

Laser Distance Measuring Device

LMC-J-0050-1X-X

Precise – Robust – Reflectorless

- Measures distances with millimeter accuracy
- Precisely defines positions
- Detects movements
- Digital output / Trigger input
- Measurement on material surfaces up to 1450°C

The LMC-J-0050-1X-X is an opto-electronic distance measuring sensor for industrial applications and is developed for measurement on hot material surfaces from 1200°C up to 1450°C (HT- High Temperature). The laser operates on the 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 measuring range on most natural surfaces is between 0.2 to 35m, and up to 150m depending on the target surface reflectivity coefficient (concrete = 30%, white paper = 90%). Special plastic reflectors with a very high reflectivity coefficient of 2000% are also available. Sensor alignment can be easily achieved with the help of the red pilot laser.

Features:

- Laser class 3R
- Reflectorless measurement
- Millimeter accuracy measurement on most any surface
- Serial Interface RS 232 or RS 422,
- Analog output 4 to 20 mA
- Optional Int.: Profibus, SSI, Ethernet TCP/IP, W-LAN
- Easy installation and commissioning
- Meets IP 65 protection class for industrial use



Specifications:

Measuring range: ^{*1*3}	0.2 to 50 m on most natural surfaces. More than 100 m possible
Measuring accuracy: ^{*2}	± 3 mm; ± 2 mm under defined measuring conditions; ≤ ± 5mm on hot material surfaces up to 1450°C
Repeatability ^{*2} :	≤ ± 0.5 mm
Measuring resolution:	Depends on scale factor (1 mm @ SF 1; 0.1mm @ SF 10)
Measurement rate ^{*4} :	1 Hz to 10 Hz (optional 50 Hz),
Laser divergence:	0.6 mrad
Laser classification:	≤ 5 mW per IEC 825-1, Laser Class 3R (650 nm)
Interface:	RS232 or RS 422, analog Output: 4 to 20 mA
Switching output:	1 output, free programmable switching threshold and hysteresis
Trigger input:	1 input, start single measurement, programmable trigger edge and delay
Temperature range:	-10 °C to +50 °C
Power supply:	10 to 30 VDC; <2 W @ 24 VDC
Bracket:	Three-point bracket spring cushioned included. 2 base plates available for vertical or horizontal attachment
Dimensions:	(250 x 90 x 110) mm (L x W x H)
Weight:	Approx. 4.3 kg
Protection class:	IP 66
MTTF	30,000 hrs

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

*2 statistical spread 95%

*3 Depending of the material surface temperature

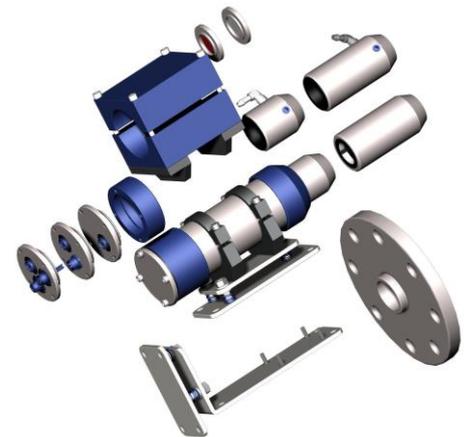
*4 Depending of the sensor type



Type	Interfaces	Additional Specification	Optional
LMC-J-0050-11-1 LMC-J-0050-11-2	RS232, 4 - 20 mA, 1 switching out, RS422, 4 - 20 mA, 1 switching out,		1 trigger in 1 trigger in
LMC-J-0050-12-1 LMC-J-0050-12-2	RS232, 4 - 20 mA, 1 switching out, RS422, 4 - 20 mA, 1 switching out,	50 Hz 50 Hz	1 trigger in 1 trigger in
LMC-J-0050-13	Profibus, SSI, 2 switching Outputs	50 Hz	
LMC-J-0050-11-4 LMC-J-0050-12-4	EtherNet, 1 switching out, EtherNet, 1 switching out,	Webserver 50 Hz	4x I/O, 1 trigger in 4x I/O, 1 trigger in
LMC-J-0050-11-5 LMC-J-0050-11-5	Wireless LAN, 1 switching out, Wireless LAN, 1 switching out,	Webserver 50 Hz	4x I/O, 1 trigger in 4x I/O, 1 trigger in
LMC-J-0050-11-63 LMC-J-0050-11-64	RS232, 100 Hz output rate, 4 - 20 mA RS422, 100 Hz output rate, 4 - 20 mA		
LMC-J-0050-X	Other interfaces on available on request		

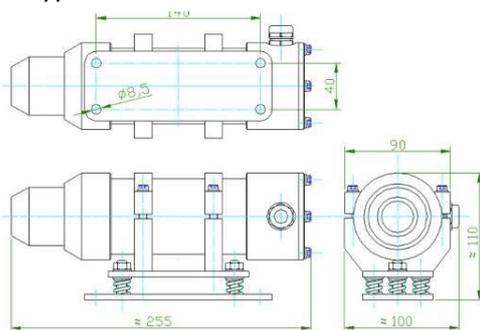
Options:

- Exchange Window
- Double long front tube for better dust and spray material protection
- Water cooling for ambient 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 can be used for width measurement (only Profibus, Ethernet and WLAN Types)
- Plug versions
- Custom made outputs, interfaces and housings
- Vibration protection
- IP 67



Bracket Types and Dimensions:

Type: A



Type: B

