

LSOC / LSOP Series

DC-Operated, Gravity-Referenced 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
- $\pm 1^\circ$ to $\pm 90^\circ$ ranges available
- Extremely rugged, withstands 1500g shock

Applications

Ballast transfer systems

Pipeline levelling

Level control and calibration systems

Large machinery installation

Benefits

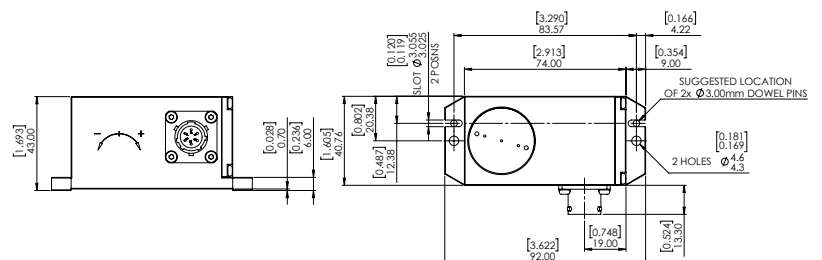
- -19 to 70°C operating range
- High accuracy
- High reliability

Electrical Connections

Pin A	Supply +15Vdc
Pin B	0V common
Pin C	Supply - 15Vdc
Pin D	Output
Pin E	Not used
Pin F	Self Test

SIDE VIEW

PLAN VIEW



Specifications

Specifications by Range @ 20°C

		±1°	±3°	±14.5°	±30°	±47.5°	±90°
Output Impedance	Ω			<10			
Output Standardisation	% FRO			±1			
Output Noise	V rms (max)			0.002			
Non-linearity (see note 2)	% FRO (max)	0.05	0.05	0.02	0.02	0.02	0.05
Non-repeatability	% FRO (max)	0.04	0.02	0.004	0.002	0.002	0.001
Resolution	arc seconds	0.1	0.2	1.0	2.0	2.0	4.0
3 dB Frequency	Hz	10	15	30	40	40	55
Sensitive Axis to Case Misalignment	deg (max)	±0.1	±0.15	±0.25	±0.5	±0.5	±1.0
Cross-axis Sensitivity (see note 3)	% FRO (max)			0.2			
Zero Offset (see note 4)	Volts dc (max)	±0.05	±0.04	±0.03	±0.02	±0.02	±0.02
Thermal Zero Shift	%FRO/°C (max)	0.05	0.03	0.01	0.005	0.005	0.003
Thermal Sensitivity	%Reading/°C (max)	0.04	0.03	0.01	0.006	0.006	0.006

Electrical

Full Range Output (FRO) (see note 1 & 5)	Volts dc	±5
Excitation Voltage	Volts dc	±12 to ±18
Current Consumption	mA (nom)	±15

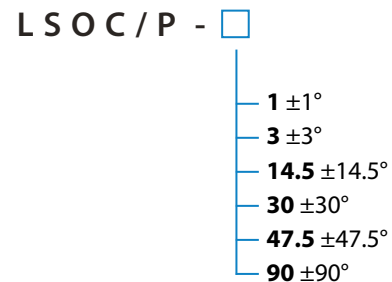
Environmental Characteristics

Operating Temperature Range	°C	-18 to 70
Survival Temperature Range	°C	-40 to 70
Constant Acceleration	g	50
Overload		1500g, 0.5msec, ½ sine
Shock Survival		35g rms, 20 Hz to 2000 Hz
Vibration Endurance		sinusoidal
Environmental Sealing		IP65

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 the 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



Specify Optional Mating Electrical Connector 3CON-0009 with LSOC if required.

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