Emerson Wireless 1410S Gateway

ROSEMOUNT

EMERSON

Safety messages

NOTICE

This guide provides basic guidelines for the Emerson Wireless 1410S Gateway. It does not provide instructions for diagnostics, maintenance, service, or troubleshooting. Refer to the Emerson Wireless Gateway 1410S Reference Manual for more information and instructions. The manuals and this guide are available electronically on Emerson.com/Rosemount.

⚠ WARNING

Explosion hazard

Do not make or break any connections to the gateway while circuits are live unless area is known to be non-hazardous.

Risque d'explosion

N'établissez ni ne rompez aucune connexion à la passerelle lorsque les circuits sont sous tension, à moins que la zone ne soit connue comme étant non dangereuse.

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 Product Certifications section for any restrictions associated with a safe installation.

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

Les explosions peuvent entraîner la mort ou des blessures graves

L'installation de l'appareil dans un environnement explosif doit être conforme aux normes, codes et pratiques locaux, nationaux et internationaux appropriés. Consultez la section Certifications du produit pour toute restriction associée à une installation en toute sécurité.

Évitez tout contact avec les fils et les bornes. La haute tension qui peut être présente sur les câbles peut provoquer un choc électrique.

Potential electrostatic charging hazard

The Emerson Wireless 1410S2 Gateway enclosure's polyurethane paint finish may constitute an electrostatic hazard. The Emerson Wireless 1410S1 Gateway is housed in a polymeric enclosure that may constitute an electrostatic hazard. Use care in handling and cleaning when in explosive environments to avoid an electrostatic discharge.

Risque potentiel de charge électrostatique

Voir les instructions.

Repair/maintenance

The Emerson Wireless 1410S Gateway contains no user serviceable components. If the device is not functioning properly, see the troubleshooting guide in the Emerson Wireless 1410S Gateway manual. If these troubleshooting steps do not resolve the problem, contact the factory.

Physical access

Physical security is an important part of any security program and fundamental to protecting your system. Unauthorized personnel may cause intentional or unintentional damage or misconfiguration of the Emerson Wireless 1410S Gateway and connected field devices. Restrict physical access by unauthorized personnel to protect end users' assets

⚠ CAUTION

Equipment conformance

Protection may be impaired if the device is used in a manner not specified by the manufacturer.

NOTICE

The 1410S1 needs an external IP54 that meets the requirements of CAN/CSA 60079-0.

Le 1410S1 a besoin d'un IP54 externe qui répond aux exigences de CAN/CSA 60079-0.

Contents

1   Wireless planning

1.1   Power up sequence

The gateway should be installed and functioning properly before power modules are installed in any wireless field devices. Wireless field 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.

1.2   Gateway redundancy

If the wireless gateway was ordered with redundancy (Gateway Redundancy code RD), refer to Appendix D in the Emerson Wireless 1420 Gateway Reference Manual for additional installation instructions.

1.3   Gateway firmware compatability

The gateway firmware needs to be compatible with host connections being made. Verify that gateway firmware and host firmware (e.g. Security Setup Utility (SSU) and Plantweb Insight) are compatible before commissioning.

2   PC requirements

2.1   Operating system (optional software only)

For security setup. Microsoft® supported Windows™ operating systems are acceptable. Some examples are shown below:

- Microsoft Windows Server 2019 (Standard Edition), Service Pack 2
- Windows 10 Enterprise, Service Pack 1

2.2   Applications

Configuration of the gateway is done through a secure web interface. Recent versions of the following browsers are supported:

- Chrome™ browser
- Mozilla Firefox®
- Microsoft Edge

2.3   Hard disk space

- AMS Wireless Configurator: 1.5 GB
- Gateway Setup CD: 250 MB

3   Initial connection and configuration

To configure the gateway, a local connection between a computer and the gateway needs to be established.

Powering the Gateway

For the Emerson Wireless 1410S Gateway, bench top power will be needed to power the Gateway by wiring a 10.5–30 VDC power source.

An Emerson Wireless 1410S Gateway can also be powered via Power over Ethernet (PoE) and is compliant with the IEEE 802.3af standard.

Note
The Emerson Wireless 1410S2 Gateway hardware revision 1.0.0 configured with Intrinsically Safe Outputs option "A" can only be powered by 24 VDC power source. Check label to verify hardware revision.

Figure 3-1: Emerson Wireless 1410S1 Gateway Wiring

A. DIN-rail release tab

B. 781S terminal 1 power and data connections

C. 781S terminal 2 power and data connections

D. Ethernet port 1. When this port is activated, the factory IP address is 192.168.1.10.

E. Ethernet port 2. When this port is activated, the factory IP address is 192.168.2.10.

F. Emerson 1410S power and serial connections

G. 781S power terminals

H. 781S data terminals

I. 10.5 to 30 VDC power input[1]

J. Serial Modbus

Figure 3-2: Emerson Wireless 1410S2 Gateway Wiring

- A. *Mounting plate*
- B. *781S terminal 1 power and data connections*
- C. *781S terminal 2 power and data connections*
- D. *Ethernet port 1. When this port is activated, the factory IP address is 192.168.1.10.*
- E. *Ethernet port 2. When this port is activated, the factory IP address is 192.168.2.10.*
- F. *Emerson 1410S power and serial connections*
- G. *781S power terminals*
- H. *781S data terminals*
- I. *10.5 to 30 VDC power input[1]*
- J. *Serial modbus*
- K. *External ground terminal*
- L. *Internal ground terminal*

⚠ WARNING

Conduit/cable entries for Emerson Wireless 1410S2 Gateway

The conduit/cable entries in the transmitter housing use a ½–14 NPT thread form. When installing in a hazardous location, use only appropriately listed or Ex certified plugs, glands, or adapters in cable/conduit entries.

