

Rosemount™ 3900/3900VP

General Purpose pH/ORP Sensors



High performance for your process pH/ORP needs

The Rosemount 3900 and 3900VP pH/ORP combination sensors are used for reliable pH or oxidation reduction potential measurements of aqueous solutions in pipelines, open tanks, or ponds. Their robust designs allow the Rosemount 3900 and 3900VP sensors to be used in a wide range of applications.

Rosemount 3900VP ordering information

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Model

Code	Description
3900VP	General Purpose pH/ORP Sensor with Variopol connector

Preamplifier options

Code	Description
01	SMART preamplifier ⁽¹⁾
02	No preamplifier

(1) Standard preamplifier if used with oxidation reduction potential (ORP).

Measuring code

Code	Description
10	General purpose low resistivity (GPLR) pH glass (0-14 pH)
12	Platinum oxidation reduction potential (ORP)

Calibration certificates - optional level

Code	Description
CC	Certificate of Calibration (no test data given)
LC	Loop Calibration Certificate (sensor and transmitter calibrated together, with test data)
EC	Electronic Calibration Certificate (sensor calibrated against factory instrument, with test data)

Table 2: Rosemount 3900/3900VP pH/ORP Sensor Specifications (continued)

Cable	
3900	Various cable lengths (see Preamplifier options) with integral preamplifier; 15-ft. (4.6 m) and less without preamplifier
3900VP	Use 24281-XX, 2.5-ft. (0.8 m) to 100 ft. (30.5 m). See Accessories .
Weight/shipping weight	
1 lb./2 lb. (0.45 kg/0.9 kg)	

Rosemount pH/ORP sensor(s) product certifications

Rev 0.5

European directive information

A copy of the EU Declaration of Conformity can be found at the end of the Quick Start Guide. The most recent revision of the EU Declaration of Conformity can be found at Emerson.com/Rosemount.

Ordinary location certification

As standard, the transmitter has been examined and tested to determine that the design meets the basic electrical, mechanical, and fire protection requirements by a nationally recognized test laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

Installing equipment in North America

The US National Electrical Code® (NEC) and the Canadian Electrical Code (CEC) permit the use of Division marked equipment in Zones and Zone marked equipment in Divisions. The markings must be suitable for the area classification, gas, and temperature class. This information is clearly defined in the respective codes.

USA

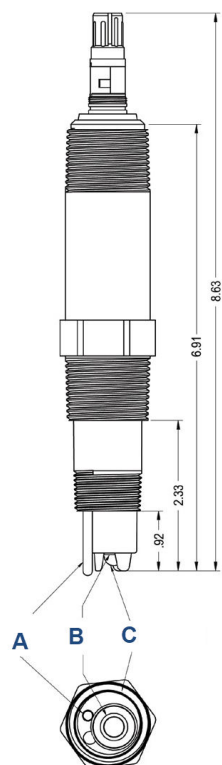
FM Intrinsic Safety

Certificate	FM17US0198X
Standards	FM Class 3600:1998, FM Class 3610:2010, FM Class 3611: 2004, FM Class 3810: 2005
Markings	IS/I,II,III/1/ABCDEFG/T6 Ta = -20 °C to 60 °C I/0/AEx ia IIC/T6 Ta = -20 °C to 60 °C NI/I/2/ABCD/T6 Ta = -20 °C to 60 °C S/II,III/2/EFG/T6 Ta = -20 °C to 60 °C

Specific Conditions for Safe Use (X):

1. Sensors with Model 1700702 preamplifier:
 - a. Model 385+-a-b-c. Triple junction pH/ORP sensor

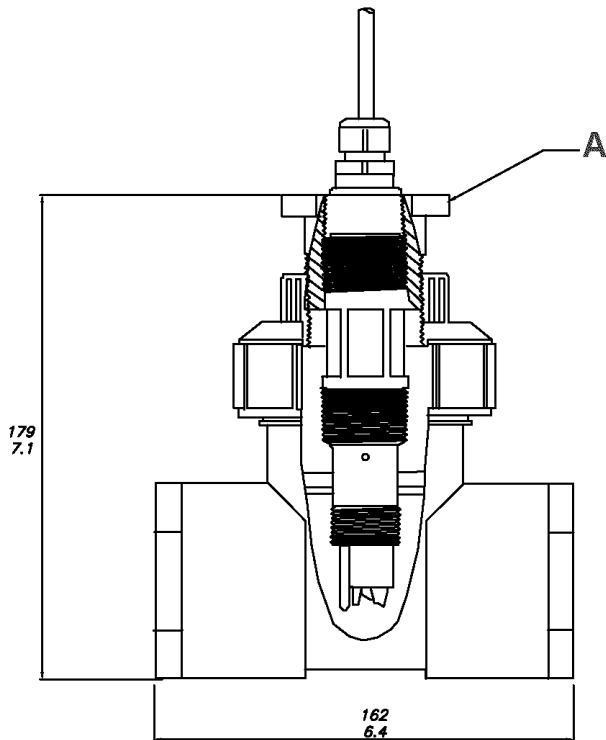
Figure 3: Rosemount 3900VP with Variopol Cable Connection



- A. *Temperature compensation solution ground*
- B. *Reference junction*
- C. *pH electrode*

Table 3: Horizontal Pipe Tee (PN 2002011) Pressure/Temperature Ratings

psig (kpa)	°F (°C)
150 (1136)	150 (65)
128 (984)	160 (71)
102 (805)	170 (77)
80 (653)	180 (82)
57 (494)	200 (93)
48 (432)	210 (99)

Figure 6: Flow-through Tee (2-in.) (PN 914240-XX)

A. Adapter

The following flow-through tees are available for the Rosemount 3900/3900VP.

- 915240-03
- 915240-04
- 915240-05

For a new installation, use the appropriate tee above and add the S10283-LQD adapter.

When replacing an existing Rosemount 399 with a Rosemount 3900 sensor, add the S10283-LQD adapter to convert the tee to accept the Rosemount 3900 sensor.