

Rosemount™ 3200HP

High Purity Water pH Sensor



A reliable sensor for accurately measuring pH in high purity water

The Rosemount™ 3200HP pH sensor is used to accurately measure pH in high purity water applications such as boiler water, boiler feedwater, and steam condensate. These sensors feature a flowing reference design for improved signal stability in low conductivity water.

Overview



A Robust Sensor Design

- Operates in low conductivity water down to 0.4 $\mu\text{S}/\text{cm}$.
- High signal stability with flowing reference electrode and laser drilled capillary junction.
- Operates in sample temperatures of 0 to 70 °C (32 to 158 °F).
- Built-in solution ground for measurement stability and complete diagnostic functionality.

Ease of Installation and Maintenance

- Rosemount 3200HP features a complete panel mounted system, including an electrolyte reservoir, a flow cell, a pH sensor, and a calibration cup holder.
- Easy to replace liquid junction and refillable electrolyte reservoir.
- Variopol (VP8) cable connection option, for quick cable-to-sensor release, which eliminates cable twisting.

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Ordering Information

The Rosemount 3200HP High Purity Water pH Sensor comes as a complete panel mounted system, consisting of an electrolyte reservoir, flow cell, combination pH sensor, calibration cup holder, and quick disconnect VP8 sensor cable. All components are mounted on an ABS plate which is suitable for wall mounting. Sensors feature a 316 stainless steel solution ground and integral Pt-100 RTD for quick and accurate temperature compensation.

Table 1. Rosemount 3200HP High Purity Water pH Sensor ordering information

| Model | Sensor type |
|--|---|
| 3200HP | pH sensor |
| Variopol cable selection | |
| 01 | Complete panel with 10 ft VP cable and sensor |
| 02 | Complete panel with 20 ft VP cable and sensor |
| 03 | Complete panel with 30 ft VP cable and sensor |
| Typical Model Number: 3200HP-01 | |

Specifications

Table 2. Rosemount 3200HP High Purity Water pH Sensor specifications

| Physical characteristics | Specifications |
|--------------------------|--|
| Measurement range | pH: 0 to 14 ORP: -1500 to +1500 mV |
| Wetted materials | Silicone, polycarbonate/polyester, glass, stainless steel, PVDF, and Viton |
| Accuracy | ±0.05 pH |
| Noise | < 0.02 pH |
| Conductivity range | > 0.4 $\mu\text{S}/\text{cm}$ |
| Sample temperature | 0 to 70 °C (32 to 158 °F) |
| Sample inlet pressure | 5 to 10 psig (134-370 kPa abs); no back pressure allowed; sample must drain to open atmosphere |
| Sample flow rate | 1 to 3 gph (60 to 180 mL/min) |
| Process connections | 1/4 in. FPT |
| Reference electrode | Flowing, open capillary |
| Weight/shipping weight | 5.4 lb / 7.6 lb (2.5 kg / 3.5 kg) |

Product Certifications

Please see online certificates for further details

IECEX

Ex ia IIC T4 Ga (-20 °C ≤ Ta ≤ +60 °C)

Per standards IEC60079-0: 2011, IEC 60079-11: 2011

ATEX

II G Ex ia IIC T4 Ga (-20 °C ≤ Ta ≤ +60 °C)

Per standards EN60079-0:2012+ A11: 2013, EN 60079-11: 2012

FM

Intrinsically safe for use in Class I, II, and III, Division 1, Groups A, B, C, D, E, F, and G; Temperature Class T6 Ta = -20 °C to + 60 °C

Intrinsically safe for use in Class I, Zone 0, AExia IIC T6 Ta = -20 °C to + 60 °C

Nonincendive for use in Class I, Division 2, Groups A, B, C, and D; Temperature Class T6 Ta = -20 °C to + 60 °C

Suitable for use in Class II and III, Division 2, Groups E, F, and G; Temperature Class T6 Ta = -20 °C to + 60 °C Hazardous (Classified)

Locations

IS/I,II,III/1/ABCDEFG/T6 Ta = 60 °C - 1400332; Entity; I/0/AEx ia IIC/T6 Ta = 60 °C - 1400332; Entity; NI/1/2/ABCD/T6 Ta = 60 °C;

