

Rosemount™ 2051HT Hygienic Pressure Transmitter

with 4-20 mA HART® Revision 5 and 7



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1 About this guide

1.1 Safety messages

This guide provides basic guidelines for the Rosemount 2051 Pressure Transmitter. It does not provide instructions for configuration, diagnostics, maintenance, service, troubleshooting, explosionproof, flameproof, or intrinsically safe (IS) installations.

⚠ WARNING

Explosions could result in death or serious injury.

Installation of this transmitter in an explosive environment must be in accordance with the appropriate local, national, and international standards, codes, and practices. Review the approvals section of the Quick Start Guide for any restrictions associated with a safe installation.

Before connecting a handheld communicator in an explosive atmosphere, be sure that the instruments in the loop are installed in accordance with intrinsically safe or non-incendive field wiring practices.

In an explosion-proof/flameproof installation, do not remove the transmitter covers when power is applied to the transmitter.

⚠ WARNING

Process leaks could result in death or serious injury.

Install and tighten process connectors before applying pressure.

Do not attempt to loosen or remove flange bolts while the transmitter is in service.

⚠ WARNING

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.

Before connecting a handheld communicator in an explosive atmosphere, be sure that the instruments in the loop are installed in accordance with intrinsically safe or non-incendive field wiring practices.

In an explosion-proof/flameproof installation, do not remove the transmitter covers when power is applied to the transmitter.

⚠ 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.

⚠ WARNING

Replacement equipment or spare parts not approved by Emerson for use as spare parts could reduce the pressure retaining capabilities of the transmitter and may render the instrument dangerous.

Use only bolts supplied or sold by Emerson as spare parts.

NOTICE

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.

2 System readiness

Note

Before installing the transmitter, confirm the correct device driver is loaded on the host systems.

2.1 Confirm HART® Revision capability

If using HART-based control or AMS, confirm the HART capability of those systems prior to transmitter installation.

Not all systems are capable of communicating with HART Revision 7 protocol. You can configure this transmitter for either HART Revision 5 or 7.

Related information

[Switch HART Revision mode](#)

2.2 Confirm correct device driver

- Verify the latest device driver (DD/DTM™) is loaded on your systems to ensure proper communications.
- Download the latest device driver at Emerson.com or FieldCommGroup.org.

2.2.1 Device revisions and drivers

[Table 2-1](#) provides the information necessary to ensure you have the correct device driver and documentation for your device.

Table 2-1: Device Revisions and Files

Software release date	Identify device		Find device driver		Review instruction	Review functionality
	NAMUR software revision ⁽¹⁾	HART software revision ⁽²⁾	HART universal revision	Device revision	Reference manual	Changes to software
Dec-11	1.0.0	01	7	10	Rosemount 2051 Pressure Transmitter Reference Manual	N/A

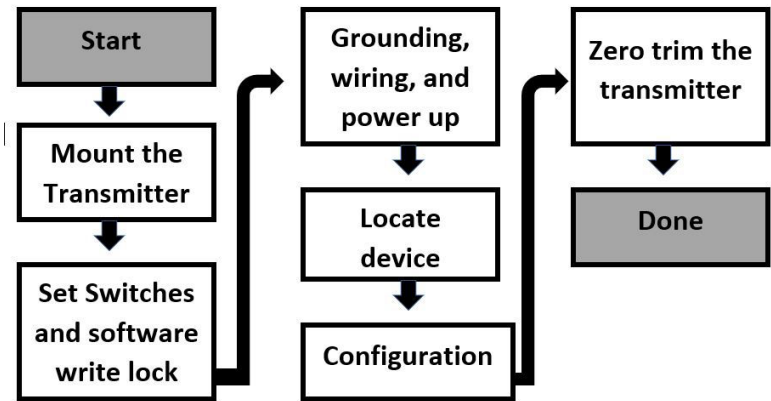
Table 2-1: Device Revisions and Files *(continued)*

	Identify device		Find device driver		Review instruction	Review functionality
			5	9		

- (1) *NAMUR software revision is located on the hardware tag of the device. In accordance with NE53, revisions of the least significant level X (of 1.0.X) do not change functionality or operation of the device and will not be reflected in this device revision history.*
- (2) *HART software revision can be read using a HART capable configuration tool.*

3 Transmitter installation

Figure 3-1: Installation Flowchart



3.1 Mount the transmitter

Before mounting, adjust the transmitter to desired orientation. Transmitter must not be securely mounted or clamped in place when changing transmitter orientation.

