

Single Axis Programmable Tilt Switch

Part Number: 0729-1758-99

Operating Specifications¹

Output	2 open collectors
Supply Voltage	4.5 V DC to 28 V DC
Supply Current	24 mA @ 12 V DC
Operating Range	±45°
Axes of Measurement	1
Repeatability	≤0.1°
Null Offset	≤5°
Cross Axis (Roll) Sensitivity	≤0.025° per degree
Long Term Stability/Drift	≤0.1°
Null Temperature Coefficient ²	≤0.006° per °C
Scale Temperature Coefficient	0.1% per °C
Operating Temperature	-40 °C to 70 °C
Storage Temperature	-40 °C to 70 °C
Temperature Sensor Range	-40 °C to 125 °C
Time Constant (63.2% of final output)	≤100 ms
Output Delay	0.5 s
Output Hysteresis	0.35°

Dimensions

Housing	ABS Plastic ³
Electrical Connections	18" cable with 24 gauge wire
Weight	40 grams
Length	50.8 mm (2.000")
Width	38.1 mm (1.500")
Height	19.1 mm (0.750")
Flange Length	76.2 mm (3.000")
Hole Center	63.5 mm (2.500")
Hole Diameter	4.8 mm (0.190")

Electrical Connections

Red	Supply (4.5 V DC to 28 V DC)
Black	Supply (-)
Green	Ground for supply and open collectors
Blue	Left trip point open collector
Gray	Right trip point open collector

Open Collector Output Description

The open collector is open (disconnected from ground) when non-tripped and closed (connected to ground) when tripped. It is rated to a maximum of 200 mA when closed. For opposite open collector output functionality (closed when non-tripped and open when tripped), see the 0729-1757-99.

Benefits

- Very low power consumption
- Simple integration
- Excellent resolution and repeatability of measurements
- Superior performance in extreme temperatures and environments
- Excellent customer support
- Manufactured in the United States of America



Description

The 0729-1758-99 Single Axis Programmable Tilt Switch utilizes a 0717-4319-99 Fredericks TrueTilt™ wide range electrolytic tilt sensor and analog signal conditioner. Its robust plastic housing provides excellent durability and environmental protection. This tilt switch 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

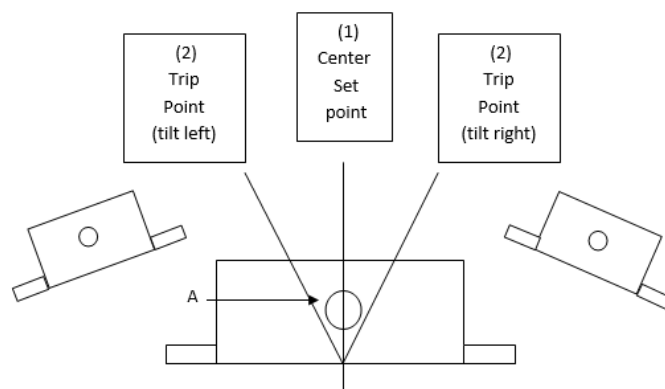
- Construction vehicles
- Agricultural vehicles
- Vehicle tip over prevention
- Aerial lift platform, boom lift, forklift, scissor lift, and telehandler, operator safety and tip over prevention

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

Certifications and Ratings

- RoHS Compliant
- IP64 (note that the standard version of this unit is not potted, epoxy potting is available upon request for IP66 protection)

Direction of Measurement



¹ Visit www.frederickscompany.com for a list of definitions.

² See application note AN1001 for a description of temperature compensation.

³ Metal housing available upon request.

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Mounting Notes

The 0729-1758-99 and all tilt switches 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

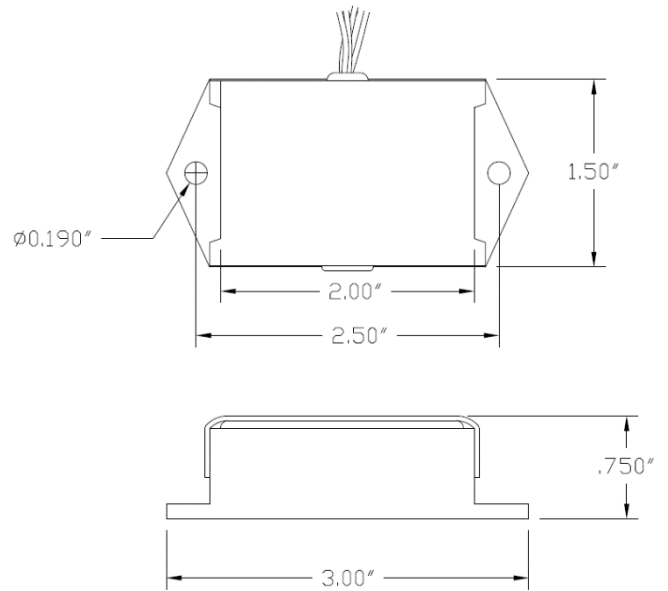
Tilt Switches

0729-1757-99	±45° range, single axis, 2 open collector outputs
0729-1736-99	±35° range, dual axis, 1 relay output

0729 series inclinometers - Inclinometers provide a continuous output of tilt angle position instead of the on/off functionality of the tilt switch. Our inclinometers in this series utilize Fredericks TrueTilt™ wide range electrolytic tilt sensors. They have a variety of output options including analog 0 to 5 V DC, CAN Bus SAE J1939, 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.



Dimensional Drawings



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