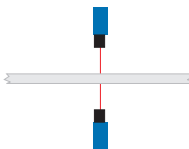
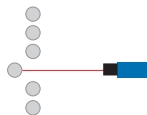
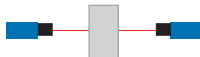
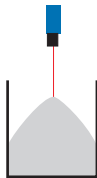
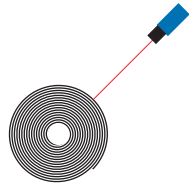


## Applications

- Process monitoring in steel and rolling mills
- Distance measurement on hot glowing steel up to 1300 °C
- Level measurement in silos and heaps
- Monitoring and positioning of cranes and conveying systems
- Position monitoring of vehicles and vessels
- Monitoring of lifting plants / lifting height measurement and positioning of elevators
- General distance measurement and position monitoring
- Diameter measurement of rolls / coils
- Distance measurement in mining, building, forestry and material-handling technology
- Thickness, length and width detection
- Diameter measurement of steel coils
- Detection of fast moving objects
- Use as proximity switch
- 2D and 3D scanning applications
- Altimeter



## Contact

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## Non-contact measurement with light



## Contact person LDM series

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Laser distance measurement

## Advantages

The meters of the LDM series are able to measure the distance between themselves and nearly every solid surface or liquid.

### Wide distance ranges

- Up to 300 m without reflector
- Distances up to 3000 m with suitable reflective targets

### High accuracy

- High end opto-electronic measurement methods
- Accuracy down to  $\pm 1$  mm
- Constant accuracy independent from measured value

### Easy integration

- Flexible parameterization
- Easy adaptation to the application
- Different industrial-suited interfaces
- 4 mA ... 20 mA, Profibus, Industrial Ethernet, RS422, RS485, RS232

### Reliable and robust

- Aluminum housings with IP 65 or IP 67
- Integrated heating for outdoor applications
- Use in bright outdoor environments with high percentage of constant or stray light

### Safe and harmless

- Visible and infrared laser radiation
- Laser class 1 or 2
- No special safeguards necessary

## Technical Data

	LDM4x	LDM51 Lumos	LDM30xA	LDS30A
<b>Measuring principle</b>	phase comparison	impulse back-mixing	pulsed time-of-flight	
<b>Max. range without reflector</b>	0.1 m ... 30 m	0.15 m ... 100 m	0.5 m ... 300 m	0.2 m ... 30 m
<b>Max. range with reflector</b>	100 m	500 m	3000 m	250 m
<b>Resolution</b>	0.1 mm (freely scalable)		1 mm (freely scalable)	
<b>Measuring accuracy</b>	$\pm 2$ mm	$\pm 1$ mm (max. 20 Hz) $\pm 2,5$ mm (max. 100 Hz)	$\pm 20$ mm (100 Hz) $\pm 60$ mm (2000 Hz)	$\pm 50$ mm
<b>Reproducibility</b>	$\pm 0,5$ mm		$\pm 10$ mm	$\pm 20$ mm
<b>Max. measuring frequency</b>	LDM41A: 10 Hz LDM42A: 50 Hz	100 Hz	LDM301A: 2000 Hz LDM302A: 100 Hz	30 kHz
<b>Type of laser</b>	650 nm, visible, red		905 nm, invisible, IR	
<b>Laser class (EN60825-1:2007)</b>	2		1	
<b>Laser divergence</b>	0.6 mrad	0.2 mrad	1.7 mrad	3 mrad $\times$ 1 mrad
<b>Analogue output</b>	4 mA ... 20 mA, programmable range, failure indicator			
<b>Digital output <sup>1)</sup></b>	1 $\times$ high-side-switch	3 $\times$ high-side-switch	2 $\times$ high-side-switch	
<b>Serial interface</b>	RS232 or RS422	RS232, RS422, RS485	RS232 or RS422	
<b>Optional interfaces</b>	Profibus, SSI, Ethernet		Profibus, SSI	
<b>Trigger</b>	1 $\times$ input / output, adjustable delay and switching logic			
<b>Control and display elements</b>			OLED-Display, 4 touch-buttons, 2 status-leds	5 status-LEDs
<b>Power supply</b>	10 V ... 30 V DC			
<b>Power consumption</b>	< 1,5 W	< 10 W	< 5 W	< 3 W
<b>Operating temperature</b>	-10 °C ... +50 °C	-10 °C ... +60 °C	-40 °C ... +60 °C	0 °C ... +50 °C
<b>Protection class</b>	IP 65		IP 67	
<b>Dimensions [mm]</b>	212 $\times$ 96 $\times$ 50	120 $\times$ 76,5 $\times$ 40	136 $\times$ 57 $\times$ 104	86 $\times$ 45 $\times$ 45
<b>Weight</b>	750 g	700 g	800 g	125 g

<sup>1)</sup> adjustable threshold and hysteresis