

Rosemount™ Smart Pressure Gauge



This guide provides basic guidelines for Rosemount Smart Pressure Gauges. It does not provide instructions for configuration, diagnostics, maintenance, service, troubleshooting, or intrinsically safe (I.S.) installations. Refer to the [Rosemount Smart Pressure Gauge Reference Manual](#) for more instruction. The manual and this guide are also available [electronically](#).

NOTICE

Shipping considerations

The device is shipped with the battery installed. Each device contains one "D" size primary lithium-thionyl chloride battery. Primary lithium batteries are regulated in transportation by the U.S. Department of Transportation, and are also covered by IATA (International Air Transport Association), ICAO (International Civil Aviation Organization), and ARD (European Ground Transportation of Dangerous Goods). It is the responsibility of the shipper to ensure compliance with these or any other local requirements. Consult current regulations and requirements before shipping.

⚠ 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. Ensure device is installed in accordance with intrinsically safe or non-incendive field practices.

Electrical shock could cause death or serious injury.

Device must be installed to ensure a minimum antenna separation distance of 8 in. (20 cm) from all persons. Care must be taken during transportation of device to prevent electrostatic charge build-up.

Process leaks could result in death or serious injury.

Handle the device carefully.

Failure to follow these installation guidelines could result in death or serious injury.

Ensure only qualified personnel perform the installation.

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1 Required equipment

Figure 1-1: Anti-seize paste or PTFE tape (for NPT threaded connection)

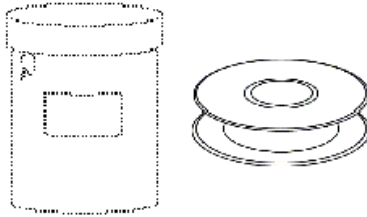
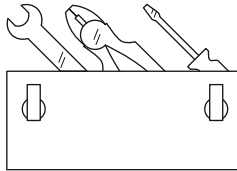





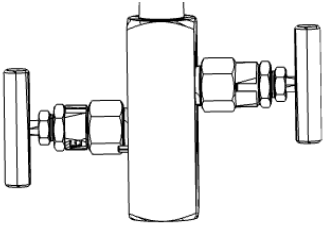
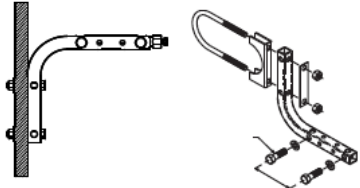
Figure 1-2: Standard tools (e.g., screwdriver, wrench, pliers)

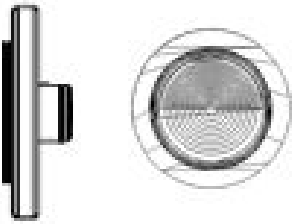
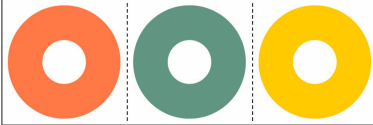


2 What's in the box

 <p>A Rosemount Smart Pressure Gauge with a blue protective cap and a white face. The gauge has two scales: an outer scale from 0 to 100 psi and an inner scale from 0 to 7. The needle is pointing to 50 on the outer scale and 3 on the inner scale. The text 'ROSEMOUNT Smart Pressure Gauge' and 'psi' are visible on the face.</p>	<p>Quick Start Guide 00825-0100-4-AS; Rev. AA September 2017</p> <p>Rosemount™ Smart Pressure Gauge</p>  <p>A smaller version of the Rosemount Smart Pressure Gauge, identical in design to the one in the first image.</p>  <p>EMERSON</p>
<p>Smart Pressure Gauge</p>	<p>Quick Start Guide</p>

The following options are also available and will ship with the Rosemount Smart Pressure Gauge if ordered.

 <p>A technical drawing of the Rosemount 306 Integral Manifold, showing a central cylindrical body with two side ports and two end ports.</p>	 <p>A technical drawing of the B4 bracket, showing a curved mounting bracket with two side ports and a detailed view of the mounting hardware.</p>
<p>Rosemount 306 Integral Manifold (model code S5)</p>	<p>B4 bracket (model code B4)</p>

	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>PRODUCT CERTIFICATION</p> <hr style="width: 10%; margin: 0 auto;"/> </div>
<p>Rosemount 1199 Seal(model code S1)</p>	<p>Product Certification</p>
	<p>Q4: Calibration Cert QG: Calibration Cert and GOST Verification Cert QP: Calibration Cert and Tamper Evident Seal Q8: Material Traceability cert per EN 102043.1 Q15: Cert of Compliance to NACE MR0175/ISO 15156 for wetted materials Q25: Cert of Compliance to NACE MR00103 for wetted materials</p>
<p>Normal range Indication (model code LK)</p>	<p>Product Certification model codes</p>

3 **Optional: Power/device check**

The device is designed to be installation-ready.

