

SICK LMS511-22100

Laser Measurement Sensors LMS511-22100 Heavy Duty Outdoor

Features

Application Outdoor, Indoor

Variant Heavy-Duty

Resolution power High Resolution

Light source Infrared (905 nm, ± 10 nm)

Laser class 1 (EN/IEC 60825-1:2014, EN 60825-1:2014+A11:2021)

Aperture angle

Horizontal 190°

Scanning frequency 25 Hz

35 Hz

50 Hz

75 Hz

100 Hz

Angular resolution

Horizontal 0.042°, interlaced

0.083°, interlaced

0.1667°

0.25°

0.333°

0.5°

0.667°

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 0.2 m ... 80 m

Scanning range

At 10% remission factor 26 m

Measurement accuracy ± 12 mm

Spot size Divergence: 4.7 mrad

At the viewing window: 13.5 mm

In 26 m: 136 mm

In 40 m: 202 mm

Amount of evaluated echoes 5

You can contact us through the following contact information

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

Mechanics/electronics

Connection type 4 x M12 round connector (stainless steel)

Supply voltage 24 V DC, $\pm 20\%$

Power consumption 22 W, + 55 W heating (typical)

Housing material 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 ≥ 10 ms

Detectable object shape Almost any

Systematic error ± 25 mm (1 m ... 10 m)

± 35 mm (10 m ... 20 m) 1)

Statistical error 7 mm (1 m ... 10 m)

9 mm (10 m ... 20 m) 1)

Integrated application Field evaluation

Output of measurement data

Number of field sets 10 fields

Simultaneous evaluation cases 10

Filter Echo filter

Fog filter

Particle filter

Average filter

Glare filter

Interfaces

Ethernet ✓ , TCP/IP, UDP/IP

Function Host and AUX, NTP

Data transmission rate 10/100 MBit/s

Serial ✓ , RS-232, RS-422

Function Host and AUX

Data transmission rate 9.6 kBaud ... 500 kBaud

CAN ✓

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Function Extension of outputs

Data transmission rate 20 kBit/s, 500 kBit/s, 1 MBit/s, Synchronization

USB ✓

Remark Mini-USB

Function Service interface

Digital inputs/outputs

Inputs 4 (Digital, encoder (HTL), synchronization)

Outputs 6 (digital)

Optical indicators 5 LEDs (Additional 7-segment display)

Parameter storage Integrated into system plug with cloning parameter memory

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 - 40 ° C ... +60 ° C

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

Ambient light immunity 70,000 lx

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