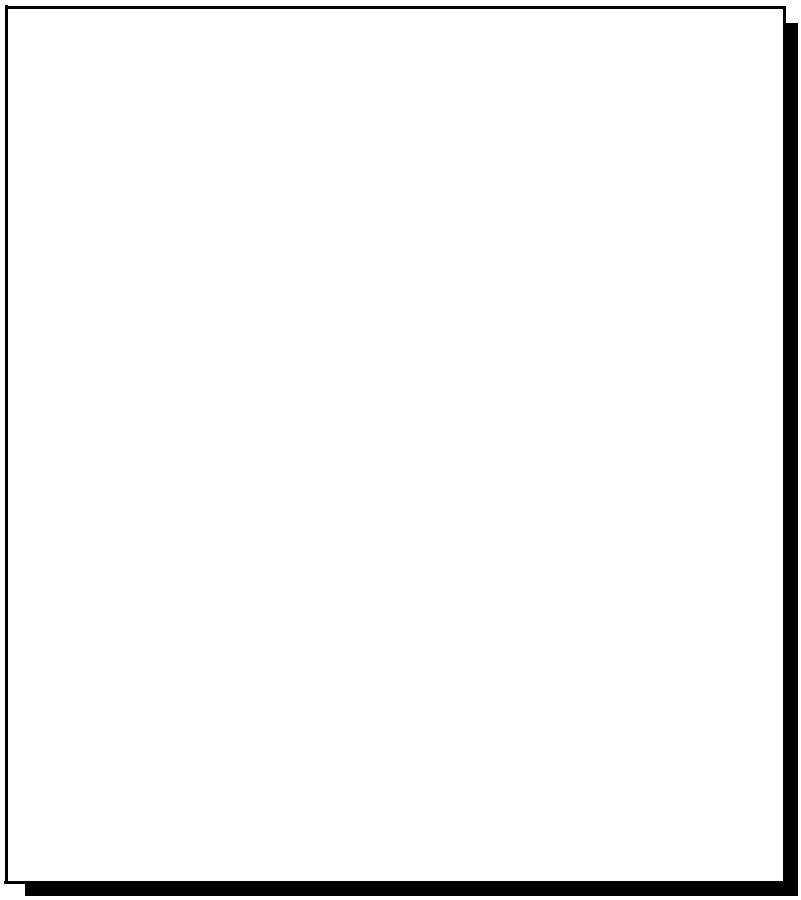
Reference Manual
00809-0100-4708, Rev AA
June 2010

Rosemount 708 Wireless Acoustic Transmitter



WirelessHART

ROSEMOUNT®

www.rosemount.com

EMERSON™
Process Management

Rosemount 708 Wireless Acoustic Transmitter

Rosemount 708 Hardware Revision	**1**
HART® Device Revision	**1**
Field Communicator Field Device Revision	**Dev vX, DD vX**

NOTICE

Read this manual before working with the product. For personal and system safety, and for optimum product performance, make sure to thoroughly understand the contents before installing, using, or maintaining this product.

The United States has two toll-free assistance numbers and one international number.

Customer Central
1 800 999 9307 (7:00 a.m. to 7:00 p.m. CST)

National Response Center
1 800 654 7768 (24 hours a day)
Equipment service needs

International
1 952 906 8888

⚠CAUTION

The products described in this document are NOT designed for nuclear-qualified applications.

Using non-nuclear qualified products in applications that require nuclear-qualified hardware or products may cause inaccurate readings.

For information on Rosemount nuclear-qualified products, contact an Emerson Process Management Sales Representative.

⚠WARNING

Explosions could result in death or serious injury:

Installation of this transmitter in an explosive environment must be in accordance with the appropriate local, national, and international standards, codes, and practices. Please review the approvals section of the 708 Reference Manual for any restrictions associated with a safe installation.

- Before connecting a Field Communicator in an explosive atmosphere, ensure the instruments are installed in accordance with intrinsically safe or non-incendive field wiring practices

Process leaks may cause harm or result in death:

- Install and tighten process connectors before applying pressure

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

NOTICE

The Rosemount 708 and all other wireless devices should be installed only after the Smart Wireless Gateway has been installed and is functioning properly. Wireless devices should also be powered up in order of proximity from the Smart Wireless Gateway, beginning with the closest. This will result in a simpler and faster network installation.

NOTICE

Shipping considerations for wireless products:

The unit was shipped to you without the power module installed. Please remove the power module prior to shipping.

Each power module contains one “D” size primary lithium 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. Please consult current regulations and requirements before shipping.

