LGS
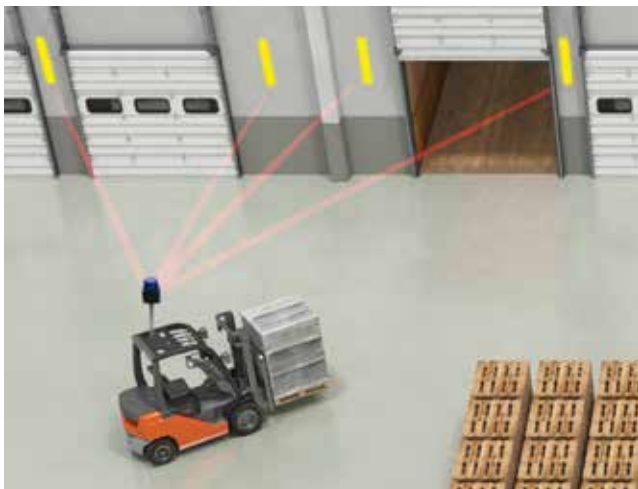
LIDAR GUIDANCE SCANNER

DATASENSING
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DATALOGIC

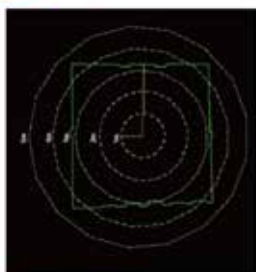# LONG-RANGE 2D ALL-ROUND 360°
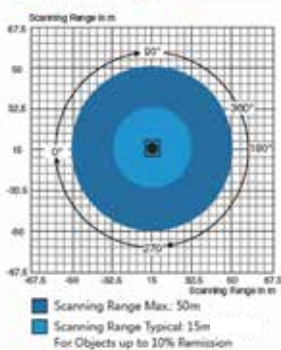
Lidar for navigation of automated guide vehicles!

Lidar Guidance Scanner is suitable for navigation of AGVs moving up to 2 m/s, has a scan rate selectable up to 25 Hz and 60.000 measurements per second.

Angular resolution of 0.06° ensures accurate detection over 360°.

Sample Data

Scanning Range

Scanning Range Max: 50m
Scanning Range Typical: 15m
For Objects up to 10% Remission

With an operating temperature range of -20 ...+50 °C, an IP66 protection against dust and water, and its sturdy compact structure, Lidar Guidance Scanner is well suited for use in indoor industrial environments.

Lidar Guidance Scanner LGS-N50 provides precise distance and angle measurement up to 50 meters and can differentiate between natural objects and reflectors or other artificial landmarks.

Lidar Guidance Scanner can be used for navigation with triangulation and for natural navigation, in particular SLAM (simultaneous navigation and mapping), in which the measured contour is compared to a map internal to the navigation controller to estimate the position of the vehicle.

MEASUREMENT CHARACTERISTICS

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/s
Angular resolution	0.06°at 12Hz
	0.09°at 15Hz
	0.12°at 20Hz
	0.15°at 25Hz
Absolute measurement accuracy	±30 mm with 90% reflectivity
Repeat measurement accuracy	< 20 mm with 90% reflectivity

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Dimensions (width, depth, height)	95 x 97 x 116 mm
Operating temperature	-20 ...+50 °C
Storage temperature	-30 ...+70 °C
Mechanical protection	IP66
Ambient light limit	80000 Lux
Housing material	Aluminum alloy and polycarbonate
Window material	Polycarbonate
Certifications	CE TÜV SÜD

COMMUNICATION

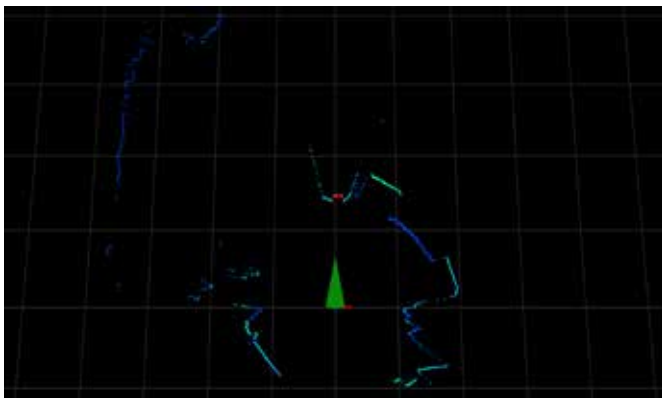|	
Communication interface	IEEE 802.3u 100Mbps Ethernet
Communication protocol	TCP/IP
Data transmission protocol	UDP/IP
Transmitted information	Angle of the measured point (in 0.01°)
	Distance of the measured point (in mm)
	Signal intensity (0...65535)
	Time stamp in ms with 24-hour cycle
	Rotation rate

NAVIGATION GETS EASIER

Quick and easy configuration, data transmission and monitoring!

