

SE 558 pH Sensor



pH Sensor for Low Conductivity Liquids

The SE 558 Memosens pH sensor is ideal for use in high purity water. This low-maintenance sensor is designed for use in applications with a conductivity of $>10 \mu\text{S}/\text{cm}$. Constructed using Alpha pH glass, 3 ceramic junctions, and a KCl reservoir, the SE 558 is a great alternative to high-maintenance, liquid filled pH sensors. An integrated NTC 30K temperature element assures that all pH measurements are accurately compensated for the temperature of the process media.

The reduced maintenance requirements, along with the integration of Memosens technology, provide for a significant reduction in overall cost of ownership.

The SE 558 is suitable for use with any M4 Knick transmitter.

QUICK SPECS

Range: 0 ... 14 pH

Temperature: 32 ... 212°F (0 ... 100°C)

Pressure: Full Vacuum ... 43 psig (-1 ... 3 bar)

Sensor Material: Alpha pH glass

Diaphragm/Junction: 3X Ceramic

Electrolyte: Gel

Reference Electrode: Ag/Ag Cl – Silamid®

TYPICAL APPLICATIONS

- Boiler Condensate
- Boiler Blow-down
- Reverse Osmosis (RO) Systems
- Water for Injection (WFI)
- Ultra-pure Water

SE 558 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.

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.

SENSOR GLASS

Alpha pH glass

Alpha glass is a medium-impedance, fluoride resistant, hydrogen sensitive glass. It is designed for use in applications requiring fast response time in both low temperature and extremely low ionic environments ($>10 \mu\text{S}/\text{cm}$).



ELECTROLYTE

Gel Electrolyte

Gel electrolyte does not require refilling, making this sensor a low cost and low maintenance option.

KCl Rings

A KCl reservoir (solid KCl rings) assist in preventing the electrolyte from being leached out of the reference system, extending sensor life.

DIAPHRAGM/JUNCTION

3X Ceramic

Robust and corrosion resistant design. The density of a ceramic junction allows for the reference system to be pressurized. This slows the fouling/poisoning of the reference system, extending time between calibrations and reducing sensor replacement frequency.

Using 3 junctions eliminates the influence of flow and ensures a solid connection between the reference electrode and the process fluid.