

# LCI Series Flexure Suspension Servo Inclinometer

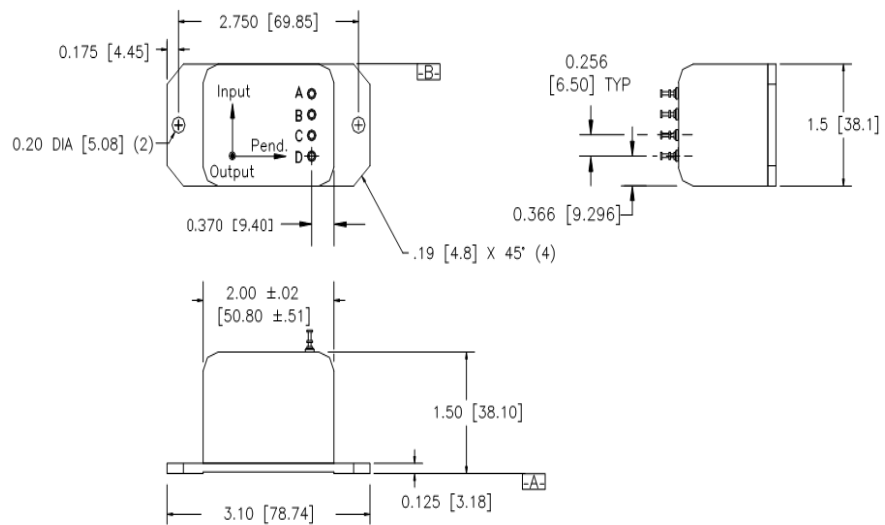
**Input Ranges From  $\pm 3^\circ$  to  $\pm 90^\circ$  and offers excellent turn on repeatability.**

## The Jewell **LCI Series**

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.



**Outline Drawing: Dimensional Drawing for the LCI Inclinometer**



## Features & Benefits

- Standard 5 Hz Bandwidth Cutoff
- Economically Priced - High Accuracy
- Resolves Angles > 1mrad
- 100 ppm/°C Temp Sensitivity
- -55°C to +80°C Temp Reading

## 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

### Pin Out:

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

## LCI Inclinometer Specifications

### STATIC/DYNAMIC

Input Range, °:	±3	±5	±10	±14.5	±30	±90
Full Range Output (FRO -Note 1) VDC ±0.5%:	±5.00	±5.00	±5.00	±5.00	±5.00	±5.00
Scale Factor, Volts/g, nominal:	95.5	57.4	28.8	20	10	5
Scale Factor Temp. Sensitivity (SFTS), PPM /°C maximum:	100	100	100	100	100	100
Bandwidth (-3 dB), Hz nominal:	5.00	5.00	5.00	5.00	5.00	5.00
Output Axis Misalignment, ° maximum:	0.7	0.7	0.7	0.35	0.7	0.7
Pendulous Axis Misalignment, ° maximum:	0.70	0.70	0.70	0.35	0.70	0.70
0° Output, Volts range:	±0.1	±0.06	±0.075	±0.05	±0.05	±0.025
0° Output Temp. Sensitivity, Volts /°C maximum:	0.0048	0.0029	0.0014	0.0003	0.0003	0.0003
Resolution and Threshold, μradians maximum:	1.0	1.0	1.0	1.0	1.0	1.0

### ELECTRICAL

Number of Axes:	1
Input Voltage Range, (VDC):	±12 to ±18
Input Current, mA, max:	25
Output Impedance, Ohms, nom:	100
Noise, Vrms, maximum:	0.001

### ENCLOSURE

Seal:	MIL-STD-202, Mtd. 112
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### ENVIRONMENTAL

Operating Temp Range:	-55°C to +85°C
Storage Temp Range:	-60°C to +90°C
Vibration grms:	0
Shock:	3 foot drop

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 - Referenced to theoretical sine value independent of misalignment.

3- Output phase angle = -90°

## How to Order

LCI-3	459999-004
LCI-5	459999-005
LCI-10	459999-006
LCI-14.5	459999-001
LCI-30	459999-002
LCI-90	459999-003