

LSOX-L Precision Fluid Damped Inclinometer

4-20mA 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**
- **4-20mA Output**
- **+20 to +30 VDC 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	N/C
D	SIGNAL OUT
E	N/C
F	N/C

Pin Terminal Version

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

Wired Version

COLOR	FUNCTION
RED	POWER IN
WHITE	COMMON
BLACK	N/C
GREEN	SIGNAL OUT

L5OX-L Precision Fluid Damped Inclinometer

4-20mA Output

STATIC/DYNAMIC

	±1	±3	±14.5	±30	±60	±90
Input Range (deg.)	±1	±3	±14.5	±30	±60	±90
Full Range Output (mA) ¹	4-20	4-20	4-20	4-20	4-20	4-20
Non-linearity (% FRO) ²	0.05	0.03	0.03	0.03	0.03	0.05
Scale Factor (mA/g nom.)	458.4	152.9	32.0	16.0	9.2	8.0
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 (mA)	12 ±0.6	12 ±0.6	12 ±0.3	12 ±0.3	12 ±0.3	12 ±0.3
0° Output Temp. Sensitivity (mA/°C max)	0.024	0.01	0.002	0.001	0.001	0.0008
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):	+20 to +30
Input Current, mA, max:	40
Noise, µArms, maximum:	0.002
Mass (grams)	370

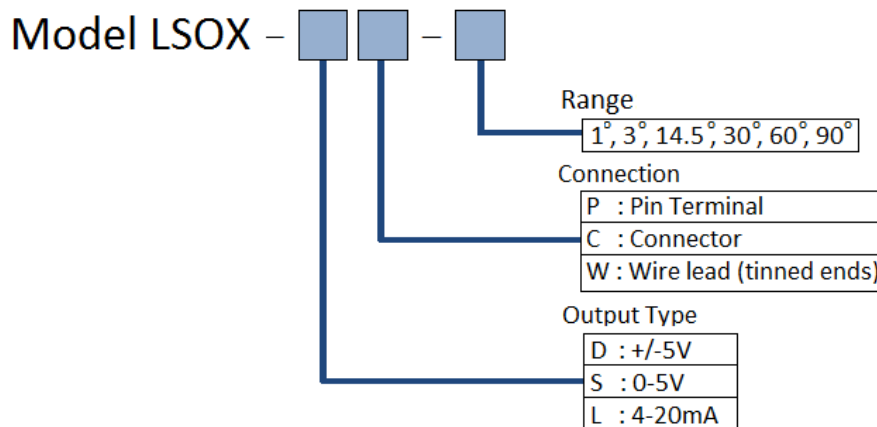
ENVIRONMENTAL

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

ENCLOSURE

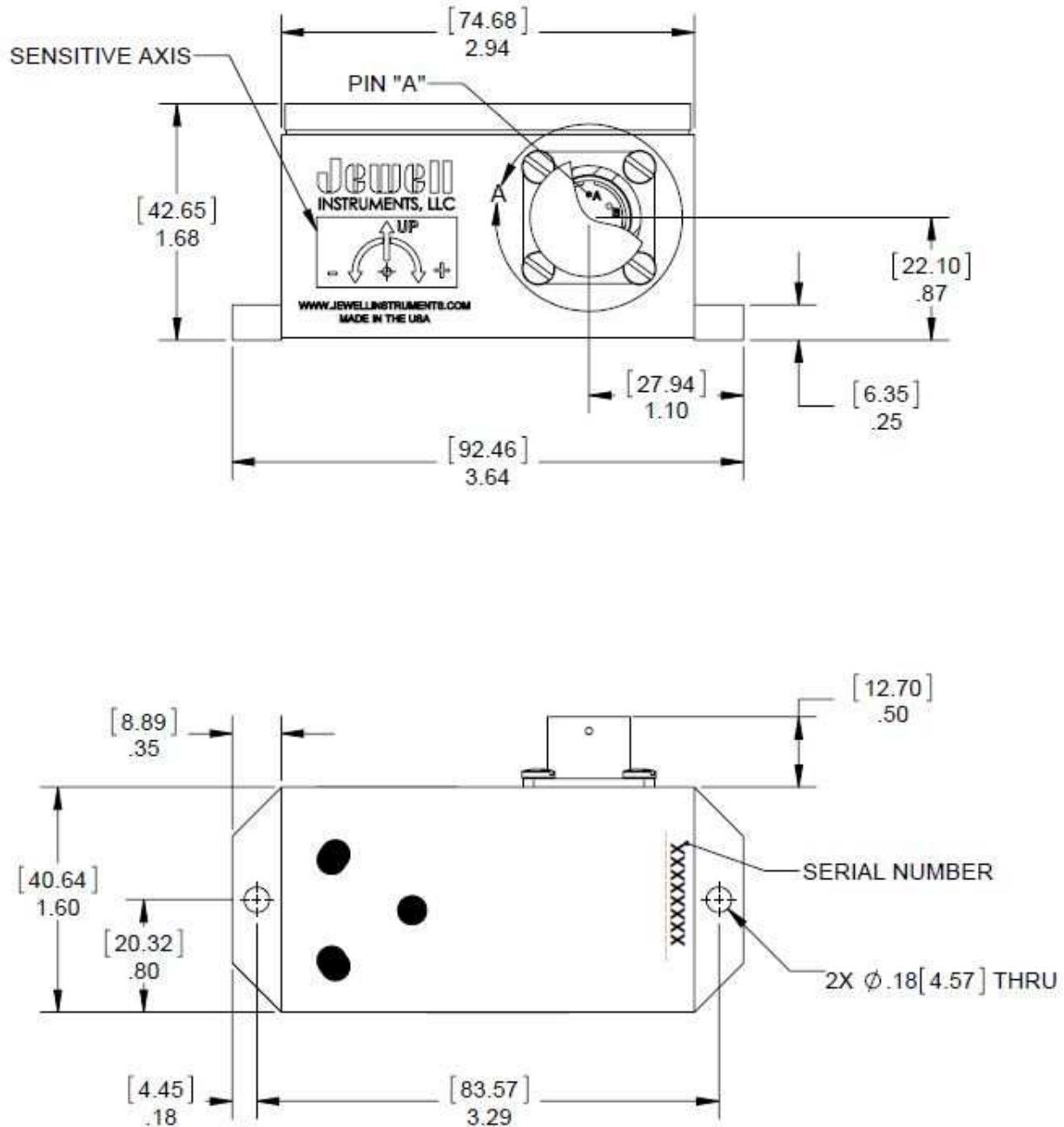
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Order Code



