

SICK LMS531-11100

SICK LMS531-11100 2D Laser Scanner Infrared Outdoor 25/35/50/75/100Hz 40m Range TCP/IP
OPC

Detailed technical data

Features

Task Measuring - Dimension, contour and volume

Measuring - Level

Measuring - Length and distance

Measuring - Number

Monitoring and controlling - Quality

Protecting objects - Buildings and grounds

Protecting objects - Valuable items

Protecting objects - Vehicles

Protecting objects - Infrastructure

Identifying - Classifying

Variant Lite

Application Outdoor, Security

Resolution power Standard Resolution

Light source Infrared (905 nm, ± 10 nm)

Laser class 1 (EN/IEC 60825-1:2014 (Ed.3), EN/IEC 60825-1:2007 (Ed.2)
CAN/CSA-E60825-1:2015-11
(Ed.3))

Aperture angle

Horizontal 190°

Scanning frequency 25 Hz

35 Hz

50 Hz

75 Hz

Angular resolution 0.25°

0.5°

1°

Scan field flatness Scan field flatness combined: $\pm 0.72^\circ$

Typical conical error: 1 sigma value - $0.11^\circ \pm 0.1^\circ$

Typical tilt: 1 sigma value + $0.15^\circ \pm 0.08^\circ$

Heating Self-heating with additional integrated heating

Working range 1 m ... 80 m

Scanning range

You can contact us through the following contact information

www.sparetechplc.com +86 180 3000 5825 sales@sparetechplc.com

At 10% remission factor 40 m
Measurement accuracy ± 24 mm
Spot size Divergence: 11.9 mrad
At the viewing window: 13.5 mm
In 26 m: 322 mm
In 40 m: 489 mm
Amount of evaluated echoes 2
Mechanics/electronics
Connection type 4 x M12 round connector
Supply voltage 24 V DC, ± 20 %
Power consumption 22 W, + 55 W heating (typical)
Housing AlSi12
Housing color Gray (RAL 7032)
Window material Polycarbonate, scratch-resistant coating
Enclosure rating IP65 (EN 60529, Section 14.2.7)
IP67 (EN 60529, Section 14.2.7)
Protection class III (IEC 61140:2016-11)
Weight 3.7 kg
Dimensions (L x W x H) 160 mm x 155 mm x 185 mm
MTBF > 100 years
Safety-related parameters
MTTFD > 100 years
Performance
Response time ≥ 13 ms
Detectable object shape Almost any
Systematic error ± 25 mm (1 m ... 10 m)
 ± 35 mm (10 m ... 20 m)
 ± 50 mm (20 m ... 30 m) 1)
Statistical error 6 mm (1 m ... 10 m)
8 mm (10 m ... 20 m)
14 mm (20 m ... 30 m) 1)
Integrated application Field evaluation
Output of measurement data
Number of field sets 4 fields
Simultaneous evaluation cases 4
Filter Echo filter
Fog filter
Particle filter
Average filter
Glare filter

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

Interfaces

Ethernet ✓, TCP/IP, UDP/IP

Function Host and AUX, NTP

Data transmission rate 10/100 MBit/s

USB ✓

Remark Mini-USB

Function Service interface

Digital inputs 3 (digital)

Digital outputs 3 (2 relay, 1 digital)

Optical indicators 5 LEDs (Additional 7-segment display)

Ambient data

Object remission 2 % ... > 1,000 % (reflectors)

Electromagnetic compatibility (EMC)

Emitted radiation Industrial environment (IEC 61000-6-3:2020 / EN IEC 61000-6-3:2007+A1:2011)

Electromagnetic immunity Industrial environment (IEC 61000-6-2:2016 / EN IEC 61000-6-2:2019)

Vibration resistance

Sine test 10 Hz ... 150 Hz, Amplitude 0.35 mm to 5 g, 20 cycles 1)

Shock resistance 15 g, 11 ms, 6 single shocks/axis 2)

10 g, 16 ms, 1,000 continuous shocks/axis 2)

Impact resistance IK05, IK06, IK07 (DIN EN 50102:09-1997)

Ambient operating temperature - 30 ° C ... +50 ° C

Storage temperature - 40 ° C ... +70 ° C

Ambient light immunity 70,000 lx

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