



For use in:

Oil and GAS E&P Equipment
Industrial and Mobile Hydraulics
Off-road and construction vehicles

MHP-7 Series

LVIT Linear Position Sen-

**NO MAGNET
REQUIRED!**

Specifically Designed for Position Feedback of Hydraulic & Pneumatic Cylinders

The MHP-7 series LVIT (Linear Variable Inductance Transducer) Position Sensors from Alliance Sensors Group were designed to be installed into the rear endcap of hydraulic cylinders having a female O-ring port. Their 1-inch hex aluminum or stainless steel housings are ideal for operation up to 5000 psig (350 bar) in high pressure mobile hydraulic systems, factory automation machinery, or oil and gas exploration equipment.

The MHP-7 series sensors are based on a proprietary, contactless, sensing technology with a good stroke-to-length ratio. They employ a 7 mm diameter sealed inductive probe inserted into a gun-drilled hole in the cylinder rod to measure its position rather than using a ring magnet or potentiometer's contact spool. They are offered in full scale ranges from 25 to 900 mm (1 to 36 inches), with a wide variety of analog I/Os, and either connector or cable terminations. The MHP-7 is also offered with 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)
- Senses cylinder rod... **NO MAGNET REQUIRED**
- 1-inch hex aluminum or stainless steel housing
- Easily adapts to existing cylinder designs
- Contactless sensing for long sensor life
- Proprietary SenSet™ for field adjustable range scaling

Specifications:

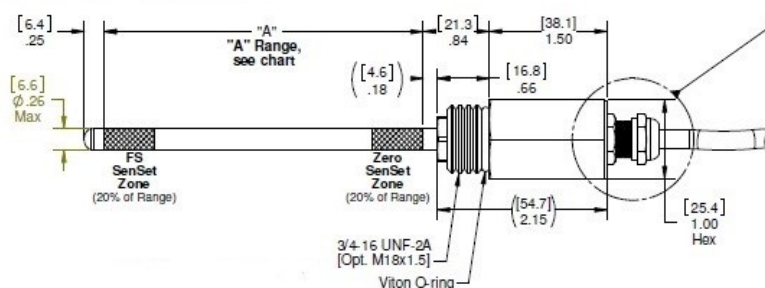
Analog I/Os:	0-5 V or 0.5—4.5 V output with 8 -30 V input, 35 mA max. 0-10 V output with 12—30 V input, 35 mA max. 4-20 mA (3-wire) output with 18-30 V input, 60 mA max (75 C max).
Measuring Ranges:	0-25 mm to 0-900 mm (1 to 36 inches) Full Scale (nominal)
Linearity Error:	<± 0.15% of FSO typical, ± 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:	≤± 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

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

MHP-7 Series

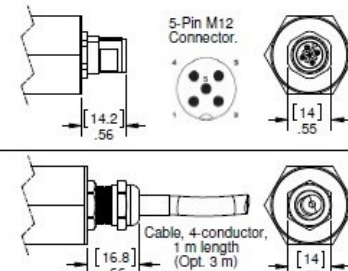


Unit Length Table		Unit Length Table		Wiring Table		
Nominal Range	Dim. "A" In. [mm]	Nominal Range	Dim. "A" In. [mm]	I/O Function	Pin	Cable Color
25 mm	1.0 [25.4]	300 mm	12.0 [304.8]	+ Power input	1	Red
50 mm	2.0 [50.8]	350mm	14.0 [355.6]	Ground	2	Black
75 mm	3.0 [76.2]	400 mm	16.0 [406.4]	Voltage output	3	Green
100 mm	4.0 [101.6]	450 mm	18.0 [457.2]	Current output	4	Green
125 mm	5.0 [127.0]	500 mm	20.0 [508.0]	SenSet™	5	White
150 mm	6.0 [152.4]	600 mm	24.0 [609.6]			
200 mm	8.0 [203.2]	750 mm	30.0 [762.0]			
250 mm	10.0 [254.0]	900 mm	36.0 [914.4]			



ELECTRICAL TERMINATIONS:

See wiring table



Ordering Information:

Series	Output Type	Body Diameter	Range, Metric	Port Thread	Termination	Output	Housing Material	Bore Size (mm)	Bore Material
MHP	X-	X	XXX-	XX-	XX-	XX-	X-	XX-	XX-
	E- Voltage	7- 7 mm	025-150 (25 mm increments)	08- 3/4-16	00- 1 m cable	05- 0.5-4.5 VDC	A- Aluminum	08- 8 (25-100 ranges)	AL- Aluminum
	I- Current			18- M18	01- 5-pin M12	06- 4.5-0.5 VDC	S- 300 Series SS	95- 9.5 (125-200 ranges)	AS- Alloy Steel
			200-500 (50 mm increments)	22- M22	03- 5-pin mini 7/8	10- 0-10 VDC		11- 11 (225-900 ranges)	CS- Carbon Steel
						11- 10-0 VDC			SS- Stainless Steel
			600-900 (150 mm increments)			20- 4-20 mA			
						21- 20-4 mA			
						50- 0-5 V			
						51- 5-0 V			

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

Alliance Sensors Group
102 Commerce Drive, Unit 8
Moorestown, New Jersey 08057 USA
Ph: 856-727-0250
www.alliancesensors.com
info@alliancesensors.com