

# Rosemount™ 3051 Pressure Transmitter and Rosemount 3051CF Series Flowmeter

with 4-20 mA HART® and 1-5 Vdc Low Power  
Protocol



**HART**  
COMMUNICATION PROTOCOL

**NOTICE**

This guide provides basic guidelines for Rosemount 3051 Transmitters. It does not provide instructions for configuration, diagnostics, maintenance, service, troubleshooting, Explosion-Proof, Flame-Proof, or intrinsically safe (I.S.) installations. Refer to the Rosemount 3051 [Reference Manual](#) for more instruction. This manual is also available electronically [EmersonProcess.com/Rosemount](http://EmersonProcess.com/Rosemount).

**⚠ 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 Rosemount 3051 [Reference Manual](#) for any restrictions associated with a safe installation.

- Before connecting a HART-based communicator in an explosive atmosphere, make sure the instruments in the loop are installed in accordance with intrinsically safe or non-incendive field wiring practices.
- In an Explosion-Proof/Flame-Proof installation, do not remove the transmitter covers when power is applied to the unit.

**Process leaks may cause harm or result in death.**

- To avoid process leaks, only use the o-ring designed to seal with the corresponding flange adapter.

**Electrical shock can result in death or serious injury.**

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

**Conduit/cable entries**

- Unless marked, the conduit/cable entries in the transmitter housing use a 1/2–14 NPT thread form. Entries marked “M20” are M20 × 1.5 thread form. On devices with multiple conduit entries, all entries will have the same thread form. Only use plugs, adapters, glands, or conduit with a compatible thread form when closing these entries.
- When installing in a hazardous location, use only appropriately listed or Ex certified plugs, adapters, or glands in cable/conduit entries.

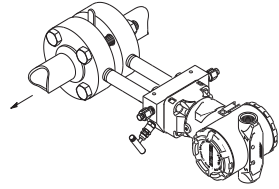
**Contents**

Mount the transmitter . . . . .	3	Verify configuration . . . . .	11
Consider housing rotation . . . . .	7	Trim the transmitter . . . . .	14
Set the jumpers . . . . .	8	Safety Instrumented Systems (SIS) . . . .	15
Connect the wiring and power up . . . . .	8	Product Certifications . . . . .	18

# 1.0 Mount the transmitter

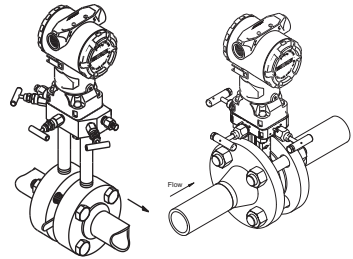
## 1.1 Liquid flow applications

1. Place taps to the side of the line.
2. Mount beside or below the taps.
3. Mount the transmitter so the drain/vent valves are oriented upward.



## 1.2 Gas flow applications

1. Place taps in the top or side of the line.
2. Mount beside or above the taps.



## 1.3 Steam flow applications

1. Place taps to the side of the line.
2. Mount beside or below the taps.
3. Fill impulse lines with water.

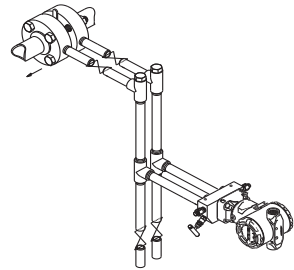
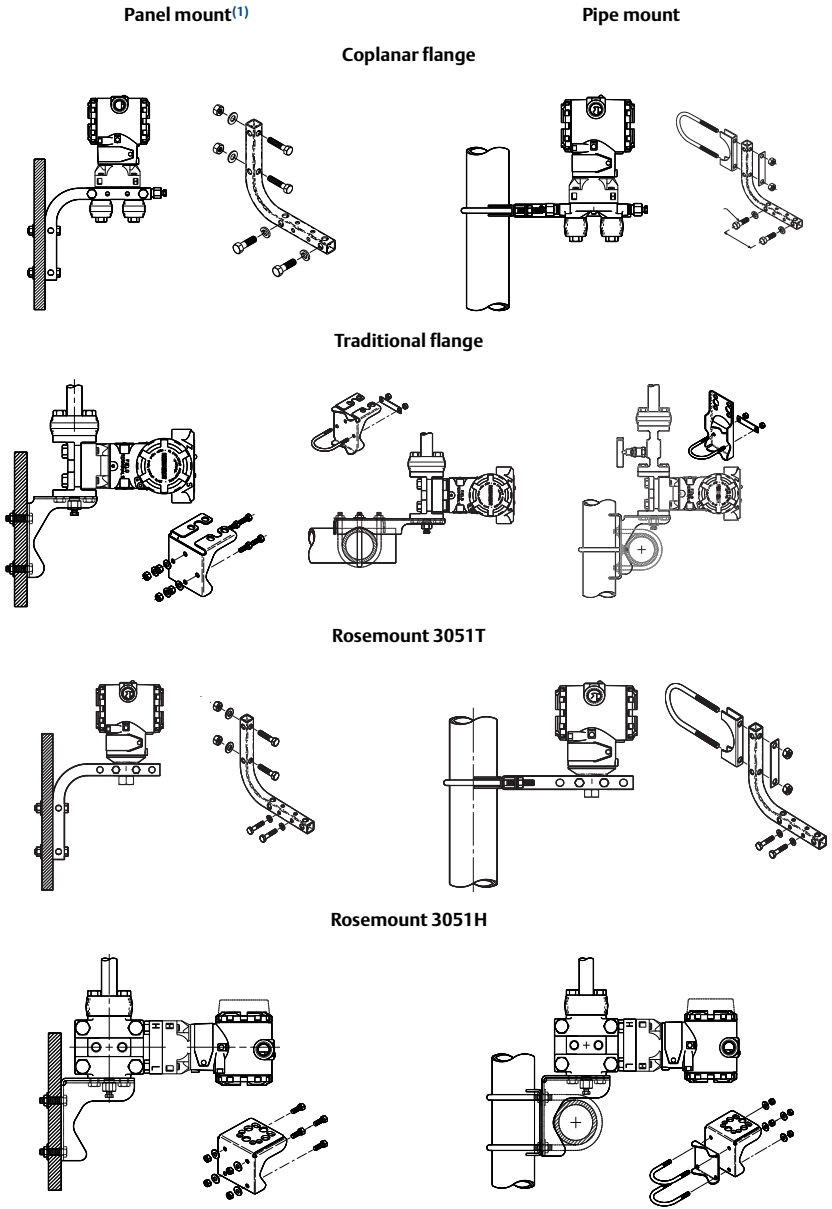


Figure 1. Panel and Pipe Mount

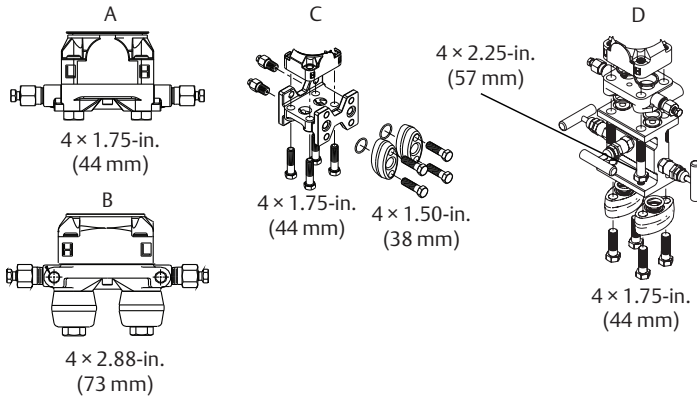


1. Panel bolts are customer supplied.

## 1.4 Bolting considerations

If the transmitter installation requires assembly of the process flanges, manifolds, or flange adapters, follow these assembly guidelines to ensure a tight seal for optimal performance characteristics of the transmitters. Use only bolts supplied with the transmitter or sold by Emerson™ as spare parts. **Figure 2** illustrates common transmitter assemblies with the bolt length required for proper transmitter assembly.

