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Laser Distance Sensor

Series LDS 90/_

- **Active Laser power control**
- **Deviation from linearity** ≤ 0,3%
- **Measurement frequency** 3 kHz
- **Resolution** ≥ 15 µm

Principal features:

- PSD
- Operating state indication via output signal
- Analogue output **0-10 VDC**
- Resolution **≥ 15 µm**
- Laser class 2
- High linearity
- Insensitive to contrast and colour transition due to laser power control
- Protection type IP 54 (IP 65 on request)
- CE

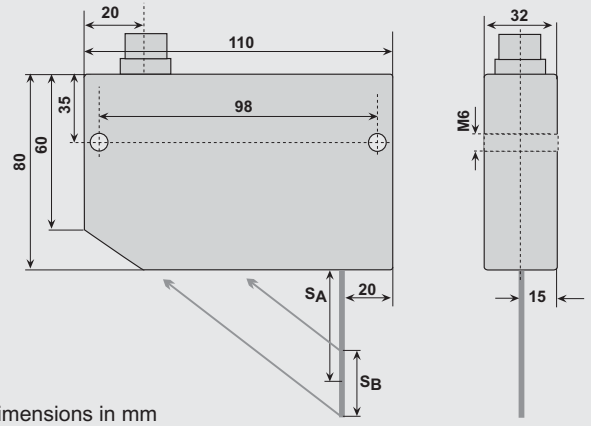
Typical applications:

- 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
- Positional control

Advantages:

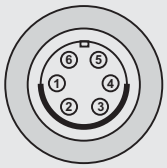
- Wide dynamic range
- Insensitive to colour
- High shock- and vibration resistance

Dimensions



All dimensions in mm

Wiring connections



1	red	+ 24 VDC*
2	blue	GND*
3	yellow	Signal- GND
4	green	Invalid (+ 24V PNP)*
5	transparent	Analogue signal
6	black	Laser ON/OFF

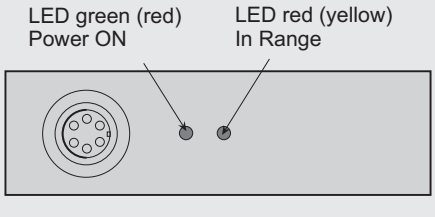
blank with black
Insolation: screen

* Galvanical separated from signal-GND

Operating and display elements

Signal output: INVALID
- PNP- switching
- 0 V = VALID
- 24 V = INVALID

Signal input: LASER ON/OFF
- 0 V = Laser OFF
- 24 V = Laser ON



Technical data

			LDS 90/10	LDS 90/40
Specifical data	Standoff distance * S_B		(5 / 10 mm)	(20 / 40 mm)
	Measurement distance S_A		80 mm	80 mm
	Resolution		≥ 15 µm	≥ 60 µm
	max. deviaton from linearity		0.3 % FS	
	Light spot diameter in the center of measuring range		~ 0,4 mm	
	Permis. degree of reflection		typ. 5-95%	
Electrical data	Operating Voltage		24 VDC (res. ripple ± 5 %)	
	Current consumption		~ 200 mA	
	Measurement sequence freq.		3 kHz	
	Analogue output		0-10 VDC	
Data on radiation source	Wavelength		typ. 680 nm	
	Output power		< 1 mW	
	Modulation frequency		25 kHz (pulse 40/60%)	
	Laser protection class		2 (EN 60825-1:1994)	
Environmental Data	Perm. operating temperature		32 to 122 °F (0 to +50 °C)	
	Perm. relative humidity		90% (not condensing)	
	Protection type		IP 54 (IP 65 on request)	
Shock and vibration resistance	Shock	standard	IEC 68-2-27	
		half sinus	250 m/s²	
	Vibration	standard	IEC-68-2-6, B3	
		resonance	5-16 Hz max. 0.5 mm 16-500 Hz max. 5 m/s²	
		fatigue	5-27 Hz max. 3.5 mm; max. 10.5 m/s² 27-500 Hz max. 0.35 mm; max. 50 m/s²	
Mechanical data	Dimensions		110 x 70 x 30 mm	
	Weight		approx. 260 g	
	Connection		via Fischer plug type D103 A056 (cable plug type S103A056-2)	

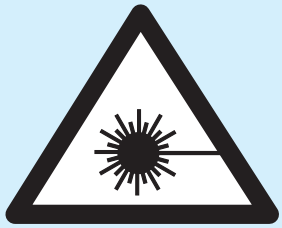
* Switchable via jumper on board

Ordering information

Sensor	**Part No.**
LDS 90/10	10651412
LDS 90/40	10651413

Accessories (part of delivery)

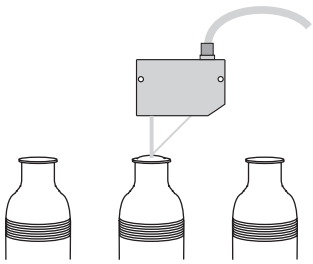
Wiring cable	11241414



Do not stare into beam !

LASER CLASS 2
EN 60825-1:1994

Application



Monitoring on bottle plants
(e.g. checking for vacuum)

Presented by: