

PUR-SENSE™ Autoclavable and Steam Sterilizable pH Sensors

- DRIFT FREE REFERENCE- designed with silver-silver chloride reference electrode with gelled electrolyte and proprietary liquid junction
- STERILIZATIONS UP TO 140°C- Improved GPHT glass technology increases high temperature stability.
- FAST, ACCURATE AND IMPROVED STABILITY- Reliable measurements after sterilization cycles
- 50 STEAM CYCLES- Ensures fast & accurate long life in actual process conditions
- INDIVIDUAL QUALITY CERTIFICATION- With a list of materials for each sensor



**MODELS 3800
& 3800VP**

FEATURES AND APPLICATIONS

Designed for accuracy and stability in a heat intensive application, the new **PUR-SENSE** 3800 series pH sensors are optimized for autoclaving and steam sterilization. Building on PERpH-X® and AccuGlass® technology, the 3800 sensors exhibit unparalleled stability after exposure to high temperature sterilization.

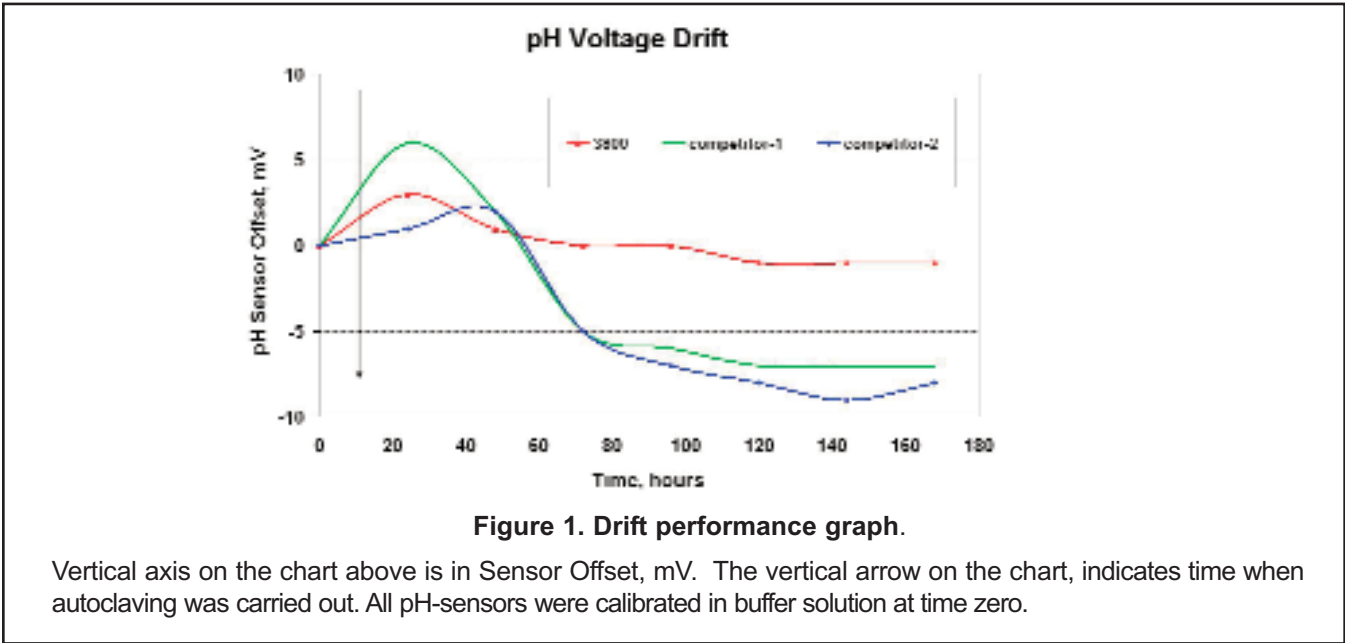
The 3800 series are available in three different insertion lengths, 120 mm, 225 mm and 325 mm. The 3800VP has a PT100 ohm RTD mounted inside the pH glass stem for automatic temperature compensation. The 3800 has no integral temperature sensor and is supplied with a coaxial S8 Pg 13.5 connector. VP8 cable assembly works with both VP6 and VP8 cable connector.

The **PUR-SENSE** reference electrode uses a silver-silver chloride sensor in combination with a new gelled

potassium chloride electrolyte to provide a stable reference potential through the single proprietary ceramic reference junction. 3800 test data indicates the sensor drift is well within 0.1pH (0.02-0.07pH). The proven stability of the 3800 sensors translates into less maintenance and more reliable measurements even after multi autoclaving cycles. Models 3800 are at least 2 times more stable than any other pH sensor in this challenging application.