Installer to ensure external conduit/cable fittings are Type 4X rated or better (C22.2 No 94.2/UL 50E requirement).

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(1) *Emerson Wireless 1410S2 Gateway hardware revision 1.0.0 configured with Intrinsically Safe Outputs option "A" can only be powered by 24 VDC power source. Check label to verify hardware revision*

3.1   Establishing a connection

Connect the PC/laptop to the Ethernet 1 (Primary) receptacle on the gateway using an Ethernet cable.

For DeltaV Ready Gateways, commission the gateway to the Deltav system first. Proceed to Section 3.5 for updating user information. Section 3.2-3.4 can be ignored for a DeltaV Ready Gateway.
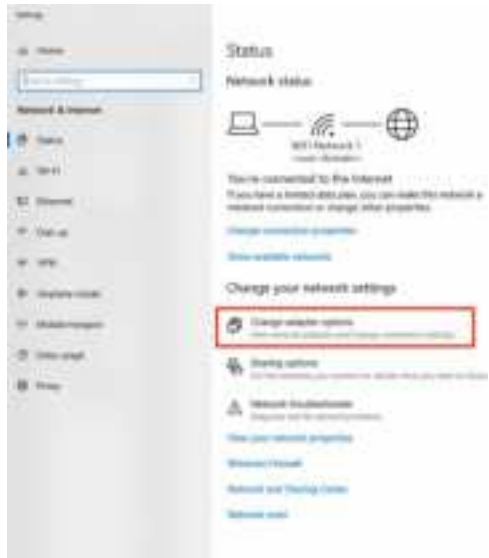
3.2   Windows 10

Procedure

1. Select the network icon in the lower right corner of the Windows 10 workspace.
2. Select the **Network & Internet Settings** link.

Figure 3-3: WiFi Connections Menu
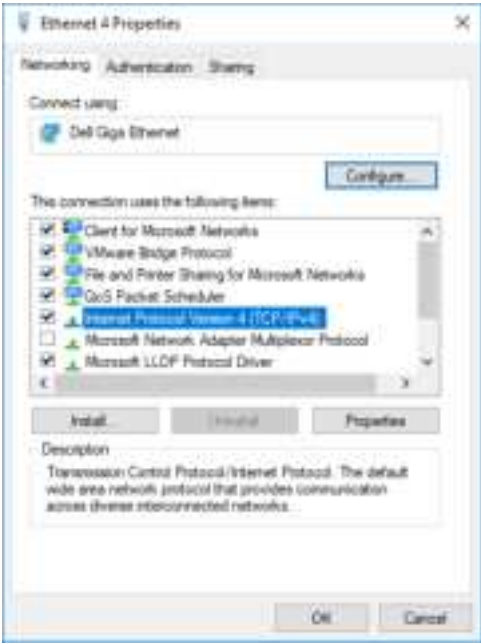
3. Select **Change adapter options**.

Figure 3-4: Network & Internet Settings

4. Right click the network interface connection that the gateway is plugged into, and select **Properties**.

5. Select **Internet Protocol Version 4 (TCP/IPv4) → Properties**.

Figure 3-5: Ethernet properties

Note
If the PC/laptop is from another network, record the current IP address and other settings so the PC/laptop can be returned to the original network after the gateway has been configured.

6. Select the **Use the following IP address** button.

Figure 3-6: IP Address Properties

7. In the **IP Address** field, enter 192.168.1.11.

8. In the **Subnet mask** field, enter 255.255.255.0.

9. Select **OK** for both the *Internet Protocol (TCP/IP) Properties* window and the *Local Area Connection Properties* window.

Note
Connecting to the gateway's secondary Ethernet port will require different network settings.

Table 3-1: Network Settings

| Ethernet	Gateway	PC/laptop/tablet	Subnet
1	192.168.1.10	192.168.1.11	255.255.255.0
2	192.168.2.10	192.168.2.11	

3.3   Disable proxies

This procedure may be necessary when using a Chrome browser with Windows operating systems.

Procedure

1. Open web browser.

2. Navigate to **Settings → Advanced**.

3. In the System section, click **Open proxy settings**.

Example

Figure 3-7: Proxy settings menu. Only use if a proxy is needed.
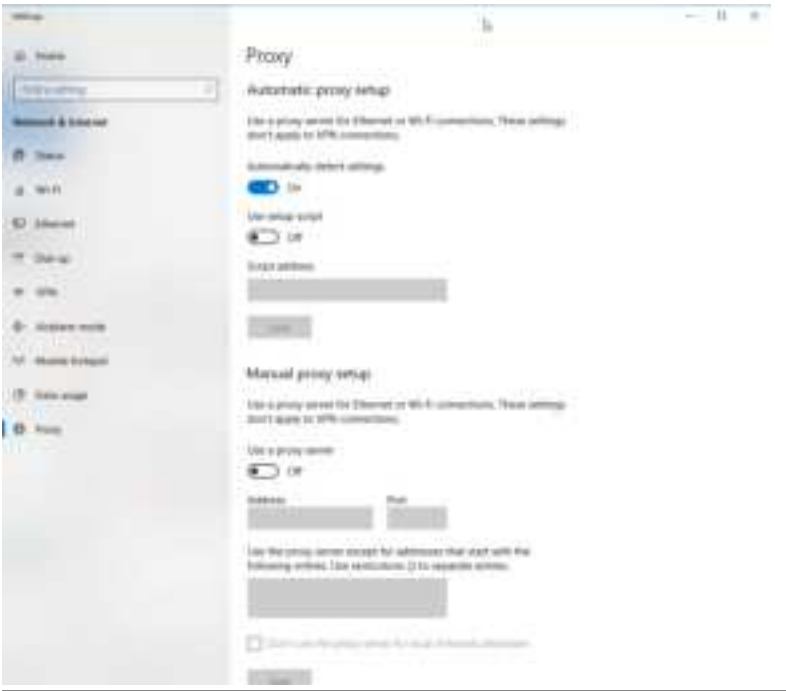
3.4   Configure the Gateway

To complete initial configuration for the gateway, follow the steps below. This will have to be done be done for both networks.

