Online data sheet

LD-MRS400001S01

LD-MRS

3D LIDAR SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	Part no.
LD-MRS400001S01	1052960

Detailed technical data

Features

Application	Outdoor
Laser class	1 (IEC 60825-1:2014, EN 60825-1:2014)
Aperture angle	
Horizontal	85° (Working range with 4 measuring planes, 25° extension of working range with 2 measuring planes to a total of 110°)
Vertical	3.2°
Scanning frequency	12.5 Hz ... 50 Hz, object tracking at 12.5 Hz
Angular resolution	0.125° 0.25° 0.5°
Working range	0.5 m ... 300 m
Scanning range	
At 10% remission	50 m
Amount of evaluated echoes	3

Performance

Detectable object shape	Almost any
Systematic error	± 300 mm [1)]
Statistical error	100 mm [1)]
Integrated application	Object tracking

[1)] Typical value; actual value depends on environmental conditions.

Interfaces

Ethernet	✓, TCP/IP
Function	Raw data interface/parameterization
Data transmission rate	100 Mbit/s
Serial	✓, RS-232
Function	Auxiliary interface
Data transmission rate	57,600 Baud
CAN	✓
Function	Output: Objects, Input: Vehicle ego motion data

Mechanics/electronics

Electrical connection	Circular plug-in connector
Supply voltage	9 V ... 27 V
Power consumption	8 W
Housing	Al
Housing color	Gray (RAL 7032), black (RAL 9005)
Enclosure rating	IP69K
Protection class	III
Weight	1 kg
Dimensions (L x W x H)	94 mm x 165 mm x 88 mm

Ambient data

Ambient operating temperature	–40 °C ... +70 °C

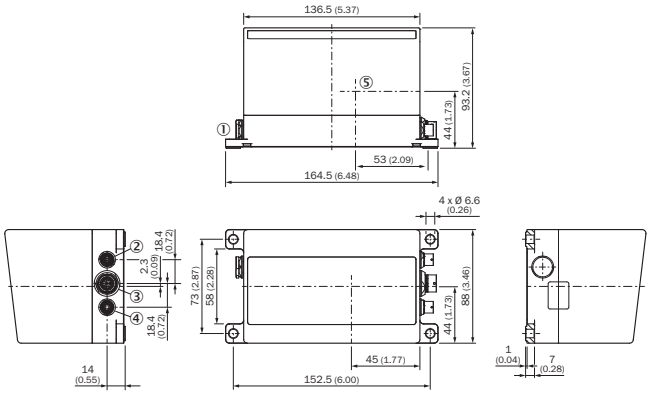
General notes

Note on use	The sensor does not constitute a safety component as defined by relevant legislation on machine safety.

Classifications

ECl@ss 5.0	27270990
ECl@ss 5.1.4	27270990
ECl@ss 6.0	27270913
ECl@ss 6.2	27270913
ECl@ss 7.0	27270913
ECl@ss 8.0	27270913
ECl@ss 8.1	27270913
ECl@ss 9.0	27270913
ETIM 5.0	EC002550
ETIM 6.0	EC002550
UNSPSC 16.0901	46171620

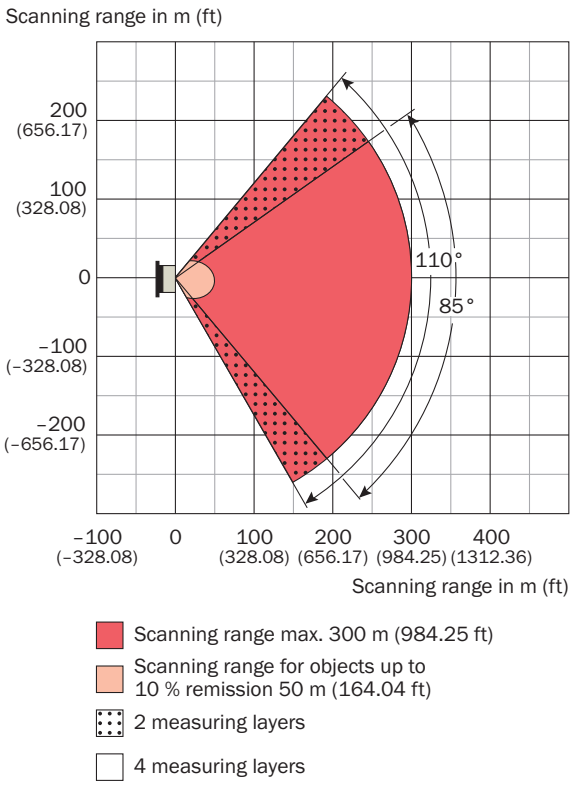
Dimensional drawing (Dimensions in mm (inch))



① Venting element
② "Ethernet" connection, 4-pin female connector
③ Connection data interface / synchronisation, 12-pin female connector
④ Connection "Power", 4-pin female connector

Working range diagram

Working range diagram 50 m



Scanning range max. 300 m (984.25 ft)
Scanning range for objects up to 10 % remission 50 m (164.04 ft)
2 measuring layers
4 measuring layers

Recommended accessories

	Brief description	Type	Part no.
Terminal and alignment brackets			
	Bracket for LD-MRS, alignment adjustable in 2 axes	Alignment bracket	1047429
Plug connectors and cables			
	Head A: male connector, round plug, 12-pin, straight Head B: female connector, D-Sub, 9-pin, straight Cable: CAN/CANopen, shielded, 2 m For LD-MRS	Connection cable (male connector-male connector)	2054647
	Head A: female connector, round socket, 4-pin, straight Head B: Flying leads Cable: shielded, 2 m	Connection cable (male connector-male connector)	2049823
	Head A: male connector, round plug, straight Head B: male connector, RJ45, straight Cable: Ethernet, shielded, 2 m Connects the Ethernet interface of the LD-MRS to the Ethernet interface of the PC	Connection cable (male connector-male connector)	2049826
Test and monitoring tools			
	Scan finder, receiver to localize infrared scans	Scan-Finder LS-80L	6020756

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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