

0729-1723-99

Microprocessor Based, Dual Axis Signal Conditioner Assembly



Description

The Signal Conditioner Assembly is a combination Microprocessor based electronics and TrueTilt™ dual axis tilt sensor in a weather resistant, high-impact plastic case. This new design has proven successful in applications that demand high accuracy, low power consumption, "field" durability, and easy mounting. The assembly can be custom configured for a wide variety of angle ranges and outputs. It can be used as a stand-alone inclinometer as well as in challenging production and instrument applications.

- +7 to +16 Volt Single Power Supply
- ± 45 Degree Angle Range
- 0 to 5 VDC Analog Output

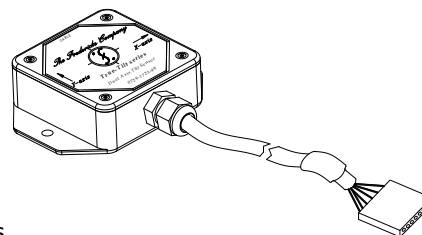
Operating Specifications

Tilt Sensor part number	0717-4304-99
Operating Range (max.)	±45°
Linear Range	±25°
Null Voltage	≤ 0.025 Volts
Null Current (max.)	0.2mA (continuous)
Null Impedance (nom)	40 K Ohms (25°C)
(measured left to right electrode)	see figure 2
Repeatability	0.1°
Resolution	<0.2 arc minutes
Symmetry (typ.)	5%
Null Offset (max)	5.0°
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
Material	magnetic

Applications Include

- Automotive Wheel Alignment
- Camera and Vehicle Stabilization
- Geophysical Monitoring
- Machine Tool Leveling
- Medical Positioning and Monitoring

Physical Dimensions



Case Dimensions

Length	2.500"
Width	2.500"
Height	0.900"
Flange Length	3.500"
Flange Holes (centerline)	3.000"
Hole Diameter	0.190"

Circuit Board Specifications

Circuit Board Part Number	1-6200-002
Power supply voltage (range)	+7 to +16 VDC
Power supply current (typical)	11.0 mA @ 9VDC
Analog output voltage (max)	Power supply voltage minus 2 Volts
Analog output load current (max)	1 mA
Analog output resolution (0 to 5 volts output)	1.5mV
Digital output voltage (typical)	0 to 5 Volts
Digital output load current (max)	1 mA
Digital resolution (percent) (time)	0.1% 2.0 usec
Digital output frequency	488 Hz

Connector

J1-1	+7 to +16 VDC
J1-2	Common
J1-3	not used
J1-3	X axis analog
J1-5	Y axis analog
J1-6	X axis pulse width (optional)
J1-7	y axis pulse width (optional)

Cable Length 60.0"

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