Procedure

1. Access the default web page for the gateway at https:// 192.168.1.10.

    a) Log on as Username: **admin**

    b) Type in password: **default**

        Note
        If the gateway has been connected properly, a security certificate alert will be displayed in the web browser. Proceed to the gateway web interface and log-in using the following default credentials. Password should be changed after initial sign-in. See Section 3.5 for changing username and passwords.

        Figure 3-8: User Name and Password

2. Navigate to **System Settings → Gateway → Ethernet Communication** to enter the Network Settings.

    a) Configure a static IP Address or set for DHCP and enter a Host Name.

Figure 3-9: Ethernet Communication

Note

IP addresses will need to be user defined. See Figure 3-9 contains example IP addresses.

b) Restart application at **System Settings → Gateway → Backup and Restore → Restart Apps**.

Note

Resetting applications will temporarily disable communications with field devices.

3. Disconnect the power and Ethernet cable from the gateway.

3.5 Changing username and passwords

Procedure

1. Navigate to **System Settings → Users → User Accounts** to change passwords and add users with the following steps.

   a) For DeltaV Ready Gateways, access gateway web interface from DeltaV Explorer

2. Change admin, operator, maintenance, and executive passwords to a secure password that adheres to user's password requirements.

Figure 3-10: Navigating to User Accounts page

NOTICE

Changing passwords is **HIGHLY SUGGESTED** before installing the gateway for full use.

⚠ WARNING

There is no way to recover lost passwords. The only way to access a gateway that no longer has known credentials is to factory reset the gateway. Doing a factory reset will clear all user settings.

Figure 3-11: User Accounts page for updating changing passwords

4   Physical installation

4.1   Emerson 1410S mounting

Find a location where the gateway has convenient access to the host system network (process control network).

4.1.1   1401S1 DIN-rail mounting

The Emerson Wireless 1410S1 Gateway can be snapped onto a DIN TS35/7.5 or TS35/15 rail system. To clip the gateway onto the DIN rail, see Figure 4-1.

Prerequisites

- DIN-rail for mounting gateway
- Emerson Wireless 1410S1 Gateway

Procedure

1. Press down on the upper release tab of the gateway to release the mounting clip.
2. Align top teeth on top of DIN-rail and rotate bottom teeth into bottom of DIN-rail.
3. Release upper tab to secure the gateway to the DIN-rail.
4. To remove, press down on upper tab to release the gateway from the DIN-rail.

NOTICE

When mounting the unit in an electrical enclosure or other location, comply with the appropriate local and national installation codes. Verify that the installer, associated hardware, and installation equipment used have the proper certifications for the specific type of installation being performed. Before installation, verify if local codes require a permit and/or an inspection before energizing. When planning the installation, account for routing the antenna cable within the enclosure.

Note
Do not mount the antenna within a metal enclosure. To avoid damage to sensitive RF components, do not remove protective cap from the gateway SMA connector until ready to install the antenna.

Figure 4-1: Emerson 1410S1 Mounting
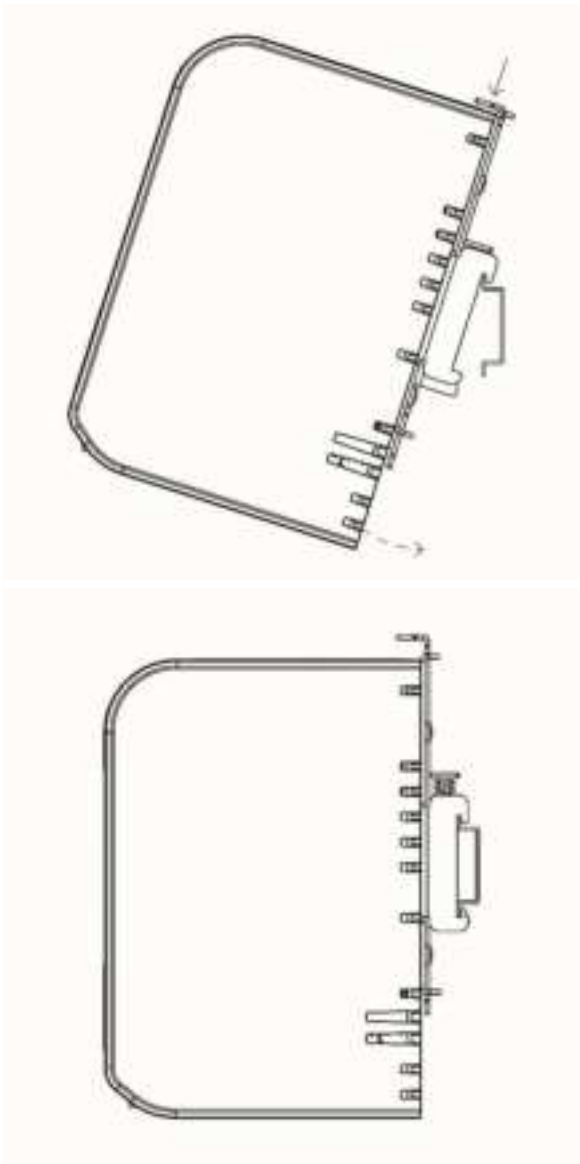
4.1.2   1410S2 Pipe mount
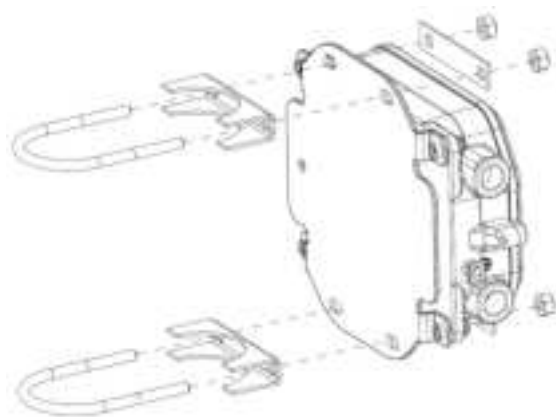
Prerequisites

