

Rosemount™ 550PT Pressure Transmitter

and 551 Single-Use Process Connector



Safety messages

This guide provides basic guidelines for this product. It does not provide instructions for configuration, diagnostics, maintenance, service, or troubleshooting. Procedures and instructions in this section may require special precautions to ensure the safety of personnel performing the operation.

⚠ CAUTION

The products described in this document are NOT designed for nuclear-qualified applications. Using non-nuclear qualified products in applications that require nuclear-qualified hardware or products may cause inaccurate readings. For information on Rosemount nuclear-qualified products, contact your local Emerson Sales Representative.

⚠ WARNING

Explosions could result in death or serious injury.

Installation of device in an explosive environment must be in accordance with appropriate local, national, and international standards, codes, and practices.

Process leaks may cause harm or result in death.

Install and tighten process connectors before applying pressure.

Electrical shock can result in death or serious injury.

Avoid contact with the leads and terminals. High voltage that may be present on leads can cause electrical shock.

⚠ WARNING

Physical access

Unauthorized personnel may potentially cause significant damage to and/or misconfiguration of end users' equipment. This could be intentional or unintentional and needs to be protected against.

Physical security is an important part of any security program and fundamental in protecting your system. Restrict physical access by unauthorized personnel to protect end users' assets. This is true for all systems used within the facility.

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1 Introduction

The Rosemount 550PT is a pressure transmitter designed for use with the Rosemount 551 Single-Use Process Connector in single-use pharmaceutical manufacturing. The Rosemount 551 provides a sterile barrier to contain the process and transfer pressure to the transmitter which converts the reading into a 4-20 mA output signal.

1.1 About this guide

This guide provides basic guidelines for the Rosemount 550PT Transmitter. It does not provide instructions for configuration, diagnostics, maintenance, or service. This guide is also available electronically at [Emerson.com/Rosemount](https://www.emerson.com/Rosemount).

2 Installation

2.1 Insert the Rosemount 551 into the process equipment

▲ CAUTION

Do not push directly on the isolating diaphragm during assembly as this can damage and possibly rupture the barrier.

Procedure

1. Insert the Rosemount 551 into a ½-in. port or tubing by pressing on the protective cap.
2. Secure with a cable tie.

2.2 Wire the transmitter

Procedure

1. Ensure a tight connection between the cable and 6-pin connector.
There will be an audible click when cable is completely connected.

Note

The Emerson supplied cable must be used to ensure proper electrical connection and prevent damage to the transmitter.

2. Connect the two wires to a data acquisition system that supplies 24 Vdc of power.

Note

Transmitter requires between 20-28 Vdc under normal operating conditions. A loop impedance of 250 Ohms is recommended.

2.3 Connect the transmitter

Prerequisites

Ensure no external pressure is applied to the single-use connector.

Procedure

1. Remove the protective cap from the single-use process connector.

- Place the flange of the single-use process connector into the transmitter and attach using a ½ / ¾-in Tri Clamp (Rosemount part # 00550-3100-0001).
- Tighten the Tri Clamp until the connection is finger-tight and feels secure.

⚠ CAUTION

Over-tightening can lead to degraded performance over time.

- Orient the transmitter to the position in which it will be used (see [Figure 4-3](#)).

2.4 Set the transmitter zero point

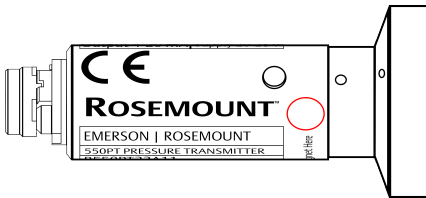
Prerequisites

Ensure the transmitter is powered on and no pressure (other than the desired zero point) is applied to the sensor.

Procedure

- Place magnet over the circle on the transmitter labeled “Place magnet here” and hold for one second.

Figure 2-1: Transmitter



- As soon as the LED blinks (about one second), remove the magnet. The zero point is saved.

Need help?

If more than 1.5 psig is applied to the transmitter during this process, then this step will fail (indicated by three brief LED flashes). If this happens, then ensure minimal pressure is being applied to the transmitter and repeat [Step 1](#).

3 Troubleshooting

3.1 Transmitter will not zero despite having no pressure applied

⚠ CAUTION

Before continuing, ensure no pressure is applied to single-use process connector.

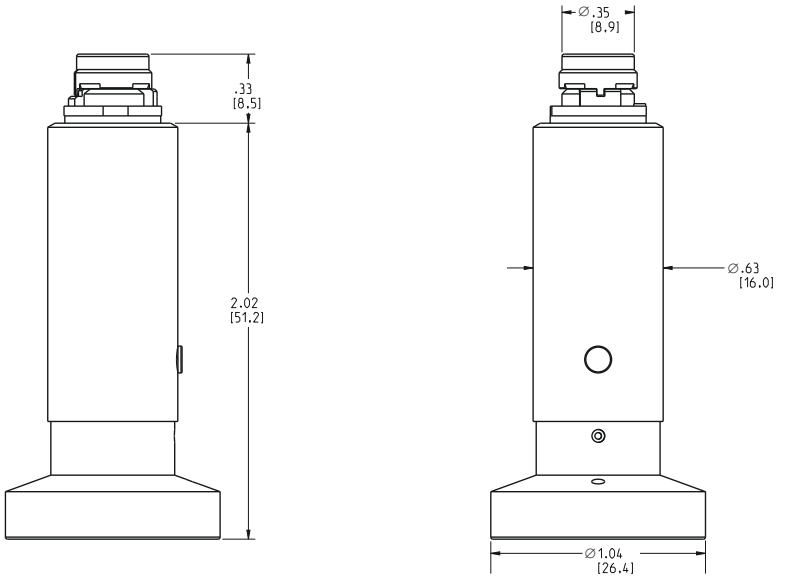
Solution: Factory reset required

Recommended actions

1. Disconnect the process connector from the transmitter.
2. Attempt a zero (see [Set the transmitter zero point](#)).
 - If the zero was successful with no process connector attached, then reattach the transmitter with the clamp.
 - If the zero was unsuccessful, then perform a factory reset by holding a magnet on the magnet point for four seconds.
3. Perform the zero function again with the clamp applied.
 - If the zero procedure fails, then perform a factory reset by holding a magnet on the magnet point for four seconds.
 - If the factory reset is successful, then the LED will illuminate for four seconds before returning to factory calibration.
 - If this procedure fails, then contact your local Emerson representative.

