

## Model 83162

### Dual-channel Signal Conditioning Card

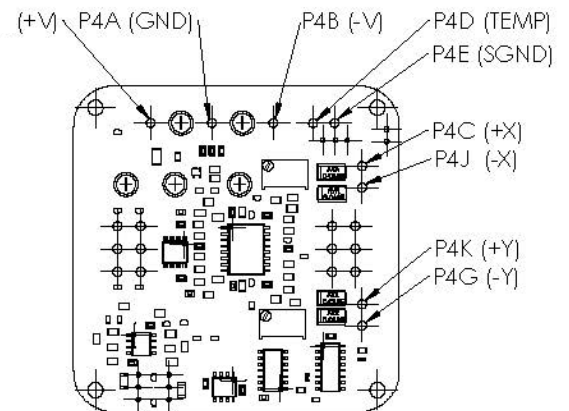
The model 83162 is a precision, two-channel signal conditioning card for use with all Jewell miniature tilt sensors. Powerful electronics generate balanced AC sensor excitation for up to two tilt channels (X and Y), then amplify, rectify and filter sensor response to produce a high-level DC output signal. Output is  $\pm 8$  VDC single-ended ( $\pm 16$  VDC differential).

Units conveniently come with two switchable gain and filter settings (high/low; on/off) for added signal processing flexibility. The 83162 also includes an amplifier for one LM35 temperature sensor, and will drive tilt and temperature signals over 1000m cable lengths. All units include calibration when ordered with Jewell Instruments miniature tilt sensors. Use the model 83162 for peak performance from our 755-, 756-, or ceramic tilt sensor packages.

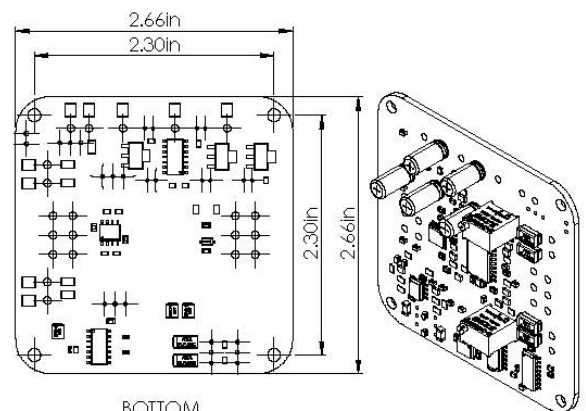
#### PIN OUTS

<b>A</b>	POWER GROUND
<b>B</b>	- V IN
<b>C</b>	SIG + X
<b>D</b>	TEMPERATURE OUT
<b>E</b>	SIGNAL GROUND
<b>G</b>	SIG + Y
<b>H</b>	+V IN
<b>J</b>	SIG - X
<b>K</b>	SIG - Y

Dimensions: in [mm]



TOP



BOTTOM

# PERFORMANCE SPECIFICATIONS

<b>INPUT CHANNELS</b>	Two Tilt Channels (X and Y tilt), One LM35 Temp. Sensor			
<b>OUTPUT SIGNALS</b>	±8 VDC Single-ended (±16 VDC differential)			
<b>GAIN SETTINGS</b>	Two switchable gains, 10:1 ratio			
<b>STANDARD CALIBRATION</b>	<u>Sensor Type</u>	<u>High-Gain</u>	<u>Low-Gain</u>	<u>Range</u>
	755-series	0.1 μradian/mV	1.0 μradian/mV	±8000 μradian
	756-series	0.1 °/V	1.0 °/V	±8.0°
<b>OUTPUT FILTERS</b>	Filter "On" = 7.5 sec; Filter "Off" = 0.05 sec <sup>1</sup> ; Roll-off = 6 dB/octave			
<b>TEMPERATURE OUTPUT</b>	0.1oC/mV (single-ended)			
<b>OUTPUT IMPEDANCE</b>	270 Ohms			
<b>POWER REQUIREMENTS</b>	±11 to ±15 VDC @ +11 and -6 mA, 250 mV ripple max., reverse polarity protected			
<b>CONNECTIONS</b>	Sensor: Au-plated 100 mil header pins; Power/signal: 3-ft tinned pigtail			
<b>ENVIRONMENTAL</b>	-25° to +70°C Operation, -30°C to +100°C Storage, 0-90% humidity non-condensing			
<b>MATERIALS</b>	Fiberglass PCB, thru-holed soldered components			
<b>DIMENSIONS AND WEIGHT</b>	2.66 x 2.66 x 1.12 inches (includes switches), 30 g			

*Specifications subject to change without notice on account of continued product development*

## ORDERING CODE

MODEL NO.	DESCRIPTION
<b>83162</b>	Dual Channel Signal Conditioning Card, Square, 2 Gains, 2 Filters, ±8 VDC Output (Single-ended)