3.1.1 Conduit entry orientation

When installing a Rosemount 2051HT Hygienic Pressure Transmitter, it is recommended to install so the conduit entry faces downward toward the ground. This is to maximize drainability when cleaning.

3.1.2 Environmental seal for housing

Thread sealing (PTFE) tape or paste on male threads of conduit is required to provide a water/dust tight conduit seal and meets requirements of NEMA[®] Type 4X, IP66, IP68, and IP69K. Consult factory if other Ingress Protection ratings are required.

For M20 threads, install conduit plugs to full thread engagement or until mechanical resistance is met.

Note

IP69K rating only available on units with a SST housing and option code V9 in the model string.

For aluminum housings ordered with M20 conduit entries, transmitters shipped will have NPT threads machined into the housing and a NPT to M20 thread adapter will be provided.

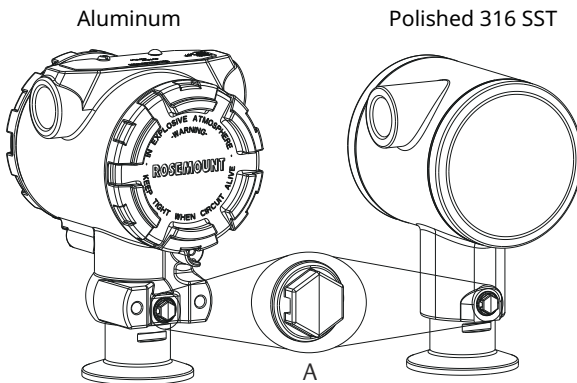
Considerations for environmental sealing listed above should be taken into account when installing the thread adapter.

3.1.3 Inline gage transmitter orientation

The low side pressure port (atmospheric reference) on the inline gage transmitter is located on the neck of the transmitter via a protected gage vent (See [Figure 3-2](#)).

Keep the vent path free from obstructions including but not limited to paint, dust, and viscous fluids by mounting the transmitter so the process can drain away. Recommended installations have a conduit entry facing the ground so the gage vent port is pointing parallel to the ground.

Figure 3-2: Inline Protected Gage Vent Low Side Pressure Port



A. Low side pressure port (atmospheric reference)

3.1.4 Clamping

When installing clamp, follow recommended torque values provided by gasket manufacturer.

Note

To maintain performance, torquing a 1.5. Tri-Clamp® beyond 50 in-lb is not recommended on pressure ranges below 20 psi.

3.2 Setting security switch

Prerequisites

Set Simulate and Security switch configuration before installation as shown in [Figure 3-3](#).

- The simulate switch enables or disables simulated alerts and simulated AI Block status and values. The default simulate switch position is enabled.
- The Security switch allows (unlocked symbol) or prevents (locked symbol) any configuration of the transmitter.
- Default security is off (unlocked symbol).
- The security switch can be enabled or disabled in software.

Use the following procedures to change the switch configuration:

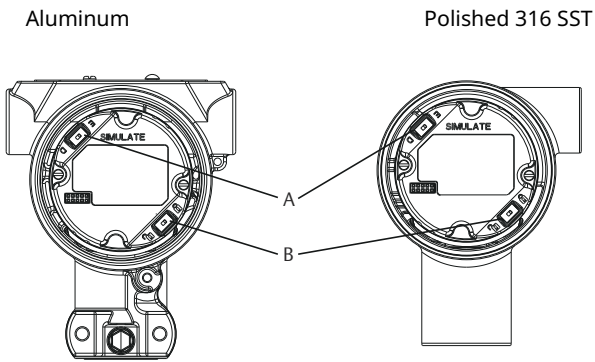
Procedure

1. If the transmitter is installed, secure the loop, and remove power.
2. Remove the housing cover opposite the field terminal side. Do not remove the instrument cover in explosive atmospheres when the circuit is live.
3. Slide the security and simulate switches into the preferred position.
4. Reattach transmitter housing cover; it is recommended the cover be tightened until there is no gap between the cover and housing to comply with explosion proof requirements.

3.3 Setting simulate switch

The simulate switch is located on the electronics. It is used in conjunction with the transmitter simulate software to simulate process variables and/or alerts and alarms. To simulate variables and/or alerts and alarms, the simulate switch must be moved to the enable position and the software enabled through the host. To disable simulation, the switch must be in the disable position or the software simulate parameter must be disabled through the host.

