

# Rosemount™ 550pH

## Single-use pH Sensor for Bioprocessing Applications



# Rosemount™ 550pH Sensor



## Robust sensor design

- High measurement stability which leads to minimal one-point sensor standardizations.
- Shelf life up to 2 years from manufacturing.
- Maximum pressure up to 2 bar.
- USP Class VI, ISO 10093, and ADI-free compliant wetted materials.
- Material selection based on lowest achievable extractables profiles. (Extractables report conducted per BPOG guidelines available upon ordering.)

## Ease of installation

- Sensor installs into 1-in. barb fittings on the single-use bioreactors.
- Sensor begins measurement immediately, with no time needed to wet glass for a stable measurement.
- Ensure sensor functionality prior to filling the bioreactor with a true, one point standardization against a fully traceable storage solution.

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## Ordering information

The Rosemount™ 550pH Sensor features a storage buffer that allows for a one-point standardization to ensure functionality of the sensor prior to startup and reduce the need for future maintenance of calibrations versus an off-line sample. The sensor comes with a VP8 cable connector that allows for quick connection of the sensor to the measuring loop.

**Table 1: Rosemount 550pH Sensor Ordering Information**

Measurement type electrode	
A1	pH - single-use pH glass electrode
Sensor tip	
M2	PEI - ULTEM™
Body material	
2	PEI - ULTEM
O-ring material	
E	EPDM
Preamplifier	
0	No preamplifier
Cable connection	
VP	Variopol quick-disconnect connector
Cable length	
000	No cable (for replacement sensors)
Material certification - optional level	
Q8	Material certification and traceability reports
Calibration certificate - optional level	
Q4	Calibration Certificate
<b>Typical Model String: 550PHA1M22E0VP000Q8Q4</b>	

Spare Variopol cable sold separately (see [Accessories](#)).

## Specifications

**Table 2: Rosemount™ 550pH Sensor Specifications**

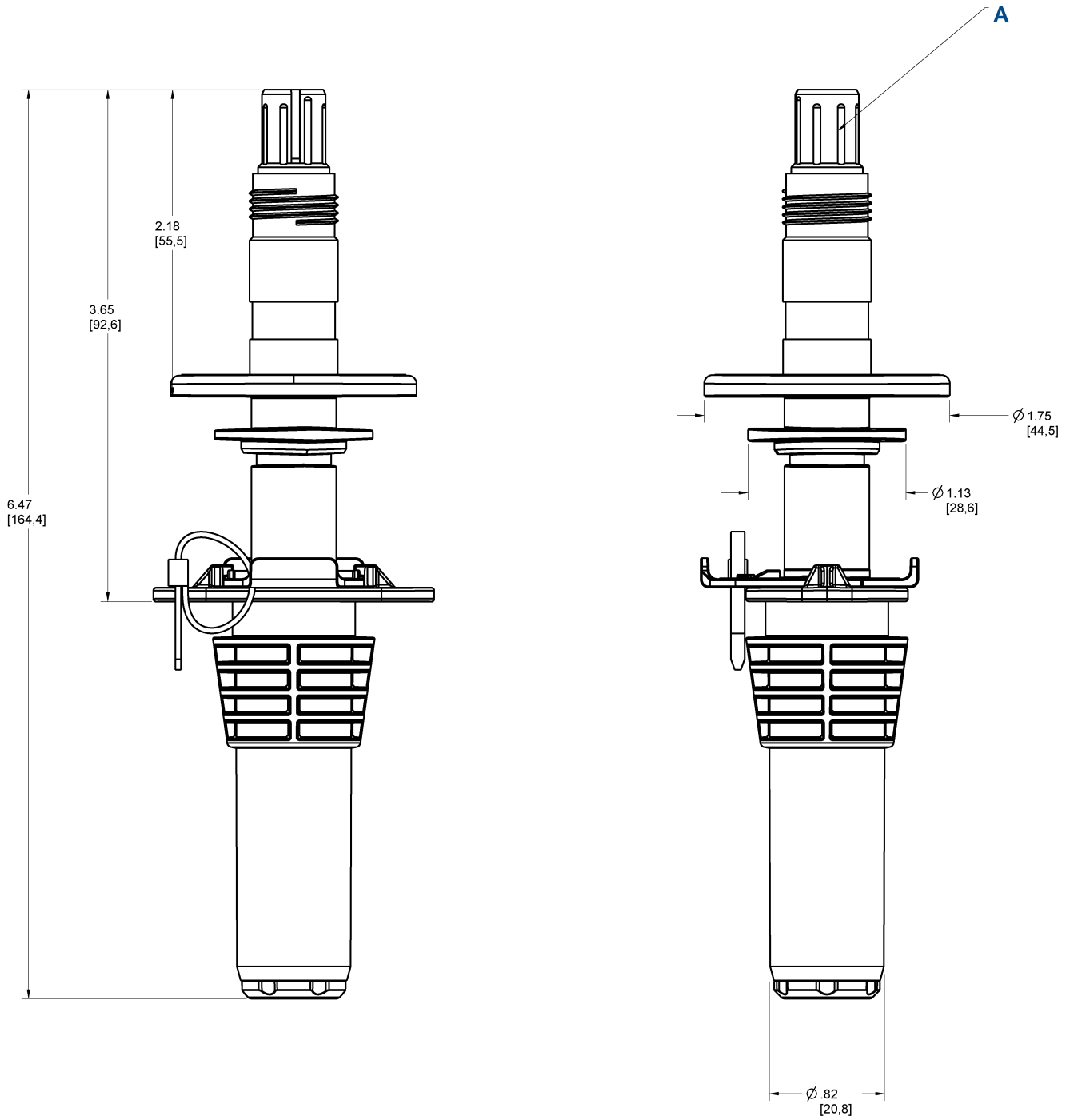
Specifications	Materials and units
Operating temperature range	39 to 104 °F (4 to 40 °C)
Pressure range	0 to 30 Psig (0 to 2 bar)
pH range	2 to 12
Sensor drift	Less than 0.005 pH drift per day in laboratory conditions
Initial one-point standardization accuracy using internal sensor buffer	Less than ±0.1 pH at pH 7

**Table 2: Rosemount™ 550pH Sensor Specifications (continued)**

<b>Specifications</b>	<b>Materials and units</b>
Shelf life	2 years at 77 °F (25 °C), expiration date on sensor label
<b>Measuring method</b>	
Potentiometry	pH glass electrode and double-junction reference electrode
<b>Wetted materials</b>	
pH electrode	Proprietary glass formulation
O-ring	EPDM (USP Class VI)
<b>Operations parameters</b>	
Process connection	1-in. barb fitting
Electrical connector	Variopol (VP 8.0)
Sensitivity	Greater than 57 mV / pH at 77 °F (25 °C)
Electrolyte	Phosphate based (see SDS on product website)
Integral temperature sensor	Pt-100
Gamma irradiation	Up to 50 kGy

# Dimensional drawings

Figure 1: Rosemount™ 550pH Sensor 1-in. Installation



A. VP8 cable connection

## Accessories

**Table 3: Rosemount™ 550pH Sensor Accessories**

<b>Part number</b>	<b>Description</b>
24281-00	15 ft. (4.6 m) cable with mating VP8 connector
24281-02	2.5 ft. (.8 m) cable with mating VP8 connector
24281-05	4 ft. (1.2 m) cable with mating VP8 connector
24281-06	10 ft. (3 m) cable with mating VP8 connector

# Notes

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