

# Rosemount™ 3051S Electronic Remote Sensor (ERS)™ System

with HART® Protocol



Safety messages

**NOTICE**

This guide provides basic guidelines for the Rosemount™ 3051S ERS System. It does not provide instructions for diagnostics, maintenance, service, or troubleshooting. Refer to the Rosemount 3051S ERS Reference Manual for more instruction. This document is also available electronically on [Emerson.com/Rosemount](http://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 [Rosemount 3051S/3051SFX/3051S-ERS Product Certifications](#) section of this guide for any restrictions associated with a safe installation.

- Before connecting a handheld 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.

Process leaks could result in death or serious injury.

- Install and tighten process connectors before applying pressure.

Electrical shock could cause death or serious injury.

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

Conduit/cable entries

- Unless marked, the conduit/cable entries in the transmitter housing use a ½–14 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.

**Contents**

Identify system components.....	3	Verify configuration.....	18
Sensor mounting.....	4	Calibrate the system.....	20
Consider housing rotation.....	9	Rosemount 3051S/3051SFX/3051S-ERS	
Set the switches.....	10	Product Certifications.....	21
Connect wiring and power up.....	11		

# 1 Identify system components

A complete Rosemount ERS system contains two sensors. One is mounted on the high-pressure ( $P_{HI}$ ) process connection, and the other is mounted on the low-pressure ( $P_{LO}$ ) process connection. An optional remote display and interface may also be included (not pictured) if ordered.

## Procedure

1. Look at the wire-on tag on the Rosemount 3051S sensor to identify whether it is configured as the  $P_{HI}$  or  $P_{LO}$  sensor.
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2. **Note**

For new installations or applications, the second Rosemount 3051S ERS sensor may have been shipped in a separate box.

If servicing or replacing part of an existing Rosemount 3051S ERS system, the other sensor may already be installed.

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Locate the second sensor that will be used in the Rosemount 3051S ERS system.

## 2 Sensor mounting

Mount the  $P_{HI}$  and  $P_{LO}$  sensors at the correct process connections for the application. This section shows some common installations.

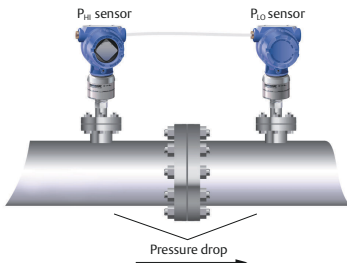
### Vertical installation

In a vertical installation such as on a vessel or distillation column, the  $P_{HI}$  sensor should be installed at the bottom process connection. The  $P_{LO}$  sensor should be installed at the top process connection.



### Horizontal installation

In a horizontal installation, the  $P_{HI}$  sensor should be installed at the upstream process connection. The  $P_{LO}$  sensor should be installed downstream.



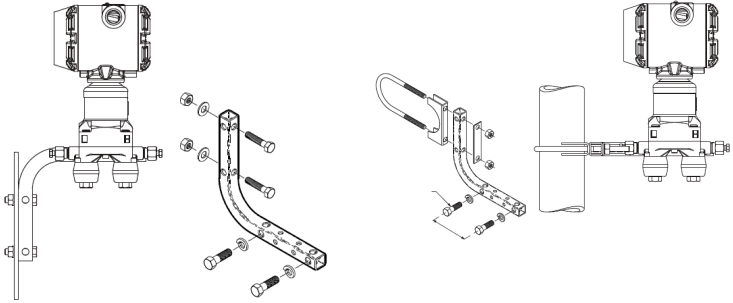
## 2.1 Mounting brackets

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**Figure 2-1: Mounting Bracket – Coplanar Flange**

Panel mount

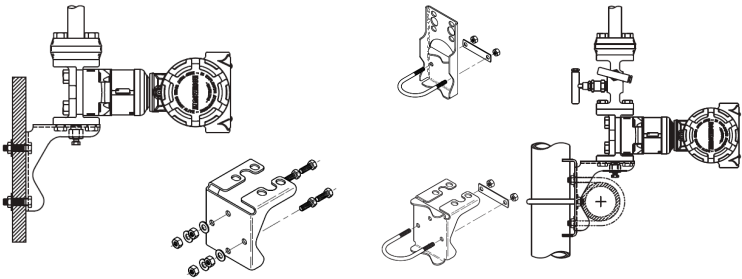
Pipe mount



**Figure 2-2: Mounting Brackets – Traditional Flange**

Panel mount

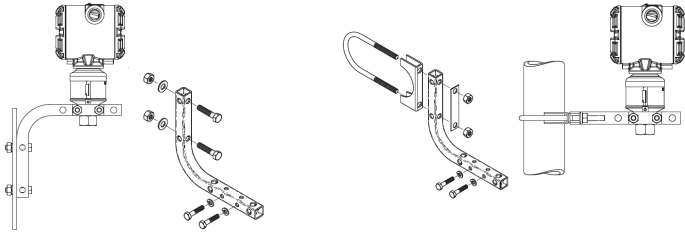
Pipe mount



**Figure 2-3: Mounting Brackets – In-line**

Panel mount

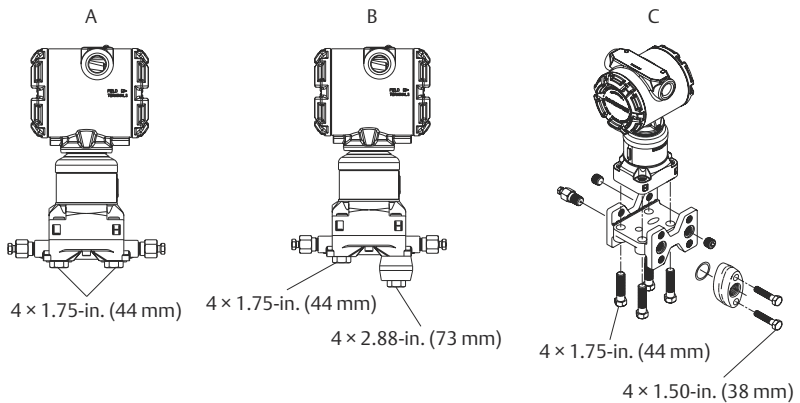
Pipe mount



## 2.2 Bolt installation

If the installation requires assembly of a process flange, manifold, or flange adapters, follow these assembly guidelines to ensure a tight seal for optimal performance characteristics of the Rosemount™ 3051S ERS System. Only use bolts supplied with the transmitter or sold by Emerson™ as spare parts. [Figure 2-4](#) illustrates common transmitter assemblies with the bolt length required for proper transmitter assembly.

**Figure 2-4: Common Transmitter Assemblies**



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

Bolts are typically carbon steel or stainless steel. Confirm the material by viewing the marking on the head of the bolt and referencing [Table 2-1](#). If bolt material is not shown in [Table 2-1](#), contact your local Emerson representative for more information.

