

An extremely sensitive and rugged transducer designed to provide horizontal angle or vertical deviation measurements with virtually infinite resolution.



The Jewell **LSRP Series** meets the needs of applications with space constraints. The fluid damped compact, cylindrical shape and the "stacking" feature of the LSR facilitate the use of several inclinometers when multi-axis measurement is required. The LSRP offers precise readings with high outputs at lower range frequencies.

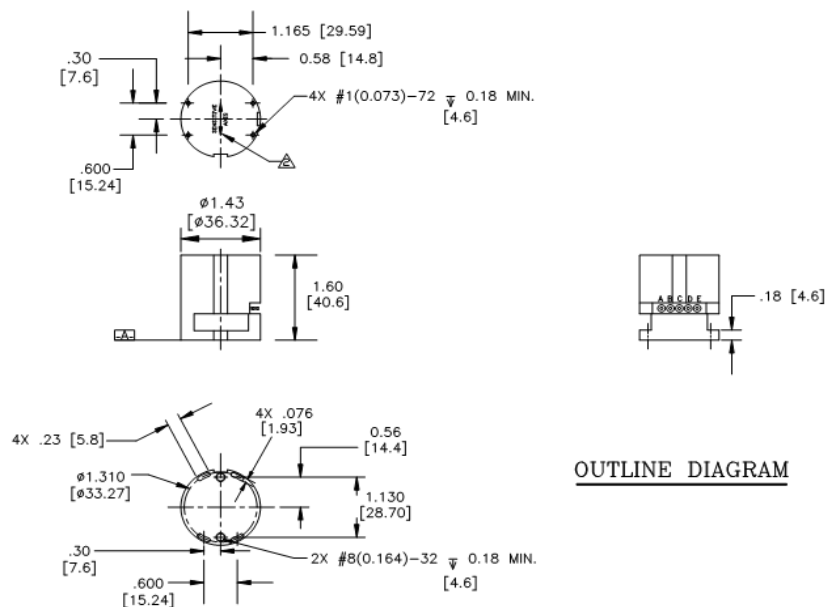
Features & Benefits

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

Applications

- 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

Dimensional Drawing: LSRP Inclinometer Series



Pin A	+12 to +18 VDC
Pin B	Power/Sig Common
Pin C	-12 to -18 VDC
Pin D	E _o (volts/g)
Pin E	Self-Test

Jewell Instruments LLC, 850 Perimeter Road, Manchester, NH 03103

sales@jewellinstruments.com • www.jewellinstruments.com • Tel (800) 227-5955

LSRP Inclinometer Specifications

PERFORMANCE

Input Range (°)	± 1.0	± 3.0	± 14.5	± 30.0	± 90.0
Full Range Output (FRO), ±1% (Note 1)	± 5.0	± 5.0	± 5.0	± 5.0	± 5.0
Non Linearity (%FRO' Max.) (Note 2)	0.05	0.05	0.02	0.02	0.05
Scale Factor (V/g, Nom.)	286.5	95.5	20.0	10.0	5.0
Scale Factor Temp Sens (PPM/°C, Max.)	400	300	100	60	60
Natural Frequency, Hz, (Nom.) (Note 3)	1.0	2.0	15.0	20.0	40.0
Bandwidth (-3db), Hz, (Nom.)	1.0	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. Sens, (Volts/°C, Max.)	0.005	0.003	0.001	0.005	0.003
Resolution and Threshold	1 μradian				

ELECTRICAL

Input Voltage (Vdc) (Note 4)	±12 to ±18				
Input Current (mA, Nom.)	±15				
Output Impedance (Ohms, Nom.)	15k	5k	16k	8k	4k
Noise (Vrms, Max.)	0.002				

ENVIRONMENTAL

Operating Temp Range	-18°C to +71°C				
Survival Temp Range	-60°C to +90°C				
Vibration	20 grms				
Shock	1500g, 0.5 msec, 1/2 sine				
Seal	MIL-STD 202, Method 112				
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.

How to Order

LSRP Series

LSRP-1	02550276-001
LSRP-3	02550276-002
LSRP-14.5	02550276-003
LSRP-30	02550276-004
LSRP-90	02550276-005

Jewell Instruments LLC, 850 Perimeter Road, Manchester, NH 03103
 sales@jewellinstruments.com • www.jewellinstruments.com • Tel (800) 227-5955