Sherborne Sensors

T640 Series

DC-Operated Tilt Sensor with unfiltered and low pass filter outputs

Features

- Ranges ±30º, ±60º and ±90º
- Essentially zero temperature coefficent of damping ratio
- Filtered and unfiltered outputs simultaneously available
- Integral temperature compensation
- DC input - DC output
- Signal ground isolated from power ground
- High reliability

Applications

Data acquisition systems	Structural monitoring
Road bed analysis	Pipeline levelling
Platform levelling	Ship ballast transfer systems

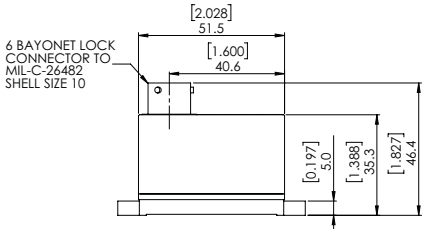
Benefits

- High accuracy
- -40°C to +100°C temp rating
- Integral temperature compensation
- High reliability

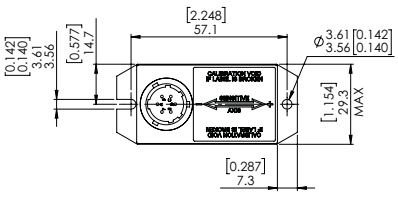
Electrical Connections

Pin A	+ Supply
Pin B	0v Supply
Pin C	Signal ground
Pin D	Signal output (filtered)
Pin E	Signal output (unfiltered)
Pin F	Not connected

SIDE VIEW



PLAN VIEW



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Specifications

Specifications by Range @25°C		± 30°	± 60°	± 90°
Output Impedance	Ω (nom)		1Ω	
Non-linearity *(see note 2)*	% FRO (max)		±0.5%	
Hysteresis			0.02%	
Resolution			0.001%	
Damping Ratio			0.7 (±0.2) @ 25°C	
Output Impedance			1Ω	
Filtered output response			-3dB at 5Hz, 2-pole	
Cross-axis Sensitivity *(see note 3)*	% FRO (max)		± 1	
Zero Offset *(see note 4)*	Volts dc (max)		±2%	
Thermal Zero Shift	%FRO/°C (max)		±0.03%	
Thermal Sensitivity Shift	%Reading/°C (max)		±0.03%	
Weight	Grams (max)		120	

Electrical

Full Range Output (FRO) *(see note 1)*	Volts dc	±5V dc ±2%
Input Voltage	Volts dc	+6 to 32Vdc Unregulated
Input Current	mA dc (max)	100

Environmental Characteristics

Operating Temperature Range °C		-40 to 100
Compensated Temperature Range °C		0°C to 50°C
Storage Temperature Range °C		-55°C to 130°C
Shock Survival		200g for 2ms (½ sine wave)
Insulation Resistance		20 MΩ at 50V dc

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

T64 □ - 0001 - □

3 Electrical Connector
5 Solder Pin Outlet

30 ±30°
60 ±60°
90 ±90°

Please specify Mating Connector 3CON-0009 if required

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