

HB Series Electrodes:

HB546 – In-line & Submersible pH Electrode

7/07
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Specification

Overview

Honeywell's pH electrodes for applications with high temperatures and pressures in addition to low and high pH. The HB Series complements the other pH offerings – the Durafet and Meredian electrodes.

The **HB546** is:

- intended for threaded in-line and submersible operations
- rugged, versatile and simple to use
- compatible with most industrial transmitters and analyzers

Honeywell's HB Series of electrode mountings utilize the patented Axial Ion Path Reference Cell Technology.

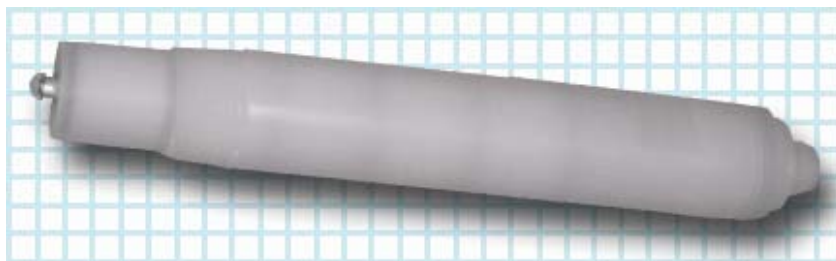
The Axial Ion Path Technology:

- prevents sensor poisoning
- prevent internal leaks
- prevent internal plugging
- allows extreme temperature and pressure tolerance
- allows for long life in low and high pH applications

Description

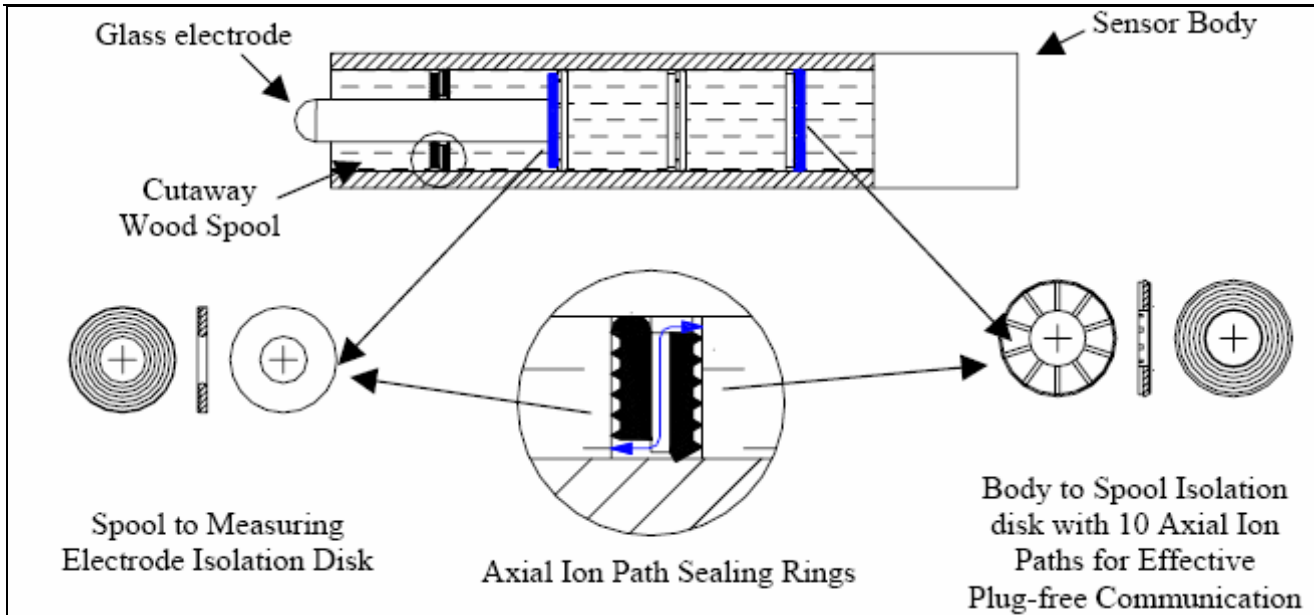
The **HB546** pH electrode offers a reliable combination of measuring and reference electrodes together with an integral automatic temperature compensator in a 1-piece corrosion resistant body (the body material is chosen by the customer).

