Rosemount™ 3051 Pressure Transmitter
NOTICE

This guide provides basic guidelines for Rosemount™ 3051 Transmitters. It does not provide instructions for configuration, diagnostics, maintenance, service, troubleshooting, Explosion-proof, Flameproof, or intrinsically safe (I.S.) installations. Refer to Rosemount 3051 Reference Manual for more instructions. This manual is also available electronically at Emerson.com/Rosemount.

⚠️ 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. 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/flameproof installation, do not remove the transmitter covers when power is applied to the unit.

⚠️ WARNING

Process leaks

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

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.

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.

Entries marked M2 are M20 x 1.5 thread form. On devices with multiple conduit entries, all entries will have the same thread form.

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1 System readiness

Confirm HART revision capability

- If using HART-based control or asset management systems, confirm the HART capability of those systems prior to transmitter installation. Not all systems are capable of communicating with HART Revision 7. This transmitter can be configured for either HART Revision 5 or 7.
- For instructions on how to change the HART revision of your transmitter, see Switch HART revision mode.

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 with 4-20mA HART Protocol Device Revisions and Files

<table>
<thead>
<tr>
<th>Release date</th>
<th>Device identification</th>
<th>Device Driver identification</th>
<th>Review Instructions</th>
<th>Review Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NAMUR hardware Revision(1)</td>
<td>HART Software Revision(3)</td>
<td>HART Universal revision</td>
<td>Device Revision(4)</td>
</tr>
<tr>
<td>Aug-16</td>
<td>1.1.xx</td>
<td>1.0.xx</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Jan-13</td>
<td>N/A</td>
<td>1.0.xx</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>
Table 1-1: Rosemount 3051 with 4-20mA HART Protocol Device Revisions and Files (continued)

<table>
<thead>
<tr>
<th>Release date</th>
<th>Device identification</th>
<th>Device Driver identification</th>
<th>Review Instructions</th>
<th>Review Functionality</th>
<th>Change description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-98</td>
<td>N/A</td>
<td>N/A</td>
<td>178</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

(1) NAMUR Revision is located on the hardware tag of the device. Differences in level 3 changes, signified above by xx, represent minor product changes as defined per NE53. Compatibility and functionality are preserved and product can be used interchangeably.

(2) NAMUR Revision is located on the hardware tag of the device. Differences in level 3 changes, signified above by xx, represent minor product changes as defined per NE53. Compatibility and functionality are preserved and product can be used interchangeably.

(3) HART Software Revision can be read using a HART capable configuration tool. Value shown is minimum revision that could correspond to NAMUR Revisions.

(4) Device Driver file names use Device and DD Revision, e.g. 10_01. HART Protocol is designed to enable legacy device driver revisions to continue to communicate with new HART devices. To access new functionality, the new Device Driver must be downloaded. It is recommended to download new Device Driver files to ensure full functionality.

(5) HART Revision 5 and 7 Selectable, local operator interface (LOI), scaled variable, configurable alarms, expanded engineering units.

(6) Rosemount 3051G Pressure Transmitter updated electronics hardware design. Intrinsric Safety temperature classification change.
2 Transmitter installation

2.1 Mount the transmitter

2.1.1 Liquid applications

Procedure

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

Figure 2-1: Coplanar and In-line Liquid Applications

2.1.2 Gas applications

Procedure

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

Procedure

1. Place taps to the side of the line.
2. Mount beside or below the taps.
3. Fill impulse lines with water.
**Figure 2-3: Coplanar and In-line Steam Applications**

A. *Coplanar*

B. *In-line*

**Figure 2-4: Panel and pipe mounting**

1. 5/6 x 1½ panel bolts are customer supplied.
2.1.4 Bolting considerations

If the transmitter installation requires assembly of the process flanges, manifolds, or flange adapters, follow the 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 2-5 illustrates common transmitter assemblies with the bolt length required for proper transmitter assembly.

**Figure 2-5: 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 (CS) or stainless steel (SST). Confirm the material by viewing the markings on the head of the bolt and referencing Table 2-1. If bolt material is not shown in Table 2-1, contact a local Emerson representative for more information.

Use the following bolt installation procedure:

**Procedure**

1. CS bolts do not require lubrication and the SST 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 2-1 for initial torque value.
4. Torque the bolts to the final torque value using the same crossing pattern. See Table 2-1 for final torque value.
5. Verify that the flange bolts are protruding through the isolator plate before applying pressure.

Table 2-1: Torque Values for the Flange and Flange Adapter Bolts

<table>
<thead>
<tr>
<th>Bolt material</th>
<th>Head markings</th>
<th>Initial torque</th>
<th>Final torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>B7M</td>
<td>300 in-lb</td>
<td>650 in-lb</td>
</tr>
<tr>
<td>SST</td>
<td>B8M, 316, STM 316, SW 316</td>
<td>150 in-lb</td>
<td>300 in-lb</td>
</tr>
</tbody>
</table>

2.1.5 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 2-6)

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.
2.1.6 Consider housing rotation

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

**Procedure**

1. Loosen the housing rotation set screw using a -in. hex wrench.
2. Turn the housing left or right maximum up to 180° from its original position.(1)

**Note**

Over-rotating can damage the transmitter.

