

pH/ORP Preamplifiers
PHAMP SERIES



- ✓ Send pH Electrode Signal 0.3km (1,000') Over Ordinary, Wire and Connectors or Coaxial Cable
- ✓ Interface pH Electrodes Directly with Inexpensive mV Meters and Recorders or Sophisticated Process Controllers and Data Acquisition Systems
- ✓ Extend Useful Life of pH Electrodes
- ✓ Available With/Without Automatic Temperature Compensation

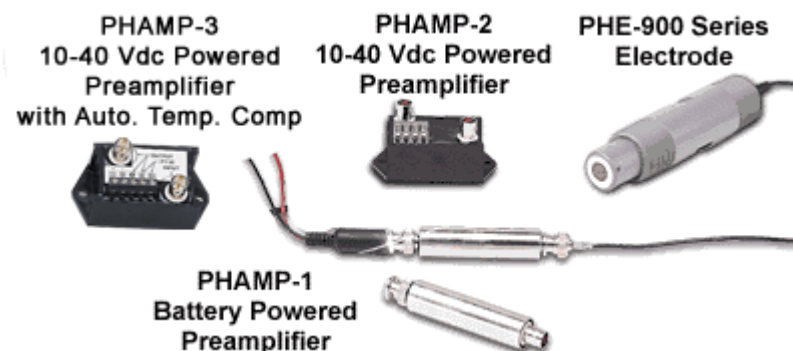


The **NEWPORT® PHAMP Series** Preamps are unity gain preamplifiers which convert the high impedance mV signal of a pH or ORP electrode to a low impedance signal which can travel 1,000 feet over ordinary wire and connectors not only to pH meters and controllers which are designed with high impedance input circuitry, but also to Process Meters and Controllers such as the iSeries which can not otherwise register the high impedance signal. In many applications the PHAMP series Preamps will also extend the useful life of expensive pH electrodes, lowering the output impedance of an aging electrode allowing it to continue providing a measurable signal.

The **PHAMP-1** is powered by lithium batteries with an estimated life of 5 years when used with high input impedance instruments. The electronics are entirely encapsulated in an epoxy filled stainless steel enclosure. The input and output connections are industry standard BNC. The output can be split from coaxial to separated leads with the 3073 adapter.

The **PHAMP-2** is a 10-40 volt dc powered preamp which can be powered by the excitation of a process meter or the optional power supply. The electrodes are entirely encapsulated in a compact epoxy filled enclosure designed for easy mounting in a manufacturing process. The PHAMP-2 offers redundant outputs from either a BNC connection, terminal strip or both at the same time.

The **PHAMP-3** is the same as the PHAMP-2 (above) with the added feature of AUTOMATIC TEMPERATURE COMPENSATION. With the output of a PHAMP-3 automatically compensated for temperature variations, it is possible to use an inexpensive but sophisticated process meter or controller (such as the iSeries) to monitor and control pH in place of more expensive dedicated pH meters. The Automatic Temperature Compensating element required is a 1,000 Ohm RTD. (ATC is not used on ORP measurements.)



SPECIFICATIONS - COMMON

Output Offset: 1 mV typical; 2 mV max. which corresponds to 0.033 pH

Input Impedance: 10 to the power of 13, Ohms

Output Impedance: 20K Ohms

Output Voltage: -2000 mV to +2000 mV

Operating Temperature: 0 to 60°C (32 to 140°F)

PHAMP-1 Internal Battery Powered Model**Dimensions:** 95.25 L x 17.8 mm D,(3.75" x 0.7")**Weight:** 5.7 g, (2 oz.)**Battery Life:** Approximately 5 Years**PHAMP-2, PHAMP-3 External Powered Dual Output****Model Power:** 10 to 40 Vdc**Dimensions:** 38.1 H x 76.2 W x 38.1 mm D, (1.5" x 3" x 1.5")

Product Selection (Specify Model Number)	
Part Number	Description
PHAMP-1	pH Preamplifier, single output, battery powered
PHAMP-2	pH Preamp, 10 to 40 Vdc powered
PHAMP-3	pH Preamp, 10 to 40 Vdc, with Auto. Temp. Comp
Accessories	
3073	BNC to Banana Plug adaptor
PHA-4	4.01 pH buffer solution 475 ml bottle (1 pint)
PHA-7	7.01 pH buffer solution 475 ml bottle (1 pint)
PSR-24L	Regulated power supply, 24 Vdc, 400 mA, UL, 1.8 m (6') cord with stripped leads
PSR-12L	Regulated power supply, 12 Vdc, 1.2 A, with stripped leads
iS800	Strain/process meter

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