Model 84800
Single-channel Signal Conditioning Card

JEWELL Instruments

The model 84800 is a compact, high performance signal conditioner for use with all Jewell Instruments miniature tilt sensors. Each 84800 conditioning card will drive one tilt channel (X or Y), and one LM35 temperature sensor. Output is a stable ±5 DC voltage (±10 VDC differential). Units also include a built-in 1.75 sec low-pass Butterworth filter for superior noise rejection (specify custom filter times on order), and the square form factor allows for easy packaging in OEM and end-user assemblies.

The model 84800 will drive signals over cable lengths of 300m. Distances between card and tilt sensor can be up to 100m. Use the 84800 signal conditioning card for peaK performance from any of our 755-series, 756- or Ceramic Miniature Tilt Sensors.
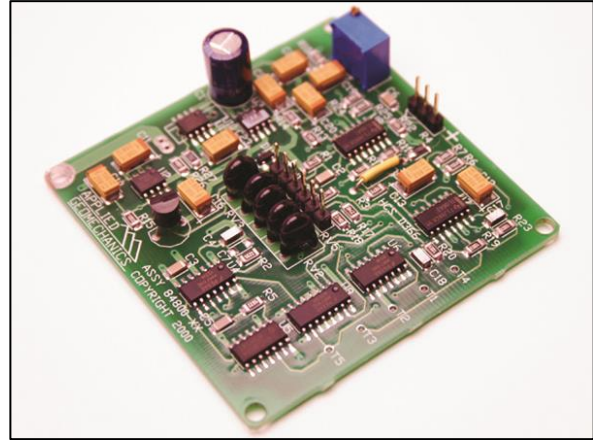
Input Channels	One Tilt Channel, One LM35 Temp. Sensor
Output Signal	±5 VDC Single-ended (±10 VDC differential)
Gain Settings	Fixed gain
Standard Calibration	*Sensor Type* *Scale Factor* *Range* *755-Series* *0.1°/V* *±0.5°* *756-Series* *1.0°/V* *±5.0°* *84053 Ceramic* *0.6°/V* *±3.0°* *84064-02 Ceramic* *10°/V* *±50°*
Output Filters	2-pole Butterworth low-pass filter, roll-off = 12 dB/octave
Temperature Output	0.1°C/mV (single-ended)
Output Impedance	270 Ohms
Power Requirements	8 to 18 VDC@ 8 mA typical, 250 mV ripple max.; reverse polarity protected
Connections	Sensor: Au-plated 100 mil header pins; Power/signal: J1 100 mil header pins
Environmental	-25° to +70°C Operation, -30°C to +100°C Storage, 0-90% humidity non-condensing
Materials	Fiberglass PCB, surface mount components
Dimensions and Weight	2.47 x 2.47 x 0.63 inches (63 x 63 x 16 mm), 0.75 oz (21 g)

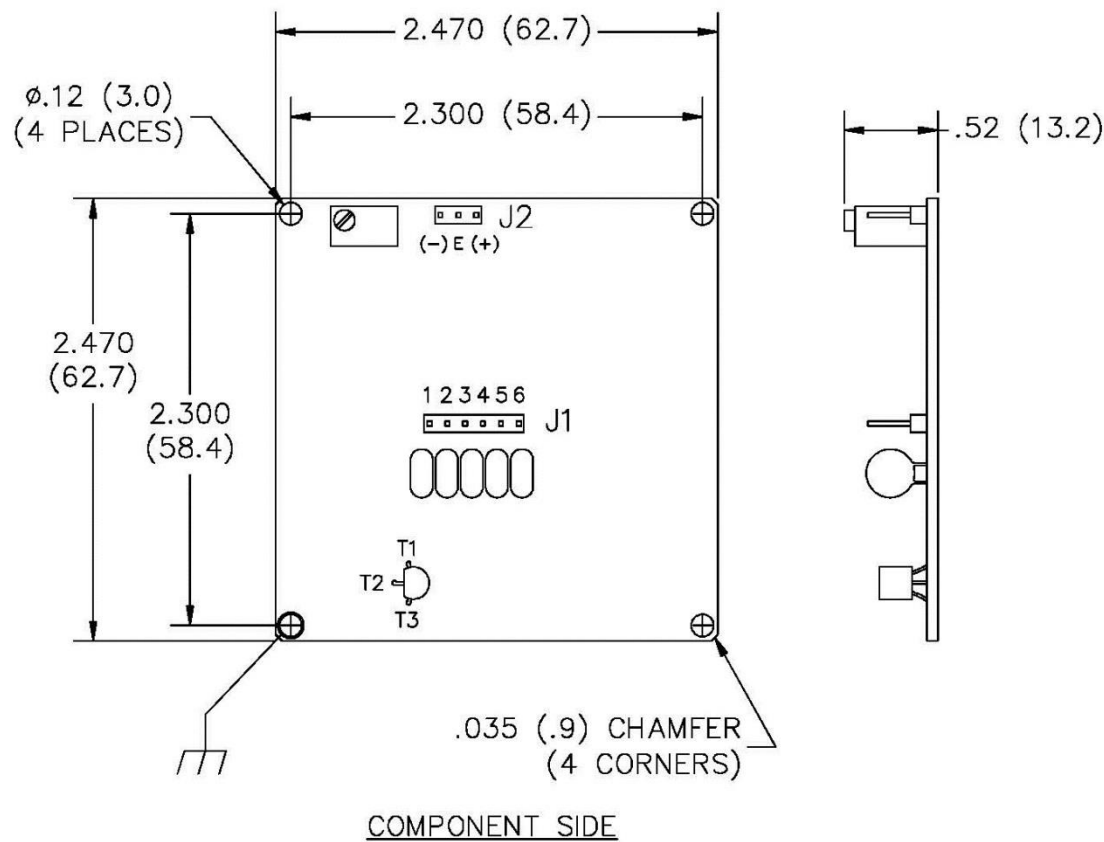*Specifications subject to change without notice on account of continued product development*

Ordering Code:

Model No.	Filter f_o(Hz)	Typical Time Constant (s)
84800 - 01	0.183	1.750
84800 - 02	1.829	0.175
84800 - 03	0.638	0.500
84800 - 04	0.318	1.000
84800 - 05	0.064	5.000

Dimensions:

COMPONENT SIDE

Dimensions in inches (mm)

Wiring and Pin-out:

J1 Pin	Function
1	8-18 VDC
2	Signal Ground
3	Power Ground
4	+Tilt
5	-Tilt (differential)
6	Temperature

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L00173 Rev. B