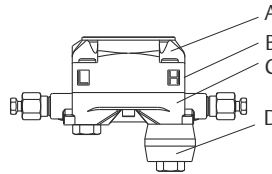
**Note**

Carbon steel bolts do not require lubrication. Stainless steel bolts are coated with a lubricant to ease installation, however no additional lubricant should be applied when installing either type of bolt.

**Procedure**

1. Finger-tighten the bolts.
2. Torque the bolts to the initial torque value using a crossing pattern. See [Table 2-1](#) for initial torque value.
3. Torque the bolts to the final torque value using the same crossing pattern. See [Table 2-1](#) for final torque value.
4. Verify that the flange bolts are protruding through the module isolator plate before applying pressure (See [Figure 2-5](#)).

**Figure 2-5: Module Isolator Plate**



- A. Bolt
- B. Sensor module isolator plate
- C. Coplanar flange
- D. Flange adapters

**Table 2-1: 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

## 2.3 O-rings with flange adapters

### **⚠ WARNING**

Use only the O-rings included with the flange adapter for this sensor. Failure to install proper fitting flange adapter O-rings may cause process leaks, which can result in death or serious injury.

When removing flanges or adapters, visually inspect the PTFE O-rings. Replace them if there are any signs of damage such as nicks or cuts. If replacing O-rings, re-torque the flange bolts after installation to compensate for seating of the PTFE O-ring.

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### 3 Consider housing rotation

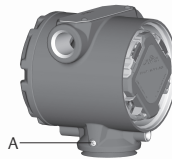
To improve field access to wiring or to better view the optional LCD display:

#### Procedure

1. Loosen the housing rotation set screw.
2. Turn the housing up to 180° left or right of its original (as shipped) position.
3. Retighten the housing rotation set screw.

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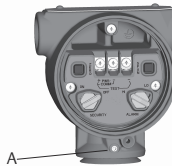
**Figure 3-1: Plantweb Housing**



A. Housing rotation set screw (3/32-in.)

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**Figure 3-2: Junction Box Housing**



A. Housing rotation set screw (3/32-in.)

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#### Note

Do not rotate the housing on each transmitter more than 180° without first performing a disassembly procedure (see [Rosemount 3051S ERS Reference Manual](#) for more information). Over-rotation may sever the electrical connection between the sensor module and feature board electronics.

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## 4 Set the switches

### Prerequisites

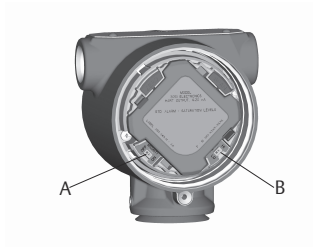
If the sensor is equipped with alarm and security hardware switches, verify the desired configuration (default: alarm = HI, security = OFF).

### Procedure

1. If the sensor is installed, secure the loop and remove power.
2. Remove the housing cover opposite the field terminals side. Do not remove the housing cover in explosive environments.
3. Slide the security and alarm switches into the preferred positions by using a small screwdriver.

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**Figure 4-1: Transmitter Switch Configuration**



- A. Security switch  
B. Alarm switch
- 

4. Reinstall the housing cover so that metal contacts metal to meet explosion-proof requirements.

## 5 Connect wiring and power up

The system can be wired in a variety of configurations, depending on the hardware that was ordered.

### 5 Standard system

#### Procedure

1. Remove the housing cover labeled “Field Terminals” on both sensors.
2. Using the communication cable (if ordered) or an equivalent 4-wire shielded assembly per the specifications detailed below, connect the 1, 2, A, and B terminals between the two sensors per [Figure 5-1](#).
3. Connect the system to the control loop by connecting the + and - PWR/COMM terminals to the positive and negative leads, respectively.
4. Plug and seal all unused conduit connections.
5. If applicable, install wiring with a drip loop. Arrange the drip loop so the bottom is lower than the conduit connections on the transmitter housings.
6. Reinstall and tighten the housing covers on both sensors so that metal contacts metal to meet explosion-proof requirements.

### 5.1 System with remote display and interface

#### Procedure

1. Remove the housing cover labeled “Field Terminals” on both sensors and the remote housing.
2. Using the communication cable (if ordered) or an equivalent 4-wire shielded assembly per the specifications detailed below, connect the 1, 2, A, and B terminals between the two sensors and remote housing in a “tree” ([Figure 5-2](#)) or “daisy-chain” ([Figure 5-3](#)) configuration.
3. Connect the system to the control loop by connecting the + and - PWR/COMM terminals on the remote housing to the positive and negative leads, respectively.
4. Plug and seal all unused conduit connections.
5. If applicable, install wiring with a drip loop. Arrange the drip loop so that the bottom is lower than the conduit connections on the transmitter housings.
6. Reinstall and tighten all housing covers so that metal contacts metal to meet explosion-proof requirements.

## 5.2 Wiring diagrams

Figure 5-1, Figure 5-2, and Figure 5-3 show the wiring connections necessary to power a Rosemount 3051S ERS System and enable communications with a handheld communicator.

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### Note

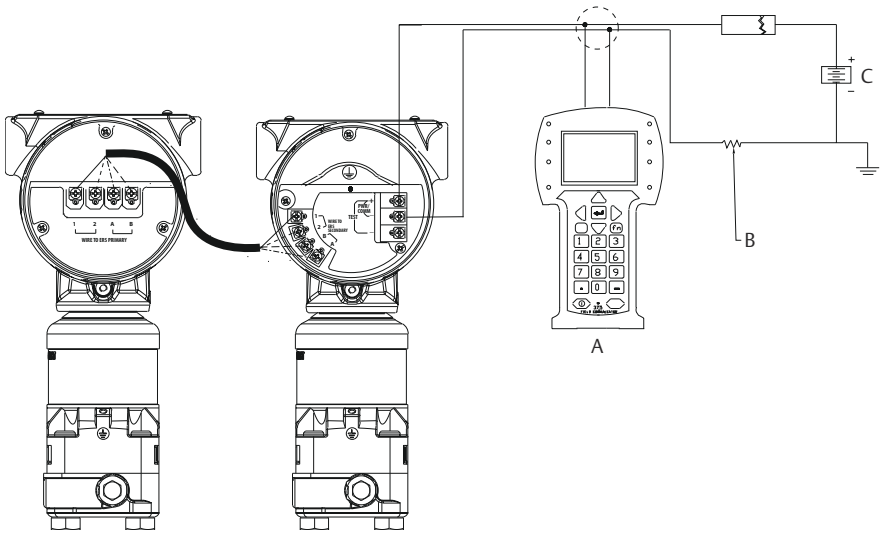
The wiring connection between the sensors (and remote housing if applicable) must be made directly. An intrinsically safe barrier or other high-impedance device will cause the system to malfunction if placed between any of the sensors.

