



LD-MRS400001

LD-MRS

3D LIDAR SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
LD-MRS400001	1045046

Other models and accessories → www.sick.com/LD-MRS



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
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

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

Performance

Detectable object shape	Almost any
Systematic error	± 300 mm ¹⁾
Statistical error	100 mm ¹⁾
Integrated application	Field evaluation

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

Number of field sets	16 fields
Simultaneous evaluation cases	16

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

Interfaces

Ethernet	Function	✓, TCP/IP
	Data transmission rate	Raw data interface/parameterization 100 Mbit/s
Serial	Function	✓, RS-232
	Data transmission rate	Auxiliary interface 57,600 Baud
CAN	Function	✓
		Auxiliary interface

Ambient data

Ambient operating temperature	-40 °C ... +70 °C
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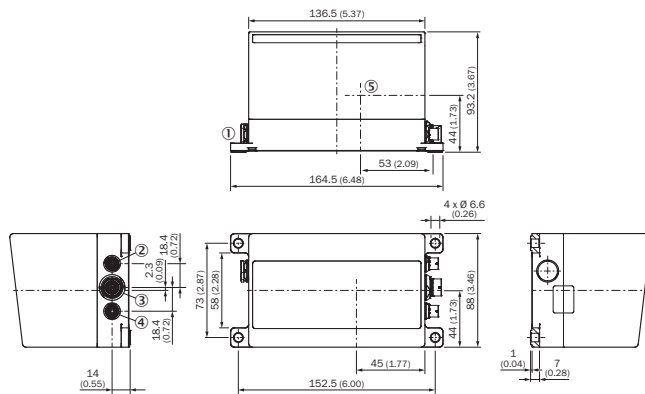
General notes

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

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

Dimensional drawing (Dimensions in mm (inch))

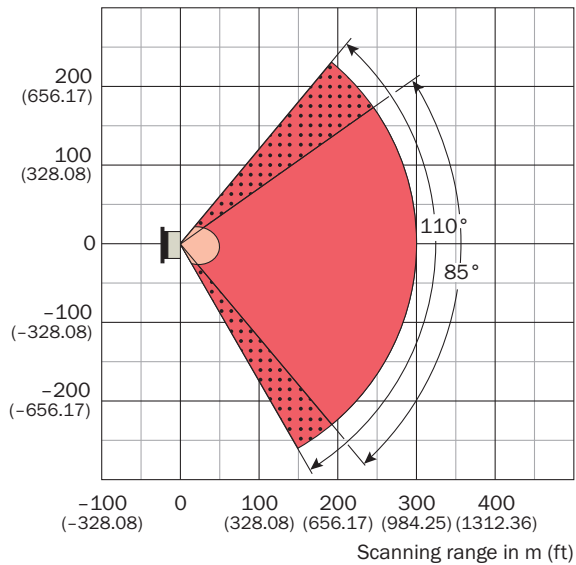


- ① Venting element
- ② "Ethernet" connection, 4-pin female connector
- ③ Connection data interface / synchronisation, 12-pin female connector
- ④ Connection "Power", 4-pin female connector

Working range diagram

Working range diagram 50 m





Scanning range in m (ft)



- 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

Other models and accessories → www.sick.com/LD-MRS

	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, 4-pin, straight Head B: male connector, RJ45, straight Cable: Ethernet, shielded, 8 m Connects the Ethernet interface of the LD-MRS to the Ethernet interface of the PC	YM2Z14-080EC3MRJA8	2049827
	Head A: female connector, round socket, 4-pin, straight Head B: Flying leads Cable: shielded, 8 m	YM2Z14-080VA4M2Z12	2049824
Test and monitoring tools			
	Scan finder, receiver to localize infrared scans	Scan-Finder LS-80L	6020756

Recommended services

Additional services → www.sick.com/LD-MRS

	Type	Part no.
Warranty extensions		
<ul style="list-style-type: none"> • Product area: Identification solutions, Vision, Distance sensors, Detection and ranging solutions • Range of services: The services correspond to the scope of the statutory manufacturer warranty (SICK general terms and conditions of purchase), Long-term protection for calculable lump sum. • Duration: Five-year warranty from date of purchase. 	Five-year extended warranty	1680671
Training		
<ul style="list-style-type: none"> • Product family group: 2D LiDAR sensors, 3D LiDAR sensors • Range of services: The training format and location can be worked out in collaboration with SICK • Note: A minimum and maximum number of participants is determined based on the training format depending on the training format, content and location, a training course may take place over the course of one or more work days • Duration: The fixed price includes the specific training services agreed upon with the customer the fixed price includes the work time required for the training services the required work time depends on the range of services Additional work will be invoiced separately based on time spent • Travel expenses: The prices include costs for the travel time and expenses travel costs, such as flight or hotel expenses, are not included 	Training LMS/MRS/NAV/TiM	1612234

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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com