



## Laser Distance Meter LDM302

For low-reflection surfaces in the close-up and far range



### Properties

The Laser Distance Meters of the LDM302 product family measure distance and speed to or from moving and static objects in a non-contact fashion – also without a reflector. The time-of-flight measurement principle is particularly suited for long distance measurements and operation in harsh industrial environments.

### Optimized for difficult measurement conditions

The LDM302 sensors are optimized for measurement on natural surfaces with low reflectivity in the close-up range and in distances of up to several hundred meters.

Of compact design shape, the powerful sensors work eyesafe and, by default, are equipped with heating, a status display and a sighting aid.

### Benefits

- Broad range when measuring without reflectors and on surfaces with low reflectivity
- Optimized for measurements in the close-up range
- Broad total working range and short time to measure
- Compact design shape, easy to set-up and operate

### Applications

Performance features of the LDM302 family warrant multiple possibilities of application in industrial environments:

- Position monitoring for docking procedures for example, of vehicles and ships
- Positioning of cranes, loading- and handling equipment
- Height-above-ground-measurement of aircrafts (altimeter)
- Process control in steel works and rolling mills
- Fill-level measurement

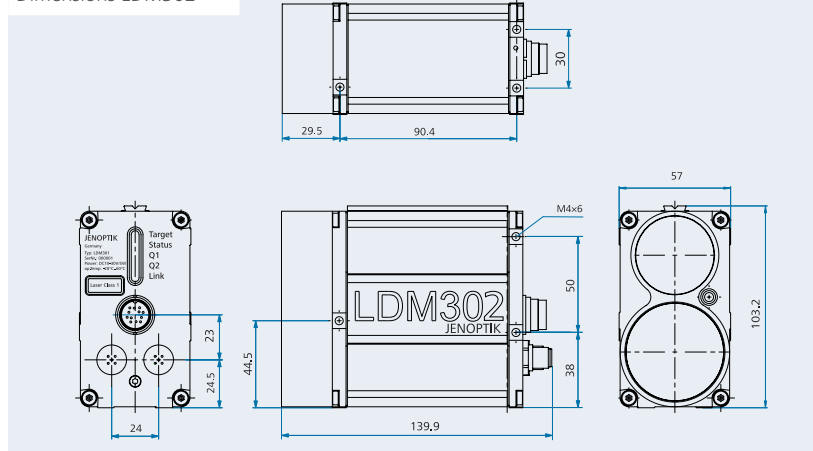
# Laser Distance Meter LDM302

For low-reflection surfaces in the close-up and far range

## Specifications

		Standard models LDM302.	100	200
Measuring range <sup>1</sup>	total	0.5 m ... 3000 m		
	on natural surfaces, reflectivity $\geq 6\%$ <sup>2</sup>	0.5 m ... 200 m		
	on surfaces with reflectivity $\geq 80\%$	0.5 m ... 500 m		
	on target board / reflector	30 m ... 3000 m		
Absolute Accuracy <sup>1</sup>	$1\sigma$	$\leq \pm 50$ mm		
Repeatability <sup>1</sup>	$1\sigma$	$\leq \pm 20$ mm		
Measurement value resolution		1 mm		
Time to measure (Frequency)		10 ms (100 Hz)		
Max. measuring frequency for speed		4 Hz		
Laser classification		Laser class 1, according to EN 60825-1:2007		
Wavelength		905 nm		
Divergence measuring beam		3.7 mrad		
Adjusting aid	standard	Pilot laser, 635 nm (red), laser class 2		
	optional	Telescope adapter		
Interfaces and data rates		RS232 (max. 460.8 kBaud) RS422 (max. 460.8 kBaud)		
Connectors		12-pole M16 (Binder series 423)	(1x)	(1x)
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 window	(2x)	(2x)
Trigger device synchronisation		In/out, up to 30 V DC, flank/delay adjustable	(1x)	(1x)
Analog output		4 mA ... 20 mA		
Voltage supply (U <sub>v</sub> )		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		
Internal protection class		IP67		
EMC		EN 61326-1		

Dimensions LDM302



<sup>1</sup> Depending on target reflectivity, stray light effects and atmospheric conditions.

<sup>2</sup> Target size approx. 0.8 m x 0.8 m at 200 m distance.

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



JENOPTIK | Defense & Civil Systems  
 ESW GmbH | Business field Sensor Systems  
 Pruessingstrasse 41 | 07745 Jena | Germany  
 Phone +49 3641 65-3041 | Fax -3573  
 lasersensors.dcs@jenoptik.com  
 www.jenoptik.com/lasersensors