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### Cable specifications

<b>Cable type</b>	Recommend Madison AWM Style 2549 cable. Other comparable cable may be used as long as it has independent dual twisted shielded pair wires with an outer shield. The power wires (pin terminals 1 and 2) must be 22 AWG minimum and the communication wires (pin terminals A and B) must be 24 AWG minimum.
<b>Cable length</b>	Up to 150 ft (45,7 m) depending upon cable capacitance.
<b>Cable capacitance</b>	The capacitance between the communication terminals (pin terminals A and B) as wired must be less than 5000 picofarads total. This allows up to 50 picofarads per ft (0,3 m) for a 100 ft (31 m) cable.
<b>Cable outside diameter (O.D.)</b>	0.270-in. (6,86 mm)

**Figure 5-1: Wiring Diagram for Standard System**

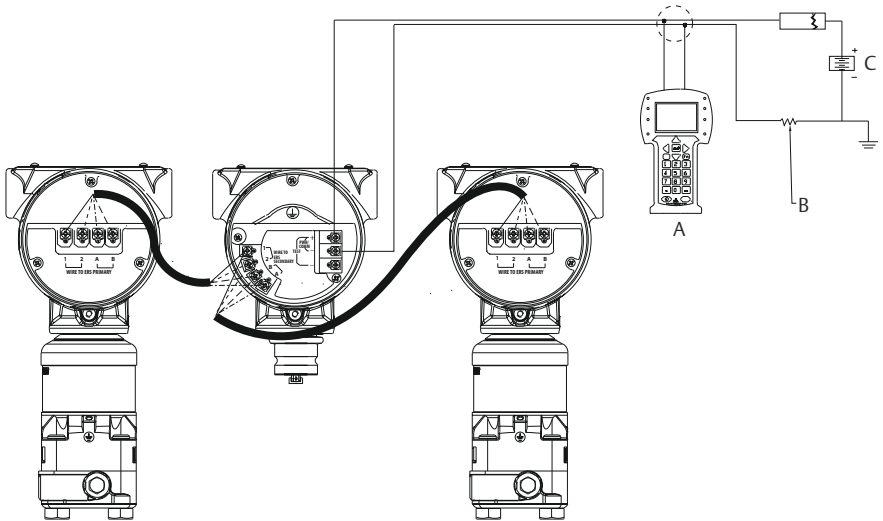


- A. Power supply
- B. 250Ω Resistor needed for HART communications
- C. Handheld communicator

**Table 5-1: Wiring Legend**

Wire color	Drawing symbol	Terminal connection
Red	————	1
Black	-----	2
White	-----	A
Blue	-----	B

**Figure 5-2: Wiring Diagram for System with Remote Display in “Tree” Configuration**

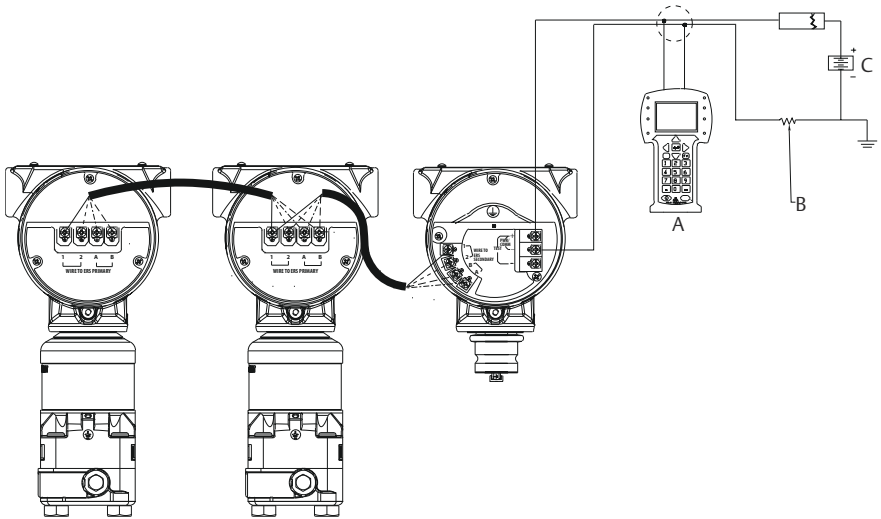


- A. Power supply
- B. 250Ω Resistor needed for HART communications
- C. Handheld communicator

**Table 5-2: Wiring Legend**

Wire color	Drawing symbol	Terminal connection
Red	_____	1
Black	-----	2
White	-----	A
Blue	-----	B

**Figure 5-3: Wiring Diagram for System with Remote Display in “Daisy-Chain” Configuration**



- A. Power supply
- B. 250Ω Resistor needed for HART communications
- C. Handheld communicator

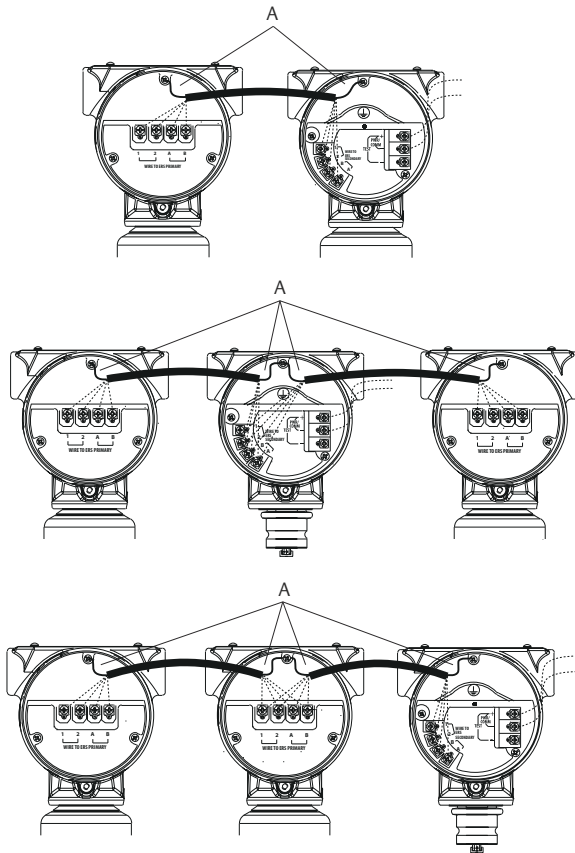
**Table 5-3: Wiring Legend**

Wire color	Drawing symbol	Terminal connection
Red	_____	1
Black	-----	2
White	-----	A
Blue	-----	B

### 5.3 Shield grounding

Connect the shield from the communication cable assembly to each housing case as shown for the applicable wiring configuration in [Figure 5-4](#).

