

Analog / Digital Mini Signal Conditioner Board (Part Number: 6200-007) Data Sheet

Specifications:

Power supply voltage	3 to 5 VDC (regulated)
Power supply current	15mA @ 5VDC
.....	10mA @ 3.3VDC
Operating temperature range (board only).....	-40°C to +85°C
Storage temperature range (board only)	-55°C to +100°C
Angle Range	0-100% of sensor range (16 bit, 65535 counts max)
Board dimensions.....	1.25 x 1.25 inches or 32mm x 32mm square
Mounting hole and spacing.....	0.089 inches diameter and 1.05 inches (center to center)
Temperature sensor range.....	-40°C to +125°C (10 bit resolution)

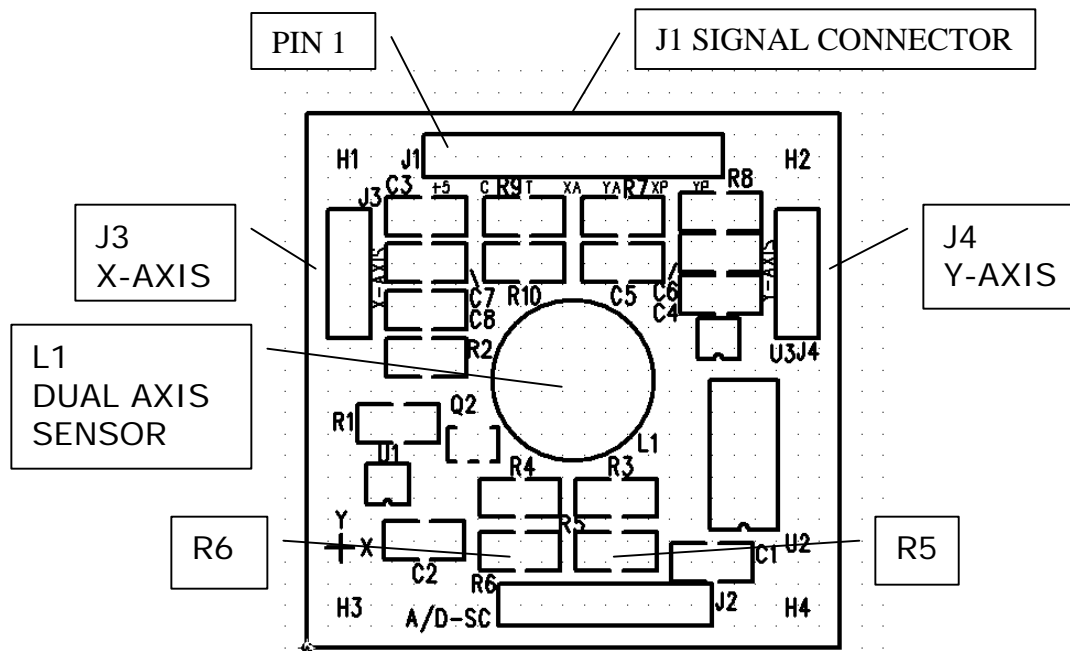


Signal descriptions J1:

Pin #	Signal name	Direction	Description
1	Vcc	Input	Supply voltage input: +3 to +5 vdc regulated
2	GND	-	Ground - The reference for the digital signals and the supply voltage
3	Temperature	Output	Voltage output from the on board temperature sensor MCP9700 NOTE: To convert the voltage from the on board MCP9700 use the following formula, Temperature C = (MCP9700 output voltage – 0.5) / 0.010
4	X axis analog	Output	X axis voltage output – ratiometric with supply voltage For example: Null (zero degrees of angle) = 2.5 volts with supply voltage at 5 V Null (zero degrees of angle) = 1.65 volts with supply voltage at 3.3 V
5	Y axis analog	Output	Y axis voltage output - ratiometric with supply voltage For example: Null (zero degrees of angle) = 2.5 volts with supply voltage at 5 V Null (zero degrees of angle) = 1.65 volts with supply voltage at 3.3 V
6	X axis PWM	Output	X axis PWM output – 122 Hz duty cycle, 16 bit resolution (1% to 99 %) For example: Null (zero degrees of angle) = 50 % modulation
7	Y axis PWM	Output	Y axis PWM output – 122 Hz duty cycle, 16 bit resolution (1% to 99 %) For example: Null (zero degrees of angle) = 50 % modulation

NOTE: The analog voltage output circuit is integrated from the PWM output. This circuit will be sensitive to moisture. Protected environment or conformal coating may be needed in higher humidity conditions.

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Analog / Digital signal conditioner board assembly

Sensor configuration	Description
Dual Axis sensor mounted on board (standard configuration)	Dual axis sensor is mounted in location L1 R5 is 10.0K ohms R6 is not installed
Single axis sensors mounted off board	Single axis sensors are connected to J3 (x-axis) and J4 (Y-axis) No sensor is installed in L1 R5 is not installed R6 is 1.0K ohms Note: If R5 is not removed then R6 must be less than 100 Ohms

Note: J2 is for factory use only.