The following hardware and tools are needed to mount the gateway to a 20-in. pipe:

- Two 5/16-in. u-bolts kits (supplied with gateway)
- 2-in. mounting pipe
- 1/2-in. wrench

Procedure

1. Insert one u-bolt around the pipe, through the top mounting holes of the gateway mounting plate, and through the washer plate.
2. Use a 1/2-in. wrench to fasten the nuts to the u-bolt.
3. Repeat for the second u-bolt and the lower mounting holes.

Figure 4-2: Emerson 1410S2 Mounting

4.1.3   1410S2 Surface mount

The following hardware and tools are needed to surface mount the gateway to a support bracket:

Prerequisites

- Four appropriate fasteners for preferred mounting method
- Mounting plate (supplied with gateway)
- Drill (not supplied)
- Wrench (not supplied)

Mount the gateway using the following procedure:

Procedure

Install gateway into surface as shown in Figure 4-3. Screws shown as example.

Figure 4-3: Emerson 1410S2 Surface Mounting

4.2   Wiring the Emerson 1410S to Power and 781S Smart Antenna(s)

Prerequisites

- Compatible cable

- Screwdriver

- Wire strippers

- For the Emerson Wireless 1410S1 Gateway, the connectors require a 12-30 AWG cable that meets the ambient temperature requirements of the end installation. Screws on the connector must be secured with a torque of 4.4 - 5.3 in-lbs.

- For the Emerson Wireless 1410S2 Gateway, the internal antenna terminal connections on the shroud require 14 AWG cable or smaller. The cable must be rated for an ambient temperature of 100 °C. Terminal screws must be secured with a torque of 7 in-lbs at installation and maximum torque of 10 in-lbs.

- For the internal and external grounding, screws should be installed with a torque of 7 in-lbs.

4.2.1   Connecting power to the Emerson Wireless 1410S Gateway

Procedure

1. Strip the insulation back a minimum of 0.14 inches.

2. Attach positive and negative wires to appropriate terminals on 1410S Gateway (see wiring diagrams in Figure 4-4 and Figure 4-5).

4.2.2   Connecting 781S antenna to the Emerson 1410S Gateway

Prerequisites

781S is provided with up to 9 m (30 ft) of Belden 3084A cabling. If additional cabling is required, user must supply field junction box with compatible terminals and shielded, twisted pair cable such as Belden 3084A. Recommended cable specifications are an ambient temperature rating of at least 100°C and 18-24 AWG.

Maximum cable length between 1410S and 781S is 400 m (1312 ft) using these cable specs.

Procedure

1. Strip the insulation back a minimum of 0.14 inches.

2. Attach 781S Smart Antenna wires to appropriate terminals on Emerson 1410S Gateway (see wiring diagram in Figure 4-4 and Figure 4-5).

Note
781S shield must be connected at gateway.

Figure 4-4: Emerson 1410S1 Wiring diagram with 781S smart antenna

A. *Emerson Wireless 1410S1 Gateway*
B. *Terminal connections*
C. *Shielded, twisted pair cable*
D. *Emerson Wireless 781S Smart Antenna*
E. *781S power terminals*
F. *781S data terminals*
G. *10.5 to 30 VDC power input*
H. *Serial Modbus*
I. *781S terminal 1 power and data connections*
J. *781S terminal 2 power and data connections*[3]

Figure 4-5: Emerson 1410S2 Wiring Diagram with 781S Smart Antenna
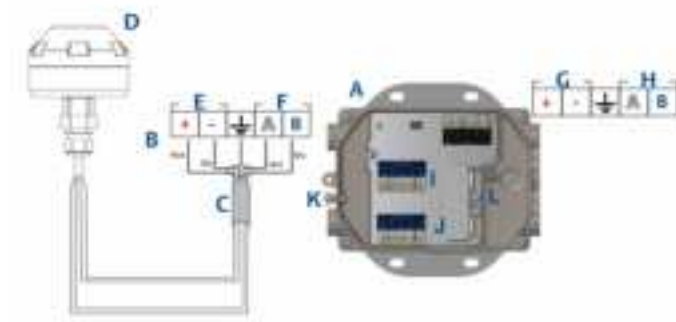
A. Emerson Wireless 1410S2 Gateway

B. Terminal connections

C. Shielded, twisted pair cable

D. Emerson Wireless 781S Smart Antenna

E. 781S power terminals

F. 781S data terminals

G. 10.5 to 30 VDC power input [2]

H. Serial Modbus

I. 781S terminal 1 power and data connections

J. 781S terminal 2 power and data connections[3]

K. External ground terminal

L. Internal ground terminal

Note
Wire colors are typical of Belden 3084a cable or equivalent

[2] Emerson Wireless 1410S2 Gateway hardware revision 1.0.0 configured with Intrinsically Safe Outputs option "A" can only be powered by 24 VDC power source. Check label to verify hardware revision.

[3] Second antenna can be connected to terminal 2, Wiring is same as terminal 1 antenna.

