

LCF-3000 Tri-Axis Inclinometer



Making Sense out of Motion...

Input Ranges From $\pm 3.0^\circ$ to $\pm 90^\circ$ With High Reliability, High Resolution, and Three Axis



The Jewell **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.

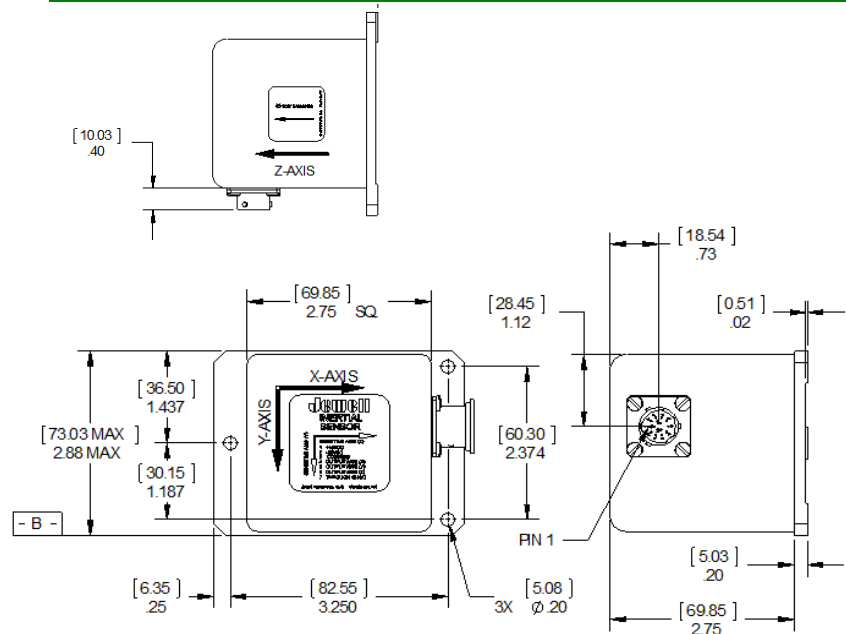
Features & Benefits

- 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

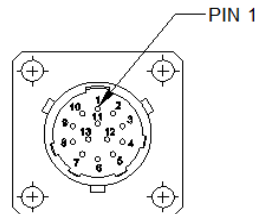
Applications

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

Outline Diagram



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



CONNECTOR: MS27476Y10D35P
MATE: MS27473T10B35S

CONNECTOR INTERFACE	
PIN	FUNCTION
1	+15 VDC
2	-15 VDC
3	COMMON
4	X OUTPUT
5	Y OUTPUT
6	Z OUTPUT
7-13	N/C

Performance Specifications

STATIC/DYNAMIC

Input Range, °:	±3	±14.5	±30	±90
Full Range Output (FRO -Note 1) VDC ±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 /°C maximum:	100	100	100	100
Bandwidth (-3 dB), Hz nominal:	3.00	30.00	30.00	30.00
Output Axis Misalignment, ° maximum:	0.4	0.4	0.7	0.7
Pendulous Axis Misalignment, ° maximum:	0.35	0.35	0.71	0.71
0° Output, Volts range:	±0.25	±0.075	±0.05	±0.05
0° Output Temp. Sensitivity, Volts /°C maximum:	0.005	0.001	0.0005	0.0003
Resolution and Threshold, μradians 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

ENCLOSURE

Weight oz:	16
Seal:	Mil-Std 202, Mtd 112

ENVIRONMENTAL

Operating Temp Range:	-40°C to +80°C
Storage Temp Range:	-40°C to +90°C
Vibration grms:	20
Shock:	1000g, 0.001 sec., ½ sine

Notes: Note 1: Full Range is defined "from negative full input angle to positive full input angle."

Note 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

How to Order

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