**Figure 2. Common Transmitter Assemblies**











- A. Transmitter with coplanar flange
- B. Transmitter with coplanar flange and optional flange adapters
- C. Transmitter with traditional flange and optional flange adapters
- D. Transmitter with coplanar flange and optional manifold and flange adapters

Bolts are typically carbon steel or stainless steel. Confirm the material by viewing the markings on the head of the bolt and referencing **Table 1**. If bolt material is not shown in **Table 1**, contact the local Emerson Process Management representative for more information.

Use the following bolt installation procedure:

1. Carbon steel bolts do not require lubrication and the stainless steel bolts are coated with a lubricant to ease installation. However, no additional lubricant should be applied when installing either type of bolt.
2. Finger-tighten the bolts.
3. Torque the bolts to the initial torque value using a crossing pattern. See **Table 1** for initial torque value.
4. Torque the bolts to the final torque value using the same crossing pattern. See **Table 1** for final torque value.
5. Verify that the flange bolts are protruding through the isolator plate before applying pressure.

**Table 1. Torque Values for the Flange and Flange Adapter Bolts**

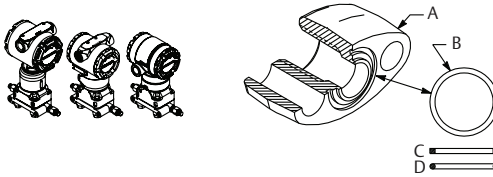
Bolt material	Head markings	Initial torque	Final torque
Carbon Steel (CS)	 	300 in-lb	650 in-lb
Stainless Steel (SST)	     	150 in-lb	300 in-lb

## 1.5 O-rings with flange adapters

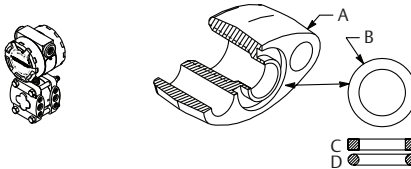
### **⚠ WARNING**

Failure to install proper flange adapter O-rings may cause process leaks, which can result in death or serious injury. The two flange adapters are distinguished by unique O-ring grooves. Only use the O-ring that is designed for its specific flange adapter, as shown below:

Rosemount 3051S/3051/2051/3095



Rosemount 1151



- A. Flange adaptor
- B. O-ring
- C. PTFE based (profile is square)
- D. Elastomer (profile is round)

Whenever the flanges or adapters are removed, visually inspect the O-rings. Replace them if there are any signs of damage, such as nicks or cuts. If you replace the O-rings, re-torque the flange bolts and alignment screws after installation to compensate for seating of the PTFE O-rings.

## 1.6 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, and IP68. Consult factory if other Ingress Protection ratings are required.

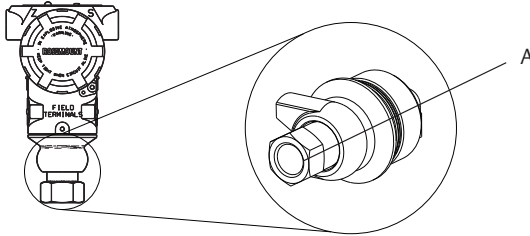
For M20 threads, install conduit plugs to full thread engagement or until mechanical resistance is met.

## 1.7 In-line gage transmitter orientation

The low side pressure port (atmospheric reference) on the in-line gage transmitter is located in the neck of the transmitter, behind the housing. The vent path is 360° around the transmitter between the housing and sensor. (See Figure 3.)

Keep the vent path free of any obstruction, including but not limited to paint, dust, and lubrication by mounting the transmitter so that the process can drain away.

**Figure 3. In-line Gage Low Side Pressure Port**



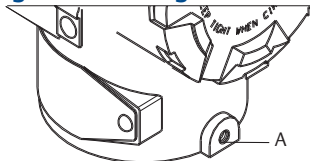
A. Low side pressure port (atmospheric reference)

## 2.0 Consider housing rotation

To improve field access to wiring or to better view the optional LCD display:

1. Loosen the housing rotation set screw.
2. First rotate the housing clockwise to the desired location. If the desired location cannot be achieved due to thread limit, rotate the housing counter clockwise to the desired location (up to 360° from thread limit).
3. Retighten the housing rotation set screw.

**Figure 4. Housing Rotation Set Screw**



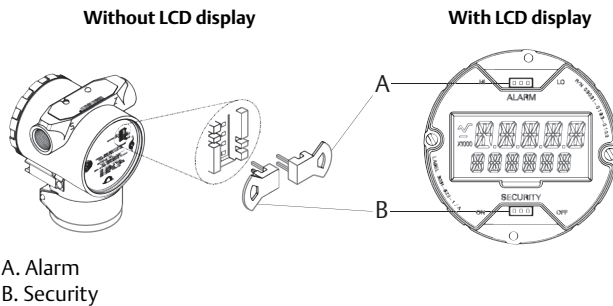
A. Housing rotation set screw ( $5/64$ -in.)

## 3.0 Set the jumpers

If alarm and security jumpers are not installed, the transmitter will operate normally with the default alarm condition alarm *high* and the security *off*.

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. Reposition the jumper. Avoid contact with the leads and the terminals. See [Figure 5](#) for the location of the jumper and the *ON* and *OFF* positions.
4. Reattach the transmitter cover. The cover must be fully engaged to comply with explosion-proof requirements.

**Figure 5. Transmitter Electronics Board**



## 4.0 Connect the wiring and power up

Use the following steps to wire the transmitter:

1. Remove the housing cover on the field terminals side.
2. Connect the positive lead to the “+” terminal (PWR/COMM) and the negative lead to the “-” terminal.
3. 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.

### 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.

4. Ensure proper grounding. It is important that the instrument cable shield:
  - Be trimmed close and insulated from touching the transmitter housing
  - Be connected to the next shield if cable is routed through a junction box
  - Be connected to a good earth ground at the power supply end



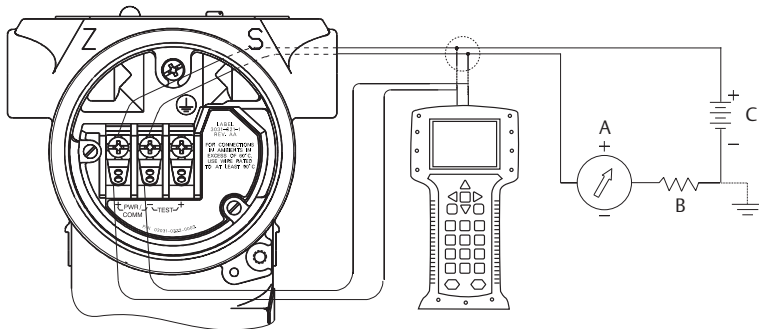
**Note**

Do not connect the powered signal wiring to the test terminals. Power could damage the test diode in the test connection. Shielded twisted pair cable should be used for best results. Use 24 AWG or larger wire and do not exceed 5,000 feet (1500 meters).

