

Laser Distance Sensor LMC-J-0050-x

Precise – Robust – Reflectorless

- Multi-Bus
- Measuring distances with millimeter accuracy
- Accurate positioning
- Motion detection / Contour detection
- Level gauging
- Measures surfaces up to 1200°C

Width measurement without additional equipment

The LMC-J-0050-x is an opto-electronic distance measuring module for industrial application. The device uses a contact less measurement technique based on comparative phase measurement with amplitude modulation. The laser diode has a divergence of 0.6 mrad for measurement with pinpoint accuracy

The measurement data is available through different interfaces for further processing. A digital switching output and an analogue output (4..20mA) are also available. The sensor alignment can easily be achieved using the red laser spot.

The sensor is built in a IP 66 housing which is made for heavy industry area. It includes a special dust protection chamber, which keeps the sensor window much longer clean. As ad on, water cooling and air purge nozzles are available.

It comes including a spring cushioned three point bracket for easy and safe installation. 2 different base plates for horizontal and vertical installation are available.

Features:

- Class 2 Laser for eye safe operation
- Reflector less measurement possible in most cases
- Millimeter accuracy with most surfaces
- A lot of different Interfaces are available like RS232/422 4-20 mA, ProfiBus, WLAN etc.
- Dust and waterproof according to IP 66
- Reduced power consumption
- Compact housing
- Wide application spectrum



Technical Data:

Measuring range: ^{*1}	0.2 - 35m for natural, diffuse reflecting surfaces. Max. 150 m possible target board
Repeatability:	≤ ± 0,4 mm on whole measuring range
Measuring accuracy: ^{*2}	± 2 mm
Measuring resolution:	Depends on scale factor (1 mm at SF 1; 0,01mm at SF 100)
Measurement rate:	1 Hz...5 Hz, 10 Hz, 50 Hz ^{*3}
Connection	clamp contacts, incl. 2 m cable
Laser divergence:	0.6 mrad
Laser classification:	≤1 mW under IEC 825-1, Laser class 2 (Red light)
Protection class:	IP 66
Supply voltage:	10 - 30 VDC <1,5 W at 24 VDC
Dimensions:	255 x 90 x 110 mm (L x W x H)
Weight:	approx. 4,3 kg
MTTF	50.000 h
Cable bushing:	Standard lateral; Multiple or custom bushing optional
Bracket:	Three-point bracket , spring cushioned for horizontal installation (Type A) Optional for vertical installation (Type B)
Operating temperature:	-10 °C to +60 °C (-40°C with heater and +100°C with Water cooling)

^{*1} dependent on target reflectivity, stray light influences and atmospheric conditions
^{*2} statistical spread 95%, temperature range +15°C.... +30°C, ± 3mm -10°C +60°C
^{*3} depending on type

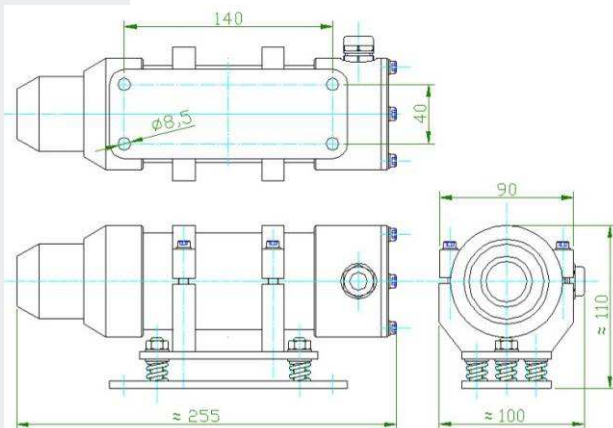
Type	Interfaces	Additional Specification	Optional
LMC-J-0050-1	RS232 / RS422, 4 - 20 mA, 1 switching out, 1 trigger in		
LMC-J-0050-1M	RS232 and RS422, 4 - 20 mA, 3 switching out, 1 trigger in		50Hz
LMC-J-0050-2	RS232 / RS422, 4 - 20 mA, 1 switching out, 1 trigger in	50 Hz	
LMC-J-0050-3-H	Profibus, simple Protocol, Addressing via DIP switches		
LMC-J-0050-3	Profibus, SSI, 2 switching Outputs	50 Hz	
LMC-J-0050-4	EtherNet, 1 switching out, 1 trigger in	Webserver	50 Hz, 4x I/O
LMC-J-0050-5	Wireless LAN, 1 switching out, 1 trigger in	Webserver	50 Hz, 4x I/O
LMC-J-0050-6	Bluetooth, 1 switching out, 1 trigger in		50 Hz
LMC-J-0050-X	Other interfaces on available on request		

Options:

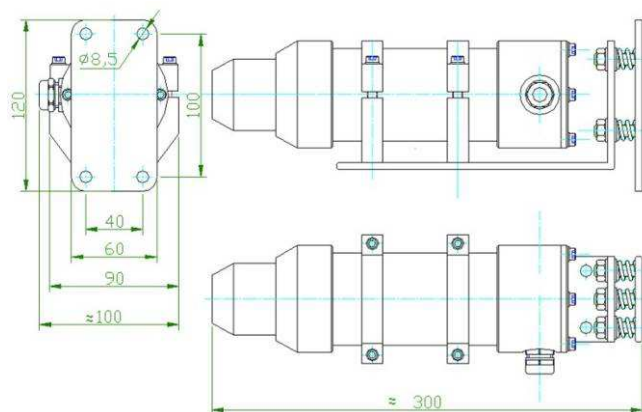
- Exchange Window
- Double long front tube for better dust and spray material protection
- Water cooling for temp. up to +100°C
- Heat shield
- Air Purge
- Heating for Temperatures down to -40 °C
- Master slave configuration with signal processing at the master sensor. F.e used for width measurement (only Ethernet and WLAN Types)
- 3 switching outputs
- Plug versions
- Custom made outputs, interfaces and housings



Bracket Types and Dimensions:



Type A



Type B