The Fredericks Company

DATA SHEET

0729-1757-99

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.

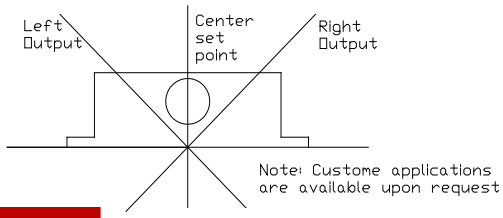
- *+4.5 to +28 Volt Single Power Supply*
- *±1 to 45° Sensing Range*
- *Open collector functionality: low/non-tripped, open/tripped For opposite functionality (open/non-tripped, low tripped) see the 0729-1758-99*

Applications Include

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

Programming and Operation

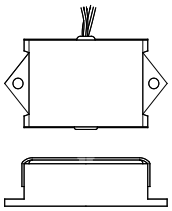
Unit can be programmed to trip at any point within its angle range. This is accomplished very simply by applying power and inserting and removing a jumper* at the starting and trip point. Refer to operating manual for Programming Information. The unit can be reprogrammed as often as necessary for any application.



*Potted units have wires

Case Dimentions

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



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 & Storage Temperature	-40° C to +70° C*
Time Constant(1)	≤ 100 msec
Materials	magnetic

* Limited by housing

Circuit Board Operating Specifications

Power Supply Voltage (range)	+4.5 to + 28 VDC
Power Supply Current (typical)	1.0 mA @ 12 VDC
Output (Right)	200 mA max.
Output (Left)	200 mA max.
Cable length	18.0”
Output Delay	0.5 sec
Output Hystersis	1.0°

Wiring Connections

Wire Description	Power	Common	Output Left	Output Right	
Red	X				+4.5 to 28 VDC
BLK		X			Power/signal common
Green		X			Power/signal common
Blue			X See note		Low/non-tripped* Open/tripped* 200 mA (max)
Gray				X See note	Low/non-tripped* Open/tripped* 200 mA (max)

*Consult factory for other configuration

NOTE: The outputs (left and right) are open collector.

The Fredericks Company I 2400 Philmont Ave • HuntingdonValley, PA 19006-0067
Tel: 215.947.2500 I Fax: 215.947.7464 I Email: sales@frederickscom.com I www.frederickscom.com

FREDERICKS COMPANY

Distribuidor

Brasil e América do Sul

CONTATO

Endereço
Rua Sete de Setembro, 2671 - Centro
13560-181 - São Carlos - SP - Brasil

Telefone
+ 55 (16) 3371-0112
+ 55 (16) 3372-7800

Internet
www.metrolog.net
metrolog@metrolog.net

Metrolog Controles de Medição