5. Plug and seal unused conduit connections.
6. If applicable, install wiring with a drip loop. Arrange the drip loop so the bottom is lower than the conduit connections and the transmitter housing.
7. Replace the housing cover.

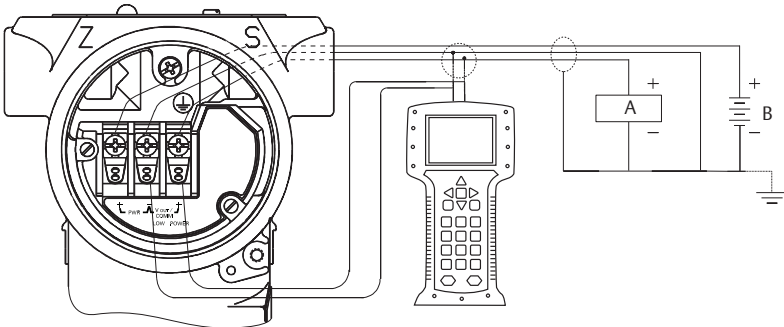
Figure 6 shows wiring connections necessary to power a Rosemount 3051 and enable communications with a hand-held Field Communicator. For low-power transmitters, refer to the Rosemount 3051 [Reference Manual](#).

**Figure 6. Transmitter Wiring Diagrams (4–20 mA)**



- A. Current meter  
 B.  $R_L \geq 250\Omega$   
 C. 24 Vdc supply

**Figure 7. Low Power Transmitter Wiring**



- A. Voltmeter  
 B. 6–12 Vdc supply

**Note**

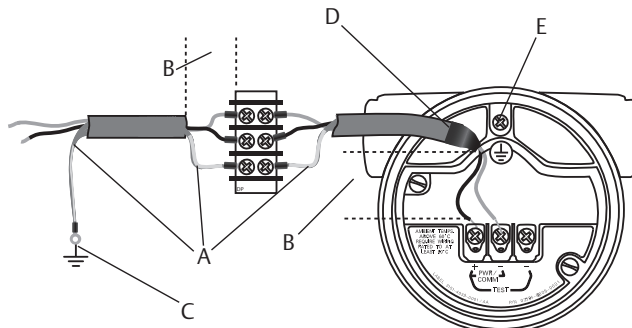
Installation of the transient protection terminal block does not provide transient protection unless the Rosemount 3051 case is properly grounded.

## 4.1 Signal wiring grounding

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. See [Step 2](#) for more information on how the cable shield should be grounded.

1. Remove the field terminals housing cover.
2. Connect the wiring pair and ground as indicated in [Figure 8](#). The cable shield should:
  - Be trimmed close and insulated from touching the transmitter housing
  - Continuously connect to the termination point
  - Be connected to a good earth ground at the power supply end

**Figure 8. Wiring**



- |   |                             |
|---|-----------------------------|
| A. Insulate shield                                | D. Trim shield and insulate |
| B. Minimize distance                              | E. Safety ground            |
| C. Connect shield back to the power supply ground |                             |

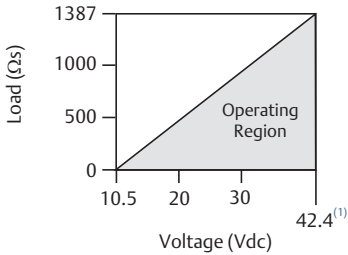
3. Replace the housing cover. It is recommended that the cover be tightened until there is no gap between the cover and the housing.
4. Plug and seal unused conduit connections.

## 4.2 Power supply for 4–20 mA HART

Transmitter operates on 10.5–42.4 Vdc. The dc power supply should provide power with less than two percent ripple.

**Figure 9. Load Limitation**

Max. Loop Resistance = 43.5 (Power Supply Voltage – 10.5)



Communication requires a minimum loop resistance of 250 ohms.

1. For CSA approval, power supply must not exceed 42.4 V.

The total resistance load is the sum of the resistance of the signal leads and the load resistance of the controller, indicator, and related pieces. Note that the resistance of intrinsic safety barriers, if used, must be included.

**4.3 Power supply for 1–5 Vdc HART Low Power**

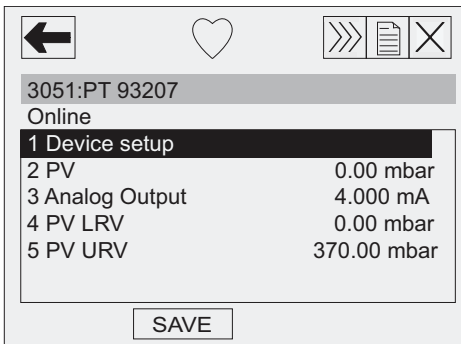
Low power transmitters operate on 6–12 Vdc. The dc power supply should provide power with less than two percent ripple. The  $V_{out}$  load should be 100 kW or greater.

**5.0 Verify configuration**

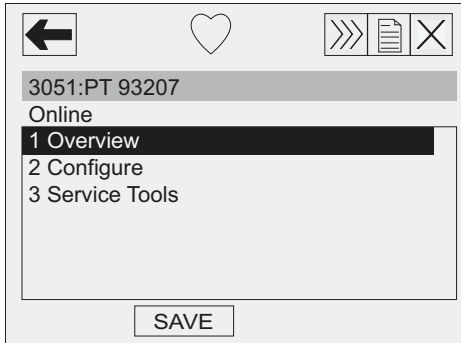
**5.1 Field Communicator user interface**

The Traditional Interface - Device Revision 3 and DD Revision 2 Fast Key sequence can be found on [page 12](#).

**Figure 10. Traditional Interface - Device Revision 3 and DD Revision 2**



The Device Dashboard - Device Revision 3 and DD Revision 6 Fast Key sequence can be found on [page 12](#).

**Figure 11. Device Dashboard - Device Revision 3 and DD Revision 6****Note**

A check (✓) indicates the basic configuration parameters. At minimum, these parameters should be verified as part of the configuration and startup procedure.

**Table 2. Traditional Interface - Device Revision 3 and DD Revision 2 Fast Key Sequence**

Function	Fast Key sequence
Alarm and Saturation Levels	1, 4, 2, 7
Analog Output Alarm Type	1, 4, 3, 2, 4
Burst Mode Control	1, 4, 3, 3, 3
Burst Operation	1, 4, 3, 3, 3
Custom Meter Configuration	1, 3, 7, 2
Custom Meter Value	1, 4, 3, 4, 3
✓ Damping	1, 3, 6
Date	1, 3, 4, 1
Descriptor	1, 3, 4, 2
Digital To Analog Trim (4–20 mA Output)	1, 2, 3, 2, 1
Disable Local Span/Zero Adjustment	1, 4, 4, 1, 7
Field Device Information	1, 4, 4, 1
Full Trim	1, 2, 3, 3
Keypad Input – Rerange	1, 2, 3, 1, 1
Local Zero and Span Control	1, 4, 4, 1, 7
Loop Test	1, 2, 2
Lower Sensor Trim	1, 2, 3, 3, 2
Message	1, 3, 4, 3

