

# SPECTROTILT™ – RS232 / 12 bit Electronic Inclinometer

The SPECTROTILT™ RS232 / 12 bit Electronic Inclinometer offers unparalleled accuracy and value. By combining a single axis / hybrid electrolytic tilt sensor, with custom digital electronics and software, Spectron has successfully spanned the gap between cost and performance. Features include a +/-60 degree linear sensing range, on-board linearity and temperature correction, ESD and EMI protection, aluminum housing, all in a hermetically sealed package.

The angular range, scale factor / resolution, and number of readings internally averaged (ie: filtering), can all be custom tailored to satisfy most applications. The viscosity of the fluid inside the sensing element can also be altered, to decrease susceptibility in high vibration environments. In addition, the digital output signal is ideal for long cable runs, eliminating concerns over signal loss and noise.



## Applications

- **Construction Equipment** (Boom Angle, Safe Load Indicators)
- **Road Graders and Pavers** (Blade Angle)
- **Wheel Alignment** (Caster and Camber measurement)
- **Antenna Position** (Satellite Dish Elevation Angle)

## General Specifications

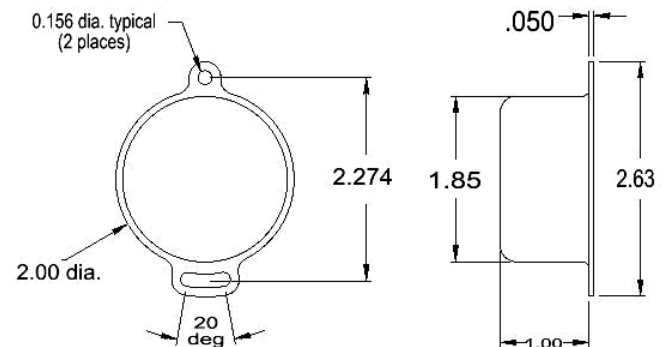
Input Voltage ..... +7 to +14Vdc (unregulated)  
 Input Current ..... 20mA  
 Output ..... RS232

Range (linear) ..... +/-60 degrees  
 Accuracy ..... +/-0.3 degrees maximum  
 Scale Factor/Resolution ..... 0.03425 degrees per count  
 Output at null (zero degrees) ... 2048 counts  
 Temperature Range  
     • operating ..... -40° to +80° C  
     • storage ..... -55° to +80° C  
 Start-up Time ..... <1 second  
 Vibration ..... MIL Std. 810, method 514.4

\* The output is transmitted in RS232 format, 9600 baud rate, at CMOS logic levels (0 and +5Vdc). The most and least significant bytes are transmitted at 15msec intervals.

\*\* Accuracy includes all effects, and is defined as the maximum output deviation from the absolute input angle.

## Physical Dimensions (inches)



• vertical mounting shown!

## Electrical Connections

Black = Ground  
 Red = +7 to +14Vdc (unregulated)  
 White = Data output line (referenced to Ground)

## Ordering Information

Part Number	Description
SSY0185-VDS12	Vertical mount
SSY0185-HDS12	Horizontal mount

**Consult factory for further technical information!**



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**Specifications subject to change without notice!**

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