Figure 3-3: Transmitter Electronics Board



- A. *Simulate switch*
- B. *Security switch*

3.4 Connect the wiring and power up

Use copper wire of sufficient size to ensure the voltage across the transmitter power terminals does not drop below 9 Vdc. Power supply voltage can be variable, especially under abnormal conditions such as when operating on battery backup. A minimum of 12 Vdc under normal operating conditions is recommended. Shielded twisted pair type A cable is recommended.

Use the following steps to wire the transmitter:

1. To power the transmitter, connect the power leads to the terminals indicated on the terminal block label.

Note

The Rosemount 2051 power terminals are polarity insensitive, which means the electrical polarity of the power leads does not matter when connecting to the power terminals. If polarity sensitive devices are connected to the segment, terminal polarity should be followed. When wiring to the screw terminals, the use of crimped legs is recommended.

2. Ensure full contact with terminal block screw and washer. When using a direct wiring method, wrap wire clockwise to ensure it is in place when tightening the terminal block screw. No additional power is needed.

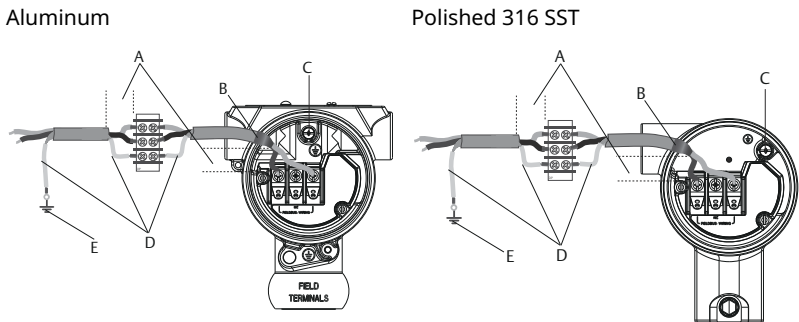
Note

The use of a pin or a ferrule wire terminal is not recommended as the connection may be more susceptible to loosening over time or under vibration.

3. Ensure proper grounding. It is important the instrument cable shield be:
 - Trimmed close and insulated from touching the transmitter housing.
 - Connected to the next shield if cable is routed through a junction box.
 - Connected to a good earth ground at the power supply end.
4. If transient protection is needed, refer to section [“Signal ground wiring”](#) for grounding instructions.
5. Plug and seal unused conduit connections.
6. Reattach the transmitter covers.

Note

It is recommended that the cover be tightened until there is no gap between the cover and the housing.
The covers must only be capable of being released or removed with the aid of a tool to comply with applicable ordinary locations requirements.

Example**Figure 3-4: Wiring**

- A. Minimize distance
- B. Trim shield and insulate
- C. Protective grounding terminal (do not ground cable shield at the transmitter)
- D. Insulate shield
- E. Connect shield back to the power supply ground

3.4.1 Grounding for transient terminal block

Ground termination is provided on the outside of the electronics housing and inside the terminal compartment. These grounds are used when the transient protection terminal blocks are installed. It is recommended that 18 AWG or larger wire is used to connect housing ground to earth ground (internal or external).

If the transmitter is currently not wired for power up and communication, follow [Connect the wiring and power up](#), step 1–8. When the transmitter is properly wired, refer to [Figure 3-4](#) for internal and external transient grounding locations.

3.4.2 Signal ground wiring

Do not run signal wiring in conduit or open trays with power wiring, or near heavy electrical equipment. Grounding terminations are provided on the outside of the electronics housing and inside the terminal compartment. These grounds are used when transient protect terminal blocks are installed or to fulfill local regulations.

Procedure

1. Remove the field terminals housing cover.
2. Connect the wiring pair and ground as indicated in [Figure 3-4](#).
 - a) Trim the cable shield as short as practical and insulate from touching the transmitter housing.

Note

Do NOT ground the cable shield at the transmitter; if the cable shield touches the transmitter housing, it can create ground loops and interfere with communications.

3. Continuously connect the cable shields to the power supply ground.
 - a) Connect the cable shields for the entire segment to a single good earth ground at the power supply.

Note

Improper grounding is the most frequent cause of poor segment communications.

4. Replace the housing cover. It is recommended that the cover be tightened until there is no gap between the cover and the housing.
 - a) The covers must only be capable of being released or removed with the aid of a tool to comply with applicable ordinary locations requirements.
5. Plug and seal unused conduit connections.

