

# The Fredericks Company

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**0729-1720-99**

## **Microprocessor Based, Dual Axis, Signal Conditioner Assembly**

- +7 to +16 Volt Single Power Supply
- $\pm 60$  Degree Angle Range
- 0 to 5 VDC Analog Output



The **0729-1720-99** 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.).....  $\pm 60^\circ$   
Linear Range.....  $\pm 25^\circ$   
Null Voltage.....  $\leq 0.025$  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) .....  $\leq 100$  msec  
Material ..... magnetic

## Circuit Board Operating Specifications:

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

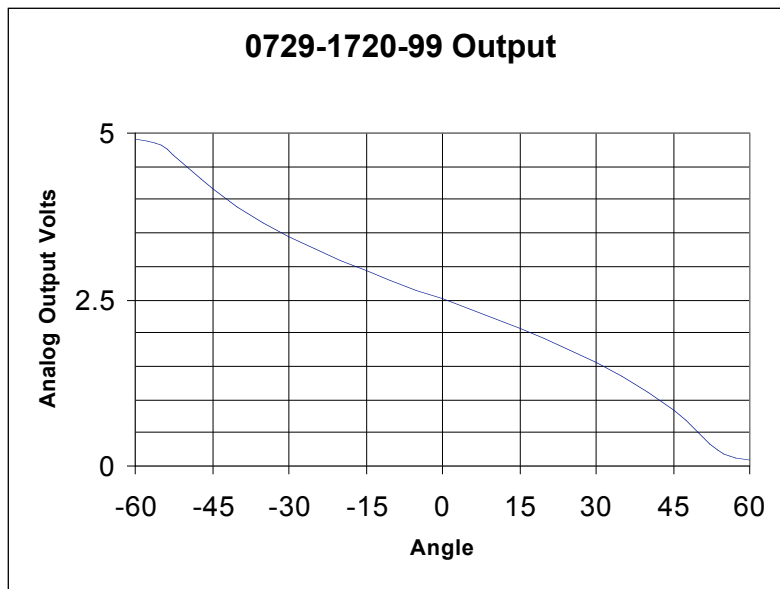
Power supply voltage (range).....+7 to +16 VDC  
Power supply current (typical).....11.0 mA @ 9VDC

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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