

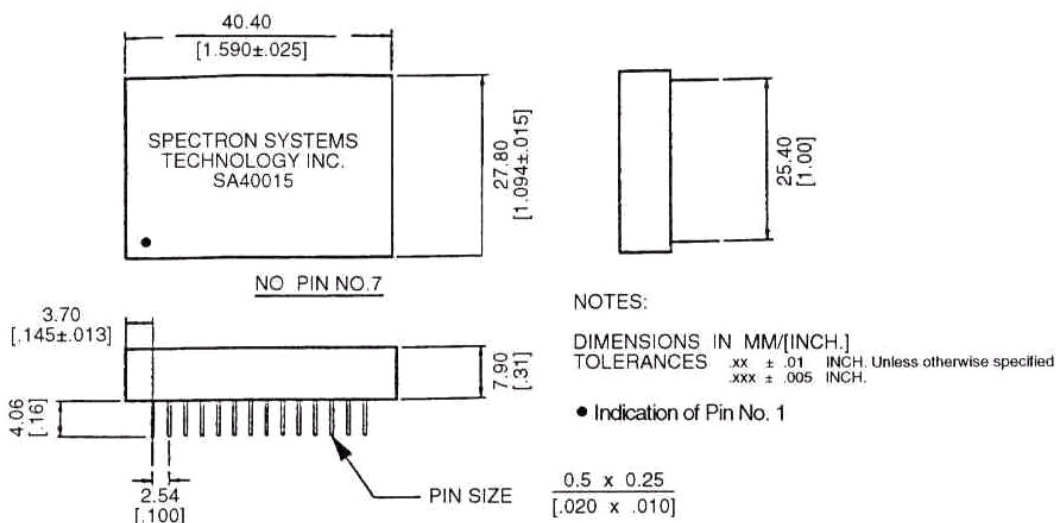
SA40015 ñ Dual Axis CMOS Signal Conditioning Module

The SA40015 *Dual Axis CMOS Signal Conditioning Module* is a DC input/output operated device, which operates off a single ended supply, and provides a bipolar DC output. Specifically designed to interface directly with the entire line of *SP5000 Series Dual Axis Tilt Sensors*, this low power consumption conditioner is ideal for battery driven applications. Featuring a PC board mountable design, the 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 SA40015 also features overload protection, and is 100% reliability tested to provide the highest quality available.

General Specifications

- Input voltage+5Vdc, +/-5%
- Input current 1.5mA
- Sensor excitation 3 V pp, square wave
- Input impedance 5 megohms
- Output +/-1.5Vdc (Ref. 2.5Vdc) Time constant 70 msec
- Offset adjustment +/-0.2Vdc
- 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 (Vout and Vref2) 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 a resistor (see wiring diagram for typical values). 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.

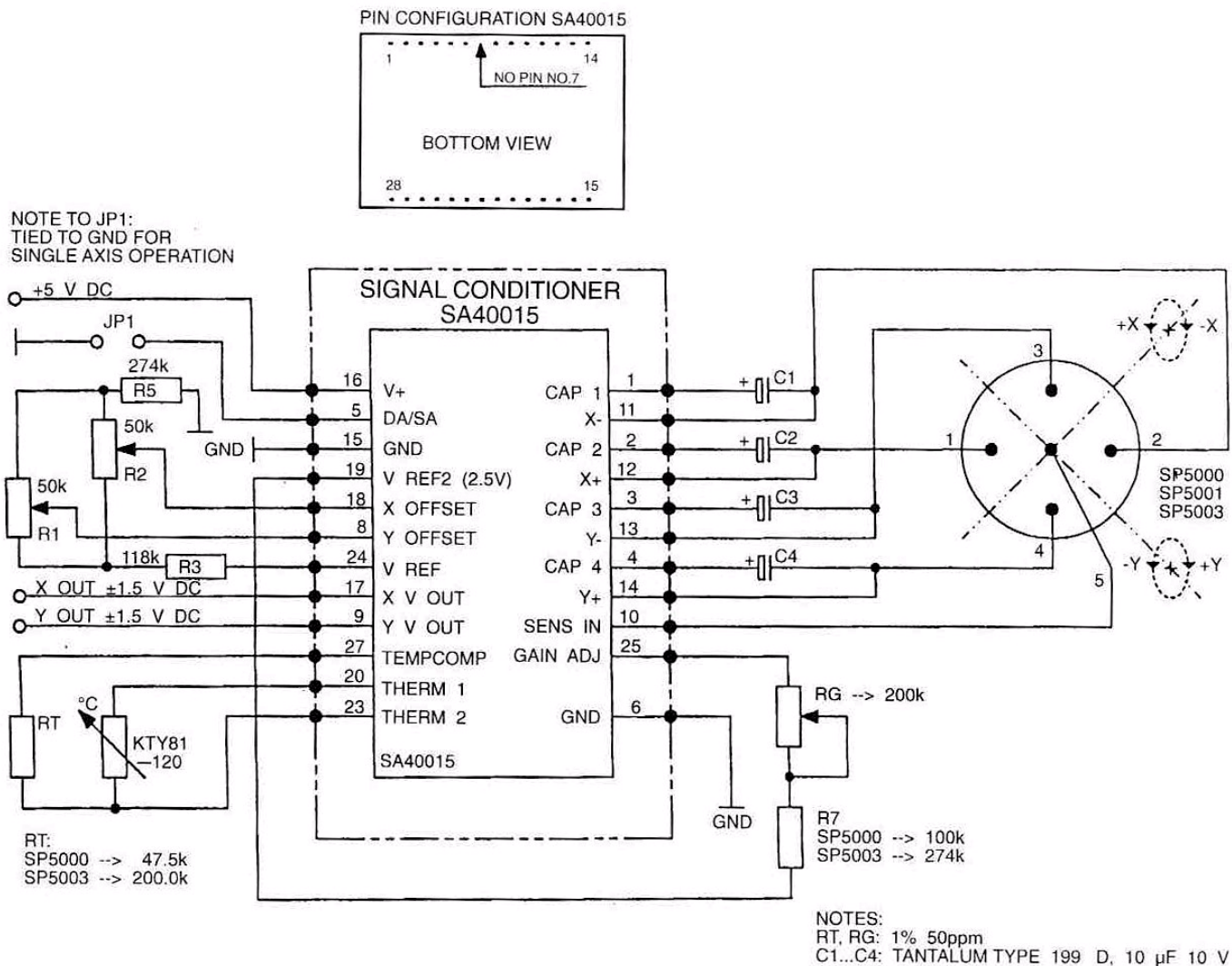
Dimensions



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Input/Output Connections



Consult factory for further technical information and ordering details!

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