**Figure 5-4: Shield Grounding**



A. Cable shield

## 5.4 Power supply

The DC power supply should provide power with less than two percent ripple. The total resistance load is the sum of the resistance of the two signal leads and the load resistance of the controller, indicator, intrinsic safety barriers, and related components.

### Load limitation

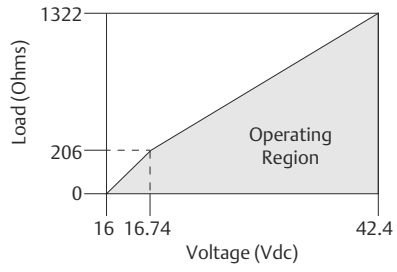
**If supply voltage  $\leq 16.74$  Vdc,**

Maximum loop resistance =  $277.8 \times (\text{Power supply voltage} - 16.0)$

**If supply voltage  $> 16.74$  Vdc,**

Maximum loop resistance =  $43.5 \times (\text{Power supply voltage} - 12.0)$





## 6 Verify configuration

As part of the basic commissioning process of the system, the parameters in [Table 6-1](#) should be verified/configured with a HART-compliant master (see [Figure 5-1](#), [Figure 5-2](#), and [Figure 5-3](#) for connecting a handheld communicator)

**Table 6-1: Basic Configuration HART Fast Key Sequence**

Function	Fast Key sequence
Device Tagging	
Tag	2, 1, 1, 1, 1
Long Tag	2, 1, 1, 1, 2
Descriptor	2, 1, 1, 1, 3
Message	2, 1, 1, 1, 4
Units of Measure	
P <sub>LO</sub> Pressure	2, 1, 1, 2, 1, 1
P <sub>LO</sub> Module Temperature	2, 1, 1, 2, 1, 2
System DP	2, 1, 1, 2, 1, 3
P <sub>HI</sub> Module Temperature	2, 1, 1, 2, 1, 4
P <sub>HI</sub> Pressure	2, 1, 1, 2, 1, 5
Damping	
P <sub>LO</sub> Pressure	2, 1, 1, 2, 2, 1
System DP	2, 1, 1, 2, 2, 2
P <sub>HI</sub> Pressure	2, 1, 1, 2, 2, 3
Variable Mapping	
Primary Variable	2, 1, 1, 3, 1
2 <sup>nd</sup> Variable	2, 1, 1, 3, 2
3 <sup>rd</sup> Variable	2, 1, 1, 3, 3
4 <sup>th</sup> Variable	2, 1, 1, 3, 4
Analog Output	
Primary Variable	2, 1, 1, 4, 1
Upper Range Value	2, 1, 1, 4, 2
Lower Range Value	2, 1, 1, 4, 3
Alarm and Saturation Levels	2, 1, 1, 5

The items in [Table 6-2](#) are considered “optional” and can be configured as necessary:

**Table 6-2: Optional Configuration HART Fast Key Sequence**

Function	Fast Key sequence
Device Display	2, 1, 3
Burst Mode	
Burst Mode	2, 1, 4, 1
Burst Option	2, 1, 4, 2
Scaled Variable	
Linear (2-point) Scaled Variable	2, 1, 5, 1
Non-Linear (Multi-point) Scaled Variable	2, 1, 5, 2
Change Module Assignments	
View Module 1 Assignment	2, 1, 6, 1
View Module 2 Assignment	2, 1, 6, 2
Set Module 1 = P <sub>HI</sub> , Module 2 = P <sub>LO</sub>	2, 1, 6, 3
Set Module 1 = P <sub>LO</sub> , Module 2 = P <sub>HI</sub>	2, 1, 6, 4
View Device Topology	2, 1, 6, 5

## 7 Calibrate the system

Each sensor is shipped fully calibrated per request or with the factory default of full scale. After the system has been installed and wired, either a zero trim or a lower sensor trim should be performed on each sensor to compensate for installation effects.

- A zero sensor trim should be performed after installing a gage sensor. A zero sensor trim should not be performed on an absolute sensor or on a gage sensor that is at line pressure.
- A lower sensor trim should be performed after installing an absolute sensor or a gage sensor that is at line pressure.

Additionally, a “System DP Zero” trim should be performed to establish a zero-based DP reading. The “System DP Zero” trim should be performed after a zero/lower trim has been performed on each sensor.

The steps outlined below detail the procedures for the sensor trims and the “System DP Zero” trim.

### 7.1 System calibration

#### Procedure

1. Equalize or vent both sensors and connect a handheld communicator as shown in [Figure 5-1](#), [Figure 5-2](#), and [Figure 5-3](#).
2. Input the following Fast Key sequence on the handheld communicator to trim each sensor and the DP reading. Follow the commands prompted by the handheld communicator.

**Table 7-1: ERS Calibration HART Fast Key Sequence**

Function	Fast Key sequence
P-Hi Sensor Zero Trim	3, 4, 3, 1, 3
P-Hi Sensor Lower Trim	3, 4, 3, 1, 2
P-Lo Sensor Zero Trim	3, 4, 4, 1, 3
P-Lo Sensor Lower Trim	3, 4, 4, 1, 2
System DP Zero Trim	3, 4, 2, 1, 3

#### Postrequisites

The “System DP Zero Trim” should be performed after the P-Hi and P-Lo sensor trims. Refer to the Rosemount 3051S ERS [Reference Manual](#) for the recommended calibration procedure for performing a sensor trim at line pressure.

## 8 Rosemount 3051S/3051SFx/3051S-ERS Product Certifications

Rev 2.2

### European Directive Information

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

### Installing Equipment in North America

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

## 8.1 USA

### 8.1.1 E5 US Explosionproof (XP) and Dust-Ignitionproof (DIP)

**Certificate** FM16US0090

**Standards** FM Class 3600 - 2011, FM Class 3615 - 2006, FM Class 3616 - 2011, 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

### 8.1.2 I5 US Intrinsic Safety (IS) and Nonincendive (NI)

**Certificate** FM16US0089X

**Standards** FM Class 3600 - 2011, FM Class 3610 - 2010, FM Class 3611 - 2004, FM Class 3810 - 2005, NEMA® 250 - 2003

**Markings** IS CL I, DIV 1, GP A, B, C, D; CL II, DIV 1, GP E, F, G; Class III; Class 1, Zone 0 AEx ia IIC T4; NI CL 1, DIV 2, GP A, B, C, D; T4(-50 °C ≤ T<sub>a</sub> ≤ +70 °C) [HART]; T4(-50 °C ≤ T<sub>a</sub> ≤ +60 °C) [Fieldbus]; when connected per Rosemount drawing 03151-1006; Type 4X

**Special Condition for Safe Use:**

1. The Model 3051S/3051S-ERS Pressure Transmitter contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact and friction.