**Table 2. Traditional Interface - Device Revision 3 and DD Revision 2 Fast Key Sequence**

Function	Fast Key sequence
Meter Options	1, 4, 3, 4
Number of Requested Preambles	1, 4, 3, 3, 2
Poll Address	1, 4, 3, 3, 1
Poll a Multidropped Transmitter	Left Arrow, 4, 1, 1
Range Values	1, 3, 3
Rerange	1, 2, 3, 1
Scaled D/A Trim (4–20 mA Output)	1, 2, 3, 2, 2
Self Test (Transmitter)	1, 2, 1, 1
Sensor Info	1, 4, 4, 2
Sensor Temperature	1, 1, 4
Sensor Trim Points	1, 2, 3, 3, 5
Status	1, 2, 1, 1
✓ Tag	1, 3, 1
Transfer Function (Setting Output Type)	1, 3, 5
✓ Transmitter Security (Write Protect)	1, 3, 4, 4
Trim Analog Output	1, 2, 3, 2
✓ Units (Process Variable)	1, 3, 2
Upper Sensor Trim	1, 2, 3, 3, 3
Zero Trim	1, 2, 3, 3, 1

**Table 3. Device Dashboard - Device Revision 3 and DD Revision 6 Fast Key Sequence**

Function	Fast Key sequence
✓ Alarm and Saturation Levels	1, 7, 5
Burst Mode Control	2, 2, 4, 1
Burst Option	2, 2, 4, 2
Custom Display Configuration	2, 2, 3
✓ Damping	2, 2, 1, 2
Date	2, 2, 6, 1, 4
Descriptor	2, 2, 6, 1, 5
Digital to Analog Trim (4–20 mA Output)	3, 4, 2, 1
Disable Zero & Span Adjustment	2, 2, 5, 2
Rerange with Keypad	2, 2, 2, 1
Loop Test	3, 5, 1

**Table 3. Device Dashboard - Device Revision 3 and DD Revision 6  
Fast Key Sequence**

Function	Fast Key sequence
Lower Sensor Trim	3, 4, 1, 2
Message	2, 2, 6, 1, 6
✓ Range Values	2, 2, 2
Scaled D/A Trim (4–20 mA Output)	3, 4, 2, 2
Sensor Temperature/Trend (Rosemount 3051S)	2, 2, 1, 6
✓ Tag	2, 2, 6, 1, 1
✓ Transfer Function	2, 2, 1, 3
Transmitter Security (Write Protect)	2, 2, 5, 1
✓ Units	2, 2, 1, 1
Upper Sensor Trim	3, 4, 1, 1
Zero Trim	3, 4, 1, 3

## 6.0 Trim the transmitter

### Note

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

### 6.1 Zero trim

A zero trim is a single-point adjustment used for compensating mounting position effects. When performing a zero trim, ensure the equalizing valve is open and all wet legs are filled to the correct level.

There are two methods to compensate for mounting effects:

- Field Communicator
- Transmitter zero adjustment buttons

Select the appropriate method and follow instructions below:

#### Using the Field Communicator

If zero offset is within 3% of URL, follow the [Using the Field Communicator](#) instructions below. This zero trim will affect the 4–20 mA value, the HART PV, and the display value.

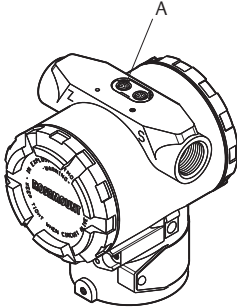
1. Equalize or vent the transmitter and connect Field Communicator.
2. At the menu, input the HART Fast Key sequence (refer to [Table 2](#) or [Table 3](#)).
3. Follow the commands to perform a zero trim.

#### Using the transmitter zero adjustment buttons

Using the transmitter zero adjustment buttons, the lower range value (LRV) will be set to the pressure applied to the transmitter. This adjustment will affect the 4–20 mA value only. Perform the following steps to perform a rerange using the zero adjustment buttons.

1. Loosen the certifications label screw and slide the label to expose the zero adjustment buttons.
2. Set the 4 mA point by pressing the **Zero** button for two seconds. Verify the output is 4 mA. The optional LCD display will show ZERO PASS.

**Figure 12. Zero Adjustment Buttons**



A. Zero adjustment buttons

## 7.0 Safety Instrumented Systems (SIS)

The following section applies to Rosemount 3051C Transmitters used in SIS applications.

### 7.1 Installation

No special installation is required in addition to the standard installation practices outlined in this document. Always ensure a proper seal by installing the electronics housing cover(s) so that metal contacts metal.

The loop must be designed so the terminal voltage does not drop below 10.5 Vdc when the transmitter output is 22.5 mA.

Position the security switch to the *ON* position to prevent accidental or deliberate change of configuration data during normal operation.

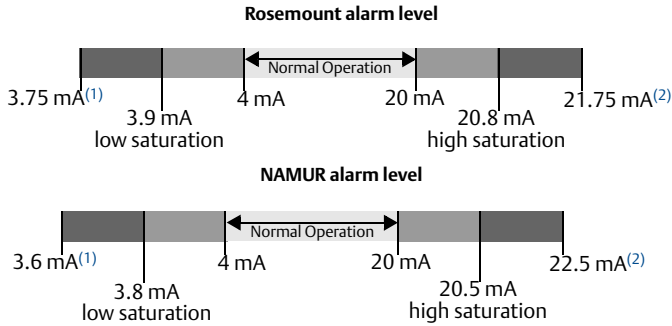
### 7.2 Configuration

Use any HART-compliant master to communicate with and verify configuration of the Rosemount 3051.

User-selected damping will affect the transmitters ability to respond to changes in the applied process. The *damping value + response time* must not exceed the loop requirements.

#### Note

1. Transmitter output is not safety-rated during the following: configuration changes, multidrop, loop test. Alternative means should be used to ensure process safety during transmitter configuration and maintenance activities.
2. DCS or safety logic solver must be configured to match transmitter configuration. [Figure 13](#) identifies the two alarm levels available and their operation values. Position the alarm switch to the required HI or LO alarm position.

**Figure 13. Alarm Levels**

1. Transmitter failure, hardware alarm in LO position.
2. Transmitter failure, hardware alarm in HI position.

**Note**

Some detected faults are indicated on the analog output at a level above high alarm regardless of the alarm switch selection.

## 7.3 Operation and maintenance

### Proof test and inspection

The following proof tests are recommended. Proof test results and corrective actions taken must be documented at [EmersonProcess.com/Rosemount/Report-A-Failure](http://EmersonProcess.com/Rosemount/Report-A-Failure) in the event that an error is found in the safety functionality.

Use the Fast Key sequences in [Table 2 on page 12](#) or [Table 3 on page 13](#) to perform a loop test, analog output trim, or sensor trim. See the [Rosemount 3051 Reference Manual](#) for additional information.

#### Proof test 1<sup>(1)</sup>

This proof test will detect 59.6% of DU failures not detected by the Rosemount 3051 automatic diagnostics.

1. Execute the *Master Reset* command to initiate start-up diagnostics.
2. Enter the milliamperere value representing a high alarm state
3. Check the reference meter to verify the mA output corresponds to the entered value.
4. Enter the milliamperere value representing a low alarm state
5. Check the reference meter to verify the mA output corresponds to the entered value.

1. This test will detect approximately 59.6% of possible DU failures in the transmitter.



### Proof test 2<sup>(1)</sup>

This proof test, when combined with the five-year proof-test, will detect 94.6% of DU failures not detected by the Rosemount 3051 automatic diagnostics.

1. Execute the *Master Reset* command to initiate start-up diagnostics.
2. Perform a minimum two point sensor calibration check using the 4–20 mA range points as the calibration points.
3. Check the reference mA meter to verify the mA output corresponds to the pressure input value.
4. If necessary, use one of the “Trim” procedures available in the Rosemount 3051 [Reference Manual](#) to calibrate.

---

### Note

The user determines the proof-test requirements for impulse piping.