4 Dimensional drawings

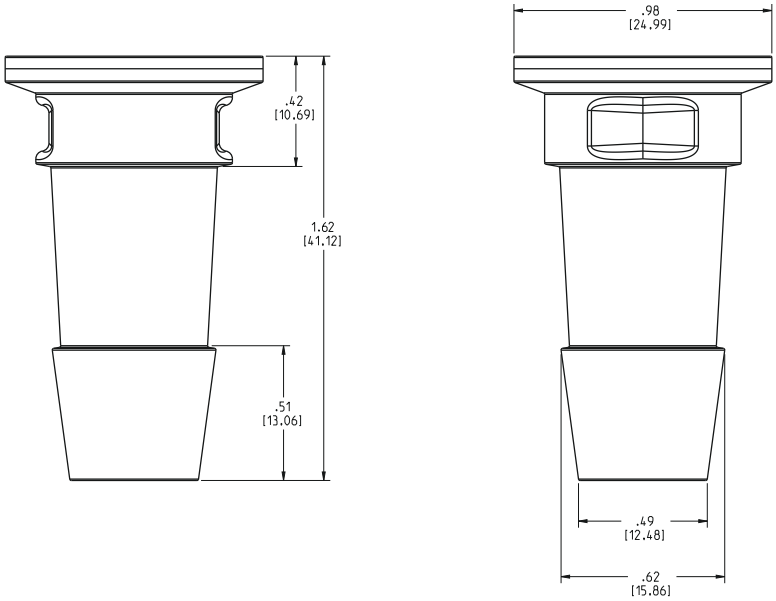
Figure 4-1: Rosemount 550PT Single-Use Pressure Transmitter



Note

Measurements are in in. (mm).

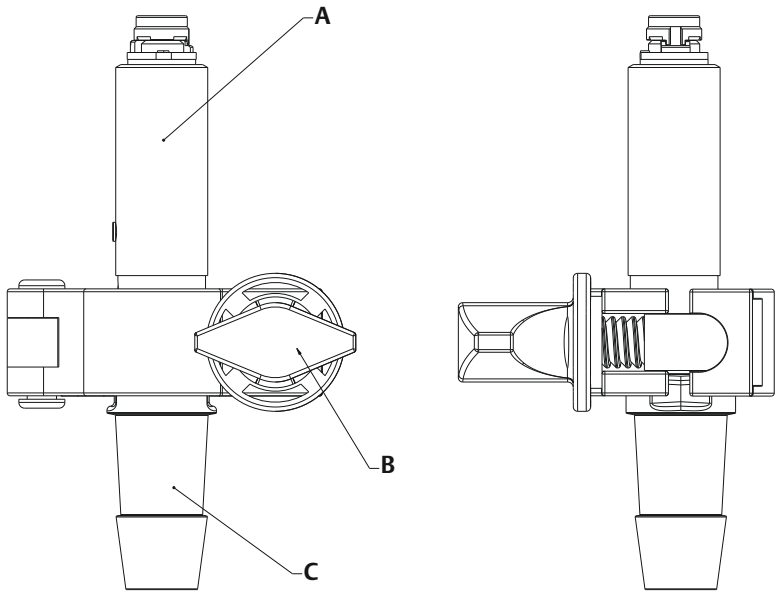
Figure 4-2: Rosemount 551 Single-Use Process Connector



Note

Measurements are in in. (mm).

Figure 4-3: Rosemount 550PT and 551 Assembly








- A. Transmitter
- B. Clamp
- C. Process connector

Note

Measurements are in in. (mm).

5 EU Declaration of Conformity


	
EU Declaration of Conformity No: RMD 1159 Rev. A	
<p>We,</p> <p style="margin-left: 40px;">Rosemount Inc. 6021 Innovation Boulevard Shakopee, MN 55379-4676 USA</p> <p>declare under our sole responsibility that the product,</p> <p style="text-align: center;">Rosemount™ 550PT Pressure Transmitters for Single-Use and 551 Single-Use Process Connector</p> <p>manufactured by,</p> <p style="margin-left: 40px;">Rosemount Inc. 6021 Innovation Boulevard Shakopee, MN 55379-9685 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>	
 <hr/> <small>(signature)</small>	<hr/> <small>Vice President of Global Quality (function)</small>
<hr/> <small>Chris LaPoint (name)</small>	<hr/> <small>22-Sep-20, Shakopee, MN USA (date of issue & place)</small>
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EU Declaration of Conformity
No: RMD 1159 Rev. A

EMC Directive (2014/30/EU)
Rosemount 550PT Pressure Transmitters for Single-Use and 551 Single-Use Process Connector
Harmonized Standards: EN 61326-1:2013, EN 61326-2-3:2013

RoHS Directive (2011/65/EU)
Rosemount 550PT Pressure Transmitters for Single-Use and 551 Single-Use Process Connector
Harmonized Standard: EN 50581:2012



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