Note

The Rosemount 2051HT polished 316 SST housing only provides ground termination inside the terminal compartment.

3.5 Verifying configuration

Verify the configuration using any HART®-capable configuration tool or local operator interface (LOI) - option code M4. Configuration instructions for a handheld communicator and LOI are included in this section.

3.5.1 Verify configuration with a handheld communicator

Prerequisites

Install a Rosemount 2051 device driver (DD) on the handheld communicator to verify configuration.

Fast Key sequences for the latest DD are shown in [Table 3-1](#). For Fast Key sequences using legacy DDs, contact your local Emerson representative.

NOTICE

Emerson recommends installing the latest DD to access the complete functionality. Visit [Emerson.com/FieldCommunicator](https://emerson.com/FieldCommunicator) for information on updating the DD library.

Procedure

Verify device configuration using the Fast Key sequences in [Table 3-1](#). A check (✓) indicates the basic configuration parameters. At minimum, verify these parameters as part of configuration and startup.

Table 3-1: Device Revision 9 and 10 (HART® 7), DD Revision 1 Fast Key sequence

	Function	HART 7	HART 5
✓	Alarm and Saturation Levels	2, 2, 2, 5, 7	2, 2, 2, 5, 7
✓	Damping	2, 2, 1, 1, 5	2, 2, 1, 1, 5
✓	Range Values	2, 2, 2	2, 2, 2
✓	Tag	2, 2, 7, 1, 1	2, 2, 7, 1, 1
✓	Transfer Function	2, 2, 1, 1, 6	2, 2, 1, 1, 6
✓	Units	2, 2, 1, 1, 4	2, 2, 1, 1, 4
	Burst Mode	2, 2, 5, 3	2, 2, 5, 3
	Custom Display Configuration	2, 2, 4	2, 2, 4
	Date	2, 2, 7, 1, 4	2, 2, 7, 1, 3

Table 3-1: Device Revision 9 and 10 (HART® 7), DD Revision 1 Fast Key sequence (*continued*)

	Function	HART 7	HART 5
	Descriptor	2, 2, 7, 1, 5	2, 2, 7, 1, 4
	Digital to Analog Trim (4–20 mA output)	3, 4, 2	3, 4, 2
	Disable Configuration Buttons	2, 2, 6, 3	2, 2, 6, 3
	Rerange with Keypad	2, 2, 2, 1	2, 2, 2, 1
	Loop Test	3, 5, 1	3, 5, 1
	Lower Sensor Trim	3, 4, 1, 2	3, 4, 1, 2
	Message	2, 2, 7, 1, 6	2, 2, 7, 1, 5
	Scaled D/A Trim (4–20 mA output)	3, 4, 2	3, 4, 2
	Sensor Temperature/Trend	3, 3, 2	3, 3, 2
	Upper Sensor Trim	3, 4, 1, 1	3, 4, 1, 1
	Digital Zero Trim	3, 4, 1, 3	3, 4, 1, 3
	Password	2, 2, 6, 5	2, 2, 6, 4
	Scaled Variable	3, 2, 2	3, 2, 2
	HART Revision 5 to HART Revision 7 switch	2, 2, 5, 2, 3	2, 2, 5, 2, 3
	Long Tag ⁽¹⁾	2, 2, 7, 1, 2	N/A
	Find Device ⁽¹⁾	3, 4, 5	N/A
	Simulate Digital Signal ⁽¹⁾	3, 4, 5	N/A

(1) Only available in HART Revision 7 mode.

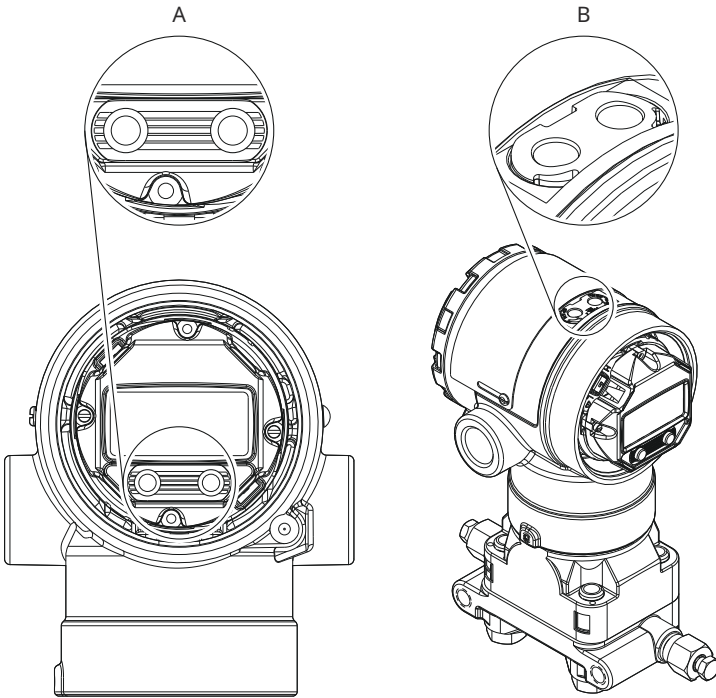
3.5.2 Verify configuration with local operator interface (LOI)

