



No Magnet
Required!

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

SS-7 Series

LVIT Linear Position Sensor for Subsea

Specifically designed for subsea high pressure PBOF environments with no magnet required!

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 to save space and a gun drilled hole in the cylinder rod. The SS housing 1-inch diameter 316 stainless steel and comes standard with a subsea connector. They are offered in ranges from 25 to 600 mm (1 to 24 inches) full scale with a wide variety of analog I/Os. 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.

Additional information can be found at www.alliancesensors.com.

Features:

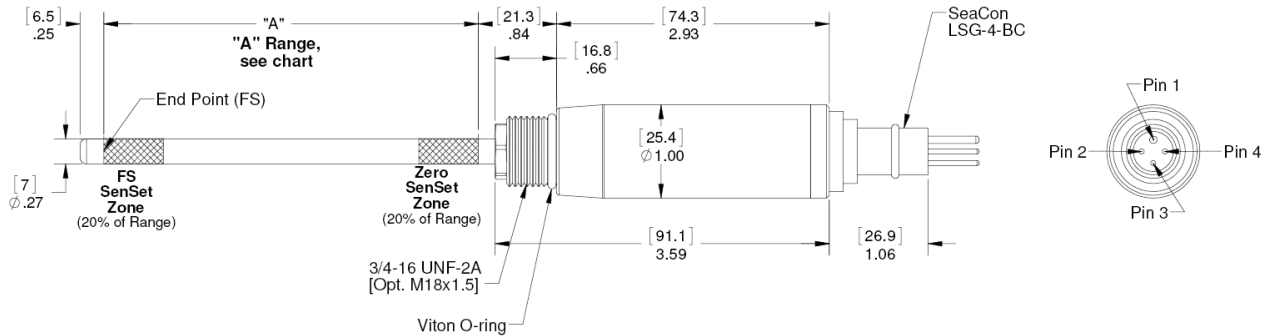
- LVIT Technology™ (Linear Variable Inductance Transducer)
- Operational to 12,000 ft depth or 5,200 psig (350 bar)
- Senses cylinder rod, no magnet required
- Contactless sensing for long sensing life
- Proprietary SenSet™ field adjustable range scaling

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 600 mm(1 to 24 inches)
Linearity Error	<± 0.15% of FSO
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	5200 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

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

SS-7 Series



Unit Length Table

Nominal Range	Length "A" in. [mm]	Nominal Range	Length "A" in. [mm]
25 mm	1.0 [25.4]	225 mm	9.0 [228.6]
50 mm	2.0 [50.8]	250 mm	10.0 [254.0]
75 mm	3.0 [76.2]	300 mm	12.0 [304.8]
100 mm	4.0 [101.6]	350 mm	14.0 [355.6]
125 mm	5.0 [127.0]	400 mm	16.0 [406.4]
150 mm	6.0 [152.4]	450 mm	18.0 [457.2]
175 mm	7.0 [177.8]	500 mm	20.0 [508.0]
200 mm	8.0 [203.2]	600 mm	24.0 [609.6]

Wiring Table

Function	Pin
DC 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-	XX-	XXX-	X-	XX-	XX-	X-	XX-	XX
LR	E- Voltage	7- 7 mm	025-250 mm (25 mm increments)	08- 3/4-16UNF 18-M18 x 1.5	06-MacArtney MCBH4M	03- 0-3 VDC	S- 316 SS	08- 8	AS- Alloy Steel
	I- Current					04- 3-0 VDC		95- 9.5	SS- Stainless Steel
			250-500 mm (50 mm increments)			05- 0.5-4.5 VDC		11- 11	
				500-600 mm (100 mm increments)			06- 4.5-0.5 VDC		
							10- 0-10 VDC		
						11- 10-0 VDC			
						20- 4-20 mA			
						21- 20-4 mA			
						50- 0-5 VDC			
						51- 5-0 VDC			

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