

## Laser Distance Sensor LDM41/42 – Measuring range up to 150m



### Description

The LDM41/42 is a family of opto-electronic distance meters designed for industrial applications. Measurements up to 150 m are performed precisely, fast and in a non-contact fashion using the comparative phase shift method. Equipped with interface options such as RS232 or RS422 as well as selectable switching and analog outputs, the sensors can easily be integrated into any industrial infrastructure.

The compact and robust design shape combines with low power consumption, and the possibility to set specific device parameters warrants flexibility in use. Optional heating enables indoor and outdoor operation at low temperatures.

### Benefits

- Precise
- Nonwearing
- Accurate

### Applications

- Distance measurement and determination of positions
- Fill level measurement
- Position monitoring of moving objects
- Positioning of hoisting facilities, conveyor systems and crane equipment
- Industrial labor protection and security-related applications

### Technical characteristics

Measuring range <sup>1</sup>	0.1 m ... 30 m on natural surfaces ; up to maximum 150 m on target board
Measuring accuracy <sup>2</sup>	± 3 mm (+15°C ... +30°C) ; ± 5 mm (-10°C ... +50°C)
Measured value resolution	0.1 mm
Reproducibility	< 0.5 mm
Time to measure	0.16 s ... 6 s
Laser classification	Laser class 2, < 1 mW according to IEC 825-1 / EN 60825
Wavelength	650 nm (red)
Divergence measurement beam	0.6 mrad
Connector	1 x 12 pins (Binder serie 723) M18
Interfaces and data transfer rates	RS232 or RS422 2,4 / 4,8 / 9,6 / 19,2 / 38,4 kBaud, 8N1, no parity, ASCII Protocol, Configuring measurement parameters (eg. scaling, measurement time), Configuring the analog output or digital signal ; input trigger, offset and alarm. Internal temperature
Operating modes	Continuous measurement, extern trigger
Digital switching output:	HIGH = UV – 2 V, LOW < 2 V, rated for loads up to 0.5 A, switching threshold and hysteresis selectable, can be inverted
Analog output	4 mA ... 20 mA, distance range limits can be set, behavior on error report can be preselected Load resistance: 500Ω
Trigger input	Adjustable trigger and delay, max trigger pulse : 24V
Supply voltage (UV)	10 ... 30 V DC
Maximum power consumption	3.2W - at 24 V DC
Operating temperature	-10 °C ... +50 °C The laser power switches off if temperature exceeds a predefined threshold
Storage temperature	-20 °C ... +70 °C
Dimensions (L x W x H)	212 mm x 96 mm x 50 mm
Internal protection class	IP 65
EMC	EM 61000-6-2, EN 55011



