

Rosemount™ 3051HT Hygienic Pressure Transmitter

with FOUNDATION™ Fieldbus Protocol



NOTICE

This guide provides basic guidelines for the Rosemount 3051HT Transmitter. It does not provide instructions for configuration, diagnostics, maintenance, service, troubleshooting, Explosion-proof, Flameproof, or intrinsically safe (I.S.) installations.

⚠ 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.

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

Electrical shock could cause death or serious injury.

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

Process leaks could result in death or serious injury.

To avoid process leaks, only use the gasket designed to seal with the corresponding flange adapter.ph>

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.

Conduit/cable entries

Unless otherwise marked, the conduit/cable entries in the housing enclosure use a ½–14 NPT form. Only use plugs, adapters, glands, or conduit with a compatible thread form when closing these entries.

Contents

System readiness..... 3

Transmitter installation..... 4

Product certifications..... 21

1 System readiness

Note

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

1.1 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.

Rosemount 3051 device revisions and drivers

Table 1-1 provides the information necessary to ensure you have the correct device driver and documentation for your device.

Table 1-1: Rosemount 3051 Device Revision 8 and Drivers

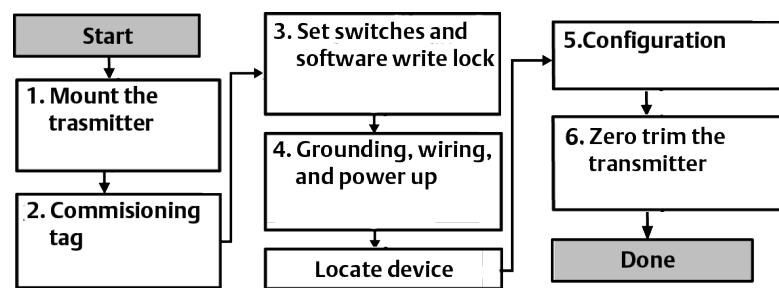
FOUNDATION™ Fieldbus device revision can be read using a FOUNDATION Fieldbus capable configuration tool.

Host	Device driver (DD) ⁽¹⁾	Obtain at	Device driver (DTM)	Manual document number
All	DD4: DD Rev 1	FieldCommGroup.org	Emerson.com	00809-0100-4774, Rev CA or newer
All	DD5: DD Rev 1	FieldCommGroup.org		
Emerson	AMS Device Manager V 10.5 or higher: DD Rev 2	Emerson.com		
Emerson	AMS Device Manager V 8 to 10.5: DD Rev 1	Emerson.com		
Emerson	375/475: DD Rev 2	Easy Upgrade Utility		

- (1) Device driver file names use device and DD revision. To access functionality, the correct device driver must be installed on your control and asset management hosts, and on your configuration tools.

2 Transmitter installation

Figure 2-1: Installation Flowchart



2.1 Mount the transmitter

Place the transmitter to the desired orientation before mounting. Transmitter must not be securely mounted or clamped in place when changing transmitter orientation.

Conduit entry orientation

When installing a Rosemount 3051HT, it is recommended installing so a conduit entry faces downward or parallel to the ground to maximize drainability when cleaning.

Environmental seal for housing

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

Note

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

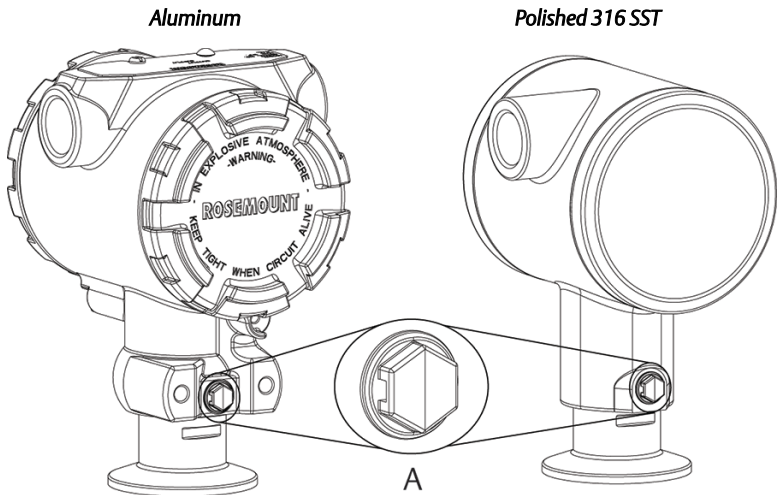
For M20 threads, install conduit plugs to full thread engagement or until mechanical resistance is met.