Procedure

1. To check device battery prior to installation, perform [Turn on device](#)
2. Slide the ON/OFF switch to the OFF position until ready for use.

4 Optional: Normal range indication option

Important

- The stickers are intended to be installed on the dial only and should not be applied on the inside or outside of the housing cover.
 - Stickers should be applied in an environment where the ambient temperature is above 50 °F (10 °C)
-

Procedure

1. Modify each of the stickers to desired size.
2. Remove housing cover.
3. Slide ON/OFF switch to the OFF position and wait for the LED to stop flashing.
4. Gently move the needle in the clockwise direction until it is pointing at the red X.

NOTICE

Equipment Damage

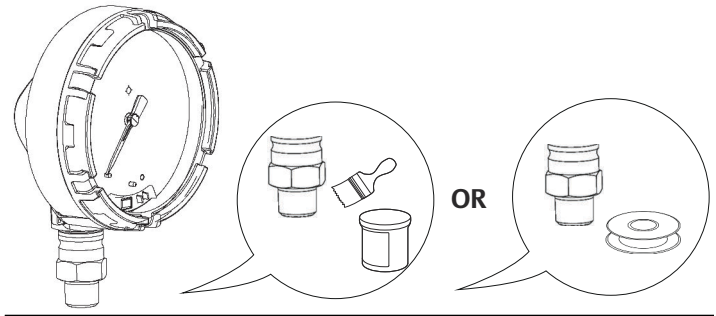
Use caution as the electronics assembly is connected to the needle.

5. Remove any debris on the dial, so it does not become trapped under the sticker.
6. Peel back the white paper backing of the sticker.
7. Slowly lower the sticker onto the surface of the dial in the desired location and rub it in place firmly. Repeat steps [Step 6](#) and [Step 7](#) until desired indication locations are set.
Moving the sticker after initial contact is not recommended as this decreases the amount of adhesive on the back of the sticker.
8. Slide ON/OFF switch to the ON position.
9. Replace housing cover.

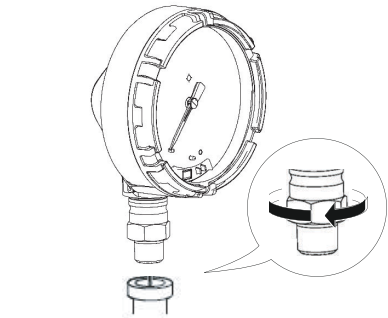
5 Installation procedure

Procedure

1. Seal and protect threads



2. Mount device



Note

Use wrench on flats, not on housing.

5.1 Mounting orientation

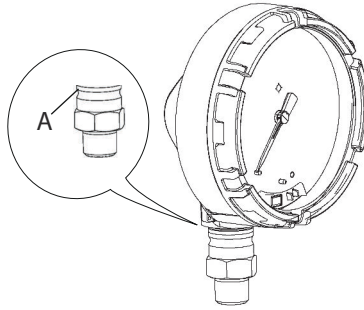
The low side pressure port (atmospheric reference) is located in the neck of the device behind the housing.

The vent path is between the housing and sensor.

⚠ CAUTION

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

Figure 5-1: Low Side Pressure Port



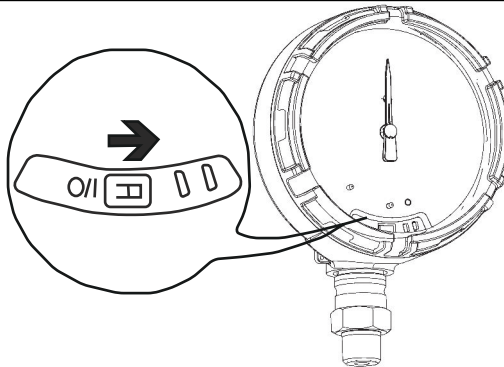
A. Low side pressure port (atmospheric reference)

5.2 Turn on device

Check to ensure the device and battery are working properly.

Procedure

1. Twist the cover counterclockwise to remove it.
2. Slide the OFF/ON switch to the ON position to initiate the power sequence.



