

Ultra low noise power unit/amplifier

P31

SPECIFICATIONS

INPUT CHARACTERISTICS

Voltage to transducer	18 VDC
Current to transducer, $\pm 20\%$	2.4 mA
Maximum input voltage (gain = 1)	3.5 V rms

OUTPUT CHARACTERISTICS

Output impedance, nominal	2.5 k Ω
Recommended load impedance	>250 k Ω
Maximum output voltage	3.5 V rms
Spectral noise, 1-10 Hz, referred to input	< -140 dB

TRANSFER CHARACTERISTICS

Gain acceleration	1, 10, 100 V/V
Output sensitivity ¹ :	
Acceleration	10, 100, 1,000 V/g
Velocity	0.1, 1, 10 V/in/sec
Gain accuracy	± 0.25 dB
Frequency response, -3 dB:	
Acceleration (450 Hz filtered)	0.05 - 450 Hz
Acceleration (100 Hz filtered)	0.05 - 100 Hz
Velocity	0.8 - 150 Hz

Amplitude nonlinearity	<1%
Total harmonic distortion	<1%

POWER REQUIREMENTS

Internal batteries	(2) 9 V alkaline
Battery life	>50 hours

ENVIRONMENTAL

Temperature range	0° to +55°C
Relative humidity, max	90%

PHYSICAL CHARACTERISTICS

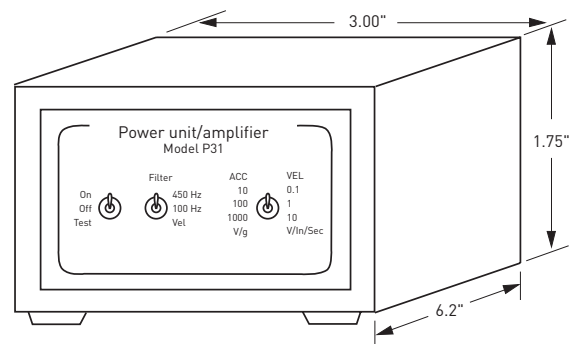
Weight	1.4 lb
Dimensions, W x H x D	3 x 1 $\frac{1}{2}$ x 6"
Connectors:	
Signal input	Amphenol 31-225 twinax
Signal output	BNC

Notes: ¹ When used with 731A accelerometer.

Accessories supplied: Two 9 V alkaline batteries

Key features

- Amplifies signal x1, x10, x100
- Switchable output - acceleration or velocity
- Powers 731A accelerometer
- Manufactured in ISO 9001 facility



Note: Due to continuous process improvement, specifications are subject to change without notice.
This document is cleared for public release.