



LCF-3000 Digital Inclinometer

Features

- Ranges Available from $\pm 3^\circ$ to $\pm 90^\circ$
- Operating Temp Range of -40°C to $+80^\circ\text{C}$
- Shock Survival of 1000g
- High Level of ± 5 Vdc Output
- Fluid Damped
- Tri-Axis

Application

- Antenna Leveling
- Weapons Platforms
- Barge & Offshore Platform Leveling & Control
- Missile Launchers
- Crane Overturning-Moment Alarms
- Electronic Level Applications
- Marine Data Bouy Applications



Introduction

Input ranges from $\pm 3.0^\circ$ to $\pm 90^\circ$ with high reliability, high resolution and three axis. The LCF 3000 Series tri axis inclinometer is a rugged, high accuracy version of the LCF Series. It is available with a wide range of options including single ended input power, internal temperature sensor and 4-20mA.

Performance specifications

Static/dynamic

Input range ($^\circ$)	± 3	± 14.5	± 30	± 90
Full Range Output (FRO) VDC $\pm 1\%$ ¹	± 5.00	± 5.00	± 5.00	± 5.00
Scale Factor, Volts/g, Nominal	95.54	20	10	5
Scale Factor Temp. Sensitivity (SFTS), PPM / $^\circ\text{C}$ max	100	100	100	100
Bandwidth (-3 dB), Hz nominal	3.00	30.00	30.00	30.00
Input Axis Misalignment, $^\circ$ maximum	0.4	0.4	0.7	0.7
Pendulous Axis Misalignment, $^\circ$ maximum	0.35	0.35	0.71	0.71
0 $^\circ$ Output, Volts range	± 0.25	± 0.075	± 0.05	± 0.05
0 $^\circ$ Output Temp. Sensitivity, Volts / $^\circ\text{C}$ maximum	0.005	0.001	0.0005	0.0003
Resolution and Threshold, μ radians maximum	1.0	1.0	1.0	1.0

Electrical

Number of Axes	3
Input Voltage Range, (VDC)	± 12 to ± 18
Input Current, mA, max	30
Output Impedance, Ohms, nom	100
Noise, Vrms, Maximum	0.002

Environmental

Operating Temp Range	-40°C to $+80^\circ\text{C}$
Storage Temp Range	-40°C to $+90^\circ\text{C}$
Vibration grms	20
Shock	1000g, 0.001 sec., $\frac{1}{2}$ sine

Enclosure

Weight oz	16
Seal	Mil-Std 202, Mtd 112

LCF-3000 Tri-Axis Digital Inclinometer

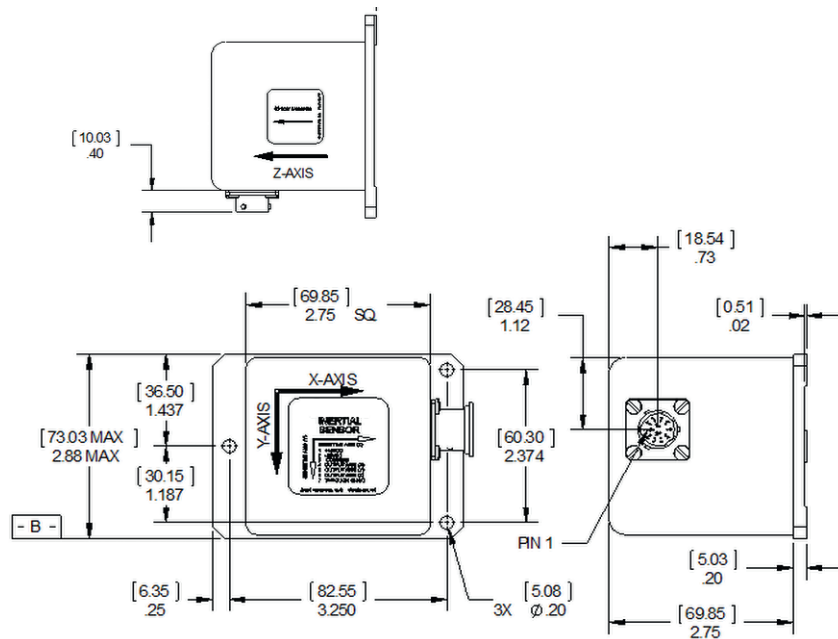
Single ended input power, internal temperature sensor and 4-20mA Output

- Notes**
1. Full Range is defined "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.

Custom Capabilities

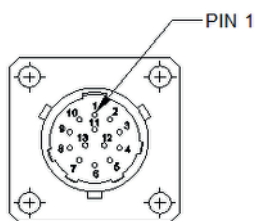
- Unit Power Connections can be easily adapted for operations from single-ended, floating power supplies of 24 to 36 Volts DC
- Internal Temperature Sensor
- 4-20 mA output

Outline Diagram



Dimensions in inches [mm]

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



CONNECTOR: MS27476Y10D35P
MATE: MS27473T10B35S

Connector interface

1	+15 VDC	5	X OUTPUT
2	-15 VDC	6	Z OUTPUT
3	COMMON	7-13	NC
4	X OUTPUT		

Ordering information

LCF-3000-3/3/3	471300-001
LCF-3000-14.5/14.5/14.5	471300-002
LCF-3000-30/30/30	471300-003
LCF-3000-90/90/90	471300-004