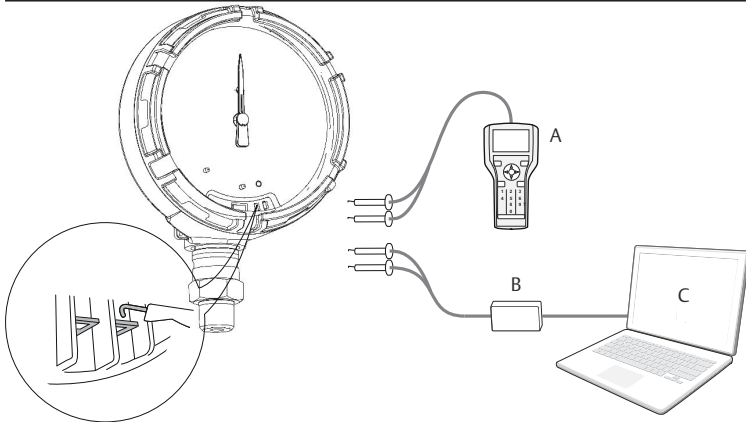
Note

During the power sequence, the dial tests full range of motion and LED flashes amber.

- Once the power sequence ends, verify that the LED flashes green. The LED may display several colors; see [Device status indicator](#) .

5.3 Connect to the device

Image displaying the device connection diagram



- A. *Field Communicator*
- B. *HART® Modem*
- C. *AMS Configurator*

5.3.1 AMS Configurator

Procedure to connect the AMS Configurator to the smart pressure gauge.

Procedure

- Start AMS Configurator.
- From the View menu, select **Device Connection View**.
- Double-click the device under the HART® modem.

5.3.2 Field communicator

Procedure to connect the smart pressure gauge to the field communicator.

Procedure

- Turn on the Field Communicator.
- From the Main menu, select the HART® symbol.

5.4 Eliminate mounting effects

Devices are factory-calibrated. Once installed, it is recommended to perform this step to eliminate potential error caused by mounting position or static pressure.

Note

See the [Rosemount Smart Pressure Gauge Reference Manual](#) for the following:

- Using AMS Configurator
- Sensor trim function on absolute gauge

Procedure

1. Vent the device.
2. Connect the Field Communicator.
3. From the *HOME* screen, enter the HART® Fast Key sequence.









Device dashboard Fast Keys	2, 1, 1
----------------------------	---------

4. Follow the commands to perform the procedure.

6 Troubleshooting

6.1 Device status indicator

Table 6-1: Status Descriptions

LED color		Device status
 = 	Green	Functioning properly
 = 	Amber	Battery is low, battery replacement recommended
 = 	Red	Battery replacement required OR Device is malfunctioning
 = 	No color	No power, verify ON/OFF switch is in the on position

6.2 Pressure measurement

If the mounting effects have not been eliminated after completing, perform this alternative procedure for verifying the pressure value.

Procedure

1. From the *HOME* screen, enter the HART® Fast Key sequence.

Device dashboard Fast Keys	2, 2, 1, 1, 1
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2. Follow the commands to perform the procedure.

7 Product certifications

Rev: 4.0

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 www.rosemount.com.

Ordinary Location Certification from CSA

The product has been examined and tested to determine that the design meets the basic electrical, mechanical, and fire protection requirements by CSA, a nationally recognized test laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

Installing in North America

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

USA

I5 U.S.A. Intrinsically Safe (IS)

Certificate: [CSA] 70047656

Standards: FM 3600 – 2011, FM 3610 – 2010, UL Standard 50 – Eleventh Edition, UL 61010-1 – 3rd Edition, ANSI/ISA-60079-0 (12.00.01) – 2013, ANSI/ISA-60079-11 (12.02.01) – 2013, ANSI/IEC 60529 – 2004

Markings: IS CL I, DIV 1, GP A, B, C, D T4; Class 1, Zone 0, AEx ia IIC T4 Ga; T4 ($-40\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$) when installed per Rosemount drawing 00G45-1020; Type 4X; IP66/67;

Special Conditions for Safe Use(X):

1. Do not replace battery when explosive atmosphere is present.
2. Use only 00G45-9000-0001 batteries.
3. The surface resistivity of the housing is greater than $1\text{G } \Omega$. To avoid electrostatic charge build-up, it must not be rubbed or cleaned with solvents or a dry cloth.
4. Substitution of components may impair intrinsic safety.

Canada

I6 Canada Intrinsically Safe (IS)

Certificate: [CSA]70047656

Standards: CAN/CSA C22.2 No. 0-10, CAN/CSA C22.2 No. 94-M1991 (R2011), CAN/CSA-60079-0-11, CAN/CSA-60079-11-14, CSA Std C22.2 No. 60529-05, CAN/CSA-C22.2 No. 61010-1-12

Markings: Intrinsically Safe for Class I, Division 1, Groups A, B, C, D T4; Ex ia IIC T4 Ga T4 ($-40\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$) when installed per Rosemount drawing 00G45-1020; Type 4X; IP66/67;

Special Conditions for Safe Use (X):

1. Do not replace battery when explosive atmosphere is present. Ne pas remplacer les accumulateurs si une atmosphère explosive peut être présente.
2. Use only 00G45-9000-0001 batteries. Utiliser uniquement des accumulateurs 00G45-9000-0001.
3. The surface resistivity of the housing is greater than $1\text{G } \Omega$. To avoid electrostatic charge build-up, it must not be rubbed or cleaned with solvents or a dry cloth. La résistance de surface du boîtier est supérieure à un gigaohm. Pour éviter l'accumulation de charge électrostatique, ne pas frotter ou nettoyer avec des produits solvants ou un chiffon sec.
4. Substitution of components may impair intrinsic safety. La substitution de composants peut compromettre la sécurité intrinsèque.