3. Re-tighten the housing rotation set screw to no more than 7 in-lb when desired location is reached.

---

*(1)* Rosemount 3051D original position aligns with “H” side; Rosemount 3051G original position is the opposite side of bracket holes.
2.2 Set the switches

Procedure

1. Set alarm and security switch configuration before installation as shown in Figure 2-8.

2. The alarm switch sets the analog output alarm to high or low.

3. Default alarm is high.

4. The security switch allows (unlocked symbol) or prevents (locked symbol) any configuration of the transmitter.

5. Default security is off (unlocked symbol).

   Use the following procedure to change the switch configuration:

6. If the transmitter is installed, secure the loop, and remove power.

7. Remove the housing cover opposite the field terminal side. Do not remove the instrument cover in explosive atmospheres when the circuit is live.

8. Slide the security and alarm switches into the preferred position using a small screwdriver.

9. Reattach the transmitter cover. The cover must be fully engaged to comply with explosion-proof requirements.

Figure 2-8: Transmitter Electronics Board

<table>
<thead>
<tr>
<th>Without LCD display</th>
<th>With LCD/LOI display</th>
</tr>
</thead>
</table>

CAUTION

Over rotation of housing may cause damage to module communication cable.
2.3 Connect the wiring and power up

Figure 2-9: Transmitter Wiring Diagrams (4–20 mA)

A. 24 Vdc supply
B. \( R_l \geq 250 \)
C. Current meter (optional)

Shielded twisted pair cable should be used for best results. Use 24 AWG or larger wire that does not exceed 5,000 ft. (1500 m) in length. 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.
Installation of the transient protection terminal block does not provide transient protection unless the Rosemount 3051 case is properly grounded.

Do not run signal wiring in conduit or open trays with power wiring, or near heavy electrical equipment.

Do not connect the powered signal wiring to the test terminals. Power could damage the test diode in the terminal block.

Use the following steps to wire the transmitter:

**Procedure**

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. Ground housing to fulfill local grounding regulations.
4. Ensure proper grounding. It is important that 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
5. If transient protection is needed, refer to "Grounding for transient terminal block" for grounding instructions.
6. Plug and seal unused conduit connections.
7. Replace the housing cover.
2.3 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 through step 7. When the transmitter is properly wired, refer to Figure 2-10 for internal and external transient grounding locations.

2.4 Verifying configuration

Verify the configuration using any HART capable configuration tool. Configuration instructions for a Field Communicator are included in this step. See Rosemount 3051 Reference Manual for configuration instructions using AMS Device Manager.

2.4.1 Verifying configuration with a Field Communicator

A Rosemount 3051 DD must be installed on the Field Communicator to verify configuration. Fast Key sequences for the latest DD are shown in Table 2-2. For Fast Key sequences using legacy DD’s, contact your local Emerson representative.
Note
Emerson recommends installing the latest DD to access the complete functionality. Visit Fieldcommunicator.com for information on updating the DD Library.

Procedure
Verify device configuration using the Fast Key sequences in Table 3.

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

b) A (7) indicates availability only in HART Revision 7 mode.

Table 2-2:

<table>
<thead>
<tr>
<th>Function</th>
<th>Fast Key sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HART 7</td>
</tr>
<tr>
<td>P Alarm and Saturation Levels</td>
<td>2, 2, 2, 5, 7</td>
</tr>
<tr>
<td>P Damping</td>
<td>2, 2, 1, 1, 5</td>
</tr>
<tr>
<td>P Range Values</td>
<td>2, 2, 2</td>
</tr>
<tr>
<td>P Tag</td>
<td>2, 2, 7, 1, 1</td>
</tr>
<tr>
<td>P Transfer Function</td>
<td>2, 2, 1, 1, 6</td>
</tr>
<tr>
<td>P Units</td>
<td>2, 2, 1, 1, 4</td>
</tr>
<tr>
<td>Burst Mode</td>
<td>2, 2, 5, 3</td>
</tr>
<tr>
<td>Custom Display Configuration</td>
<td>2, 2, 4</td>
</tr>
<tr>
<td>Date</td>
<td>2, 2, 7, 1, 4</td>
</tr>
<tr>
<td>Descriptor</td>
<td>2, 2, 7, 1, 5</td>
</tr>
<tr>
<td>Digital to Analog Trim (4–20 mA output)</td>
<td>3, 4, 2</td>
</tr>
<tr>
<td>Disable Configuration Buttons</td>
<td>2, 2, 6, 3</td>
</tr>
<tr>
<td>Rerange with Keypad</td>
<td>2, 2, 2, 1</td>
</tr>
<tr>
<td>Loop Test</td>
<td>3, 5, 1</td>
</tr>
<tr>
<td>Lower Sensor Trim</td>
<td>3, 4, 1, 2</td>
</tr>
<tr>
<td>Message</td>
<td>2, 2, 7, 1, 6</td>
</tr>
<tr>
<td>Scaled D/A Trim (4–20 mA output)</td>
<td>3, 4, 2</td>
</tr>
<tr>
<td>Sensor Temperature/Trend (Rosemount 3051S)</td>
<td>3, 3, 3</td>
</tr>
</tbody>
</table>
Table 2-2: (continued)