Figure 1 shows the stability test results. The tests were conducted in an autoclave at 125°C for 45 minutes followed by a simulated cell-culture process for eight consecutive days. All pH sensors were calibrated in buffer solution prior to drift measurements. Testing media for this test was cell-culture or simulated perfusion culture process.

PERpH-X is a registered trademark of Rosemount Analytical.
PUR-SENSE is a trademark of Rosemount Analytical.
AccuGLASS is a registered trademark of Rosemount Analytical.



PERFORMANCE AND PHYSICAL SPECIFICATIONS

Sensor Type: *PUR-SENSE* 3800, 3800VP, GPHT glass with hemi bulb

Range: pH 0 to 14

Temperature Range: up to 105°C (steam up to 140°C) / up to 221 F° (steam up to 284 F°)

Pressure Range: max 6 bar at 105°C/ max 72 psig (600kPa) at 221 F°

Temperature sensor: Pt 100

Wetted Materials: Glass, ceramic and EPDM o-ring USP VI

Reference Junction: Single Ceramic junction

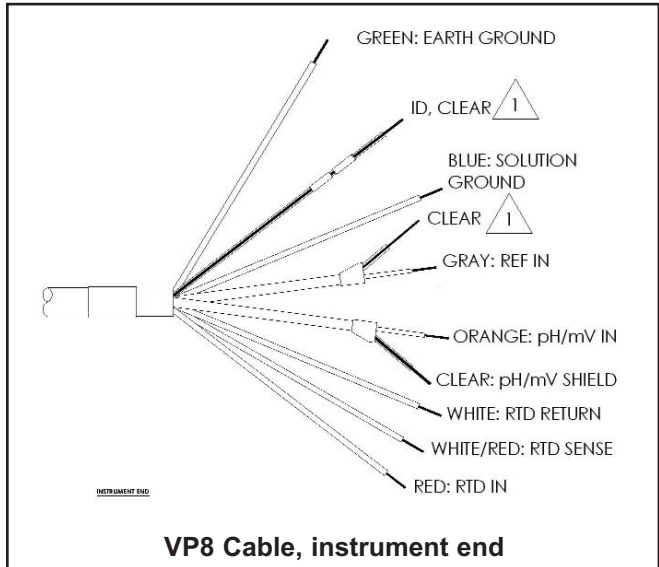
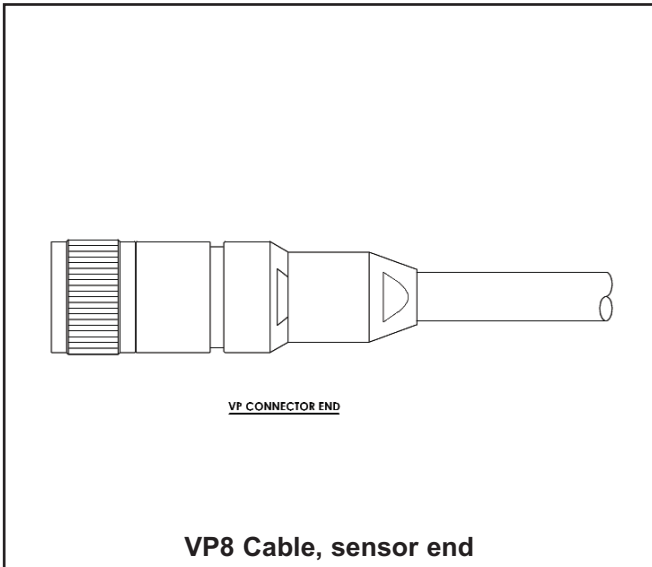
Electrolyte: Gelled polymer

Cable Connector: Type VP 8 - multipin pH connector head, or coaxial S8

Process Connector: Pg 13.5 connector

Dimensions: 12 mm OD, shaft length -01= 120 mm , -02 = 225 mm , -03 = 325 mm

Remarks: Suitable for all Rosemount pH-instruments. Quality certification includes list of wetted materials and calibration records



