MODULOC® Control Systems

COMPACT PRECISION *MLM SERIES LASER TRIANGULATION METERS*

- ***Compact Triangulation Meters providing High Precision over extended range.***
- ***Non-Contact Measurement of Distance, Displacement, Width or Thickness***
- ***When matching Sensors paired will automatically provide width/thickness or differential***
- ***Measurement ranges: 70 - 170 mm.***
- ***High Resolution: 0.001 mm - 0.005 mm.***
- ***RS232 or RS422 Serial Outputs***
- ***Analogue Output 4 –20mA or 1-9V***

Performance

Model	*MLM 72*	*MLM75*	*MLM82*	*MLM95*	*MLM120*
Measured range	70 –75 mm	70 – 80 mm	70—95 mm	70 –120 mm	70—170 mm
Center distance	72.5 mm	75 mm	82.5 mm	95 mm	120 mm
Short Range Resolution	0.001 mm	0.001 mm	0.001 mm	0.001mm	0.001 mm
Short Range Resolution	0.001 mm	0.001 mm	0.002 mm	0.002 mm	0.005 mm
Measuring Linearity	±0.003 mm	±0.004 mm	±0.008 mm	±0.013 mm	±0.025 mm
Temperature Deviation	± 1.5 µ ˚ C	± 1.5 µ ˚ C	± 2.5 µ ˚ C	± 5 µ ˚ C	± 10 µ ˚ C
Laser Spot Size	Ø 2mm	Ø 3mm	Ø 3mm	Ø 4mm	Ø 4mm

Typical Applications

- ***Distance measurement***
- ***Strip Thickness***
- ***Tension Control***
- ***Roll Diameter***
- ***Profile measurement***
- ***Measurements for feedback in productions lines***
- ***Measurements for quality control and statistics***
- ***Vibration Monitoring of a Rotating Object***

General Description

The MLM Laser Triangulation Meters are compact units with integrated optics and signal processor that provide exceptionally precise measurement of distance over extended ranges of up to 170 mm. A focused laser spot is illuminated on the object and the image distance determined by internal Line Scan Camera. LED's indicate when object at center or outside measuring range. Installation disc is provided for connection via PC and display of measured values. Measurement data is also transmitted via Serial and analog outputs.

These Sensors can be programmed to output the value in Medium filter format, Simple average or as a running average filter where the user specifies the number of measuring points for the filter block as well as the number of bad zero values to be ignored before calculating and outputting the average value via both the Serial and analogue outputs. The simple average filter compresses the measuring points into one single output disregarding missing values. A level mode is also available that inverts the values outputted.

Broad range of usage for measurement off surfaces where other devices fail. Ideal for measuring off wood, plastic, rubber, paper, foam, textiles, food product and metals

MODULOC® Technology - Lasers for Precise Product Measurement

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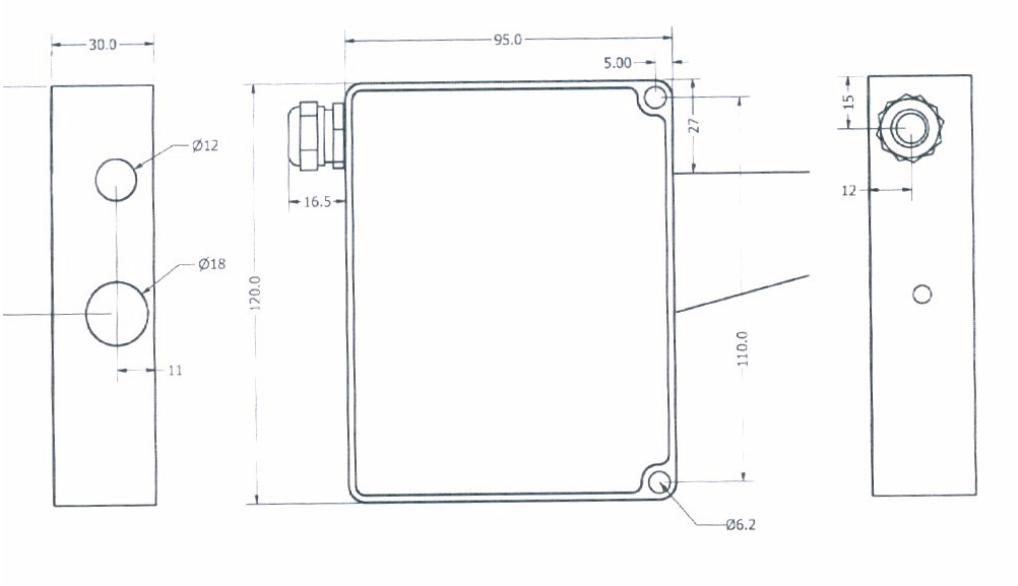
Dimensions

Housing: Aluminum/Glass
Housing Rating: IEC IP65
Weight w/o Cable: 370 g excl. Cable
Cable Length: 2.5 M, Optional 6M



General Specifications

Serial Output	RS232 or RS422 up to 115200 baud	Supply Voltage	22—36 VDC
Analog Output	4-20mA or 1-9VDC	Power Consumption	<4.5 Watt
Measuring Frequency	1000 Hz	Humidity	Max 90% RH (non condensing)
Output Rates User specified	2 kHz, except if simple average selected	Operating Temperature	0°C to +45°C (32°F to 113°F)
Laser Class	II, IEC 2, 1 mW	Storage Temperature	-20°C to +70°C (-4°F to 158°F)
Protection	IP 65	Light Source	Visible 650mm laser
Analogue Output Resolution	14Bit DACs converting 18 bit digital values Integrator value of 0.001 mm resolution	Static non-averaging deviation off white paper	2.6>> 2 x Standard deviation
Filtering Options	Medium, Simple & Running Average		

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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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