<table>
<thead>
<tr>
<th>Function</th>
<th>HART 7</th>
<th>HART 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Sensor Trim</td>
<td>3, 4, 1, 1</td>
<td>3, 4, 1, 1</td>
</tr>
<tr>
<td>Digital Zero Trim</td>
<td>3, 4, 1, 3</td>
<td>3, 4, 1, 3</td>
</tr>
<tr>
<td>Password</td>
<td>2, 2, 6, 5</td>
<td>2, 2, 6, 4</td>
</tr>
<tr>
<td>Scaled Variable</td>
<td>3, 2, 2</td>
<td>3, 2, 2</td>
</tr>
<tr>
<td>HART revision 5 to HART Revision 7 switch</td>
<td>2, 2, 5, 2, 3</td>
<td>2, 2, 5, 2, 3</td>
</tr>
<tr>
<td>P Long Tag</td>
<td>2, 2, 7, 1, 2</td>
<td>N/A</td>
</tr>
<tr>
<td>P Find Device</td>
<td>3, 4, 5</td>
<td>N/A</td>
</tr>
<tr>
<td>P Simulate Digital Signal</td>
<td>3, 4, 5</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note
See Figure 13 on page 16 to confirm external button functionality.

2.4.2 Verify configuration with LOI

The optional LOI can be used for commissioning the device. The LOI is a two button design with internal and external buttons. The internal buttons are located on the display of the transmitter, while the external buttons are located 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 2-3 and Figure 2-12 for button operation and menu information.

Figure 2-11: Internal and External LOI Buttons

A. Internal buttons
B. External buttons
Table 2-3: LOI Button Operation

<table>
<thead>
<tr>
<th>Button</th>
<th>Left</th>
<th>Right</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Figure 2-12: LOI Menu

2.4.3 Switch HART revision mode

If the HART configuration tool is not capable of communicating with HART Revision 7, the Rosemount 3051 will load a generic menu with limited capability. The following procedures will switch the HART revision mode from the generic menu:

Procedure

*Manual Setup>Device Information>Identification>Message*

a) To change to HART Revision 5, Enter: “HART5” in the Message field

b) To change to HART Revision 7, Enter: “HART7” in the Message field
2.5 Trim the transmitter

Devices are calibrated by the factory. Once installed, it is recommended to perform a zero trim on gage and differential pressure transmitters to eliminate error due to mounting position or static pressure effects. A zero trim can be performed using either a Field Communicator or configuration buttons.

For instructions using AMS Device Manager, see the Rosemount 3051 Reference Manual.

Procedure

1. Choose your trim procedure.
   a) Analog zero trim – Sets the analog output to 4 mA.

2. Also referred to as a “rerange,” it sets the lower range value (LRV) equal to the measured pressure.

3. The display and digital HART output remains unchanged.
   a) Digital zero trim – Recalibrates the sensor zero.

4. The LRV is unaffected. The pressure value will be zero (on display and HART output). 4 mA point may not be at zero.

5. This requires that the factory calibrated zero pressure is within a range of 3% of the URV \([0 + 3\% \times URV]\).

Example: \(URV = 250 \text{ inH}_2\text{O}\) Applied Zero Pressure = \(+ 0.03 \times 250 \text{ inH}_2\text{O}\) = \(+ 7.5 \text{ inH}_2\text{O}\) (compared to factory settings) values outside this range will be rejected by the transmitter.

2.5.1 Trimming with a Field Communicator

Procedure

1. Connect the Field Communicator. See "Connect the wiring and power up" for instructions.

2. Follow the HART menu to perform the desired zero trim.
Table 2-4: Zero Trim Fast Keys

<table>
<thead>
<tr>
<th>Fast Key sequence</th>
<th>Analog zero (Set 4 mA)</th>
<th>Digital zero</th>
</tr>
</thead>
<tbody>
<tr>
<td>3, 4, 2</td>
<td>3, 4, 1, 3</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2-13: External Configuration Buttons

A. LOI
B. Analog zero and span
C. Digital zero
D. Configuration buttons

Use the following procedures to perform a zero trim:

Perform trim with LOI (option M4)

3. Set the transmitter pressure.
4. See Figure 2-12 for the operating menu.
   a) Perform an analog zero trim by selecting Rerange.
   b) Perform a digital zero trim by selecting Zero Trim.
3 Safety instrumented systems installation

For safety certified installations, refer to Reference Manual for installation procedure and system requirements.
4 Product Certifications

4.1 Rosemount 3051D Pressure Transmitter

Rev 2.10

European Directive Information

A copy of the EC Declaration of Conformity can be found at the end of the Quick Start Guide. The most recent revision of the EC Declaration of Conformity can be found at Emerson.com/Rosemount.

