



## Pre-amplified ALpHA® pH Electrodes



- ✓ Interfaces Directly with Most Instrumentation that Accepts mV Input Signal
- ✓ Signal can be Run up to 305 m (1000')
- ✓ Power Supply Available in Three Styles

OMEGA Engineering offers pH electrodes with integral preamplifiers for laboratory or industrial applications. These electrodes can interface directly with equipment that accepts a millivolt input signal with a 10 kΩ or greater input impedance, such as a data acquisition interface or multimeter. The preamplifier converts the high impedance millivolt signal of the electrode into a low impedance signal, enabling the signal to be run up to 305 m (1000') without signal loss. The electrode is supplied with 1 to 3 m (3 to 10') of coaxial cable, depending on the model. If longer cable lengths are required, simply splice on extension cable. These preamplified electrodes are available in a variety of styles and can interface with any pH meter, controller, transmitter, multimeter

or data acquisition system with a one-to-one unity gain. An accompanying power supply is available in three styles: an encapsulated battery design, an external battery style, and a style for use with an external DC power source.

### SPECIFICATIONS

**Output:** 0 pH = +414.1 mV;  
14 pH = -414.1 mV @ 25°C (77°F)  
**Temperature:** -5 to 100°C (23 to 212°F)  
**Impedance:** 10 kΩ  
**Unity Gain:** 1

**Power Supply:** ±1.5 Vdc to ±9 Vdc; 0.5 mA current  
**Battery Life:** 1 year

### Accessories

Model No.	Price	Description
EB-SPARE	\$10	Spare battery pack for -EB option.
PHE-DPS	50	±3 Vdc power supply to operate preamplified electrodes, input 115 Vac

**MOST POPULAR MODEL HIGHLIGHTED!**

To Order (Specify Model Number)		
Model No.	Price	Description
PHE-1304-*	\$32	Combination gel-filled, epoxy-bodied, general purpose laboratory pH electrode. pH range 0 to 12, temp. 0 to 80°C (32 to 176°F).
PHE-2114-*	77	Combination general purpose, large bulb, refillable glass pH electrode. pH range 0 to 13, temp. 0 to 1000°C (32 to 1832).
PHE-5311-10-*	103	Industrial in-line combination, general purpose, gel filled, pH electrode, Kynar housing, ½" MNPT threading, insertion length 1". 10' of cable standard. pH range 0 to 13, temp. range -5 to 100°C. (23 to 212°F). Dimensions: 127 x 25 mm (5 x 1").
PHE-5411-10-*	124	Industrial in-line combination double junction electrode. MNPT threading, insertion length 1". 10' of cable standard. pH range 0 to 13, temp. range -5 to 100°C (23 to 212°F). Dimensions: 127 x 25 mm (5 x 1").
PHE-5316-10-*	93	Industrial in-line combination, general purpose, gel-filled, pH electrode, CPCV housing, ¾" MNPT threading, 2" insertion length. 10' cable standard. pH range 0 to 13, temp. range -5 to 80°C (23 to 176°F). Dimensions: 168 x 25 mm (6.6 x 1").
PHE-6351-10-*	114	Industrial submersible, combination, general purpose, gel-filled, pH electrode. Electrode potted in 36" ABS pipe. 10' cable standard. pH range 0 to 13, temp. range 0 to 80°C (32 to 176°F). Dimensions: 28 x 914 mm (1.1 x 36").
PHE-6451-10-*	134	Industrial submersible, combination, double junction, gel-filled, pH electrode. Electrode potted in 36" ABS pipe. 10' cable standard. pH range 0 to 13, temp. range 0 to 80°C (32 to 176°F). Dimensions: 28 x 914 mm (1.1 x 36").

Comes with complete operator's manual.

\* Specify power option (see table) and add additional cost to price of electrode: "-EB" (\$60), "-PB" (\$60), or "-NB" (\$50).

**Ordering Example:** PHE-5411-10-EB, industrial in-line double junction preamplified electrode with external battery, \$124 + 60 = \$184.

### Power Options

Suffix to Add to Model No. of Electrode	Price	Description
-EB	\$60	Replaceable external battery pack
-PB	60	Battery encapsulated in the cap of the electrode. Battery life approximately one year. Battery cannot be replaced.
-NB	50	Requires external DC power supply of ±1.5 Vdc to ±9 Vdc



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