

INPROX sensors

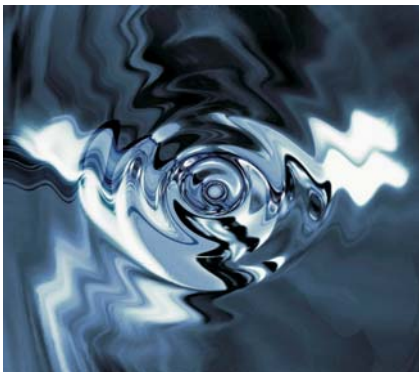
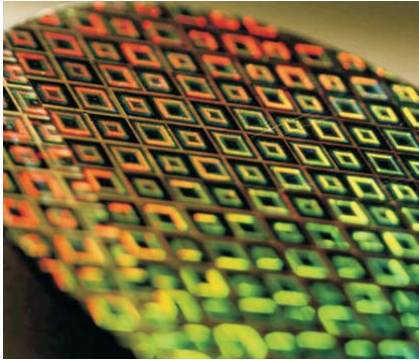


advanced **laser** distance **system**
ultra long distance laser sensor

MLS9B(H)

INPROX sensors

advanced **laser** distance **system**



MLS9B Advanced Laser Distance System

The MLS9B Laser Distance Sensor is the latest generation of powerful and robust distance measuring modules designed to meet the demands of the industrial measurement market. These modules offer many outstanding features:

Measuring range 0.2 to 200 m

Serial interface (RS232 and RS422)

Connection of up to 10 modules on a single RS422 line

Programmable analog output

Two programmable digital outputs

Digital output for error signalization

4 LEDs for status signaling

D-Sub connector and screw terminal for easy connection

Adapter for telescopic viewer for easy installation

Solid aluminum metal housing

IP65 (protected against ingress of dust and water)

Complementary configuration software

Laser class II (<0.95mW)

Can be mounted with three M4 screws

Wide range power supply (9 to 30VDC)

multiple control suite

Master - slave, synchronization, limit systems, averaging and adjustable measurement rates through a user friendly software platform.

«master - slave system

industrial grade distance measurements

With a tough IP65 housing and the option of an integrated heater system designed to resist difficult production and outdoor environments where temperature, dirt, vibration and shock issues may impede performance.

«integrated heater available in MLS9BH models (July 2006)

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Typical measuring accuracy for MLS9B 15 / MLS9BH ¹⁾ 15 MLS9B 30 / MLS9BH ¹⁾ 30	± 1.5 mm @ 2σ ± 3.0 mm @ 2σ
Smallest unit displayed	0.1 mm
Measuring range on natural surfaces	0.05 to approx. 65 m
Measuring range on orange (reflecting) target plate. See chapter 9.2 Target plates on page 35.	0.05 to 500 m
Measuring reference	from front edge (See 6 Physical dimensions)
Diameter of laser spot at target at a distance of	4mm @ 5 m 8mm @ 10m approx. 28mm*14mm @ 50m approx. 40mm*25mm @ 100 m
Time for a measurement Single measurement Tracking	0.04 to approx. 3 sec 0.04 to approx. 3 sec
Light source	Laser diode 620-690 nm (red) IEC 60825-1:2001; Class 2 FDA 21CFR 1040.10 and 1040.11 Beam divergence:0.16 x 0.6 mrad Pulse duration: 0.45x10 ⁻⁹ s Maximum radiant power: 0.95 mW
ESD	IEC 61000-4-2 : 1995 +A1 +A2
EMC	EN 61000-6-4 EN 61000-6-2
Power supply	9 ... 30V DC 0.5A for MLS9B 24 ... 30V DC 2.5A for MLS9BH (Heating option)
Dimensions	150 x 80 x 55 mm
Temperature range during operation ²⁾ MLS9B 15 / MLS9B 30 MLS9BH 15 / MLS9BH 30	-10 °C to +50 °C -40 °C to +50 °C
Temperature range during storage	-40 °C to +70 °C
Degree of Protection	IP65; IEC60529 (protected against ingress of dust and water)
WeightM	MLS9B(H): 665 g MLS9B(H): 690 g
Interface	1 serial asynchronous interface (RS232/RS422) 1 programmable analog output 0/4 .. 20mA 2 programmable digital outputs 1 programmable digital input 1 digital output for error status

¹⁾ See 4.1 Measuring accuracy on page 14.

²⁾ In case of permanent measurement (tracking mode) the max. temperature is reduced to 45°C

¹⁾ See 4.1 Measuring accuracy on page 13.

²⁾ In case of permanent measurement (tracking mode) the max. temperature is reduced to 45°C

³⁾ 500 – 1000h at 50°C.

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The telescopic viewfinder can be used for easy alignment of the MLS9 for long distances.

