

LSOX-D Precision Fluid Damped Inclinometer

+/-5V DC Output

The LSOX Series Inclinometer is a rugged, high performance, single-axis tilt sensor designed for peak performance in extreme conditions. The fluid damped mechanism delivers superior noise rejection in high shock and vibration environments as well as excellent output stability. Units are available with a 6-pin connector, pin-terminals or flying leads. Available outputs include +/-5V, 0-5V and 4-20mA. Custom input ranges, filters and temperature compensation are also available on request.



Features

- **Extremely Rugged**
- **High Accuracy**
- **Temperature Compensation Available**
- **+/-5V Output**
- **±12 to ±18 Volts DC Power Input**
- **RoHS Compliant**
- **CE Certification Pending**

Applications

- **High-precision Geotech**
- **Oil and Gas/Riser Tilt Monitoring**
- **Railroad MOW Equipment**
- **Pavement Profiling Rigs**
- **Vehicle Wheel Alignment**
- **Robotics**



Connector Version

PIN	FUNCTION
A	+POWER IN
B	COMMON
C	- POWER IN
D	SIGNAL OUT
E	N/C
F	N/C

Pin Terminal Version

PIN	FUNCTION
A	+POWER IN
B	COMMON
C	- POWER IN
D	SIGNAL OUT
E	N/C
F	N/C

Wired Version

COLOR	FUNCTION
RED	+POWER IN
WHITE	COMMON
BLACK	- POWER IN
GREEN	SIGNAL OUT

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STATIC/DYNAMIC

Input Range (deg.)	±1	±3	±14.5	±30	±60	±90
Full Range Output (VDC) ¹	±5	±5	±5	±5	±5	±5
Non-linearity (% FRO) ²	0.05	0.02	0.02	0.02	0.02	0.05
Scale Factor (V/g nom.)	285.5	95.5	20.0	10.0	5.8	5.0
Scale Factor Sensitivity (PPM/°C max)	350	300	100	60	60	60
Bandwidth, Hz (-3 dB)	0.5	2	15	20	30	30
Transverse Axis Misalignment (° max)	±0.25	±0.25	±0.5	±0.5	±0.5	±0.5
0° Output nominal (VDC)	±0.10	±0.04	±0.02	±0.02	±0.02	±0.02
0° Output Temp. Sensitivity (V/°C max)	0.015	0.005	0.001	0.0005	0.0004	0.0003
Resolution & Threshold (µradians) ³	1	1	1	1	1	1

¹Full Range is defined "from negative full input angle to positive full input angle." ²Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment. ³Full Resolution is achieved with noise reduction techniques.

ELECTRICAL

Number of Axes:	1
Input Voltage Range, (VDC):	±12 to ±18
Input Current, mA, max:	40
Noise, Vrms, maximum:	0.002
Output Impedance (ohms)	1
Mass (grams)	370

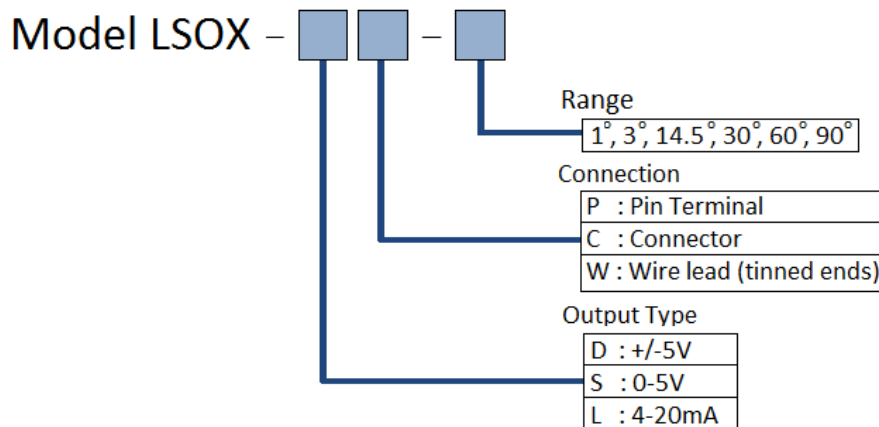
ENVIRONMENTAL

Operating Temp Range:	-40°C to +80°C
Storage Temp Range:	-60°C to +90°C
Shock:	1500g, 0.5 msec, ½ sine