You can use the optional LOI to configure the device.

The LOI is a two-button design with internal and external/rear buttons. On a polished stainless steel housing, buttons are located internally both on the display and terminal side of the transmitter. On an aluminum housing, buttons are located on the display and externally underneath the top metal tag.

To activate the LOI, push any button. LOI button functionality is shown on the bottom corners of the display. See [Table 3-2](#) and [Figure 3-6](#) for button operation and menu information.

Figure 3-5: Internal and external LOI buttons



- A. Internal buttons
- B. External buttons

Table 3-2: LOI Button operation



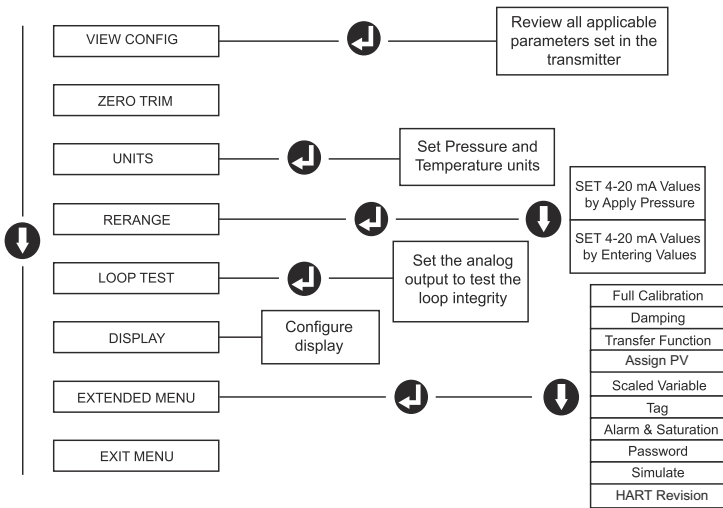
Button		
Left	No	SCROLL
Right	Yes	ENTER

Figure 3-6: LOI menu



3.5.3 Switch HART® Revision mode

If the HART configuration tool is not capable of communicating with HART Revision 7, the Rosemount 2051 will load a generic menu with limited capability. To switch the HART Revision mode from the generic menu:

Procedure

Navigate to **Manual Setup** → **Device Information** → **Identification** → **Message**.

- To change to HART Revision 5, enter HART5 in the Message field.
- To change to HART Revision 7, enter HART7 in the Message field.

3.6 Zero trim the transmitter

Emerson calibrates devices at the factory. Once you have installed the transmitter, Emerson recommends performing a zero trim on gauge transmitters to eliminate error due to mounting position or static pressure effects. You can use either a handheld communicator or configuration buttons to perform a zero trim.

NOTICE

When performing a zero trim, ensure the equalization valve is open and all wet legs are filled to the correct level.

NOTICE

Emerson does not recommend zeroing an absolute transmitter, Rosemount 2051HT Hygienic Pressure Transmitter.

Procedure

Choose your trim procedure:

- **Analog zero trim** Sets the analog output to 4 mA. Also referred to as a rerange, it sets the lower range value (LRV) equal to the measured pressure. The display and digital HART® output remains unchanged.
- **Digital zero trim** Recalibrates the sensor zero. The LRV is unaffected. The pressure value will be zero (on display and HART output). 4 mA point may not be at zero. This requires that the factory calibrated zero pressure is within a range of three percent of the upper range value (URV) [$0 \pm 3\% \times \text{URV}$].

Example

URV = 250 inH₂O

Applied Zero Pressure = $\pm 0.03 \times 250 \text{ inH}_2\text{O} = \pm 7.5 \text{ inH}_2\text{O}$ (compared to factory settings). The transmitter will reject values outside this range.

