



For use in:
Subsea valves and cylinders
Oil and gas exploration
PBOF environments

**No Magnet
Required!**

SS-7 Series

LVIT Linear Position Sensor for Subsea

Specifically Designed for Subsea High Pressure PBOF Environments

The SS-7 series LVIT (Linear Variable Inductance Transducer) Position Sensors from Alliance Sensors Group have been designed to give cylinder position feedback in subsea environments with depths up to 12,000 ft or in a PBOF (pressure balanced oil filled) chamber. For oil and gas exploration, blow out preventers, ROVs, and relief valves.

The SS-7 requires no magnet and is based on a proprietary, contactless, inductive, sensing technology that employs a 7 mm diameter probe with a with good stroke-to-length ratio. The SS-7 housing is 1-inch diameter with 316 stainless steel, and comes standard with a subsea connector. They are offered in ranges from 25 to 900 mm (1 to 36 inches) full scale with a wide variety of analog I/Os. The SS-7 sensors are 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)
- Operational to 12,000 ft depth or 5,000 psig (350 bar)
- Senses cylinder rod; no magnet required
- Contactless sensing for longer sensing life
- Proprietary SenSet™ field adjustable range scaling

Specifications:

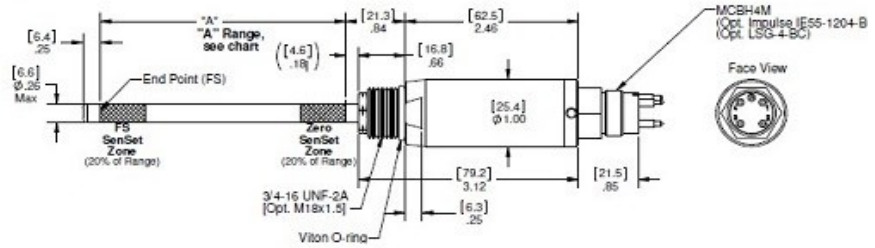
Analog I/Os	0-5 V or 0.5—4.5 V output with 8 -30 V input, 35 mA max. 0-10 V output with 12—30 V input, 35 mA max. 4-20 mA (3-wire) output with 18-30 V input, 60 mA max. (75 C max).
FS Measuring Ranges	25mm to 900 mm (1 to 36 inches)
Linearity Error	± 0.15% of FSO (Full Span Output) typical, ±0.25 max.
Resolution	0.025% of FSO
Bandwidth	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 max. (350 bar)
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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SS-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	
I/O Function	Pin
+ Power Input	1
Ground	2
Analog Output	3
SenSet™	4

Ordering Information:

Series	Output Type	Probe Diameter	Range, Metric	Port Thread	Termination	Output	Housing Material	Bore Size (mm)	Bore Material
SS	X-	X-	XXX-	XX-	XX-	XX-	X-	XX-	XX
	E- Voltage	7- 7 mm	025 - 250 mm	08- 3/4-16UNF	06- MACARTNEY	03- 0-3 VDC	S- 316 SS	08- 8 mm	AS- Alloy Steel
	I- Current		(25 mm increments)	18- M18 x 1.5	MCBH4M	04- 3-0 VDC		95- 9.5 mm	SS- Stainless Steel
			250 - 500 mm			05- 0.5-4.5 VDC		11- 11 mm	AL—Aluminum
			(50 mm increments)			06- 4.5-0.5 VDC			CS—Carbon Steel
			500 - 900 mm			10- 0-10 VDC			
			(100 mm increments)			11- 10-0 VDC			
						20- 4-20 mA			
						21- 20-4 mA			
						50- 0-5 VDC			
						51- 5-0 VDC			

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