

MicroStrain Sensing Product Datasheet

DEMOD-DC™ Miniature Signal Conditioner



The **DEMOD-DC** in-line signal conditioner makes DVRT sensors as easy to use as a potentiometer. With integral signal conditioning electronics, the user connects power, ground and analog out, and the DEMOD-DC outputs a buffered, high-frequency response voltage proportional to linear position. During the manufacturing process the analog output voltage is digitally trimmed, ensuring that every DVRT's offset and gain values match one another. The DEMOD-DC provides internal power regulation and reverse polarity protection, and will operate with a wide range of input voltages.

FEATURES AND BENEFITS

HIGH PERFORMANCE

- High dynamic range for difficult measurements
- Ready for use with LORD MicroStrain wireless sensor network

EASY IMPLEMENTATION

- Out-of-the-box use with all standard LORD MicroStrain DVRT sensors
- Miniature body for embedded and space restricted applications
- Identical performance between units for quick scaling

APPLICATIONS

- In vivo Strain, Micromotion and deformation in Bone & Tissue
- Process Control for Production-Line Monitoring Miniature Position Control Elements
- Linear & Angular Motion Control
- Measuring Strain and Deflection in Materials and Structures
- Dimensional Gauging for Quality Control

DISPLACEMENT SENSORS



SIGNAL CONDITIONERS



OUTPUT

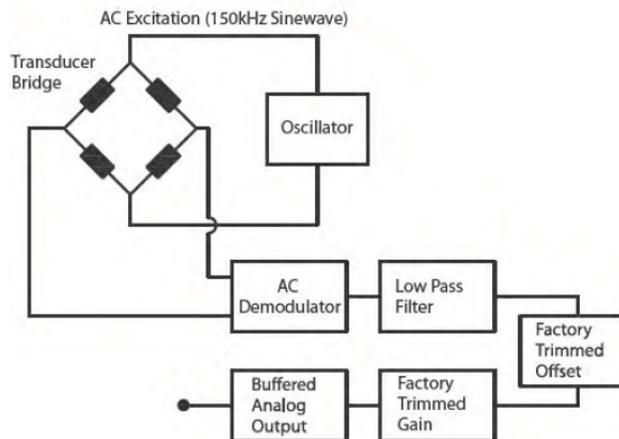


Miniature Signal Conditioner

Specifications

Sensor Types	Inductive (DVRT®)
Excitation	Regulated sinewave, 150 kHz standard Other frequencies available on request
Demodulation	Asynchronous, DC output
Output	0 to 5 V typical, digitally trimmed
Gain	Factory adjustable from 10 to 10,000
Low pass filter	2 Pole, 3 dB down @ 800 Hz standard Factory adjustable 10 Hz – 20 kHz
Supply voltage	+ 6.0 to + 16 volts DC
Supply current	22 mA typical (15 mA when modified for use with LORD MicroStrain V-Link® or DVRT-Link™ wireless nodes)
Warm-up time	30 seconds recommended
Operating temperature	-40 to +85°C
Enclosure size	65.7 mm x 19.9 mm x 8.3 mm
Connections	Power, ground, analog output
Connector	Micro-D9 (MIL-C-83513/5) mating connector included
Weight	12.02 g

Electrical Block Diagram



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