



Laser Distance Meter LDM301

Measuring distance and speed without a reflector



Properties

The LDM301 laser distance meter measures distance and speed values in a non-contact fashion, also without a reflector. Taking only a short time to measure, it facilitates distance measurement to or from moving objects. The laser pulse's time-of-flight measurement principle is particularly suitable where long distances have to be measured or for operation in harsh industrial environments.

Of compact design shape, simple setup and configured with standard interfacing facilities, the LDM301 can easily be installed and commissioned. For interfacing, RS232, RS422, SSI and Profibus are available. Standard LDM301 delivery includes heating, a status display and a sighting device. A modular setup allows for easy complementation with accessories or special models for particular applications.

Benefits

- Broad working range and very short time to measure
- Great reach, also without reflectors
- Allows synchronisation with external devices
- Compact design shape, easy to install and operate

Applications

Performance features of the LDM301 warrant multiple possibilities of application in industrial environments:

- Process monitoring in steel works and rolling mills
- Fill-level measurement
- Positioning of cranes, loading and handling equipment
- Measurement of points that cannot be accessed, for example, inside of cavities, tubes or containers
- Position monitoring of vehicles or ships

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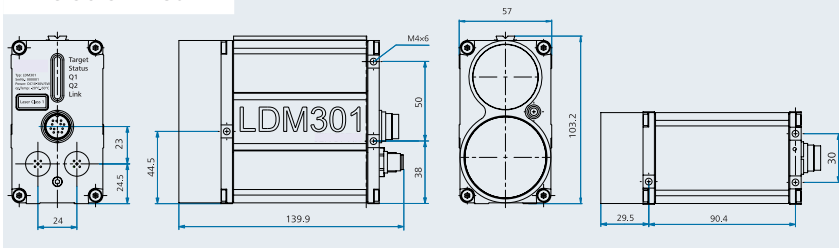
Specifications

		Standard models LDM301.	100	101	102	110	120	130	200	202	210
Measuring range ¹	on natural surfaces ²	0.5 .. 300 m									
	on target board	0.5 .. 3000 m									
Accuracy ³	100 Hz output	± 20 mm									
	2 kHz output	± 60 mm									
Measurement value resolution		1 mm									
Time to measure Frequency	standard	0.5 ms 2 kHz									
	special models	0.1 ms 10 kHz									
Time to measure <i>speed measurement</i>	min. 12.5 ms at 2 kHz measuring frequency										
	min. 2.5 ms at 10 kHz measuring frequency										
Laser classification		Laser class 1, according to EN 60825-1:2007									
Laser wavelength		905 nm									
Divergence measuring beam	standard	1.7 mrad									
	special models	10 mrad									
Adjusting aid	standard	Pilot laser, 635 nm (red), laser class 2									
	optional	Telescope adapter									
Interfaces and data rates ⁴		RS232 (max. 460.8 kBaud)									
		RS422 (max. 460.8 kBaud)									
		Profibus DP-V0 Slave (max. 12 MBaud)									
		SSI, 24 bit, Gray-encoded, 1 validity bit									
Connectors		12-pole M16 (Binder series 423)	(1x)	(1x)	(1x)	(1x)	(1x)	(1x)	(1x)	(1x)	(1x)
		5-pole M12 B-encoded (Binder series 766)	(2x)	(2x)	(2x)	(2x)	(2x)	(2x)	(2x)	(2x)	(2x)
Operating modes		Single and continuous measurement, average, external triggering, near-field suppression, windowing									
Switching output		„High-side“, max. load 0.2 A, permanent short-circuit-proof, adjustable windowing	(2x)	(2x)	(2x)	(2x)	(2x)	(2x)	(2x)	(2x)	(2x)
Trigger for device synchronisation		In/out, up to 30 VDC, flank/delay adjustable	(1x)	(1x)	(1x)	(1x)	(1x)	(1x)	(1x)	(1x)	(1x)
Analog output		4 mA ... 20 mA									
Voltage supply (U _v)		10 V DC ... 30 V DC									
Max. power consumption		< 5 W (without heating)									
		11.5 W (with heating, 24 V DC)									
Operating temperature		-40 °C ... +60 °C									
Storage temperature		-40 °C ... +70 °C									
Humidity		15 % ... 90 %									
Dimensions (L x W x H)		136 mm x 57 mm x 104 mm									
Weight		approx. 800 g (depending on configuration)									
Internal protection class		IP67									
EMC		EN 61326-1									

¹ Depending on target reflectivity, stray light effects and atmospheric conditions. ² on natural, diffuse reflecting surfaces.

³ Measuring distance to objects: 0,5 m ... 700 m ⁴ Listed are available interface options and maximum data transfer rates. For more detailed informationen please contact us.

Dimensions LDM301



Device configuration: LDM301 . x y z

x - serial interface	1	RS232	
	2	RS422	
y - divergence / time to measure	0	1.7 mrad	0.5 ms
	1	1.7 mrad	0.1 ms
	2	10 mrad	0.5 ms
	3	10 mrad	0.1 ms
z - additional interface	0	none	
	1	SSI	
	2	Profibus DP	

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