The power module with the wireless unit contains one "D” size primary lithium/thionyl chloride batteries. Each battery contains approximately X.X grams of lithium. Under normal conditions, the battery materials are self-contained and are not reactive as long as the batteries and the pack integrity are maintained. Care should be taken to prevent thermal, electrical or mechanical damage. Contacts should be protected to prevent premature discharge.

Battery hazards remain when cells are discharged.

Power modules should be stored in a clean and dry area. For maximum battery life, storage temperature should not exceed 30° C.

The power module has surface resistivity greater than one gigaohm 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 build-up.

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Section 1 Overview

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SAFETY MESSAGES

Instructions and procedures in this section may require special precautions to ensure the safety of the personnel performing the operations. Information that potentially raises safety issues is indicated by a warning symbol (⚠). Please refer to the following safety messages before performing an operation preceded by this symbol.

Warnings

⚠WARNING

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

- Only qualified personnel should perform the installation

Explosions could result in death or serious injury.

- Before connecting a Field Communicator in an explosive atmosphere, make sure that the instruments are installed in accordance with intrinsically safe or non-incendive field wiring practices
- Verify that the operating atmosphere of the transmitter is consistent with the appropriate hazardous locations certifications

Electrical shock could cause death or serious injury.

- Use extreme caution when making contact with the leads and terminals

OVERVIEW

Manual

This manual is designed to assist in the installation, operation, and maintenance of the Rosemount 702.

Section 1: Overview

- Overview
- Considerations
- Service Support
- Product Recycling/Disposal

Section 2: Configuration

- Device Sensor Configuration
- Device Network Configuration
- Remove Power Module

Section 3: Mounting

- Mounting
  - Direct Mount
- Ground the Transmitter

Section 4: Commissioning

- Verify Operation
- AMS® Wireless Configurator

Section 5: Operation and Maintenance

- Power Module Replacement

Section A: Specifications and Reference Data

- Specifications
- Dimensional Drawings
- Ordering Information

Section B: Product Certifications

- Approved Manufacturing Locations
- Telecommunication Compliance
- FCC and IC
- European Union Directive Information
- Ordinary Location Certification for FM
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Transmitter

Features of the Rosemount 708 include:

- An installation-ready solution that provides acoustic noise detection.
- Acoustic levels to verify the state of steam traps, pressure relief valves, condensers, and many others.
- Wireless output with >99% data reliability delivers rich HART® data, protected by industry leading security
- Simple and easy installation practices currently being used for robust installations

CONSIDERATIONS

General

The acoustic transmitter detects either a noise or no noise along with a temperature. By using simple HART configuration, the Rosemount 708 converts the noise and temperature status to a device status.

Wireless Considerations

Power Up Sequence

The power module should not be installed on any wireless device until the Smart Wireless Gateway (“Gateway”) is installed and functioning properly. Wireless devices should also be powered up in order of proximity from the Gateway, beginning with the closest. This will result in a simpler and faster network installation. Enable Active Advertising on the Gateway to ensure that new devices join the network faster. For more information see the Smart Wireless Gateway Manual (Document Number 00809-0200-4420).

Antenna Position

The antenna is internal to the acoustic transmitter. If best practices are followed, the antenna position will not matter in the wireless functionality.

Field Communicator Connections

The Power Module needs to be connected for the Field Communicator to interface with the 708.

Figure 1-1.

Mechanical

Location

When choosing an installation location and position, take into account access to the transmitter.

Electrical

Power Module

The Rosemount 708 Wireless transmitter is self-powered. The included power module contains one “D” size primary lithium/thionyl chloride battery. Each battery contains approximately X.X grams of lithium. Under normal conditions, the battery materials are self-contained and are not reactive as long as the batteries and the power module are maintained. Care should be taken to prevent thermal, electrical, or mechanical damage. Contacts should be protected to prevent premature discharge.

⚠ Use caution when handling the power module, it may be damaged if dropped from heights in excess of 20 feet (6.10 m).

Environmental

Verify that the operating atmosphere of the transmitter is consistent with the appropriate hazardous locations certifications.

Temperature Effects

The transmitter will operate within specifications for ambient temperatures between -40 and 185 °F (-40 and 85 °C). Heat from the process is transferred from the switch to the transmitter housing. If the expected process temperature is near or beyond specification limits, ...add recommendation

Temperature Limits

Operating Limit	Storage Limit
-40 to 185 °F -40 to 85° C	-40 to 185 °F -40 to 85 °C

SERVICE SUPPORT

To expedite the return process outside of North America, contact your Emerson Process Management representative,

Within the United States, call the Emerson Process Management Response Center toll-free number 1 800 654 7768. The center, which is available 24 hours a day, will assist you with any needed information or materials.

The center will ask for product model and serial numbers, and will provide a Return Material Authorization (RMA) number. The center will also ask for the process material to which the product was last exposed.