4.3   Emerson 1410S grounding

4.3.1   Emerson 1410S1 grounding

The Emerson Wireless 1410S1 Gateway is grounded through the DIN-rail mounting plate on the back of the gateway. The DIN-rail should always be grounded in accordance with national and local electrical codes. Ensure proper contact between gateway's mounting plate and DIN-rail for grounding.

4.3.2   Emerson 1410S2 grounding

The gateway's enclosure case should always be grounded in accordance with national and local electrical codes using either the internal or external grounding provisions. The most effective grounding method is a direct connection to earth ground with minimal impedance. The ground should be connected with a conductor larger than 11AWG. Ensure the ground screw is securely tightened. The internal and external ground screws should be installed with a torque of 7 in-lbs. The connection should be 1Ω or less. See wiring diagrams in Figure 4-5 above for identifying internal and external ground terminals.

Note
Always make sure cable is rated for ambient temperature of the end installation.

4.4   Terminating resistors

Three DIP switches are provided to enable termination and biasing resistors to the serial Modbus connection.

See *1410S Reference Manual* for more information.

4.5   Connect to the host system

Connect the Gateway's Ethernet 1 (Primary) or serial Modbus Output connection to the Host System Network or Serial I/O.

Refer to *1410S Reference Manual* for additional instruction on host connections.

4.6   Best practice

Twisted shielded pair cable is generally used to wire the serial connection, and it is standard practice to ground the shield on the serial host side leaving the shield floating on the gateway side. Insulate the shield to avoid grounding issues.

4.6.1   Security best practices

For security best practices, please see Emerson Wireless Security Whitepaper. User is solely responsible for the security of their system and products installed on such systems. These recommendations are in addition to user's product and cybersecurity policies.

5   Software installation (optional)

Install **Security Setup Utility** (only required for secure host connections or OPC-DA communications) and AMS Wireless Configurator as needed. See *Reference Manual* for further information.

The gateway firmware needs to be compatible with host connections being made. Verify that gateway firmware and host firmware (e.g. Security Setup Utility (SSU) and Plantweb Insight) are compatible before commissioning.

6 Verify operations

Operation is verified through the web interface by opening a web browser from any PC on the host system network and entering the gateway IP address or DHCP host name in the address bar.

Log in using credentials set in Section 3-5.

Procedure

1. Ensure field devices to be used with each network have the **Network ID** and **Join Key** that can be found on the gateway's Network Settings Page.

2. Verify field devices are joined to the network and displayed on the Devices page of the gateway web interface.

3. Verify host system is receiving field device data.

7   Product certifications

7.1   Emerson Wireless 1410S1 Gateway

Rev: 1.0

7.1.1   European Directive Information

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

7.1.2   Ordinary location certification

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

7.1.3   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.

7.1.4   USA

N5 U.S.A. Division 2 with Intrinsically Safe Outputs

Certificate	80009647 (CSA)
Standards	UL 60079-0: 2019, UL 60079-7: 2017, UL 60079-11: 2014, FM 3600: 2011, FM 3610:2018, FM 3611:2004, FM 3616:2011, UL 61010-1-12 Ed 3
Markings with Intrinsically Safe into Division 1 or Zone 0	Class I Division 2, Groups A, B, C, D; Intrinsically Safe outputs to Class I, Division 1, Groups A, B, C, D; Class I, Zone 2 AEx ec [ia Ga] IIC T4 Gc
Markings with Intrinsically Safe into Division 2 or Zone 2	Class I Division 2, Groups A, B, C, D; Intrinsically Safe outputs to Class I, Division 2, Groups A, B, C, D; Class I, Zone 2 AEx ec [ic] IIC T4 Gc
Temperature code	T4 (-40 °C ≤ T_a ≤ 70 °C)

Special Conditions for Safe Use(X)

1. Warning: Potential electrostatic charging hazard - See instructions.

2. Warning: The equipment is not capable of withstanding the 500V electrical strength test as defined in Clause 6.1 of UL 60079-7:2017 and 6.3.13 of UL 60079-11:2014. This must be taken into account during installation.

3. The 1410S1 needs an external IP54 that meets the requirements of UL 60079-0.

7.1.5   Canada

N6 Canada Division 2 with Intrinsically Safe Outputs

Certificate	80009647 (CSA)
Standards	CAN/CSA C22.2 No 60079-0:2019, CAN/CSA C22.2 No 60079-7:2016, CAN/CSA C22.2 No 60079-11:2014, CAN/CSA C22.2 No.25:2014, CAN/CSA C22.2 No.61010-1-12 3rd Edition
Markings with Intrinsically Safe into Division 1 or Zone 0	Class I Division 2, Groups A, B, C, D; Intrinsically Safe outputs to Class I, Division 1, Groups A, B, C, D; Class I, Zone 2 Ex ec [ia Ga] IIC T4 Gc
Markings with Intrinsically Safe into Division 2 or Zone 2	Class I Division 2, Groups A, B, C, D; Intrinsically Safe outputs to Class I, Division 2, Groups A, B, C, D; Class I, Zone 2 Ex ec [ic] IIC T4 Gc
Temperature code	T4 (-40 °C ≤ T_a ≤ 70 °C)

Special Conditions for Safe Use(X)

1. Warning: Potential electrostatic charging hazard - See instructions. AVERTISSEMENT - RISQUE D'EXPLOSION. NE PAS DÉBRANCHER PENDANT QUE LE CIRCUIT EST SOUS TENSION.

2. Warning: The equipment is not capable of withstanding the 500V electrical strength test as defined in Clause 6.1 of CAN/CSA 60079-7:2016 and 6.3.13 of CAN/CSA 60079-11:2014. This must be taken into account during installation.
    Avertissement: L'équipement n'est pas capable de résister au test de résistance électrique de 500V tel que défini dans la clause 6.1 de CAN / CSA 60079-7:2016 et 6.3.13 de CAN / CSA 60079-11:2014. Ceci doit être pris en compte lors de l'installation.

