LMC-J-0050-x-x

Laser-based distance measuring system

Type of unit

Opto-electronic distance measuring module
for industrial applications

Measuring method

Phase comparison measurement

**Functions &
fields of application**

- Millimetre-precise distance measurements
- Exact position determination
- Object detection
- Motion registration
- Level control
- Measurement on diffuse reflecting surfaces
- Measurement on surface temperatures up to 1200 °C
- Width measurement

Special features

1) The rigid and compact sensor housing was specially developed for use in heavy industry and machine construction.
2) A special dust protection in the front tube ensures that contamination of the optics is largely avoided.
3) Optional equipment with air purge, heating, water cooling, filter, plug connection, heat shield etc.
4) Simple, safe installation and adjustment thanks to spring-loaded 3-point mounting (optionally for horizontal or vertical installation)
5) Measurement with red laser light allows easy alignment of the laser to the object to be measured.

Advantages

- Safe use due to laser class 2
- Millimetre-precise measurement on a wide variety of surfaces
- Measurements of even the smallest objects thanks to a divergence of 0.6 mrad
- Reflectorless measurement possible
- Wide range of applications thanks to user-specific parameterisation
- Low power consumption
- Compact design
- Dust and splash water protection according to IP 66

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	Values apply to all units of the 0050-x-x series, unless otherwise noted
Measuring range *1	0.2 to 35 m on white and almost all natural surfaces; max. 150 m e.g. on white surfaces
Measuring rate	up to 50 Hz
Measuring accuracy *2	± 2 mm (0.2 – 35 m) ± 3 mm (0.2 – 150 m)
Repeatability	≤ ± 0.5 mm in the entire measuring range
Resolution	depending on the scaling factor (1 mm for SF 1; 0.1 mm for SF 10)
Connection type	12-pin flange connector (Binder 723); Profibus-IN /-OUT (M12, B-coded)
Laser divergence	0.6 mrad
Laser class	2 (red light) according to IEC 825-1/EN 825 (FDA 21 CFR)
Laser power	≤ 1 mW
Wavelength	λ = 650 nm
Pilot laser	no
Data interfaces	RS 232 or RS 422; optionally ProfiBus/SSI (RS 485), Ethernet/TCP/IP, 50 Hz; others on request
Switching outputs	1 output, programmable switching threshold and hysteresis
Analogue output	4 – 20 mA
T (°C) Operating range	- 10 °C to + 60 °C (- 40 °C with heating; + 100 °C with water cooling)
T (°C) Object surface	up to 1200 °C
Supply voltage	10 – 30 VDC
Power consumption	< 1.5 W @ 24 V
Housing material	Aluminium
Dimensions	255 x 90 x 110 mm (L x W x H)
Weight	approx. 4.3 kg
Protection class	IP 66
EMC	EN 61326-1
MTTF	50,000 h

*1 Dependent on reflectivity, stray light influences and atmospheric conditions
*2 Statistical scatter 95%

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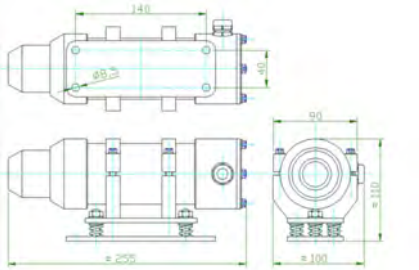
Additional accessory variants on request

- Changeable window
- 90° beam deflection
- Double-length front-tubus for protection against dust and flying sparks
- Water cooling for ambient temperatures up to + 100 °C
- Heat shield
- Air purgeg
- Heating for temperatures down to - 40 °C
- Master-slave confguration with signal evaluation in the master sensor, e.g. for width measurement (only Ethernet and WLAN)
- 1 switching output
- Connector versions
- Customer-specific interfaces, outputs and housings

- Brackets

Bracket type 1



Bracket type 2