⚠CAUTION

Individuals who handle products exposed to a hazardous substance can avoid injury if they are informed of, and understand, the hazard. If the product being returned was exposed to a hazardous substance as defined by OSHA, a copy of the required Material Safety Data Sheet (MSDS) for each hazardous substance identified must be included with the returned goods.

SHIPPING CONSIDERATIONS FOR WIRELESS PRODUCTS (LITHIUM BATTERIES):
The unit was shipped with the Power Module not installed. Please remove the Power Module from the unit before shipping.

Primary lithium batteries (charged or discharged) are regulated during transportation by the U.S. Department of Transportation. They 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.

PRODUCT RECYCLING/DISPOSAL

Recycling of equipment and packaging should be taken into consideration and disposed of in accordance with local and national legislation/regulations.

Section 2 Configuration

Safety Messages . . . . . page 2-1
Device Sensor Configuration . . . . . page 2-1
Device Network Configuration . . . . . page 2-2
Remove Power Module . . . . . page 2-5

SAFETY MESSAGES

Instructions and procedures in this section may require special precautions to ensure the safety of the personnel performing the operations. Information that potentially raises safety issues is indicated by a warning symbol (⚠). Please refer to the following safety messages before performing an operation preceded by this symbol.

Warnings

⚠WARNING

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

- Only qualified personnel should perform the installation

Explosions could result in death or serious injury.

- Before connecting a Field Communicator in an explosive atmosphere, make sure that the instruments are installed in accordance with intrinsically safe or non-incendive field wiring practices
- Verify that the operating atmosphere of the transmitter is consistent with the appropriate hazardous locations certifications

Electrical shock could cause death or serious injury.

- Use extreme caution when making contact with the leads and terminals

DEVICE SENSOR CONFIGURATION

Remove the power module housing then connect to the HART communication terminals for configuration.

The Rosemount 708 will receive any HART communication from a handheld Field Communicator, or AMS®. When using a Field Communicator, any configuration changes must be sent to the transmitter using the **Send** key (F2). AMS configuration changes are implemented when the **Apply** button is clicked.

AMS® Wireless Configurator

AMS is capable of connecting to devices directly, using a HART modem, or with the Gateway. When configuring on the bench with a HART modem, double click the device icon, then choose the Configure/Setup tab (or right click and select Configure/Setup). Configure the device settings using the Direct Connection menu. When configuring with the Gateway, double click the device icon then choose the Configure/Setup tab (or right click and select Configure/Setup). Configure the device settings using the Wireless Connection menu.

To check or change sensor configuration using a 475 Field Communicator, enter the following Fast Key Sequence: X, X, X.

DEVICE NETWORK CONFIGURATION

To communicate with the Gateway, and ultimately the Information System, the transmitter must be configured to communicate with the wireless network.

Using a Field Communicator or AMS, enter the Network ID and Join Key so they match the Network ID and Join Key of the Gateway and the other devices in the network. If the Network ID and Join Key are not identical, the transmitter will not communicate with the network. The Network ID and Join Key may be obtained from the Gateway on the **Setup>Network>Settings** page on the web server. Using a 475 Field Communicator, the Network ID can be configured by entering the Fast Key Sequence: X, X, X, X. The Join Key can also be configured using a 475 Field Communicator with the Fast Key Sequence: X, X, X, X.

The final device network configuration piece is the Update Rate which, by default, is 1 minute. It can be changed at commissioning, or at any time, by using AMS or the Gateway's web server. The Update Rate should be between 4 seconds and 60 minutes. To change the Update Rate with a Field Communicator, use the Fast Key Sequence: X, X, X.

If doing a bench top initial configuration, after completion remove the power module until installation. When the device is installed, insert he power module and close the housing cover securely. Always ensure a proper seal so that polymer touches polymer, but do not over tighten.

Figure 2-1. 708 Power Module

Connect the HART communication leads to the COMM terminals on the power module.

