

## LCF 2000/3000 Inclinometer



**BEST OF  
CLASS**

*This is a two or three axis version of the rugged, high accuracy LCF Series. It is available with a wide range of options including single ended input power, internal temperature sensor and 4-20mA output*

### LCF 2000/3000 Inclinometer Specifications

#### Performance

|   |          |       |        |        |
|---|----------|-------|--------|--------|
| Input Range, °:                                 | ±1.0     | ±14.5 | ±30.0  | ±90.0  |
| Full Range Output (FRO), VDC ±1% <sup>1</sup> : | ±5.0     | ±5.0  | ±5.0   | ±5.0   |
| Nonlinearity, % FRO <sup>2</sup> , maximum:     | 0.05     | 0.02  | 0.02   | 0.10   |
| Scale Factor, volts/g nominal:                  | 286.5    | 20.0  | 10.0   | 5.0    |
| Scale Factor Temp Sensitivity, PPM/°C, maximum: | 200      | 100   | 100    | 100    |
| Natural Frequency, Hz, nominal <sup>3</sup> :   | 3.0      | 30.0  | 30.0   | 30.0   |
| Bandwidth (-3db), Hz, nominal:                  | 3.0      | 30.0  | 30.0   | 30.0   |
| Input-Axis Misalignment, °, maximum:            | 0.25     | 0.50  | 1.00   | 1.00   |
| Bias Volts, maximum:                            | 0.75     | 0.075 | 0.050  | 0.050  |
| 0° Output Temp Sensitivity, volts/°C, maximum:  | 0.015    | 0.001 | 0.0005 | 0.0003 |
| Resolution and Threshold:                       | 1µradian |       |        |        |

#### Electrical

|                                   |                 |                 |  |
|-----------------------------------|-----------------|-----------------|--|
| Input Voltage, VDC <sup>4</sup> : | ±12 to ±18      |                 |  |
| Input Current, mA, nominal:       | Model 2000 - 30 | Model 3000 - 45 |  |
| Output Impedance, ohms, nominal:  | 100             |                 |  |
| Noise, mV rms, maximum:           | 0.002           |                 |  |

#### Environmental

|                       |                         |
|-----------------------|-------------------------|
| Operating Temp Range: | -40° C to +80° C        |
| Survival Temp Range:  | -60° C to +90° C        |
| Vibration:            | 20 grms                 |
| Shock:                | 1000 g, 0.001 sec       |
| Seal:                 | MIL-STD 202, Method 112 |
| Weight:               | 16.0 oz.                |

<sup>1</sup> Full Range is defined "from negative full input angle to positive full input angle."

<sup>2</sup> Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.

<sup>3</sup> Output Phase angle = -90°.

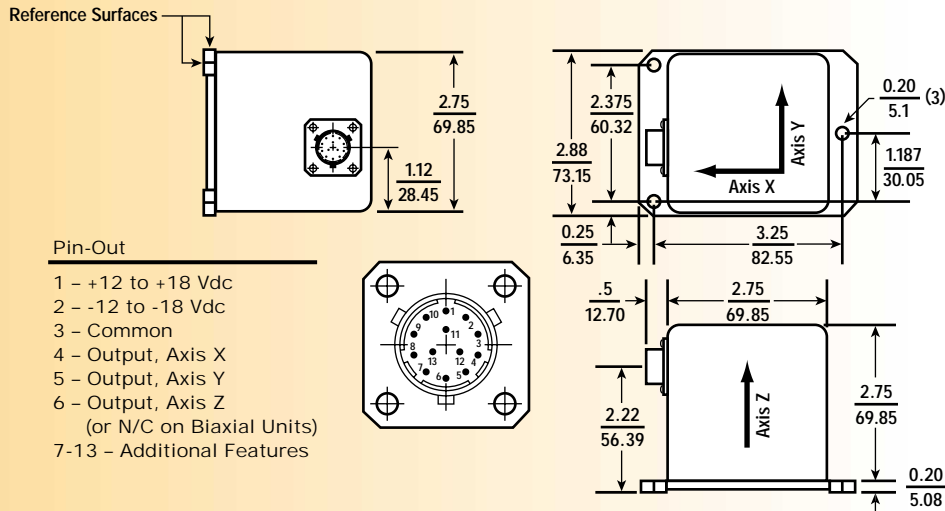
<sup>4</sup> Unit Power connections can be easily adapted for operations from single-ended, floating power supplies of 24 to 36 Volts DC.

#### Applications

- ▶ Antenna Leveling
- ▶ Weapons Platforms
- ▶ Barge & Offshore Platform Leveling & Control
- ▶ Torpedo Attitude Control

## LCF 2000 and 3000 Models

Dimensional Drawing for the LCF Inclinometer (inch/mm)



Block Diagram for the LCF Inclinometer

