

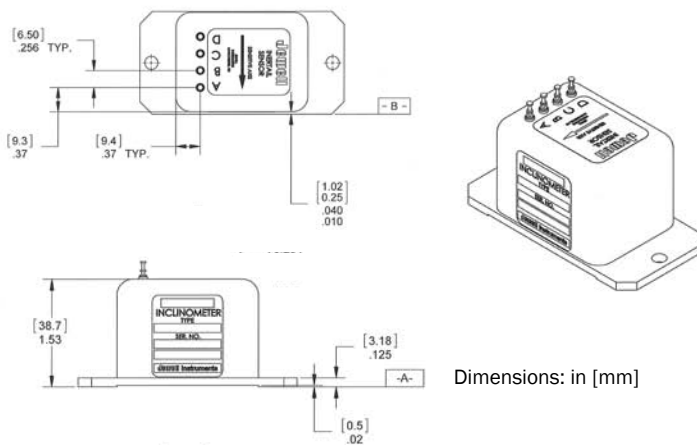
## LCI

### 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.

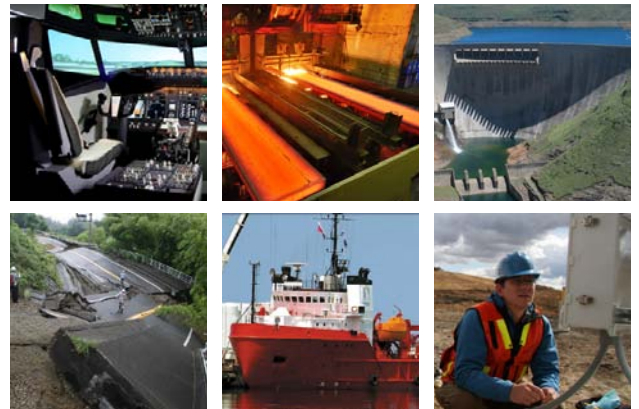
#### FEATURES:

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



#### PIN OUT:

<b>A</b>	+15 VDC
<b>B</b>	-15 VDC
<b>C</b>	Power/Sig Common
<b>D</b>	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

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

## ELECTRICAL

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

## ENVIRONMENTAL

<b>OPERATING TEMPERATURE RANGE</b>	-55° to +85°C
<b>SURVIVAL TEMPERATURE RANGE</b>	-60° to +90°C
<b>SHOCK</b>	3 foot drop
<b>SEAL</b>	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 #
<b>±3.0</b>	LCI-3	459999-004
<b>±5.0</b>	LCI-5	459999-005
<b>±10.0</b>	LCI-10	459999-006
<b>±14.5</b>	LCI-14.5	459999-001
<b>±30.0</b>	LCI-30	459999-002
<b>±90.0</b>	LCI-90	459999-003

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