In-line gauge transmitter orientation

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

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.

Figure 2-2: In-line Protected Gage Vent Low Side Pressure Port



A. Low side pressure port (atmospheric reference)

Clamping

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

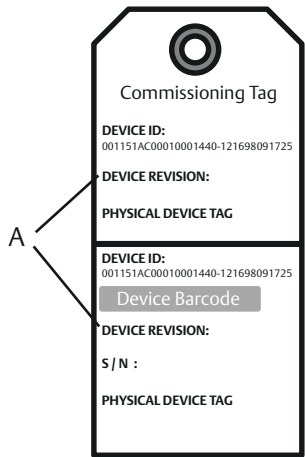
Note

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

2.2 Commissioning (paper) tag

To identify which device is at a particular location use the removable tag provided with the transmitter. Ensure the physical device tag (PD Tag field) is properly entered in both places on the removable commissioning tag and tear off the bottom portion for each transmitter.

Figure 2-3: Commissioning Tag



A. Device revision

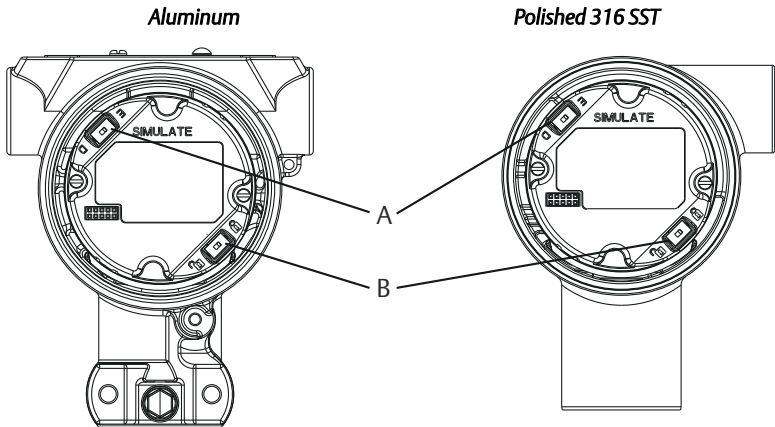
Note

The device description loaded in the host system must be at the same revision as this device. The device description can be downloaded from the host system website, from [Emerson.com/Rosemount](https://emerson.com/rosemount), or from [FieldCommGroup.org](https://fieldcommgroup.org).

2.3 The security and simulate switches

The security and simulate switches are located on the electronics.

Figure 2-4: Transmitter Electronics Board



- A. Simulate switch
- B. Security switch

2.3.1 Setting the security switch

The security switch allows (🔓) or prevents (🔒) any configuration of the transmitter.

Note

Default security is off (🔓).

Setting the simulate switch

The security switch can be enabled or disabled in the software.

Procedure

1. If the transmitter is installed, secure the loop, and remove power.
2. Remove the housing cover opposite the field terminal side.

⚠ WARNING

Explosions could result in death or serious injury.

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

3. Slide the security switch into the preferred position.
4. Reattach the transmitter housing cover.
Tighten the cover until there is no gap between the cover and housing to comply with explosion proof requirements.

2.3.2 Setting the simulate switch

The simulate switch is used in conjunction with the transmitter simulate software to simulate process variables and/or alerts and alarms.

Note

The simulate switch enables or disables simulated alerts and simulated AI Block status and values. The default simulate switch position is enabled.

- 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 before installation of the transmitter.
- To disable simulation, the switch must be in the disable position or the software simulate parameter must be disabled through the host.

Procedure

1. If the transmitter is installed, secure the loop, and remove power.
2. Remove the housing cover opposite the field terminal side.

WARNING

Explosions could result in death or serious injury.

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

3. Slide the simulate switch into the preferred position.
4. Reattach the transmitter housing cover.
Tighten the cover until there is no gap between the cover and housing to comply with explosion proof requirements.

2.4 Connect the wiring and power up

Procedure to connect the wiring and power up the transmitter.

Prerequisites

- Use copper wire of sufficient size to ensure the voltage across the transmitter power terminals does not drop below 9 Vdc. A minimum of 12 Vdc under normal operating conditions is recommended. Shielded twisted pair Type A cable is recommended.

- Power supply voltage can be variable, especially under abnormal conditions such as when operating on battery backup.

