



## Laser-Distance-Sensor

### Series LDS 100/ \_

- **Measuring range** 30-2000 mm
- **Resolution** 10-500 µm
- **Linearity** ≤ 0,03-1 mm
- **Switching frequency** ≤ 1 kHz

#### Principal features:

- Center distance **115 - 3000 mm**
- Resolution **10-500 µm**
- Switching outputs for status
- Analog output **1-9 VDC**  
or **4- 20 mA**
- RS232 (Baud rate: 38400)
- High linearity
- Active laser power adaption
- Colour insensitive measurement
- CCD-receiver
- Synchronisation of 2 sensors for thickness measuring
- Modells for high temperature applications available
- Laser CLASS 2
- Protection IP 65
- CE

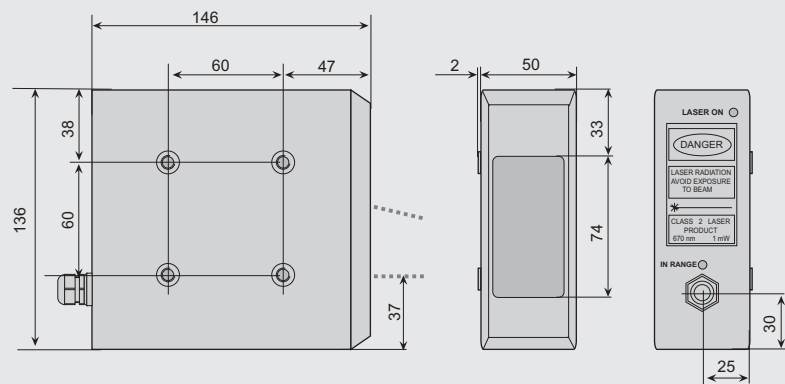
#### Typical applications:

- Distance measurement
- Thickness measurement
- Displacement measuring
- Profile checking
- Checking control tasks in the production process
- Detection of fractures and cracks
- Out-of-balance measurement
- Control of overlapping
- Position control

#### Advantages:

- Wide dynamic range
- High resolution
- High linearity
- Insensitive to colour
- High shock and vibration resistance

## Dimensions



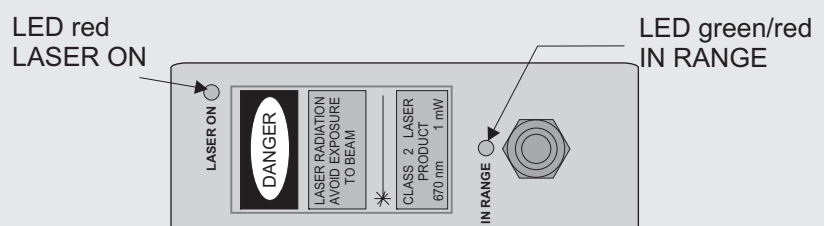
All dimensions in mm

## Wiring connections

#### Cable

red	+24 VDC	
blue	GND	
green	Laser interlock	
violet	Synchr. input	
grey/pink	RX digital input	
red/blue	RX digital input	
yellow	Measure 10 kΩ to GND	
white	Analog output 1-9 VDC	
brown	Analog output GND	
grey	Analog output 4-20 mA	
pink	Analog output GND	
black	Synchr. output	
white/grey	TX digital output (signal)	
brown/grey	TX digital output (GND)	

## Operating and display elements



## Technical data

<b>Electrical data</b>	Supply voltage	24 VDC +/-10%										
	Power consumption	~ 4.5 W typ.										
	Measuring / testing frequency	0.5 / 1 kHz										
	Analog output	1-9VDC 4-20 mA										
	Serial output	RS232 (Baudrate: 38400)										
	Cable	7x2x0.14 mm <sup>2</sup> , shielded, 2.5 m length										
<b>Lightsource</b>	Laser, Wave length	typ. 670 nm										
	Laser power	< 1 mW										
	Laser CLASS	2 (EN 60825-1:1994)										
<b>Data on ambiente conditions</b>	Max. operating temperature	0 to +45 °C										
	Max. storage temperature	-20 to + 70 °C										
	Max. rel.humidity	90% (not condensing)										
	Protection	IP 65										
<b>Specific data</b>		<b>Sensor LDS 100/...</b>										
		<b>30</b>	<b>100</b>	<b>200</b>	<b>300</b>	<b>500</b>	<b>700</b>	<b>900</b>	<b>900/M</b>	<b>1400</b>	<b>2000</b>	
	<b>Sensing range (mm)</b>	from	100	100	100	100	200	400	700	1500	700	2000
		up to	130	200	300	400	700	1100	1600	2400	2100	4000
	<b>Center distance</b>		115	150	200	250	450	750	1150	1950	1400	3000
	<b>Spot Ø</b>	mm	1	1	1-2	1-2	1-2	1-2	4	5	5	5
	<b>Resolution*</b>	mm	0.002	0.01**	0.05	0.25	0.1	0.5	0.1	0.3	0.2	0.5
	<b>Linearity*</b>	+/- mm	0.03	0.1	0.3	0.45	0.5	1.05	0.9	1.0	1.4	1.0
	<b>Reproduceability*</b>	mm	0.01	0.01**	0.05	0.25	0.1	0.5	0.1	0.3	0.2	0.5
	<b>Temp.drift</b>	+/- µm/°C	9	30	60	90	150	210	270	270	420	600
	<b>Dimensions</b>		136 x 146 x 50 mm						230 x 70 x 200 mm			
<b>Weight</b>		approx. 1.6 kg						approx. 3.6 kg				

\* Static measurement on white paper

\*\* Specification for digital output; analog output: 0.05 mm

## Ordering information

Part No.

10652067

10652068

10652069

10652070

10652071

10652072

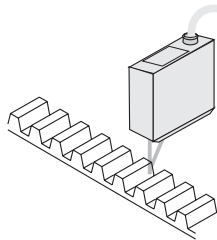
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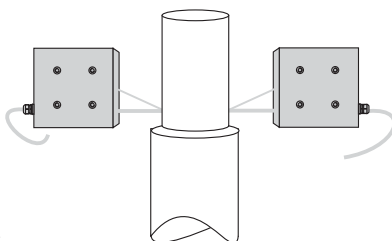
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### Application



Contour control

### Application



Diameter check



**LASER CLASS 2**  
**EN 60825-1:1994**

**Do not stare**  
**into beam!**

Presented by: