

Laser Distance Measuring Device LMC-J-0040-3

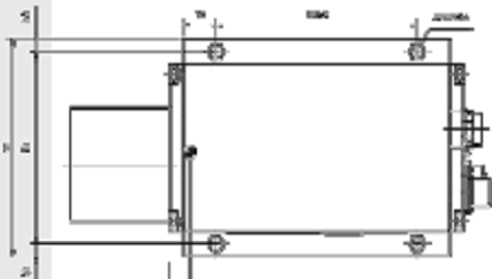
Precise – Robust – Reflector less:

- Measures distances with millimetre accuracy
- Precisely defines positions
- Detects movements
- ProfiBus DP and SSI Interface

The LMC-J-0040-3 is an opto-electronic distance measuring module for industrial applications. Equipped with a ProfiBus DP Interface, the LMC-J-0040-3 can easily be integrated into any fieldbus driven process controller. The additional SSI Interface provides another convenient option for controlled operation of the measuring module. A compact and robust design shape combines with low power consumption, selectable switching outputs and the possibility to set specific application parameters to warrant flexibility in use. The module operates on basis of non-contact comparative phase measurement with amplitude modulation. The Laser diode (cw operation) has a divergence of 0.6 mrad for measurement with pinpoint accuracy. The sensor alignment can be easily achieved with the help of the red pilot laser. The Measuring range is on any natural surface between 0,2 to 30m, for 30 to 100m it depends on the surface reflectivity coefficient (f.e. concrete 30%, white paper 90%) and for distances of more than 100 m we can deliver special plastic reflectors with a very high reflectivity coefficient of 2000%.

Features

- Laser class 2 for eye safe operation
- Non-reflector measurement
- Millimetre accuracy measurement on any surface
- Easy installation and commissioning
- Allows field bus integration with Profibus/SSI
- Meets IP 65 protection class for industrial use
- Also available in explosion-proofed version



Technical Data

Measuring range: ^{*1}	0.2 to 30 m on any natural surface. More than 100 m possible
Measuring accuracy: ^{*2}	± 2 mm under defined measuring condition ± 3 mm
Measuring resolution:	Depends on scale factor (1 mm with SF = 1)
Repeatability	≤ ± 0,5 mm
Measuring rate: ^{*1}	50/10 Hz fixed on white surface, else typically 5 Hz (up to 10 Hz)
Connector:	12 pin (Binder Series 723)
Laser divergence:	0.6 mrad
Laser classification:	≤ 1 mW under IEC 825-1, laser class 2 (red light)
Profibus Interface:	RS 485, DP-V0 Slave acc. to IEC 61158 / IEC 61784, automatic Baud rate detection, ext. terminating
SSI Interface:	Transfer rate 50kHz. 1 MHz, Signal input to output difference signal (RS422), 24 bit, Gray encoded
Switching output:	2 outputs, free programmable switching threshold and hysteresis
Analogue output:	programmable distance range limits, 4 mA to 20 mA
Operating temperature:	-10 °C to +50 °C
Supply voltage:	10 V to 30 V <3,2 W
Phys. dimensions:	212 x 96 x 50 mm (L x W x H) length with plug max. 260 mm
Weight:	About 850 g
Protection class:	IP 65
Options:	Heating, Cooling, EEx Housing

^{*1} dependent on target reflectivity, stray light influences and atmospheric conditions

^{*2} statistical spread 95%

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