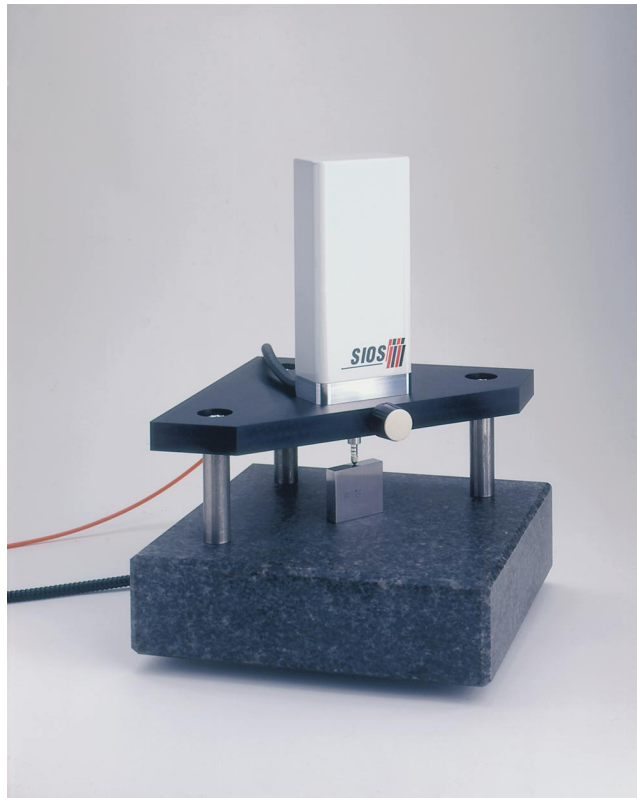


LM series laser-interferometric gauging probes



The LM series laser-interferometric gauging probes are precision length-measurement instruments allowing the contact measurement over ranges of 0 – 20mm or 0 – 50mm with nanometer precision.

The compact gauging head and 8h6-mm diameter probes allow their use with conventional length measurement systems.

The integral miniature interferometer converts displacements in the motor-driven probe shaft into optical-interference signals that are transmitted via a fibre optic link to an optoelectronic signal-processing/power-supply unit for processing and output.

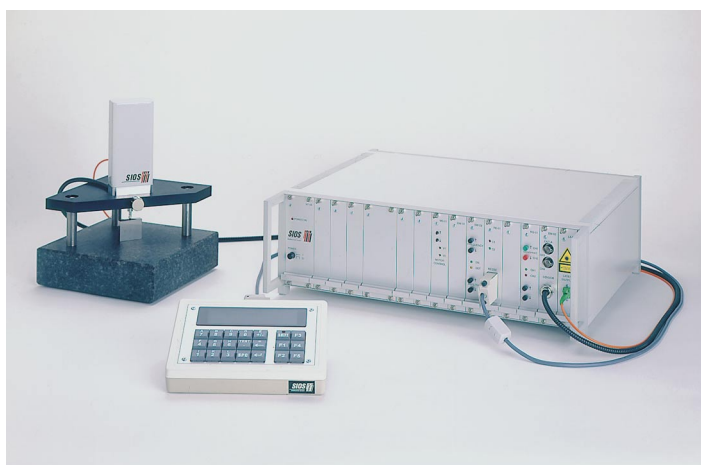
The frequency-stabilised HeNe laser, which serves as a light source for the miniature interferometer, is corrected for wavelength shift due to environmental factors and allows very high metric precision.

The operation of the system and display of the results is via either a separate keypad/display or a PC running the supplied software package.

Applications:

- Precision length measurements
- Final dimensional checks
- Calibrating gauge blocks/pins/plugs, rules, dial gauges and other measuring devices
- Measuring thickness of, e.g., plastic films
- Measuring depth of indentations produced by hardness testers
- Contact surface profiling
- Measuring deformations
- Gauging tasks in R&D work at near-reference-standard precision

Technical Data for Models LM 20 & LM 50



	Model LM 20	Model LM 50
Measuring range	20 mm	50 mm
Metric resolution	1 nm	1 nm
Nominal laser wavelength	632.8 nm	632.8 nm
Operating temperature range	10 – 30 °C	10 – 30 °C
Probe shaft diameter	8h6 mm	8h6 mm
Force exerted by probe shaft (factory set)	0.5 – 1.5 N	0.5 – 1.5 N
Dimensions (H x W x D) (mm):		
- gauging head (less probe shaft)	137 x 60 x 36	170 x 60 x 36
- gauging head (including probe shaft)	170 x 60 x 36	220 x 60 x 36
- signal processing/PSU	150 x 450 x 400	150 x 450 x 400
- keypad/display unit	48 x 190 x 138	48 x 190 x 138
Weights (g):		
- gauging head	370	420
- signal processing/PSU	9500	9500
- keypad/display unit	630	630
Interface:		
- serial	RS 232C	RS 232C
- parallel (option)	IEEE 488	IEEE 488
PC plug-in circuit board (option)	ISA-bus	ISA-bus
Fibre optic cable length	3 – 25 m	3 – 25 m
Supply-line voltage	100 – 240 VAC	100 – 240 VAC
Supply-line frequency	47 – 60 Hz	47 – 60 Hz

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