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**Note**

Transmitters marked with NI CL 1, DIV 2 can be installed in Division 2 locations using general Division 2 wiring methods or Nonincendive Field Wiring (NIFW). See Drawing 03151-1006.

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### 8.1.3 IE US FISCO Intrinsically Safe

**Certificate** FM16US0089X

**Standards** FM Class 3600 - 2011, FM Class 3610 - 2010, FM Class 3611 - 2004, FM Class 3810 - 2005, NEMA 250 - 2003

**Markings** IS CL I, DIV 1, GP A, B, C, D; T4(-50 °C ≤ T<sub>a</sub> ≤ +60 °C); when connected per Rosemount drawing 03151-1006; Type 4X

**Special Condition for Safe Use:**

1. The Rosemount 3051S/3051S-ERS Pressure Transmitter contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact and friction.

## 8.2 Canada

### 8.2.1 E6 Canada Explosionproof, Dust-Ignitionproof, and Division 2

**Certificate** 1143113

**Standards** CAN/CSA C22.2 No. 0-10, CSA Std C22.2 No. 25-1966, CSA Std C22.2 No. 30-M1986, CAN/CSA C22.2 No. 94-M91, CSA Std C22.2 No. 142-M1987, CSA Std C22.2 No. 213-M1987, ANSI/ISA 12.27.01-2003, CSA Std C22.2 No. 60529:05

**Markings** Explosionproof Class I, Division 1, Groups B, C, D; Dust-Ignitionproof Class II, Division 1, Groups E, F, G; Class III; suitable for Class I, Zone 1, Group IIB+H2, T5; suitable for Class I, Division 2, Groups A, B, C, D; suitable for Class I, Zone 2, Group IIC, T5; when connected per Rosemount drawing 03151-1013; Type 4X

### 8.2.2 I6 Canada Intrinsically Safe

**Certificate** 1143113

**Standards** CAN/CSA C22.2 No. 0-10, CSA Std C22.2 No. 25-1966, CSA Std C22.2 No. 30-M1986, CAN/CSA C22.2 No. 94-M91, CSA Std C22.2 No. 142-M1987, CSA Std C22.2 No. 157-92, ANSI/ISA 12.27.01-2003, CSA Std C22.2 No. 60529:05

**Markings** Intrinsically Safe Class I, Division 1; Groups A, B, C, D; suitable for Class 1, Zone 0, IIC, T3C; when connected per Rosemount drawing 03151-1016 [3051S] 03151-1313 [ERS]; Type 4X

### 8.2.3 IF Canada FISCO

**Certificate** 1143113

**Standards** CAN/CSA C22.2 No. 0-10, CSA Std C22.2 No. 30-M1986, CAN/CSA C22.2 No. 94-M91, CSA Std C22.2 No. 142-M1987, CSA Std C22.2 No. 157-92, ANSI/ISA 12.27.01-2003, CSA Std C22.2 No. 60529:05


**Markings** FISCO Intrinsically Safe Class I, Division 1; Groups A, B, C, D; suitable for Class 1, Zone 0, IIC, T3C; when connected per Rosemount drawing 03151-1016 [3051S] 03151-1313 [ERS]; Type 4X

## 8.3 Europe

### 8.3.1 E1 ATEX Flameproof

**Certificate** KEMA 00ATEX2143X

**Standards** EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-26:2015

**Markings**  II 1/2 G Ex db IIC T6...T4 Ga/Gb, T6(-60 °C ≤ T<sub>a</sub> ≤ +70 °C), T5/T4(-60 °C ≤ T<sub>a</sub> ≤ +80 °C)

**Table 8-1: Process Temperature**

Temperature class	Process temperature
T6	-60 °C to +70 °C
T5	-60 °C to +80 °C
T4	-60 °C to +120 °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 Category 1 (process connection) and Category 2 (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.

### 8.3.2 I1 ATEX Intrinsic Safety

**Certificate** BAS01ATEX1303X

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

**Markings**  II 1 G Ex ia IIC T4 Ga, T4(-60 °C ≤ T<sub>a</sub> ≤ +70 °C)

**Table 8-2: Input Parameters**

	U <sub>i</sub>	I <sub>i</sub>	P <sub>i</sub>	C <sub>i</sub>	L <sub>i</sub>
SuperModule	30 V	300 mA	1.0 W	30 nF	0
3051S...A; 3051SF...A; 3051SAL...C	30 V	300 mA	1.0 W	12 nF	0
3051S...F; 3051SF...F	30 V	300 mA	1.3 W	0	0
3051S ...A...M7, M8, or M9; 3051SF ...A...M7, M8, or M9; 3051SAL...C... M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	60 μH
3051SAL or 3051SAM	30 V	300 mA	1.0 W	12 nF	33 μH
3051SAL...M7, M8, or M9 3051SAM...M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	93 μH
RTD Option for 3051SF	5 V	500 mA	0.63 W	N/A	N/A


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

1. The Model 3051S Transmitters fitted with transient protection are not capable of withstanding the 500V test as defined in Clause 6.3.13 f EN 60079-11:2012. This must be taken into account during installation.



2. The terminal pins of the Model 3051S SuperModule must be provided with a degree of protection of at least IP20 in accordance with IEC/EN 60529.
3. The Model 3051S 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 a zone 0 area.

### 8.3.3 IA ATEX FISCO

- Certificate** BAS01ATEX1303X
- Standards** EN 60079-0: 2012+A11:2013, EN 60079-11: 2012
- Markings**  II 1 G Ex ia IIC T4 Ga, T4(-60 °C ≤ T<sub>a</sub> ≤ +70 °C)


**Table 8-3: 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>	0
Inductance L <sub>i</sub>	0

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


1. The Model 3051S Transmitters fitted with transient protection are not capable of withstanding the 500 V test as defined in Clause 6.3.13 of EN 60079-11:2012. This must be taken into account during installation.
2. The terminal pins of the Model 3051S SuperModule must be provided with a degree of protection of at least IP20 in accordance with IEC/EN 60529.
3. The Model 3051S 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 a zone 0 area.

### 8.3.4 ND ATEX Dust

- Certificate** BAS01ATEX1374X
- Standards** EN 60079-0: 2012+A11:2013, EN 60079-31: 2009
- Markings**  II 1 D Ex ta IIIC T105 °C T<sub>500</sub> 95 °C Da, (-20 °C ≤ T<sub>a</sub> ≤ +85 °C), V<sub>max</sub> = 42.4 V

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

1. Cable entries must be used which maintain the ingress protection of the enclosure to at least IP66.
2. Unused cable entries must be filled with suitable blanking plugs which maintain the ingress protection of the enclosure to at least IP66.
3. Cable entries and blanking plugs must be suitable for the ambient temperature range of the apparatus and capable of withstanding a 7J impact test.
4. The SuperModule(s) must be securely screwed in place to maintain the ingress protection of the enclosure(s).

