

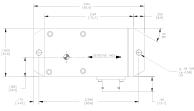
MAKING SENSE OUT OF MOTION

LSOC/LSOP Single-Axis Analog Inclinometer

The Jewell LSOC/LSOP Series fluid damped, flexure suspesion, servo inclinometer is a precision internal grade sensing instruments and it is Jewell's most robust solution designed to meet the needs of a variety of commercial, industrial, and aerospace applications. LSOC/LSOP Series is a fluid damped design. Units are available with a 6-pin connector, or pin-terminals and in ±5V and 4-20mA outputs.

FEATURES:

- Extremely high resolution and low hysteresis of less than 0.0005% of full range output.
- Extremely robust designed to withstand shocks in excess of 1500g and vibration of 20 grms.
- Responds to changes of slope as small as 0.000006"/ft.
- High accuracy closed-loop force balanced sensor technology.
- Low white noise spectral density of better than 0.15µV/Sq. Root HZ
- **RoHS** compliant

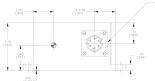


Connector Version

Dimensions: in [mm]

sensori & trasduttori

Pin-Terminal Version





ARTS Buell Instruments INCLINOMETER





APPLICATIONS:

- Steel Processing
- **Continuous Casting** .
- **Electric Arc Furnace**
- Idle Control
- Heavy construction
- Paving •
- Grading .
- Mining
- Tunneling
- **Overturn Detection**
- Structural Monitoring
- **Automated Train Controls**
- Rail Leveling and Grinding
- **Rail Bed Analysis**

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LSOC/LSOP: ±5V OUTPUT

The Jewell LSOC/LSOP Series fluid damped, flexure suspension, servo inclinometer is a precision inertial grade sensing instrument and is Jewell's most robust solution designed to meet the needs of a variety of commercial, industrial, and aerospace applications.

APPLICATIONS:

- Steel Processing
- Heavy Construction
- Structural Monitoring
- Railway Control & Analysis

PERFORMANCE SPECIFICATIONS

STATIC/DYNAMIC

INPUT RANGE (°)	±1	±3	±14.5	±30	±45	±90
FULL RANGE OUTPUT (VDC) ±1% ¹	±5					
NONLINEARITY (% FRO) ² max	0.05	0.05	0.02	0.02	0.02	0.05
SCALE FACTOR (V/g) nominal	286.5	95.5	20.0	10.0	7.071	5.0
SCALE FACTOR TEMP. SENSITIVITY (PPM/°C max)	400	300	100	60	60	60
BANDWIDTH (-3dB) Hz, nominal	0.5	2	15	20	20	40
TRANSVERSE AXIS MISALIGNMENT, ° max	0.1	0.15	0.25	0.5	1.00	1.00
OUTPUT AT 0° TILT (V)	±0.1	±0.04	±0.02	±0.02	±0.02	±0.02
0° OUTPUT TEMP. SENSITIVITY (Volts/°C) max	0.005	0.003	0.001	0.0005	0.0004	0.0003
RESOLUTION & THRESHOLD (µradians) max	1					

NOTES:

1. Full Range is defined "from negative full input angle to positive full input angle."

2. Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.

PIN OUTS

А	RED	SUPPLY +15VDC
В	WHITE	POWER/SIGNAL COMMON
С	BLACK	SUPPLY -15VDC
D	ORANGE	±5V OUTPUT
Ε	N/C	SELF TEST RETURN
F	BLUE	SELF TEST

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

DSPM Induktig*



PRODUCT SPECIFICATIONS

ELECTRICAL

NUMBER OF AXES	1		
INPUT VOLTAGE RANGE (VDC)	±12 to ±18		
INPUT CURRENT (mA, max)	15		
OUTPUT IMPEDANCE (Ohms) nominal	100		
NOISE (Vrms, max)	0.002		

ENVIRONMENTAL

OPERATING TEMP. RANGE	-18° to +71°C
STORAGE TEMP. RANGE	-40° to +71°C
VIBRATION	20 grms
SHOCK	1500g, 0.5 msec, ½ sine

ENCLOSURE

HOUSING MATERIAL	Anodized Aluminum		
WEIGHT	13 oz (368.5 g)		
PROTECTION CLASS (per IEC 529)	IP68		
FASTENER SIZE ³	#8-32 (M4X0.7)		
TORQUE FOR STEEL FASTENERS ⁴	10 inch-lbs (1.0nM)		
JEWELL CONNECTOR PART #	62101011-000		
SURFACE FLATNESS ³	0.003 (0.0765mm)		

NOTES:

- 3. Jewell Instruments recommendations
- 4. Manufacture is Amphenol or equivalent

CUSTOM CAPABILITIES

- Internal temperature sensor and thermal modeling for the highest levels of accuracy over a wide temperature range
- Available in LSR Series package configuration for applications requiring a more compact solution
- Factory set zero biasing for non-horizontal measurements

Solder terminals and flying leads in place of military connector

- Custom input ranges from ±0.5° to ±90° available
- Custom output impedances available
- Custom bandwidths available on certain ranges

ORDERING INFORMATION

HOW TO ORDER Model Numbers are comprised of the series, the connector option, and the input range.

SERIES	TERMINATION -	INPUT RANGE - Z* - ROHS	_	TERMINATION	MODEL #	PART #
LSO		±1 ±3	±1	PIN	LSOP-1-Z-ROHS	02550412-201-ROHS
				CONNECTOR	LSOC-1-Z-ROHS	02550412-206-ROHS
			±3	PIN	LSOP-3-Z-ROHS	02550412-202-ROHS
	P			CONNECTOR	LSOC-3-Z-ROHS	02550412-207-ROHS
			±14.5	PIN	LSOP-14.5-Z-ROHS	02550412-203-ROHS
	C	±14.5		CONNECTOR	LSOC-14.5-Z-ROHS	02550412-208-ROHS
		±30	±30	PIN	LSOP-30-Z-ROHS	02550412-204-ROHS
				CONNECTOR	LSOC-30-Z-ROHS	02550412-209-ROHS
			±45	PIN	Not Available	Not Available
		±45		CONNECTOR	LSOC-45-Z-ROHS	02550412-211-ROHS
*Z stands for "Low Impedance"			±90	PIN	LSOP-90-Z-ROHS	02550412-205-ROHS
		±90	±90	CONNECTOR	LSOC-90-Z-ROHS	02550412-210-ROHS

