

SA40111 – Ultra-Dual Signal Conditioner

The SA40111 Ultra-Dual is a dual axis signal conditioner that delivers high accuracy RS232 (8 bit) and analog (Vdc) outputs. Designed to interface perfectly with Spectron's full line of single and dual axis electrolytic tilt sensors, the SA40111 Ultra-Dual is capable of providing data over widely varied angular ranges. On-board linearity correction further enhances sensor performance, to achieve unparalleled measurement accuracy. The RS232 output is easily read via the serial port of a PC or by direct interface to a microcontroller, while the optional analog output provides interfacing flexibility for most other applications. On-board temperature compensation is also available. Consult factory for details.

General Specifications

Input voltage+3.4 to +12Vdc
 Input current 15mA (8mA in sleep mode)
 Outputs: • RS232 16000 counts
 • Analog 0 to +3.0Vdc
 Response time 25 mSec
 Null offset adjustment programmable
 Operating Temp range -20 to +70C°
 Temp. sensor resolution 0.1 C°

RS232 Communication Protocol

Baud rate 38400
 Data width 8 Bits
 Stop bit 1
 Parity None

Input/Output Connections

RS232 (JP3)

Circuit Board Connector - JP3	Function	Corresponding PC Serial port connection
Pin#		Pin#
1	Input Voltage	N/A
2	Ground (common)	5
3	Output Data	2
4	Input Command	3

* A DB9 type connector is required to connect to the PC serial port (not supplied)

Analog (JP1, optional)

Circuit Board Connector - JP1	Function
Pin#	
10	Input Voltage
4	X axis output
1	Ground (common)
2	Y axis output

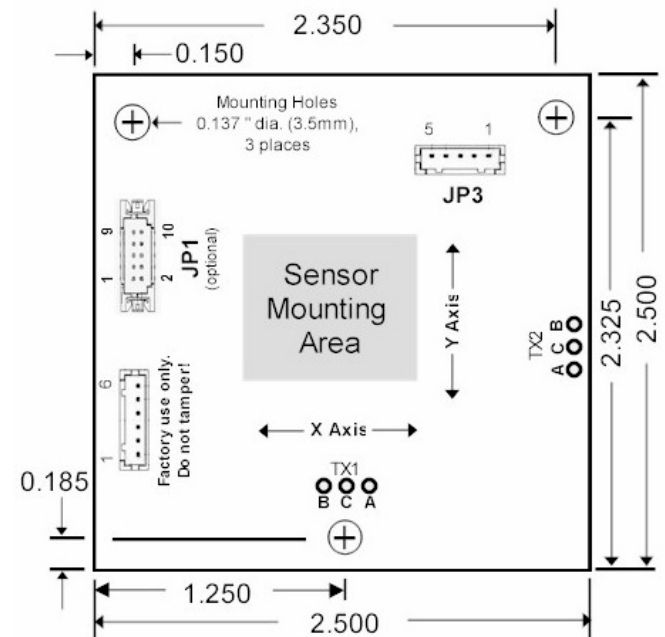
Sensor Connections

Circuit Board Connection Points		Function
TX1 - X axis	TX2 - Y axis	
A	A	Excitation (Input 1)
C	C	Output (center)
B	B	Excitation (Input 2)



*Shown with two SH Series Ceramic Sensors installed (not included).

Dimensions (inches)



Mating Connector

Manufacturer: Hirose
 Pins: DF13-2630SCFA
 Socket: JP1 = DF13-10DS-1.25SC
 JP3 = DF13-5S-1.25SC

Ordering Information

Consult factory for ordering details!



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Specifications are subject to change without notice!

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