable measurement up to 50 meters
- 60,000 measured points per second
- Up to 25 Hz selectable rotation frequency
- 0.06° angle resolution
- Dimensions: 95 x 97 x 116 mm

APPLICATIONS

- Automated Guided Vehicles (AGV)
- Automated Guided Carts (AGC)
- Automated Mobile Robots (AMR)
- Automated Guided Forklifts (AGF)
- Laser Guided Vehicles (LGV)

INDUSTRIES

- **Intralogistics**
- **Material handling**
- **Manufacturing**

LGS-N50

MODEL		MAX MEASUREMENT RANGE	
N	Lidar Guidance Scanner for Navigation	50	50 m (with 80% reflectivity)

TECHNICAL DATA

LGS-N50	
MEASUREMENT	
Scanning Angle	360°
Measurement range	0.2 - 2 m with 1.8% reflectivity
	0.2 - 15 m with 10% reflectivity
	0.2 - 50 m with 80% reflectivity
Scanning rate (selectable through web server)	10/15/20/25 Hz
Measurement rate	60000 points per second
Angular resolution	0.06° at 10Hz
	0.09° at 15Hz
	0.12° at 20Hz
	0.15°at 25Hz
Linear resolution	1 mm
Absolute measurement accuracy	±30 mm with 90% reflectivity
Repeat measurement accuracy	< 20 mm with 90% reflectivity
Response time	100/66/50/40 ms
ELECTRICAL DATA	
Power supply	12 ... 32 Vdc
Power consumption	7 W (at 25°C and 15 Hz)
Output current	30 mA
MECHANICAL AND ENVIRONMENTAL	
Dimentions (width, depth, height)	95 x 97 x 116 mm
Operating temperature	-20 ...+50 °C
Storage temperature	-30 ... 70°C
Relative humidity	15 ... 95 % (no condensation)
Mechanical protection	IP 66
Ambient light limit	80000 Lux
Housing material	Aluminum alloy and polycarbonate
Window material	Polycarbonate
Weight	900 g
COMMUNICATION	
Communication interface	IEEE 802.3u 100Mbps Ethernet
Communication protocol	TCP/IP
Data transmission protocol	UDP/IP
Transmitted information	Angle of the measured point (in 0.01°)
	Distance of the measured point (in mm)
	Signal intensity (0...65535)
	Time stamp in ms with 24-hour cycle
	Rotation rate
Transmitted diagnostic	Motor fault
	Voltage fault
	Temperature fault
CONFIGURATION	
Configuration software	Any web browser (configuration throuth web server)
Monitoring software	LGS Viewer
USER INTERFACE	
Power indicator	Green LED
Fault indicators	Red LED
LASER	
Laser Safety Class	Class 1 (IEC 60825-1)
Wavelength	905±20 nm (infrared)
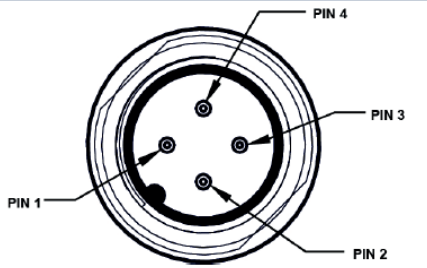
CONNECTIONS
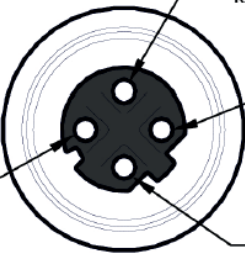
CONNECTOR	CHARACTERISTICS
Power	M12 4-pins male
Multi-function	M12 8-pins male
Ethernet	M12 4 poles D-coded female

Power:
DC 12~32V/2A

PC Settings (default):
DHCP: off
IP: 192.168.1 . 10
Mask: 255.255.255.0

Ethernet (RJ-45)
Special cable

Power Multi-Function Ethernet
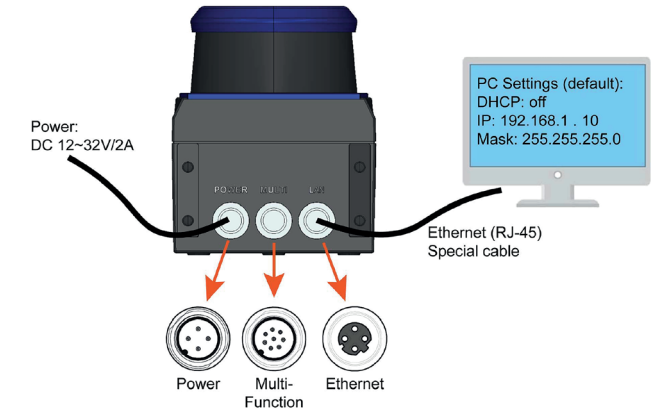
POWER CONNECTOR (M12, 4-Pins)

	SIGNAL	DESCRIPTION	COLOR	PIN NUMBER
POWER	+ Vcc	24Vdc	BROWN	1
	GND	0 V	BLUE	3
DIAGNOSTIC OUTPUT	Q1	Temperature out of range	BLACK	4
	Q2	Generic failure	WHITE	2

ETHERNET CONNECTOR (M12, 4-Pins)