---

### Visual inspection

Not required.

### Special tools

Not required.

### Product repair

All failures detected by the transmitter diagnostics or by the proof-test must be reported. Feedback can be submitted electronically at [EmersonProcess.com/Rosemount/Report-A-Failure](https://EmersonProcess.com/Rosemount/Report-A-Failure).

The Rosemount 3051 is repairable by major component replacement. Follow the instructions in the Rosemount 3051 [Reference Manual](#) for additional information.

## 7.4 Reference

### Specifications

The Rosemount 3051 must be operated in accordance to the functional and performance specifications provided in the Rosemount 3051 [Reference Manual](#).

### Failure rate data

The FMEDA report includes failure rates and common cause Beta factor estimates. This report is available at [EmersonProcess.com/Rosemount](https://EmersonProcess.com/Rosemount).

### Rosemount 3051 safety failure values

Safety accuracy: 0.065%

Safety response time: 100 msec

### Product life

50 years – based on worst case component wear-out mechanisms – not based on wear-out process wetted materials

1. This test will detect approximately 94.6% of possible DU failures in the transmitter.

## 8.0 Product Certifications

Rev 1.4

### 8.1 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 [EmersonProcess.com/Rosemount](http://EmersonProcess.com/Rosemount).

### 8.2 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).

### 8.3 North America

#### E5 USA Explosionproof (XP) and Dust-Ignitionproof (DIP)

Certificate: 0T2H0.AE

Standards: FM Class 3600 – 2011, FM Class 3615 – 2006, FM Class 3810 – 2005, ANSI/NEMA 250 – 2003

Markings: XP CL I, DIV 1, GP B, C, D; DIP CL II, DIV 1, GP E, F, G; CL III; T5(-50 °C ≤ T<sub>a</sub> ≤ +85 °C); Factory Sealed; Type 4X

#### I5 USA Intrinsic Safety (IS) and Nonincendive (NI)

Certificate: FM16US0120X

Standards: FM Class 3600 – 2011, FM Class 3610 – 2010, FM Class 3611 – 2004, FM Class 3810 – 2005, ANSI/NEMA 250 – 2008

Markings: IS CL I, DIV 1, GP A, B, C, D; CL II, DIV 1, GP E, F, G; Class III; DIV 1 when connected per Rosemount drawing 03031-1019; NI CL 1, DIV 2, GP A, B, C, D; T4(-50 °C ≤ T<sub>a</sub> ≤ +70 °C) [HART], T5(-50 °C ≤ T<sub>a</sub> ≤ +40 °C) [HART]; T4(-50 °C ≤ T<sub>a</sub> ≤ +60 °C) [Fieldbus/PROFIBUS®]; Type 4x

#### **Special Conditions for Safe Use (X):**

1. The Rosemount 3051 Transmitter housing contains aluminum and is considered a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact and friction.
2. The Rosemount 3051 Transmitter with the transient terminal block (Option code T1) will not pass the 500 Vrms dielectric strength test and this must be taken into account during installation.

#### IE USA FISCO

Certificate: FM16US0120X

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 03031-1019 (-50 °C ≤ T<sub>a</sub> ≤ +60 °C); Type 4x

#### **Special Conditions for Safe Use (X):**

1. The Rosemount 3051 Transmitter housing contains aluminum and is considered a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact and friction.
2. The Rosemount 3051 Transmitter with the transient terminal block (Option code T1) will not pass the 500 Vrms dielectric strength test and this must be taken into account during installation.

- C6** Canada Explosionproof, Dust-Ignitionproof, Intrinsic Safety and Nonincendive Certificate: 1053834  
Standards: ANSI/ISA 12.27.01-2003, CSA Std. C22.2 No. 30-M1986, CSA Std. C22.2 No.142-M1987, CSA Std. C22.2. No.157-92, CSA Std. C22.2 No. 213-M1987  
Markings: Explosionproof for Class I, Division 1, Groups B, C and D; Suitable for Class I, Zone 1, Group IIB+H2, T5; Dust-Ignitionproof Class II, Division 1, Groups E, F, G; Class III Division 1; Intrinsically Safe Class I, Division 1 Groups A, B, C, D when connected in accordance with Rosemount drawing 03031-1024, Temperature Code T3C; Suitable for Class I, Zone 0; Class I Division 2 Groups A, B, C and D, T5; Suitable for Class I Zone 2, Group IIC; Type 4X; Factory Sealed; Single Seal (See drawing 03031-1053)
- E6** Canada Explosionproof, Dust-Ignitionproof and Division 2 Certificate: 1053834  
Standards: ANSI/ISA 12.27.01-2003, CSA Std. C22.2 No. 30-M1986, CSA Std. C22.2 No.142-M1987, CSA Std. C22.2 No. 213-M1987  
Markings: Explosionproof Class I, Division 1, Groups B, C and D; Suitable for Class I, Zone 1, Group IIB+H2, T5; Dust-Ignitionproof for Class II and Class III, Division 1, Groups E, F and G; Class I, Division 2, Groups A, B, C and D; Suitable for Class I Zone 2, Group IIC; Type 4X; Factory Sealed; Single Seal (See drawing 03031-1053)

## 8.4 Europe

- E8** ATEX Flameproof and Dust Certificate: KEMA00ATEX2013X; Baseefa11ATEX0275X  
Standards: EN60079-0:2012, EN60079-1:2007, EN60079-26:2007, EN60079-31:2009  
Markings:  $\text{Ex}$  II 1/2 G Ex d IIC T6/T5 Ga/Gb, T6(-50 °C ≤ T<sub>a</sub> ≤ +65 °C), T5(-50 °C ≤ T<sub>a</sub> ≤ +80 °C);  $\text{Ex}$  II 1 D Ex ta IIIC T95 °C T<sub>500</sub> 105 °C Da (-20 °C ≤ T<sub>a</sub> ≤ +85 °C)

**Table 4. Process Temperature**

Temperature class	Process temperature
T6	-50 °C to +65 °C
T5	-50 °C to +80 °C

**Special Conditions for Safe Use (X):**

1. This device contains a thin wall diaphragm. Installation, maintenance and use shall take into account the environmental conditions to which the diaphragm will be subjected. The manufacturer's instructions for installation and maintenance shall be followed in detail to assure safety during its expected lifetime.
2. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.
3. Some variants of the equipment have reduced markings on the nameplate. Refer to the Certificate for full equipment marking.

**I1** ATEX Intrinsic Safety and Dust

Certificate: BAS97ATEX1089X; Baseefa11ATEX0275X

Standards: EN60079-0:2012, EN60079-11:2012, EN60079-31:2009

Markings: HART:  $\text{Ex}$  II 1 G Ex ia IIC T5/T4 Ga, T5(-60 °C ≤ T<sub>a</sub> ≤ +40 °C),  
T4(-60 °C ≤ T<sub>a</sub> ≤ +70 °C)Fieldbus/PROFIBUS:  $\text{Ex}$  II 1 G Ex ia IIC Ga T4(-60 °C ≤ T<sub>a</sub> ≤ +60 °C)DUST:  $\text{Ex}$  II 1 D Ex ta IIIC T95 °C T<sub>500</sub> 105 °C Da (-20 °C ≤ T<sub>a</sub> ≤ +85 °C)**Table 5. Input Parameters**

Parameter	HART	Fieldbus/PROFIBUS
Voltage U <sub>i</sub>	30 V	30 V
Current I <sub>i</sub>	200 mA	300 mA
Power P <sub>i</sub>	0.9 W	1.3 W
Capacitance C <sub>i</sub>	0.012 μF	0 μF
Inductance L <sub>i</sub>	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. Some variants of the equipment have reduced markings on the nameplate. Refer to the Certificate for full equipment marking.

