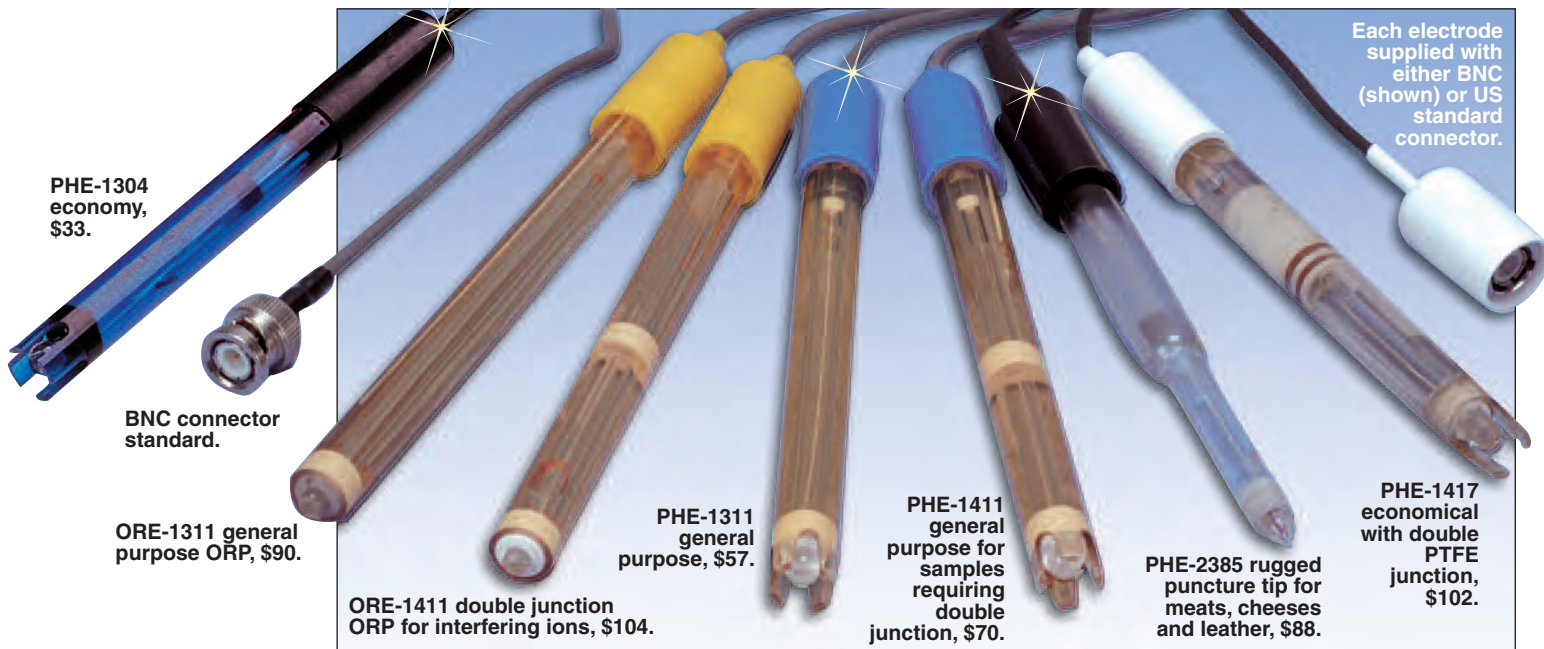




pH FIELD & LAB ELECTRODES

ALpHA® Series Rugged Gel-Filled Electrodes

PHE-1311
Starts at
\$57



PHE-1304
economy,
\$33.

BNC connector
standard.

ORE-1311 general
purpose ORP, \$90.

ORE-1411 double junction
ORP for interfering ions, \$104.

PHE-1311
general
purpose, \$57.

PHE-1411
general
purpose for
samples
requiring
double
junction, \$70.

PHE-2385 rugged
puncture tip for
meats, cheeses
and leather, \$88.

Each electrode
supplied with
either BNC
(shown) or US
standard
connector.

PHE-1417
economical
with double
PTFE
junction,
\$102.

To Order (Specify Model Number)

