

Rosemount™ Hx338+

Steam Sterilizable and Autoclavable Pre-Pressurized pH Sensor



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1 Rosemount Hx338+ IQ/OQ Instruction Sheet

1.1 Purpose

The purpose of this document is to describe the procedure for an Installation Qualification (IQ) and Operation Qualification (OQ) for Rosemount Hx338+ pH sensors.

The IQ/OQ may be performed at a customer site by following these instructions.

1.2 Applicable documents

To carry out the IQ/OQ procedures, the following documents must be available:

- Quick Start Guide for the Rosemount Hx338+ sensor
- Instruction Manual for the pH transmitter used to conduct the IQ/OQ
- IQ/OQ Form ([Section 1.5](#))

1.3 Installation Qualification (IQ)

1. Visual inspection.

Check to see if there is any obvious physical damage to the sensor.

No damage = passed, damage = failed.

Note any visible defects.

2. Verification of documentation.

- a. Is the final test inspection (Declaration of Quality) for the sensor available? Attach a copy to the completed IQ report.
- b. Is the Quick Start Guide for the Rosemount Hx338+ sensor available? Attach a copy to the IQ report.

3. Test connection of sensor to transmitter.

With the sensor connected to a pH transmitter according to the instruction manual for each, perform the following:

- a. Remove the protective cap on the sensor and rinse in deionized water.
- b. Immerse the sensor in pH 4 buffer and swirl.
- c. Monitor the mV value for at least three minutes until stable.
- d. mV reading must be positive and over 100 mV to pass.

Record value and note pass or fail.

4. If the above steps are completed without any problem, note that the sensor has passed IQ.
5. Sign and date on the IQ section of the IQ/OQ Form ([Section 1.5](#)).

1.4 Operation Qualification (OQ)

This test verifies the slope and offset of the pH sensor are within specification.

1. Perform a two-point calibration as directed by the transmitter instruction manual.
2. Use buffers of pH 7 and pH 4.
3. Make sure to rinse the sensor carefully when moving the sensor from one buffer to another.
4. Make sure that the mV reading has stabilized in one buffer solution before moving on to the second buffer solution.
5. Once the calibration is completed, verify the sensor slope and offset which should be available from the calibration menu of the transmitter.
 - a. Offset must be between -20 mV and +20 mV to pass.
 - b. Slope must be between 50.3 mV/pH unit and 65.0 mV/pH unit to pass (or 85% to 110% on some transmitters).
6. If the above steps are completed without any problem, note that the sensor has passed OQ.
7. Sign and date on the OQ section of the IQ/OQ Form ([Section 1.5](#)).

1.5 IQ/OQ form

Installation Qualification		
	Model	Serial Number
Sensor		
Transmitter		

Documentation	Y/N	Comments
Sensor Instruction Manual Available		
Transmitter Instruction Manual Available		

Visual Inspection	Y/N	Comments
Any Damage Noted?		

Test Connection	mV Reading	Pass/Fail (>100 mV = Pass, <100 mV = Fail)
mV Reading in pH4 Buffer		
Comments		

IQ Completion	Y/N	Comments
Passed?		

Signed	
Name	
Title	
Date	

Operation Qualification		
	Model	Serial Number
Sensor		
Transmitter		

Buffers	Part Number
pH 4 Buffer	
pH 7 Buffer	

	Recorded Value	Pass/Fail (Must be between ± 20 mV)
Sensor Offset		
Comments		
	Recorded Value	Pass/Fail (Must be between 50.3 mV and 65.0 mV per pH unit, or 85% to 110% on some transmitters)
Sensor Slope		
Comments		

Signed	
Name	
Title	
Date	

GLOBAL HEADQUARTERS

Emerson Automation Solutions
6021 Innovation Blvd
Shakopee, MN 55379, USA

📞 +1 800 999 9307 or +1 952 906 8888

☎️ F +1 952 949 7001

✉️ liquid.csc@emerson.com

www.Emerson.com/
RosemountLiquidAnalysis
NORTH AMERICA

Emerson Automation Solutions
8200 Market Blvd
Chanhassen, MN 55317

📞 Toll Free +1 800 999 9307

☎️ F +1 952 949 7001

✉️ liquid.csc@emerson.com

www.Emerson.com/
RosemountLiquidAnalysis

EUROPE

Emerson Automation Solutions
Neuhofstrasse 19a P.O. Box 1046
CH-6340 Baar
Switzerland

📞 T + 41 (0) 41 768 6111

☎️ F + 41 (0) 41 768 6300

✉️ liquid.csc@emerson.com

www.Emerson.com/
RosemountLiquidAnalysis

MIDDLE EAST AND AFRICA

Emerson Automation Solutions
Emerson FZE
Jebel Ali Free Zone
Dubai, United Arab Emirates, P.O. Box 17033

📞 T +971 4 811 8100

☎️ F +971 4 886 5465

✉️ liquid.csc@emerson.com

www.Emerson.com/
RosemountLiquidAnalysis

ASIA-PACIFIC

Emerson Automation Solutions
1 Pandan Crescent
Singapore 128461
Singapore

📞 T +65 777 8211

☎️ F +65 777 0947

✉️ liquid.csc@emerson.com

www.Emerson.com/
RosemountLiquidAnalysis

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