**IA** ATEX FISCO

Certificate: BAS97ATEX1089X

Standards: EN60079-0:2012, EN60079-11:2009

Markings:  $\text{Ex}$  II 1 G Ex ia IIC T4 Ga (-60 °C ≤ T<sub>a</sub> ≤ +60 °C)**Table 6. Input Parameters**

Parameter	FISCO
Voltage U <sub>i</sub>	17.5 V
Current I <sub>i</sub>	380 mA
Power P <sub>i</sub>	5.32 W
Capacitance C <sub>i</sub>	<5 nF
Inductance L <sub>i</sub>	<10 μH

**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.

**N1** ATEX Type n and Dust

Certificate: BAS00ATEX3105X; Baseefa11ATEX0275X

Standards: EN60079-0:2012, EN60079-15:2010, EN60079-31:2009

Markings:  $\text{Ex}$  II 3 G Ex nA IIC T5 Gc ( $-40\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$ ); $\text{Ex}$  II 1 D Ex ta IIIC T95  $^{\circ}\text{C}$  T<sub>500</sub> 105  $^{\circ}\text{C}$  Da ( $-20\text{ }^{\circ}\text{C} \leq T_a \leq +85\text{ }^{\circ}\text{C}$ )**Special Conditions for Safe Use (X):**

1. This apparatus is not capable of withstanding the 500 V insulation test that is required by EN60079-15. This must be taken into account when installing the apparatus.
2. Some variants of the equipment have reduced markings on the nameplate. Refer to the Certificate for full equipment marking.

## 8.5 International

**E7** IECEx Flameproof and Dust

Certificate: IECEx KEM 09.0034X; IECEx BAS 10.0034X

Standards: IEC60079-0:2011, IEC60079-1:2007-04, IEC60079-26:2006, IEC60079-31:2008

Markings: Ex d IIC T6/T5 Ga/Gb, T6 ( $-50\text{ }^{\circ}\text{C} \leq T_a \leq +65\text{ }^{\circ}\text{C}$ ), T5 ( $-50\text{ }^{\circ}\text{C} \leq T_a \leq +80\text{ }^{\circ}\text{C}$ );Ex ta IIIC T95  $^{\circ}\text{C}$  T<sub>500</sub> 105  $^{\circ}\text{C}$  Da ( $-20\text{ }^{\circ}\text{C} \leq T_a \leq +85\text{ }^{\circ}\text{C}$ )**Table 7. Process Temperature**

Temperature class	Process temperature
T6	$-50\text{ }^{\circ}\text{C}$ to $+65\text{ }^{\circ}\text{C}$
T5	$-50\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$

**Special Conditions for Safe Use (X):**

1. This device contains a thin wall diaphragm. Installation, maintenance and use shall take into account the environmental conditions to which the diaphragm will be subjected. The manufacturer's instructions for installation and maintenance shall be followed in detail to assure safety during its expected lifetime.
2. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.
3. Some variants of the equipment have reduced markings on the nameplate. Refer to the Certificate for full equipment marking.

**I7** IECEx Intrinsic Safety

Certificate: IECEx BAS 09.0076X

Standards: IEC60079-0:2011, IEC60079-11:2011

Markings: HART: Ex ia IIC T5/T4 Ga, T5 ( $-60\text{ }^{\circ}\text{C} \leq T_a \leq +40\text{ }^{\circ}\text{C}$ ), T4 ( $-60\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$ )Fieldbus/PROFIBUS: Ex ia IIC T4 ( $-60\text{ }^{\circ}\text{C} \leq T_a \leq +60\text{ }^{\circ}\text{C}$ )**Table 8. 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 $\mu\text{F}$	0 $\mu\text{F}$
Inductance $L_i$	0 mH	0 mH

**Special Conditions for Safe Use (X):**

1. If the apparatus is fitted with optional 90 V transient suppressor, it is not capable of withstanding the 500 V insulation test required by IEC60079-11. 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.

IECEx Mining (Special A0259)

Certificate: IECEx TSA 14.0001X

Standards: IEC60079-0:2011, IEC60079-11:2011

Markings: Ex ia I Ma ( $-60\text{ °C} \leq T_a \leq +70\text{ °C}$ )

**Table 9. Input Parameters**

Parameter	HART	Fieldbus/PROFIBUS	FISCO
Voltage $U_i$	30 V	30 V	17.5 V
Current $I_i$	200 mA	300 mA	380 mA
Power $P_i$	0.9 W	1.3 W	5.32 W
Capacitance $C_i$	0.012 $\mu\text{F}$	0 $\mu\text{F}$	<5 nF
Inductance $L_i$	0 mH	0 mH	<10 $\mu\text{H}$

**Special Conditions for Safe Use (X):**

1. If the apparatus is fitted with optional 90 V transient suppressor, it is not capable of withstanding the 500 V insulation test required by IEC60079-11. This must be taken into account when installing the apparatus.
2. It is a condition of safe use that the above input parameters shall be taken into account during installation.
3. It is a condition of manufacture that only the apparatus fitted with housing, covers and sensor module housing made out of stainless steel are used in Group I applications.

**N7 IECEx Type n**

Certificate: IECEx BAS 09.0077X

Standards: IEC60079-0:2011, IEC60079-15:2010

Markings: Ex nA IIC T5 Gc ( $-40\text{ °C} \leq T_a \leq +70\text{ °C}$ )

**Special Condition for Safe Use (X):**

1. The apparatus is not capable of withstanding the 500 V insulation test required by IEC60079-15. This must be taken into account when installing the apparatus.

## 8.6 Brazil

**E2 INMETRO Flameproof**

Certificate: UL-BR 13.0643X

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

ABNT NBR IEC60079-1:2009 + Errata 1:2011,

ABNT NBR IEC60079-26:2008 + Errata 1:2008

Markings: Ex d IIC T6/T5 Ga/Gb, T6( $-50\text{ °C} \leq T_a \leq +65\text{ °C}$ ), T5( $-50\text{ °C} \leq T_a \leq +80\text{ °C}$ )

**Special Conditions for Safe Use (X):**

1. This device contains a thin wall diaphragm. Installation, maintenance and use shall take into account the environmental conditions to which the diaphragm will be subjected. The manufacturer's instructions for installation and maintenance shall be followed in detail to assure safety during its expected lifetime.

2. In case of repair, contact the manufacturer for information on the dimensions of the flameproof joints.
  3. The capacitance of the wrap around label, being 1.6 nF, exceeds the limit in Table 9 of ABNT NBR IEC 60079-0. The user shall determine suitability for the specific application.
- 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(-60 °C ≤ T<sub>a</sub> ≤ +40 °C), T4(-60 °C ≤ T<sub>a</sub> ≤ +70 °C)  
 Fieldbus/PROFIBUS: Ex ia IIC T4 Ga (-60 °C ≤ T<sub>a</sub> ≤ +60 °C)

**Table 10. Input Parameters**

Parameter	HART	Fieldbus/PROFIBUS
Voltage U <sub>i</sub>	30 V	30 V
Current I <sub>i</sub>	200 mA	300 mA
Power P <sub>i</sub>	0.9 W	1.3 W
Capacitance C <sub>i</sub>	0.012 μF	0 μF
Inductance L <sub>i</sub>	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 IEC 60079-11. This must be taken into account when installing the equipment.
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.

