

SPECTROTILT™-Dyna —Single Axis Dynamic Electronic Inclinometer

The SPECTROTILT™-Dyna Single Axis Dynamic Electronic Inclinometer is a fully signal conditioned, single axis electronic inclinometer, designed specifically for dynamic applications. Featuring an impressive frequency response of over 10Hz, the SPECTROTILT™-Dyna can satisfy numerous applications where slower responding sensors are prohibited.

Features include a +/-85 degree total sensing range, three standard output configurations (*Analog / Digital* / 4-20mA*), integral reverse polarity, over-voltage and EMI protection*, and an on-board temperature sensor, all mounted in a rugged die-cast aluminum alloy housing. In addition, the output of the SPECTROTILT™-Dyna is in arc-degrees (*no sine conversion necessary*), thereby simplifying system integration.

Designed to operate in the most physically demanding environments, this robust inclinometer is also ideal for numerous other applications. Extended operating temperature models of -50° to +125° C are also available.

*Note: Digital version output line not EMI protected! See Application Note SAN-220-xxxx for available communication protocols.

Applications

- **Mobile / Dynamic** (Vehicles, Robotics, Machine Automation, etc.)
- **Construction Equipment** (Boom Angle, Safe Load Indicators)
- **Road Graders and Pavers** (Blade Angle)
- **Antenna Position** (Satellite Dish Elevation Angle)

General Specifications

Input Voltage +7.5 to +32Vdc (unregulated)

Input Current 50mA (max.)

Output (scale factor, in arc-degrees)

- Analog Mode 28.2mV/°
- Digital Mode 22.75counts/°
- 4-20mA Mode 90.5uA/° (*consult factory for proper load!)

Null Output

- Analog Mode +2.50Vdc
- Digital Mode 0 Counts
- 4-20mA Mode 12.00mA

Repeatability 0.044 degrees

Resolution 0.022 degrees

Total Range +/-85 degrees

Linear Range +/-80 degrees

Linearity

- 0 to 70 deg. 0.1 degrees
- 70 to 80 deg. 0.5 degrees
- 80 to 85 deg. monotonic

Temperature Range

- operating -40° to +85° C (-50° to +125° C avail.)
- storage -50° to +125° C

Temp. Coefficient of Null 0.008 deg./C°

Temp. Coefficient of Scale 2% of reading

Frequency Response 13Hz

Settling Time 250mSec

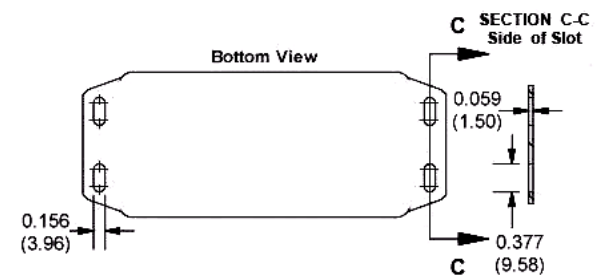
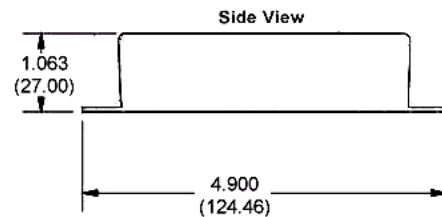
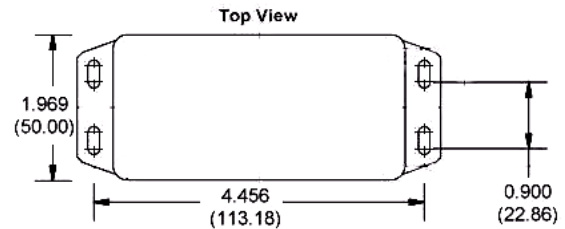
Start-up Time 500mSec

Shock 1,000g's

Cable 18" long, 22 awg



Physical Dimensions inches (mm)



Electrical Connections

- Black = Ground (common)
- Red = +7.5 to +32Vdc input (unregulated)
- Brown = Analog Output (referenced to Ground)
- Green = 4-20mA Output
- White = (A) RS485 Output
- Blue = (B) RS485 Output

Ordering Information

Output Type	Part Number
Analog	SSY0247-HAS
Digital	SSY0247-HDS
4-20mA	SSY0247-HIS



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Specifications are subject to change without notice!



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