

SE 554 pH Sensor



pH Sensor for Liquids with Suspended Solids

The SE 554 Memosens pH sensor is ideal for use in liquids with suspended solids and high ionic strength. This low-maintenance sensor is constructed using Alpha pH glass, 2 open hole junctions, a solid polymer electrolyte with high KCl concentration. These features provide for stable performance and long life in the most difficult applications.

The integrated NTC 30K temperature element assure that all pH measurements are accurately compensated for the temperature of the process media.

The robust sensor design and construction, along with the integration of Memosens technology, provide for a significant reduction in overall cost of ownership.

The SE 554 is suitable for use with any M4 Knick transmitter.

QUICK SPECS

Range: 0 ... 14 pH

Temperature: 32 ... 266°F (0 ... 130°C)

Pressure: 0 ... 180 psig (1 ... 12 bar)

Sensor Material: Alpha pH Glass

Diaphragm/Junction: 2X Open

Electrolyte: Solid Polymer

Reference Electrode: Ag/Ag Cl – Silamid®

TYPICAL APPLICATIONS

- Media with fine suspended solids
- Caustic addition
- Wet gas scrubbers
- Slurries
- Waste water

SE 554 PH SENSOR ANATOMY

SENSOR HEAD

Memosens Digital Sensing Technology

Memosens sensors provide several benefits with regard to ease of use and reduction of operating costs:

- Submersible inductive connection removes measurement influence from moisture and humidity that are commonly present in process applications.
- Galvanically isolated so there is no measurement influence from noise or ground loops. This is especially beneficial when using plastic holders.
- Calibration and diagnostics can be performed in the shop or lab. This reduces field maintenance time and process down time.

ELECTROLYTE

Solid Polymer

Solid polymer electrolyte with a high KCl content.

- Reduces measurement inference due to diffusion potentials and improves sensor response time.
- Prolongs sensor life by slowing process ingress and fouling of reference electrode.

SENSOR MATERIAL

Alpha pH Glass

Alpha glass is medium-impedence, fluoride resistant, hydrogen sensitive glass designed for use in applications requiring fast response time in media with extremely high ionic strength strongly oxidizing media.



REFERENCE ELECTRODE

Ag/Ag Cl – Silamid®

The Silamid reference electrode is constructed using a glass tube internally lined with silver and packed with silver chloride powder. A polyester fiber plug is added as an additional barrier to prevent poisoning and extend sensor life.

DIAPHRAGM/JUNCTION

2X Open Hole

The 2 open hole junctions help to minimize contamination and plugging of the reference system. This will extend the time between sensor calibration and replacement in high-solids applications.