

HB Series Electrodes: HB551 – Quick Change pH Sensor

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 **HB551** is:

- a quick change pH sensor
- a pH sensor with an external nut-loc that improves safety and makes replacement easy
- ideal for sample lines and valve side-streams
- 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

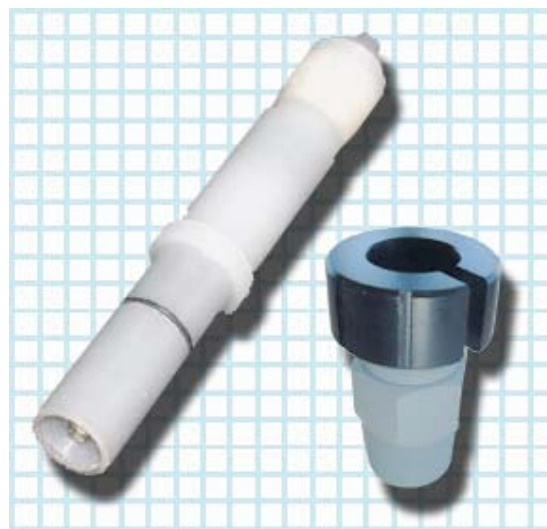
Description

The **HB551** 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 **HB551** pH electrodes are designed for quick-change in-line installations. The **HB551** can also be used in submersion operations.

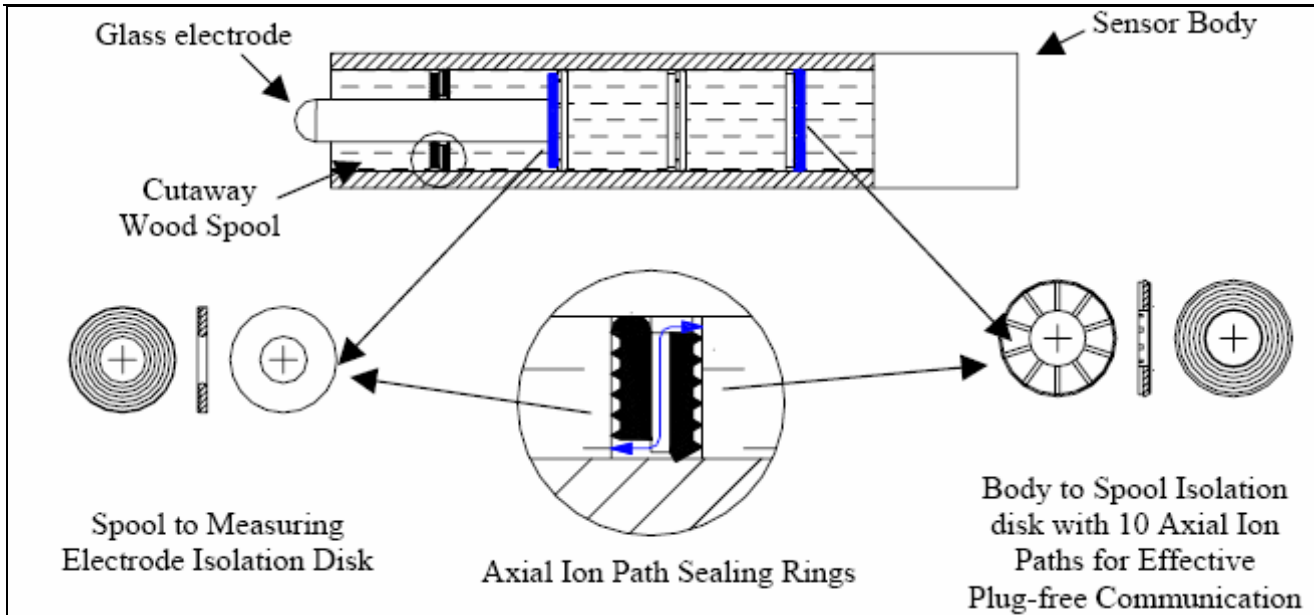
The HB551 pH electrode is a quick change sensor.

HB551 Electrode and Fitting:



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 **HB551** 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

HB551 Electrode

- Uses Axial Ion Path reference technology
 - One electrode for entire pH and temperature ranges.
 - ***Intended for quick-change in-line applications***
 - ***Ideal for sample lines and valve side-streams***
 - 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
 - Utilizes an external nut-loc to improve safety
 - 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
Operating Range	0-14 pH
Mounting	Quick-change in-line: 1" MNPT threaded adapter for installation into process, sample line or automatic cleaning system. Nut-loc retainer for quick removal and replacement. Submerged: 3/4" MNPT threaded top for connection to 3/4" FNPT coupling and extension pipe. <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 :



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Honeywell

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