



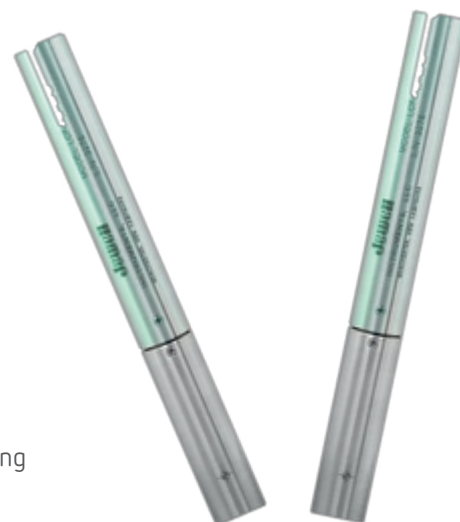
LCF-196 Analog Inclinometer

Features

- Very low hysteresis
- Excellent turn on repeatability
- High Accuracy Sensor
- 500g Shock Capability
- IP65 Sealed Housing
- Less > 0.02% Non-linearity
- Bias Temp Sens >50µg/°C
- Small diameter

Application

- Geophysical Measurement
- Earth Movement Monitoring
- Oil & Gas Well Logging
- Dam Monitoring
- Heavy Construction, Grading
- Ship & Barge Leveling
- Deviation Surveys
- Continuous Casting
- Weapons Platform Leveling
- Data Logging



Introduction

Biaxial Inclinometer is a ± 14.5 to ± 90 device, with lower ranges available with customization. The LCF 196 Series is a high accuracy sensor designed for applications where high levels of shock and vibration are present. The LCF 196 is a two-axis tilt sensor in a 22 mm diameter stainless steel package.

Performance specifications

Static/dynamic

Input range (°)	± 14.5	± 30.0	± 90.0
Full Range Output (FRO) VDC $\pm 1\%$ ¹	± 5.0	± 5.0	± 5.0
Non linearity (%fro max) ²	0.02	0.02	0.10
Scale Factor, Volts/g, Nominal	20.0	10.0	5.0
Scale factor temp. Sensitivity (ppm/°c, max)	100	100	100
Natural Frequency, Hz Nominal ³	30.0	30.0	30.0
Bandwidth (-3db hz, nominal)	30.00	30.00	30.00
Input Axis Misalignment, ° Maximum	1.00	1.00	1.00
Bias, Volts, Maximum	0.040	0.020	0.020
0° Output Temp Sensitivity, Volts/°C, Maximum	0.001	0.0005	0.0003
Resolution and Threshold	3 μ radians		

Electrical

Input Voltage Range, (VDC) ⁴	± 12 to ± 19		
Input Current, mA, Nominal	15		
Output Impedance, Ohms, Nominal	100		
Noise, Vrms, Maximum	0.002	0.001	0.001

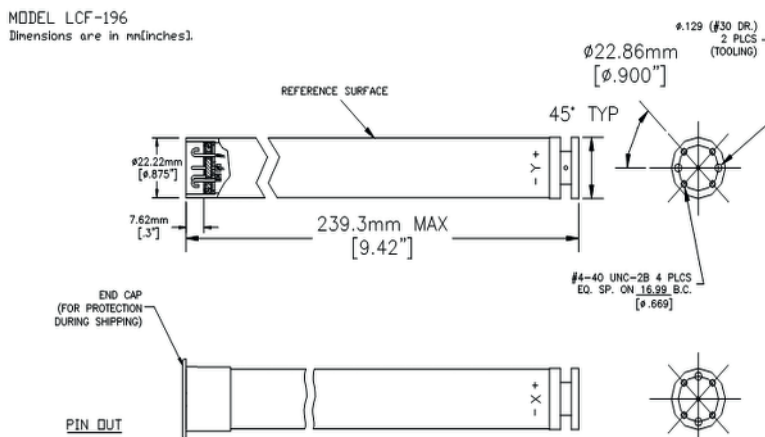
Environmental

Operating Temp Range	-40°C to +80°C		
Survival Temp Range	-60°C to +90°C		
Vibration grms	10		
Shock	500g, 0.001 sec		
Seal	MIL-STD 202, Method 112		
Weight	11.0 oz.		

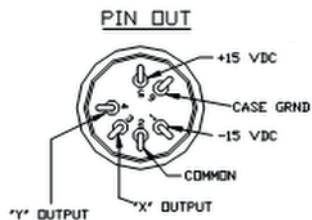
- Notes**
1. Full Range is defined as "from negative full input angle to positive full input angle."
 2. Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.
 3. Output phase angle = -90°
 4. Unit Power connections can easily be adapted for operations from single-ended, floating power supplies of 24 to 34 Volts DC.

Custom Capabilities
Available in lower ranges with customization.
Single Axis lower cost until available.

Outline Diagram



Pin Out (Options: C-connector, P-Pin)



Ordering information

LCF-196-14.5	475196-001
LCF-196-30	475196-002
LCF-196-90	475196-003