**IB INMETRO FISCO**

Certificate: UL-BR 13.0584X

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

Markings: Ex ia IIC T4 Ga (-60 °C ≤ T<sub>a</sub> ≤ +60 °C)**Table 11. Input Parameters**

Parameter	FISCO
Voltage U <sub>i</sub>	17.5 V
Current I <sub>i</sub>	380 mA
Power P <sub>i</sub>	5.32 W
Capacitance C <sub>i</sub>	<5 nF
Inductance L <sub>i</sub>	<10 μH

**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 IEC 60079-11. This must be taken into account when installing the equipment.
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.

## 8.7 China

### E3 China Flameproof

Certificate: GYJ14.1041X; GYJ15.1368X [Flowmeters]

Standards: GB12476-2000; GB3836.1-2010, GB3836.2-2010, GB3836.20-2010

Markings: Ex d IIC T6/T5 Ga/Gb, T6( $-50\text{ °C} \leq T_a \leq +65\text{ °C}$ ), T5( $-50\text{ °C} \leq T_a \leq +80\text{ °C}$ )

#### Special Conditions for Safe Use (X):

- The relation between ambient temperature arrange and temperature class is as follows:

$T_a$	Temperature class
$-50\text{ °C} \sim +80\text{ °C}$	T5
$-50\text{ °C} \sim +65\text{ °C}$	T6

When used in a combustible dust environment, the maximum ambient temperature is 80 °C.

- The earth connection facility in the enclosure should be connected reliably.
- Cable entry certified by notified body with type of protection Ex d IIC in accordance with GB3836.1-2000 and GB3836.2-2000, should be applied when installed in a hazardous location. When used in combustible dust environment, cable entry in accordance with IP66 or higher level should be applied.
- Obey the warning “Keep tight when the circuit is alive.”
- End users are not permitted to change any internal components.
- During installation, use and maintenance of this product, observe the following standards: GB3836.13-1997, GB3836.15-2000, GB3836.16-2006, GB50257-1996, GB12476.2-2006, GB15577-2007.

### I3 China Intrinsic Safety

Certificate: GYJ13.1362X; GYJ15.1367X [Flowmeters]

Standards: GB3836.1-2010, GB3836.4-2010, GB3836.20-2010, GB12476.1-2000

Markings: Ex ia IIC Ga T4/T5

#### Special Conditions for Safe Use (X):

- Symbol “X” is used to denote specific conditions of use:
  - If the apparatus is fitted with an optional 90 V transient suppressor, it is not capable of withstanding the 500 V insulation test for 1 minute. This must be taken into account when installing the apparatus.
  - 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.
- The relation between T code and ambient temperature range is:

Model	T code	Temperature range
HART	T5	$-60\text{ °C} \leq T_a \leq +40\text{ °C}$
HART	T4	$-60\text{ °C} \leq T_a \leq +70\text{ °C}$
Fieldbus/PROFIBUS/FISCO	T4	$-60\text{ °C} \leq T_a \leq +60\text{ °C}$



## 3. Intrinsically Safe parameters:

Parameter	HART	Fieldbus/PROFIBUS	FISCO
Voltage $U_i$	30 V	30V	17.5 V
Current $I_i$	200 mA	300 mA	380 mA
Power $P_i$	0.9 W	1.3 W	5.32 W
Capacitance $C_i$	0.012 $\mu$ F	0 $\mu$ F	<5 nF
Inductance $L_i$	0 mH	0mH	<10 $\mu$ H

Note 1: FISCO parameters apply to both Group IIC and IIB.

Note 2: [For Flowmeters] When Rosemount 644 Temperature Transmitter is used, the transmitter should be used with Ex-certified associated apparatus to establish explosion protection system that can be used in explosive gas atmospheres. Wiring and terminals should comply with the instruction manual of both Rosemount 644 and associated apparatus. The cables between Rosemount 644 and associated apparatus should be shielded cables (the cables must have insulated shield). The shielded cable has to be grounded reliably in a non-hazardous area.

- Transmitters comply with the requirements for FISCO field devices specified in IEC60079-27:2008. For the connection of an intrinsically safe circuit in accordance with FISCO Model, FISCO parameters are listed in the table above.
- The product should be used with Ex-certified associated apparatus to establish explosion protection system that can be used in explosive gas atmospheres. Wiring and terminals should comply with the instruction manual of the product and associated apparatus.
- The cables between this product and associated apparatus should be shielded cables (the cables must have insulated shield). The shielded cable has to be grounded reliably in a non-hazardous area.
- End users are not permitted to change any intern components but to settle the problem in conjunction with the manufacturer to avoid damage to the product.
- During installation, use and maintenance of this product, observe the following standards: GB3836.13-1997, GB3836.15-2000, GB3836.16-2006, GB50257-1996, GB12476.2-2006, GB15577-2007.

**N3** China Type n

Certificate: GYJ15.1105X

Standards: GB3836.1-2010, GB3836.8-2003

Markings: Ex nA nL IIC T5 Gc ( $-40^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$ )

**Special Condition for Safe Use (X):**

- Symbol "X" is used to denote specific conditions of use: The apparatus is not capable of withstanding the 500 V test to earth for one minute. The must be taken into consideration during installation.

## 8.8 Japan

**E4** Japan Flameproof

Certificate: TC20577, TC20578, TC20583, TC20584 [HART]; TC20579, TC20580, TC20581, TC20582 [Fieldbus]

Markings: Ex d IIC T5

## 8.9 Technical Regulations Customs Union (EAC)

### EM EAC Flameproof

Certificate: RU C-US.GB05.B.01197

Markings: Ga/Gb Ex d IIC T5/T6 X, T5(-60 °C ≤ T<sub>a</sub> ≤ +80 °C), T6(-60 °C ≤ T<sub>a</sub> ≤ +65 °C)

### Special Condition for Safe Use (X):

1. See certificate for special conditions.

### IM EAC Intrinsically Safe

Certificate: RU C-US.GB05.B.01197

Markings: HART: 0Ex ia IIC T4/T5 Ga X, T4(-60 °C ≤ T<sub>a</sub> ≤ +70 °C), T5(-60 °C ≤ T<sub>a</sub> ≤ +40 °C)  
Fieldbus/PROFIBUS: 0Ex ia IIC T4 Ga X (-60 °C ≤ T<sub>a</sub> ≤ +60 °C)

### Special Condition for Safe Use (X):

1. See certificate for special conditions.

## 8.10 Combinations

**K2** Combination of E2 and I2

**K5** Combination of E5 and I5

**K6** Combination of C6, E8, and I1

**K7** Combination of E7, I7, and N7

**K8** Combination of E8, I1, and N1

**KB** Combination of E5, I5, and C6

**KD** Combination of E8, I1, E5, I5, and C6

**KM** Combination of EM and IM

## 8.11 Conduit Plugs and Adapters

IECEx Flameproof and Increased Safety

Certificate: IECEx FMG 13.0032X


Standards: IEC60079-0:2011, IEC60079-1:2007, IEC60079-7:2006-2007

Markings: Ex de IIC Gb

ATEX Flameproof and Increased Safety

Certificate: FM13ATEX0076X

Standards: EN60079-0:2012, EN60079-1:2007, IEC60079-7:2007

Markings:  II 2 G Ex de IIC Gb

**Table 12. Conduit Plug Thread Sizes**

Thread	Identification mark
M20 × 1.5	M20
1/2-14 NPT	1/2 NPT

**Table 13. Thread Adapter Thread Sizes**

Male thread	Identification mark
M20 × 1.5-6H	M20
1/2-14 NPT	1/2-14 NPT
3/4-14 NPT	3/4-14 NPT

**Table 13. Thread Adapter Thread Sizes**

Female thread	Identification mark
M20 × 1.5–6H	M20
1/2–14 NPT	1/2–14 NPT
G <sup>1/2</sup>	G <sup>1/2</sup>

**Special Conditions for Safe Use (X):**

1. When the thread adapter is used with an enclosure in type of protection increased safety “e” the entry thread shall be suitably sealed in order to maintain the ingress protection rating (IP) of the enclosure.
2. The blanking plug shall not be used with an adapter.
3. Blanking Plug and Threaded Adapter shall be either NPT or Metric thread forms. G<sup>1/2</sup> thread forms are only acceptable for existing (legacy) equipment installations.