Procedure

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

Note

The Rosemount 3051 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

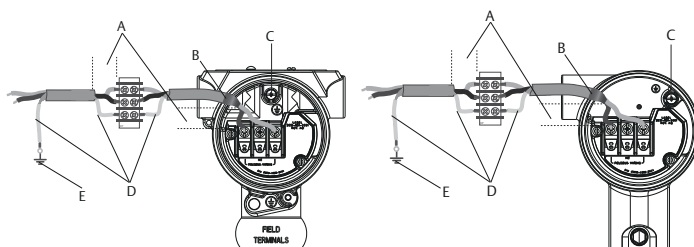
The use of a pin or a ferrule wire terminal is not recommended as the connection may be more susceptible to loosening over time or under vibration.

3. Ensure proper grounding. It is important the instrument cable shield be:
 - a) Trimmed close and insulated from touching the transmitter housing.
 - b) Connected to the next shield if cable is routed through a junction box.
 - c) 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.
 - 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.

Figure 2-5: Wiring

Aluminum

Polished 316 SST



- 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
-

2.4.1 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 2-5](#)
 - 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.

- b) Continuously connect the cable shields to the power supply ground.
- c) 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.

3. Replace the housing cover. It is recommended that the cover be tightened until there is no gap between the cover and the housing.
4. Plug and seal unused conduit connections.

Note

The Rosemount 3051HT polished 316 SST housing only provides ground termination inside the terminal compartment.

Power supply

The transmitter requires between 9 and 32 Vdc (9 and 30 Vdc for intrinsic safety) to operate and provide complete functionality.

Power conditioner

A Fieldbus segment requires a power conditioner to isolate the power supply, filter, and decouple the segment from other segments attached to the same power supply.

Grounding

Signal wiring of the Fieldbus segment can not be grounded. Grounding out one of the signal wires will shut down the entire Fieldbus segment.

Shield wire ground

To protect the Fieldbus segment from noise, grounding techniques for shield wire require a single grounding point for shield wire to avoid creating a ground loop. Connect the cable shields for the entire segment to a single good earth ground at the power supply.

Signal termination

For every Fieldbus segment a terminator should be installed at the beginning and at the end of each segment.

Locating devices

Devices are frequently installed, configured, and commissioned over time by different personnel. A “Locate Device” capability uses the LCD display (when installed) to assist personnel in finding the desired device.

From the device Overview screen, select the Locate Device button. This will launch a method allowing the user to display a “Find me” message or enter a custom message to display on the device LCD display. When the user exits the “Locate Device” method, the device LCD display automatically returns to normal operation.

Note

Some hosts do not support “Locate Device” in the DD.

2.5 Configure

Each FOUNDATION™ Fieldbus host or configuration tool has a different way of displaying and performing configurations. Some use device descriptions (DD) or DD methods for configuration and to display data consistently across platforms. There is no requirement that a host or configuration tool support these features. Use the following block examples to do basic configuration to the transmitter. For more advanced configurations, see the Rosemount 3051 FOUNDATION Fieldbus [Reference Manual](#).

