



*The Fredericks Company*

**0717-4323-99**  
**TrueTilt™**  
**Low Profile**  
**Single/Dual Axis**  
**Electrolytic Tilt Sensor**



Patent 6,249,984

<i>Angle Range (max)</i>	$\pm 50^\circ$
<i>Linear Range</i>	$\pm 15^\circ$
<i>Resolution</i>	$\pm 0.005$ degrees
<i>Repeatability</i>	$\pm 0.1$ degrees

The **0717-4323-99** TrueTilt™ Sensor™ represents a new advancement in electrolytic tilt sensor technology. Robust all metal construction provides durability as well as superior dimensional tolerances, which equates to excellent sensor-to-sensor electrical performance. This sensor is ideal for economical, commercial market applications requiring high production quantities and first-rate accuracy.

**Applications Include:**

- ◆ Wheel Alignment
- ◆ Navigation and GPS Compensation
- ◆ Lift Platforms
- ◆ Tip Protection
- ◆ RV Leveling
- ◆ Antenna positioning

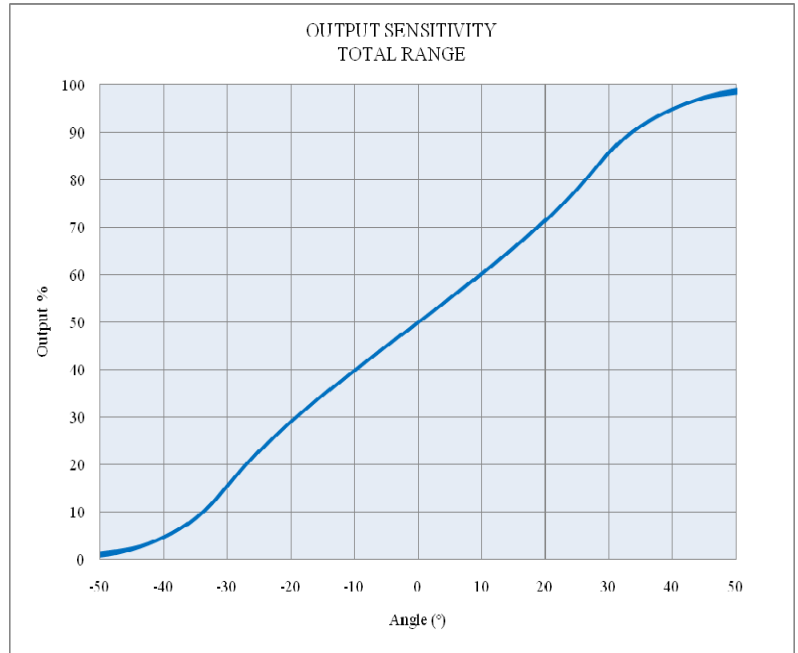
## 0717-4323 TrueTilt™, Low profile, Single/Dual Axis, Electrolytic Tilt Sensor

### Operating Specifications:

Operating Range (max.) .....  $\pm 50^\circ$   
 Linear Range.....  $\pm 15^\circ$   
 Null Current (max.) ..... .0.2 mA (continuous)  
 Null Impedance (nom) ..... 55 K Ohms (25° C)  
 Repeatability.....  $\pm 0.1^\circ$   
 Resolution.....  $\leq 0.005^\circ$   
 Symmetry (typ.)..... 5 %  
 Null Offset<sup>1</sup> (max).....  $\pm 3.0^\circ$   
 Mech. Crosstalk / Deg. (to 20°).....  $\pm 0.025^\circ$   
 Temperature Coefficient  
     Null.....20 arc sec / °C  
     Scale..... 0.1 % / °C  
 Stability @ 24 Hrs.....  $\pm 0.1^\circ$   
 Operating Temperature ..... -40° C to +85° C  
 Storage Temperature..... -55° C to +100° C  
 Time Constant (1).....  $\leq 100$  msec  
 Material..... magnetic

<sup>1</sup>Difference between electrical and mechanical null

NOTE: Output sensitivity's scale factor may be modified to individual requirements upon special order.



### Physical Dimensions:

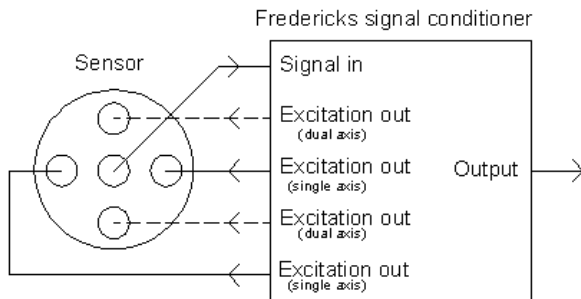
Height..... 0.330"(8.38mm)  
 Diameter - Cap..... 0.325"(8.25mm)  
 Diameter - Flange..... 0.360"(9.14mm)  
 Lead length..... 0.20"(5.0mm)  
 Lead diameter..... 0.020"(0.5mm)  
 Lead spacing (center to outer).... 0.1" (2.5mm)

### Linearity Specifications:

Range (0° to 3°) .....Linearity  $\leq 0.01^\circ$   
 Range (3° to 8°) .....Linearity 2%  
 Range (8° to 15°).....Linearity 3%

### Sensor Test Circuitry

Tests were conducted by exciting the outer electrodes of the sensor in a single axis mode using the Fredericks Universal signal conditioner. Output curve and linearity specifications are shown above. Information on electrolytic tilt sensor signal conditioning is available on the Fredericks web site at [www.frederickscom.com](http://www.frederickscom.com).



**Caution!** – Ensure that all test and operating circuits are entirely free of direct current. Direct current will cause level damage and/or instability.

**Note!** – The housing (center pin) is the active output signal. The unit must be electrically isolated.



## Distribuidor

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