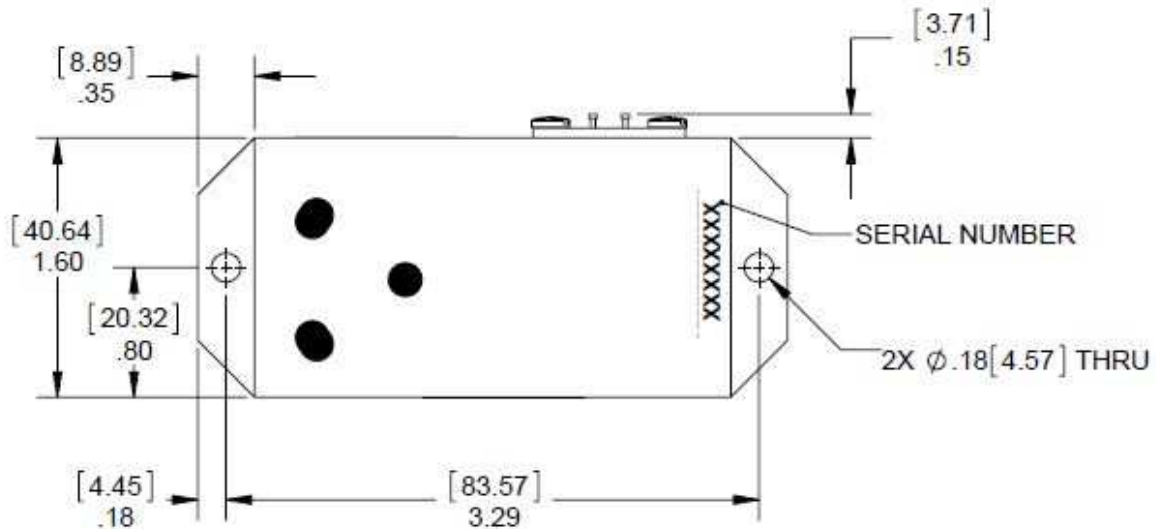
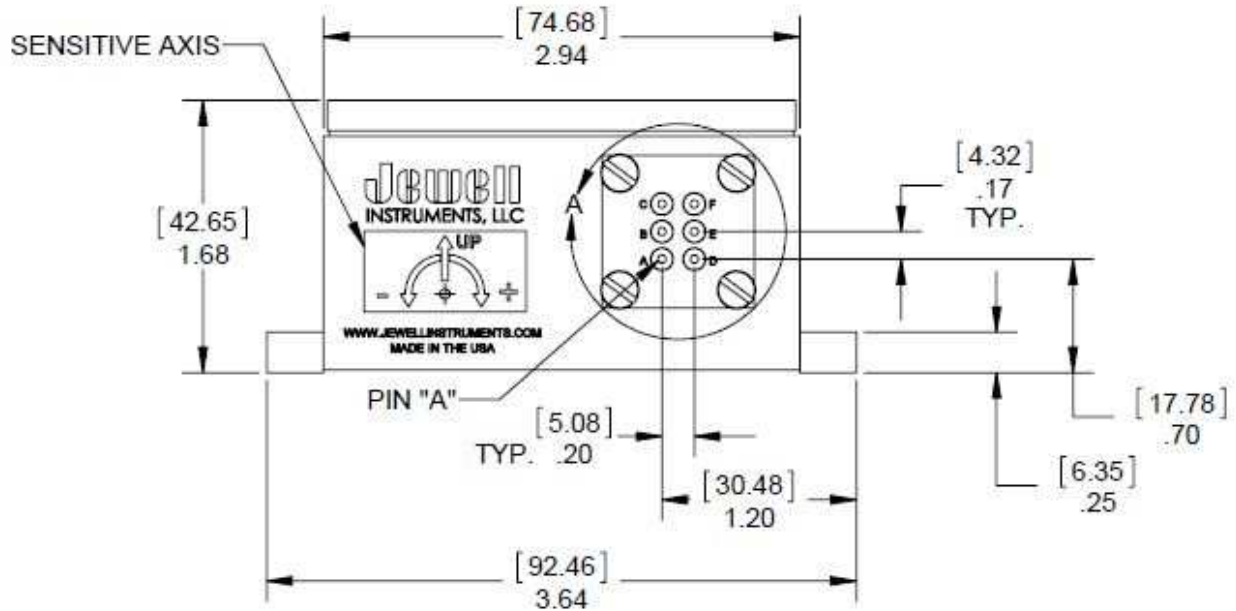
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Outline Drawing: Connector Version



L5OX-L Precision Fluid Damped InclInometer 4-20mA Output

Outline Drawing: Pin Terminal Version



LSOX-L Precision Fluid Damped Inclinometer 4-20mA Output

Outline Drawing: Wired Version

