

Model 84800 Conditioning Card

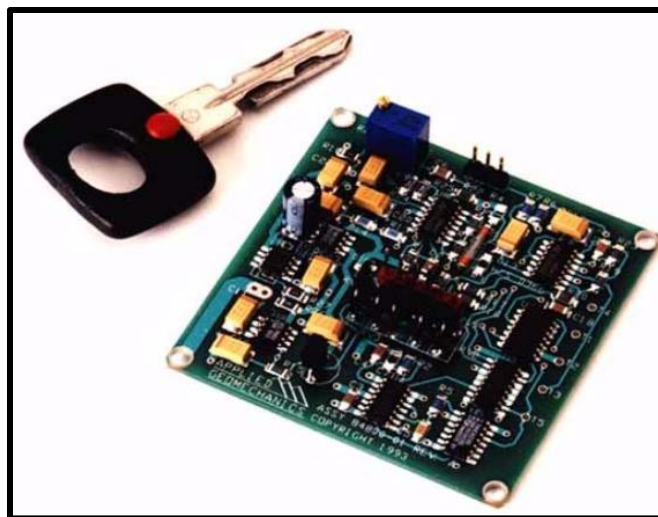
(Single-Channel Signal Conditioner)

Model 84800 is a compact electronic circuit that provides excitation and signal conditioning for any electrolytic tilt sensor and one LM-35 temperature sensor. It is designed to generate peak performance from your Jewell Instruments 755, 756, 84053, or 84064 Series Miniature Tilt Sensors.



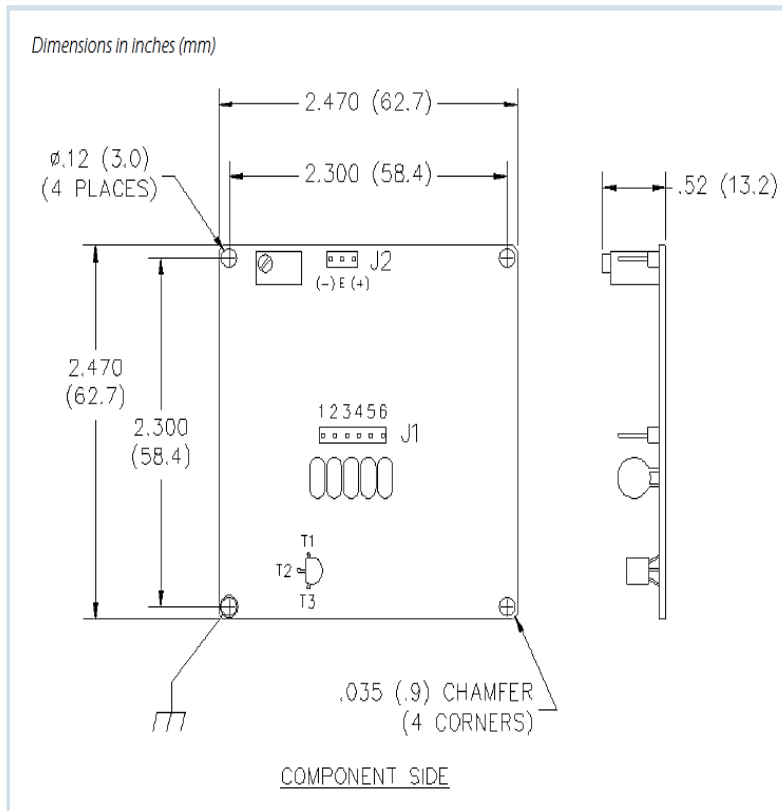
FOR ANY ELECTROLYTIC TILT SENSOR

Model 84800 will drive signals over cable lengths of 300m. Distances between card and tilt sensor can be up to 100m. Four mounting holes allow easy packaging in OEM and end-user assemblies. A wide input voltage range, transient surge protection and reverse polarity protection are added advantages of using this circuit.



INPUT	One electrolytic tilt sensor, one LM-35 temperature sensor (included)		
TILT OUTPUT	Single-ended and differential analog outputs, proportional to tilt: Output voltage range: ± 5 VDC (single-ended), ± 10 VDC (differential)		
SCALE FACTORS*	When Used With: 755-Series Sensors 756-Series Sensors	Scale Factor: 1.0 μ radian/mV [†] 1.0 degree/V	Range: ± 5000 μ radians ± 5 degrees
OUTPUT FILTER	2-Pole Butterworth low-pass filter, roll off = 12 dB/octave; time constant 0.2 second (other values on request)		
TEMPERATURE OUTPUT	0.1°C/mV (single ended), -40°C to +100°C, ± 0.75 °C accuracy, 0°C = mV		
OUTPUT IMPEDANCE	270 ohms, short circuit and surge protected		
POWER REQ'TS	8 to 18 VDC @ 8 mA typical, 250 mV peak-to-peak ripple max.; reverse polarity protected		
CONNECTIONS	Gold-plated 100 mil header pins for sensors, power & signal; 3 ft (0.8m) power & signal cable provided, greater lengths available		
ENVIRONMENTAL	-25°C to +70°C operational, -30°C to +100°C storage; 0 to 90% humidity, noncondensing		
MATERIALS	Fiberglass printed circuit board with surface mount components		
SIZE & WEIGHT	2.47 2.47 x 0.63 inches (63 x 63 x 16 mm), 0.75oz (21g); four mounting holes in corners		

*1 degree = 3600 arc seconds = 17453 μ radians (microradians)
[†] Single-ended outputs; divide by 2 for differential scale factors



Ordering Information

Model 84800	Single-Channel Signal Conditioning Card
P/N 70382-03	Sensor hook-up cable, specify length
P/N 70304	Additional power & signal cable, specify length

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