3. The 1410S1 needs an external IP54 that meets the requirements of CAN/CSA 60079-0.
    Le 1410S1 a besoin d'un IP54 externe qui répond aux exigences de CAN/CSA 60079-0.

7.2   Emerson Wireless 1410S2 Gateway

Rev: 3.0

7.2.1   European Directive Information

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

7.2.2   Ordinary location certification

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

7.2.3   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.

7.2.4   USA

N5 U.S.A. Division 2 with Intrinsically Safe Outputs

Certificate	80009647 (CSA)
Standards	UL 60079-0: 2019, UL 60079-7: 2017, UL 60079-11: 2014, UL 60079-31: 2015, FM 3600: 2011, FM 3610:2018, FM 3611:2004, FM 3616:2011, UL 61010-1-12 Ed 3
Markings with Intrinsically Safe Outputs into Division 1 or Zone 0	Class I, II, III, Division 2, Groups A, B, C, D, F, G; Intrinsically Safe outputs to Class I, Division 1, Groups A, B, C, D; Class I, Zone 2 AEx ec [ia Ga] IIC T4 Gc; Class I, Class II, Zone 22 AEx tc [ia Ga] IIIC T90 Dc
Markings with Intrinsically Safe into Division 2 or Zone 2	Class I, II, III, Division 2, Groups A, B, C, D, F, G; Intrinsically Safe outputs to Class I, Division 2, Groups A, B, C, D; Class I, Zone 2 AEx ec [ic] IIC T4 Gc; Class II, Zone 22 AEx tc [ic Gc] IIIC T90 Dc
Temperature Code	Rev 1 (-40 °C ≤ T_a ≤ 65 °C), Rev 2 T4 (-40 °C ≤ T_a ≤ 70 °C)

Special Conditions for Safe Use (X):

1. Warning: Potential electrostatic charging hazard - See instructions.

2. Warning: The equipment is not capable of withstanding the 500V electrical strength test as definded in Clause 6.1 of UL 60079-7:2017 and 6.3.13 of UL 60079-11:2014. This must be taken into account during installation.

7.2.5   Canada

N6 Canada Division 2 with Intrinsically Safe Outputs

Certificate	80009647 (CSA)
Standards	CAN/CSA C22.2 No 60079-0:2019, CAN/CSA C22.2 No 60079-7:2016, CAN/CSA C22.2 No 60079-11:2014, CAN/CSA C22.2 No 60079-31:2016, CAN/CSA C22.2 No.25:2014, CAN/CSA C22.2 No.61010-1-12 3rd Edition
Markings with Intrinsically Safe Outputs into Division 1 or Zone 0	Class I, II, III, Division 2, Groups A, B, C, D, F, G; Intrinsically Safe outputs to Class I, Division 1, Groups A, B, C, D; Class I, Zone 2 Ex ec [ia Ga] IIC T4 Gc; Class II, Zone 22 Ex tc [ia Ga] IIIC T90 Dc
Markings with Intrinsically Safe Outputs into Division 2 or Zone 2	Class I, II, III, Division 2, Groups A, B, C, D, F, G; Intrinsically Safe outputs to Class I, Division 2, Groups A, B, C, D; Class I, Zone 2 Ex ec [ic] IIC T4 Gc; Class II, Zone 22 Ex tc [ic Gc] IIIC T90 Dc
Temperature code	Rev 1 (-40 °C ≤ T_a ≤ 65 °C), T4 (-40 °C ≤ T_a ≤ 70 °C)

Special Conditions for Safe Use (X):

1. Warning: Potential electrostatic charging hazard - See instructions. AVERTISSEMENT - RISQUE D'EXPLOSION. NE PAS DÉBRANCHER PENDANT QUE LE CIRCUIT EST SOUS TENSION.

2. Warning: The equipment is not capable of withstanding the 500V electrical strength test as defined in Clause 6.1 of CAN/CSA 60079-7:2016 and 6.3.13 of CAN/CSA 60079-11:2014. This must be taken into account during installation.

    Avertissement: L'équipement n'est pas capable de résister au test de résistance électrique de 500V tel que défini dans la clause 6.1 de CAN / CSA 60079-7: 2016 et 6.3.13 de CAN / CSA 60079-11: 2014. Ceci doit être pris en compte lors de l'installation.

7.2.6   Europe

N1 ATEX Increased Safety with Intrinsically Safe Outputs to Zone 0

Certificate   SGS20ATEX0036X

Markings   Ⓔ II 3(1)G Ex ec [ia Ga] IIC T4 Gc (-40 °C ≤ T_a ≤ +65 °C)

Standards   EN IEC 60079-0: 2018, EN IEC 60079-7:2015+A1:2018, EN
60079-11: 2012, EN 60079-15:2010, EN 60079-31:2014

N1 ATEX Increased Safety with Intrinsically Safe Outputs to Zone 0 (For use only with the Cisco Outdoor Access Point Model IW-6300H-AC-x-K9)

Certificate   SGS20ATEX0036X

Markings   Ⓔ II 3(1)G Ex ec nA [ia Ga] IIC T4 Gc (-40 °C ≤ T_a ≤ +65 °C)

Standards   EN IEC 60079-0: 2018, EN IEC 60079-7:2015+A1:2018, EN
60079-11: 2012, EN 60079-15:2010, EN 60079-31:2014

Special Conditions for Safe Use (X):

1. The enclosure's polyurethane paint finish may constitute an electrostatic hazard. Care should be taken to protect it from external conditions conducive to the build-up of electrostatic charge on such surfaces. The equipment must only be cleaned with a damp cloth.