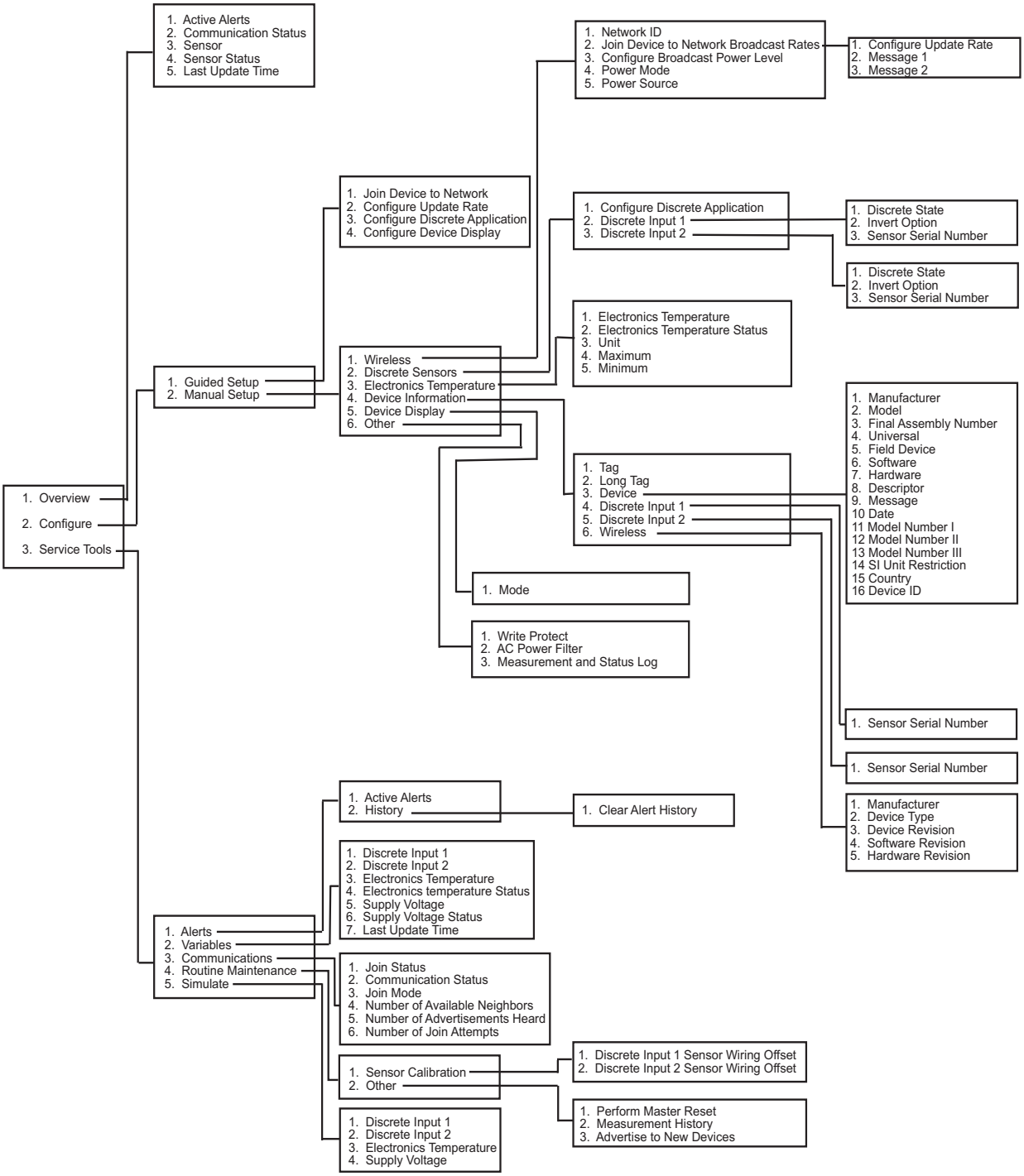
Figure 2-2. 475 Field Communicator Connections

For HART communication, a 708 DD is required.

HART Menu Tree

For ease of operation, changing setup, such as switch type, can be completed in several locations.

Figure 2-3. Field Communicator Menu Tree



Fast Key Sequence

Table 2-1 lists the fast key sequence for common transmitter functions.

NOTE:
The fast key sequences assume that DD Dev v1, DD v4 is being used.

Table 2-1. 702 Fast Key Sequence

Function	Key Sequence	Menu Items
Device Information	**2, 2, 5, 3**	Manufacturer, Model, Final Assembly Number, Universal, Field Device, Software, Hardware Descriptor, Message, Date, Model Number, I, II, III, SI Unit Restriction, Country
Guided Setup	**2, 1**	Join Device to Network, Configure Update Rate, Configure Sensor, Calibrate Sensor, Configure Display, Configure Process Alarms
Manual Setup	**2, 2**	Wireless, Process Sensor, Percent of Range, Device Temperature, Device Information, Device Configure, Other
Wireless	**2, 2, 1**	Network ID, Join Device to Network, Configure Update Rate, Configure Broadcast Power Level, Power Mode, Power Source
Discrete Input Configuration	**3, 4, 1**	Output Configuration, Discrete Input Configuration

Calibration

REMOVE POWER MODULE

After the sensor and network have been configured, remove the power module and replace the power module cover. The power module should be inserted only when the device is ready for commissioning

Section 3 Mounting

Safety Messages . . . . . page 3-1
Mounting . . . . . page 3-2
Direct Mount . . . . . page 3-2
Ground the Transmitter . . . . . page 3-5

SAFETY MESSAGES

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Warnings

⚠WARNING

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

- Only qualified personnel should perform the installation

Explosions could result in death or serious injury.

