

Amplifiers



Sine Wave Carrier Demodulator

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This Sine Wave Carrier Demodulator operates with variable reluctance transducers to provide a DC output signal for dynamic and steady state measurements.

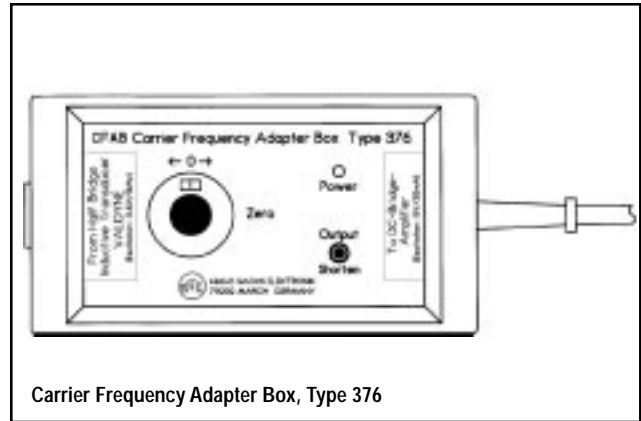
A 5 kHz sine wave excitation is applied to the two inductance ratio arms of the Transducer, and the resulting output is demodulated and amplified using the latest integrated circuit techniques. The DC output is obtained from an active filter circuit and gives a uniform response from steady state to 1000 Hz.

Two ten-turn locking potentiometers control the transducer zero and span adjustment. This Demodulator is regulated against line voltage variations. It provides low impedance sine wave excitation allowing operation with the Transducer located over 304.8 m (1,000 ft) from the Demodulator.

Specifications

Input Sensitivity	± 15 mV/V excitation, minimum for \pm VDC output
Transducer Excitation	5 V rms, 5 kHz sine wave
Output Voltage	± 10 VDC at 10 mA; short circuit proof
Output Impedance	10 Ω , nominal
Frequency Response	DC to 1000 Hz, flat $\pm 10\%$
Stability	$\pm 0.1\%/30$ days
Ripple	< 10 mV peak-to-peak
Zero Shift	$\pm 0.005\%/^{\circ}\text{F}$, average
Temperature Range	-57° to $+85^{\circ}\text{C}$ (0° to 185°F)
Power	95 to 125 VAC or 190 to 250 VAC, 50 to 400 Hz, 5 W, nominal
Dimensions, H x W x D	7.4 x 14.2 x 14 cm (2.9 x 5.6 x 5.5 in)
Weight	1.58 kg (3.5 lb)

Catalog No.	Product
CGS 8210.69	Sine Wave Carrier Demodulator, 95 to 125 VAC, 50/60 Hz
CGS 8211.69	Sine Wave Carrier Demodulator, 190 to 250 VAC, 50/60 Hz



Carrier Frequency Adapter Box, Type 376

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The Type 376 carrier frequency adapter box (CFAB) allows the interconnection of an inductive or capacitive transducer (half bridge system) to a DC-bridge amplifier. This adapter box can be used with most differential pressure transducers and with the HSE-Harvard lung weight transducer. A DC bridge amplifier supplies power, through a 5 volt excitation voltage to the adapter box which in turn supplies a 0.6 volt, 5 kHz sine wave excitation signal to the transducer. The transducer signal voltage is demodulated and passed through the adapter box to the DC bridge amp. It is available with connectors for one of five different amplifiers including both PLUGSYS TAM modules.

- Sine wave carrier demodulator for amplifiers
- Provides a carrier frequency excitation for inductive or capacitive transducers
- Interfaces differential pressure transducers to various amplifiers

Specifications

Power Supply	From Preamp Excitation, 5 V/ 30 mA
Transducer Excitation Voltage	0.6 V, 5 kHz
Input Voltage From Transducer	0 to 50 mV
Input Resistance	40 Ω
Gain	1-fold
Thermal Zero Shift	< 0.01 mV/ $^{\circ}\text{K}$
Thermal Gain Shift	< 0.01 $\%/^{\circ}\text{K}$
Output Resistance	300 Ω
Frequency Range	0 to 200 Hz, $\pm 5\%$
Dimensions, H x W x D	40 x 120 x 65 mm (1.6 x 4.7 x 2.6 in)
Cable Length	1.8 m (5.9 ft)
Weight	0.2 kg (7 oz)

Catalog No.	Product
CGS 8212.69	CFAB for PLUGSYS Amplifier
CGS 8213.69	CFAB for Transducer Amplifier
CGS 8214.69	CFAB for Grass Amplifier, 6 pin Cannon Connector
CGS 8215.69	CFAB for Gould Series 6600 Amplifier, 14 pin Connector
CGS 8216.69	CFAB for Gould Series 4600 Amplifier, 12 pin Deutsch Connector