

# SA40011 – Dual Axis Signal Conditioning Module

The **SA40011- Dual Axis Signal Conditioning Module** is a bipolar DC input/output operated device, specifically designed to interface directly with the entire line of *SP5000 Series Dual Axis Tilt Sensors*. This PC board mountable module internally converts the DC input voltage into an AC excitation voltage for the sensor, and demodulates the sensor output into a smooth amplified DC output voltage. Incorporating a proprietary signal processing algorithm, and an external temperature compensation sensor (optional), normal measurement errors are severely reduced. The **SA40011** also features overload protection, and is 100% reliability tested to provide the highest quality available.

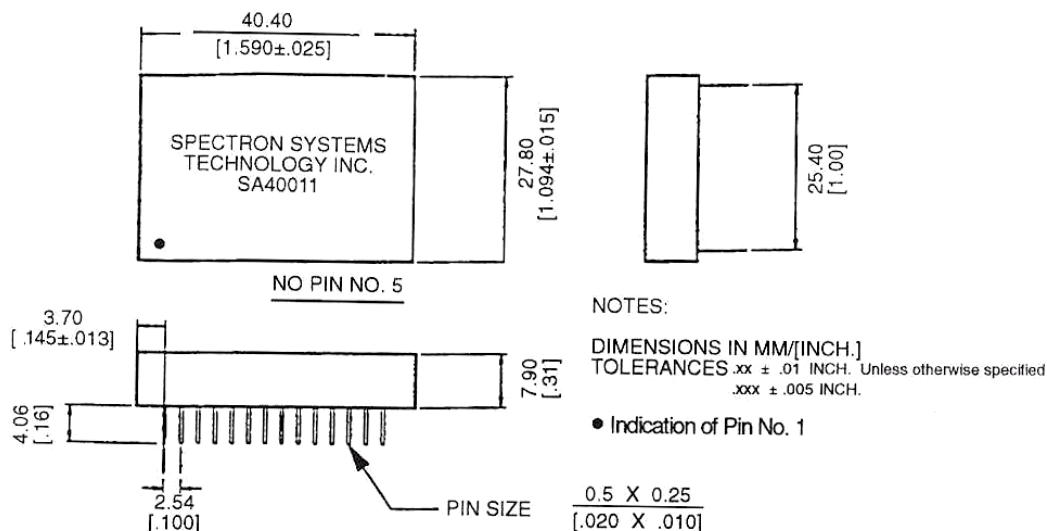
## General Specifications

Input voltage ..... +/-10 to +/-16Vdc  
Input current ..... 12mA  
Sensor excitation ..... 10 V pp, square wave  
Input impedance ..... 5 megohms  
Output ..... +/-7Vdc @ +/-10Vdc input  
Time constant ..... 150 msec  
Offset adjustment ..... +/-1Vdc  
Output ripple ..... 0.2% / Vdc output  
Temperature coefficients (module w/out sensor)  
- Null ..... 60 microvolts / C<sup>o</sup> (typical)  
- Scale ..... 0.02% / C<sup>o</sup>  
Output short duration ..... Continuous  
Temperature range  
- Operating ..... -20 to +70C<sup>o</sup>  
- Storage ..... -40 to +80C<sup>o</sup>

### Temperature Compensation

- Temperature compensation of the assembly (module and sensor) can be accomplished using an external silicon temperature sensor (KTY81-120) and resistor (47k ohm typical). With this configuration, it is possible to reduce the scale temperature coefficient error from a 0.3%/C<sup>o</sup> (nominal), to 0.03%/C<sup>o</sup> (nominal). Please see wiring diagram for connection points.

## Dimensions



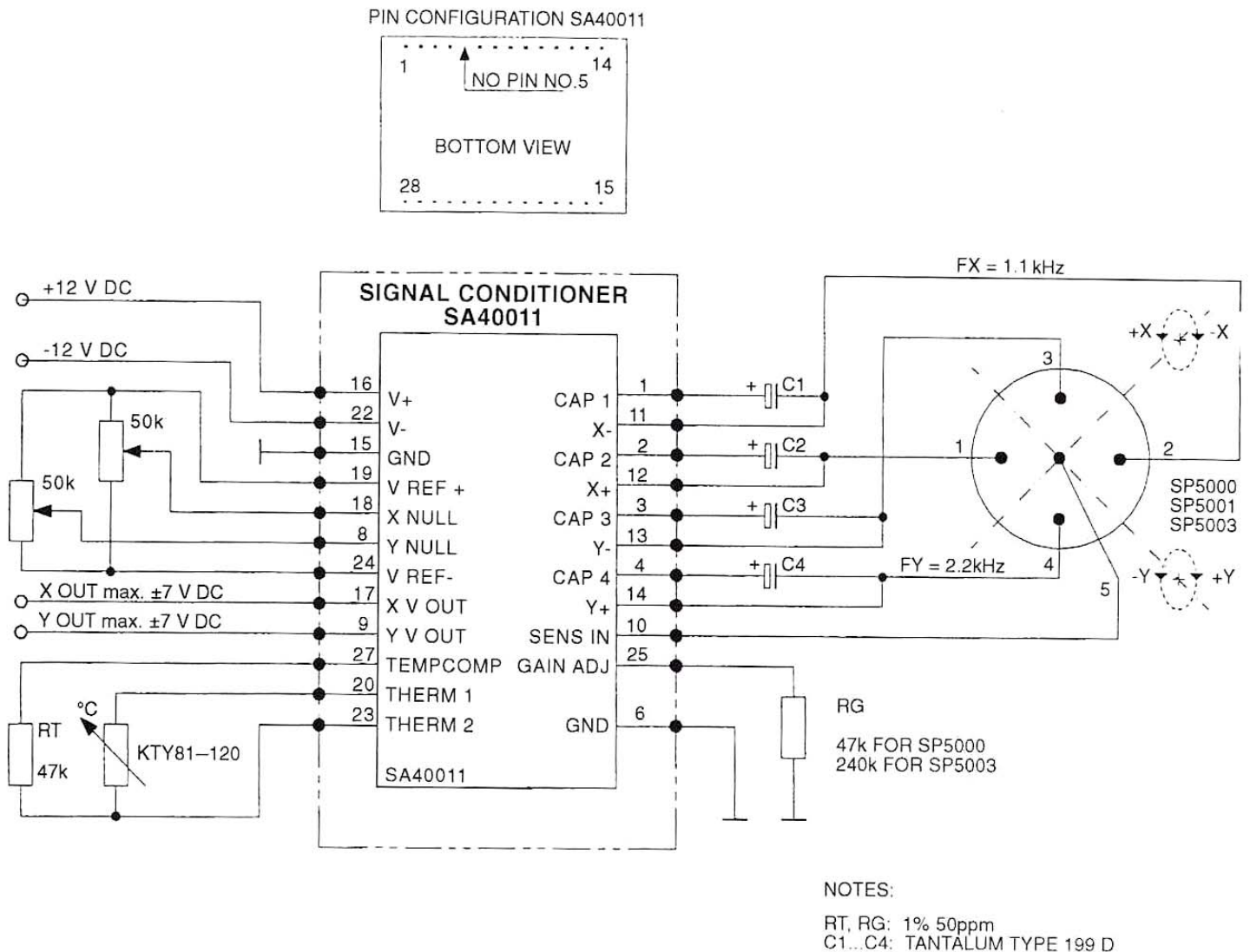
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### **Input/Output Connections**



***Consult factory for further technical information and ordering details!***

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