

# LASER DISPLACEMENT SENSOR

further Links for this series:

[Installation guide LAS](#)

[Teaching guide LAS](#)

[Product page laser sensors](#)



## LAS2-TM SERIES

### Key-Features:

- very compact housing
- measurement ranges from 10 to 500 mm
- linearity up to  $\pm 0.13\%$
- repeatability up to  $4\ \mu\text{m}$
- point and line laser versions
- analog output 4...20 mA or 0...10 V
- protection class: IP67
- working temperature: -10 to 50 °C
- individual parametrization by teach-in procedure
- very precise distance measurement on most materials
- protected against reverse polarity and short circuit

### Content

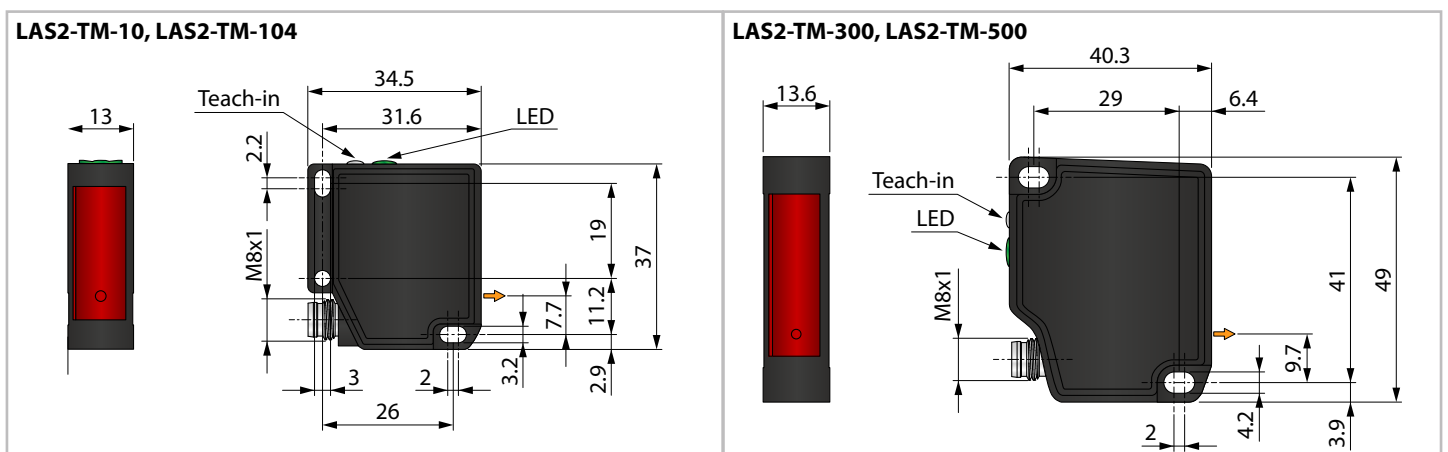
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## TECHNICAL DATA