Europe

E8 ATEX Flameproof and Dust

Standards Certificate: DEKRA12ATEX0212X (Ex d); Baseefa12ATEX0191 (Ex ta)


Markings

$\text{II 1/2 G Ex db IIC T6/T5 Ga/Gb, T6}(-50 \, ^{\circ}\text{C} \leq T_a \leq +65 \, ^{\circ}\text{C}),$

$\text{T5}(-50 \, ^{\circ}\text{C} \leq T_a \leq +70 \, ^{\circ}\text{C})$

$\text{II 1 D Ex ta III C T95 \, ^{\circ}\text{C} T}$

$105 \, ^{\circ}\text{C} \, \text{Da} (-20 \, ^{\circ}\text{C} \leq T_a \leq +85 \, ^{\circ}\text{C}) \quad V_{\text{max}} = 42.4 \, \text{Vdc}$

Table 4-1: Process Temperature

<table>
<thead>
<tr>
<th>Temperature class</th>
<th>Process temperature</th>
<th>Ambient temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>T6</td>
<td>-50 to +65 °C</td>
<td></td>
</tr>
<tr>
<td>T5</td>
<td>-50 to +70 °C</td>
<td></td>
</tr>
</tbody>
</table>

Special Conditions for Safe Use (X):

1. This device contains a thin wall diaphragm less than 1mm thickness that forms a boundary between zone 0 (process connection) and zone 1 (all other parts of the equipment). The model code and datasheet are to be consulted for details of the diaphragm material. 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. Flameproof joints are not intended for repair.
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** Certificate: Baseefa12ATEX0189X; Baseefa12ATEX0191


**Markings** II 1 G Ex ia IIC T5/T4 Ga, T5(−60 °C ≤ T_a ≤ +40 °C), T4(−60 °C ≤ T_a ≤ +70 °C) II 1 D Ex ta IIIC T95 °C T_500 10°C Da (−20 °C ≤ T_a ≤ +85 °C)

<table>
<thead>
<tr>
<th>Table 4-2: Input Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameters</td>
</tr>
<tr>
<td>Voltage U_i</td>
</tr>
<tr>
<td>Current I_i</td>
</tr>
<tr>
<td>Power P_i</td>
</tr>
<tr>
<td>Capacitance C_i</td>
</tr>
<tr>
<td>Inductance L_i</td>
</tr>
</tbody>
</table>

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

1. The equipment is not capable of withstanding the 500 V insulation test required by clause 6.3.13 of EN60079-11:2012. 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.

3. Some variants of the equipment have reduced markings on the nameplate. Refer to the Certificate for full equipment marking.

N1 ATEX Type n and Dust

**Certificate** Certificate: Baseefa12ATEX0190X; Baseefa12ATEX0191


**Markings** II 3 G Ex nA IIC T5 Gc (−40 °C ≤ T_a ≤ +70 °C), II 1 D Ex ta III C T95 °C T_500 105 °C Da (−20 °C ≤ T_a ≤ +85 °C)

**Special Conditions for Safe Use (X):**
1. The equipment is not capable of withstanding the 500V insulation test required by clause 6.5.1 of EN60079-15:2010. This must be taken into account when installing the equipment.

2. Some variants of the equipment have reduced markings on the nameplate. Refer to the Certificate for full equipment marking.

**International**

**E7 IECEx Flameproof and Dust**

**Certificate**  IECEx DEK 12.0067X (Ex d); IECEx BAS 12.0109 (Ex ta)


**Markings**  Ex db IIC T6/T5 Ga/Gb, T6 (–50 °C ≤ Ta ≤ +65 °C), T5 (–50 °C ≤ Ta ≤ +70 °C); Ex ta IIIIC T95 °C T500 105 °C Da (–20 °C ≤ Ta ≤ +85 °C) Vmax = 42.4 Vdc

<table>
<thead>
<tr>
<th>Temperature class</th>
<th>Process temperature</th>
<th>Ambient temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>T6</td>
<td>−50 to +65 °C</td>
<td></td>
</tr>
<tr>
<td>T5</td>
<td>−50 to +70 °C</td>
<td></td>
</tr>
</tbody>
</table>

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

1. This device contains a thin wall diaphragm less than 1mm thickness that forms a boundary between zone 0 (process connection) and zone 1 (all other parts of the equipment). The model code and datasheet are to be consulted for details of the diaphragm material. 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. Flameproof joints are not intended for repair.

3. Some variants of the equipment have reduced markings on the nameplate. Refer to the Certificate for full equipment marking.

