



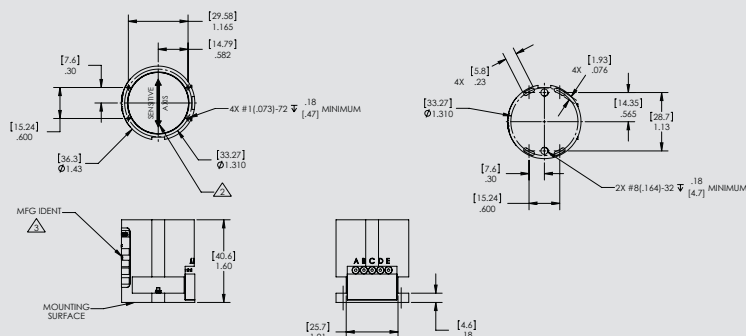
## LSRP Analog Inclinometer

### Introduction

The LSRP Series inclinometer is an extremely sensitive, rugged transducer designed to provide horizontal angle or vertical deviation measurements with virtually infinite resolution. These fluid damped compact, cylindrical shaped sensors are stackable to meet the needs of applications with space constraints while facilitating the use of several inclinometers for multi-axis measurements.

### Features

- $\pm 1^\circ$  to  $\pm 90^\circ$  Input Full Range
- Only 1.4" diameter X 1.60" Tall in Size
- Withstands 20 grms of vibration
- Stackable for 2-Axis Sensing
- Solder Pins Terminations
- RoHS version available



Dimensions in [mm]

### Block

Pin A	+12 to +18 VDC
Pin B	Power / Sig Common
Pin C	-12 to -18 VDC
Pin D	Eo [Volts/g]
Pin E	Self-Test

### Application

- Heavy Construction Grading
- Ship and Barge Leveling
- Deviation Surveys
- Continuous Casting
- Weapons Platform Leveling
- Steel Mill Ladle Position
- Oil and Gas Well Bore Mapping
- Geophysical Monitoring
- Mobile Antenna Positioning



## Performance specifications LSRP

### Performance

Input range (°)	±1.0	±3.0	±14.5	±30.0	±90.0
Full range output VDC (fro ± 1%) <sup>1</sup>			±5.0		
Non linearity (%fro max) <sup>2</sup>	0.05	0.05	0.02	0.02	0.05
Scale factor (V/g, nominal)	286.5	95.5	20.0	10.0	5.0
Scale factor temp. Sensitivity (ppm/°c, max)	400	300	100	60	60
Bandwidth (-3db hz, nominal)	0.5	2.0	15.0	20.0	40.0
Transverse axis misalignment (° max)	0.10	0.15	0.25	0.50	1.00
Output at 0° tilt (Volts, max)	±0.10	±0.04	±0.02	±0.02	±0.02
0° output temp. Sensitivity (Volts/°C, max)	0.005	0.003	0.001	0.0005	0.0003
Resolution & threshold (µradian)			1		

### Electrical

Input voltage range (VDC) <sup>4</sup>			±12 to ±18		
Input current (mA, max)			15		
Output impedance (Ohms, nominal)	15k	5k	15k	8k	4k
Noise (Vrms max)			0.002		

### Environmental

Operating temperature range			-18° to +71°C		
Storage temperature range			-40° to +71°C		
Shock			1500g, 0.5 msec, 1/2 sine		
Seal			MIL-STD 202, Method 112		
Vibration			20 grms		
Weight			4.0 oz		

### Notes

1. Full range is defined as "from negative full input angle to positive full input angle."
2. Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.
3. Output phase angle = -90°
4. Unit Power connections can easily be adapted for operations from single-ended, floating power supplies of 24 to 36 Volts DC.

\*Specifications subject to change without notice on account of continued product development



## Ordering information

### RoHS Version

<b>±1.0</b>	LSRP-1	02550389-001
<b>±3.0</b>	LSRP-3	02550389-002
<b>±14.5</b>	LSRP-14.5	02550389-003
<b>±30.0</b>	LSRP-30	02550389-004
<b>±90.0</b>	LSRP-90	02550389-005

### Military Grade

<b>±1.0</b>	LSRP-1	02550276-001
<b>±3.0</b>	LSRP-3	02550276-002
<b>±14.5</b>	LSRP-14.5	02550276-003
<b>±30.0</b>	LSRP-30	02550276-004
<b>±90.0</b>	LSRP-90	02550276-005