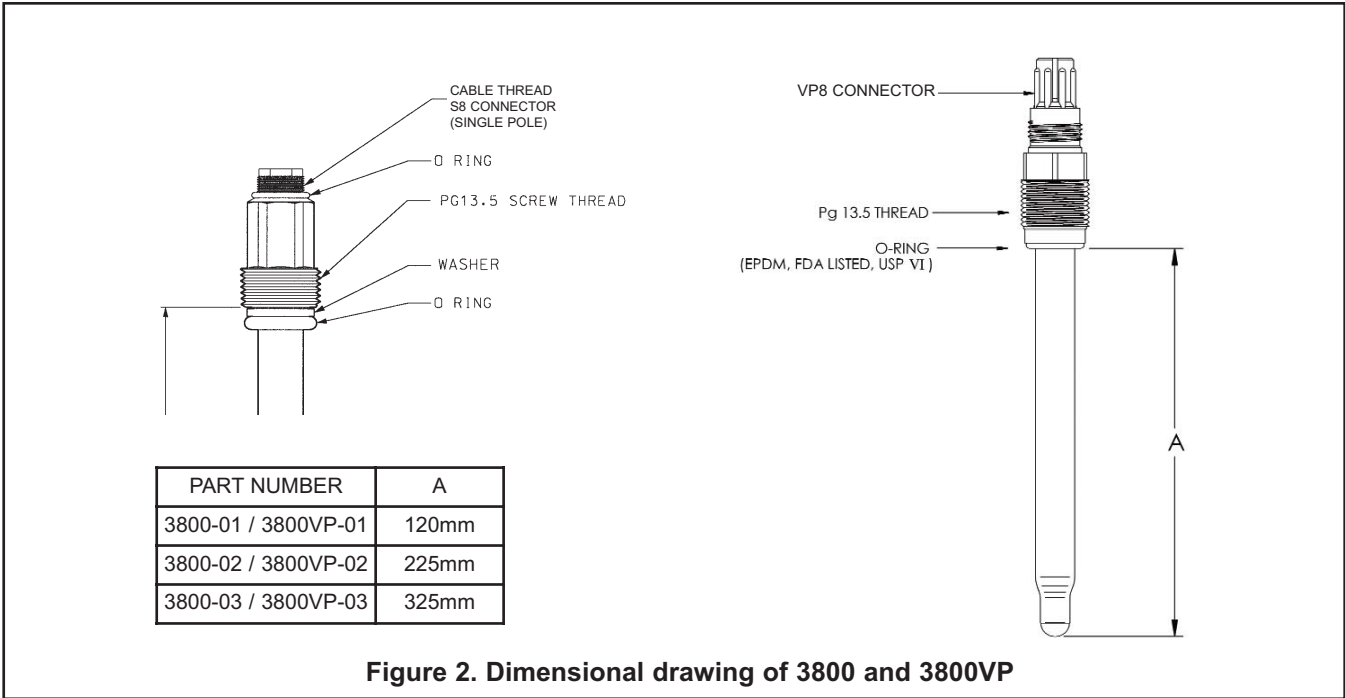


Figure 2. Dimensional drawing of 3800 and 3800VP

INSTALLATION AND ACCESSORIES SPECIFICATIONS

The Rosemount Analytical insertion mounting assemblies are the best selections for all biopharmaceutical and standard industrial applications. Insertion mounting assembly is very easy to use and maintain. The Tri-clamp adapter makes sensor mounting ideal for any sanitary application used in biopharmaceutical and food & beverage industries. Both insertion mounting assembly and Tri-Clamp adapter designed to prevent sensor breakage to maintain process integrity.

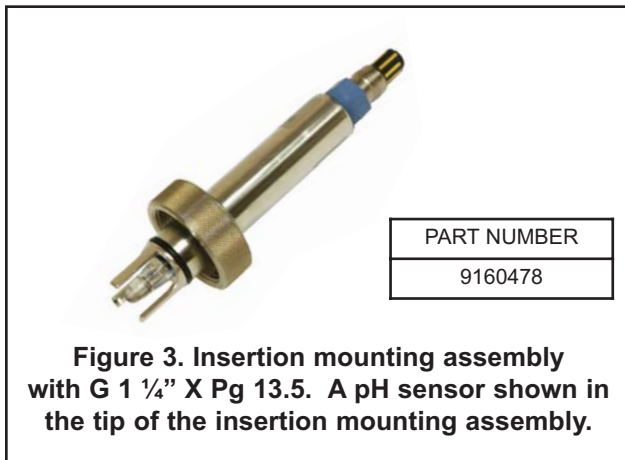


Figure 3. Insertion mounting assembly with G 1 1/4" X Pg 13.5. A pH sensor shown in the tip of the insertion mounting assembly.

