

Single-Use In-Line pH Sensor for Efficient Bioprocess Monitoring



High Precision and Rapid Response

The electrochemical pH probe delivers accurate real-time measurements and quick response times, allowing for the detection of fast pH shifts.



Two-Point Calibration

The pH probe comes with calibration values printed directly on it. These values include the zero point, indicating where the pH electrode shows zero potential, and the slope of the calibration line, which determines the sensor's accuracy throughout its measuring range.



Streamlined Sterilization and Operation

The sensor is compatible with gamma irradiation for sterilization and is available in two pre-assembled sizes.



Seamless Integration

Designed for easy compatibility with existing METTLER TOLEDO transmitters.



Advanced Single-Use pH Sensor For Enhanced Downstream Bioprocessing Operations

The single-use pH sensor combines METTLER TOLEDO's InSUS 307 pH probe technology with a single-use flow cell optimized for in-line sensing in downstream bioprocessing. It features a pH-sensitive electrode, reference electrode, and temperature probe to measure hydrogen ion concentration accurately through potential difference. Designed for real-time, high-precision measurements, it delivers rapid responses to pH fluctuations, which is critical during product purification. The calibration values are printed on the probe to eliminate the need for buffer calibration, supporting closed system operations without sensor exposure to buffer standards. They are available in two pre-assembled sizes and compatible with gamma irradiation sterilization. It does not require calibration, thereby reducing the need for process calibration and minimizing process downtime. The sensor integrates seamlessly with METTLER TOLEDO transmitters, offering a reliable, efficient solution for bioprocess pH monitoring, especially where probe cleaning is difficult, ensuring quick response to pH changes.

Sensor Performance Specifications

pH Range	pH 3 to pH 10
Slope (pH 7 to pH 4 buffer)	Min -57.8 mV/pH (98%)
Zero-point (In pH 7 buffer)	7.20±0.25pH
Accuracy under defined laboratory conditions	± 0.10 pH for ± 1.50 pH units around the calibration point after 1-point process calibration (adjustment of inline reading to an offline pH measurement of a grab sample)
Response Time	t90% < 20s between pH 4 to 7
Operating Temperature Range	5 to 60°C
Operating Pressure Range	4 Bar at 25°C*; 2 Bar at 40°C**; 1 Bar at 60°C**
Membrane Glass Resistance	300...900 MOhm
Glass Type	pH-sensitive glass membrane
Temperature Compensation (T.C.)	Via built-in Pt 1000
Shelf Life	12 months PT-PH-S-5-5, PT-PH-S-025 24 months with available coating on the reference system PT-PH-L-5-5, PT-PH-L-025

* This specification was determined and validated by Pendotech. Pendotech testing and validation data regarding this claim are on file.

**This specification is provided by the original manufacturer (PT-PH1 pH Sensor).

Ordering Information - MONITOR

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Dual pH Bench-Top monitor/transmitter for the interface of 2 Pendotech Single-Use pH sensors	30280773
M300 transmitter stand kit 1/2 DIN	58083319

PROBES/FLOW CELLS

Pendotech Single Use pH In-Line pH Sensor - 3/4 inch sanitary flange, Polysulfone. 1-year Shelf-Life	PT-PH-S-5-5
Pendotech Single Use In-Line pH Sensor- 1/4 inch Hosebarb, Polysulfone. 1-year Shelf-Life	PT-PH-S-025
Pendotech Single Use pH In-Line pH Sensor - 3/4 inch sanitary flange, Polysulfone. 2-year Shelf-Life	PT-PH-L-5-5
Pendotech Single Use In-Line pH Sensor- 1/4 inch Hosebarb, Polysulfone. 2-year Shelf-Life	PT-PH-L-025

CABLES

Cable VP6 ST/1m, for Mettler INSUS307 Probe	52300107
Cable VP6 ST/3m, for Mettler INSUS307 Probe	52300108
Cable VP6-ST/1m/BNC-30	52300210
Cable VP6-ST/3m/BNC-30	52300211