



Features

- DC Excitation for External Impedance Converter
- Two Output – AC & DC
- Outputs Proportional to Acceleration
- Selectable Gain & Frequency Response

DESCRIPTION

The PA175 is a plug in signal-conditioning module for use with piezoelectric accelerometers containing an internal impedance converter or connected through an external converter. The PA175 supplies a constant DC current at a 17.2 Vdc compliance voltage for operation of most low-current converters. An input signal of 10 mV peak will provide a 10 V full scale output. A front panel switch allows gain selection, and a gain vernier provides fine adjustment. A separate analog DC voltage output, which is equal to the AC peak output, is available. A front panel switch allows selection of three frequency response ranges.

FRONT PANEL CONTROLS & TEST POINTS

Gain Switch	To select gain in six steps from X25 to 1000
Gain Vernier	To adjust gain from 10 to 110% to the selected gain switch position
Filter Switch	To select output frequency response range of 5-50 Hz, or 5 Hz to 2 khz
AC Test Jack	For monitoring of the AC output voltage with an oscilloscope or AC voltmeter
DC Test Jack	For monitoring the DC output voltage, which is proportional to the average of the AC voltage peak value
Calibrate Jack	For calibrating signal input from signal generator or other low impedance sources; may also be used as a test jack to monitor the accelerometer input signal with an oscilloscope
NOTE:	All controls and switches are screw driver actuated. Ground jack for all test points is on MC170 rear panel.

Specifications

Input Impedance:	51K ohms
Current Source:	1.8 mA, constant current: 17.2 Vdc compliance
Gain:	Continuously variable 10 to 110% of gain step
Output Voltage	
A) Output:	+/-10 V pk, +/-4mA
B) Output:	0 to 10 Vdc, equal to peak of an AC output signal at +4 mA current
Frequency Response:	5 Hz to 2kHz, plus front panel switch selectable low pass filter, at 50 Hz, 200 Hz. Optional bandwidth up to 20Khz available (consult factory).
Temperature:	Operating range 0°F to 150°F
Power Supply:	+/-15 Vdc, 2.5 V rms @ 3 Khz supplied by MC170 module case
Size:	2.76"H x 0.45"W x 7.5"D (7.01 cm x 1.14cm x 19.05 cm)

INPUT-OUTPUT CONNECTIONS

The plug-in module card can be used in any module position of the Module Case, as the case is internally wired to provide the proper operating and excitation voltages to all positions.

Signal input and output connections are made to the terminals or connectors at the rear of the Module Case. Connections should be made in accordance with the installation information in the Instruction Manual.