- Before connecting a Field Communicator in an explosive atmosphere, make sure that the instruments are installed in accordance with intrinsically safe or non-incendive field wiring practices
- Verify that the operating atmosphere of the transmitter is consistent with the appropriate hazardous locations certifications

Electrical shock could cause death or serious injury.

- Use extreme caution when making contact with the leads and terminals

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions: This device may not cause harmful interference. This device must accept any interference received, including interference that may cause undesired operation.

This device must be installed to ensure a minimum antenna separation distance of 20 cm from all persons.

MOUNTING

The acoustic transmitter is connected directly to the piping that is being measured.

Direct Mount

1. Align the metal foot of the transmitter onto the pipe.
2. Secure the transmitter with the two provided clamps. One should be on each side of the foot.
3. If commissioning the device, install the power module.

Mounting Considerations

Section 4 Commissioning

Safety Messages . . . . . page 4-1
Warnings . . . . . page 4-1
Verify Operation . . . . . page 4-2
AMS Wireless Configurator . . . . . page 4-3

SAFETY MESSAGES

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- Verify that the operating atmosphere of the transmitter is consistent with the appropriate hazardous locations certifications.

Electrical shock could cause death or serious injury.

- Use extreme caution when making contact with the leads and terminals.

NOTE
The Rosemount 708 and all other wireless devices should be installed only after the Gateway has been installed and is functioning properly.

Wireless devices should be powered up in order of proximity from the Gateway, beginning with the device closest to the Gateway. This will result in a simpler and faster network installation.

VERIFY OPERATION

Operation can be verified in three locations: at the device, by using the 475 Field Communicator, at the Smart Wireless Gateway's integrated web interface or via AMS Wireless Configurator.

Troubleshooting

If the device is not joined to the network after power up, verify the correct configuration of the Network ID and Join Key, and verify that Active Advertising has been enabled on the Gateway. The Network ID and Join Key in the device must match the Network ID and Join Key of the Gateway.

Field Communicator

A 708 DD is required for HART communication. For connecting with a Field Communicator, refer to Figure 2-2 on page 2-3.

Function	Key Sequence	Menu Items
Communications	3,3	Join Status, Wireless Mode, Join Mode, Number of Available Neighbors, Number of Advertisements Heard, Number of Join Attempts

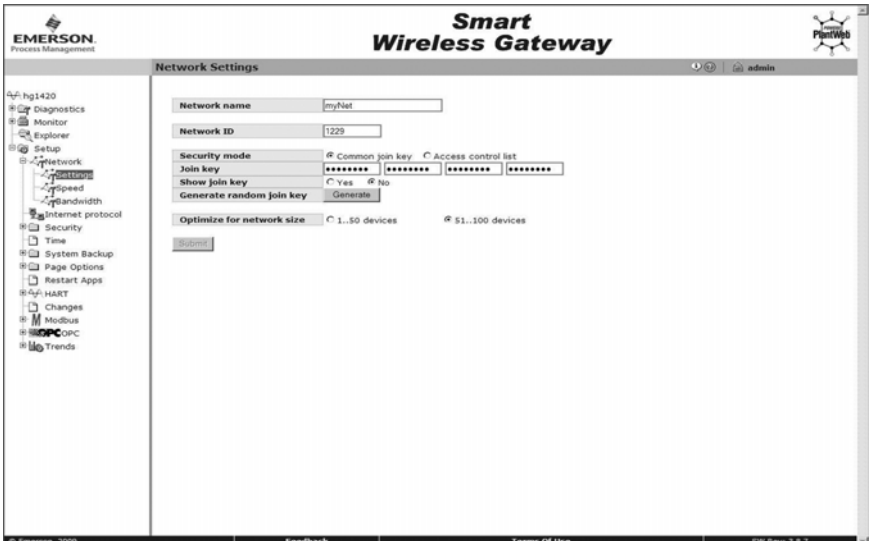
Smart Wireless Gateway

In the integrated web interface from the Gateway, navigate to the **Explorer>Status** page. This page shows whether the device has joined the network and if it is communicating properly.

NOTE:
The time to join the new device(s) to the network is dependent upon the number of devices being joined and the number of devices in the current network. For one device joining an existing network with multiple devices, it may take up to five minutes. While it may take up to 60 minutes for multiple new devices to join the existing network.

NOTE:
If the device joins the network and immediately has an alarm present, it is likely due to sensor configuration. Check the sensor configuration (see Fast Key Sequence on page 2-5).

