pH ELECTRODES

PHE-1478/1479

PHE-1479 shown smaller than actual size.

pH Electrodes

OMEGA's glass-bodied, refillable (RF), combination pH electrodes are for general purpose laboratory measurements. The inert nature of the glass body allows these electrodes to be used in aqueous and non-aqueous solutions at temperatures up to 110°C (230°F).

The PHE-1479 has a ceramic liquid junction and a saturated potassium chloride electrolyte. This electrolyte is a laboratory standard and is suitable for most measurements. The ceramic junction has a low flat rate that minimizes sample contamination from the potassium chloride solution.

The PHE-1478 has a porous PTFE liquid junction and a saturated potassium chloride electrolyte. The porous PTFE liquid junction provides a stable, non-fouling reference contact ideal for the most demanding applications. This research-grade electrode should be used when the sample has a very low or very high ionic strength, where greases or oils are present, or in biological solutions containing TRIS or large amounts of protein.

SPECIFICATIONS

pH Range: 0 to 14 pH
Temperature Range: -5 to 100°C (23 to 212°F)
Accuracy: ±0.02 pH
Response Time: 95% of reading within 5 seconds
Impedance: 60 MΩ at 25°C (77°F)
Zero Potential: 7.0 ±0.2 pH
Dimensions (L x D): 140 x 12 mm (5.5 x 0.47")

To Order

Model No.	Description
PHE-1478	PTFE liquid junction
PHE-1479	Ceramic liquid junction

Comes with complete operator's manual.
***Note:** 1 m (3') of cable length is standard; for additional length consult Engineering.*
***Ordering Example: PHE-1478**, PTFE liquid-junction electrode.*

PHE-1525/1526

PHE-1526 shown smaller than actual size.

Specialty pH Electrodes

These specialty electrodes are designed for surface and subsurface measurements of semi-soft materials. Typical applications include meats, cheese, dairy products, photographic emulsions, and electrophoresis gels.

The PHE-1525 flat style is a refillable combination pH electrode with a polymer body, porous PTFE liquid, and a flat pH glass membrane. It can be used to measure the pH of any moist surface or inverted and used as a "one-drop" electrode. Samples as small as 100 µL are easily measured with this inverted technique.

SPECIFICATIONS

pH Range: 0 to 14 pH
Temperature Range: -5 to 100°C (23 to 212°F)
Accuracy: ±0.02 pH
Response Time: 95% of reading within 5 seconds
Impedance: 60 MΩ at 25°C (77°F)
Zero Potential: 7.0 ±0.2 pH
Dimensions (L x D):
Flat: 140 x 12 mm (5.5 x 0.47")
Spear-Point:150 x 9.5 mm (5.9 x 0.37")

To Order

Model No.	Description
PHE-1525	Flat-surface pH electrode
PHE-1526	Spear-point pH electrode

Comes with complete operator's manual.
***Note:** 1 m (3') of cable length is standard; for additional length consult Engineering.*
***Ordering Example: PHE-1525,** flat surface pH electrode.*

Options for Combination Electrodes

Suffix	Description
-D	Double junction
-HF	HF fluoride resistant body
-HT	High-temperature reference
-HPH	High-pH glass
-ORP	Redox (ORP) measurement

Options available on PHE-1478, PHE-1479, PHE-1525, PHE-1526, PHE-1523 and PHE-1524 electrodes.
***Note:** 1 m (3') of cable length is supplied standard; for additional length, consult Engineering.*

Laboratory Electrodes

PHE-3216D shown smaller than actual size.

PHE-3216

Laboratory Reference Electrodes

Laboratory procedures require a separate reference electrode. Several standard methods and techniques for pH measurement and most ion selective electrodes require the use of a “double junction” reference electrode. The PHE-3216 is ideal for such applications. These gel-filled electrodes feature a replaceable porous PTFE liquid junction in a polymer body. They are supplied ready to use with a saturated potassium chloride-silver reference cell. The double junction version uses potassium nitrate as the screening electrolyte, although it can be easily replaced with the electrolyte of your choice. The liquid junction has a large surface area and provides a stable, low-impedance contact to the solution, ensuring fast, accurate measurements. The chemically inert nature of PTFE makes the sensor easy to clean.

SPECIFICATIONS

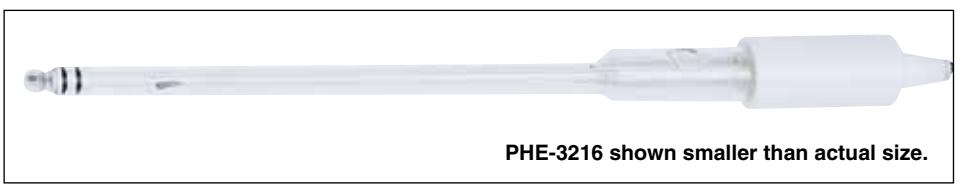
pH Range: 0 to 14 pH
Temperature Range: -5 to 100°C (23 to 212°F)
Response Time: Stable in 30 seconds
Resistance: Less than 1000 Ω
Liquid Junction: Porous PTFE
Electrolytes: Saturated potassium chloride-silver
Screening Electrolyte: 8 molar potassium nitrate
Dimensions (L x D): 140 x 12 mm (5.5 x 0.47")

To Order

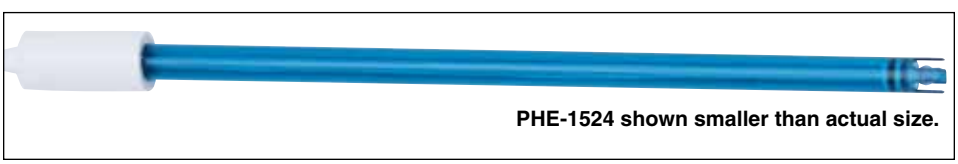
Model No.	Description
PHE-3216	Single-junction pH electrode
PHE-3216D	Double-junction pH electrode

Comes with complete operator’s manual.
***Ordering Example: PHE-3216**, single-junction pH electrode.*

PHE-1523/1524



PHE-3216 shown smaller than actual size.



PHE-1524 shown smaller than actual size.

Laboratory-Insertable Electrodes

Lab insertables are designed for pH measurement inside narrow vessels. Small volumes in test tubes or solutions in large Erlenmeyer casks can be conveniently measured by one of these responsive electrodes. The PHE-1523 is a glass-bodied, refillable, combination pH electrode. The 5.0" insertion length allows measurement in test tubes or other narrow vessels. This electrode features full-span, fast-response pH glass and high-flow porous PTFE reference junction, making it a must for any laboratory.

The PHE-1524 is a sealed, polymer-bodied, 254 mm (10”) long combination pH electrode. The length allows measurements to be made in large, deep flasks or bottles. This sensor has our full-span pH glass and a gel-filled silver chloride reference using the trouble-free porous PTFE liquid junction.

SPECIFICATIONS

pH Range: 0 to 14 pH
Temperature Range: -5 to 100°C (23 to 212°F)
Accuracy: ±0.02 pH with proper calibration
Sodium Error: 0.05 pH in 0.1 molar Na^+ ion at 12.8 pH
Response Time: 95% in 10 seconds, stable in 30 seconds
Impedance: 60 MΩ at 25°C (77°F)
Zero Potential: 7.0 ±0.2 pH
Dimensions (L x D Micro): 190 x 12 mm (7.5 x 0.47")

To Order

Model No.	Description
PHE-1523	Glass-body pH electrode
PHE-1524	Polymer-body pH electrode

Comes with complete operator’s manual.
***Ordering Example: PHE-1523**, glass-body pH electrode.*