

# LSI Series

DC-Operated, Gravity-Referenced  
Servo Inclinometer

## Features

- Fully self-contained - connect to a DC power source and a readout or control device for a complete operating system
- High-level DC output signal proportional to sine of the angle of tilt
- $\pm 14.5^\circ$ ,  $\pm 30^\circ$  &  $\pm 90^\circ$  ranges available

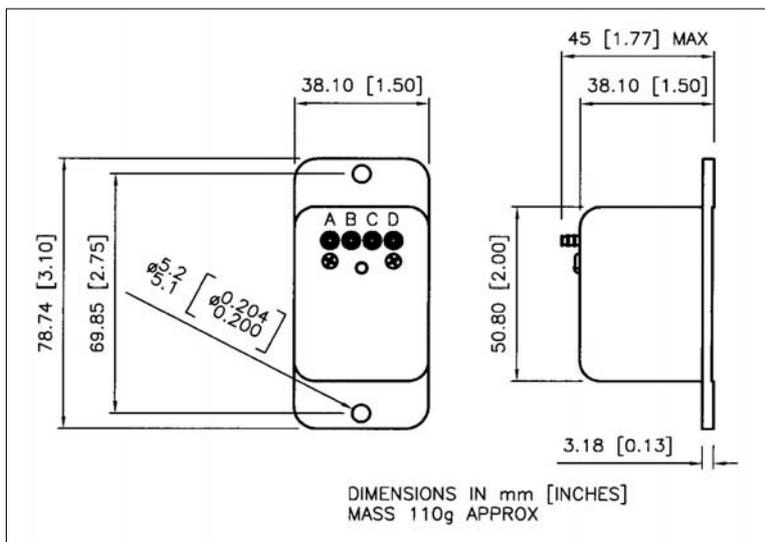
## Applications

- Level control of machines and structures
- Safety control of cranes and lifting equipment
- Civil engineering studies
- Marine ballast transfer systems

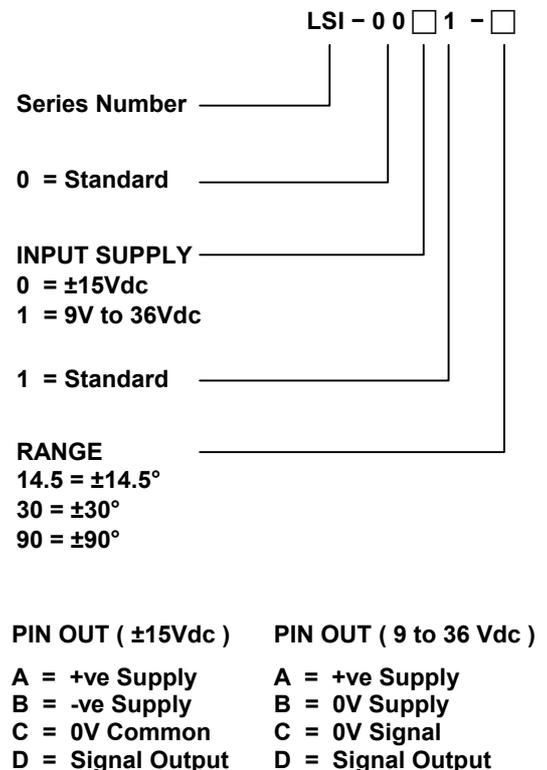


## Description

The LSI Series is a precision gravity referenced servo inclinometer that can be used for a wide variety of industrial and military applications. Versions are available in a choice of angular ranges and power supply options. Electrical terminations are via solder posts.



## DESIGNATION & ORDERING CODE



In North America: Email: [nasales@sherbornesensors.com](mailto:nasales@sherbornesensors.com)  
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Sherborne Sensors, a Nova Metrix company



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Servo Inclinometer

  
**Sherborne Sensors**  
... the first choice in precision

## Environmental Characteristics

Operating Temperature Range	°C	-20 to 80
Survival Temperature Range	°C	-40 to 90
Shock Survival		500g, 0.5msec, ½ sine
Environmental Sealing		IP64

## Specifications @ 20°C

		±14.5°	±30°	±90°
Excitation Voltage options	Volts dc		±15 or +9 to +36	
Power Consumption	W (max)	±15V version = ±0.6	+9V to +36V version = 1.5	
Full Range Output (FRO) options (see note 1)	Volts dc		±5 ±0.5%	
Output Impedance	Ω		less than 10	
Output Noise (DC to 10kHz)	µV/√Hz (max)	±15V version = 2	+9V to +36V version = 20	
Non-Linearity (see note 2)	% FRO (max)	0.02	0.02	0.05
Non-Repeatability	% FRO (max)		0.004	
-3 dB Frequency	Hz		5	
Cross-axis sensitivity (see note 3)	% FRO (max)		± 1	
Zero Offset (see note 4)	Volts dc (max)		± 0.050	
Thermal Zero Shift	%FRO/°C (max)		± 0.003	
Thermal Sensitivity	%Reading/°C (max)		± 0.01	
EMC Directive	EN 61326: 1998			
EMC Emissions	EN 55022: 1998, 30 MHz to 1 GHz			
EMC Immunity	EN61000-4-2 1995 inc A1: 1998 & A2: 2001, ±4 kV EN61000-4-3: 2002, 10 V/m EN61000-4-4: 2004, ± 1 kV EN61000-4-4: 2004, ± 2 kV EN61000-4-6 1996 inc A1: 2001, 3 Vrms EN61000-4-6 1996 inc A1: 2001, 10 Vrms EN61000-4-8: 1994 Incorporating Amendment A1: 2001, 30 A/m			

## Notes

1. Full Range Output is defined as the full angular excursion from positive to negative, i.e. ±90° = 180°
2. Non-linearity is determined by the method of least squares
3. Cross-axis Sensitivity is the output of unit when tilted to full range angle in cross-axis.
4. Zero offset is specified under static conditions with no vibration inputs

## How to Order

Specify model type, input supply and range.

e.g. LSI-0001-30 = ±15Vdc supply, ±30°  
LSI-0011-90 = +9Vdc to +36Vdc supply, ±90° degree



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