

Model HiZ-223

Dual Channel Differential Electrometer

The HiZ-223 is a very high input impedance, dual channel electrometer designed for measurements with high resistance ion-selective microelectrodes



- $10^{15}\Omega$ Input Resistance
- Designed for measurements with ion-selective microelectrodes
- Probe Test Port
- Standby mode protects input amplifiers
- Driven Guard Shield reduces stray capacity and noise

The HiZ-223 is a very high input impedance, dual channel electrometer designed for measurements with high resistance ion-selective microelectrodes. The amplifier features two small active headstages, allowing the first stage of amplification to take place at the electrode site. Shunt capacity is reduced and electrical interference, such as electrostatic noise and motion artifact common to the type of recording are greatly minimized.

To reduce the noise and stray capacity even farther the probe housing includes a signal driven guard. A portion of this inner driven shell is exposed at the probe tip allowing a spring shield to be extended over the electrode holder and microelectrode.

The amplifier features a probe test port that permits testing of the electrode test feature and setting of the probe leakage current, (IG).

A standby mode is included and should be used when attaching glass microelectrode or electrode holders to the probe input. While in the standby mode the voltage at the probe input is clamped near zero volts thus protecting the input.

Specifications

Input Resistance	$10^{15} \Omega$
Input Capacitance	1.0 pF nominal
Input Leakage Current	75 fA max
Voltage Gain	$1.000 \pm 0.1\%$
Output Resistance	50 Ω
Input Voltage Swing	± 10 V
Risetime	5 μ s (10 -90%, small signal)
Output Noise (input shorted)	100 μ V peak-to-peak
Baseline Stability	± 0.1 mV/day
Position Control Range	± 600 mV
Power Requirements	90 to 265 VAC, 50/60 Hz, 10 VA
Physical Dimensions:	
Case Size	8.8 x 21 x 17.5 cm (H x W x D)
Probe	12.7 mm x 6.5 cm (D x W) with 1.8 m cable length
Shipping Weight	2.5 kg
Warranty	Two years, parts & labor

Order #	Model	Product
W3 64-1650	HiZ-223	Dual Differential Electrometer

Accessories/Replacement Parts

W3 64-1651	HiZP	Replacement Probe
W3 64-1658	DG-1	Driven Guard Shield Pkg. 2
W3 64-0980	ESP-F10N	E Series Holder for 1.0 mm glass
W3 64-0981	ESP-F12N	E Series Holder for 1.2 mm glass
W3 64-0982	ESP-F15N	E Series Holder for 1.5 mm glass
W3 64-0983	ESP-F20N	E Series Holder for 2.0 mm glass