4. **I7 IECEx Intrinsic Safety Certificate:** IECEx BAS 12.0107X Standards: IEC60079-0:2011, IEC60079-11:2011 Markings: Ex ia IIC T5/T4 Ga, T5 (–60 °C ≤ Ta ≤ +40 °C), T4 (–60 °C ≤ Ta ≤ +70 °C)

5. **Table 4-3: Input Parameters**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>HART</th>
</tr>
</thead>
</table>
Table 4-3: Input Parameters (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage $U_i$</td>
<td>30 V</td>
</tr>
<tr>
<td>Current $I_i$</td>
<td>200 mA</td>
</tr>
<tr>
<td>Power $P_i$</td>
<td>0.9 W</td>
</tr>
<tr>
<td>Capacitance $C_i$</td>
<td>0.012 µF</td>
</tr>
<tr>
<td>Inductance $L_i$</td>
<td>0 mH</td>
</tr>
</tbody>
</table>

Special Conditions for Safe Use (X)

1. The equipment is not capable of withstanding the 500V insulation test required by clause 6.3.13 of IEC60079-11:2011. 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.

N7 IECEx Type n

**Certificate**  
IECEx BAS 12.0108X

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

**Markings**  
Ex nA IIC T5 Gc ($-40 \, ^\circ C \leq T_a \leq +70 \, ^\circ C$)

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.

China

E3 China Flameproof

**Certificate**  
GYJ18.1023X

**Standards**  
GB3836.1-2010, GB3836.2-2010, GB3836.20-2010

**Markings**  
Ex d IIC T6/T5 Ga/Gb

Special Conditions for Safe Use (X):

1. The relation between ambient temperature range and temperature class is as follows:

<table>
<thead>
<tr>
<th>$T_a$</th>
<th>Temperature class</th>
</tr>
</thead>
<tbody>
<tr>
<td>$-50 \sim +70 , ^\circ C$</td>
<td>T5</td>
</tr>
</tbody>
</table>
When used in a combustible dust environment, the maximum ambient temperature is 70 °C.

2. The earth connection facility in the enclosure should be connected reliably.

3. Cable entry certified by notified body with type of protection Ex d IIC in accordance with GB3836.1-2010 and GB3836.2-2010, 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.

4. Obey the warning “Keep tight when the circuit is alive.”

5. End users are not permitted to change any internal components.

6. During installation, use and maintenance of this product, observe the following standards: GB3836.13-2013 “Electrical apparatus for explosive gas atmospheres Part 13: Repair and overhaul for apparatus used in explosive gas atmospheres” GB3836.15-2000 “Electrical apparatus for explosive gas atmospheres Part 15: Electrical installations in hazardous area (other than mines)” GB3836.16-2006 “Electrical apparatus for explosive gas atmospheres Part 16: Inspection and maintenance of electrical installation (other than mines)” GB50257-2014 “Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering”.

I3 China Intrinsic Safety

Certificate       GYJ17.1509X
Standards       GB3836.1-2010, GB3836.4-2010, GB3836.20-2010
Markings    Ex ia IIC T5/T4 Ga

Special Conditions for Safe Use (X):

1. The enclosure may contain light metal, attention should be taken to avoid ignition hazard due to impact or friction when used in Zone 0.

2. This apparatus is not capable of withstanding the 500 V r.m.s insulation test required by Clause 6.3.12 of GB3836.4-2010.

3. N3 China Type n Certificate: GYJ17.1510X Standards: GB3836.1-2010, GB3836.8-2014 Markings: Ex nA IIC T5 Gc

N3 China Type n

Certificate       GYJ17.1510X
Standards GB3836.1-2010, GB3836.8-2014
Markings Ex nA IIC T5 Gc

Special Condition for Safe Use (X):

1. This apparatus is not capable of withstanding the 500V r.m.s insulation test required by Clause 6.5.1 of GB3836.8-2014.

Combinations

K7 Combination of E7, I7, and N7
K8 Combination of E8, I1, and N1

4.2 Rosemount 3051G Pressure Transmitter

European Directive Information

A copy of the EC Declaration of Conformity can be found at the end of the Quick Start Guide. The most recent revision of the EC Declaration of Conformity can be found at Emerson.com/Rosemount.

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).

North America

Certificate E5 USA Explosionproof (XP) and Dust-Ignitionproof (DIP) Certificate: 0T2H0.AE
Markings XP CL I, DIV 1, GP B, C, D; DIP CL II, DIV 1, GP E, F, G; CL III; T5(−40 °C ≤ T_a ≤ +85 °C); Factory Sealed; Type 4X

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

Certificate 1Q4A4.AX
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; Temp code T4; Type 4x; Factory Sealed

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


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


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)

Europe

E8 ATEX Flameproof and Dust

Certificate KEMA97ATEX2378X; BAS01ATEX1427X

Markings: Ex II 1/2 G Ex db IIC T6...T4 Ga/Gb, T6(−60 °C ≤ Ta ≤ +70 °C), T5/T4(−60 °C ≤ Ta ≤ +80°C); Ex II 1 D Ex t IIC T50 °C T500 60 °C Da

<table>
<thead>
<tr>
<th>Temperature class</th>
<th>Process connection temperature</th>
<th>Ambient temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>T6</td>
<td>−60 to +70 °C</td>
<td>−60 to +70 °C</td>
</tr>
<tr>
<td>T5</td>
<td>−60 to +80 °C</td>
<td>−60 to +80 °C</td>
</tr>
<tr>
<td>T4</td>
<td>−50 to +120 °C</td>
<td></td>
</tr>
</tbody>
</table>

Special Conditions for Safe Use (X):

1. This device contains a thin wall diaphragm less than 1 mm thickness that forms a boundary between zone 0 (process connection) and zone 1 (all other parts of the equipment). The model code and datasheet are to be consulted for details of the diaphragm material. 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. Flameproof joints are not intended for repair.