S/II,III/2/EFG/T6 Ta = 60 °C; Entity Parameters

Per standards 3600: 1998, 3610: 2010, 3611:2004, 3810:2005

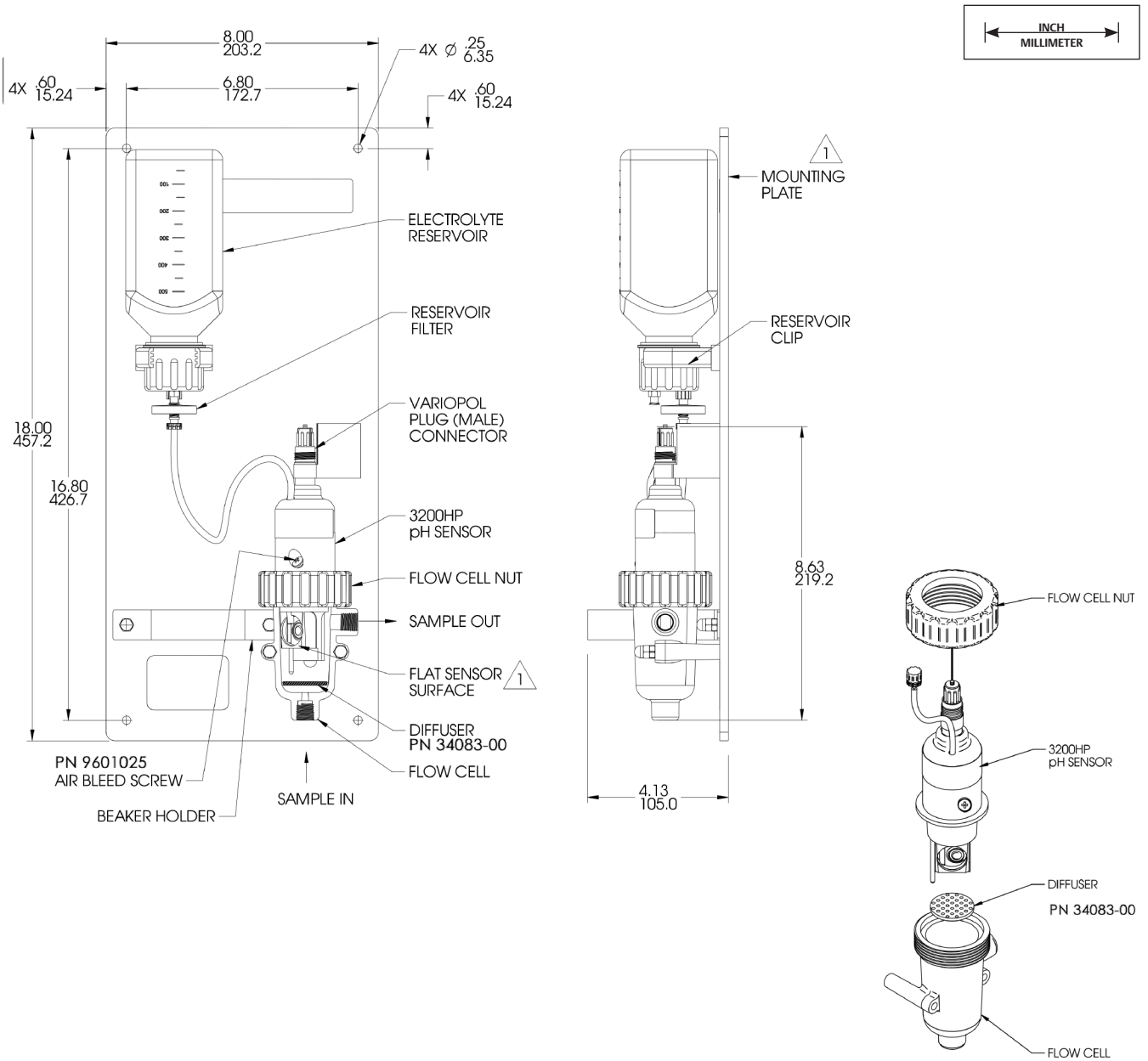
CSA

Intrinsically safe and nonincendive:

Class I, Division 1, Groups ABCD; Class II, Division 1, Groups EFG; Class II; Class I, Division 2, Groups ABCD; Ex ia IIC; T6; Ambient temperature rating -20 °C to +60 °C: (Simple Apparatus)

Per standards C22.2 No. 142 - M1987, C22.2 No. 157 = M1992, CAN/CSA E60079-0:07, CAN/CSA E60079-11:02, UL 50: 11th Ed., UL 508: 17th Ed., UL 913: 7th Ed., UL 60079-0: 2005, UL 60079-11: 2002

Dimensional and Installation Drawings



Accessories

Table 3. Rosemount 3200HP High Purity Water pH Sensor accessories information

| Part number | Description |
|---------------|--|
| 24281-00 | 15 ft (4.6 m) cable with mating VP8 connector |
| 24281-01 | 25 ft (7.6 m) cable with mating VP8 connector |
| 24281-02 | 2.5 ft (0.8 m) cable with mating VP8 connector |
| 24281-05 | 4 ft (1.2 m) cable with mating VP8 connector |
| 24281-07 | 20 ft (6.1 m) cable with mating VP8 connector |
| 24281-08 | 30 ft (9.1 m) cable with mating VP8 connector |
| 3200HP-00 | 3200HP replacement pH sensor |
| 3200HP-OEM | 3200HP pH system without panel and without VP cable |
| 3200HP-OEM-01 | 3200HP pH system without panel and without VP cable, with 10 ft (3 m) VP cable |
| 3200HP-OEM-02 | 3200HP pH system without panel and without VP cable, with 20 ft (6.1 m) VP cable |
| 3200HP-OEM-03 | 3200HP pH system without panel and without VP cable, with 30 ft (9.1 m) VP cable |
| 24185-00 | HP pH reservoir kit |
| 24193-00 | Calibration cup, 100 mL |
| 24212-00 | Electrolyte tubing |
| 33810-00 | Calibration cup holder |
| 34083-00 | Diffuser |
| 34132-00 | Flowing junction capillary kit (capillary disc and O-ring) |
| 9160590 | Cartridge filter |
| 9210391 | 3200HP electrolyte refill, 500 mL |
| 9601025 | Air bleed screw |
| 9913804 | Washer for air bleed screw |

Notes

www.Emerson.com/RosemountLiquidAnalysis



[YouTube.com/user/RosemountMeasurement](https://www.youtube.com/user/RosemountMeasurement)



Analyticexpert.com



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