

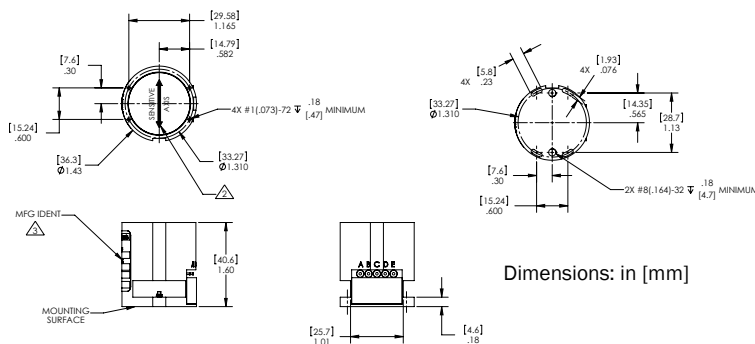
LSRP

Single-Axis Analog Inclinometer

The Jewell 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 ± 90 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



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



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

PERFORMANCE SPECIFICATIONS

PERFORMANCE

INPUT RANGE (°)	±1.0	±3.0	±14.5	±30.0	±90.0
FULL RANGE OUTPUT VDC (FRO ± 1%)¹	±5.0				
NON LINEARITY (%FRO max)²	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)⁴	±12 to ±18				
INPUT CURRENT (mA, max)	15				
OUTPUT IMPEDANCE (Ohms, nominal)	15k	5k	15k	8k	4k
NOISE (V, rms 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 are subject to change without notice due to continued product development



ORDERING INFORMATION

HOW TO ORDER

RoHS Version

	MODEL #	PART #
±1.0	LSRP-1	02550389-001
±3.0	LSRP-3	02550389-002
±14.5	LSRP-14.5	02550389-003
±30.0	LSRP-30	02550389-004
±90.0	LSRP-90	02550389-005

Military Grade

	MODEL #	PART #
±1.0	LSRP-1	02550276-001
±3.0	LSRP-3	02550276-002
±14.5	LSRP-14.5	02550276-003
±30.0	LSRP-30	02550276-004
±90.0	LSRP-90	02550276-005

850 Perimeter Road Manchester, NH 03103 USA

SENSORS: 800.227.5955
www.jewellinstruments.com | sensors@jewellinstruments.com

FI27
© Jewell Instruments 2020