3. Non-standard paint options may cause risk from electrostatic discharge. Avoid installations that could cause electrostatic build-up on painted surfaces, and only clean the painted surfaces with a damp cloth. If paint is ordered through a special option code, contact the manufacturer for more information.

4. Appropriate cable, glands and plugs need to be suitable for a temperature of 5 °C greater than maximum specified temperature for location where installed.

5. The user must ensure that the maximum rated voltage and current (36 volts, 24 milliamps, d.c.) are not exceeded. All connections to other apparatus or associated apparatus shall have control over this voltage and current equivalent to a category ‘ib’ circuit according to EN 50020.

6. Cable entries must be used which maintain the ingress protection of the enclosure to at least IP66.

7. Unused cable entries must be filled with suitable blanking plugs which maintain the ingress protection of the enclosure to at least IP66.

8. Cable entries and blanking plugs must be suitable for the ambient range of the apparatus and capable of withstanding a 7J impact test.
9. Rosemount 2088/2090 sensor module must be securely screwed in place to maintain the ingress protection of the enclosure.

10. 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** BAS00ATEX1166X  
**Markings**  

![II 1 G Ex ia IIC T4 Ga (−55 °C ≤ Ta ≤ +70 °C)]

**Table 4-4: Input Parameters**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>HART</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage $U_i$</td>
<td>30 V</td>
</tr>
<tr>
<td>Current $I_i$</td>
<td>200 mA</td>
</tr>
<tr>
<td>Power $P_i$</td>
<td>0.9 W</td>
</tr>
<tr>
<td>Capacitance $C_i$</td>
<td>0.012 µF</td>
</tr>
<tr>
<td>Inductance $L_i$</td>
<td>0 mH</td>
</tr>
</tbody>
</table>

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

1. When fitted with a transient suppression terminal block, the equipment is not capable of withstanding the 500 V insulation test. 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 or abrasion if located in a Zone 0 area.

**N1 ATEX Type n and Dust**

**Certificate** BAS00ATEX3167X; BAS01ATEX1427X  
**Markings**  

![II 3 G Ex nA IIC T5 Gc (−40 °C ≤ Ta ≤ +70 °C); II 1 D Ex t IIC T50 °C T500 60 °C Da]

**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.

International

E7 IECEx Flameproof

Certificate  IECEx KEM 06.0021X
Markings  Ex db IIC T6…T4 Ga/Gb T6(–60 °C ≤ Ta ≤ +70 °C), T5/T4(–60 °C ≤ Ta ≤ +80°C)

<table>
<thead>
<tr>
<th>Temperature class</th>
<th>Process connection temperature</th>
<th>Ambient temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>T6</td>
<td>–60 to +70 °C</td>
<td>–60 to +70 °C</td>
</tr>
<tr>
<td>T5</td>
<td>–60 to +80 °C</td>
<td>–60 to +80 °C</td>
</tr>
<tr>
<td>T4</td>
<td>–50 to +120 °C</td>
<td></td>
</tr>
</tbody>
</table>

Special Conditions for Safe Use (X):

1. This device contains a thin wall diaphragm less than 1 mm thickness that forms a boundary between zone 0 (process connection) and zone 1 (all other parts of the equipment). The model code and datasheet are to be consulted for details of the diaphragm material. 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. Flameproof joints are not intended for repair.

3. Non-standard paint options may cause risk from electrostatic discharge. Avoid installations that could cause electrostatic build-up on painted surfaces, and only clean the painted surfaces with a damp cloth. If paint is ordered through a special option code, contact the manufacturer for more information.

4. Appropriate cable, glands and plugs need to be suitable for a temperature of 5 °C greater than maximum specified temperature for location where installed.

I7 IECEx Intrinsic Safety

Certificate  IECEx BAS 12.0071X
Markings  Ex ia IIC T4 Ga (–55 °C ≤ Ta ≤ +70 °C)
Table 4-5: Entity Parameters

<table>
<thead>
<tr>
<th>Parameters</th>
<th>HART</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage $U_i$</td>
<td>30 V</td>
</tr>
<tr>
<td>Current $I_i$</td>
<td>200 mA</td>
</tr>
<tr>
<td>Power $P_i$</td>
<td>0.9 W</td>
</tr>
<tr>
<td>Capacitance $C_i$</td>
<td>0.012 µF</td>
</tr>
<tr>
<td>Inductance $L_i$</td>
<td>0 mH</td>
</tr>
</tbody>
</table>

Special Conditions for Safe Use (X):

1. If the apparatus is fitted with optional 90V 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.

N7 IECEx Type n

Certificate  
IECEx BAS 12.0072X

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

Markings  
Ex nA IIC T5 Ga ($-40 \degree C \leq T_a \leq +70 \degree C$)

Special Conditions for Safe Use (X):

1. When fitted with a transient suppression terminal block, the Rosemount 2088 is incapable of passing the 500 V isolation test. This must be taken into account when installing the apparatus.

