

## Laser Distance Measuring Device LMC-F-0050-1

### Precise – Robust – Reflectorless:

- Measures distances with millimetre accuracy
- Precisely defines positions
- Detects movements
- Level control

The LMC-F-0050-1 is an opto-electronic level measuring module for industrial applications like tank level measurement. 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 measured result is available on the serial data interface. A digital switching output, an analogue 4..20mA output are also included. Optional a wide series of different data outputs are available like Profibus DP, SSI, CAN 2.0, CanOpen, Ethernet and Wlan. 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 depends it on the surface reflectivity coefficient (f.e. concrete 30%, white paper 90%). The built in Controller allows the Sensor to delete not valid measurements, like wrong measurements coming from dust.

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

### Features:

- As Standard Flange DN 80 and DN 100 are available. Others sizes possible.
- Laser class 2 for eye safe operation
- Non-reflector measurement
- Millimetre accuracy measurement on any surface
- Easy installation and commissioning
- Allows field bus integration.
- Meets IP 66 protection class for industrial use



### Technical Data

Measuring range: *1	0.2 to 30 m on any natural surface. More than 100 m possible
Measuring accuracy: *2	±3 mm (-10°C...+50°C) ± 2 mm (+ 15°C....+ 30°C)
Measuring resolution:	0.1 mm
Repeatability	≤ 0,5 mm
Measuring rate: *1	1...5Hz normal 10 Hz fixed on white surface
Connector:	terminal
Laser divergence:	0.6 mrad
Laser classification:	≤ 1 mW under IEC 825-1, laser class 2 (red light)
Interface:	RS 232(RS 422), baud rate 9600, format 8n1, selection of measuring functions, scaling, measuring time, output of measured values, inner temperature, error codes, single measurement mode.
Switching output:	Programmable switching threshold and hysteresis, "high-side-switch" with 0.5 A load capacity.
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 DC <1,5 W (without IAlarm)
Phys. dimensions:	Ø200 x 204,5 mm (D x L)
Weight:	About 5 kg
Protection class:	IP 66
Options:	Profibus, CANopen, WLAN, Bluetooth, Ethernet Interface, Heating, Cooling

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

\*2 statistical spread 95%