

# Seismic accelerometer and power amplifier system

## 731A/P31

### SPECIFICATIONS

<b>Acceleration sensitivity, selectable</b>	10, 100, 1000 V/g		
<b>Velocity sensitivity, selectable</b>	0.1, 1, 10 V/in/sec		
<b>Vibration range, max</b>	0.5 g peak		
<b>Amplitude nonlinearity</b>	1%		
<b>Frequency response:</b>			
Filter	100 Hz	450 Hz	velocity
-10%	0.08 - 70 Hz	0.08 - 300 Hz	---
-3 dB	0.05 - 100 Hz	0.05 - 450 Hz	0.8 - 150 Hz
<b>Transverse sensitivity, max</b>	1% of axial		
<b>Output impedance</b>	2500 Ω		
<b>Recommended load impedance</b>	>250 kΩ		
<b>Maximum output voltage</b>	5 V peak		
<b>Noise:</b>			
<b>Spectral</b>	<b>2 Hz</b>	0.03 µg/√Hz	
	<b>10 Hz</b>	0.01 µg/√Hz	
	<b>100 Hz</b>	0.004 µg/√Hz	
<b>Grounding</b>	case isolated		
<b>Output connector:</b>	<b>731A</b>	2 pin, MIL-C-5015	
	<b>P31</b>	BNC	
<b>Input connector (P31)</b>	twin axial BNC		
<b>Power requirements (P31):</b>			
<b>Internal batteries</b>	Two 9-volt alkaline		
<b>Battery life</b>	>75 hours		
<b>Temperature range</b>	-10° to +65°C		
<b>Vibration limit</b>	10 g peak		
<b>Shock limit</b>	fragile		
<b>Base strain sensitivity</b>	0.0001 g/µstrain		
<b>Sensing element design</b>	PZT ceramic / flexure		
<b>Weight:</b>	<b>731A</b>	760 grams	
	<b>P31</b>	600 grams	
<b>Interconnect cable, 731A to P31</b>	R6-2T-J9-10		

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

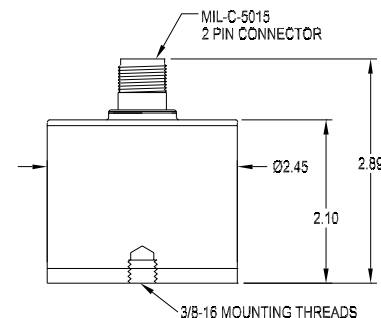
### CONNECTIONS

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

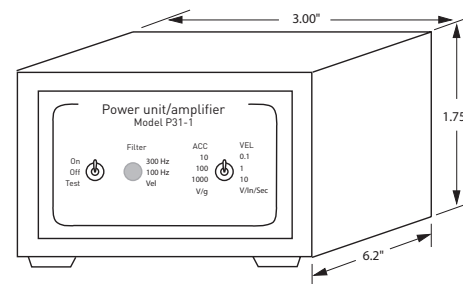


### Key features

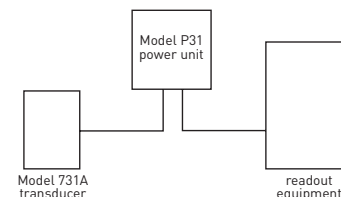
- Ultra high sensitivity
- Ultra low-noise electronics
- Manufactured in ISO 9001 facility



Model 731A



Model P31



Powering with P31 power unit

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