

pH/ORP Preamplifiers



PHTX-21



- ✓ Send pH Electrode Signal 0.3 km (1000') 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 or Without Automatic Temperature Compensation



PHTX-22 10 to 40 Vdc powered preamplifier shown larger than actual size

PHTX-21 battery powered preamplifier Shown smaller than actual size.

OMEGA's PHTX-20 Series Preamps are unity gain preamplifiers which convert the high impedance mV signal of a pH or ORP electrode to a low impedance signal. This signal can travel up to 1,000 feet using ordinary wire and connectors to high impedance input pH meters and controllers such as OMEGA's PHCN-37, and to standard Process Meters and Controllers such as the DPi8 which could not otherwise interface with the high impedance signal. In many applications the PHTX-20 Series Preamps will be able to extend the useful life of expensive pH electrodes. By lowering the output impedance of aging electrodes, the PHTX-20 allows them to continue to function and provide a measurable signal.

The PHTX-21 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 adaptor.

The PHTX-22 is a 10 to 40 Vdc powered preamp. Power can be provided by the excitation of a process meter (such as the DPi) 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 PHTX-22 offers redundant outputs from either a BNC connection, terminal strip or both at the same time.

The PHTX-23-ATC is the same as the PHTX-22 (above) with the added feature of Automatic Temperature Compensation. With the output of a PHTX-23-ATC automatically compensated for temperature variations, it is possible to use an inexpensive but sophisticated process meter or controller such as the DPi and CNi series to monitor and control pH in place of more expensive dedicated pH units. The Automatic Temperature Compensating element required is a 1000Ω RTD (ATC is not used on ORP measurements.)

Specifications

Common Specifications

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

Input Impedance: 10¹³ Ω

Output Impedance: 20 kΩ

Output Voltage: -2000 mV to +2000 mV

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

PHTX-21 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

PHTX-22, PHTX-23-ATC External Powered Dual Output Models

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")

To Order

Model No.	Description
PHTX-21	pH Preamplifier, single output, battery powered
PHTX-22	pH Preamp, 10 to 40 Vdc powered
PHTX-23-ATC	pH Preamp, 10 to 40 Vdc, Auto Temp Comp

Accessories

Model No.	Description
3073	BNC to banana plug adaptor
PSR-24L	24 Vdc power supply
DPiS8	1/8 DIN process and strain meter

Comes complete with operator's manual.

Ordering Example: PHTX-21, pH preamplifier and 3073 BNC to banana plug adaptor.