DATAQ INSTRUMENTS

Super-Z Ultra High Input Impedance Head-Stage

- **Provides an ultra high input impedance front end for the BMA-931 (>$10^{15}\Omega$)**
- **Excellent for intra- and extracellular microelectrode work**
- **Switch-selectable gains of x1 or x10**
- **Built-in, 5-step DC calibrator**
- **Switch selectable AC/DC coupling**

The Super-Z is an auxiliary ultra high impedance amplifier head-stage for use with the BMA-931 Bioamplifier Module. FET electrometer input buffers are used to create the highest possible input impedance. That high impedance means the Super-Z can be used with any type of electrode, including tiny ion-specific microelectrodes, so it's well-suited for use in studying high-impedance cell-level signals. A stable input DC offset control allows you to null out electrode polarization potentials or other offset voltages, which can interfere with measurement accuracy. The Super-Z's switchable x1/x10 gain provides an overall range of 50 - 500,000x when used with the BMA-931. A five-step DC calibrator is standard.

Specifications*			
Input type	Differential, balanced to chassis common	Output range	±6V
Input range	±6V	Output offset (position) range	±25, 250, 2500 mv jumper selectable
Input impedance	>$10^{15}\Omega$ differential	Output connector	Amphenol, 7-pin plug
Wideband noise (referred to input)	<12µv P-P	Head-Stage output cable length	12 ft.
Common mode rejection	>100db @ 60Hz	Calibrator voltages	20, 50, 500, 1000 µv
Gain range	1x/10x switchable	Power requirements	±12VDC @ 20ma from BMA-931
Input connector	Pin jacks; .080 in. dia.	Dimensions	3.6" × 1" × 4"
*The Super-Z Hi Z IS NOT designed for patient-connected measurements.			

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PM-1000 High Performance Transducer Amplifier

- **Excellent for pressure and force measurements of any kind**
- **Built-in, 6-position lowpass filter**
- **9 Switch-selectable gain ranges**
- **Built-in, adjustable excitation**
- **Industry standard Canon WK6-32S input connector**

This DC-type bridge amplifier is designed for use with most resistive bridge transducers and solid state pressure transducers. When paired with the appropriate transducers, it's ideal for measuring mouth pressure, force, or acceleration. When used with a pneumotach and differential transducer, it can also be used to measure airflow. The PM-1000 can be used as a low drift, differential DC amplifier with a wide gain range. Variable low-pass active filters, including a mean pressure function, allow the frequency response to be tailored to eliminate vibration signals or other noise. Up to six PM-1000 modules can be accommodated in any DI-1000 Series module cage. The PM-1000 IS NOT designed for patient-connected (clinical) blood pressure applications.

Specifications*			
Input type	Differential, balanced to chassis common	Low pass filter	6-position
Transducer compatibility	Statham, Gould, Grass, etc.	Filter frequencies	0.1(Mean), 10, 50, 100, 500, 5000Hz
Common mode rejection	>100db @ 60Hz	Filter cutoff slope	-12db/octave
Input connector	Canon WK6-32S	Input connector	BNC
Excitation voltage	+4 to +10VDC adjustable	Output range	±10V
Balance control	±0.5, ±0.1, ±0.01 VDC 10-turn (internally selectable ranges)	Output offset (position) range	±3V
Sensitivity	1mV-10VFS, 9 ranges	Output connector	BNC
Gain attenuator	15-turn, 0-1x	Power requirements	±12VDC @ 50ma
		Dimensions	2.75" × 5" × 10"
*The PM-1000 IS NOT designed for patient-connected measurements.			

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