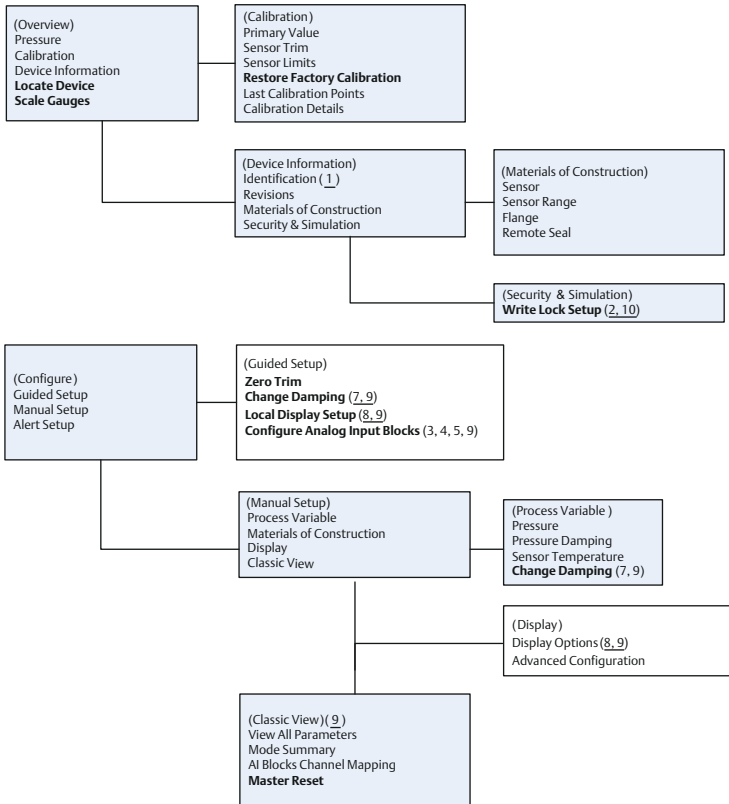
Note

DeltaV™ users should use DeltaV Explorer for the resource and transducer blocks and Control Studio for the function blocks.

2.5.1 Configure the AI block

Navigation instructions for each step are provided in the [Figure 2-7](#). In addition, the screens used for each step are shown in the [Figure 2-6](#).

Figure 2-6: Basic Configuration Menu Tree



- Standard Text – Navigation selections available
- (Text) – Name of selection used on parent menu screen to access this screen
- Bold Text – Automated methods
- Underlined Text – Configuration task numbers from configuration flow chart

2.5.2 Before you begin configuration

Before beginning configuration, you may need to verify the device tag or deactivate hardware and software write protection on the transmitter.

Use this procedure to verify the device tag and the software write lock switch.

Procedure

1. To verify the device tag, from the **Overview** screen, select **Device Information**.
2. To disable the software write lock (devices ship from the factory with the software write lock disabled):

Note

The software write lock switch must be in the unlocked position if the switch has been enabled in the software.

- a) From the **Overview** screen, select **Device Information** and then select the **Security and Simulation** tab.
- b) To disable the software write lock, perform **write lock setup**.

Note

Place the control loop in Manual mode before beginning analog input block configuration.

2.5.3 Guided setup of the AI Block Configuration

This procedure is for the guided setup of the AI Block Configuration.

Prerequisites

Navigate to **Configure** → **Guided Setup**.

Procedure

1. Select **AI Block Unit Setup**.
2. Select the signal conditioning L_TYPE from the menu.
 - Select **Direct** for pressure measurements using the device default units.
 - Select **Indirect** for other pressure or level units.
3. Set the XD_SCALE to the 0% and 100% scale points (the transmitter range).
 - a) Select the XD_SCALE_UNITS from the menu.
 - b) Enter the XD_SCALE 0% point.
This may be elevated or suppressed for level applications.
 - c) Enter the XD_SCALE 100% point.
This may be elevated or suppressed for level applications.
 - d) If the L_TYPE is Direct, guided setup automatically places the AI block into AUTO mode to return the device to service.

4. If the L_TYPE selected is Indirect or Indirect Square Root, set OUT_SCALE to change engineering units.
 - a) Select **OUT_SCALE UNITS** from the menu.
 - b) Set the OUT_SCALE low value.
This may be elevated or suppressed for level applications.
 - c) Set the OUT_SCALE high value.
This may be elevated or suppressed for level applications.
 - d) If the L_TYPE selected is Indirect, guided setup automatically places the AI block into AUTO mode to return the device to service.
5. To change damping, select **Change Damping**

Note

Guided setup will automatically go through each step in the proper order.

6. Enter the desired damping value in seconds.
The permitted range of values is 0.4 to 60 seconds.
7. To configure the LCD display (if installed).
8. Select **Local Display Setup**.
9. Check the box next to each parameter to be displayed to a maximum of four parameters.
The LCD display will continuously scroll through the selected parameters.
10. To review the transmitter configuration, navigate using the manual setup navigation sequences for “AI Block Unit Setup”, “Change Damping”, and “Set up LCD Display”.
11. Change any values as necessary.
12. Return to the Overview screen.
13. If mode is “Not in Service”, click **Change**, and then select **Return All to Service**.

Note

If hardware or software write protection is not needed, [Step 14](#) can be skipped.

14. Set switches and software write lock.
 - a) Check switches (see [Figure 2-4](#)).

Note

The write lock switch can be left in the locked or unlocked position. The simulate enable/disable switch may be in either position for normal device operation.

2.5.4 Manual setup of the AI block configuration

This procedure describes the manual setup of the AI Block Configuration.