3.6.1 Zero trim the transmitter with a handheld communicator

Procedure

1. Connect the handheld communicator.
2. Follow the HART® menu to perform the desired zero trim.

	Analog zero (set 4 mA)	Digital zero
Fast Key sequence	3, 4, 2	3, 4, 1, 3

3.6.2 Zero trim the transmitter with configuration buttons

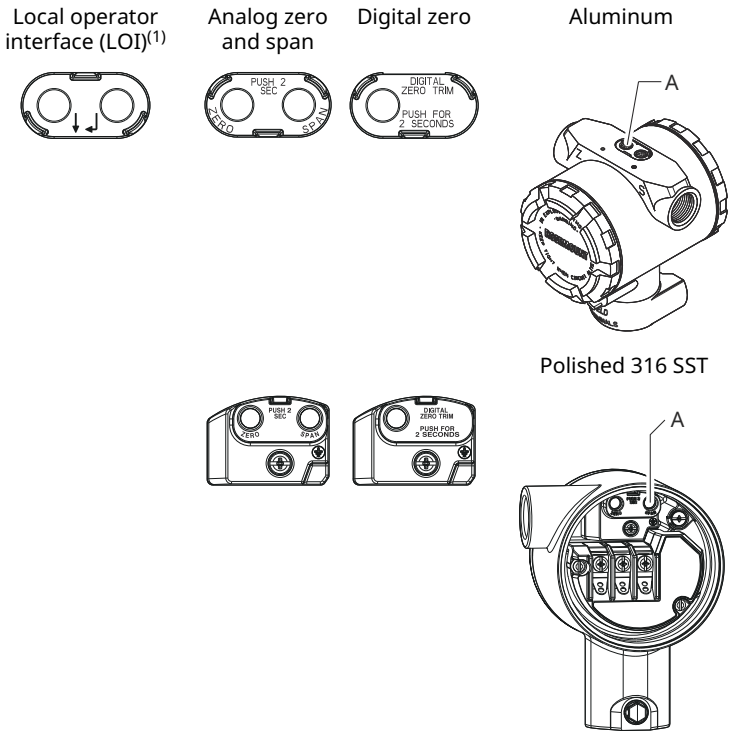
You can perform a zero trim using one of the three possible sets of configuration buttons located above the terminal block or under the top tag.

Procedure

Access the configuration buttons.

- To access the configuration buttons on a polished stainless steel (SST) housing, remove the terminal side housing cover.
- To access the configuration buttons on an aluminum housing, loosen the screw on the top tag and slide the tag on top of the transmitter.

Figure 3-7: External or rear/terminal side configuration buttons



A. Configuration buttons

- (1) LOI buttons (option M4) only offer front facing buttons on SST housing (option 1). You can purchase options D4 and DZ for rear/terminal-side facing buttons.

Zero trim with local operator interface (LOI): option M4

Procedure

1. Set the transmitter pressure.
2. See [Figure 3-6](#) for the operating menu.
 - To perform an analog zero trim, select **Rerange**.
 - To perform a digital zero trim, select **Zero Trim**.

Zero trim with analog zero and span (option D4)

Procedure

1. Set the transmitter pressure.
2. Press and hold the **Zero** button for two seconds.

Zero trim with digital zero (option DZ)

Procedure

1. Set the transmitter pressure.
2. Press and hold the **Zero** button for two seconds.

4 Product certifications

4.1 European Directive Information

A copy of the EU Declaration of Conformity can be found at the end of the Quick Start Guide. The most recent revision of the EU Declaration of Conformity can be found at [Emerson.com/Rosemount](https://www.emerson.com/Rosemount)

4.2 Ordinary Location Certification

As standard, the transmitter has been examined and tested to determine that the design meets the basic electrical, mechanical, and fire protection requirements by a Nationally Recognized Test Laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

4.3 Installing Equipment in North America

The US National Electrical Code® (NEC) and the Canadian Electrical Code® (CEC) permit the use of Division marked equipment in Zones and Zone marked equipment in Divisions. The markings must be suitable for the area classification, gas, and temperature class. This information is clearly defined in the respective codes.

4.4 Hazardous Locations Certifications

Note

Device ambient temperature ratings and electrical parameters may be limited to the levels dictated by the hazardous location certificate parameters.

