Wilcoxon Research

Model 731A/Model P31 system
Seismic accelerometer and power amplifier

Dynamic

Acceleration sensitivity, selectable ..... 10, 100, 1000 v/g
Velocity sensitivity, selectable ..... 0.1, 1, 10 V/in/sec
Vibration range, max. ..... 0.5 G peak
Amplitude nonlinearity 1%
Frequency response:

Filter	100 hz	450 hz	velocity
–10%	0.08 - 70 Hz	0.08 - 300 Hz	– – –
–3Db	0.05 - 100 Hz	0.05 - 450 Hz	0.8 - 150 Hz

Transverse sensitivity, max. ..... 1% Of axial

Electrical

Output impedance ..... 2500 Ω
Recommended load impedance ..... › 250 kΩ
Maximum output voltage ..... 5 v peak
Noise:
Spectral 2 hz ..... 0.03 µg/√hz
10 Hz ..... 0.01 µg/√hz
100 Hz ..... 0.004 µg/√hz
Grounding ..... case isolated
Output connector:
Model 731A ..... 2 pin, mil-c-5015
Model P31 ..... BNC
Input connector (P31) ..... twin axial BNC

Power requirements (P31)

Internal batteries ..... four 9 volt alkaline
Battery life ..... › 150 hours

Environmental

Temperature range ..... –10 to 65°C
Vibration limit ..... 10 g peak
Shock limit ..... fragile
Base strain sensivitiy ..... 0.0001 g/µstrain

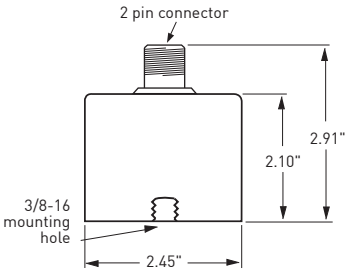
Physical

Sensing element design ..... PZT ceramic / flexure
Weight:
Model 731A seismic accelerometer ..... 670 grams
Model P31 power unit/amplifier ..... 600 grams
Interconnect cable, model 731A to model P31 ..... r6-2t-j9-10

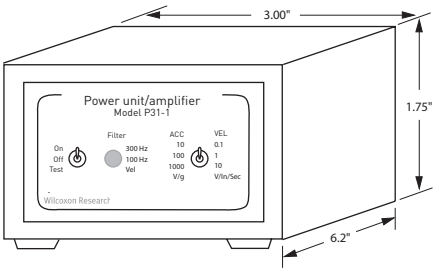
See connections on the back.

Note: Special handling required due to sensitivity
Accessories supplied: SF7 mounting stud; calibration data (level 3)

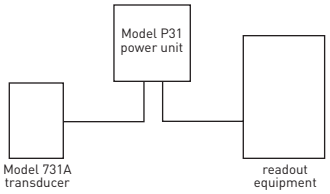
Features
- Ultra high sensitivity
- Ultra low-noise electronics for clear signals at sub micro-g levels
- Low frequency capable
- Low pass filtered to eliminate high frequencies
- ESD protection
- Mis-wiring protection



Model 731A



Model P31



Powering with P31 power unit

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Output	Connector	Function	Cable
731A	shell	case	Shield
	A	power / signal	white
	B	common	black
P31	shell	common	shield
	pin	signal	center conductor
Input	Connector	Function	Cable
P31	shell	ground	shield
	pin	power/signal	white
	socket	common	black