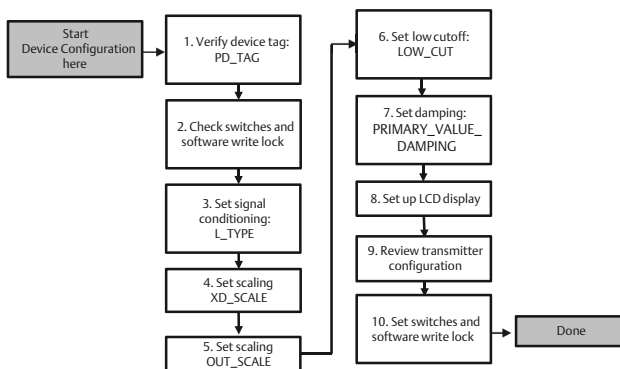
Prerequisites

Navigate to **Configure** → **Manual Setup** → **Process Variable**.

Note

When using manual setup perform the steps in the order described in [Figure 2-7](#)

Figure 2-7: Configuration Flowchart

**Note**

For convenience, AI block 1 is pre-linked to the transmitter primary variable and should be used for this purpose. AI block 2 is pre-linked to the transmitter sensor temperature. The channel must be selected for AI blocks 3 and 4.

- Channel 1 is the primary variable.
- Channel 2 is the sensor temperature.

If the FOUNDATION™ Fieldbus Diagnostics Suite Option Code D01 is enabled, these additional channels are available.

- Channel 12 is the SPM mean.
- Channel 13 is the SPM standard deviation.

To configure SPM, refer to the Rosemount 3051 FOUNDATION Fieldbus [Reference Manual](#).

Procedure

1. Select **AI Block Unit Setup**.
2. Place the AI Block in Out of Service mode.
3. Select the signal conditioning **L_TYPE** from the menu.
 - Select **Direct** for pressure measurements using the device default units.
 - Select **Indirect** for other pressure or level units.
4. Set the **XD_SCALE** to the 0% and 100% scale points (the transmitter range).
 - a) Select the **XD_SCALE_UNITS** from the menu.
 - b) Enter the **XD_SCALE** 0% point.
This may be elevated or suppressed for level applications.
 - c) Enter the **XD_SCALE** 100% point.
This may be elevated or suppressed for level applications.
5. If the **L_TYPE** selected is Direct, the AI block may be placed in AUTO mode to return the device to service.
6. If the **L_TYPE** selected is Indirect or Indirect Square Root, set **OUT_SCALE** to change engineering units.
 - a) Select **OUT_SCALE UNITS** from the menu.
 - b) Set the **OUT_SCALE** low value.
This may be elevated or suppressed for level applications.
 - c) Set the **OUT_SCALE** high value.
This may be elevated or suppressed for level applications.
 - d) If the **L_TYPE** selected is Indirect, the AI Block may be placed in AUTO mode to return the device to service.
7. To change damping, select **Change Damping**.
8. Enter the desired damping value in seconds.
The permitted range of values is 0.4 to 60 seconds.
9. To configure the LCD display (if installed).
10. Select **Local Display Setup**.
11. Check the box next to each parameter to be displayed to a maximum of four parameters.

The LCD display will continuously scroll through the selected parameters.

12. To review the transmitter configuration, navigate using the manual setup navigation sequences for “AI Block Unit Setup”, “Change Damping”, and “Set up LCD Display”.
13. Change any values as necessary.
14. Return to the Overview screen.
15. If mode is “Not in Service”, click **Change**, and then select **Return All to Service**.

Note

If hardware or software write protection is not needed, [Step 16](#) can be skipped.

16. Set switches and software write lock.
 - a) Check switches (see [Figure 2-4](#)).

Note

The write lock switch can be left in the locked or unlocked position. The simulate enable/disable switch may be in either position for normal device operation.

2.5.5 Enable software write lock

Procedure

1. Navigate from the **Overview** screen.
 - a) Select **Device Information**.
 - b) Select the **Security and Simulation** tab.
2. Perform Write Lock Setup to enable software write lock.

2.5.6 AI block configuration parameters

Use the pressure example for a guide.

