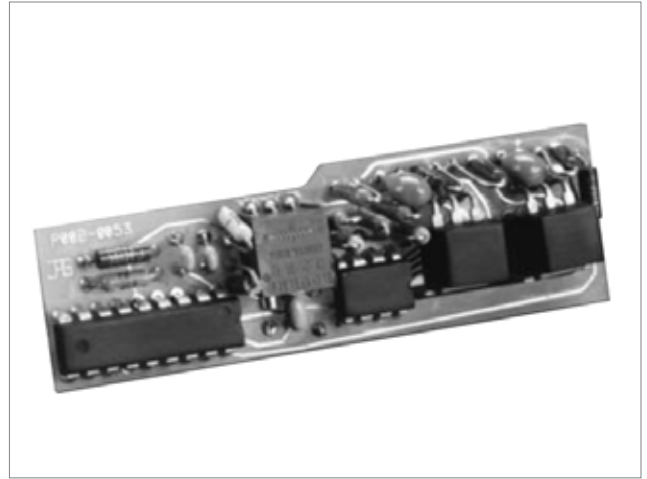


Series P010

OEM Oscillator/Demodulator

The Series P010 Oscillator/Demodulator PC Boards are the ideal AC LVDT interface for OEM applications. The compact circuit board design includes an ASIC for the oscillation/demodulation function, with peripheral components included for voltage regulation, output scaling and filtering. The synchronous demodulator converts the AC voltages from the secondary coils to a DC voltage, where the output is amplified and filtered. A standardized ± 5 VDC output signal is adjustable by manipulating an integral trim pot and can be used as an input to most A/D cards. The small size of this PC Board design makes it ideal for applications where space is limited.



KEY FEATURES

Works with 5 and 6 wire LVDTs	Internally Regulated
DC Voltage Output	Small Size and Low Cost

MODELS

MODEL	FREQUENCY KHz $\pm 10\%$	LVDT PHASE ANGLE
P010-0031	3	ALL
P010-0032	7	> 10 Degrees
P010-0033	7	< 10 Degrees

ELECTRICAL SPECIFICATIONS

INPUT POWER	Voltage	± 14 to ± 28 VDC, Input polarity protected NOTE: DUAL DC OUTPUT POWER SUPPLY REQUIRED
	Current	± 100 mA Max. plus LVDT current
OSCILLATOR OUTPUT TO LVDT	Voltage	1.7 VRMS, nominal
	Current	Will drive LVDTs with primary impedance > 100 Ohms short circuit protected
OSCILLATOR OUTPUT TO LVDT	Voltage	DC output is 2 times the RMS output of the LVDT. Output voltage is limited to ± 12 VDC.
SIGNAL OUTPUT	Voltage	Adjustable (via integral multi-turn Span trim pot) to ± 5.0 VDC when LVDT is 0.5V/V ($\pm 10\%$) at the end of its linear stroke; Output voltage is linear to ± 6.0 VDC and limited to ± 8 VDC
	Current	To ± 5 mA without distortion
	Impedance	< 2 Ohms
	Ripple	≤ 0.030 VRMS
	Frequency Response	300 Hz (-3 dB Point)
ACCURACY	Non-linearity	$\pm 0.05\%$ Max. over ± 6 VDC output
	Temp. Coefficient	< ± 0.0001 VDC $^{\circ}\text{F}$ $\pm 0.01\%$ output/ $^{\circ}\text{F}$
TEMPERATURE RANGE	Operating	+32 $^{\circ}\text{F}$ to +158 $^{\circ}\text{F}$ (0 $^{\circ}\text{C}$ to +70 $^{\circ}\text{C}$)
	Storage	-67 $^{\circ}\text{F}$ to +257 $^{\circ}\text{F}$ (-55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$)
CONNECTIONS		Double row, 12 socket connector (Berg # 66953-06 or similar). Mates with dual row of 0.025 inch square or round pins on 0.1 inch centers, 0.19 inch to 0.30 inch long.

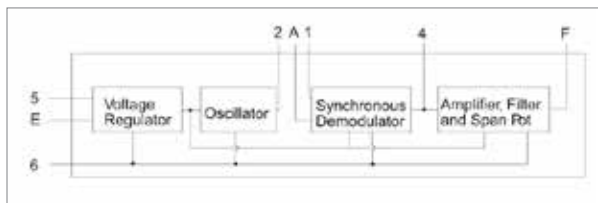
CONNECTION AND MOUNTING

The Series P010 contains a standard Berg model #66953-06 connector for easy installation on user's PC Boards. For applications where the electronics will be subject to vibration, it is recommended that the Series P010 board be clamped onto the user's main PC board assembly.

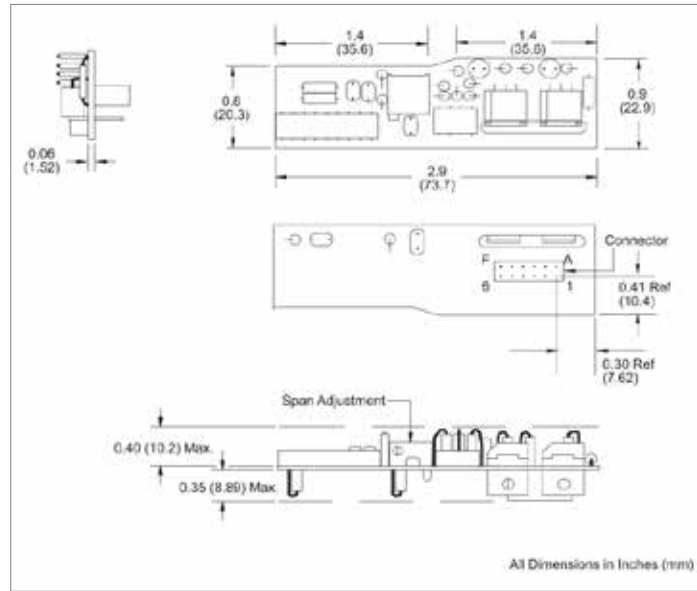
PINOUT

PIN	FUNCTION
1	LVDT Output, Non-Lead End
2	Oscillator Output High
3	Not Used
4	Unfiltered Demodulator Output
5	-15 VDC Power Supply
6	Common
A	LVDT Output, Lead End
B	Not Used
C	Not Used
D	Not Used
E	+15 VDC Power Supply
F	Analog Output

BLOCK DIAGRAM



DIMENSIONAL DRAWING



INTERCONNECTION DIAGRAM

