SPECTROTILT™ – *Analog Electronic Inclinometer*

The **SPECTROTILT™** *Analog Electronic Inclinometer* is a fully signal conditioned, single axis tilt sensor. By combining a proprietary glass/ceramic hybrid electrolytic tilt sensor, with custom electronics, the **SPECTROTILT™** rivals both the performance of higher priced sensors, and the cost of less capable solutions. Features include a +/-70 degree total sensing range, bipolar input/output, ESD and EMI protection, aluminum housing, all in a hermetically sealed package.

Designed to operate in the most physically demanding environments, this robust inclinometer is also ideal for numerous other applications.. The viscosity of the fluid inside the sensing element can be altered, to decrease susceptibility in high vibration environments. Custom sensing ranges, cable length/type and connectors are also available.


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 +/-15Vdc (unregulated)
Input Current .... 0.5mA (nom.)
Output ....+60mV/$^\circ$ (+/- 1%)
Null Output .... 0.0Vdc, +/-10 mVdc
Repeatability .... 0.05 degrees
Resolution .... 0.001 degrees
Linear Range .... +/-60 degrees
Total Range .... +/-70 degrees
Linearity
    • 0 to 10 deg. .... 0.1 degrees
    • 10 to 60 deg. .... 1% of reading
    • 60 to 70 deg. .... monotonic
Temperature Range
    • operating .... –40° to +70° C
    • storage .... –55° to +80° C
Temp. Coefficient of Null .... 0.008 deg./C$^\circ$
Temp. Coefficient of Scale .... 0.1% / C$^\circ$
Start-up Time .... <1 second
Weight .... 80 grams

Physical Dimensions *(inches)*

0.156 dia. typical (2 places)
.050
2.274
2.00 dia.
20 deg
1.85
2.63
1.00
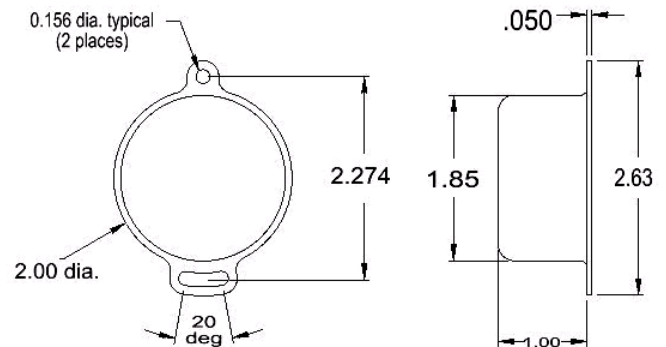
• *vertical mounting shown!*

Electrical Connections

Black =   Ground (common)
Red =   +7 to +15Vdc input (unregulated)
Gray =   -7 to -15Vdc input (unregulated)
Yellow =   Output signal (referenced to Ground)

Ordering Information

Part Number	Description
SSY0185-HAS	**Horizontal mount**
SSY0185-VAS	**Vertical mount**