



Laser scanners
LMS5xx / LMS531 / Outdoor / Security / Mid
Range

LMS531-11100



Model Name > [LMS531-11100](#)
Part No. > [1055376](#)

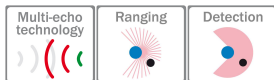


At a glance

- Powerful and efficient laser measurement sensor for ranges of up to 80 m
- Outstanding performance in adverse environmental conditions due to multi-echo technology
- Up to IP 67 enclosure rating, built-in heater for outdoor versions, highly compact design
- Low power consumption
- Fast signal processing
- Multiple I/Os
- Synchronization of multiple sensors possible

Your benefits

- Superior performance in a vast range of applications
- Smallest sensor with highest accuracy in its class
- Comprehensive range of lines and models to suit all performance and price requirements
- Fast, reliable object detection in nearly any weather conditions
- Low power consumption reduces total cost of ownership
- Best price/performance ratio in this sensor class on the market
- Fast, easy commissioning due to SOPAS software
- Self-monitoring functions increase system availability



Features

Field of application:	Outdoor, Security
Version:	Mid Range
Variant:	Lite
Resolution power:	Standard Resolution
Light source:	Infrared (905 nm)
Laser class:	1 (IEC 60825-1 (2007-6)), eye-safe
Field of view:	190 °
Scanning frequency:	25 Hz / 35 Hz / 50 Hz / 75 Hz
Angular resolution:	0.25 ° 0.5 ° 1 °
Heating:	Yes
Operating range:	0 m ... 80 m
Max. range with 10 % reflectivity:	40 m

Spot size:	11.9 mrad
Amount of evaluated echoes:	2
Fog correction:	Yes

Performance

Response time:	≥ 13 ms
Detectable object shape:	Almost any
Systematic error ¹⁾ :	± 25 mm (1 m ... 10 m) ± 35 mm (10 m ... 20 m) ± 50 mm (20 m ... 30 m)
Statistical error ²⁾ :	± 14 mm (20 m ... 30 m) ± 6 mm (1 m ... 10 m) ± 8 mm (10 m ... 20 m)
Integrated application:	Field evaluation
Number of field sets:	4 fields
Simultaneous processing cases:	4

^{1) 2)} Typical value; actual value depends on environmental conditions.

Interfaces

Serial (RS-232, RS-422):	✓
Function (Serial (RS-232, RS-422)):	Host
Data transmission rate (Serial (RS-232, RS-422)):	9.6 kBaud ... 500 kBaud
Ethernet:	✓
Function (Ethernet):	Host
Data transmission rate (Ethernet):	10/100 Mbit
Protocol (Ethernet):	TCP/IP, OPC
CAN bus:	-
PROFIBUS DP:	-
PROFINET:	-
DeviceNet:	-
USB:	✓
Function (USB):	AUX
Data transmission rate (USB):	9.6 kBaud ... 500 kBaud
Remark (USB):	Mini-USB
Switching inputs:	2
Switching outputs:	3 (2 relay, 1 digital)
Optical indicators:	5 LEDs (additional 7-segment display)

Mechanics/electronics

Electrical connection:	4 x M12 circular plug-in connector
Operating voltage:	≤ 24 V DC
Power consumption:	22 W, + 55 W heating (typical)
Housing color:	Gray (RAL 7032)
Enclosure rating:	IP 67 (EN 60529, Section 14.2.7)
Protection class:	III (EN 60529, Section 14.2.7)
Weight:	3.7 kg
Dimensions:	160 mm x 155 mm x 185 mm

Ambient data

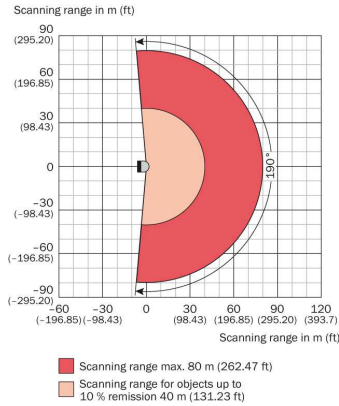
Object remission:	2 % ... > 1,000 % (reflectors)
Electromagnetic compatibility (EMC):	EN 61000-6-2:2005/EN 61000-6-3 (2007-03)
Vibration resistance:	EN 60068-2-6 (1995-04)

Shock resistance: EN 60068-2-27 (1993-03)/EN 60068-2-29 (1993-04)
 Ambient operating temperature: -30 °C ... +50 °C
 Storage temperature: -30 °C ... +70 °C
 Ambient light immunity: 70,000 lx

General notes

Note on use: Not suitable for personnel protection

Operating range diagram



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