Quick Start Guide
00825-0100-5550, Rev AA
September 2020

Rosemount™ 550PT Pressure Transmitter

and 551 Single-Use Process Connector

ROSEMOUNT™

EMERSON

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

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

Process leaks may cause harm or result in death.

Install and tighten process connectors before applying pressure.

Electrical shock

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 to protecting your system. Restrict physical access by unauthorized personnel to protect end users' assets. This is true for all systems used within the facility.

Contents

Introduction....3
Installation....4
Troubleshooting....6
Dimensional drawings....7

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.

2 Installation

2.1 Insert the Rosemount 551 into the process equipment

Procedure

1. **⚠ CAUTION**

   Do not push directly on the isolating diaphragm during assembly as this can damage and possibly rupture the barrier.
   Do not use sharp tools to complete this step.

   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.

   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.
2. 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).
3. Tighten the Tri Clamp until the connection is finger-tight and feels secure.

Note
Over-tightening can lead to degraded performance over time.

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

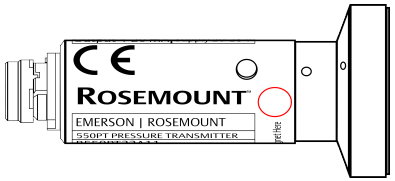
2.4 Set the transmitter zero point

Prerequisites

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

Procedure

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



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

Need help?
If more than 4 psig is applied to the transmitter during this process, this step will fail (indicated by three brief LED flashes). If this happens, 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

Ensure no pressure is applied to single-use process connector before continuing.

Solution: Factory reset required

Recommended actions

1. Disconnect the process connector from the transmitter.
2. Attempt a zero (see Set the transmitter zero point) and, if the zero was successful with no process connector attached, reattach the transmitter with the clamp.
3. Perform the zero function again with the clamp applied.
4. If the zero procedure fails, perform a factory reset by holding a magnet on the magnet point for four seconds.

   If the factory reset is successful, the LED will illuminate for four seconds before returning to factory calibration.

   If this procedure fails, contact your local Emerson representative.