Parameters	Enter data				
Channel	1 = Pressure, 2 = Sensor temp, 12 = SPM mean, 13 = SPM standard deviation				
L_Type	Direct, indirect, or square root				
XD_Scale	Scale and engineering units ⁽¹⁾				
	Pa	bar	torr at 0 °C	ft H ₂ O at 4 °C	m H ₂ O at 4 °C
	kPa	mbar	kg/cm ²	ft H ₂ O at 60 °F	mm Hg at 0 °C
	mPa	psf	kg/cm ²	ft H ₂ O at 68 °F	cm Hg at 0 °C
	hPa	Atm	in H ₂ O at 4 °C	mm H ₂ O at 4 °C	in Hg at 0 °C
	°C	psi	in H ₂ O at 60 °F	mm H ₂ O at 68 °C	in Hg at 0 °C
	°F	g/cm ²	in H ₂ O at 68 °F	cm H ₂ O at 4 °C	
Out_Scale	Scale and engineering units				

(1) Select only the units that are supported by the device.

Table 2-1: Pressure example

Parameters	Enter data
Channel	1
L_Type	Direct
XD_Scale	See list of supported engineering units ⁽¹⁾ .
Out_Scale	Set values outside operating range.

(1) Select only the units that are supported by the device.

2.5.7 Display pressure on the LCD display

Select the Pressure check box on the Display Configuration screen.

2.6 Zero trim the transmitter

Procedure to zero trim the transmitter, which is a single-point adjustment used for compensating mounting position and line pressure effects.

Prerequisites

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

Note

Transmitters are shipped fully calibrated per request or by the factory default of full scale (span = upper range limit).

The transmitter will only allow 3–5 percent URL Zero error to be trimmed.

For greater zero errors, compensate for the offset by using the XD_Scaling, Out_Scaling and Indirect L_Type which are part of the AI Block [Configure](#).

Procedure**Guided Setup**

1. Navigate to **Configure** → **Guided Setup**.
2. Select **Zero Trim**.
The method will execute the zero trim.

Manual Setup

3. Navigate to **Overview** → **Calibration** → **Sensor Trim**.
4. Select **Zero Trim**.
The method will execute the zero trim.

3 Product certifications

Rev. 1.6

3.1 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.

3.2 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).

Altitude	Pollution degree
5000 m max	4 (metallic enclosure) 2 (non-metallic enclosure)

3.3 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.

3.4 USA

I5 Intrinsic Safety; Nonincendive

Certificate: 1053834

Standards: FM Class 3600 – 2011, FM Class 3610 – 2010, FM Class 3611 – 2004, FM Class 3810 – 2005

Markings: IS CL I, DIV 1, GP A, B, C, D when connected per Rosemount drawing 03031-1024, CL I ZONE 0 AEx ia IIC T4; NI CL 1, DIV 2, GP A, B, C, D T5; T4 ($-20^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$) [HART]; T4 ($-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$) [Fieldbus]; Type 4x

3.5 Canada

I6 Intrinsic Safety

Certificate: 1053834

Standards: ANSI/ISA 12.27.01-2003, CSA Std. C22.2 No.142-M1987, CSA Std. C22.2. No.157-92, CSA Std. C22.2 No. 213 - M1987

Markings: Intrinsically Safe Class I, Division 1 Groups A, B, C, D when connected in accordance with Rosemount drawing 03031-1024, Temperature Code T4; Suitable for Class I, Zone 0; Type 4X; Factory Sealed; Single Seal (See drawing 03031-1053)

3.6 Europe

I1 ATEX Intrinsic Safety

Certificate: BAS97ATEX1089X

Standards: EN 60079-0:2012 + A11:2013, EN 60079-11:2012

Markings: HART™:  II 1 G Ex ia IIC T5/T4 Ga, T5(-20 °C ≤ T_a ≤ +40 °C), T4(-20 °C ≤ T_a ≤ +70 °C) Fieldbus:  II 1 G Ex ia IIC Ga T4(-20 °C ≤ T_a ≤ +60 °C)

Table 3-1: Input Parameters

Parameter	HART	Fieldbus/ PROFIBUS®
Voltage U _i	30 V	30 V
Current I _i	200 mA	300 mA
Power P _i	0.9 W	1.3 W
Capacitance C _i	0.012 μF	0 μF
Inductance L _i	0 mH	0 mH

Special Conditions for Safe Use (X):

1. The apparatus is not capable of withstanding the 500 V insulation test required by clause 6.3.12 of EN60079-11:2012. This must be taken into account when installing the apparatus.
2. The enclosure may be made of aluminum alloy and given a protective polyurethane paint finish; however care should be taken to protect it from impact or abrasion if located in Zone 0.

