# SPECTROTILT™ – *RS232 Electronic Inclinometer*

*Spectron Systems Technology is proud to announce the release of the **SPECTROTILT™** **RS232 Electronic Inclinometer**. 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 angular 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.*
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## Applications

• **Construction Equipment** *(Boom Angle, Safe Load Indicators)*

• **Road Graders and Pavers** *(Blade Angle)*

• **Wheel Alignment** *(Caster and Chamber measurement)*

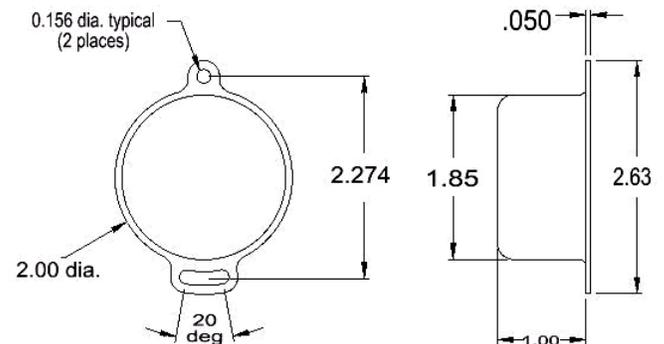• **Antenna Position** *(Satellite Dish Elevation Angle)*

## General Specifications

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

```
Range (linear) …….…..……..... +/-60 degrees
Accuracy……….…..…………... +/-0.5 degrees maximum
Scale Factor/Resolution ……… 0.137 degrees per count
Output at null (zero degrees) … 512 counts
Temperature Range
    • operating ………..…… –40° to +70° 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)*



0.156 dia. typical (2 places)
.050
2.274
2.00 dia.
20 deg
1.85
1.00
2.63

• *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-VDS** | **Vertical mount** |
| **SSY0185-HDS** | **Horizontal mount** |

*Consult factory for further technical information!*

*Specifications subject to change without notice!*          Doc.# SDS-120-4203