Brazil

E2 INMETRO Flameproof

Certificate  
UL-BR 15.0728X

Standards  

Markings  
Ex db IIC T6...T4 Ga/Gb T4/T5 ($-60 \degree C \leq T_a \leq +80 \degree C$), T6($-60 \degree C \leq T_a \leq +70 \degree C$)

Special Conditions for Safe Use (X):

1. This device contains a thin wall diaphragm less than 1 mm thickness that forms a boundary between zone 0 (process connection) and zone
1 (all other parts of the equipment). The model code and datasheet are to be consulted for details of the diaphragm material. 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. Flameproof joints are not intended for repair.

3. Non-standard paint options may cause risk from electrostatic discharge. Avoid installations that could cause electrostatic build-up on painted surfaces, and only clean the painted surfaces with a damp cloth. If paint is ordered through a special option code, contact the manufacturer for more information.

China

E3 China Flameproof

**Certificate**

GYJ15.1300X

**Standards**

GB3836.1-2010, GB3836.2-2010

**Markings**

Ex d IIB+H₂ T5 Gb

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

1. Ambient temperature range: –20 °C ~ +85 °C.

2. The earth connection facility in the enclosure should be connected reliably.

3. During installation, there should be no mixture harmful to housing.

4. During installation in hazardous location, Cable glands and blanking plugs, certified by state-appointed inspection bodies with Ex d IIC Gb type of protection should be used. Redundant cable entries should be blocked with blanking plugs.

5. During installation, use and maintenance of the product in explosive gas atmosphere, observe the warning “Don't open the cover when the circuit is alive”.

6. End users is not permitted to change any components insides, but to settle the problem in conjunction with manufacturer to avoid damage to the product.

an maintenance of electrical installation (other than mines)” GB50257-2014 “Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering”.

I3 China Intrinsic Safety

**Certificate**  GYJ15.1301X  
**Standards**  GB3836.1-2010, GB3836.4-2010, GB3836.20-2010  
**Markings**  Ex ia IIC T4 Ga (−55 °C ≤ T_a ≤ +70 °C)

Special Conditions for Safe Use (X):
1. The enclosure may contain 1 Non-metallic material, attention should be taken to avoid ignition hazard due to impact or friction when used in Zone 0.
2. When transient protection board is chosen (Option Code T1), this apparatus is not capable of withstanding the 500 V r.m.s insulation test required by Clause 6.3.12 of GB3836.4-2010.

N3 China Type n

**Certificate**  GYJ13.1305X  
**Standards**  GB3836.1-2010, GB3836.8-2003  
**Markings**  Ex nA IIC T5 Gc (−40 °C ≤ T_a ≤ +70 °C)

Special Conditions for Safe Use (X):
1. When transient protection board is chosen (option code T1), this apparatus is not capable of withstanding the 500 V r.m.s insulation test required by Clause 6.3.12 of GB3836.4-2010.

**Combinations**
K3 Combination of E3 and I3  
K5 Combination of E5 and I5  
K6 Combination of C6, E8, and I1  
K8 Combination of E8, I1, and N1  
KB Combination of E5, I5, and C6  
KD Combination of E8, I1, E5, I5, and C6

**Conduit Plugs and Adapters**
IECEEx Flameproof and Increased Safety

**Certificate**  IECEx FMG 13.0032X

Markings: Ex de IIC Gb

ATEX Flameproof and Increased Safety

Certificate: FM13ATEX0076X


Markings: Ex II 2 G Ex de IIC Gb

Table 4-6: Conduit Plug Thread Sizes

<table>
<thead>
<tr>
<th>Thread</th>
<th>Identification mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>M20 x 1.5</td>
<td>M20</td>
</tr>
<tr>
<td>½–14 NPT</td>
<td>½ NPT</td>
</tr>
</tbody>
</table>

Table 4-7: Thread Adapter Thread Sizes

<table>
<thead>
<tr>
<th>Male thread</th>
<th>Identification mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>M20 x 1.5–6g</td>
<td>M20</td>
</tr>
<tr>
<td>½–14 NPT</td>
<td>½–14 NPT</td>
</tr>
<tr>
<td>¾–14 NPT</td>
<td>¾–14 NPT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Female thread</th>
<th>Identification mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>M20 x 1.5–6H</td>
<td>M20</td>
</tr>
<tr>
<td>½–14 NPT</td>
<td>½–14 NPT</td>
</tr>
<tr>
<td>G½</td>
<td>G½</td>
</tr>
</tbody>
</table>

Special Conditions for Safe Use (X):

1. When the thread adapter or blanking plug 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. G½ thread forms are only acceptable for existing (legacy) equipment installations.
4.3 EU Declaration of Conformity

We,

Rosemount Inc.
8200 Market Boulevard
Chanhassen, MN 55317-9685
USA

declare under our sole responsibility that the product,

Rosemount™ Models 3051D and 3051G 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 Community 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 Community notified body certification, as shown in the attached schedule.