3.7 International

I7 IECEx Intrinsic Safety

Certificate: IECEx BAS 09.0076X

Standards: IEC 60079-0:2011, IEC 60079-11:2011

Markings: HART™: Ex ia IIC T5/T4 Ga, T5(−20 °C ≤ T_a ≤ +40 °C), T4(−20 °C ≤ T_a ≤ +70 °C)
 PROFIBUS®: Ex ia IIC T4 (−20 °C ≤ T_a ≤ +60 °C)

Parameter	PROFIBUS
Voltage U _i	30 V
Current I _i	300 mA
Power P _i	1.3 W
Capacitance C _i	0 µF
Inductance L _i	0 mH

Special Conditions for Safe Use (X):

1. The apparatus is not capable of withstanding the 500 V insulation test required by clause 6.3.12 of EN60079-11:2012. This must be taken into account when installing the apparatus.
2. The enclosure may be made of aluminum alloy and given a protective polyurethane paint finish; however care should be taken to protect it from impact or abrasion if located in Zone 0.

3.8 Brazil

I2 INMETRO Intrinsic Safety

Certificate: UL-BR 13.0584X

Standards: ABNT NBR IEC60079-0:2008 + Errata 1:2011, ABNT NBR IEC60079-11:2009

Markings: HART™: Ex ia IIC T5/T4 Ga, T5(−20 °C ≤ T_a ≤ +40 °C), T4(−20 °C ≤ T_a ≤ +70 °C) Fieldbus: Ex ia IIC T4 Ga (−20 °C ≤ T_a ≤ +60 °C)

	HART	PROFIBUS®
Voltage U _i	30 V	30 V
Current I _i	200 mA	300 mA
Power P _i	0.9 W	1.3 W
Capacitance C _i	0.012 µF	0 µF
Inductance L _i	0 mH	0 mH

Special Conditions for Safe Use (X):

1. If the equipment is fitted with an optional 90 V transient suppressor, it is not capable of withstanding the 500 V insulation test required by

ABNT NBR IRC 60079-11. This must be taken into account when installing the equipment.

2. The enclosure may be made of aluminum alloy and given protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion if equipment requires EPL Ga.

3.9 Additional certifications

3-A®

All Rosemount 3051HT 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, see reference the ordering table of the Rosemount 1199 Diaphragm Seal PDS (00813-0100-4016) for availability of 3-A certifications.

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

EHEDG

All Rosemount 3051HT 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, see reference the ordering table of the Rosemount 1199 Diaphragm Seal PDS (00813-0100-4016) 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.

ASME-BPE

All Rosemount 3051HT Transmitters with option F2 and the following connections are designed to ASME-BPE SF4 standards⁽¹⁾:

T32: 1½-in. Tri Clamp

T42: 2-in. Tri Clamp

A self-certified certificate of compliance to ASME-BPE is also available (option QB)

(1) Per Clause SD-2.4.4.2 (m), suitability of painted aluminum housings to be determined by end user.

Figure 3-1: Rosemount 3051HT Declaration of Conformity

	EU Declaration of Conformity No: RMD 1106 Rev. I	
We, Rosemount, Inc. 8200 Market Boulevard Chanhassen, MN 55317-9685 USA declare under our sole responsibility that the product, Rosemount™ 3051HT Pressure Transmitters manufactured by, Rosemount, Inc. 8200 Market Boulevard Chanhassen, MN 55317-9685 USA 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. 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.		
	Vice President of Global Quality	
(signature)	(function)	
Chris LaPoint	12-Jun-20; Shakopee, MN USA	
(name)	(date of issue & place)	
Page 1 of 3		

Figure 3-2: Rosemount 3051HT Declaration of Conformity



EU Declaration of Conformity

No: RMD 1106 Rev. I



EMC Directive (2014/30/EU)

Models 3051HT Pressure Transmitters

Harmonized Standards: EN 61326-1:2013, EN 61326-2-3:2013

RoHS Directive (2011/65/EU)

Models 3051HT Pressure Transmitters

Harmonized Standard: EN 50581:2012

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 surface and material in contact with food consist of the below materials:

Product	Description	Food Contact Materials
3051HT	Pressure Transmitter	316L SST

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

ATEX Directive (2014/34/EU)

Model 3051HT Pressure Transmitter

BAS97ATEX1089X - Intrinsic Safety

Equipment Group II Category 1 G

Ex ia IIC T5/T4 Ga

Harmonized Standards: EN60079-0:2012 + A11:2013, EN60079-11:2012

ATEX Notified Body

SGS FIMKO OY [Notified Body Number: 0598]