The **HB546** pH electrodes with 3/4" NPT male connections are easily adapted for in-line mounting without O-rings or special seals. The electrodes are also available in Immersion and On-line mounting.



Axial Ion Path Reference

Like other rugged semi-solid state references, the reference is formed by a series of wood segments impregnated with KCl. The difference with the Axial Ion Path (A.I.P.) technology is where others utilize an epoxy or impermeable barrier between each of the wood segments; the A.I.P. uses a pair of formed discs. When the two formed disc faces are positioned adjacent to one another they form an Axial Ion Path (filled with electrolyte) between each of the segments. The Axial Ion Path provides a more complete transition of KCl ions between the wood segments forward and creates a difficult and longer distance for poisons traveling back into the reference from the specimen fluid.



This is a porous surface, which passes ions between the reference and measurement fluid. The primary function is to allow very small amounts of KCl to leach from the reference and provide the millivolts necessary for pH measurement. The secondary function is to maintain a barrier between the measurement fluid and the reference so that the measurement fluid does not rapidly poison or foul the reference.

Temperature Compensator

This is typically a component (RTD, Resistor, Thermistor) that produces a proportional resistance to the temperature of a measured solution. The resistance is understood by the pH Transmitter/Indicator so it can make adjustment to the measurement slope to match the effect of temperature on the sensor. With conventional glass measuring electrodes the T.C. is typically located near the measurement bulb to reduce the time necessary to recognize the solution temperature.

The **HB546** allows the user to specify which temperature compensator is right for their instrument. The user has the following options:

- **Honeywell 8550 ohm**
- PT1000 RTD
- PT100 RTD Capillary. Hi-temp spec 125C
- PT1000 RTD Capillary, Hi-temp spec 125C

Features

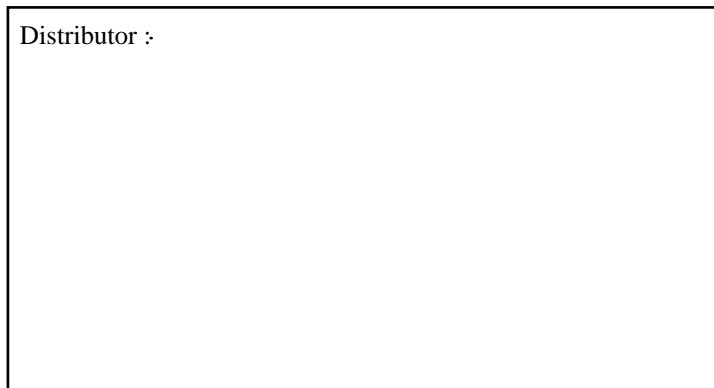
HB546 Electrode

- Uses Axial Ion Path reference technology
 - One electrode for entire pH and temperature ranges.
 - ***Suitable for in-line and submersion applications; may be mounted in any position***
 - Integral automatic temperature compensator
 - Chemically resistant CPVC, Kynar or Polypropylene body
- User can specify following:
 - Body Material
 - O-Ring Material
 - Measuring Electrode
 - Tip Configuration
 - Thermocompensation
 - Insertion Depth
 - Cable Configuration
 - Lead Terminations
- Great for high temperature and high pressure applications
 - Can be used in both low and high pH conditions
 - Rugged, quick-change, quick-clean
 - Compatible with most industrial transmitters and analyzers
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Specifications

Electrode	
Pressure and Temperature Rating	CPVC & Polypropylene: 100 psig, 100°C Kynar: 150 psig, 140°C (High Pressure Insertion System: 300 psig)
Operating Range	0-14 pH
Mounting	Threaded in-line: 3/4" MNPT threaded nose for installation into process, sample line or automatic cleaning system. Insertion depth user specifiable Submerged: 3/4" MNPT threaded top for connection to 3/4" FNPT coupling and extension pipe Ball-valve insertion: High-pressure insertion system, 1-1/4" or 1-1/2" full port valve <i>See Accessories in Module Selection Guide</i>
Wetted Materials	Kynar, CPVC, Polypropylene (Body Material Choices) Gr.2 Titanium, 316 SS, porous Teflon, Viton, EPDM, Kalrez, Nickel, Wood & Glass
Dimensions	Dependent upon user specifications
Weight	Approximately 0.23 kg (0.5 lb)

Distributor :



Honeywell

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