

LDS30

Laser Distance Sensor



Product Description

The LDS30 laser distance sensor is dedicated for general ranging applications that require instantly triggered and fast data acquisition. The sensor provides measurement rates as fast as 30 kHz within a total measurement range of up to 250 m with absolute measurement accuracy in the centimetres range. It operates fully eye safe at a wavelength of 905 nm.

The LDS30 sensor is optimized for easy system integration. It is available with a ready-to-use IP67 proof housing or configured as a distance sensor module for specialized system integration. The housed version is shockproof and suitable for applications that impose high impact on the sensor, for example in industrial environments.

Applications

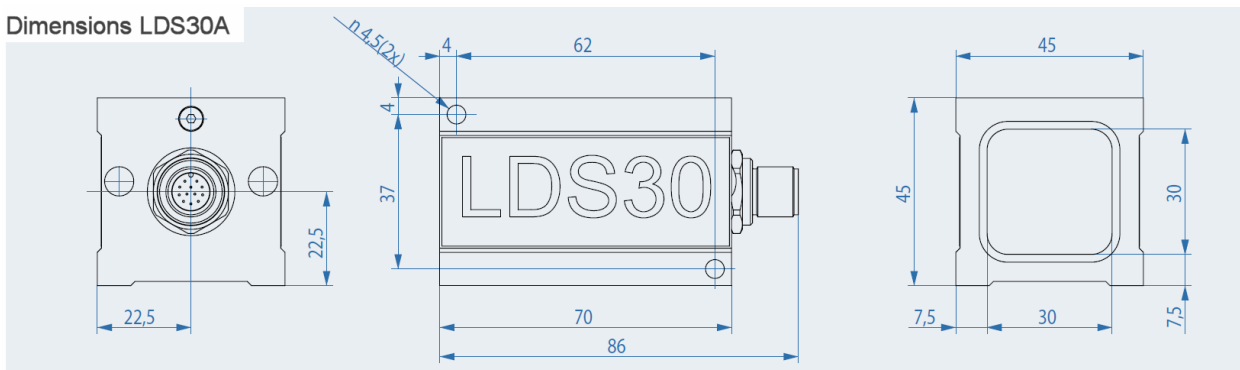
For the LDS30 there are many applications in industrial environments:

- Distance measurement & fast object detection
- Proximity sensing & warning
- 2D and 3D scanning applications
- Industrial automation

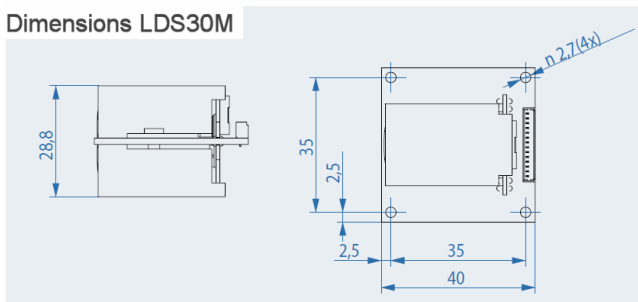
Advantage

- Compact, lightweight design
- High repetition rate
- Long measuring range
- Eye safe operation
- Housed and modular OEM versions
- Industrial standard interfaces
- Digital and analog output
- Easy system integration

Dimensions LDS30A



Dimensions LDS30M



No-contact measurement techniques for length, width, distance, position, velocity and color

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Technical Data

Model	LDS30A (IP67)	LDS30M (Module)
Measuring range ¹		
for special targets ²		0.2 m ... 250 m
for target reflectivity 10 %		0.2 m ... 30 m
Measuring accuracy ³		± 5 cm
Reproducibility		± 2 cm
Resolution		1 cm
Maximum measuring rate		
binary data output		30 kHz
decimal or binary data output		15 kHz
Laser classification	Laser Class 1 , EN 60825-1:2007, 905 nm (infrared)	
Laser divergence	3 mrad × 1 mrad	
Serial interface	RS232 or RS422 ⁴	RS422, CMOS Level 3.3 V
	9600 ... 921600 baud, 8N1, ASCII	
Analog output	4 ... 20 mA current output	-
	load resistance ≤ 500 Ω	
Digital switching output	2x „high-side switch“	-
	max. load capacity 0.2 A	
Power supply	10 VDC ... 30 VDC	6.5 VDC ... 7.0 VDC
Power consumption (max.)	3 W	2.5 W
Operating temperature	0 °C up to +50 °C	
Storage temperature	-40 °C up to +70 °C	
Humidity	10 % ... 90 %, not condensing	
EMV	EN 61000-6-2 and EN 55011	-
Shock / vibration	DIN ISO 9022-3	-
Weight / protection class	approx. 125 g / IP 67	approx. 50 g / non
Dimensions (LxWxH)	86 mm × 45 mm × 45 mm (incl. connector)	40 mm × 40 mm × 40 mm (approx.)
Options	Connector plug, software LDMTool, cable (3, 5 10 m), adjustment bracket	-

This technology is subject to continuously ongoing development. Please check if you have the latest version of this document.

¹ dependent on target reflectance, stray light influences and atmospheric conditions

² e.g. Scotchlite Cube 3000x

³ for single measurement, 1 sigma

⁴ ordering info LDS30A/RS232 or LDS30A/RS422, maximum output rate is only possible with RS422 interface

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