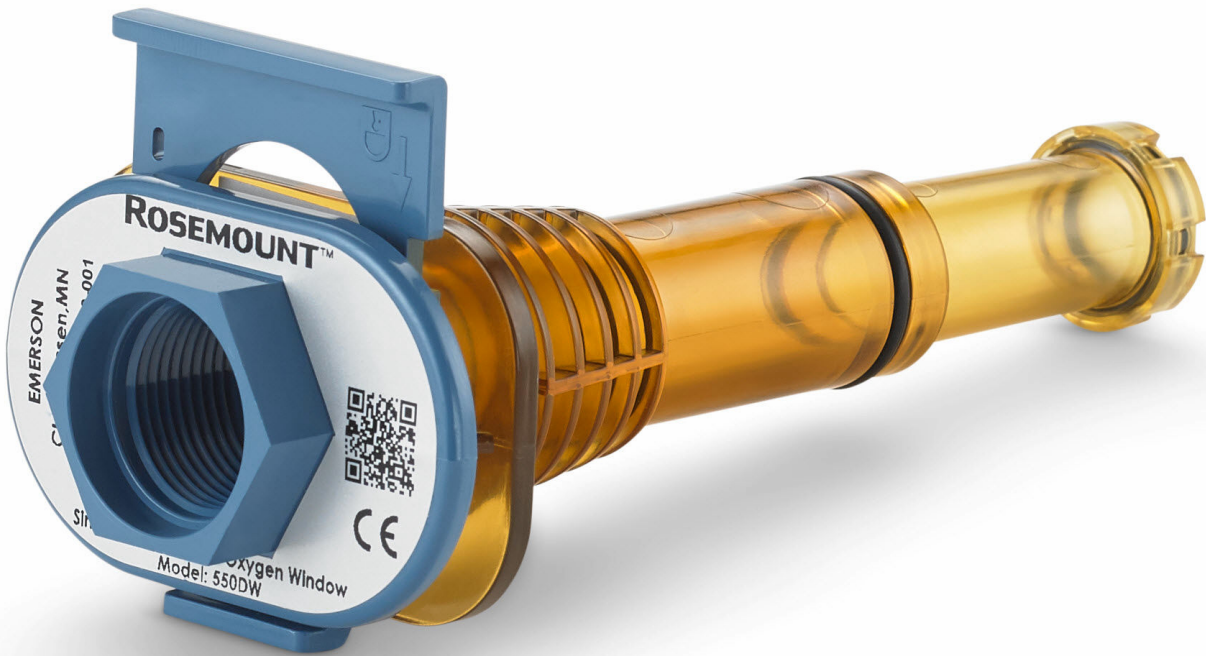


Rosemount™ 550DW

Single-use Dissolved Oxygen Sensor Adapter for Bioprocessing Applications



Essential instructions

Read this page before proceeding!

Emerson designs, manufactures, and tests its products to meet many national and international standards. Because these instruments are sophisticated technical products, you must properly install, use, and maintain them to ensure they continue to operate within their normal specifications. The following instructions must be adhered to and integrated into your safety program when installing, using, and maintaining Emerson products. Failure to follow the proper instructions may cause any one of the following situations to occur: loss of life, personal injury, property damage, damage to this instrument, and warranty invalidation.

- Read all instructions prior to installing, operating, and servicing the product.
- If you do not understand any of the instructions, contact your Emerson representative for clarification.
- Follow all warnings, cautions, and instructions marked on and supplied with the product.
- Inform and educate your personnel in the proper installation, operation, and maintenance of the product.
- Install equipment as specified in the installation instructions of the appropriate Reference Manual and per applicable local and national codes. Connect all products to the proper electrical and pressure sources.
- To ensure proper performance, use qualified personnel to install, operate, update, program, and maintain the product.
- When replacement parts are required, ensure that qualified people use replacement parts specified by Rosemount. Unauthorized parts and procedures can affect the product's performance, place the safe operation of your process at risk, and may result in fire, electrical hazards, or improper operation.
- Ensure that all equipment doors are closed and protective covers are in place, except when maintenance is being performed by qualified people, to prevent electrical shock and personal injury.

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1 Features

Figure 1-1: Rosemount™ 550DW with Sensor Installed



Robust sensor adapter

- Sensor window compatible with standard dissolved oxygen sensors without reducing measurement performance.
- Adapts sensors designed for stainless steel bioreactors into single-use bags.
- Membrane allows for up to 10 psi (68.9 kPa) pressure without a sensor supporting.
- Compatible with 4.7 in. (120 mm) sensor with a PG13.5 process connector.
- All wetted materials are USP Class VI, ADI-free, and chosen for minimal extractables.

Ease of installation

- Reuse dissolved oxygen sensor across multiple batches without autoclaving, as it does not contact process solutions.
- Adapter arrives installed and gamma-irradiated with the single-use bioreactor bag.

2 Specifications

Table 2-1: Rosemount™ 550DW Sensor Adapter Specifications

Wetted materials	PEI/ULTEM™, silicone, EPDM (all USP Class VI and ADI-free)
Operating temperature range	39 to 104 °F (4 to 40 °C)
Pressure range	0 - 10 psig, without sensor installed
Temperature compensation	See sensor manual for temperature compensation details.
Sensor diameter	0.5 in. (12 mm)
Sensor insertion length	4.72 in. (120 mm)
Process connection	PG 13.5
Optimized transmitters with automatic temperature correction	Rosemount 56 Dual Input Transmitter
Compatible sensors	Rosemount Hx438
Shelf life	3 years at 77 °F (25 °C)

Disposal

The Rosemount 550DW contains no hazardous materials. If the adapter was contaminated in the process, please decontaminate prior to disposal.