ENCLOSURE

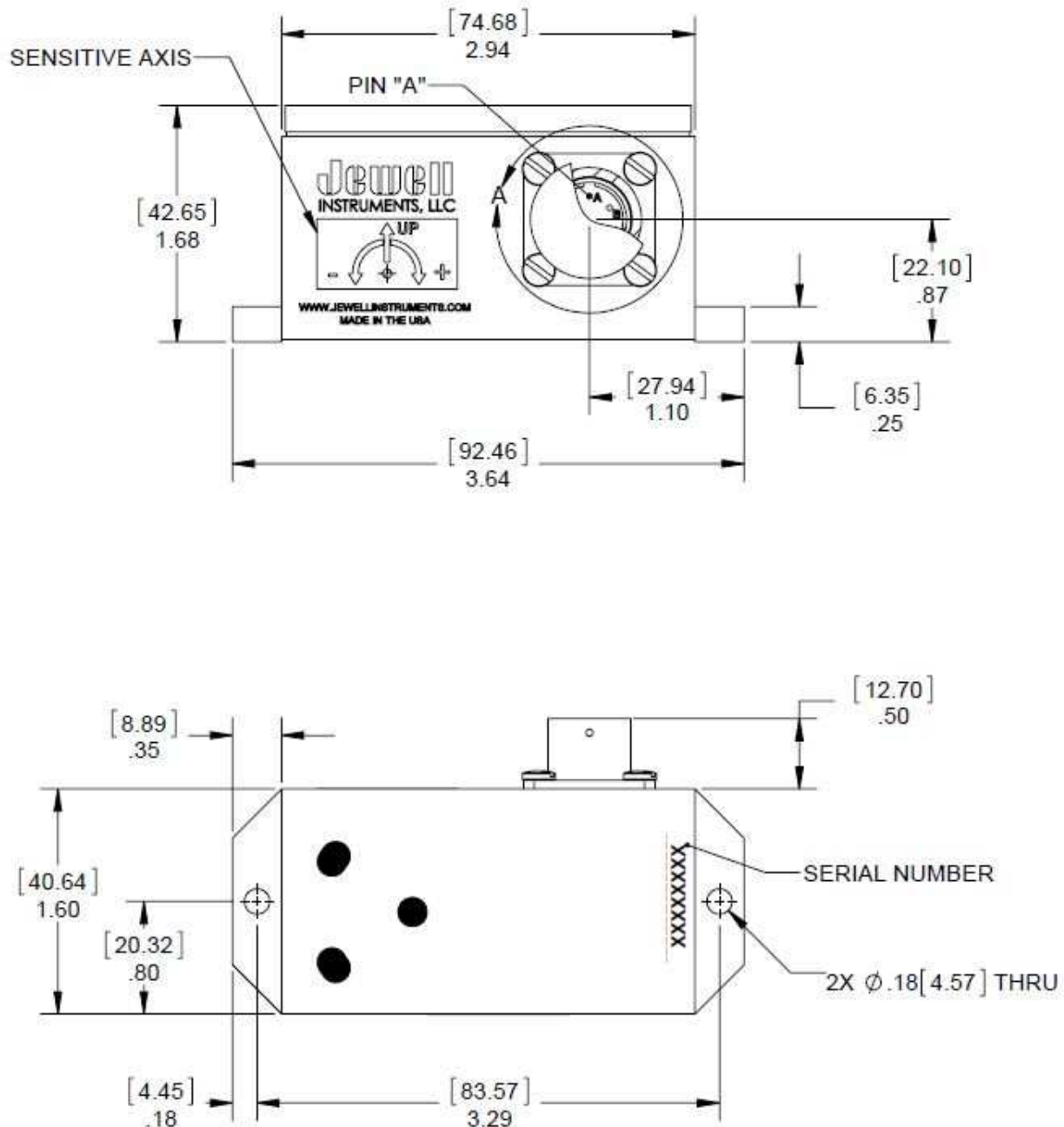
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Order Code