Model No. BNC	Model No. US Std	Applications/Features	Length mm (in)	Diameter mm (in)	pH Range	Temp °C (°F)
PHE-1311	PHE-1311-U	General purpose	150 (6.0)	12 (0.47)	0 to 14	0 to 100 (32 to 212)
PHE-1411	PHE-1411-U	General purpose for samples requiring double junction	150 (6.0)	12 (0.47)	0 to 14	0 to 100 (32 to 212)
PHE-1332	PHE-1332-U	Test tubes	150 (6.0)	6 (0.24)	0 to 14	0 to 100 (32 to 212)
PHE-1432	PHE-1432-U	Test tubes for samples requiring double junction	150 (6.0)	6 (0.24)	0 to 14	0 to 100 (32 to 212)
PHE-1335	PHE-1335-U	Extra-long test tubes	300 (12.0)	6 (0.24)	0 to 13	0 to 100 (32 to 212)
PHE-1471	PHE-1471-U	Measurement of flat surfaces for samples requiring double junction	150 (6.0)	12 (0.47)	0 to 14	0 to 100 (32 to 212)
PHE-2385	PHE-2385-U	Rugged puncture tip for meats, cheeses, fruits, leather	55 (2.2)	8 (0.31)	0 to 13	0 to 100 (32 to 212)
PHE-1317	PHE-1317-U	Economical with removable guard and PTFE junction	110 (4.3)	12 (0.47)	0 to 13	0 to 100 (32 to 212)
PHE-1417	PHE-1417-U	Economical with double PTFE junction	110 (4.3)	12 (0.47)	0 to 12	0 to 80 (32 to 176)
PHE-1304	PHE-1304-U	Economy	90 (3.5)	12.5 (0.49)	0 to 12	0 to 80 (32 to 176)
ORE-1311	ORE-1311-U	General purpose ORP	150 (6.0)	12 (0.47)	±2000 mV	0 to 100 (32 to 212)
ORE-1411	ORE-1411-U	Double-junction ORP for interfering ions such as zinc, copper or sulfide	150 (6.0)	12 (0.47)	±2000 mV	0 to 100 (32 to 212)

Note: This chart continues onto the next page.



Pre-Mixed pH Calibration Solutions and Deionized Water

PHA-4
Starts at
\$8



Optional*

- ✓ Deionized Water
- ✓ Pre-Mixed pH Solutions
- ✓ Two Bottle Sizes Available
- ✓ pH Solutions Standardized Against NIST Certified Sample



PHA-10-GAL,
\$24.

PHA-10, \$8.



PHAB-PH, \$20,
5 each 4, 7 and
10 buffer packs
with 5 deionized
water packs.
Shown smaller
than actual size.

MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)

Model No.	Price	Description
PHA-4	\$8	4.00 pH buffer solution 500 mL (1 pint) bottle
PHA-4-GAL	24	4.00 pH buffer solution 4 L (1 gal) bottle
PHA-7	8	7.00 pH buffer solution 500 mL (1 pint) bottle
PHA-7-GAL	24	7.00 pH buffer solution 4 L (1 gal) bottle
PHA-10	8	10.00 pH buffer solution 500 mL (1 pint) bottle
PHA-10-GAL	24	10.00 pH buffer solution 4 L (1 gal) bottle
PHA-DI	8	Deionized water 500 mL (1 pint) bottle
PHA-DI-GAL	24	Deionized water 4 L (1 gal) bottle
PHAB-DI	20	20 single use deionized water packets
PHAB-PH	20	5 each 4, 7 and 10 buffer packs with 5 deionized water packs
CAL-PH*	25	NIST certificate

* For NIST certificate of conformance, add suffix "-NIST" to model number and add an additional line item, **CAL-PH**, \$25 per order. NIST certificate available on pH buffers only.

Ordering Examples: **PHA-7-GAL**, 7.00 pH buffer solution 1 gallon bottle, \$24.
PHA-7, 7.00 buffer solution, 1 pt bottle, \$8.

MOST POPULAR MODELS HIGHLIGHTED!

Reference Type	Liquid Junction	Body Material	R @ 25°C (77°F) MΩ	Price	
				BNC	US Std
Ag/AgCl	Polypropylene	Epoxy	50 to 80	\$57	\$66
Ag/AgCl Double	Polypropylene	Epoxy	50 to 80	70	84
Ag/AgCl	Polypropylene	Epoxy	50 to 80	98	112
Ag/AgCl Double	Polypropylene	Epoxy	50 to 80	107	123
Ag/AgCl	Annular ceramic	Epoxy	200	92	96
Ag/AgCl Double	HDPE	Epoxy	50 to 80	105	119
Ag/AgCl	Annular ceramic	Glass	150	88	95
Ag/AgCl	Annular PTFE	Poly ethersulfone	60	68	73
Ag/AgCl Double	Annular PTFE	Poly ether sulfone	60	102	107
Ag/AgCl	Annular ceramic	Epoxy	50	33	36
Ag/AgCl	Polypropylene	Epoxy	-	90	115
Ag/AgCl Double	Polypropylene	Epoxy	-	104	115

Comes complete with 0.75 to 1 m (2.5 to 3') cable and operator's manual .

For additional lead length, add desired length **in feet** as suffix to electrode number, consult flow engineering for price.

Ordering Examples: **PHE-1311**, general purpose electrode with BNC connector, \$57.

PHE-1411-U, double junction general purpose probe with US standard connector, \$84.



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More than 100,000 Products Available!

• Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Glass Bulb Thermometers, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders Relative Humidity Measurement Instruments, RTD Probes, Elements and Assemblies, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples Thermowells and Head and Well Assemblies, Transmitters, Wire

• Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

• Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters