

The Fredericks Company

0729-1719-99

Microprocessor Based, Dual Axis, Signal Conditioner Assembly

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



The **0729-1719-99** Signal Conditioner is a Microprocessor based electronics and 0717-4304-99 MCL tilt sensor assembly. This New design has proven successful in applications that demand high accuracy, low power consumption, and “in field” durability. This standard board can be custom configured for a wide variety of angle ranges and outputs. It can be used as an evaluation tool for testing specific sensors as well as in challenging production and instrument applications.

Applications Include:

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

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"Microprocessor Based, Dual Axis, Signal Conditioner Assembly"

Sensor Operating Specifications:

Tilt sensor part number.....0717-4304-99

Operating Range (max.)..... $\pm 45^\circ$
Linear Range..... $\pm 25^\circ$
Null Voltage..... ≤ 0.025 Volts
Null Current (max.) 0.2 mA (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

Circuit Board Operating Specifications:

Circuit board part number.....1-6200-002

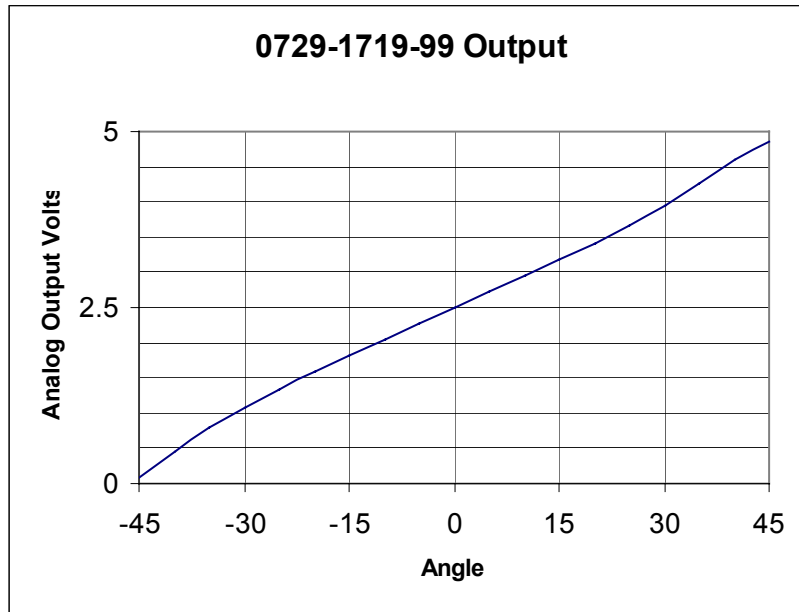
Power supply voltage (range).....+7 to +16 VDC
Power supply current (typical).....11.0 mA @ 9VDC

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).....1.5 mV

Digital output voltage (typical).....0 to 5 Volts
Digital output load current (max.).....1 mA
Digital output resolution (percent).....0.1%
(time).....2.0 usec
Digital output frequency.....488 Hz

Environmental

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



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