



Laser-Distance-Sensor

Series LDS 70/_

- **Measuring range** 5-200 mm (6 versions)
- **Resolution** 1-40 μm (depends on version)
- **Linearity** +/- 5 to +/- 200 μm
- **Measuring frequency** 1000 Hz
- **Small dimensions** (65 x 50 x 20) mm

Principal features:

- Center distance **25 - 160 mm**
- Resolution typ. **1-40 μm**
- Analogue output **4-20 mA**
optional: 1-5 VDC with integrated shunt in connection cable
- High linearity
- Colour insensitive measurement
- Laser Class 2
- Protection IP 67
- CE

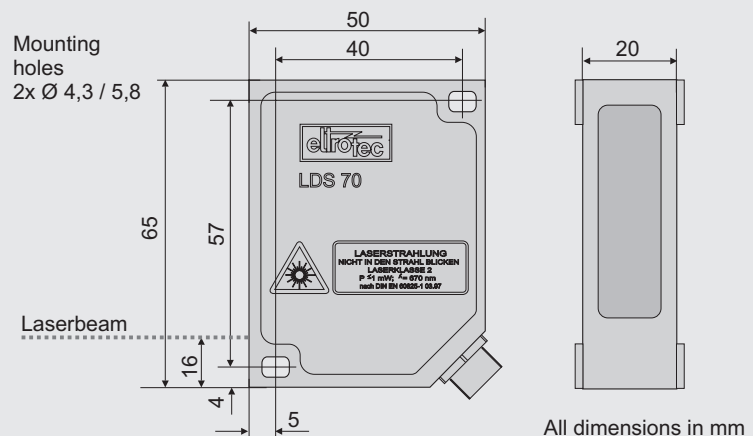
Applications:

- Distance measurement
- Thickness measurement
- Displacement measuring
- Profile checking
- Out-of-balance measurement
- Control of overlapping
- Position control
- Cone belt measurement

Advantages:

- Small dimensions
- High resolution
- High linearity
- Wide dynamic range
- High insensitive to colour due to CCD-Technology and intern. digital signal processor with intelligent logic
- Vibration resistance 15 g/ (10 Hz - 1 kHz)

Dimensions



Wiring connections

	Pin	Colour	Reference
 5 pin plug rear sight	1	gn	Error output, open collector NPN; switching to GND, U _{ce} max. 30 VDC, 100 mA, short circuit protected
	2	ge	Laser ON/OFF connect pin 2+ 4 => Laser ON
	3	gr	Output 4-20 mA, short circuit protected
	4	bn	GND
	5	ws	Potential for (2) and U _b (5) Supply 12-30 VDC inverse polarity protected
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Description

The Lasertriangulation Sensor LDS 70 is based on latest CCD-technology. It is working with a visible red laser.

The measuring values are linearised by a internal signal processor. Due to this the sensor measures the distance very accurate and independent from colour of surface. The LDS 70 provides an analogue output with 4-20 mA. Optional there is a connection cable with shunt for 1-5 VDC output available.

Technical data

Electrical data	Supply voltage	12-30 VDC, typ. 24 VDC, 150 mA
	Frequency	1 kHz
	Analogue output	4-20 mA (option: 1-5 VDC with shunt)
Light source	Wavelength	typ. 670 nm, visible/red
	Power	< 1 mW
	Laser Class	2 DIN (EN 60825-1:03.97)
Data on ambiente conditions	max. operating temp.	0 to +55 °C
	max. storage temp.	-20 to + 70 °C
	Protection	IP 67
	EMV	EN 50081-1 , EN 50082-2

Specific data	Sensor LDS 70/...					
	5	10	20	50	100	200
Measuring range	5 mm	10 mm	20 mm	50 mm	100 mm	200 mm
Center distance	22.5 mm	25 mm	40 mm	70 mm	100 mm	160 mm
Linearity typ.	+/- 5 µm	+/- 10 µm	+/- 20 µm	+/- 50 µm	+/- 100 µm	+/- 400 µm
Resolution stat.(typ.)	0.6 µm	1 µm	2 µm	5 µm	20 µm	40 µm
	dyn. at 1 kHz	3 µm	5 µm	10 µm	25 µm	100 µm
Meas. area Ø typ. at center distance	~0.5 mm	~0.8 mm	~0.4 mm	~0.1 mm	~0.2 mm	~2 mm
Temp. stability	0.03 % of measuring range / °C				0.08 % o.m.r. / °C	

All values at white, diffuse reflective surfaces (AL₂O₃- ceramic) as reference

Ordering information

Distance sensor

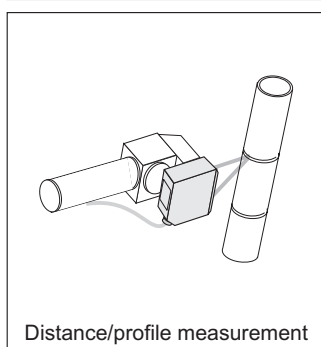
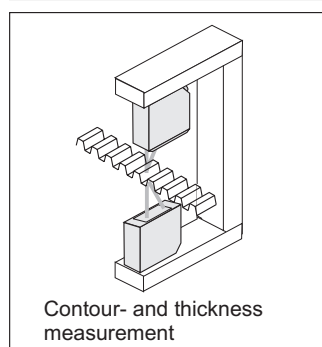
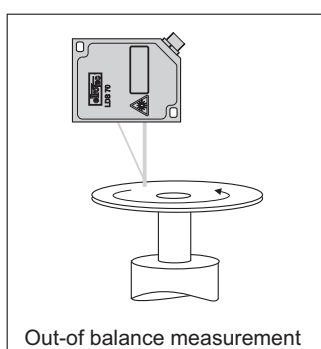
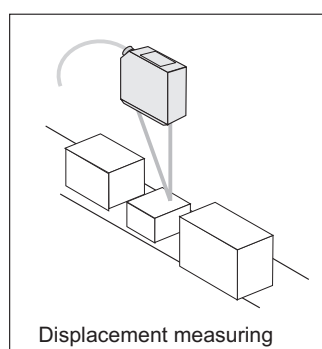
LDS70/...	5	10	20	50	100	200
Part. No.	10652508	10652509	10652510	10652511	10652512	10652513

Cable length:3 m, plug M12, 5-pin, output 4-20 mA 11242514

Cable length:3 m, plug M12, 5-pin,, output 1-5 VDC 11242515

Cable length:6 m, plug M12, 5-pin,, output 1-5 VDC 11242516

ELT/LDS/LDS70/2



Presented by:

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