Data sheet

LMC121-11001 VdS

LMC1xx

2D LIDAR SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
LMC121-11001 VdS	1051314

Other models and accessories ➜ www.sick.com/LMC1xx

Detailed technical data

Features

Application	Security, Indoor
Light source	Infrared (905 nm)
Laser class	1 (IEC 60825-1:2014, EN 60825-1:2014+A11:2021)
Aperture angle	
Horizontal	270°
Scanning frequency	50 Hz
Angular resolution	
Horizontal	0.25°
	0.5°
Heating	No
Working range	0.5 m ... 20 m
Scanning range	
At 10% remission factor	18 m
Amount of evaluated echoes	2

Mechanics/electronics

Connection type	1 x system plug with screw terminal block
Supply voltage	9 V DC ... 30 V DC
Power consumption	Typ. 8 W, 20 W
Housing color	Gray (RAL 7032)
Enclosure rating	IP65 (EN 60529, Section 14.2.5)
Protection class	III (EN 50178 (1997;10))
Weight	1.1 kg, without connecting cables
Dimensions (L x W x H)	105 mm x 102 mm x 152 mm
MTBF	> 100 years

Safety-related parameters

$MTTF_D$	> 100 years

Performance

Response time	≥ 20 ms
Detectable object shape	Almost any
Systematic error	± 30 mm [1]
Statistical error	12 mm [1]
Integrated application	Field evaluation Security conform parameterization
Number of field sets	10 fields
Simultaneous evaluation cases	10

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

Interfaces

Ethernet	✓ , TCP/IP
Function	Data interface (read result output)
Data transmission rate	10/100 MBit/s
Serial	✓ , RS-232
Function	Data interface (read result output), Service interface
Data transmission rate	9.6 kBaud ... 115.2 kBaud
CAN	✓
Function	Extension of outputs
Digital inputs/outputs	
Inputs	4 digital
Outputs	3 (2 relay, 1 digital)
Optical indicators	1 7-segment display (plus 5 LEDs showing device status, contamination warning and initial condition, both can be activated)

Ambient data

Object remission	2 % ... > 1,000 % (reflectors)
Electromagnetic compatibility (EMC)	EN 61000-6-2:2005 / EN 61000-6-4 (2007-01)
Vibration resistance	EN 60068-2-6 (1995-04)
Shock resistance	EN 60068-2-27 (1993-03)
Ambient operating temperature	0 °C ... +50 °C
Storage temperature	–30 °C ... +70 °C
Ambient light immunity	40,000 lx

General notes

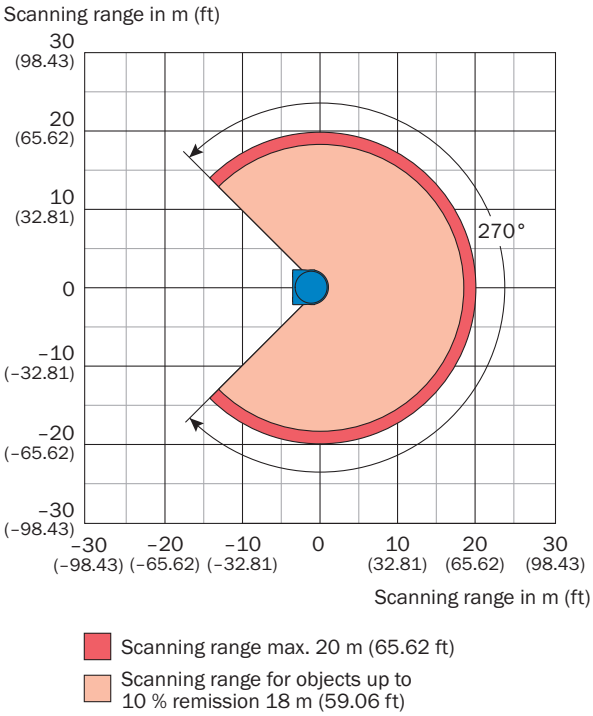
Items supplied	LMS12x VdS (Indoor), Mounting protection bracket VdS 2 (short)
Note on use	The sensor does not constitute a safety component as defined by relevant legislation on machine safety.

Classifications

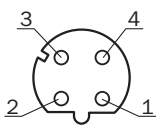
ECLASS 5.0	27270990
ECLASS 5.1.4	27270990

ECLASS 6.0	27270913
ECLASS 6.2	27270913
ECLASS 7.0	27270913
ECLASS 8.0	27270913
ECLASS 8.1	27270913
ECLASS 9.0	27270913
ECLASS 10.0	27270913
ECLASS 11.0	27270913
ECLASS 12.0	27270913
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002550
ETIM 8.0	EC002550
UNSPSC 16.0901	41111615

Working range diagram

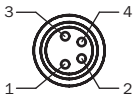


Connection type Ethernet



M12 female connector, 4-pin, D-coded
① TX+
② RX+
③ TX-
④ RX-

PIN assignment Service interface



female connector M8, 4-pin
① Reserved
② RxD AUX
③ GND RS
④ TxD AUX

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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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