IQ/OQ Instruction Sheet
00840-0100-3386, Rev AA
May 2019

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.

Follow these instructions to perform the IQ/OQ at a customer site.

1.2 Applicable documents

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

- Rosemount™ Hx338+ Sensor Quick Start Guide
- Reference Manual for the pH transmitter used to conduct the IQ/OQ
- IQ/OQ Form (IQ/OQ form)

1.3 Installation Qualification (IQ)

Procedure

1. Visually inspect the transmitter.
   a) Check to see if there is any obvious physical damage to the sensor.
   If there is no damage, the sensor passes the Installation Qualification. If there is damage, the sensor fails the Installation Qualification.
   b) Note any visible defects.
2. Verify 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 Rosemount™ 338+ Quick Start Guide 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 reference manual for each, do 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.
   mV reading must be positive and over 100 mV to pass.
   d) Record value and note pass or fail.

If the above steps are completed without any problem, the sensor has passed IQ.

Postrequisites

Sign and date on the IQ section of the IQ/OQ Form (IQ/OQ Form) .

1.4 Operation Qualification (OQ)

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

Procedure

1. Perform a two-point calibration as directed by the transmitter reference manual.
   Use buffers of pH 7 and pH 4.
2. Make sure to rinse the sensor carefully when moving the sensor from one buffer to another.
3. Make sure that the mV reading has stabilized in one buffer solution before moving on to the second buffer solution.
4. 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 60.0 mV/pH unit to pass (or 85% to 100% on some transmitters).

If the above steps are completed without any problem, the sensor has passed OQ.

Postrequisites

Sign and date on the OQ section of the IQ/OQ Form (IO/OQ Form).

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		
Sensor Slope	Recorded Value	Pass/Fail (Must be between 50.3 mV and 59.2 mV per pH unit, or 85% to 100% on some transmitters)
Comments		

Signed	
Name	
Title	
Date	

00840-0100-3386
Rev. AA
2019

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