



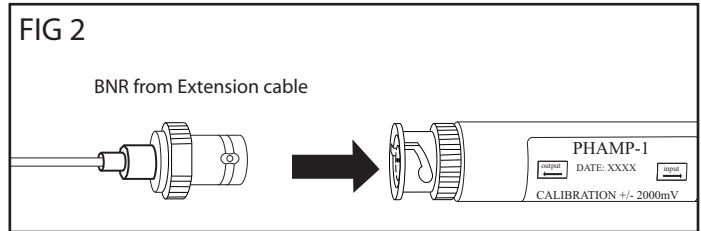
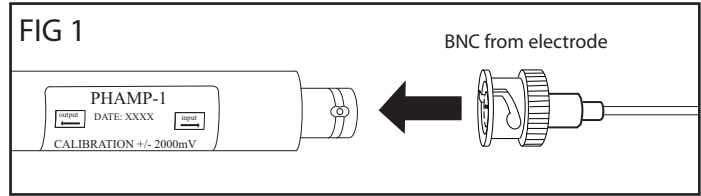
PHAMP-1 Battery-Powered pH/ORP Pre-amplifier

Introduction: The PHAMP-1 is a battery-powered unity-gain preamplifier that allows the user to run cables up to 1000 ft. between the electrode and pH/ORP controller/meter. The PHAMP-1 should be located close to the electrode for optimum use (suggested max distance 25ft (7.5m)). High impedance pH signals are reduced from megohms to under 20,000 ohms. By locating the device near the electrode, you can enhance the service life of your electrodes by eliminating noise from cable runs. Sealed to keep out moisture, the PHAMP-1 is self powered by two 3 volt lithium cells and has an estimated lifetime of 3 years.

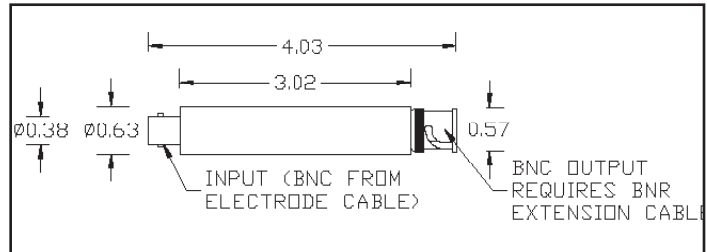
Installation: Install the BNC connector from the pH or ORP electrode cable into the BNR connector as shown in FIG. 1. Install extension cable at BNC connector as shown in FIG 2.

Maintenance: NO MAINTENANCE REQUIRED. Just keep the connectors dry.

Troubleshooting: If the output of the PHAMP-1 is always 0mV, (pH7.0) then there is either a short in the cables or the batteries of expired and it is time to buy another PHAMP-1. Check cable for continuity. If OK, then replace PHAMP-1.



OUTLINE & DIMENSIONS PHAMP-1



SPECIFICATIONS

Dimensions: 0.63" diameter x 4.00" length (see outline drawing above)

Materials of construction: Stainless steel

Power requirement: N/A powered by 2 each 3 Volt Lithium cells (not replaceable)

Input: pH or ORP electrode with BNC connector impedance <math> < 10^{13}</math> Ohms

Output: mV unity gain, <math> < 20,000</math> Ohm resistance

Output offset: 2 mV max (0.03 pH units)

Operating Temperature: 0-60 deg C

Weight: 2 oz. (5.87 gram)