PIN 4: RX-
PIN 1: TX+
PIN 3: TX-
PIN 2: RX+

	SIGNAL	PIN NUMBER
COMMUNICATION SIGNALS	TX +	1
	RX +	2
	TX -	3
	RX -	4

DIMENSIONS

70 ±0.1
1.8
3-M5▽8
20
97
60 ±0.1

Ø78
Emission position
116
88.5
75.5
POWER MULTI LAN
4-M5▽8
25 ±0.1
15
40 ±0.1
80 ±0.1
95
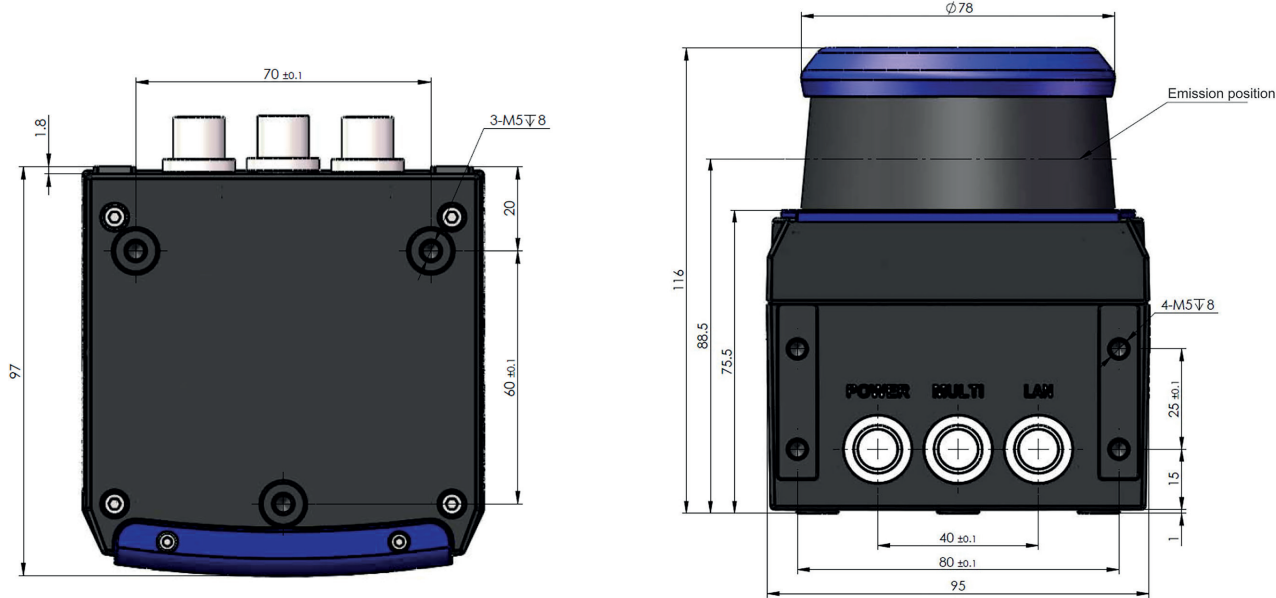
MODEL SELECTION - ORDER INFORMATION

MODEL	PRODUCT DESCRIPTION	ORDER NO.
LGS-N50	Navigation LIDAR 360° 50 m	958200001

ACCESSORIES

MAINTENANCE ACCESSORIES		
DESCRIPTION	MODEL	ORDER NO.
Liquid cleaner in spray bottle (1 lt)	SLS-CLEANER	95ASE2990
Cleaning cloth (22 cm x 22 cm), 100 pcs.	SLS-CLOTH	95ASE3000

CABLES

	MODEL	1st end	2nd end	LENGTH	CODE
POWER CABLE	CS-A1-02-U-03	4 pin female	free wires	3 m	95ASE1120
	CS-A1-02-U-05			5 m	95ASE1130
	CS-A1-02-U-10			10 m	95ASE1140
	CS-A1-02-U-15			15 m	95ASE1150
	CS-A1-02-U-25			25 m	95ASE1160
ETHERNET TO HOST CABLES	CAB-ETH-M01 M12-IP67 ETHERNET CAB. (1M)	4 pin male	RJ45	1 m	93A051346
	CAB-ETH-M03 M12-IP67 ETHERNET CAB. (3M)			3 m	93A051347
	CAB-ETH-M05 M12-IP67 ETHERNET CAB. (5M)			5 m	93A051348
	CAB-ETH-M10 M12-IP67 ETHERNET CAB. (10M)			10 m	93A051391

LED NUMBER	COLOR	DESCRIPTION
PWR	GREEN	Shows the status of powered devices. OFF = no power; ON = powered
Q1	RED	Blinks when the temperature is out of range.
Q2	RED	Blinks when a diagnostic internal test fails.
ERR	RED	Shows the unavailability of the device. OFF: device available; Blinking: device not yet available; ON: Device unavailable for internal error.

DATALOGIC PRODUCT OFFERING

Sensors

Hand Held scanners

Mobile Computers

Laser Marking Systems

Vision Systems

Stationary Industrial Scanners

Safety Light Curtains

RFID Systems