

NO MAGNET
REQUIRED!

MR-7 Series

Inductive Linear Position Sensors

Lower cost, more robust alternative to magnetostrictive sensors

The MR-7 Series Inductive Linear Position Sensors from Alliance Sensors Group has been designed as an alternative to magnetostrictive sensors that has more robust construction and a lower cost of ownership. 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 with a shorter stroke-to-length ratio than most other technologies, and uses an 8 mm gun drilled hole in the cylinder rod for sensing the rod position 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 output 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 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:

- Extremely robust construction
- Easily adapts to existing cylinder designs
- High resolution with choice of analog outputs
- Senses cylinder rod...no need for magnet
- Contactless sensing for long sensor life
- SenSet™ field scaling of analog output

Specifications:

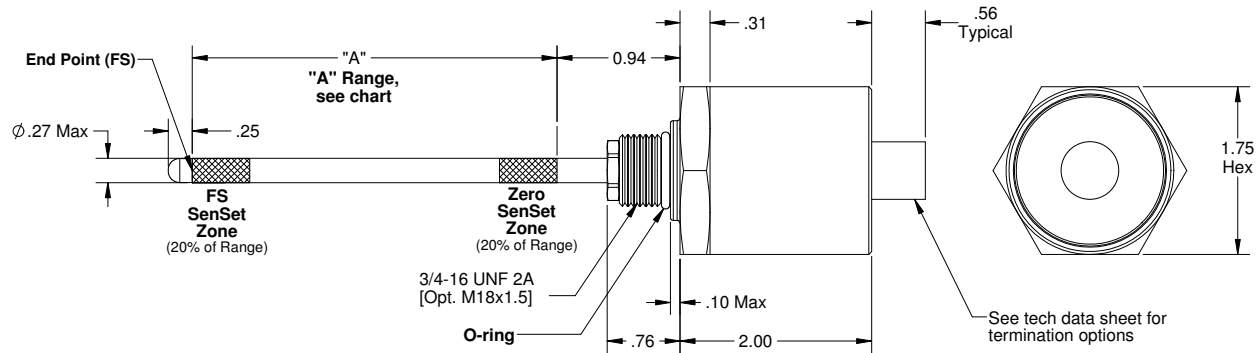
Input Power	15-30 V DC (24 V DC nominal) 35 mA max
Analog Outputs	0-10 V DC, (0.5 to 4.5 V DC optional) 4-20 mA sourcing
Measuring Ranges	0-100 mm to 0-600 mm (4 inches to 24 inches)
Linearity Error	±0.1% of FSO typical, ±0.15% FSO max
Resolution	0.025% of FSO
Frequency Response	500 Hz (nominal) Update Rate
Operating Temperature	0 C to 85 C (-40 C to 105 C Extended Range)
Operating Pressure	5000 psig max.
Vibration	5-20 Hz 0.5 inch p-p; 20-2000 Hz 4.2 g p-p
Shock	1000 g, 11 msec.

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Range	Dim. "A"
100 mm	4 inches
150 mm	6 inches
200 mm	8 inches
250 mm	10 inches
300 mm	12 inches
400 mm	16 inches
500 mm	20 inches
600 mm	24 inches

Wiring Table		
Function	Pin	Cable Color
DC power input	1 or A	Red
Ground	2 or B	Black
MRE voltage output	3 or C	Green
MRI current output	4 or D	Green
SenSet™	5 or E	White



Ordering information:

Series	Output Type	Probe Dia.	Range	Port Thread	Termination	Output	Housing Material	Bore Size	Bore Material
MR	X-	X-	XXX-	XX-	XX-	XX-	X	XX-	XX
	E - Voltage	7 - 7 mm	100 - 100 mm	08 - 3/4-16 UNF	00 - 1-m cable	05 - 0.5-4.5 V DC	A - Aluminum	08 - 8 mm	AL - Aluminum
	I - Current		150 - 150mm	18 - M18 x 1.5	01 - 5-pin M12	10 - 0-10 V DC	S - Stainless Steel	09 - 9 mm	AS - Alloy Steel
			200 - 200mm		03 - 5-pin Turck minifast	11 - 10-0 V DC		10 - 10 mm	CS - Carbon Steel
			250 - 250mm			20 - 4-20 mA		11 - 11 mm	SS - Stainless Steel
			300 - 300mm			21 - 20-4 mA		12 - 12 mm	
			400 - 400mm						
			500 - 500mm						
			600 - 600mm						

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