**8.3.5 N1 ATEX Type n****Certificate** BAS01ATEX3304X**Standards** EN 60079-0: 2012+A11:2013, EN 60079-15: 2010**Markings**  II 3 G Ex nA IIC T5 Gc, (-40 °C ≤ T<sub>a</sub> ≤ +85 °C), V<sub>max</sub> = 45 V**Special Condition for Safe Use (X):**

1. The equipment is not capable of withstanding the 500 V insulation test required by clause 6.5 of EN 60079-15:2010. This must be taken into account when installing the equipment.

**Note**

RTD Assembly is not included with the 3051SFx Type n Approval.

**8.4 International****8.4.1 E7 IECEx Flameproof and Dust****Certificate** IECEx KEM 08.0010X (Flameproof)**Standards** IEC 60079-0:2011, IEC 60079-1:2014, IEC 60079-26:2014**Markings** Ex db IIC T6...T4 Ga/Gb, T6(-60 °C ≤ T<sub>a</sub> ≤ +70 °C), T5/T4(-60 °C ≤ T<sub>a</sub> ≤ +80 °C)**Table 8-4: Process Temperature**

Temperature class	Process temperature
T6	-60 °C to +70 °C
T5	-60 °C to +80 °C
T4	-60 °C to +120 °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 EPL Ga (process connection) and EPL Gb (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 buildup 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.

**Certificate** IECEx BAS 09.0014X (Dust)

**Standards** IEC 60079-0:2011, IEC 60079-31:2008

**Markings** Ex ta IIIC T105 °C T50095 °C Da, ( $-20\text{ °C} \leq T_a \leq +85\text{ °C}$ ),  
 $V_{\max} = 42.4\text{ V}$

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

1. Cable entries must be used which maintain the ingress protection of the enclosure to at least IP66.
2. Unused cable entries must be filled with suitable blanking plugs which maintain the ingress protection of the enclosure to at least IP66.
3. Cable entries and blanking plugs must be suitable for the ambient temperature range of the apparatus and capable of withstanding a 7J impact test.
4. The 3051S- SuperModule must be securely screwed in place to maintain the ingress protection of the enclosure.

#### 8.4.2 I7 IECEx Intrinsic Safety

**Certificate** IECEx BAS 04.0017X

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

**Markings** Ex ia IIC T4 Ga, T4( $-60\text{ °C} \leq T_a \leq +70\text{ °C}$ )

**Table 8-5: Input Parameters**

	$U_i$	$I_i$	$P_i$	$C_i$	$L_i$
SuperModule	30 V	300 mA	1.0 W	30 nF	0
3051S...A; 3051SF...A; 3051SAL...C	30 V	300 mA	1.0 W	12 nF	0
3051S...F; 3051SF...F	30 V	300 mA	1.3 W	0	0
3051S ...A...M7, M8, or M9; 3051SF ...A...M7, M8, or M9; 3051SAL...C... M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	60 $\mu$ H
3051SAL or 3051SAM	30 V	300 mA	1.0 W	12 nF	33 $\mu$ H
3051SAL...M7, M8, or M9 3051SAM...M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	93 $\mu$ H
RTD Option for 3051SF	5 V	500 mA	0.63 W	N/A	N/A

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

1. The Model 3051S Transmitters fitted with transient protection are not capable of withstanding the 500 V test as defined in Clause 6.3.13 of EN 60079-11:2012. This must be taken into account during installation.
2. The terminal pins of the Model 3051S SuperModule must be provided with a degree of protection of at least IP20 in accordance with IEC/EN 60529.
3. The Model 3051S 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 a zone 0 area.

**8.4.3 I7 IECEx Intrinsic Safety - Group I - Mining (I7 with Special A0259)**

<b>Certificate</b>	IECEx TSA 14.0019X
<b>Standards</b>	IEC 60079-0: 2011, IEC 60079-11: 2011
<b>Markings</b>	Ex ia I Ma ( $-60\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$ )

**Table 8-6: Input Parameters**

	$U_i$	$I_i$	$P_i$	$C_i$	$L_i$
SuperModule	30 V	300 mA	1.0 W	30 nF	0

**Table 8-6: Input Parameters (continued)**

	$U_i$	$I_i$	$P_i$	$C_i$	$L_i$
3051S...A; 3051SF...A; 3051SAL...C	30 V	300 mA	1.0 W	12 nF	0
3051S...F; 3051SF...F	30 V	300 mA	1.3 W	0	0
3051S ...A...M7, M8, or M9; 3051SF ...A...M7, M8, or M9; 3051SAL...C... M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	60 $\mu$ H
3051SAL or 3051SAM	30 V	300 mA	1.0 W	12 nF	33 $\mu$ H
3051SAL...M7, M8, or M9 3051SAM...M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	93 $\mu$ H
RTD Option for 3051SF	5 V	500 mA	0.63 W	N/A	N/A

**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 Clause 6.3.13 of 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.

**8.4.4 IG IECEx FISCO**

<b>Certificate</b>	IECEx BAS 04.0017X
<b>Standards</b>	IEC 60079-0: 2011, IEC 60079-11: 2011
<b>Markings</b>	Ex ia IIC T4 Ga, T4(-60 °C $\leq$ T <sub>a</sub> $\leq$ +70 °C)

**Table 8-7: Input Parameters**

Parameter	FISCO
Voltage $U_i$	17.5 V
Current $I_i$	380 mA
Power $P_i$	5.32 W
Capacitance $C_i$	0

**Table 8-7: Input Parameters (continued)**

Inductance $L_i$	0
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**Special Conditions for Safe Use (X):**

1. The Model 3051S Transmitters fitted with transient protection are not capable of withstanding the 500 V test as defined in Clause 6.3.13 of EN 60079-11:2012. This must be taken into account during installation.
2. The terminal pins of the Model 3051S SuperModule must be provided with a degree of protection of at least IP20 in accordance with IEC/EN 60529.
3. The Model 3051S 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 a zone 0 area.

**8.4.5 IG IECEx Intrinsic Safety - Group I - Mining (IG with Special A0259)****Certificate** IECEx TSA 04.0019X**Standards** IEC 60079-0: 2011, IEC 60079-11: 2011**Markings** FISCO FIELD DEVICE Ex ia I Ma, ( $-60\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$ )**Table 8-8: Input Parameters**

Parameter	FISCO
Voltage $U_i$	17.5 V
Current $I_i$	380 mA
Power $P_i$	5.32 W
Capacitance $C_i$	0
Inductance $L_i$	0

**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 Clause 6.3.13 of 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.