2. The equipment is not capable of withstanding the 500V electrical strength test as defined in clause 6.1 of EN 60079-7:2015+ A1:2018 and 6.3.13 EN 60079-11:2012. This must be taken into account during installation.

N1 ATEX Increased Safety with Intrinsically Safe Outputs to Zone 2

Certificate   SGS20ATEX0057X

Markings   Ⓔ II 3G Ex ec [ic] IIC T4 Gc (-40 °C ≤ T_a ≤ +65 °C)

Standards   EN IEC 60079-0: 2018, EN IEC 60079-7:2015+A1:2018, EN
60079-11: 2012, EN 60079-15:2010, EN 60079-31:2014

N1 ATEX Increased Safety with Intrinsically Safe Outputs to Zone 2 (For use only with the Cisco Outdoor Access Point Model IW-6300H-AC-x-K9)

Certificate   SGS20ATEX0057X

Markings   Ⓔ II 3G Ex ec nA [ic] IIC T4 Gc (-40 °C ≤ T_a ≤ +65 °C)

Standards   EN IEC 60079-0: 2018, EN IEC 60079-7:2015+A1:2018, EN
60079-11: 2012, EN 60079-15:2010, EN 60079-31:2014

Special Conditions for Safe Use (X):

1. The enclosure's polyurethane paint finish may constitute an electrostatic hazard. Care should be taken to protect it from external conditions conducive to the build-up of electrostatic charge on such surfaces. The equipment must only be cleaned with a damp cloth.

2. The non-intrinsically safe Supply, Modbus RTU & Ethernet Port connections of the equipment must be supplied from either safety extra low-voltage (SELV) or protective extra low-voltage (PELV) circuits, for example equipment complying with the requirements of either the IEC 60950 series, IEC 61010-1 or a technically equivalent standard.

3. The equipment is not capable of withstanding the 500V electrical strength test as defined in clause 6.1 of EN 60079-7:2015+ A1:2018 and 6.3.13 EN 60079-11:2012. This must be taken into account during installation.

ND ATEX Dust-Ignition Proof with Intrinsically Safe Outputs to Zone 0

Certificate   SGS20ATEX0036X

Markings   ⟨Ex⟩ II 3D (1G) Ex tc [ia IIC Ga] IIIC T90 °C Dc (-40 °C ≤ T_a ≤ +65 °C)

Standards   EN IEC 60079-0: 2018, EN IEC 60079-7:2015+A1:2018, EN 60079-11: 2012, EN 60079-15:2010, EN 60079-31:2014

Special Conditions for Safe Use (X):

1. The enclosure's polyurethane paint finish may constitute an electrostatic hazard. Care should be taken to protect it from external conditions conducive to the build-up of electrostatic charge on such surfaces. The equipment must only be cleaned with a damp cloth.

2. The equipment is not capable of withstanding the 500V electrical strength test as defined in clause 6.1 of EN 60079-7:2015+ A1:2018 and 6.3.13 EN 60079-11:2012. This must be taken into account during installation.

ND ATEX Dust-Ignition Proof with Intrinsically Safe Outputs to Zone 2

Certificate   SGS20ATEX0036X

Markings   ⟨Ex⟩ II 3D (3G) Ex tc [ic IIC Gc] IIIC T90 °C Dc (-40 °C ≤ T_a ≤ +65 °C)

Standards   EN IEC 60079-0: 2018, EN IEC 60079-7:2015+A1:2018, EN 60079-11: 2012, EN 60079-15:2010, EN 60079-31:2014

Special Conditions for Safe Use (X):

1. The enclosure's polyurethane paint finish may constitute an electrostatic hazard. Care should be taken to protect it from external conditions conducive to the build-up of electrostatic charge on such surfaces. The equipment must only be cleaned with a damp cloth.

2. The non-intrinsically safe Supply, Modbus RTU & Ethernet Port connections of the equipment must be supplied from either safety extra low-voltage (SELV) or protective extra low-voltage (PELV) circuits, for example equipment complying with the requirements of either the IEC 60950 series, IEC 61010-1 or a technically equivalent standard.

3. The equipment is not capable of withstanding the 500V electrical strength test as defined in clause 6.1 of EN 60079-7:2015+ A1:2018 and 6.3.13 EN 60079-11:2012. This must be taken into account during installation.

7.2.7   International

N7 IECEx Increased Safety with Intrinsically Safe Output to Zone 0

Certificate   IECEx BAS.20. 0022X

Markings   Ex ec [ia Ga] IIC T4 Gc (-40 °C ≤ T_a ≤ +65 °C)

Standards   IEC 60079-0: 2017, IEC 60079-7:2015+A1:2017, IEC 60079-11: 2011, IEC 60079-15:2017, IEC 60079-31:2013

N7 IECEx Increased Safety with Intrinsically Safe Outputs to Zone 0 (For use only with the Cisco Outdoor Access Point Model IW-6300H-AC-x-K9)

Certificate   IECEx BAS.20. 0022X

Markings   Ex ec nA [ia Ga] IIC T4 Gc (-40 °C ≤ T_a ≤ +65 °C)

Standards   IEC 60079-0: 2017, IEC 60079-7:2015+A1:2017, IEC 60079-11: 2011, IEC 60079-15:2017, IEC 60079-31:2013

Special Conditions for Safe Use (X):

1. The enclosure's polyurethane paint finish may constitute an electrostatic hazard. Care should be taken to protect it from external conditions conducive to the build-up of electrostatic charge on such surfaces. The equipment must only be cleaned with a damp cloth.

2. The equipment is not capable of withstanding the 500V electrical strength test as defined in clause 6.1 of EN 60079-7:2015+ A1:2018 and 6.3.13 EN 60079-11:2012. This must be taken into account during installation.