Figure 4-1. Smart Wireless Gateway Network Settings



AMS Wireless Configurator

When the device has joined the network, it will appear in the Device Manager as illustrated below.

Troubleshooting

If the device is not joined to the network after power up, verify the correct configuration of the Network ID and Join Key, and verify that Active Advertising has been enabled on the Gateway. The Network ID and Join Key in the device must match the Network ID and Join Key of the Gateway.

The Network ID and Join Key may be obtained from the Gateway on the **Setup>Network>Settings** page on the web interface (see Figure 4-1 on page 4-3). The Network ID and Join Key may be changed in the wireless device by using the following Fast Key sequence.

Function	Key Sequence	Menu Items
Wireless	2,1,1	Join Device to Network

Section 5 Operation and Maintenance

Safety Messages . . . . . page 5-1
Power Module Replacement . . . . . page 5-1

SAFETY MESSAGES

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Warnings

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- Make sure only qualified personnel perform the installation.

Explosions could result in death or serious injury.

- Before connecting a Field Communicator in an explosive atmosphere, make sure the instruments are installed in accordance with intrinsically safe or non-incendive field wiring practices.
- Verify that the operating atmosphere of the transmitter is consistent with the appropriate hazardous locations certifications.

Electrical shock could cause death or serious injury.

- Use extreme caution when making contact with the leads and terminals.

POWER MODULE REPLACEMENT

Expected power module life is eight years at reference conditions.(1)

When the power module needs to be replaced, remove the power module cover and the power module (Part Number 00753-9220-0001) then replace the cover. Tighten to specification and verify operation.

Handling Considerations

The power module with the wireless unit contains one “D” size primary lithium/thionyl chloride battery. Each battery contains approximately 2.5 grams of lithium. Under normal conditions, the battery materials are self-contained and are not reactive as long as the batteries and the battery pack integrity are maintained. Care should be taken to prevent thermal, electrical or mechanical damage. Contacts should be protected to prevent premature discharge.

Use caution when handling the power module, it may be damaged if dropped from heights in excess of 20 feet.

⚠ Battery hazards remain when cells are discharged.

(1) Reference conditions are 70° F (21° C), transmit rate of once per minute, and routing data for three additional network devices.

Environmental Considerations

As with any battery, local environmental rules and regulations should be consulted for proper management of spent batteries. If no specific requirements exist, recycling through a qualified recycler is encouraged. Consult the materials safety data sheet for battery specific information.

Shipping Considerations

The unit was shipped to you without the power module installed. Please remove the power module prior to shipping.

Each power module contains one “D” size primary lithium batteries. Primary lithium batteries are regulated in transportation by the U.S. Department of Transportation, and are also covered by International Air Transport Association (IATA), International Civil Aviation Organization (ICAO), and European Ground Transportation of Dangerous Goods (ARD). It is the responsibility of the shipper to ensure compliance with these or any other local requirements. Please consult current regulations and requirements before shipping.

Appendix A Specifications and Reference Data

Specifications . . . . . page A-1
Dimensional Drawings . . . . . page A-3
Ordering Information . . . . . page A-4

SPECIFICATIONS

Functional Specifications

Output

WirelessHART™ acoustic, temperature states.

Humidity Limits

0 - 100% relative humidity

Temperature Limits

-40 °C to 85 °C

Transmit Rate

User selectable, 4, 8, 16, 32 seconds, or 1 to 60 min.

Physical Specifications

Electrical Connections/Power Module

- Replaceable, non-rechargeable, Intrinsically Safe Lithium-Thionyl Chloride power module pack with PBT enclosure
- Eight year power module life at reference conditions(1)

Field Communicator Connections

Communication Terminals

Clips permanently fixed to power module

Materials of Construction

Enclosure

Housing

- PBT/PC

Cover O-ring

- Buna-N

Power Module

- PBT/PC

Antenna

- Integrated omnidirectional antenna

(1) Reference conditions are 70 °F (21 °C), transmit rate of once per minute, and routing data for three additional network devices.

Wave Guide

- Machined 316L SST

Mounting

Transmitters are directly attached to piping using two hose clamps.

Weight

708 with power module 20 ounces

708 without power module 15 ounces

Enclosure ratings (702)

Housing option code P is NEMA 4X, and IP65.