<i>Part Number</i>	<i>Description</i>
25P100	Telescopic viewfinder



The target plates provide a defined measuring target. Please use the different sides for the distances as stated below:

- Front color brown, for measuring distances from 20 m to 200 m
- Back color white, for measuring distances from 0.2 m to 30 m

<i>Part Number</i>	<i>Description</i>
25P110	Target plate small, 105 x 147 mm
25P111	Target plate large, 210 x 297 mm



The red lens glasses improve visibility of the laser dot at bright environment conditions. It can be use for distances up to 10-15m.

<i>Part Number</i>	<i>Description</i>
25P120	Laser Glass

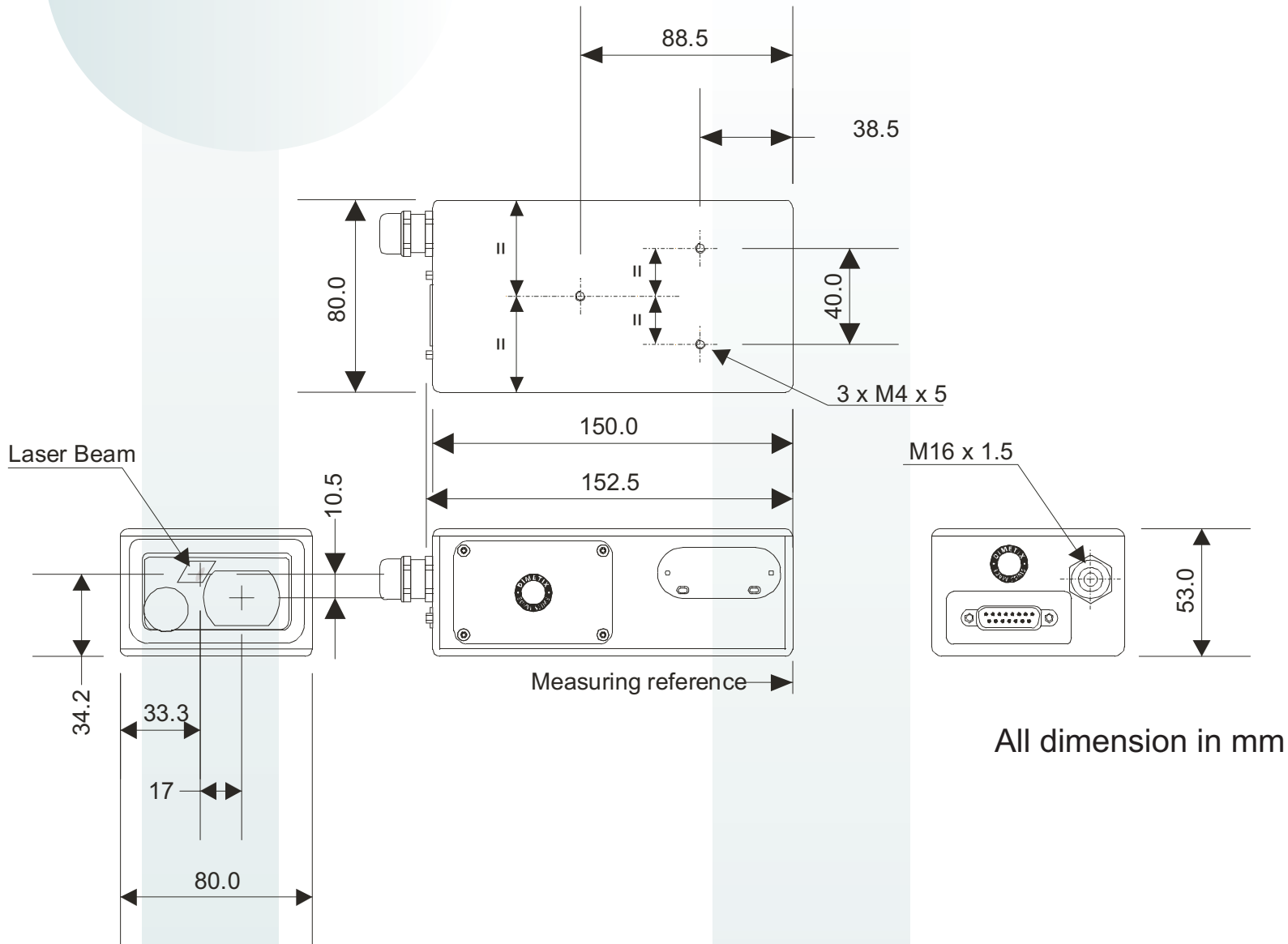


The connector allows the connection of the MLS9 with IP65 protection.

<i>Part Number</i>	<i>Description</i>
500253	Connector 90° IP65

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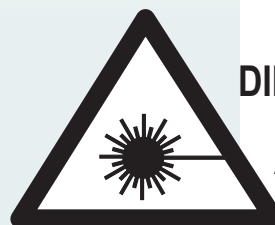


All dimension in mm

INPROX sensors

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LASER CLASS 2
DIN EN 60825-1: 03.97

Laser radiation
 Avoid exposure to beam

Sensors of CLASS 2 does not need environment special protection