

Dual Axis Analog Inclinometer

Part Number: 0729-1755-99



Operating Specifications ¹	
Output	Analog 0 to 5 V dc
Supply Voltage	+7 to +16 V dc
Supply Current	20 mA @ 7 V dc
Operating range	±60°
Linear Range	±25°
Axes of Measurement	2
Linearity (% of ±60°)	≤ 7.0%
Linearity (% of ±25°)	≤ 2.0%
Symmetry (±60°)	≤ 3°
Symmetry (±25°)	≤ 1°
Repeatability	≤ 0.1°
Resolution	≤ 0.003°
Null Offset	≤ 5°
Cross-Axis Sensitivity	≤ 0.025° per degree
Long Term Stability/Drift	≤ 0.1°
Null Temperature Offset	0.006° per °C
Range Temperature Offset	0.1% per °C
Operating Temperature	-40° to +70° C
Storage Temperature	-40° to +70° C
Frequency Response	≤ 100 ms
Settling Time	≤ 500 ms

Physical Characteristics	
Housing	Plastic ²
Electrical Connections	12" cable with 24 gauge wire
Weight	47 grams
Length	56.30 mm (2.217")
Width	40.00 mm (1.575")
Height	20.00 mm (0.335")
Hole Center	47.80 mm (1.882")

Wiring	
Red	Supply voltage (+7 to +16 V dc)
Black	Ground
Yellow	Temperature ³ (0 to 5 V dc)
Green	X axis analog output (0 to 5 V dc)
Blue	Y axis analog output (0 to 5 V dc)

Certifications and Ratings

- IP66

¹ See The Fredericks Company website for a list of term definitions.

² Metal housing available upon request.

³ Temperature (°C) = (temperature output voltage - 0.5) / 0.010

Description

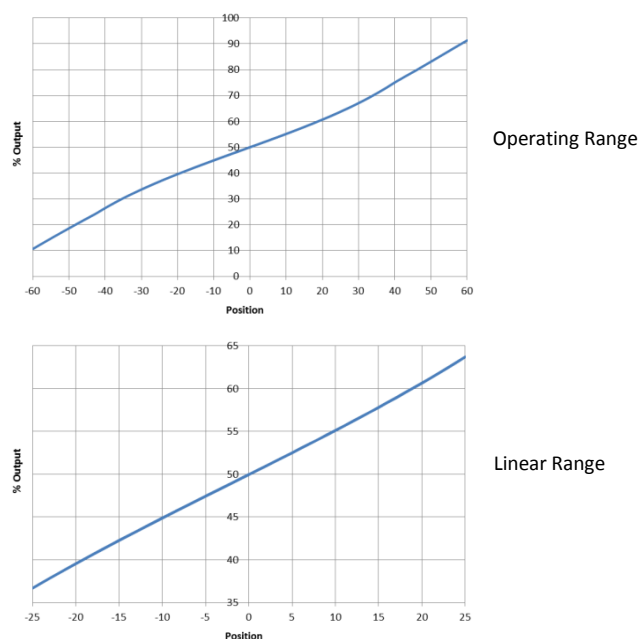
The 0729-1755-99 analog inclinometer utilizes a Fredericks TrueTilt™ wide range electrolytic tilt sensor and analog signal conditioner. Its robust plastic housing and epoxy potting provide excellent durability and environmental protection. This inclinometer has superior tolerances and unit to unit performance. Its low profile housing and economic design make it an ideal solution for a versatile range of applications in all sectors.

Applications

- Aerial lift platform leveling monitor or control
- Crane boom angle measurement
- Robotic controls
- Satellite dish alignment
- Solar panel position and elevation control
- Wheel alignment systems

View a full list of applications on The Fredericks Company website at www.fredericks.com.

