LDS30M
OEM laser module for distance measurement

The LDS30M is an OEM laser module made to integrate laser distance measurement capabilities into existing measurement equipment. It is intended for general distance measurements that require extremely fast data acquisition.

It provides up to 30,000 centimeter-precise measuring values per second – up to 30 m without a reflector. With appropriate reflectors the LDS30M reaches objects at distances of up to 250 m.

Compared to the industrial laser distance measurement gauge LDS30A only the IP67-housing is omitted. The interfaces and power supply systems are designed for direct connection to microcontrollers or SoCs.

For industrial applications the LDS30M is also available with an additional interface board, which provides a 24 V power supply and standard interfacesl like analogue current output and RS232 or RS422.

Due to the invisible and eye safe laser (905 nm) the LDS30M can also be used in public areas.

Key Features

- **OEM laser module**
- **Compact design, low weight**
- **Extremely high measuring rate**
- **Long measuring range**
- **Eye safe operation**
- **Industrial interfaces (optional)**
- **Digital and analogue outputs (optional)**
- **Easy system integration**

Application

- Distance measurement
- Fast object detection
- Use as proximity switch
- 2D and 3D scanning applications
- Altimeter
- Orientation of autonomous vehicles
- Anti-collision detection for drones
- Admission control and persons counting

Dimensions LDS30M
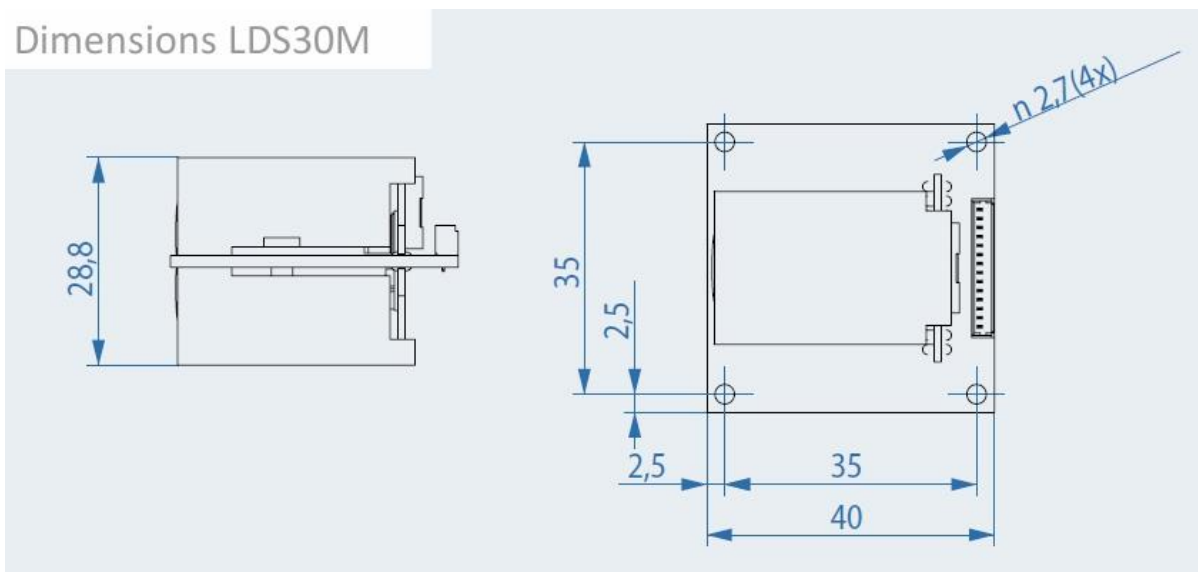
Technical Data

Measuring range [1]	0,2 m … 30 m for target reflectance ≥ 10 %
	Up to 250 m for high target reflectance or use of reflectors [2]
Measuring accuracy [3]	±5 cm
Reproducibility	±2 cm
Resolution	1 cm
Maximum measuring rate	30 kHz in FT mode
	15 kHz in DT mode using binary output
Maximum output rate	30 kHz in FT mode
	10 kHz in DT mode with binary output format
	4 kHz in DT mode with ASCII coded decimal output
Laser divergence	3 mrad x 1 mrad
Laser class	Laser class 1, EN 60825-1:2007 (905 nm, infrared)
Operating temperature	Standard: 0 °C … +50 °C
	Optional: -20 °C … +50 °C (option –c)
Storage temperature	-40 °C … +70 °C
Power supply	6.5 V … 7 V direct current
Power consumption (max.)	3 W
Serial interface	RS422, Max. Baud rate 921600, ASCII or binary encoded, CMOS-Level 3.3 V
Connector	Molex MX 53047-1410
Humidity	10 % … 90 %, not condensing
MTBF / MTTF	> 5 years (> 44.000 h)
Dimensions	40 mm x 40 mm 40 mm
Weight	Approx. 50 g
Options	
LDS30M-IF-RS232	Serial interface RS232, analogue output (4 mA … 20 mA), 2x switching output (24V)
	Power supply 10 VDC … 30 VDC
LDS30M-IF-RS422	Serial interface RS422, analogue output (4 mA … 20 mA), 2x switching output (24V)
	Power supply 10 VDC … 30 VDC

[1]   Dependent on target reflectance, influence of extraneous light and atmospheric conditions

[2]   e.g. Scotchlite Cube 3000x

[3]   For single measurement, 1 sigma

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It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding