

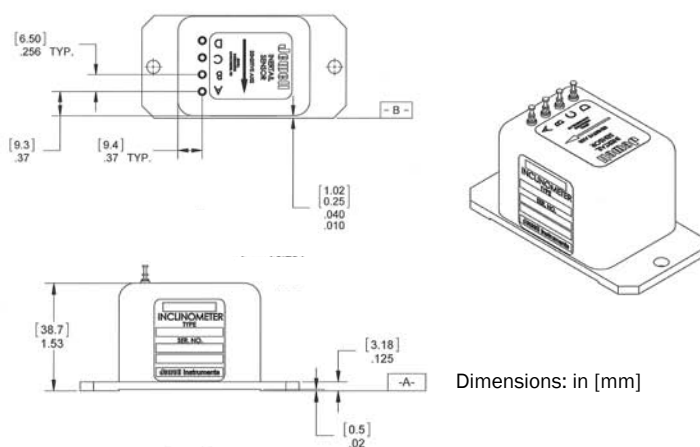
LCI

Single-Axis Analog Inclinometer

The Jewell LCI Series flexure suspension servo inclinometer is a $\pm 3^\circ$ to $\pm 90^\circ$ device designed for low frequency tilt sensing applications. LCI units are characterized by excellent turn on repeatability and very low hysteresis.

FEATURES:

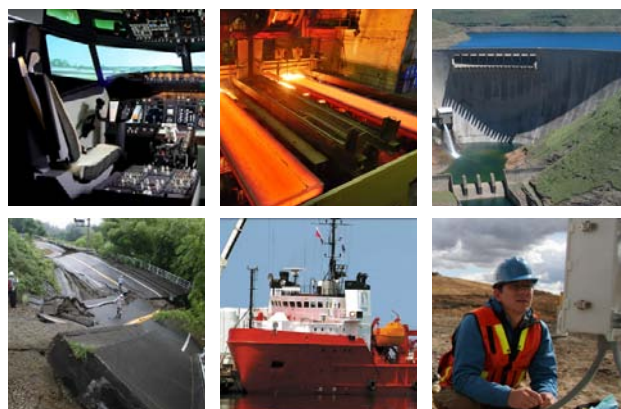
- Standard 5 Hz Bandwidth Cutoff
- Economically Priced - High Accuracy
- Resolves Angles $> 1\mu\text{rad}$
- 100 ppm/ $^\circ\text{C}$ Scale Factor Temp Sensitivity
- -55°C to $+85^\circ\text{C}$ Operating Temp Range



Dimensions: in [mm]

PIN OUT:

A	+15 VDC
B	-15 VDC
C	Power/Sig Common
D	Eo [Volts/g]



APPLICATIONS:

- Robotics Orientation
- Antenna Leveling
- Laboratory Testing
- Telescope Vertical Reference Calibration
- Vehicle Wheel Align
- Movement Detection System
- Educational Research
- Train Tilt Control Systems
- Train Automated Controls
- Tunnel Tilt Measurement
- Track Monitoring and Testing

PERFORMANCE SPECIFICATIONS: LCI

PERFORMANCE

INPUT RANGE (°)	±3	±5	±10	±14.5	±30	±90
FULL RANGE OUTPUT (FRO) ¹ VDC ± 0.5%	±5.0					
SCALE FACTOR (V/g, nominal)	95.5	57.4	28.8	20	10	5
SCALE FACTOR TEMP. SENSITIVITY (PPM/°C, max)	100					
NONLINEARITY (%FRO) ² max	0.05	0.05	0.05	0.02	0.02	0.05
BANDWIDTH (-3db, Hz, nominal)	5					
TRANSVERSE AXIS MISALIGNMENT (° max)	0.7					
0° OUTPUT RANGE (Volts)	±0.1	±0.6	±0.075	±0.05	±0.05	±0.025
0° OUTPUT TEMP. SENSITIVITY (Volts/°C, max)	0.0048	0.0029	0.0014	0.0003	0.0003	0.0003
RESOLUTION & THRESHOLD (μradian, max)	1					

ELECTRICAL

NUMBER OF AXES	1
INPUT VOLTAGE RANGE (VDC)	±12 to ±18
INPUT CURRENT (mA, max)	30
OUTPUT IMPEDANCE (Ohms, nominal)	100
NOISE (Vrms max)	0.001

ENVIRONMENTAL

OPERATING TEMPERATURE RANGE	-55° to +85°C
SURVIVAL TEMPERATURE RANGE	-60° to +90°C
SHOCK	3 foot drop
SEAL	MIL-STD-202, Mtd. 112

NOTES:

1. Full range is defined as "from negative full input angle to positive full input angle." The Inclinometer output is proportional to the sine of the tilt angle.
2. Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.

Specifications are subject to change without notice due to continued product development



ORDERING INFORMATION

HOW TO ORDER

	MODEL #	PART #
±3.0	LCI-3	459999-004
±5.0	LCI-5	459999-005
±10.0	LCI-10	459999-006
±14.5	LCI-14.5	459999-001
±30.0	LCI-30	459999-002
±90.0	LCI-90	459999-003

850 Perimeter Road Manchester, NH 03103 USA

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

F119
© Jewell Instruments 2020