Performance Specifications

Self Calibration

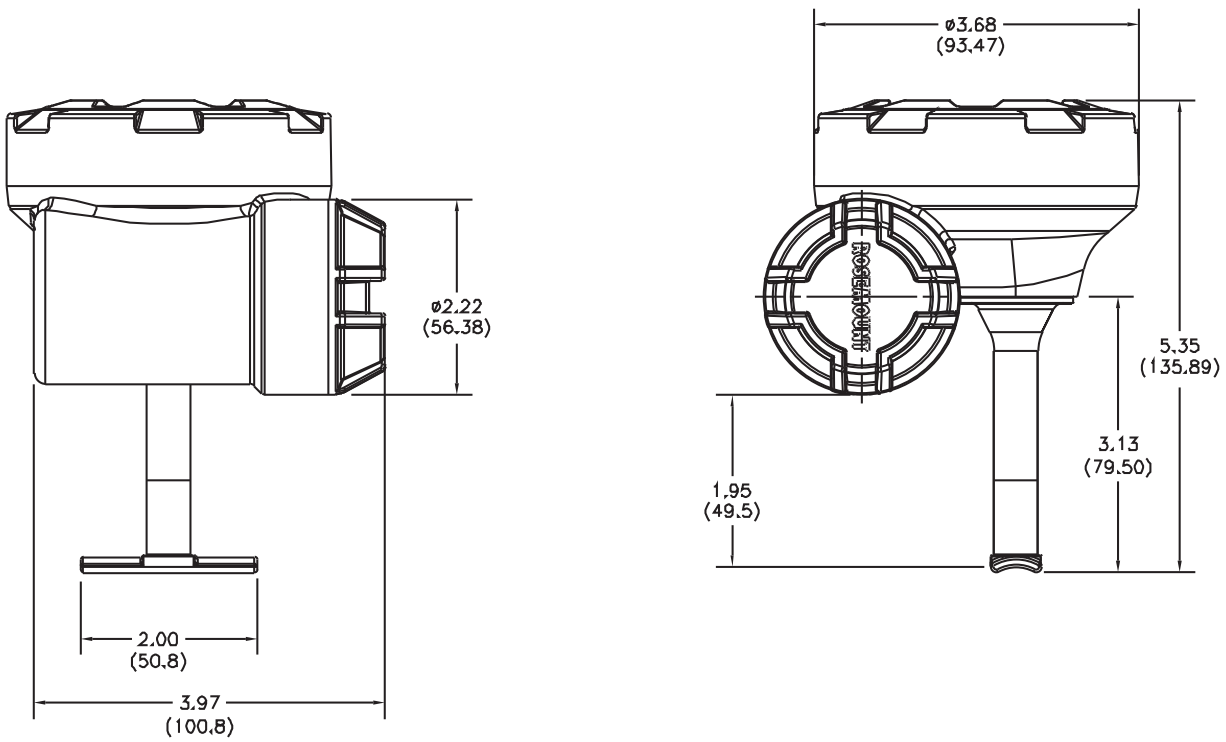
The analog-to-digital measurement circuity automatically self-calibrates for each status update by comparing the dynamic measurement to extremely stable and accurate internal reference elements.

Vibration Effect

Tested per the requirements of IEC60770-1 field or pipeline with high vibration level (10-60 Hz 0.21 mm displacement peak amplitude/60-2000 Hz 3g).

DIMENSIONAL DRAWINGS

708 Direct Mount



Dimensions are in inches (millimeters)

ORDERING INFORMATION

Table A-1. Rosemount 708 Acoustic Transmitter Ordering Information

★ The Standard offering represents the most common options. The starred options (★) should be selected for best delivery.
The Expanded offering is subject to additional delivery lead time.

Model	Product Description	
Standard		**Standard**
708	Acoustic Transmitter	★
Output Protocol		
Standard		**Standard**
X	Wireless	★
Measurement		
Standard		**Standard**
1	Steam	★
2	Generic	★
Housing		
Standard		**Standard**
P	Engineered Polymer	★
Conduit Threads		
Standard		**Standard**
1	1/2 - 14 NPT	★
Waveguide Configuration		
Standard		**Standard**
A1	Acoustic Wave Guide	★
Product Certification		
Standard		**Standard**
NA	No Approval	★
I1	ATEX Intrinsic Safety	★
I5	FM Intrinsically Safe	★
I6	CSA Intrinsically Safe	★
I7	IECEx Intrinsic Safety	★
Mounting Bracket		
Standard		**Standard**
NA00	No Mounting Bracket	★
HC01	Hose Clamp; description pending	★
HC02	Hose Clamp; description pending	★
HC03	Hose Clamp; description pending	★
HC04	Hose Clamp; description pending	★
HC05	Hose Clamp; description pending	★
HC06	Hose Clamp; description pending	★
HC07	Hose Clamp; description pending	★
HC08	Hose Clamp; description pending	★
HC09	Hose Clamp; description pending	★
Wireless Options		
Standard		**Standard**
Wireless Update Rate		★
WA	User Configurable Update Rate	★
Operating Frequency and Protocol		★
3	2.4 GHz DSSS, WirelessHART™	★
Omnidirectional Wireless Antenna		★
WP	Long Range, Internal Antenna	★
SmartPower™		★
5	Long Life Power Module Adapter (3.6V)	★
Typical Model Number: 708 X 1 P A1 NA HC01 WA3 WP5		

