

For use in:
Hydraulic and Pneumatic Cylinders
Mobile Hydraulic Equipment

No Magnet
Required!

ME-7 Series LVIT Linear Position Sensor

Lower cost, More Robust Alternative to Magnetostrictive Sensors

The ME-7 series LVIT (Linear Variable Inductance Transducer) Position Sensors from Alliance Sensors Group was designed as an alternative to magnetostrictive sensors. This series has a more robust construction and a lower cost of ownership. The unit can be embedded into the end cap of industrial or mobile hydraulic cylinders and pneumatic actuators. These 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. It also features a gun-drilled hole in the cylinder rod for sensing the rod position rather than requiring a ring magnet assembly.

The ME-7 sensor has a 1.89 inch (48 mm) diameter sensor head with an O-ring and back up ring in a groove. It can be mounted in the same cavity in the cylinder cap, and locked in with radial set screws, just like a magnetostrictive sensor. Contactless ME-7 sensors do not wear out and have no output signal deterioration over the life of the sensors because it uses an inductive coil. The ME-7 sensor can withstand much greater shock and vibrations than other technologies. A very useful element of the ME-7 sensors is ASG's proprietary SenSet™ feature whereby a sensor's analog output can be adjusted in the field, after installation, to match the range of motion of the cylinder rod.

Features:

- LVIT Technology™ Linear Variable Inductance Transducer
- Senses cylinder rod... **NO MAGNET REQUIRED**
- Easily adapts to existing cylinder designs
- Contactless sensing for long sensor life
- Proprietary SenSet™ for 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).

Measuring Ranges: 0-25 mm to 0-900 mm (1 to 36 inches) Full Scale (nominal)

Linearity Error: $\pm 0.15\%$ of Full Scale Output (FSO) typical, $\pm 0.25\%$ of FSO max

Resolution: 0.025% of FSO

Update Rate: 300 Hz nominal

Operating Temperature: -20 to 85 C (-40 to 105 C extended temperature range)

Temperature Coefficient: $\leq \pm 0.015\%$ of FS/deg C

Operating Pressure: 5000 psig (350 bar) max operating, 7500 psig (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

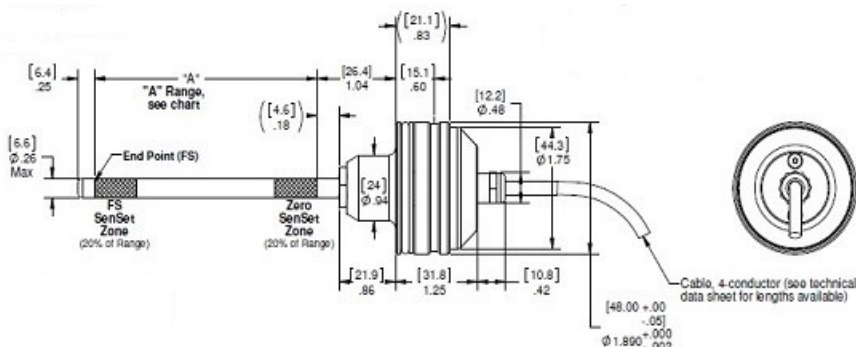
Humidity: 95% RH, non-condensing

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ME-7 Series



Unit Length Table	
Nominal Range	Length "A"
25 mm	1.0 inches [25.4 mm]
50 mm	2.0 inches [50.8 mm]
75 mm	3.0 inches [76.2 mm]
100 mm	4.0 inches [101.6 mm]
125 mm	5.0 inches [127.0 mm]
150 mm	6.0 inches [152.4 mm]
175 mm	7.0 inches [177.8 mm]
200 mm	8.0 inches [203.2 mm]
225 mm	9.0 inches [228.6 mm]
250 mm	10.0 inches [254.0 mm]
300 mm	12.0 inches [304.8 mm]
350 mm	14.0 inches [355.6 mm]
400 mm	16.0 inches [406.4 mm]
450 mm	18.0 inches [457.2 mm]
500 mm	20.0 inches [508.0 mm]
600 mm	24.0 inches [609.6 mm]
700 mm	28.0 inches [711.2 mm]
750 mm	30.0 inches [762.0 mm]
800 mm	32.0 inches [812.8 mm]
900 mm	36.0 inches [914.4 mm]



Wiring Table	
Function	Cable Color
Power input	Red
Ground	Black
Analog output	Green
SenSet™	White

Ordering Information:

Series	Output Type	Probe Diameter	Range, Metric	Body Diameter	Termination	Output	Housing Material	Bore Size (mm)
ME	X-	X-	XXX-	XX-	XX-	XX-	X-	XX-
	E- Voltage	7- 7 mm	025 - 250 (25 mm increments)	48- 48 mm	00- 1 m cable	05- 0.5-4.5 VDC	A- Aluminum	08- 8 (25-100 mm ranges)
	I- Current				01- 1 foot cable	06- 4.5-0.5 VDC	S- 300 Series SS	95- 9.5 (125-200 mm ranges)
			300 - 500 (50 mm increments)			10- 0-10 VDC		11- 11 (225-900 mm ranges)
						11- 10-0 VDC		
			500 - 900 (100 mm increments)			20- 4-20 mA		
						21- 20-4 mA		
						50- 0-5 VDC		
						51- 5-0 VDC		

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All specifications are subject to change without notice.

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