

No Magnet
Required!For use in:
Hydraulic and Pneumatic Cylinders
Mobile Hydraulic Equipment

MR-7 Series LVIT Linear Position Sensor



Lower Cost, More Robust Alternative to Magnetostrictive Sensors

The MR-7 series LVIT (Linear Variable Inductance Transducer) Position Sensors from Alliance Sensors Group are designed as an alternative to magnetostrictive sensors and have more robust construction and a lower cost of ownership and superior stroke-to-length ratio. The unit can be port mounted in industrial or mobile hydraulic cylinders and pneumatic actuators. These MR-7 series sensors are based on a proprietary contactless inductive sensing technology that employs a 7 mm diameter probe inserted into a target tube mounted inside of a gun-drilled blind hole in the cylinder rod rather than requiring a ring magnet assembly.

An MR-7 has a 1.75 inch (44.5 mm) hex sensor head with a male O-ring port thread, so it can be mounted in the same SAE dash 8 or 18 mm O-ring port as magnetostrictive sensors. Because they are contactless, MR-7 Series sensors do not wear out and have no signal deterioration over the life of the sensors, and because it uses an inductive coil, an MR-7 sensor can withstand much greater shock and vibrations than other technologies. One very useful element of the MR-7 sensors is ASG's proprietary SenSet™ feature whereby a sensor's analog output can be easily adjusted in the field after installation to match the range of motion of the cylinder rod.

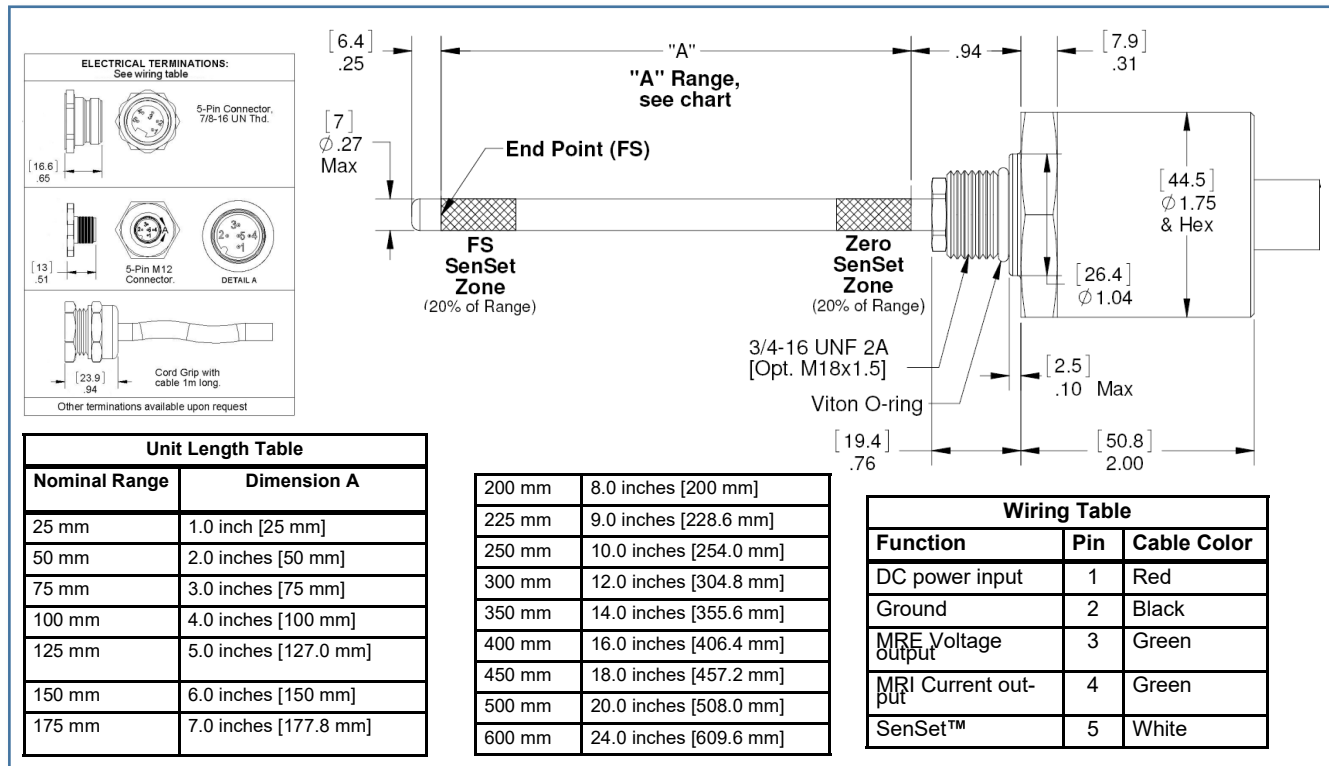
Features:

- LVIT Technology™ (Linear Variable Inductance Transducer)
- Easily adapts to existing cylinder designs
- Contactless sensing for long sensor life
- Proprietary SenSet™ field adjustable range scaling

Specifications:

Analog I/Os	0 – 5 V or 0.5 – 4.5 V output with 8 – 30 V input, 35 mA max. 0-10 V output with 12-30 V input, 35 mA max. 4-20 mA (3-wire) output with 18-30 V input, 60 mA max (75 C max).
FS Measuring Ranges	0-25 mm to 0-600 mm (1 to 36 inches) Full Scale (nominal)
Linearity Error	±0.15% of Full Scale Output (FSO) typical, +/- 0.25% of FSO max.
Resolution	0.025% of FSO
Update Rate	300 Hz (-3dB) minimum
Operating Temperature	-40 to 105 C (4 - 20 mA I/O: -40 to 75 C)
Temperature Coefficient	±≤0.015% of FS/deg C
Operating Pressure	5000 psig (350 bar) operating, 7500 psi (520 bar) proof
Vibration	5-20 Hz, 0.5 inch p-p; 20-2000 Hz, 4.2 g p-p
Shock	1000 g, 11 msec
Terminations	IEC IP-67
Humidity	95% RH, non-condensing

MR-7 Series



Ordering Information:

Series	Output Type	Probe Diameter	Range, Metric	Port Thread	Termination	Output	Housing Material
MR	X-	XX-	XXX-	XX-	XX-	XX-	X-
	E- Voltage	7- 7 mm	025-250 (25 mm increments)	08- 3/4-16	00- 1m cable	05- 0.5 to 4.5 V	A- Aluminum
	I- Current			18- M18	01- 5-pin M12	06- 4.5 to 0.5 V	S- Stainless Steel
			250-500 (50 mm increments)			10- 0 to 10.0 V	
						11- 10.0 to 0 V	
			500-600 (100 mm increments)			20- 4 to 20 mA	
						21- 20 to 4 mA	
						50- 0 to 5 V	
						51- 5 to 0 V	

ALLIANCE SENSORS GROUP
A DIVISION OF H.G. SCHAEVITZ LLC

Alliance Sensors Group
7300 Rt 130 N, Suite 22,
Pennsauken, NJ 08110 USA
Ph: 856-727-0250
www.alliancesensors.com
Info@alliancesensors.com