P.O. Box 30 (Särkiniementie 3)

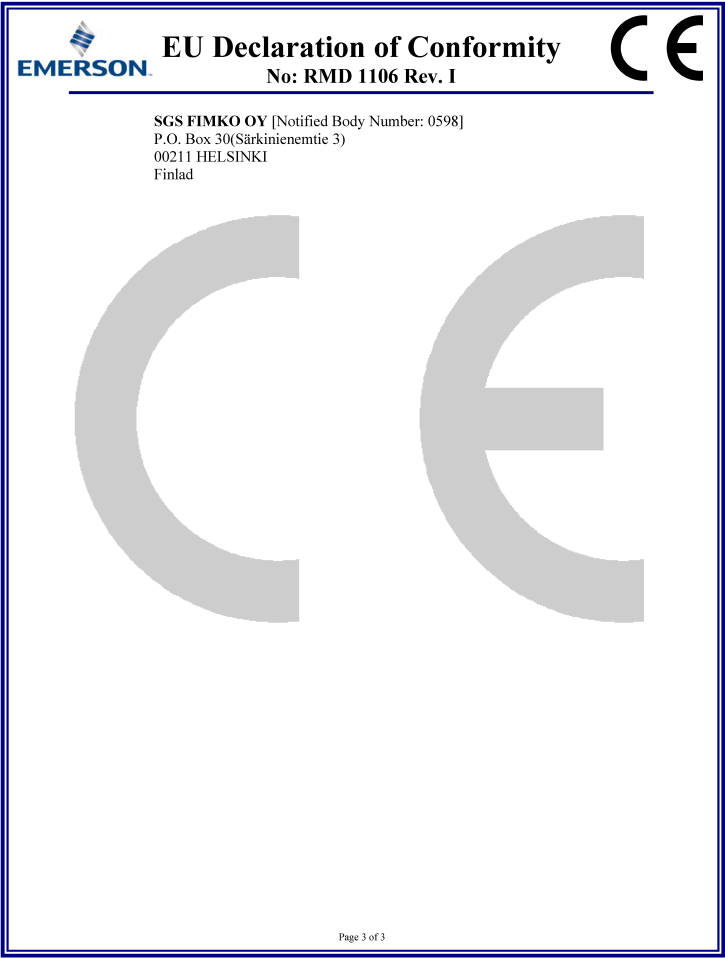
00211 HELSINKI

Finland

ATEX Notified Body for Quality Assurance

Page 2 of 3

Figure 3-3: Rosemount 3051HT Declaration of Conformity



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 3051HT
List of 3051HT 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	X	O	O	X	O	O
传感器组件 Sensor Assembly	X	O	O	X	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.

部件名称 Part Name	组装备件说明 Spare Parts Descriptions for Assemblies
电子组件 Electronics Assembly	电子线路板组件 Electronic Board Assemblies 端子块组件 Terminal Block Assemblies 升级套件 Upgrade Kits 液晶显示屏或本地操作界面 LCD or LOI Display
壳体组件 Housing Assembly	电子外壳 Electrical Housing
传感器组件 Sensor Assembly	传感器模块 Sensor Module



Quick Start Guide
00825-0200-4091, Rev. CA
June 2020

Global Headquarters

Emerson Automation Solutions
6021 Innovation Blvd.
Shakopee, MN 55379, USA

📞 +1 800 999 9307 or +1 952 906 8888

📠 +1 952 204 8889

✉️ RFQ.RMD-RCC@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

Asia Pacific Regional Office

Emerson Automation Solutions
1 Pandan Crescent
Singapore 128461

📞 +65 6777 8211

📠 +65 6777 0947

✉️ Enquiries@AP.Emerson.com

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

 [Twitter.com/Rosemount_News](https://twitter.com/Rosemount_News)

 [Facebook.com/Rosemount](https://www.facebook.com/Rosemount)

 [Youtube.com/user/RosemountMeasurement](https://www.youtube.com/user/RosemountMeasurement)

North America Regional Office

Emerson Automation Solutions
8200 Market Blvd.
Chanhassen, MN 55317, USA

📞 +1 800 999 9307 or +1 952 906 8888

📠 +1 952 204 8889

✉️ RMT-NA.RCCRFQ@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

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

©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®