4.5 North America

4.5.1 I5 United States of America - Intrinsic Safety

Certificate: 2041384

Standards: FM 3600: 2022, FM 3610: 2021, FM 3611: 2021, ANSI/UL 61010-1-2019 Third Edition ANSI/UL 60079-0: 2017, ANSI/UL 60079-11: 2013, ANSI/UL 122701:2022 (4th Edition), ANSI/UL 50E (1st Ed.)

Markings: IS CL I GP ABCD T4
IS CL II GP EFG; CL III T4
CL I ZN 0 AEx ia IIC T4 Ga
(-20°C ≤ Ta ≤ +70°C)
Single Seal. Type 4X

OPTIONAL: SINGLE SEAL
 TYPE 4X, IP 68
 INSTALL PER 03031-1024

Specific Conditions for Use:

1. The Model 2051HT transmitter housing may contain aluminum and is considered a potential risk of ignition by impact or friction. Care must be taken during installation and use to prevent impact and friction.
2. The Model 2051HT with the transient terminal block (Option code T1) will not pass the 500VRMS dielectric strength test; this must be considered during installation.
3. Equipment evaluated for atmospheric pressure range between 80 kPa (0,8 bar) to 110 kPa (1,1 bar).
4. Maximum Process Temperature limits shall be in accordance with 03031- 1053.

4.5.2 I6 Canada Intrinsic Safety

Certificate: 2041384

Standards: C22.2 No. 61010-1-12, C22.2 No. 25-17, C22.2 No. 94.2-20 Third Edition, CSA Std C22.2 No. 213-17 + UPD 1 (2018) + UPD 2 (2019) + UPD 3 (2021), CAN/CSA-60079-0:19, CAN/CSA-60079-11:14, ANSI/UL 122701:2022 (4th Edition), ANSI/UL 50E (1st Ed.)

Markings: IS CL I GP ABCD T4
 IS CL II GP EFG; CL III T4
 Ex ia IIC T4 Ga
 (-20°C ≤ Ta ≤ +70°C);
 INSTALL PER 03031-1024
 SINGLE SEAL - TEMP LIMITS PER 03031-1053
 TYPE 4X, IP 68

Specific Conditions for Use:

1. The Model 2051HT transmitter housing may contain aluminum and is considered a potential risk of ignition by impact or friction. Care must be taken during installation and use to prevent impact and friction.

2. The Model 2051HT with the transient terminal block (Option code T1) will not pass the 500VRMS dielectric strength test; this must be considered during installation.
3. Equipment evaluated for atmospheric pressure range between 80 kPa (0,8 bar) to 110 kPa (1,1 bar).

4.6 Europe

4.6.1 I1 ATEX Intrinsic Safety

Certificate: Baseefa08ATEX0129X

Standards: EN IEC 60079-0: 2018 EN 60079-11: 2012

Markings:



II 1 G Ex ia IIC T4 Ga (-20°C ≤ Ta ≤ +70°C)

Table 4-1: Input Parameters

Parameter	HART®	Fieldbus™ / PROFIBUS
Voltage U_i	30 V	30 V
Current I_i	200 mA	300 mA
Power P_i	1 W	1.3 W
Capacitance C_i	0.012 μF	0 μF
Inductance L_i	0 mH	0 mH

Specific Conditions of Safe Use (X):

1. If the equipment is fitted with an optional 90V transient suppressor, it is incapable of withstanding the 500V isolation from earth test and this must be taken into account during installation.
2. The enclosure may be made of aluminium alloy and given a protective polyurethane paint finish; however care should be taken to protect it from impact and abrasion when located in Zone 0.
3. The equipment contains thin wall diaphragms. The installation, maintenance and use shall take into account the environmental conditions to which the diaphragms will be subjected. The manufacturer's instructions for installation and

maintenance shall be followed in detail to assure safety during its expected lifetime.

4.7 International

4.7.1 I7 IECEx Intrinsic Safety

Certificate: IECEx BAS 08.0045X
Standards: IEC 60079-0:2017, IEC 60079-11:2011
Markings: Ex ia IIC T4 Ga (-60 °C ≤ T_a ≤ +70 °C)

Table 4-2: Input Parameters

Parameter	HART	Fieldbus/ PROFIBUS
Voltage U _i	30 V	30 V
Current I _i	200 mA	300 mA
Power P _i	1 W	1.3 W
Capacitance C _i	12 nF	0 μF
Inductance L _i	0 mH	0 mH

Specific Conditions of Safe Use (X):

1. If the equipment is fitted with an optional 90V transient suppressor, it is incapable of withstanding the 500V isolation from earth test and this must be taken into account during installation.
2. The enclosure may be made of aluminium alloy and given a protective polyurethane paint finish; however care should be taken to protect it from impact and abrasion when located in Zone 0.
3. The equipment contains thin wall diaphragms. The installation, maintenance and use shall take into account the environmental conditions to which the diaphragms will be subjected. The manufacturer’s instructions for installation and maintenance shall be followed in detail to assure safety during its expected lifetime.

