Sherborne Sensors

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
- ±14.5°, ±30° & ±90° ranges available

Applications

Level control of machines and structures	Marine ballast transfer systems
Civil engineering studies	Vehicle Wheel Alignment

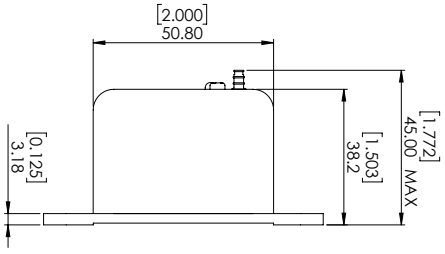
Benefits

- Economically Priced
- High Accuracy
- -20°C to +80°C Temp Rating

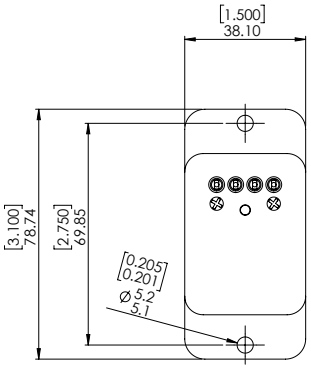
Electrical Connections

Pin A	+ve Supply
Pin B	–ve Supply *(0V supply on 9 to 36 Vdc)*
Pin C	0V Common *(0V signal on 9 to 36 Vdc)*
Pin D	Signal Output

SIDE VIEW



PLAN VIEW



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Specifications

Specifications by Range @ +20°C		± 14.5°	± 30°	± 90°
Output Impedance	Ω (nom)		Less than 10	
Non-linearity *(see note 2)*	% FRO (max)	0.02	0.02	0.05
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 Shift	%Reading/°C (max)		± 0.01	

Electrical

Full Range Output (FRO) *(see note 1)*	Volts dc	±5 ±0.5%
Excitation Voltage	Volts dc	±15 or +9 to +36
Power Consumption	W (max)	±15V version = ±0.6 +9V to +36V version = 1.5

Environmental Characteristics

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

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.

Model Designation & Ordering Code

LSI-00□1-□

- **0** ±15Vdc
- **1** 9V to 36Vdc

- **14.5** ±14.5°
- **30** ±35°
- **90** ±90°

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