



LSOC/P Series 4-20 mA Output Flexure Suspension Servo Fluid Damped Inclinometer

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CLASS**



The Jewell LSO Series Inclinometer with 4 to 20 mA output is a ± 1.0 to ± 90 device designed for applications where high levels of shock, vibration and electrical noise are present and/or long cable runs are required.

LSOC/P Series Flexure Suspension Servo Fluid Damped Inclinometer Specifications

Performance

Input Range, ° (Note 1)	± 1.0	± 14.5	± 30	± 90
Full Range Output (FRO), mADC $\pm 1.0\%$	4 to 20	4 to 20	4 to 20	4 to 20
Nonlinearity, % FRO max (Note 2)	0.05	0.10	0.10	0.05
Scale Factor, mA/g nominal	458	31.3	16.0	8.0
Scale Factor Temp Sens, PPM/°C max	400	100	100	100
Natural Frequency, Hz nominal (Note 3)	0.3	15	20	30
Bandwidth (-3dB), Hz nominal	0.3	15	20	30
Input Axis Misalignment, ° max	0.15	0.50	1.00	1.00
Output at Zero Tilt, mA	12 \pm 0.6	12 \pm 0.3	12 \pm 0.3	12 \pm 0.3
Zero Tilt Temp Sens, mA/°C max	0.015	0.0032	0.0032	0.0016
Resolution and Threshold, μ rad max	1	1	1	1

Electrical

Input Voltage, VDC	20 to 30 (24 nominal)
Input Current	40 mA maximum
Noise, mA rms max	0.01

Environmental

Operating Temp Range	-18 to +71°C
Survival Temp Range	-40 to +71°C
Vibration	20 grms
Shock	1500g, 0.5 msec, ½ sine
Seal	MIL-STD 202, Method 112

NOTE 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.

NOTE 2: Referenced to theoretical sine value independent of misalignment.

NOTE 3: Output phase angle = -90°.

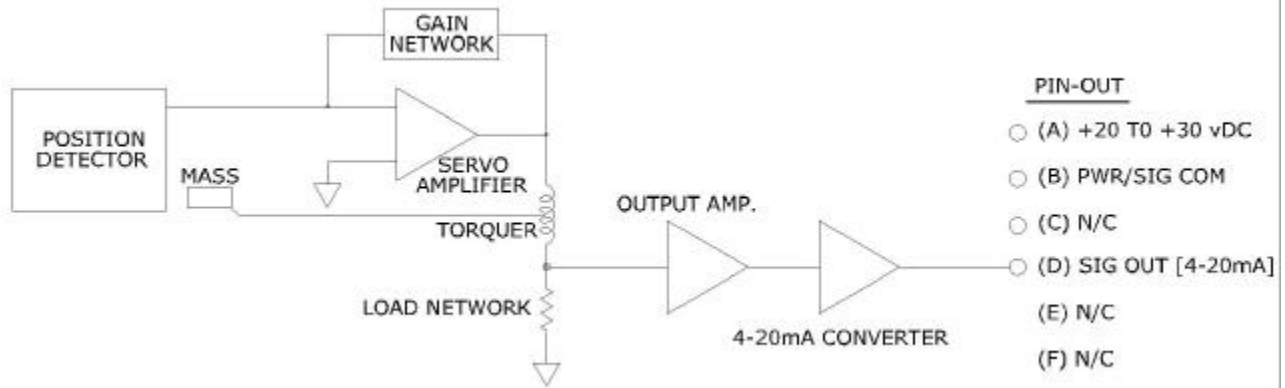
Applications

- Paving Machine Control
- Sluice Gate Control
- Continuous Casting

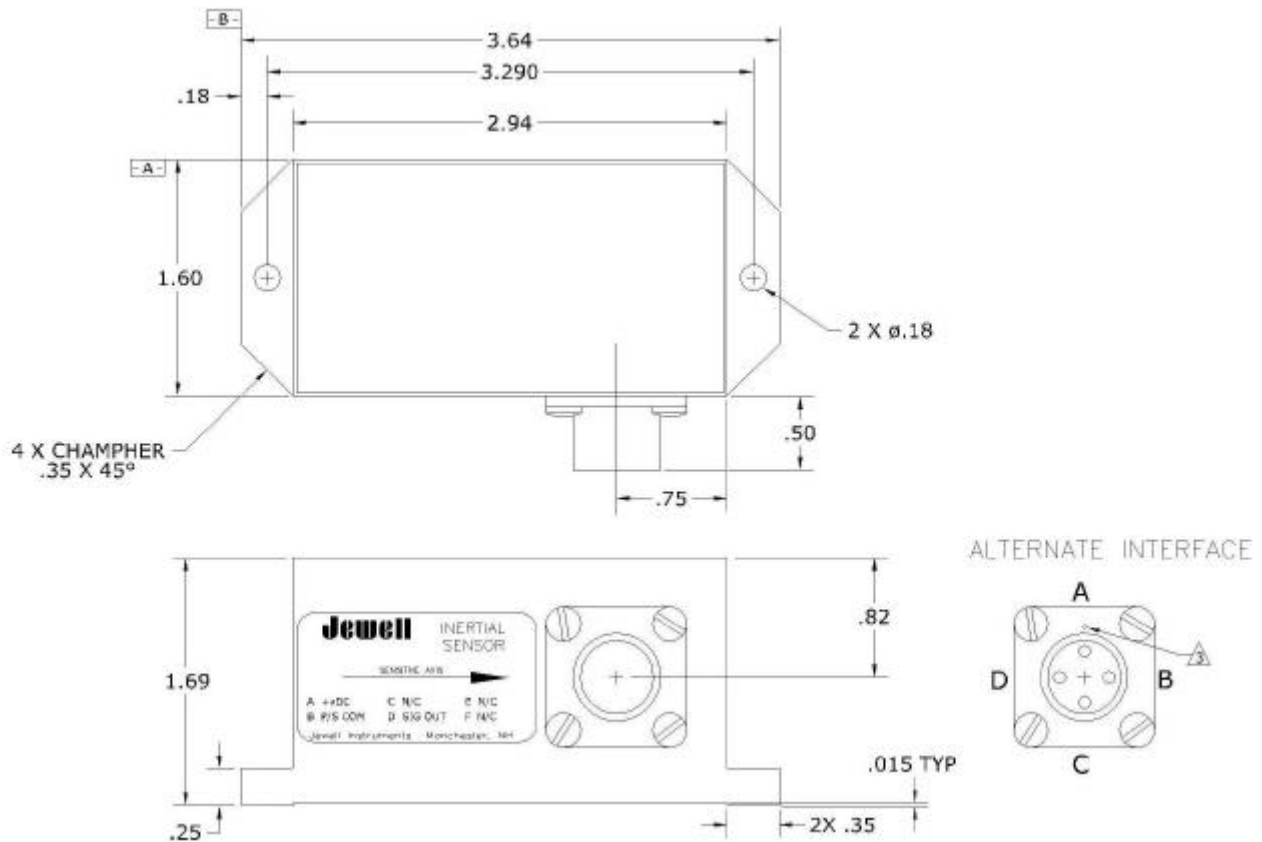


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Block Diagram



Outline Diagram



- 1 - DATUMS **A** AND **B** ARE DEFINED AS REFERENCE SURFACES
- 2 CONNECTOR SHALL BE PT02H-10-6P AND SHALL MATE WITH PT06A-10-6FR
- 3 DENOTES PIN A