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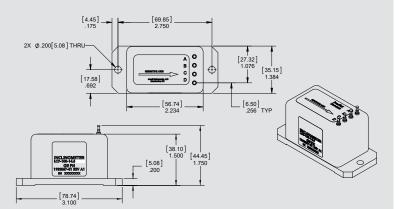
LCF-100 Single-Axis Analog Inclinometer

Introduction

The LCF Series flexure suspension servo fluid damped inclinometer is a $\pm 1^{\circ}$ to $\pm 90^{\circ}$ device designed for applications where high levels of shock and vibration are present. LCF units are characterized by excellent turn on repeatability and very low hysteresis. This unit is available with a pin terminal connection or a 6-pin cable connection.

Features

- Direct Bogie Mount
- 3-30 Hz Bandwidth
- Milligram Bias and Scale Factor
- High Level ± 5Vdc Output
- -40°C to +80°C Temperature Rating



Dimensions in [mm]

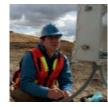












Application

- Heavy Construction, Grading
- Ship and Barge Leveling
- Deviation Surveys
- Continuous Casting for Steel Industry
- Weapons Platform Leveling
- Aircraft Flight Control
- Robot Vertical Referencing
- Auto Manufacturing Suspension Install
- Geophysical Low Range Tilt Sensing
- Platform Orientation
- Dam Sluice Gate Control





Performance specifications LCF-100

Performance

Input range (°)	±1.0	±14.5	±30.0	±90.0
Full range output VDC (fro $\pm 1\%$) ¹		±5	5.0	
Non linearity (%fro max) ²	0.05	0.02	0.02	0.05
Scale factor (V/g, nominal)	286.5	20.0	10.0	5.0
Scale factor temp. Sensitivity (ppm/°c, max)		10	00	
Bandwidth (-3db hz, nominal)	3.0	30.0	30.0	30.0
Transverse axis misalignment (° max)	0.15	0.05	1.00	1.00
Bias (Volts) max	0.500	0.100	0.100	0.050
0° Tilt temperature sensitivity (Volts/°C, max)	0.015	0.001	0.0005	0.0003
Resolution & threshhold (µradian)			1	

Electrical

Input voltage range (VDC)	±12 to ±18	
Input current (mA, max)	±15	
Output impedance (Ohms, nominal)	100	
Noise (Vrms max)	0.002	

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°

*Specifications subject to change without notice on account of continued product development

Pin outs

	Pin Version	sion Connector Version		
А	+12 to +18 VDC	А	+12 to +18 VDC	
В	-12 to -18 VDC	В	Power/Sig Common	5
С	Power/Sig Common	С	-12 to -18 VDC	
D	Eo [Volts/g]	D	Eo [Volts/g]	
		E	N/C	KUC
		F	N/C	6

Environmental

Operating temp. Range	-40° to +80°C			
Survival temp. Range	-60° to +90°C			
Shock 1500g, 1 msec, ½ sine				
Ероху	Ероху			
Vibration	20 grms			

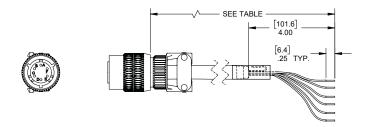
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Flexure Suspension Single-Axis Inclinometer





Connector cable



PART #	MODEL #	LENGTH m (ft)
62101011-001	6-Pin Mating Connector	-
879605-007	DSI-CBL-02M-1	2 (6.56)
879605-008	DSI-CBL-03M-1	3 (9.84)
879605-020	DSI-CBL-05M-1	5 (16.4)
879605-027	DSI-CBL-10M-1	10 (32.8)
879605-015	DSI-CBL-15M-1	15 (49.21)
879605-016	DSI-CBL-24M-1	24 (78.75)
879605-026	DSI-CBL-40M-1	40 (131.2)
879605-024	DSI-CBL-68M-1	68 (228.1)
879605-021	DSI-CBL-100M-1	100 (325.1)

Ordering information

Pin Version		Connector Version				
±1.0	LCF-100-1	458100-001		±1.0	LCF-101-1	458101-002
±14.5	LCF-100-14.5	458100-002		±14.5	LCF-101-14.5	458101-001
±30.0	LCF-100-30	458100-003		±30.0	LCF-101-30	458101-003
±90.0	LCF-100-90	458100-004		±90.0	LCF-101-90	458101-004

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