Operating and Linear Range Output Behavior



Benefits

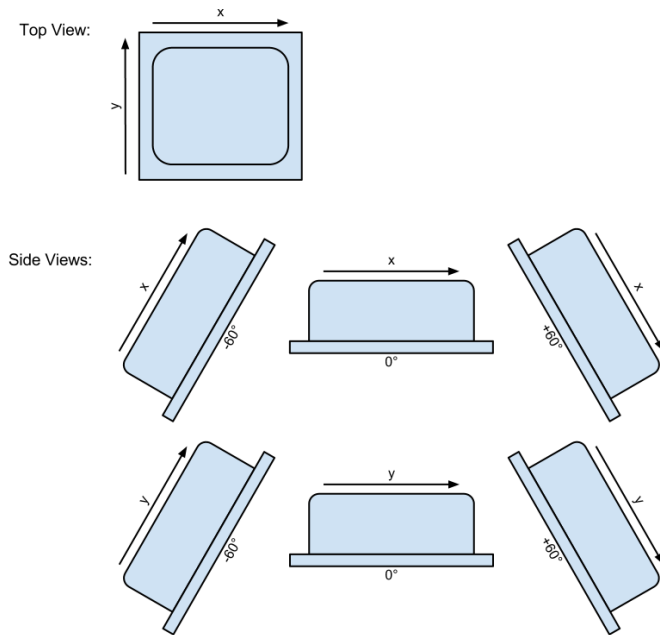
- Very low power consumption
- Extremely long life
- Minimal drift over lifetime compared to MEMS devices
- Excellent resolution and repeatability
- Superior performance in extreme temperatures and environments
- Excellent customer support
- Manufactured in the United States of America



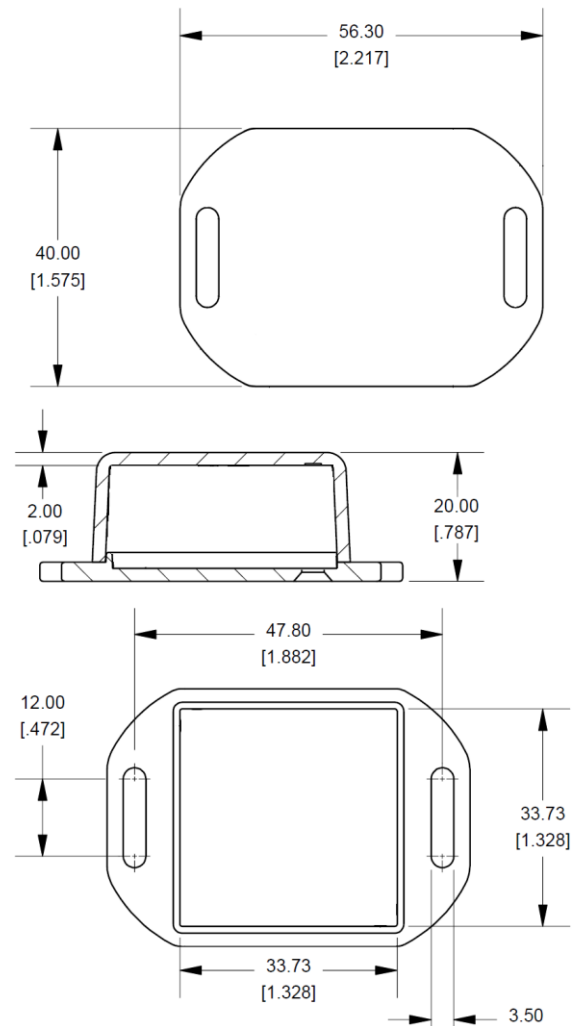
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Direction of Measurement



Dimensional Drawings



Mounting Notes

The 0729-1755-99 and all inclinometers in this series must be mounted horizontally (parallel to the surface of the earth and perpendicular to the force of gravity). For best performance, isolate the unit from vibrations when mounting it.

Related Products

0729 series inclinometers - These inclinometers utilize Fredericks TrueTilt™ wide range electrolytic tilt sensors. They have a variety of outputs including analog, RS-232, and RS-485. These inclinometers have a low profile and a robust plastic housing with epoxy potting to provide excellent durability and environmental protection.

6200 series signal conditioners - These signal conditioners can be configured with any Fredericks electrolytic tilt sensor. They have a variety of outputs including analog, PWM, RS-232, RS-485, and SPI. The electrolytic tilt sensor and signal conditioner are provided separately or as an assembly with the sensor already installed at the customer's request.

See The Fredericks Company website at www.frederickscom.com for a full list of products.

Contact Us

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