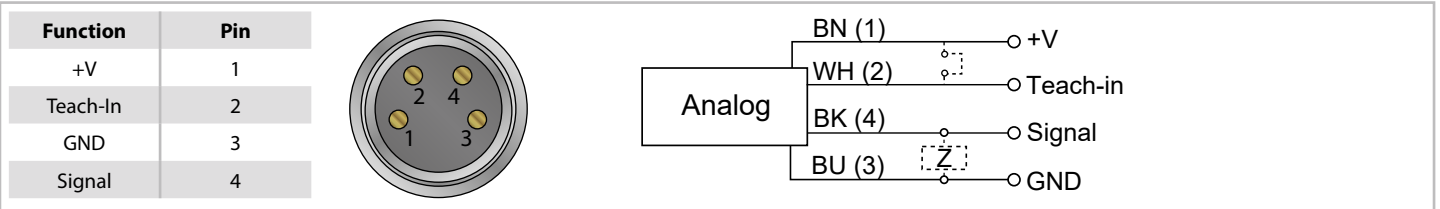
		LAS2-TM-10	LAS2-TM-104	LAS2-TM-300	LAS2-TM-500
Measurement range MR	[mm]	16...26	16...120	50...350	50...550
Linearity	[%]	±0.13	±0.14 (MR 16...70 mm) ±0.19 (MR 16...120 mm)	±0.14 (MR 50...200 mm) ±0.18 (MR 50...350 mm)	±0.25
Repeatability	[µm]	4...5	8...100	10...240	12...686
Temperature drift	[%/K]	0.01	0.04	0.05	0.08
Measurement frequency	[kHz]	5			
Response delay	[ms]	0.4			
Output signal		4...20 mA or 0...10 V			
Beam type		Point		Point or line	
Beam diameter (point laser)	[mm]	0.64...0.29	1.3...0.81	1.5	
Beam height (line laser)	[mm]	-	-	1.2...0.56	1.2...0.45
Beam width (line laser)	[mm]	-	-	2.9...6	2.9...8.1
Light source		Laser diode red, pulsed			
Wave length	[nm]	660			
Laser class		Class 2			
Pulse power max.	[mW]	1.6	2		
Pulse duration	[ms]	0.001...1	0.001...0.5	0.001...1.2	
Pulse period	[ms]	0.2...2.3	0.2...1.5	0.2...3.4	
Supply +V	[VDC]	12...28			
Current consumption max. (no load)	[mA]	100			
Load resistance		For output signal 4...20 mA: <(+V - 9 V) / 0.02 A For output signal 0...10 V: >100 kΩ			
Connection		Connector output M8, 4 poles			
Short circuit protection		Yes			
Reverse polarity protection		Yes (+V to GND)			
Protection class		IP67			
Ambient light immunity	[klx]	<100			
Operating temperature	[°C]	-10...+50			
Storage temperature	[°C]	-20...+60			
Vibration resistance		acc. to IEC 60068-2-6:2008: 1 mm p-p at f = 10 - 55 Hz, 5 min per axis, 30 min endurance at f = 55 Hz per axis			
Shock resistance		acc. to IEC 60068-2-27:2009: 30 g / 11 ms, 6 jolts per axis and direction			
Adjustment		Teach-in: Taste / external			
Power on indication		LED green			
Output indication		LED red			
Housing		Die-cast zinc			
Front optics		Glass			
Weight	[g]	41		67	

Values for measurements on white (90 % reflectivity)

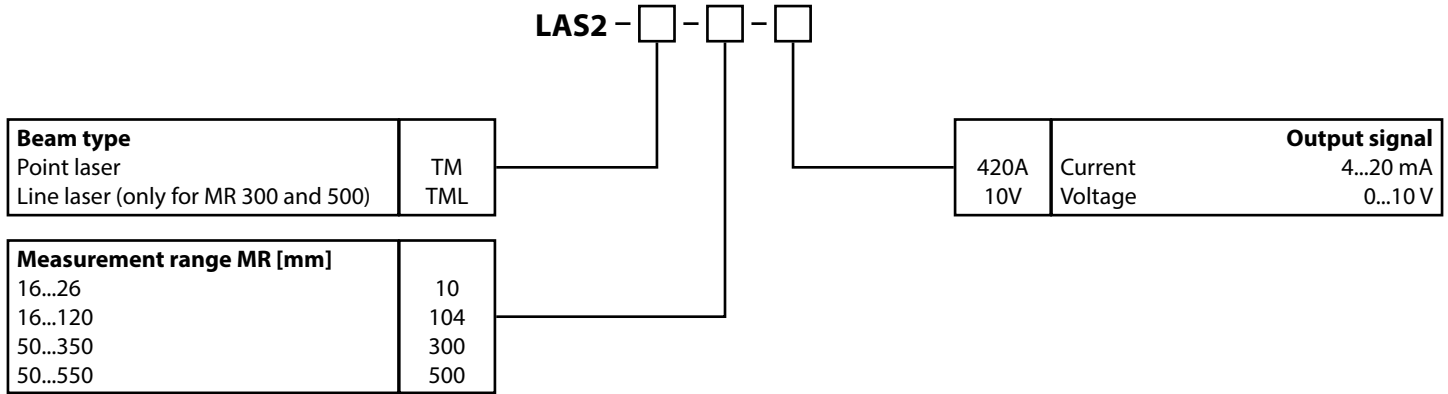
## TECHNICAL DRAWING



## ELECTRICAL CONNECTION



## ORDER CODE



## ACCESSORIES

### Cable with connector (female) M8, 4 poles, IP67, shielded

K4P2M-S-M8	2 m, straight connector
K4P5M-S-M8	5 m, straight connector
K4P10M-S-M8	10 m, straight connector

### Cable with connector (female) M8, 4 poles, IP67, shielded

K4P2M-SW-M8	2 m, angular connector
K4P5M-SW-M8	5 m, angular connector
K4P10M-SW-M8	10 m, angular connector

### Digital display for sensors with analog output, 2 channel

WAY-AX-S	Touch screen, supply: 18...30 VDC
WAY-AX-AC	Touch screen, supply: 115...230 VAC

For more information and options please refer to the [WAY-AX data sheet](#).

Subject to change without prior notice.

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