

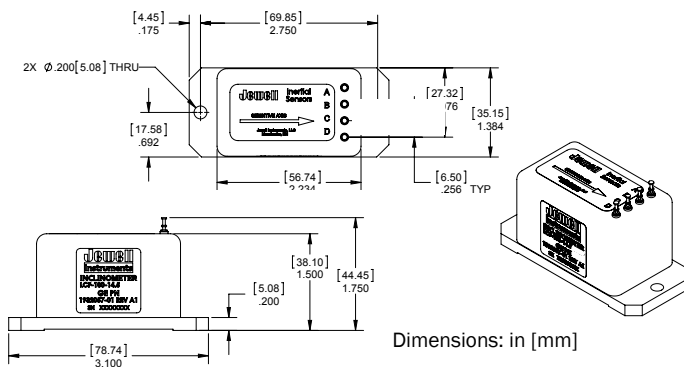
LCF-100

Single-Axis Analog Inclinometer

The Jewell 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:

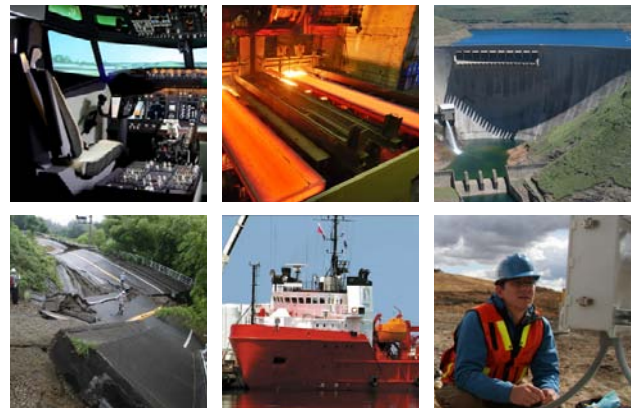
- Direct Bogie Mount
- 3-30 Hz Bandwidth
- Milligram Bias and Scale Factor
- High Level $\pm 5\text{Vdc}$ Output
- -40°C to $+80^\circ\text{C}$ Temperature Rating



PIN OUT:

Pin Version	
A	+12 to +18 VDC
B	-12 to -18 VDC
C	Power/Sig Common
D	Eo [Volts/g]

Connector Version	
A	+12 to +18 VDC
B	Power/Sig Common
C	-12 to -18 VDC
D	Eo [Volts/g]
E	N/C
F	N/C



APPLICATIONS:

- 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

PERFORMANCE

INPUT RANGE (°)	±1.0	±14.5	±30.0	±90.0
FULL RANGE OUTPUT VDC (FRO ± 1%)¹	±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)	100			
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 & THRESHOLD (µradian)	1			

ELECTRICAL

INPUT VOLTAGE RANGE (VDC)⁴	±12 to ±18
INPUT CURRENT (mA, max)	±15
OUTPUT IMPEDANCE (Ohms, nominal)	100
NOISE (Vrms max)	0.002

ENVIRONMENTAL

OPERATING TEMPERATURE RANGE	-40° to +80°C
SURVIVAL TEMPERATURE RANGE	-60° to +90°C
SHOCK	1000g, 1 msec, 1/2 sine
SEAL	Epoxy
VIBRATION	20 grms

NOTES:

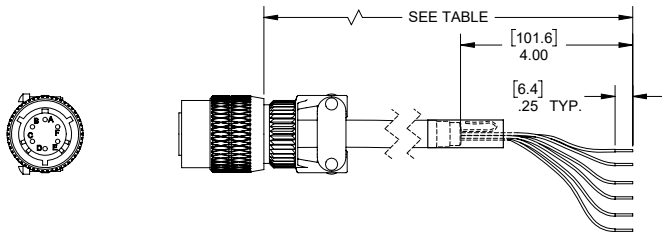
1. Full range is defined as “from negative full input angle to positive full input angle.” The Inclinometer output is proportional to the sine of the tilt angle.
2. Referenced to theoretical sine value independent of misalignment.
3. Output phase angle = 90°

Specifications are subject to change without notice due to continued product development



ACCESSORIES

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

HOW TO ORDER

Pin Version

	MODEL #	PART #
±1.0	LCF-100-1	458100-001
±14.5	LCF-100-14.5	458100-002
±30.0	LCF-100-30	458100-003
±90.0	LCF-100-90	458100-004

Connector Version

	MODEL #	PART #
±1.0	LCF-101-1	458101-002
±14.5	LCF-101-14.5	458101-001
±30.0	LCF-101-30	458101-003
±90.0	LCF-101-90	458101-004