### 8.4.6 N7 IECEx Type n

<b>Certificate</b>	IECEx BAS 04.0018X
<b>Standards</b>	IEC 60079-0: 2011, IEC 60079-15: 2010
<b>Markings</b>	Ex nA IIC T5 Gc, $(-40\text{ }^{\circ}\text{C} \leq T_a \leq +85\text{ }^{\circ}\text{C})$

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

1. The equipment is not capable of withstanding the 500 V insulation test required by clause 6.5 of EN 60079-15:2010. This must be taken into account when installing the equipment.

## 8.5 Brazil

### 8.5.1 E2 INMETRO Flameproof

<b>Certificate</b>	UL-BR15.0393X
<b>Standards</b>	ABNT NBR IEC 60079-0:2008 + Corrigendum 1:2011, ABNT NBR IEC 60079-1:2009 + Corrigendum 1:2011, ABNT NBR IEC 60079-26:2008 + Corrigendum 1: 2008
<b>Markings</b>	Ex db IIC T* Ga/Gb, T6 $(-60\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C})$ , T5/T4 $(-60\text{ }^{\circ}\text{C} \leq T_a \leq +80\text{ }^{\circ}\text{C})$ , IP66

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

1. The device contains a thin wall diaphragm less than 1mm thick 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 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 buildup 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.

### 8.5.2 I2/IB INMETRO Intrinsic Safety/FISCO

<b>Certificate</b>	UL-BR 15.0392X
<b>Standards</b>	ABNT NBR IEC 60079-0:2013, ABNT NBR IEC 60079-11:2013

**Markings** Ex ia IIC T4 Ga ( $-60\text{ °C} \leq T_a \leq +70\text{ °C}$ ), IP66

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

1. The surface resistivity of the antenna is greater than 1 GΩ. To avoid electrostatic charge buildup, it must not be rubbed or cleaned with solvents or a dry cloth.
2. The Model 701PBKKF Power Module may be replaced in a hazardous area. The Power Module has a surface resistivity greater than 1 GΩ and must be properly installed in the wireless device enclosure. Care must be taken during transportation to and from the point of installation to prevent electrostatic charge buildup.
3. The 3051S 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 areas that requires EPL Ga.

**Table 8-9: Input Parameters**

	$U_i$	$I_i$	$P_i$	$C_i$	$L_i$
SuperModule	30 V	300 mA	1.0 W	30 nF	0
3051S...A; 3051SF...A; 3051SAL...C	30 V	300 mA	1.0 W	12 nF	0
3051S...F; 3051SF...F	30 V	300 mA	1.3 W	0	0
3051S...F...IB; 3051SF...F...IB	17.5 V	380mA	5.32W	0	0
3051S ...A...M7, M8, or M9; 3051SF ...A...M7, M8, or M9; 3051SAL...C... M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	60 μH
3051SAL or 3051SAM	30 V	300 mA	1.0 W	12 nF	33 μH
3051SAL... M7, M8, or M9 3051SAM... M7, M8, or M9	30 V	300 mA	1.0 W	12 nF	93 μH
RTD Option for 3051SF	5 V	500 mA	0.63 W	N/A	N/A

## 8.6 China

### 8.6.1 E3 China Flameproof and Dust Ignition-proof

**Certificate** 3051S: GYJ16.1249X  
3051SFx: GYJ16.1466X



3051S-ERS: GJY15.1406X

- Standards** 3051S: GB3836.1-2010, GB3836.2-2010, GB3836.20-2010, GB12476.1-2013, GB12476.5-2013  
 3051SFx: GB3836.1-2010, GB3836.2-2010, GB3836.20-2010, GB12476.1-2013, GB 12476.5-2013  
 3051S-ERS: GB3836.1-2010, GB3836.2-2010, GB3836.20-2010
- Markings** 3051S: Ex d IIC T6...T4; Ex tD A20 T105 °C T<sub>500</sub>95 °C; IP66  
 3051SFx: Ex d IIC T4~T6 Ga/Gb; Ex tD A20 IP66 T105 °C T<sub>500</sub>95 °C; IP66  
 3051S-ERS: Ex d IIC T4~T6 Ga/Gb

### 8.6.2 I3 China Intrinsic Safety

- Certificate** 3051S: GYJ16.1250X [Mfg USA, China, Singapore]  
 3051SFx: GYJ16.1465X [Mfg USA, China, Singapore]  
 3051S-ERS: GYJ16.1248X [Mfg USA, China, Singapore]
- Standards** 3051S: GB3836.1-2010, GB3836.4-2010, GB3836.20-2010  
 3051SFx: GB3836.1/4-2010, GB3836.20-2010, GB12476.1-2013, GB12476.5-2013  
 3051S-ERS: GB3836.1-2010, GB3836.4-2010, GB3836.20-2010
- Markings** 3051S: Ex ia IIC T4 Ga  
 3051SFx: Ex ia IIC T4 Ga, Ex tD A20 IP66 T105 °C T<sub>500</sub>95 °C  
 3051S-ERS: Ex ia IIC T4 Ga

### 8.6.3 N3 China Type n

- Certificate** 3051S, 3051SHP: GYJ17.1354X  
 3051SFX: GYJ17.1355X
- Markings** Ex nA IIC T5 Gc

## 8.7 EAC - Belarus, Kazakhstan, Russia

### 8.7.1 EM Technical Regulation Customs Union (EAC) Flameproof and Dust Ignition-proof

- Certificate** RU C-US.AA87.B.00378
- Markings** Ga/Gb Ex d IIC T6...T4 X  
 Ex tb IIIC T105 °C T<sub>500</sub>95 °C Db X  
 Ex ta IIIC T105 °C T<sub>500</sub>95 °C Da X

## 8.7.2 IM Technical Regulation Customs Union (EAC) Intrinsic Safety

**Certificate** RU C-US.AA87.B.00378

**Markings** 0Ex ia IIC T4 Ga X

## 8.7.3 IN Technical Regulation Customs Union (EAC) Intrinsic Safety

**Certificate:** RU C-US.AA87.B.00378

**Markings:** 0Ex ia IIC T4 Ga X

## 8.8 Japan

### 8.8.1 E4 Japan Flameproof

**Certificate** TC15682, TC15683, TC15684, TC15685, TC15686, TC15687, TC15688, TC15689, TC15690, TC17099, TC17100, TC17101, TC17102, TC18876  
3051ERS: TC20215, TC20216, TC20217, TC20218, TC20219, TC20220, TC20221

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

Temperature class	Ambient temperature	Process temperature
T6	-40 °C to +70 °C	-60 °C to +70 °C

### Special Conditions for Safe Use:

1. This device contains a thin wall diaphragm less than 1mm thickness that forms a boundary between EPL Ga (process connection) and EPL Gb (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 consider 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.