Europe

I1 ATEX Intrinsic Safety

Certificate: Baseefa16ATEX0005X

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

Markings: Ⓢ II 1 G Ex ia IIC T4 Ga, T4 ($-40\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$) IP66/67;

Special Conditions for Safe Use (X):

1. The plastic enclosure may constitute a potential electrostatic ignition risk and must not be rubbed or cleaned with a dry cloth.
2. The measured capacitance between the equipment enclosure and metallic inline sensor module is 4.7pF . This must be considered only when the SPG is integrated into a system where the process connection is not grounded.

3. Do not change the battery when an explosive atmosphere is present.
4. Only replace battery with Rosemount Part No. 00G45-9000-0001.

International

I7 IECEx Intrinsic Safety

Certificate: IECEx BAS 16.0012X

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

Markings: Ex ia IIC T4 Ga, T4 ($-40\text{ °C} \leq T_a \leq +70\text{ °C}$) IP66/67;

Special Conditions for Safe Use (X):

1. The plastic enclosure may constitute a potential electrostatic ignition risk and must not be rubbed or cleaned with a dry cloth.
2. The measured capacitance between the equipment enclosure and metallic inline sensor module is 4.7pF. This must be considered only when the SPG is integrated into a system where the process connection is not grounded.
3. Do not change the battery when an explosive atmosphere is present.
4. Only replace battery with Rosemount Part No. 00G45-9000-0001.

Brazil

I2 INMETRO Intrinsic Safety

Certificate: UL-BR 16.0826X

Standards: ABNT NBR IEC 60079-0:2008+Errata 1:2011, ABNT NBR IEC 60079-11:2009

Markings: Ex ia IIC T4 Ga, T4 ($-40\text{ °C} \leq T_a \leq +70\text{ °C}$)

Special Condition for Safe Use (X):

See certificate for special condition.

Japan

I4 CML Intrinsic Safety

Certificate: CML18JPN2350X

Markings: Ex ia IIC T4 Ga, T4 ($-40\text{ °C} \leq T_a \leq +70\text{ °C}$)

Special Condition for Safe Use (X):

See certificate for special condition.

Korea**IF** **KTL Intrinsic Safety****Certificate:** 16-KA4BO-0540X**Markings:** Ex ia IIC T4 Ga, T4 ($-40\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$)***Special Condition for Safe Use (X):***

See certificate for special condition.

8 Declaration of conformity



EU Declaration of Conformity

No: RMD 1108 Rev. G

We,

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

declare under our sole responsibility that the product,

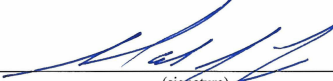
**Models WPG & SPG:
Wireless Pressure Gauge & Smart Pressure Gauge**

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)

Mark Lee
(name - printed)

January 22, 2021
(date of issue)



EU Declaration of Conformity

No: RMD 1108 Rev. G

EMC Directive (2014/30/EU)

Models WPG & SPG

Harmonized Standards:
EN 61326-1: 2013

Radio Equipment Directive (RED) (2014/53/EU)

Model WPG (Wireless Pressure Gauge only)

Harmonized Standards:
EN 300 328 V2.1.1:2016
EN 301 489-1 V2.1.1:2017
EN 301 489-17 V3.1.1:2017
EN 61010-1: 2010
EN 62479: 2010

RoHS Directive (2011/65/EU)

Models WPG and SPG

Harmonized Standard: EN 50581:2012

ATEX Directive (2014/34/EU)

Models WPG & SPG

Baseefa16ATEX0005X - Intrinsic Safety Certificate

Equipment Group II Category 1 G
Ex ia IIC T4 Ga, T4(-40°C ≤ Ta ≤ +70°C)

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



EU Declaration of Conformity

No: RMD 1108 Rev. G



ATEX Notified Bodies

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

ATEX Notified Body for Quality Assurance

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

9 China RoHS

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

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

本表格系依据SJ/T11364的规定而制作。

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

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

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

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

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

部件名称 Part Name	组装备件说明 Spare Parts Descriptions for Assemblies
壳体组件 Housing Assembly	电子外壳 Electrical Housing



Quick Start Guide
00825-0100-4145, Rev. CA
February 2021

For more information: www.emerson.com

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ROSEMOUNT™