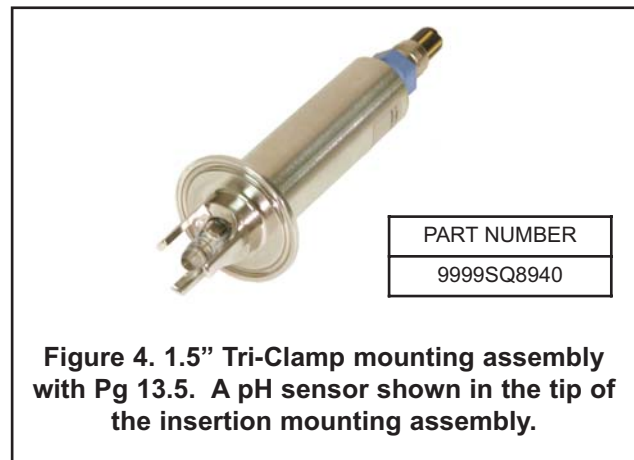


Figure 4. 1.5" Tri-Clamp mounting assembly with Pg 13.5. A pH sensor shown in the tip of the insertion mounting assembly.

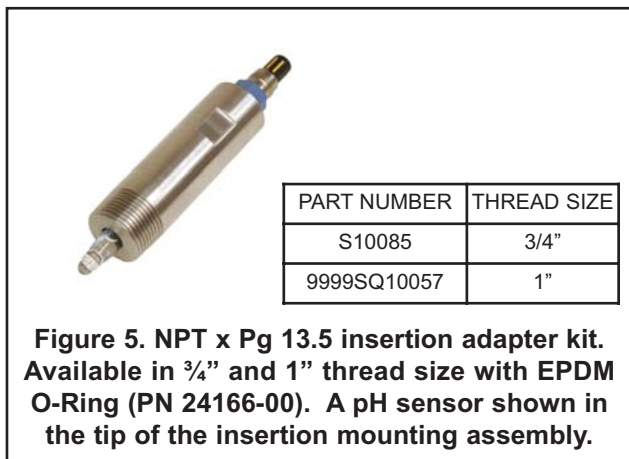


Figure 5. NPT x Pg 13.5 insertion adapter kit. Available in 3/4" and 1" thread size with EPDM O-Ring (PN 24166-00). A pH sensor shown in the tip of the insertion mounting assembly.



Figure 6. VP connector cap for sterilization. It protects the VP connector from exposure to steam.

ORDERING INFORMATION

Model 3800/3800VP sensors: provide a stable signal and retain their calibration value for repeated sterilization cycles. They can be used in the biotechnology, pharmaceutical, chemical and food processing fields. These sensors are available in three insertion lengths for various insertion depths. Models 3800/3800VP are offered with an S8 Pg 13.5 or VP connector. 120mm long 3800/3800VP sensors can be used with the various types of the Insertion Mounting Assemblies or Tri-clamp adapter to prevent sensor breakage. VP8 cable assembly works with both VP6 and VP8 sensor connector.

MODEL 3800	Steam Sterilizable pH sensor
CODE	Insertion Length
-01	120 mm insertion
-02	225 mm insertion
-03	325 mm insertion
3800-01	Example

MODEL 3800VP	Steam Sterilizable pH sensor with PT100 RTD
CODE	Insertion Length
-01	120 mm insertion
-02	225 mm insertion
-03	325 mm insertion
3800VP-01	Example

ACCESSORIES

Part Number	Description
23645-07	VP6 external cable 15 ft long (no ground wire)
23645-10	VP6 external cable 10 ft long
23645-11	VP6 external cable 20 ft long
23645-12	VP6 external cable 30 ft long
23645-13	VP6 external cable 4 ft long
9200338	S8 cable, free rotating connector, single pole 5m long
9200339	S8 cable, free rotating connector, single pole 10m long
9160478	G 1 ¼" x Pg 13.5 insertion adapter
9999SQ8940	1.5" Tri-Clamp adapter
9999SQ10057	1" NPT x Pg 13.5 insertion adapter
24281-00	15 ft. cable with mating VP8 connector
24281-01	25 ft. cable with mating VP8 connector
24281-02	2.5 ft. cable with mating VP8 connector
24281-03	50 ft. cable with mating VP8 connector
24281-04	100 ft. cable with mating VP8 connector
24281-05	4 ft. cable with mating VP8 connector
24281-06	10 ft. cable with mating VP8 connector
24281-07	20 ft. cable with mating VP8 connector
24281-08	30 ft. cable with mating VP8 connector
24166-00	EDPM O-Ring
24313-00	VP connector cap for Sterilization



*The right people,
the right answers,
right now.*

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