LMC-J-0040-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
- Measurement on diffusely reflecting surfaces
- Exact position determination
- Object detection
- Motion registration
- Level control

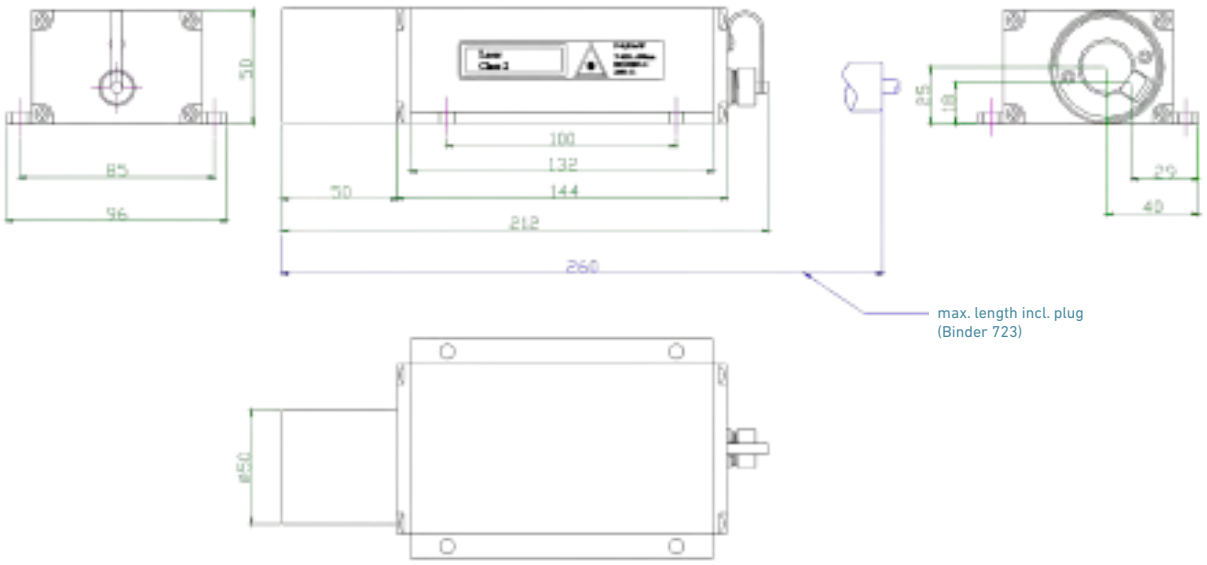
Special features

1) The measuring module can be easily integrated into fieldbus-monitored process control systems via the optional ProfiBus DP interface. The SSI interface offers an additional uncomplicated way of controlling the measuring device.

2) Measurement with red laser light enables easy alignment of the laser to the measurement object.

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 65



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	Values apply to all units of the 0040-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)
Switching outputs	1 output, programmable switching threshold and hysteresis
Analogue output	4 – 20 mA
Trigger	1 input, start single measurement, programmable trigger edge and delay
T (°C) Operating range	- 10 °C to + 60 °C
T (°C) Object surface	up to 1200 °C
Supply voltage	10 – 30 VDC
Power consumption	< 3.2 W @ 24 V
Housing material	Aluminium
Dimensions	212 x 96 x 50 mm (L x W x H); length incl. plug max. 260 mm
Weight	approx. 0.85 kg
Protection class	IP 65
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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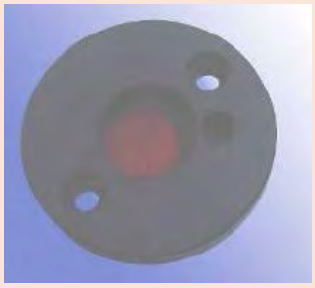
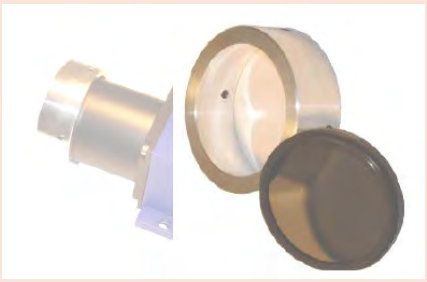
Additional accessory variants on request

Exchangeable window

Filter



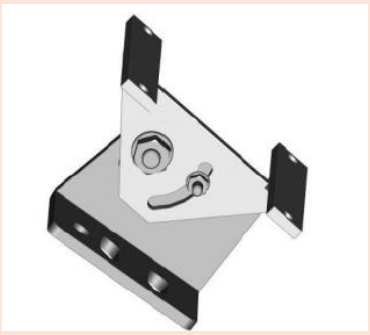


Protective housing

LMC-G-0040 A/C
(Typ C with fan)

LMC-G-0040 B
(with Peltier cooling)

Mounting bracket



Further options:

- **Double-length front tube for optimised protection against intensive exposure to dust and flying sparks**
- **Heater for temperatures down to - 40 °C**