## 8.12 Additional Certifications

**SBS** American Bureau of Shipping (ABS) Type Approval

Certificate: 09-HS446883A-5-PDA

Intended Use: Marine and Offshore Applications — Measurement of either gauge or absolute pressure for liquid, gas, and vapor.

**SBV** Bureau Veritas (BV) Type Approval

Certificate: 23155

Requirements: Bureau Veritas Rules for the Classification of Steel Ships

Application: Class notations: AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS; Pressure transmitter type 3051 cannot be installed on diesel engines

**SDN** Det Norske Veritas (DNV) Type Approval

Certificate: TAA000004F

Intended Use: DNV GL Rules for Classification — Ships and offshore units

Application:

Location classes	
Temperature	D
Humidity	B
Vibration	A
EMC	B
Enclosure	D

**SLL** Lloyds Register (LR) Type Approval




Certificate: 11/60002

Application: Environmental categories ENV1, ENV2, ENV3, and ENV5

**C5** Custody Transfer - Measurement Canada Accuracy Approval

Certificate: AG-0226; AG-0454; AG-0477

Figure 14. Rosemount 3051 Declaration of Conformity

	<h1>EU Declaration of Conformity</h1> <p>No: RMD 1017 Rev. X</p>	
<p>We,</p> <p><b>Rosemount, Inc.</b> 8200 Market Boulevard Chanhassen, MN 55317-9685 USA</p>		
<p>declare under our sole responsibility that the product,</p> <p><b>Rosemount 3051 Pressure Transmitters</b></p>		
<p>manufactured by,</p> <p><b>Rosemount, Inc.</b> 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>		
 _____ <small>(signature)</small>	_____ Vice President of Global Quality <small>(function)</small>	
_____ Kelly Klein <small>(name)</small>	_____ 19 Apr 2016 <small>(date of issue)</small>	
<p>Page 1 of 4</p>		



# EU Declaration of Conformity



No: RMD 1017 Rev. X

**EMC Directive (2004/108/EC)** *This directive is valid until 19 April 2016*

**EMC Directive (2014/30/EU)** *This directive is valid from 20 April 2016*

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

**PED Directive (97/23/EC)** *This directive is valid until 18 July 2016*

**PED Directive (2014/68/EU)** *This directive is valid from 19 July 2016*

**Rosemount 3051CA4; 3051CD2, 3, 4, 5; 3051HD2, 3, 4, 5; (also with P9 option)**

QS Certificate of Assessment - EC Certificate No. 59552-2009-CE-HOU-DNV

Module H Conformity Assessment

Other Standards Used: ANSI/ISA61010-1:2004

**All other Rosemount 3051 Pressure Transmitters**

Sound Engineering Practice

**Transmitter Attachments: Diaphragm Seal, Process Flange, or Manifold**

Sound Engineering Practice

**Rosemount 3051CFx DP Flowmeters**

See DSI 1000 Declaration of Conformity



## EU Declaration of Conformity

No: RMD 1017 Rev. X



**ATEX Directive (94/9/EC)** *This directive is valid until 19 April 2016*

**ATEX Directive (2014/34/EU)** *This directive is valid from 20 April 2016*

**BAS97ATEX1089X - Intrinsic Safety**

Equipment Group II Category 1 G

Ex ia IIC T5/T4 Ga

Harmonized Standards Used:

EN60079-0:2012, EN60079-11:2012

**BAS00ATEX3105X - Type n and Certificate**

Equipment Group II Category 3 G

Ex nA IIC T5 Gc

Harmonized Standards Used:

EN60079-0:2012, EN60079-15:2010

**Baseefa11ATEX0275X - Dust Certificate**

Equipment Group II Category 1 D

Ex ta IIIC T95°C T<sub>500</sub>105°C Da

Harmonized Standards Used:

EN60079-0:2012, EN60079-31:2009

**KEMA00ATEX2013X - Flameproof Certificate**

Equipment Group II Category 1/2 G

Ex d IIC T6/T5 Ga/Gb

Harmonized Standards Used:

EN60079-0:2012, EN60079-1:2007, EN60079-26:2007



# EU Declaration of Conformity

No: RMD 1017 Rev. X



## PED Notified Body

**Det Norske Veritas (DNV)** [Notified Body Number: 0575]  
Veritasveien 1, N-1322  
Hovik, Norway

## ATEX Notified Bodies

**DEKRA** [Notified Body Number: 0344]  
Utrechtseweg 310, 6812 AR Arnhem  
P.O. Box 5185, 6802 ED Arnhem  
The Netherlands  
Postbank 6794687

**SGS Baseefa Limited** [Notified Body Number: 1180]  
Rockhead Business Park  
Staden Lane  
Buxton, Derbyshire  
SK17 9RZ United Kingdom

## ATEX Notified Body for Quality Assurance

**SGS Baseefa Limited** [Notified Body Number: 1180]  
Rockhead Business Park  
Staden Lane  
Buxton, Derbyshire  
SK17 9RZ United Kingdom

含有China RoHS管控物质超过最大浓度限值的部件型号列表 Rosemount 3051  
List of Rosemount 3051 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.







### Global Headquarters

#### Emerson Process Management

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

### North America Regional Office

#### Emerson Process Management

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 Process Management

1300 Concord Terrace, Suite 400  
Sunrise, FL 33323, USA  
+1 954 846 5030  
+1 954 846 5121  
RFQ.RMD-RCC@EmersonProcess.com

### Europe Regional Office

#### Emerson Process Management 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@EmersonProcess.com

### Asia Pacific Regional Office

#### Emerson Process Management Asia Pacific Pte Ltd

1 Pandan Crescent  
Singapore 128461  
+65 6777 8211  
+65 6777 0947  
Enquiries@AP.EmersonProcess.com

### Middle East and Africa Regional Office

#### Emerson Process Management

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-Process-Management



Twitter.com/Rosemount\_News



Facebook.com/Rosemount



Youtube.com/user/RosemountMeasurement



Google.com/+RosemountMeasurement

Standard Terms and Conditions of Sale can be found at [www.Emerson.com/en-us/pages/Terms-of-Use.aspx](http://www.Emerson.com/en-us/pages/Terms-of-Use.aspx)  
The Emerson logo is a trademark and service mark of Emerson Electric Co.  
Rosemount and Rosemount logotype are trademarks of Emerson Process Management.  
HART is a registered trademark of the FieldComm Group.  
NEMA is a registered trademark and service mark of the National Electrical Manufacturers Association.  
PROFIBUS is a registered trademark of PROFINET International (PI).  
All other marks are the property of their respective owners.  
© 2016 Emerson Process Management. All rights reserved.