4 Dimensional drawings

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

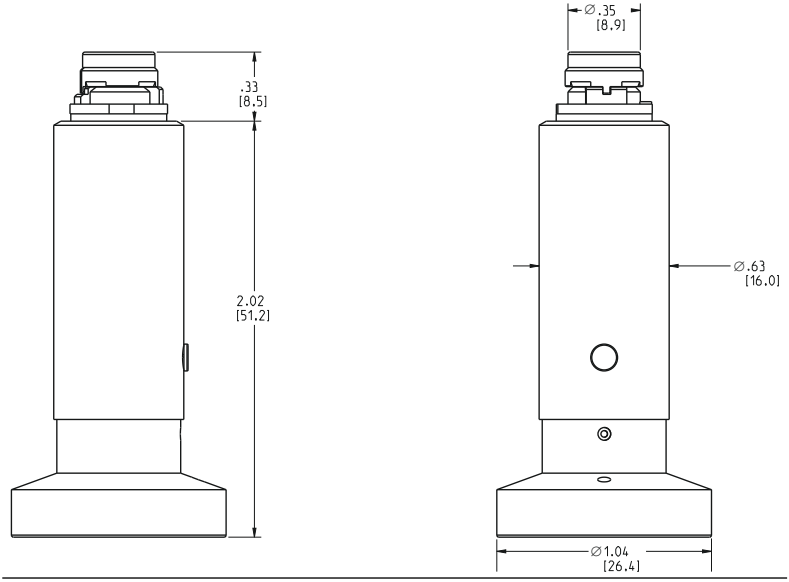


Figure 4-2: Rosemount 551 Single-Use Process Connector

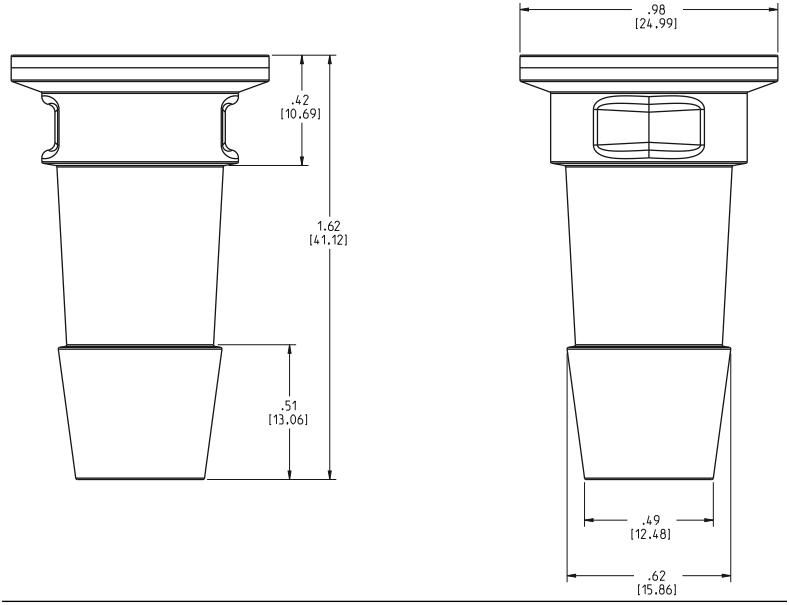
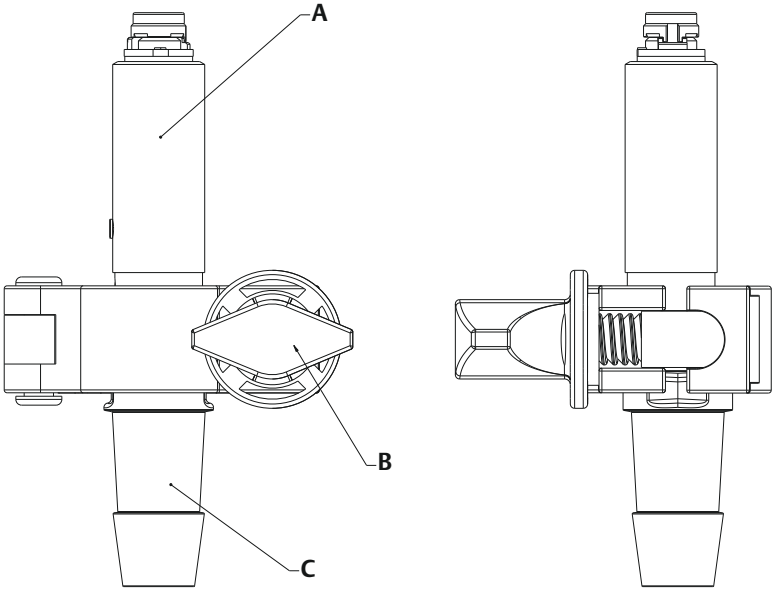


Figure 4-3: Rosemount 550PT and 551 Assembly



A. Transmitter
B. Clamp
C. Process connector

Quick Start Guide
00825-0100-5550, Rev. AA
September 2020

Emerson Automation Solutions
6021 Innovation Blvd.
Shakopee, MN 55379, USA
+1 800 999 9307 or +1 952 906 8888
+1 952 949 7001
RFQ.RMD-RCC@Emerson.com

North America Regional Office
Emerson Automation Solutions
8200 Market Blvd.
Chanhassen, MN 55317, USA
+1 800 999 9307 or +1 952 906 8888
+1 952 949 7001
RMT-NA.RCCRFQ@Emerson.com

Latin America Regional Office
Emerson Automation Solutions
1300 Concord Terrace, Suite 400
Sunrise, FL 33323, USA
+1 954 846 5030
+1 954 846 5121
RFQ.RMD-RCC@Emerson.com

Europe Regional Office
Emerson Automation Solutions Europe GmbH
Neuhofstrasse 19a P.O. Box 1046
CH 6340 Baar
Switzerland
+41 (0) 41 768 6111
+41 (0) 41 768 6300
RFQ.RMD-RCC@Emerson.com

Asia Pacific Regional Office
Emerson Automation Solutions
1 Pandan Crescent
Singapore 128461
+65 6777 8211
+65 6777 0947
Enquiries@AP.Emerson.com

Middle East and Africa Regional Office
Emerson Automation Solutions
Emerson FZE P.O. Box 17033
Jebel Ali Free Zone - South 2
Dubai, United Arab Emirates
+971 4 8118100
+971 4 8865465
RFQ.RMTMEA@Emerson.com

Linkedin.com/company/Emerson-Automation-Solutions
Twitter.com/Rosemount_News
Facebook.com/Rosemount
Youtube.com/user/RosemountMeasurement

©2020 Emerson. All rights reserved.

Emerson Terms and Conditions of Sale are available upon request. The Emerson logo is a trademark and service mark of Emerson Electric Co. Rosemount is a mark of one of the Emerson family of companies. All other marks are the property of their respective owners.

ROSEMOUNT

EMERSON