목록

System parameter	LM 20	LM 50
Measuring range	20 mm	50 mm
Resolution	0.1 nm	0.1 nm
Linearity over the entire measurement range	≤ ±2 nm	
Clamping shaft diameter	Ø 8 mm h6	
Measuring force, fixed at factory *	0.5 N...1.5 N	
Operating temperature range	15°C...30 °C	
Geometric Data		
Dimensions (L x W x H):		
Probe without plunger	[60 x 36 x 137] mm	[60 x 36 x 170] mm
Probe with plunger	[60 x 36 x 170] mm	[60 x 36 x 220] mm
Electronic supply and evaluation unit	[450 x 400 x 150] mm	
Mass:		
Probe	370 g	420 g
Electronic supply and evaluation unit (standard)	ca. 8 kg	
Electrical Data		
Interfaces standard	RS232C, USB	
Cable length between sensor head and electronics unit	3 m, optionally up to 10 m	
Power supply	100...240 VAC / 47...63 Hz	
Laser safety class according to EN 60825-1:2014 and ANSI Z136.1 (CDRH)	1 I	

*Observe installation position

11/2022 · Subject to change.

SIOS
Meßtechnik GmbH

LM 20/50

Product information

Fiber-coupled, highly linear probe for high-precision tactile thickness measurement and calibration

Laser interferometric probes

LM 20/50

The LM series laser interferometric probes are precision linear encoders. With these probes, tactile measurements are possible over a measuring range of 20 or 50 mm with nanometer accuracies. The highly linear length gauges are compatible with conventional measuring systems due to their size and the clamping shaft diameter of Ø 8 mm h6.

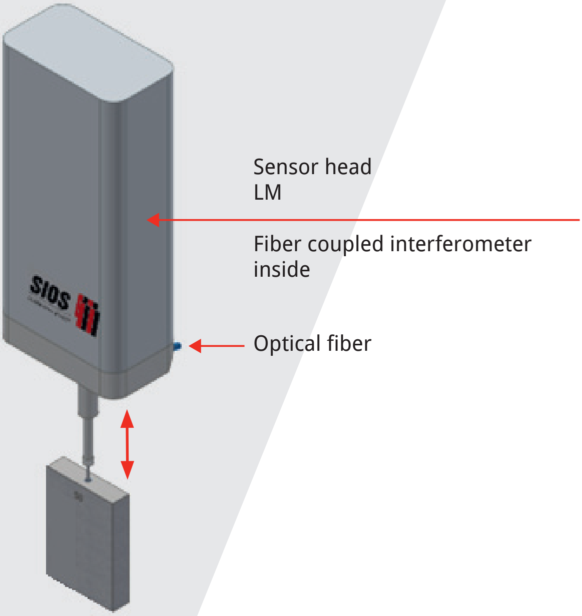
The integrated laser interferometer converts the measuring movement of the motor-driven measuring spindles into an interference signal. This optical measurement signal is transmitted by fiber optics to the optoelectronic supply and evaluation unit and output as a length value. The stylus quill and the integrated interferometer are adjusted to each other, taking into account the minimization of abbe and alignment errors.

The stable HeNe laser, whose light is fed to the laser interferometer via optical fibers, and the correction of environmental influences on the laser wavelength are the basis for the high measuring accuracy. Operation and display are either via a separate display or via a PC with suitable software.

20 mm,
50 mm

0.1 nm

MEASURING PRINCIPLE



Areas of application:

- highly linear probe
- Abbe-error-free interferometric length measurement
- constant measuring force over the complete measuring range
- suitable as a built-in measuring system
- motorized drive unit
- suitable for thickness measurement of highest accuracy in the double probe version

Ideal for

- quality control
- development
- thickness measurement
- gauge block inspection

PRECISION & QUALITY
MADE IN GERMANY

For customer-specific versions, OEM applications or integration in special measuring stations, please contact us.

We will be happy to personally assist you in finding solution to your measuring tasks.

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February 2023