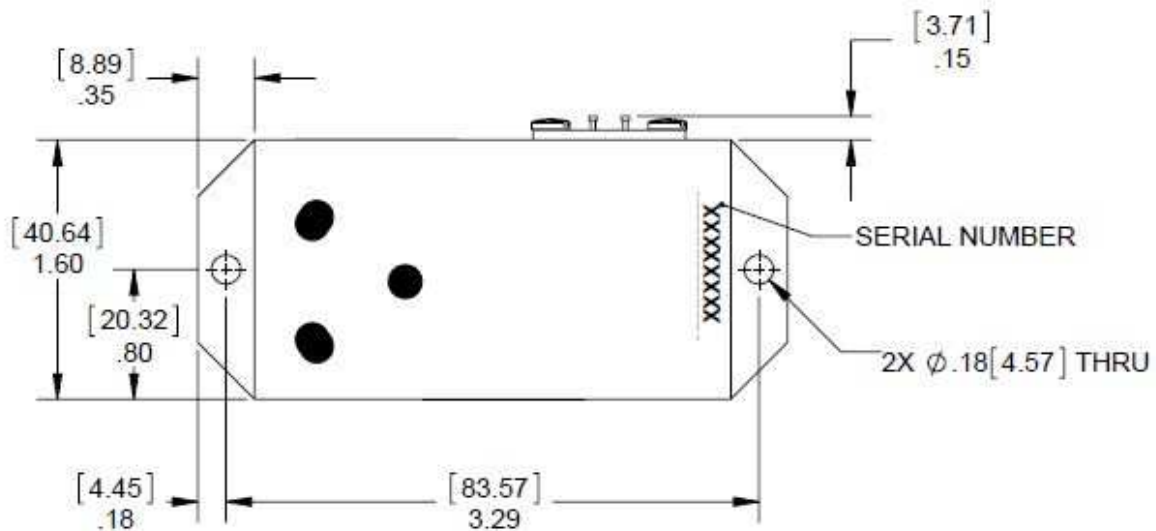
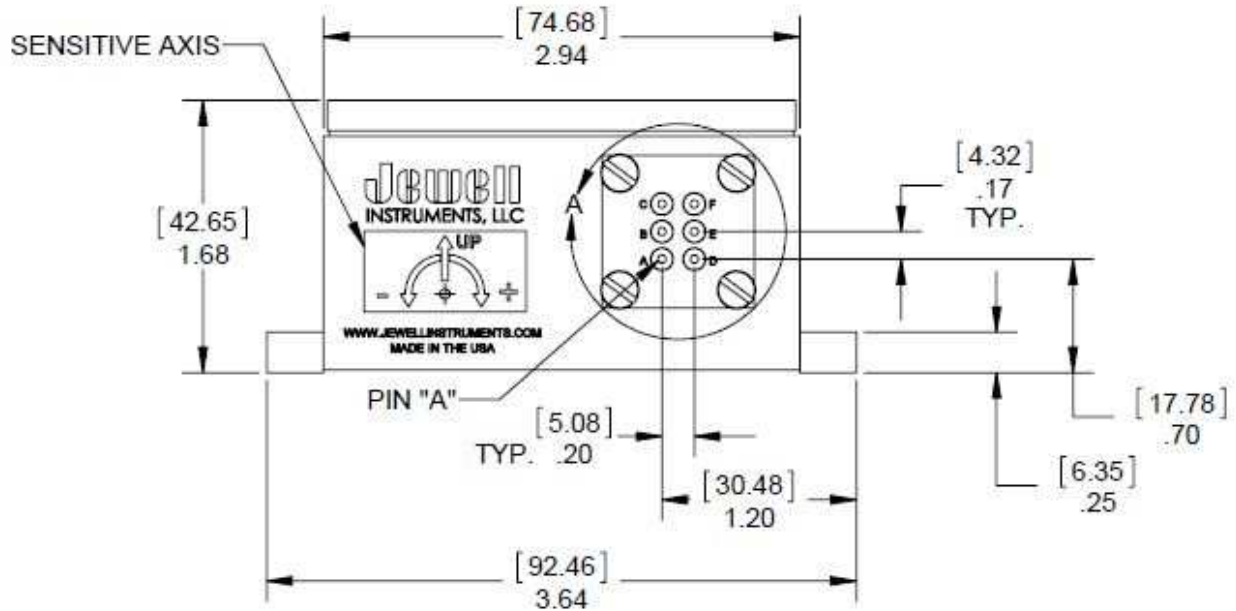
LSOX-D Precision Fluid Damped Inclinometer +/-5V DC Output

Outline Drawing: Connector Version



L5OX-D Precision Fluid Damped Inclinometer +/-5V DC Output

Outline Drawing: Pin Terminal Version



L5OX-D Precision Fluid Damped Inclinometer +/-5V DC Output

Outline Drawing: Wired Version

