

M-Series

Magnetostrictive Displacement Transducers



- ▶ Non-Contact Technology
- ▶ Absolute Feedback
- ▶ Voltage or Current output
- ▶ Long life
- ▶ Excellent Linearity 0.03 %
- ▶ IP 67 protection
- ▶ Programmable Zero & Span points
- ▶ Wide operating temperature with low drift
- ▶ Auto-Tuning technology

The need for automation is greater today than ever before

Linear Displacement Transducers play an important role in factory automation. They provide accurate, reliable, absolute position feedback to help automate today's sophisticated machinery. Sensors must deliver value, be easy to set up, and interface easily into the host controller.

The M-Series Linear Displacement Transducer are an ideal alternative to the traditional low-cost Linear Potentiometer. The advantages of the M-Series sensors over the traditional potentiometer are that the M-Series provide an accurate, programmable zero & span, auto-tuning, non-contact position sensor in an economical low profile package, that uses field proven Magnetostrictive technology to give absolute analog feedback.

With no moving parts and the IP67 rating M-Series is an ideal position feedback instrument for any automation task. The 5 pin connector simplifies wiring and allows for quick replacement. Programmability allows you to scale the LDT exactly for your application, or fine tune it in the field. Diagnostics are built into every unit and are transmitted to the host controller via the analog output. If there is ever a fault, the M-Series will transmit a fault voltage or current warning the host controller that there is a problem.

M-Series: Specification

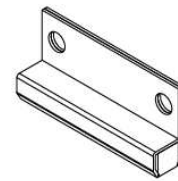
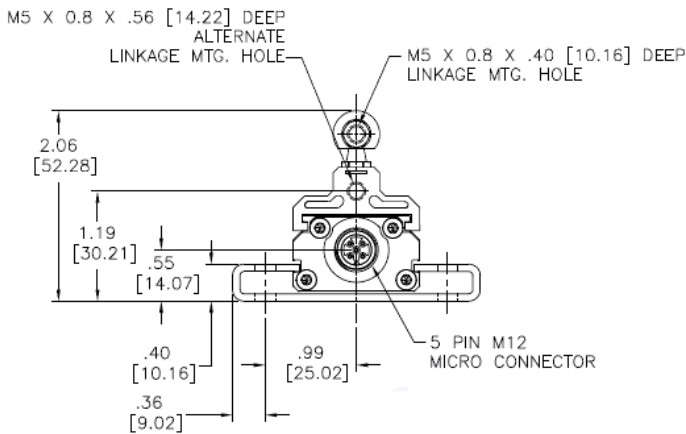
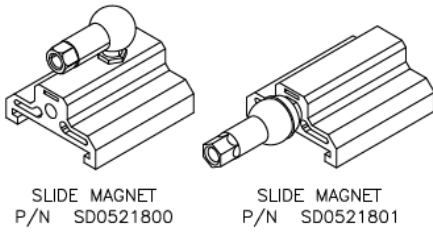
M-Series Magnetostrictive Displacement sensors	Voltage	Current	Max Measurement Range mm
	M/100/V	M/100/I	100
	M/200/V	M/200/I	200
	M/400/V	M/400/I	400
	M/600/V	M/600/I	600
	M/800/V	M/800/I	800
	M/1000/V	M/1000/I	1000

Electrical Specification	
Input Voltage	24 VDC \pm 20%
Input Current	44 mA typical (1.1W)
Dead Band	70 mm
Null Zone	70 mm
Linearity (% FRO)	less than \pm 0.03% of stroke or 0.33 mm, whichever greater
Repeatability	0.001%
Hysteresis	Less than 0.025 mm
EMC	CE marked

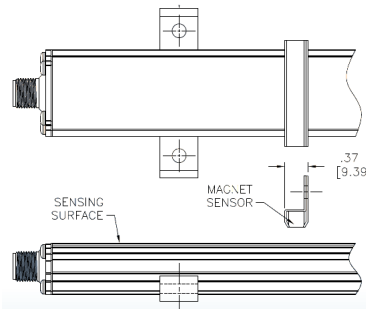
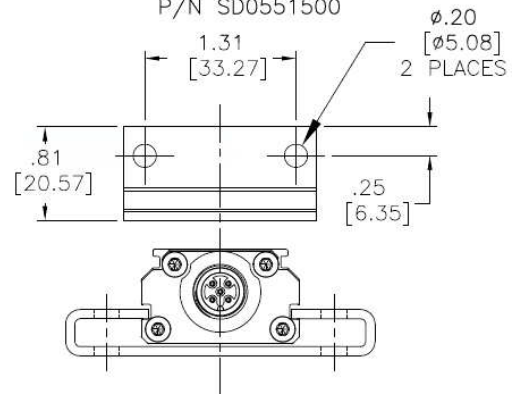
Environmental Specification	
Operating Temperature	-40°C to +85°C
IP Rating	IP 67

Analog Output Specifications		
Analogue Output	0-10 VDC	4-20 mA
Voltage Output Minimum	2 kOhms	
Load Resistance		
Current Output Maximum		500 Ohms
Load Resistance		
Analogue Ripple		1 mV
Update Time		1 ms
Resolution Internal		1.5 μ m
Output		16 Bit

M-Series: Drawing



FLOATING MAGNET
P/N SD0551500



All units are provided with mounting feet and a magnet assembly. The mounting feet (SD0522000) slide in the grooves on the side of the extruded housing. When tightened down with fastening hardware, the mounting brackets clamp the unit into place.



In the laboratory, on the shop floor or in the field, Solartron Metrology's products provide precise linear measurements for quality control, test and measurement and machine control. Wherever you are based in the world and whatever your application, Solartron Metrology has the technology, the commitment and the resources to help you measure it better.