(signature)
Vice President of Global Quality
(function name - printed)
Chris LaPoint
(name - printed)
1-Feb-19; Shakopee, MN USA
(date of issue)
EU Declaration of Conformity
No: RMD 1089 Rev. I

EMC Directive (2014/30/EU)
All Models 3051D and 3051G Pressure Transmitters
EN 61326-1:2013
EN 61326-2-3:2013

PED Directive (2014/68/EU)
Models 3051DP2, 3, 4, 5 with C-276 Isolators or options P7 or P9 Pressure Transmitters
Module H Conformity Assessment
Other Standards Used: ANSI/ISA61010-1:2004
Note – previous PED Certificate No. 59552-2009-CE-HOU-DNV
All other model 3051D and 3051G Pressure Transmitters
Sound Engineering Practice
Transmitter Attachments: Diaphragm Seal - Process Flange - Manifold
Sound Engineering Practice

ATEX Directive (2014/34/EU)
Model 3051D Pressure Transmitter
Baseefa12ATEX0189X - Intrinsic Safety Certificate
Equipment Group II Category 1 G
Ex ia IIC T4 Ga (-60°C ≤ Ta ≤ +70°C)
Ex ia IIC T5 Ga (-60°C ≤ Ta ≤ +40°C)
Harmonized Standards Used:

Baseefa12ATEX0190X - Type n Certificate
Equipment Group II Category 3 G
Ex nA IIC T5 Gc (-40°C ≤ Ta ≤ +70°C)
Harmonized Standards Used:
EU Declaration of Conformity
No: RMD 1089 Rev. I

Baseefa12ATEX0191 - Dust Certificate
Equipment Group II Category 1 D
Ex ta IIC T95°C Tso105°C Da (-20°C ≤ Ta ≤ +85°C)
Harmonized Standards Used:

DEKRA12ATEX0212X - Flameproof Certificate
Equipment Group II Category 1/2 G
Ex db IIC T6 Ga/Gb (-50°C ≤ Ta ≤ +65°C)
T5 Ga/Gb (-50°C ≤ Ta ≤ +70°C)
Harmonized Standards Used:

Model 3051G Pressure Transmitter

BAS00ATEX1166X - Intrinsic Safety Certificate
Equipment Group II Category 1 G
Ex ia IIC T5 Ga (-55°C ≤ Ta ≤ +40°C)
Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +70°C)
Harmonized Standards Used:

BAS00ATEX3167X - Type n Certificate
Equipment Group II Category 3 G
Ex nA IIC T5 Ge (-40°C ≤ Ta ≤ 70°C)
Harmonized Standards Used:

BAS01ATEX1427 - Dust Certificate
Equipment Group II Category 1 D
Ex tiIIC T50°C Tso60°C Da
Harmonized Standards Used:

KEMA97ATEX2378X Flameproof Certificate
Equipment Group II Category 1/2 G
Ex db IIC T6...T4 Ga/Gb
Harmonized Standards Used:
EU Declaration of Conformity
No: RMD 1089 Rev. 1

PED Notified Body

DNV GL Business Assurance Italia S.r.l. [Notified Body Number: 0496]
Via Energy Park, 14, N-20871
Vimercate (MB), Italy

Note – equipment manufactured prior to 20 October 2018 may be marked with previous PED Notified Body number: previous PED Notified Body information was as follows:
Det Norske Veritas (DNV) [Notified Body Number: 0575]
Veritasveien 1, N-1322
Hovik, Norway

ATEX Notified Bodies for EC Type Examination Certificate

DEKRA [Notified Body Number: 0344]
Meander 1051, 6825 MJ Arnhem
P.O. Box 5185, 6802 ED Arnhem
The Netherlands
Postbank 6794687

SGS FIMCO OY [Notified Body Number: 0598]
P.O. Box 30 (Särkiniementie 3)
00211 HELSINKI
Finland

ATEX Notified Body for Quality Assurance

SGS FIMCO OY [Notified Body Number: 0598]
P.O. Box 30 (Särkiniementie 3)
00211 HELSINKI
Finland
## 4.4 China RoHS table

<table>
<thead>
<tr>
<th>部件名称 / Part Name</th>
<th>有害物质 / Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>电子组件 / Electronics Assembly</td>
<td>铅 (Pb)</td>
</tr>
<tr>
<td>壳体组件 / Housing Assembly</td>
<td>X</td>
</tr>
<tr>
<td>传感器组件 / Sensor Assembly</td>
<td>X</td>
</tr>
</tbody>
</table>

本表格依据SJ/T11364的规定而制作。
This table is proposed in accordance with the provision of SJ/T11364.

O: 代表该部件的所用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: 代表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.