The configuration of Lidar Guidance Scanner parameters doesn't require any special software: an integrated web server allows to visualize and change parameters with any browser.

The data transmitted are the essential ones, and the protocol is as simple as possible.
Distance and angle of any point, intensity of the received beam, rotation rate and timestamp are the information transmitted.

Lidar Guidance Scanner Viewer is a free monitoring software used to monitor the navigation system operativity.
The measured points are shown in correspondence of the position of the Lidar Guidance Scanner, and the different colours show the intensity of the returned beam, permitting to differentiate reflectors.
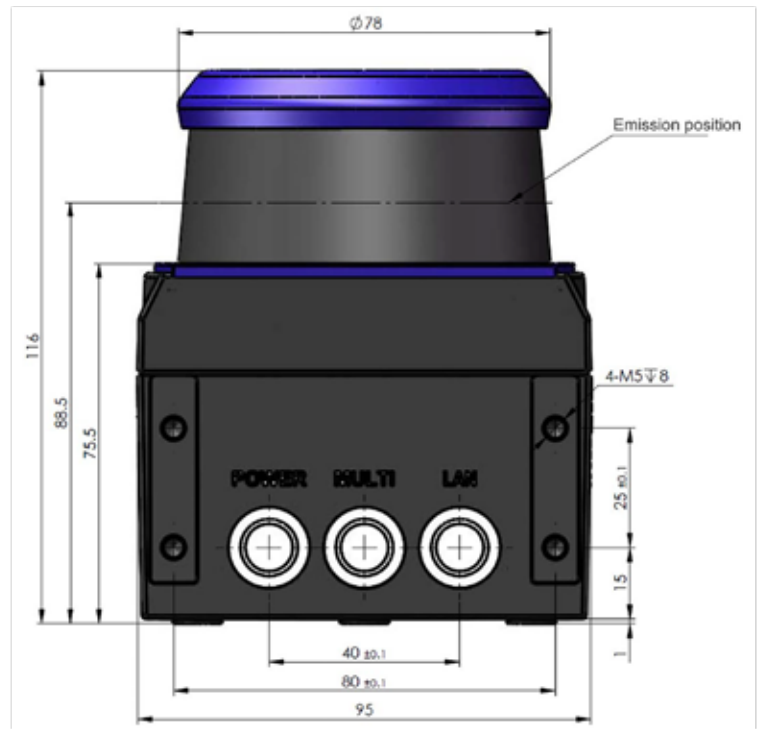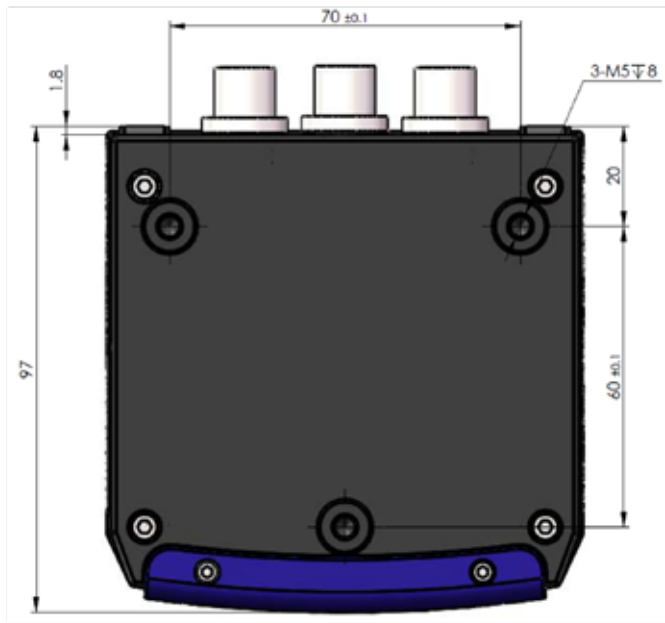
 Robot Operating System ROS™ is a framework for collaborative robotics software development that consists in a collection of libraries, tools and conventions, to simplify the task of creating general purpose robot software.

In order to make the integration of Lidar Guidance Scanner with navigation systems even more easy and quick, a ROS 2 module has been developed and is freely available.

ROS and "nine dots" ROS is a trademark of Open Robotics (www.ros.org)

Dimensions

Models and accessories

LASER GUIDANCE SCANNER	PRODUCT DESCRIPTION	ORDER NUMBER
LGS-N50	Navigation LIDAR 360° 50 m	958200001

ACCESSORIES	PRODUCT DESCRIPTION	ORDER NUMBER
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	ORDER NUMBER
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

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