0729-1727-99

Single Axis Programmable Tilt Switch Non-Mercury

Description

Fredericks Programmable Tilt Switch is a combination Microprocessor based electronics and TrueTilt™ dual axis tilt sensor in a compact, high-impact plastic case. This design provides the user with a non-mercury, field settable switch solution for many applications. The assembly can be easily custom configured for a wide variety of angle range trip points. It avoids the wide hysterisis errors of most mercury and gravity ball switches over temperature. The simple design makes it cost effective for prototype and production requirements.

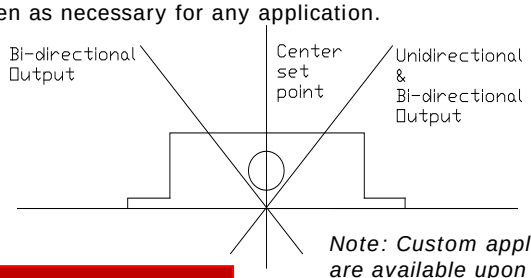
- *+4.5 to +28 Volt Single Power Supply*
- *±1 to 45° Sensing Range*
- *Unidirectional and Bi-directional Open Collector Outputs*

Applications Include

» Vehicle Tip-Over Protection / Warning
» Alarm System Activation
» Structural Threshold Monitoring
» Cut Off Switch

Programming and Operation

Unit can be programmed to trip at any point within its angle range. This is accomplished very simply by applying power and inserting and removing a jumper at the starting and trip point. Unidirectional output will trip in one direction only. Bi-Directional output will trip in both directions. The unit can be reprogrammed as often as necessary for any application.



Note: Custom applications are available upon request.

Temperature Range

Temperature Range	
Operating	-40 to +85°C
Storage	-55 to +100°C

Connector

Red	+4.3 to 28 VDC
Black	Common
Green	Common (OC)
Blue	Open Collector (unidirectional)
Grey	Open Collector (Bidirectional)

Sensor Operating Specifications

Tilt Sensor Part Number	0717-4319-99
Operating Range (max)	± 45°
Repeatability	0.1°
Resolution	<0.2 arc minutes
Symmetry (typ)	5%
Mech. Crosstalk / Deg. (to 20°)	0.025°
Temperature coefficient	
null	20 arc sec /°C
scale	0.1% / °C
Stability @ 24 Hrs	0.1°
Operating Temperature	-40° C to +85° C
Storage Temperature	-55°C to +100°C
Time Constant(1)	≤ 100 msec
Materials	magnetic

Circuit Board Operating Specifications

Power Supply Voltage (range)	+4.5 to + 28 VDC
Power Supply Current (typical)	1.0 mA @ 12 VDC
Output (unidirectional)	200 mA max.
Output (Bi-directional)	200 mA max.
Cable length	18.0"
Output Delay	0.5 sec
Output Hystersis	1.0°

Case Dimentions

Length	2.00"
Width	1.50"
Height	0.750"
Flange Length	3.00"
Flange Holes (centerline)	2.50"
Hole Diameter	0.190"