



MLS02 LASER TRIANGULATION SCANNER



- Laser Triangulation with up to 50 degrees scanning angle
- Non-Contact 2D / Profile Measurement
- Optional High Temperature Model for product temperature to 1200°C (2192°F)
- Measurement ranges from 100mm to 1400 mm
- Standoff Distances from 450 to 1500 mm
- Resolution: 0.01 mm to 0.3 mm
- Robust and compact Cast Aluminum Housing
- RS232 or Optional RS422 Serial Interface
- 2 kHz Update Rate with 300 or 600 scans/minute
- Optional 6kHz Update Rate with 450, 900 or 1800 scans/minute
- Secondary Environmental Air Purged Enclosure are available with Air or Water Cooling

Performance

Model	MLS02-505	MLS02-1155	MLS02-1950	MLS02-1400
Measured range (mm)	100	300	900	1400
Radial/Polar Mirror distance (mm)	450-550	1000-1300	1500-2400	700-2100
Scan Distance at 50° scanning angle (near / far distance) (mm)	419/ 464	932 / 1098	1398 / 2028	652 / 1774
Radial / Polar Resolution/Reproducibility (mm)	0.01	0.1	0.2	0.3
2 kHz Angular Resolution (50° scanning angle) **	<0.2 to 0.4°	<0.2 to 0.4°	<0.2 to 0.4°	<0.2 to 0.4°
6 kHz Angular Resolution (50° scanning angle) **	<0.1 to 0.4°	<0.1 to 0.2°	<0.1 to 0.2°	<0.1 to 0.2°

**NOTE: Where 10 degree Angular Scan the Resolution is 5 x Better

Typical Applications

- Width Measurement
- Thickness Measurement
- Weight/Volume Control
- Profile Measurement
- Molten Metal Level
- Tension Control

Can provide 2D profile measurement in any kind of industrial application with the output in a software converted form. The Y coordinates can be used for width or thickness according to the resolution and scan angle.

General Description

These MLS02 Laser Triangulation Scanners provide precision measurement in two dimensions. The measurement is performed by oscillating the triangulation plane by up to 50 degrees. A fine collimated and focused laser beam is diffusely reflected from the surface of the material or liquid being measured and the internal CCD Camera records the image. This image is then processed by digital signal processor to calculate the radial distance from the center of the mirror axis to the object surface as well providing an angular track off its position.

These Scanners are compact stand-alone units containing the optics, signal processing and camera unit. The Scanner view shown is a side view of the Scanner and shows the triangulation plane sweep about the horizontal plane, both 25 degrees below the horizontal plane and 25 degrees above the horizontal plane. The distance and angular values are provided at frequency of 2 kHz as a digital signal for application running under Windows using the MLS02 driver DLL software.

The scanners are delivered with a CD containing the DLL software and a Windows test/demo program. The PC application program receives the output data from the Scanner over RS422/RS232 serial interface and a COM port via the DLL. The software either converts the polar coordinates of a measured point to orthogonal X,Y co-ordinates or presents a profile (table of X, Y values) for each sweep from one side to the other. The user can specify the size of the Y increment in the application program and thus the length of the output and thus the length of time the output contains the profile data.

Each Scanner can be supplied with 4 different measuring ranges and each in two versions with differing measuring angle either 10 or 50 degrees. Also can be provided with 2kHz or 6 kHz scan rates giving high or lower resolution. Where required customized versions can be supplied with non-standard scan angles and measuring ranges. Optional High temperature models are available for measuring off product at 1200°C (2192°F).

MODULOC Technology - Lasers for Precise Product Measurement

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Housing Specifications

Housing: Aluminum AL6, Oven baked blue paint

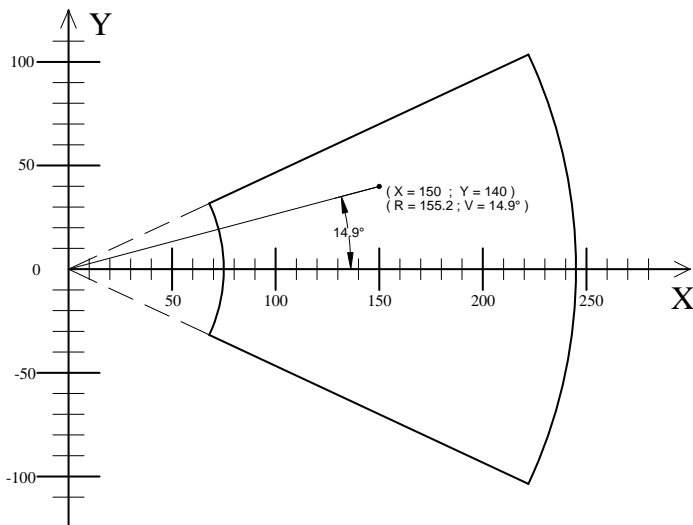
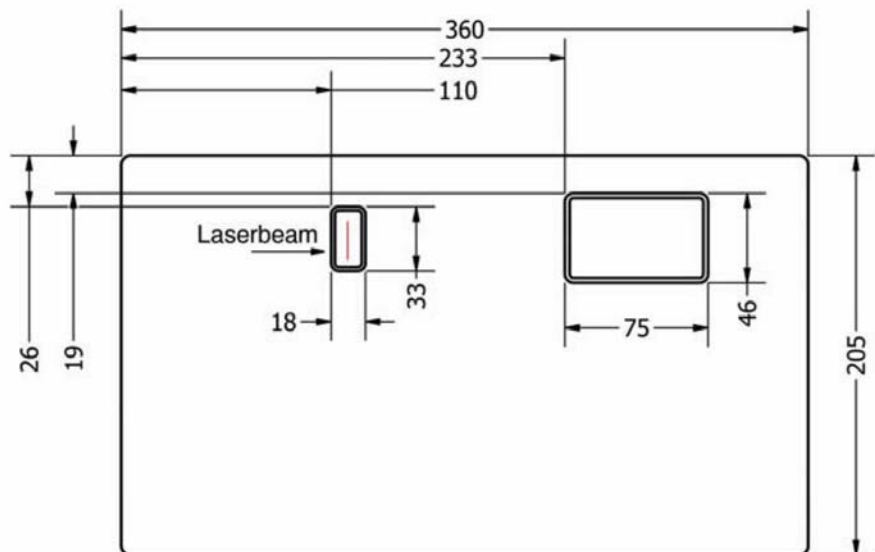
Housing Rating: IEC IP53, DIN 89011

Weight w/o Cable: 4.0 Kg

Connector: PG Gland

Cable Length: 2.0 M

Dimensions



The scanner view shown is a side view of the scanner and shows the triangulation plane sweep about the horizontal plane, both 25 degrees below the horizontal plane and 25 degrees above the horizontal plane.



The MLS-02 scanners comes with a PC program for easy application testing and software development. A large Graphical window provides zooming and panning facilities. The two modes of retrieving data, as individual X, Y coordinates or as a Profile where the X coordinate is interpolated at constant user specified Y intervals. Data sets can be saved to files on hard disk for later off line analysis in a spread sheet like Excel for instance.

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We reserve the right to alter specifications without prior notice. Specifications without tolerances are typical values.

Your Local Sales Representative:



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