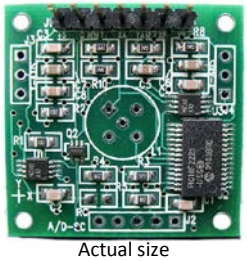
1-6200-007

Analog/Digital Mini Signal Conditioner Board



Actual size

Specifications

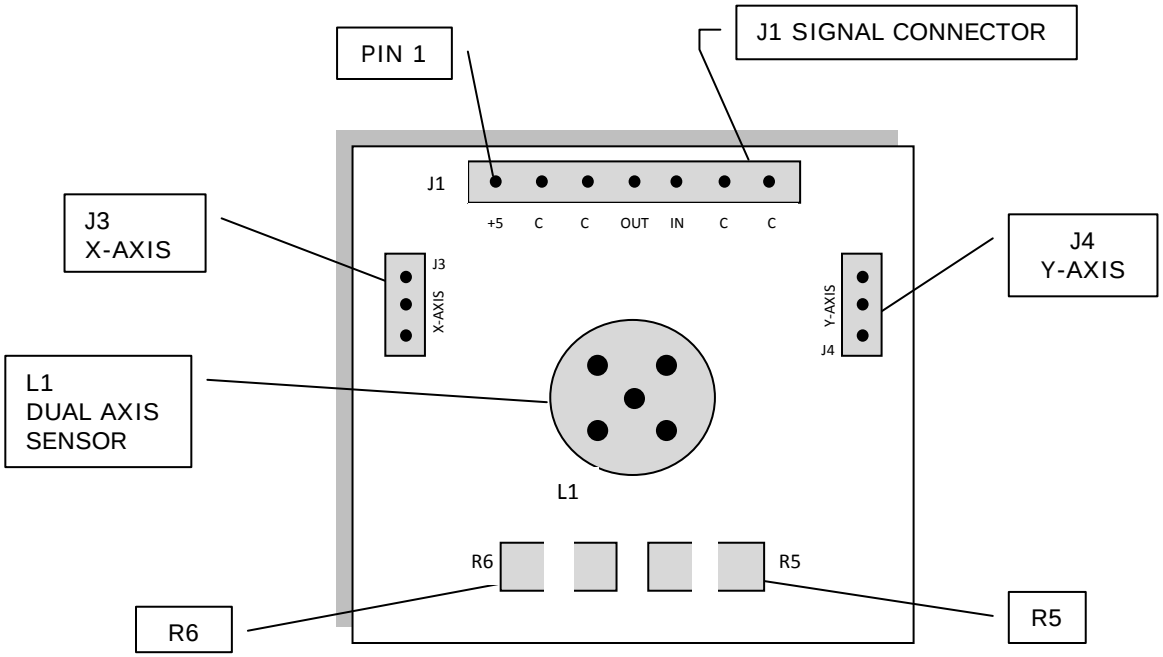
Power supply voltage	3 to 5 VDC (regulated)
Power supply current	15mA @ 5VDC 10mA @3.3VDC
Operating temp range (board only)	-40°C to +85°C
Storage temp range (board only)	-55°C to0 +100°C
Angle range	0-100% of sensor range (16 bit,65535 counts max)
Board dimensions	1.25" x 1.25" or 32mm x 32mm square
Mounting hole and spacing	0.089" dia. and 1.05" (center to center)
Temp. sensor range	-40°C to +125°C (10 bit resolution)

Signal Description 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 5V 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 5V 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

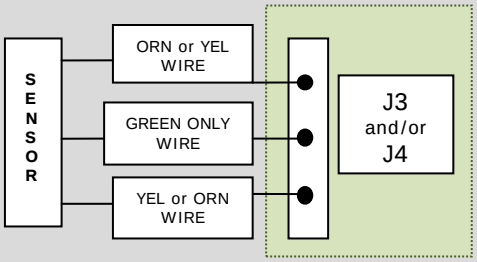
NOTE: The analog voltage output circuit is integrated from the PWM output. This circuit will be sensitive to moisture. Protected environment or conformal coating may be needed in higher humidity conditions.

Analog / Digital signal conditioner



Sensor Configuration

Sensor Configuration	Description
Dual Axis Sensor mounted on board (std configuration)	- Dual Axis 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 1K ohms Note: if R5 is not removed then R6 must be less than 100 ohms



NOTE: J2 is for factory use only.