3 Install

To install the dissolved oxygen sensor into the Rosemount™ 550DW adapter:

Prerequisites

Note

For automatic temperature compensation on the Rosemount 56 transmitter, please select the "Single-use Biopharm" option on the transmitter during sensor startup. Otherwise, refer to [Manual temperature compensation](#) for manual temperature compensation.

Procedure

1. Clip the small zip tie connecting the PG13.5 adapter to the body of the adapter.
2. Press the blue thumb press to the unlocked position.
3. Remove the PG13.5 connector from the body of the adapter.
4. Push calibrated sensor through the PG13.5 connector and screw the sensor to a torque of 40 in./lb. (4.5 N*m). Follow the instructions in the sensor manual for calibration and wiring procedures.
5. Slowly push the sensor and adapter into the body of the adapter.
The body of the adapter is designed to allow air to escape as the sensor is installed.
6. Lock the sensor into place by pressing the thumb press to the locked position.

Figure 3-1: Installed Rosemount Hx438 Sensor in Adapter



7. Place a new zip tie in the provided hole on the thumb press to ensure the press is always in the locked position.

4 Calibrate

To calibrate the sensor, please refer to the Rosemount™ Hx438 Dissolved Oxygen Sensor [Quick Start Guide](#).

5 Troubleshoot

5.1 Label information too small

The serial number, Cal pH, or slope are too small to read.

Recommended action

Scan the two-dimensional bar code on the sensor label to retrieve information.

5.2 Manual temperature compensation

The following procedure was completed on a Rosemount™ 1056 Transmitter with a dissolved oxygen sensor in position 1. The purpose of this compensation is to ensure the transmitter is using the correct temperature due to heat transfer across the adapter.




Procedure



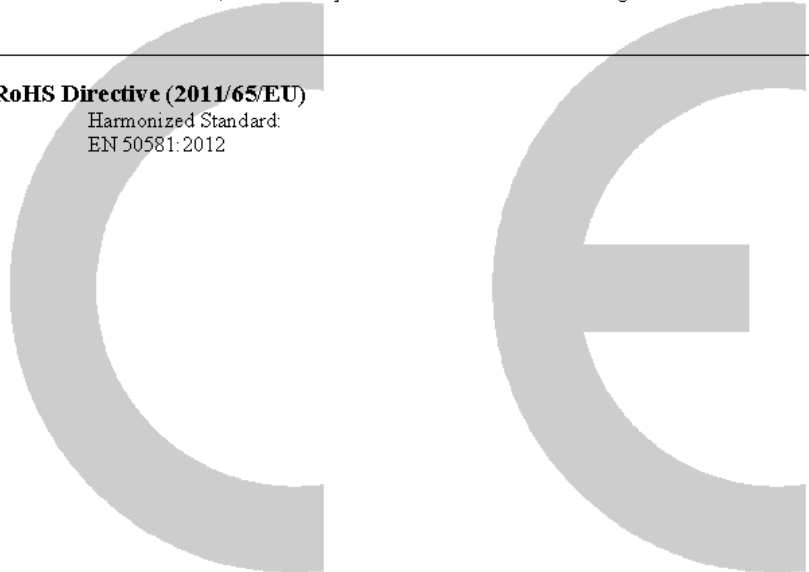
1. From the main screen, press **Menu**.
2. Select "Program" on the screen and press **Enter**.
3. Select "Temperature" on the screen and press **Enter**.
4. Select "S1 Temp Comp".
5. Select "Manual".
6. Input the process temperature from the temperature control unit and press **Enter**.

Note

The displayed temperature on the transmitter will still be the live reading from the dissolved oxygen, but the software will now use manual input temperature for DO concentration compensation.

6 EU Declaration of Conformity

	
EU Declaration of Conformity No: RAD 1139 Rev. A	
<p>We,</p> <p>Rosemount Inc. 8200 Market Boulevard Chanhassen, MN 55317-9685 USA</p> <p>declare under our sole responsibility that the product,</p> <p>Rosemount™ Single Use Bioreactor Sensor Models: 550PH and 550DW</p> <p>manufactured by,</p> <p>Rosemount Inc. 8200 Market Boulevard Chanhassen, MN 55317-9685 USA</p> <p>to which this declaration relates, is in conformity with the provisions of the European Union Directives, including the latest amendments, as shown in the attached schedule.</p> <p>Assumption of conformity is based on the application of the harmonized standards and, when applicable or required, a European Union notified body certification, as shown in the attached schedule.</p>	
 _____ (signature)	_____ Vice President of Global Quality (function)
_____ Chris LaPoint (name)	_____ 26-Mar-19; Shakopee, MN USA (date of issue & place)
Page 1 of 2	

	
EU Declaration of Conformity No: RAD 1139 Rev. A	
The product, Rosemount™ Single Use Bioreactor Sensors Model 550PH Model 550DW	
to which this declaration relates, is in conformity with relevant Union harmonization legislation:	
RoHS Directive (2011/65/EU) Harmonized Standard: EN 50581:2012	
	
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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

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

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

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

ASIA-PACIFIC


Emerson Automation Solutions
1 Pandan Crescent
Singapore 128461
Singapore

📞 T +65 777 8211


📠 F +65 777 0947

✉️ liquid.csc@emerson.com

 [Linkedin.com/company/Emerson-Automation-Solutions](https://www.linkedin.com/company/Emerson-Automation-Solutions)

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