## 8.9 Republic of Korea

### 8.9.1 EP Republic of Korea Flameproof

**Certificate** 12-KB4BO-0180X [Mfg USA], 11-KB4BO-0068X [Mfg Singapore]

**Markings** Ex d IIC T6...T4

### 8.9.2 IP Republic of Korea Intrinsic Safety

**Certificate** 12-KB4BO-0202X [HART - Mfg USA], 12-KB4BO-0204X [Fieldbus - Mfg USA], 12-KB4BO-0203X [HART - Mfg Singapore], 13-KB4BO-0296X [Fieldbus - Mfg Singapore]

**Markings** Ex ia IIC T4

## 8.10 Combinations

- K1** Combination of E1, I1, N1, and ND
- K2** Combination of E2 and I2
- K5** Combination of E5 and I5
- K6** Combination of E6 and I6
- K7** Combination of E7, I7, and N7
- KA** Combination of E1, I1, E6, and I6
- KB** Combination of E5, I5, E6, and I6
- KC** Combination of E1, I1, E5, and I5
- KD** Combination of E1, I1, E5, I5, E6, and I6
- KG** Combination of IA, IE, IF, and IG
- KM** Combination of EM and IM
- KP** Combination of EP and IP

## 8.11 Additional Certifications

### 8.11.1 SBS American Bureau of Shipping (ABS) Type Approval

**Certificate** 17-RJ1679518-PDA

**Intended Use** Measure gauge or absolute pressure of liquid, gas or vapor applications on ABS classed vessels, marine, and offshore installations.

### 8.11.2 SBV Bureau Veritas (BV) Type Approval

**Certificate** 31910 BV

**Requirements** Bureau Veritas Rules for the Classification of Steel Ships

**Application** Class Notations: AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.

### 8.11.3 SDN Det Norske Veritas (DNV) Type Approval

**Certificate** TAA00000K9

**Intended Use** Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft, and Det Norske Veritas' Offshore Standards

#### Application

Location classes	
Type	3051S
Temperature	D
Humidity	B
Vibration	A
EMC	A
Enclosure	D/IP66/IP68

### 8.11.4 SLL Lloyds Register (LR) Type Approval



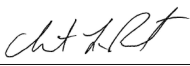
**Certificate** 11/60002

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

### 8.11.5 D3 Custody Transfer - Measurement Canada Accuracy Approval [3051S Only]

**Certificate** AG-0501, AV-2380C

## 8.12 Declaration of Conformity

	<h1 style="margin: 0;">EU Declaration of Conformity</h1> <p style="margin: 0;">No: RMD 1044 Rev. AD</p>	
<p>We,</p> <p style="margin-left: 40px;"><b>Rosemount Inc.</b> 8200 Market Boulevard Chanhassen, MN 55317-9685 USA</p> <p>declare under our sole responsibility that the product,</p> <p style="text-align: center;"><b>Rosemount 3051S Series Pressure Transmitters</b> <b>Rosemount 3051SFx Series Flowmeter Transmitters</b> <b>Rosemount 300S Housings</b></p> <p>manufactured by,</p> <p style="margin-left: 40px;"><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>		
 <hr style="border: 0; border-top: 1px solid black;"/> <p>(signature)</p>	<p>Vice President of Global Quality</p> <hr style="border: 0; border-top: 1px solid black;"/> <p>(function name - printed)</p>	
<p>Chris LaPoint</p> <hr style="border: 0; border-top: 1px solid black;"/> <p>(name - printed)</p>	<p>1-Feb-19; Shakopee, MN USA</p> <hr style="border: 0; border-top: 1px solid black;"/> <p>(date of issue)</p>	
<p>Page 1 of 4</p>		



# EMERSON. EU Declaration of Conformity



No: RMD 1044 Rev. AD

## EMC Directive (2014/30/EU)

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

## PED Directive (2014/68/EU)

### Rosemount 3051S Series Pressure Transmitters

#### Rosemount 3051S\_CA4; 3051S\_CD2, 3, 4, 5 (also with P0 & P9 option) Pressure Transmitters

QS Certificate of Assessment – Certificate No. 12698-2018-CE-USA-ACCREDIA  
Module H Conformity Assessment  
Other Standards Used: ANSI / ISA 61010-1:2004

*Note – previous PED Certificate No. 59552-2009-CE-HOU-DNV*

#### All other Rosemount 3051S Pressure Transmitters

Sound Engineering Practice

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

Sound Engineering Practice

### Rosemount 3051SFx Series Flowmeter Pressure Transmitters

See DSI 1000 Declaration of Conformity



# EU Declaration of Conformity



No: RMD 1044 Rev. AD

## ATEX Directive (2014/34/EU)

### BAS01ATEX1303X – Intrinsic Safety Certificate

Equipment Group II, Category 1 G

Ex ia IIC T4 Ga

Harmonized Standards Used:

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

### BAS01ATEX3304X – Type n Certificate

Equipment Group II, Category 3 G

Ex nA IIC T5 Gc

Harmonized Standards Used:

EN 60079-0:2012+A11:2013, EN 60079-15:2010

### BAS01ATEX1374X – Dust Certificate

Equipment Group II, Category 1 D

Ex ta IIIC T105°C T50095°C Da

Harmonized Standards Used:

EN 60079-0:2012+A11:2013

Other Standards Used:

EN 60079-31:2009 (a review against EN 60079-31:2014, which is harmonized, shows no significant changes relevant to this equipment so EN 60079-31:2009 continues to represent “State of the Art”)

### BAS04ATEX0181X – Mining Certificate

Equipment Group I, Category M1

Ex ia I Ma

Harmonized Standards Used:

EN 60079-0:2012, EN 60079-11:2012

### BAS04ATEX0193U – Mining Certificate: Component

Equipment Group I, Category M1

Ex ia I Ma

Harmonized Standards Used:

EN 60079-0:2012, EN 60079-11:2012

### KEMA00ATEX2143X – Flameproof Certificate

Equipment Group II, Category 1/2 G

Ex db IIC T6...T4 Ga/Gb

Harmonized Standards:

EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-26:2015



# EU Declaration of Conformity



No: RMD 1044 Rev. AD

## 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 the 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 EU Type Examination Certificate

**DEKRA Certification B.V.** [Notified Body Number: 0344]  
Utrechtseweg 310  
Postbus 5185  
6802 ED Arnhem  
Netherlands

**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



## 8.13 China RoHS

**Figure 8-1: 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 3051SAL/3051SAM  
List of Rosemount 3051SAL/3051SAM 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的所有均质材料里，至少有一类均质材料中该有害物质的含量高于GB/T 26572所规定的限量要求。




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







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