Appendix B Product Certifications

Approved Manufacturing Locations . . . . . page B-1
Telecommunication Compliance . . . . . page B-1
FCC and IC . . . . . page B-1
European Union Directive Information . . . . . page B-1
Ordinary Location Certification for FM . . . . . page B-1
Hazardous Locations Certificates . . . . . page B-2

Approved Manufacturing Locations

Rosemount Inc. - Chanhassen, Minnesota, USA
Emerson Process Management GmbH & Co. - Karlstein, Germany
Emerson Process Management Asia Pacific Private Limited - Singapore

Telecommunication Compliance

All wireless devices require certification to ensure that they adhere to regulations regarding the use of the RF spectrum. Nearly every country requires this type of product certification. Emerson is working with governmental agencies around the world to supply fully compliant products and remove the rise of violating country directives or laws governing wireless device usage.

FCC and IC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions: This device may not cause harmful interference. This device must accept any interference received, including interference that may cause undesired operation.

This device must be installed to ensure a minimum antenna separation distance of 20 cm from all persons.

European Union Directive Information

The EC Declaration of Conformity for all applicable European directives for this product can be found on www.rosemount.com. A hard copy may be obtained by contacting your local sales representative.

ATEX Directive (94/9/EC)
Emerson Process Management complies with the ATEX Directive.

Electro Magnetic Compatibility (EMC) (2004/108/EEC)
EN 61326-1; 2006
EN 61326-2-3; 2006l

Radio and Telecommunications Terminal Equipment Directive (R&TTE) (1999/5/EC)
Emerson Process Management complies with the R&TTE Directive.

Ordinary Location Certification for FM

As standard, the transmitter has been examined and tested to determine that the design meets basic electrical, mechanical, and fire protection requirements by FM, a nationally recognized testing laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

Hazardous Locations Certificates

North American Certifications

Factory Mutual (FM) Approvals

I5 FM Intrinsic Safety
Intrinsically Safe for Class I, Division 1, Groups A, B, C, D
Zone Marking: Class I, Zone 0, AEx ia llC
Temperature Codes T4 (T_{amb} = -50 to 70° C)
Ambient temperature limits: -50 to 85° C
Intrinsically Safe when installed in accordance with Rosemount drawing XXXXX-XXXX.
For use with Rosemount Power Module P/N XXX-XXXX-XXXX only.
Enclosure Type 4X / IP65
Warning: Does not meet the surface resistivity requirements, and it must only be cleaned with a damp cloth to avoid electrostatic charging.

CSA - Canadian Standards Association

I6 CSA Intrinsic Safety
Intrinsically Safe for Class I, Division 1, Groups A, B, C, and D.
Temp Code T3C
Enclosure Type 4X / IP65
For use with Rosemount Power Module P/N XXX-XXXX-XXXX only
Intrinsically Safe when installed per Rosemount drawing XXXXX-XXXX
Warning: Does not meet the surface resistivity requirements, and it must only be cleaned with a damp cloth to avoid electrostatic charging.

European Certifications

I1 ATEX Intrinsic Safety
Certificate No.: BASEEFA07ATEXXXXXX Ⓔx II 1G
Ex ia IIC T4 (T_a = -60 °C ≤ to ≤ 70 °C)
IP65
For use with Rosemount Power Module P/N XXX-XXXX-XXXX only

CE 1180

Does not meet the surface resistivity requirements, and it must only be cleaned with a damp cloth to avoid electrostatic charging.

IECEx Certifications

I7 IECEx Intrinsic Safety
Certificate No.: IECExBAS XX.XXXXX
Ex ia IIC T4 (T_{amb} = -60 °C ≤ to ≤ 70 °C)
IP65
For use with Rosemount Power Module P/N XXX-XXXX-XXXX only

Does not meet the surface resistivity requirements, and it must only be cleaned with a damp cloth to avoid electrostatic charging

CE

TABLE 1.

Country[1]	Restriction
Bulgaria	General authorization required for outdoor use and public service
France	Outdoor use limited to 10mW e.i.r.p.
Italy	If used outside of own premises, general authorization is required.
Norway (1)	May be restricted in the geographical area within a radius of 20 km from the center of Ny-Alesund.
Romania	Use on a secondary basis. Individual license required.

(1) Only applies to Extended Range Antenna option WM.

Figure B-1. Rosemount 702 FM Intrinsically Safe Installation Drawing

Figure B-2. Rosemount 702 CSA Intrinsic Safety Installation Drawing

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