

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.

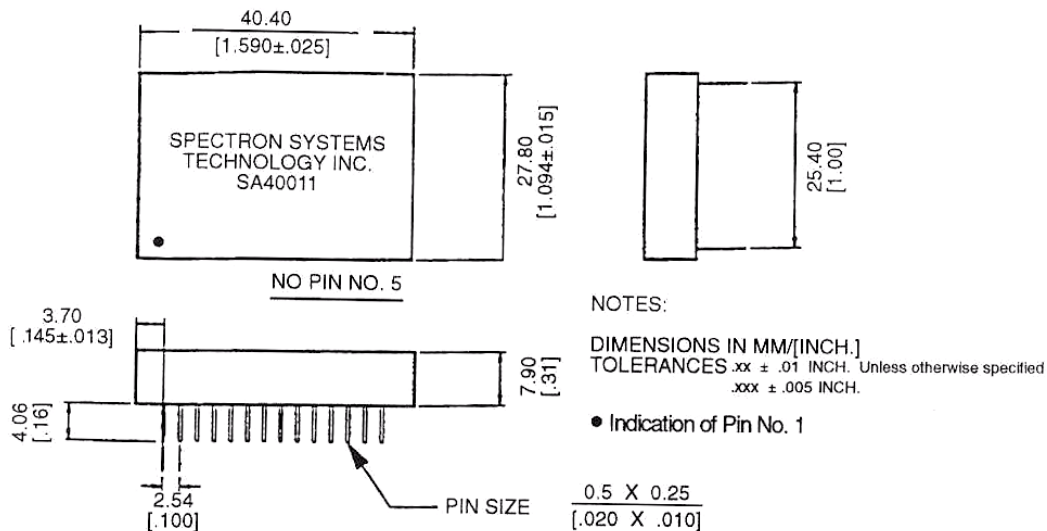
General Specifications

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^o (typical)
 - Scale 0.02% / C^o
 Output short duration Continuous
 Temperature range
 - Operating -20 to +70C^o
 - Storage -40 to +80C^o

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^o (nominal), to 0.03%/C^o (nominal). Please see wiring diagram for connection points.

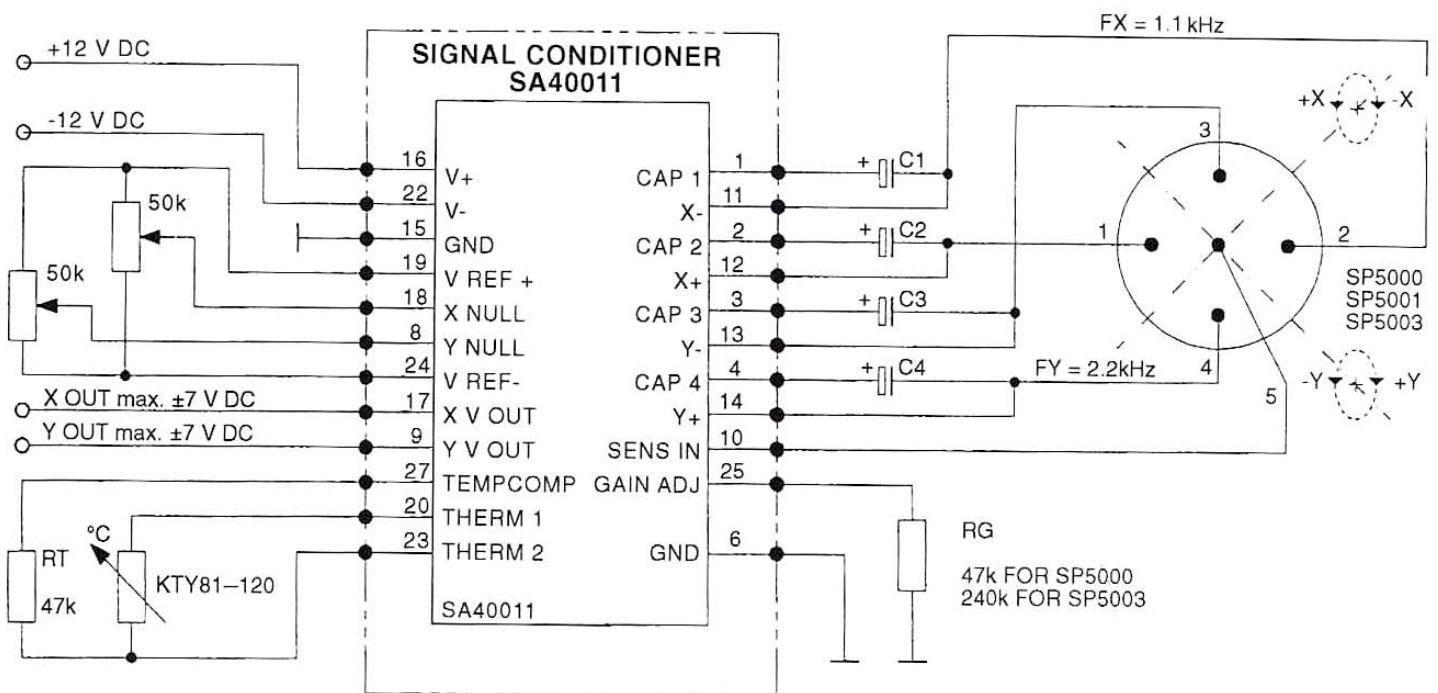
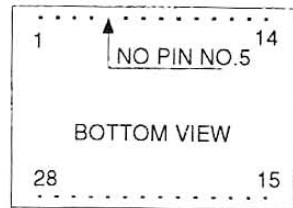
Dimensions



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Input/Output Connections

PIN CONFIGURATION SA40011



NOTES:

RT, RG: 1% 50ppm
C1...C4: TANTALUM TYPE 199 D

Consult factory for further technical information and ordering details!

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