4.8 Additional Certifications

3-A®

All Rosemount 2051HT transmitters with the following connections are 3-A approved and labeled:

T32: 1½-in. Tri Clamp

T42: 2-in. Tri Clamp

If process connection B11 is selected, please reference the ordering table of the Rosemount 1199 Diaphragm Seal [Product Data Sheet](#) for availability of 3-A certifications.

A 3-A certificate of compliance is available by selecting option code QA.

EHEDG

All Rosemount 2051HT transmitters with the following connections are EHEDG approved and labeled:

T32: 1½-in. Tri Clamp


T42: 2-in. Tri Clamp

If process connection B11 is selected, please reference the ordering table of the Rosemount 1199 Diaphragm Seal [Product Data Sheet](#) for availability of EHEDG certifications.

An EHEDG certificate of compliance is available by selecting option code QE.

Ensure gasket selected for installation is approved to meet both application and EHEDG certification requirements.

4.9 Declaration of Conformity

 EC No. 1935/2004 Declaration of Conformity No: RMD 1143 Rev. B
We,
Rosemount, Inc. 6021 Innovation Blvd., Shakopee, MN 55379 USA
declare under our sole responsibility that the products,
Rosemount™ 3051HT Pressure Transmitter Rosemount™ 2051HT Pressure Transmitter Rosemount™ Temperature Transmitters with 68Q Sanitary Sensor Rosemount™ Pressure Transmitters with 1199 Diaphragm Seals
manufactured by,
Rosemount, Inc. 6021 Innovation Blvd., Shakopee, MN 55379 USA
to which this declaration relates, are in conformity with the following European Union regulations:
Regulation (EC) No. 1935/2004 on materials and articles intended to come into contact with food,

Regulation (EC) No. 2023/2006 on good manufacturing practice for materials and articles intended to come into contact with food (GMP).
The surfaces and material in contact with food consist of the below materials:



EC No. 1935/2004
Declaration of Conformity
No: RMD 1143 Rev. B

Product	Description	Food Contact Materials
3051HT	Pressure Transmitter	316L SST
2051HT	Pressure Transmitter	316L SST
0068Q	Sanitary Temperature Sensor	316L SST
1199 ⁽¹⁾	Diaphragm Seal (seal types: SCW, VCS, SVS, SHP, SLS)	316L SST

- Rosemount 1199 Diaphragm Seals are available with multiple wetted materials and optional gaskets. Only materials listed in the "Food Contact Materials" column are included in the scope of this declaration.

The user is responsible for testing the suitability of the units for the intended application. The customer is responsible for deciding whether the specific phrasings regarding the intended application comply with the applicable laws.

(signature)

Mark Lee

(date of issue & place)

Vice President of Global Quality

(function)

June 27, 2023

(date of issue & place)

4.10 China RoHS

含有China RoHS 管控物质超过最大浓度限值的部件型号列表 Rosemount 2051HT
List of Rosemount 2051HT Parts with China RoHS Concentration above MCVs

部件名称 Part Name	有害物质 / Hazardous Substances					
	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Hexavalent Chromium (Cr +6)	多溴联苯 Polybrominated biphenyls (PBB)	多溴联苯醚 Polybrominated diphenyl ethers (PBDE)
电子组件 Electronics Assembly	X	O	O	O	O	O
壳体组件 Housing Assembly	O	O	O	O	O	O
传感器组件 Sensor Assembly	X	O	O	O	O	O

本表格系依据SJ/T11364的规定而制作。

This table is proposed in accordance with the provision of SJ/T11364.

O: 意为该部件的所有均质材料中该有害物质的含量均低于GB/T 26572所规定的限量要求。

O: Indicate that said hazardous substance in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.

X: 意为在该部件所使用的所有均质材料里，至少有一类均质材料中该有害物质的含量高于GB/T 26572所规定的限量要求。

X: Indicate that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.



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