N7 IECEx Increased Safety with Intrinsically Safe Output to Zone 2

Certificate IECEx BAS.20. 0027X

Markings Ex ec [ic] IIC T4 Gc (-40 °C ≤ T_a ≤ +65 °C)

Standards IEC 60079-0: 2017, IEC 60079-7:2015+A1:2017, IEC 60079-11: 2011, IEC 60079-15:2017, IEC 60079-31:2013

N7 IECEx Increased Safety with Intrinsically Safe Outputs to Zone 2 (For use only with the Cisco Outdoor Access Point Model IW-6300H-AC-x-K9)

Certificate IECEx BAS.20. 0027X

Markings Ex ec nA [ic] IIC T4 Gc (-40 °C ≤ T_a ≤ +65 °C)

Standards IEC 60079-0: 2017, IEC 60079-7:2015+A1:2017, IEC 60079-11: 2011, IEC 60079-15:2017, IEC 60079-31:2013

Special Conditions for Safe Use (X):

1. The enclosure's polyurethane paint finish may constitute an electrostatic hazard. Care should be taken to protect it from external conditions conducive to the build-up of electrostatic charge on such surfaces. The equipment must only be cleaned with a damp cloth.

2. The non-intrinsically safe Supply, Modbus RTU & Ethernet Port connections of the equipment must be supplied from either safety extra low-voltage (SELV) or protective extra low-voltage (PELV) circuits, for example equipment complying with the requirements of either the IEC 60950 series, IEC 61010-1 or a technically equivalent standard.

3. The equipment is not capable of withstanding the 500V electrical strength test as defined in clause 6.1 of EN 60079-7:2015+ A1:2018 and 6.3.13 EN 60079-11:2012. This must be taken into account during installation.

NF IECEx Dust-Ignition Proof with Intrinsically Safe Outputs to Zone 0

Certificate IECEx BAS.20. 0022X

Markings Ex tc [ia IIC Ga] IIIC T90 °C Dc (-40 °C ≤ T_a ≤ +65 °C)

Standards IEC 60079-0: 2017, IEC 60079-7:2015+A1:2017, IEC 60079-11: 2011, IEC 60079-15:2017, IEC 60079-31:2013

Special Conditions for Safe Use (X):

1. The enclosure's polyurethane paint finish may constitute an electrostatic hazard. Care should be taken to protect it from external conditions conducive to the build-up of electrostatic charge on such surfaces. The equipment must only be cleaned with a damp cloth.

2. The equipment is not capable of withstanding the 500V electrical strength test as defined in clause 6.1 of IEC 60079-7:2015+ A1:2017. This must be taken into account during installation.

NF IECEx Dust-Ignition Proof with Intrinsically Safe Outputs to Zone 2

Certificate IECEx BAS.20. 0027X

Markings Ex tc [ic IIC Gc] IIIC T90 °C Dc (-40 °C ≤ T_a ≤ +65 °C)

Standards IEC 60079-0: 2017, IEC 60079-7:2015+A1:2017, IEC 60079-11: 2011, IEC 60079-15:2017, IEC 60079-31:2013

Special Conditions for Safe Use (X):

1. The enclosure's polyurethane paint finish may constitute an electrostatic hazard. Care should be taken to protect it from external conditions conducive to the build-up of electrostatic charge on such surfaces. The equipment must only be cleaned with a damp cloth.

2. The non-intrinsically safe Supply, Modbus RTU & Ethernet Port connections of the equipment must be supplied from either safety extra low-voltage (SELV) or protective extra low-voltage (PELV) circuits, for example equipment complying with the requirements of either the IEC 60950 series, IEC 61010-1 or a technically equivalent standard.

3. The equipment is not capable of withstanding the 500V electrical strength test as defined in clause 6.1 of IEC 60079-7:2015+ A1:2017. This must be taken into account during installation.

7.2.8   Declaration of Conformity

EMERSON

EU Declaration of Conformity
No: RMD 1157 Rev. C

$C\epsilon$

We,

Rosemount Inc.
6021 Innovation Blvd.
Shakopee, MN 55379
USA

declare under our sole responsibility that the product,

Emerson™ Wireless 1410S Gateway

manufactured by,

Rosemount Inc.
6021 Innovation Blvd.
Shakopee, MN 55379
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.

_____   Vice President of Global Quality
(signature)   (function name - printed)

Mark Lee   October 20, 2020
(name - printed)   (date of issue)

Page 1 of 1

EU Declaration of Conformity
No: RMD 1157 Rev. C

EMERSON

CE

ATEX Directive (2014/34/EU)
Emerson™ Wireless 1410S Gateway

SGS20ATEX0036X – Increased Safety with Intrinsically Safe Outputs to Zone 0 and Dust-Ignition Proof with Intrinsically Safe Outputs to Zone 0

Equipment Group II Category 3 (1) G
   Ex ec [ia Ga] IIC T4 Gc (-40°C ≤ T_a ≤ +65°C)
   Ex ec nA [ia Ga] IIC T4 Gc (-40°C ≤ T_a ≤ +65°C)
Equipment Group II Category 3D (1G)
   Ex tc [ia IIC Ga] IIIC T90° Dc (-40°C ≤ T_a ≤ +65°C)

Harmonized Standards:
   EN IEC 60079-0:2018
   EN 60079-7: 2015 + A1:2018
   EN 60079-11:2012
   EN 60079-15:2010
   EN 60079-31:2014

SGS20ATEX0057X – Increased Safety with Intrinsically Safe Outputs to Zone 2 and Dust-Ignition Proof with Intrinsically Safe Outputs to Zone 2

Equipment Group II Category 3G
   Ex ec [ic] IIC T4 Gc (-40°C ≤ T_a ≤ +65°C)
   Ex ec nA [ic] IIC T4 Gc (-40°C ≤ T_a ≤ +65°C)
Equipment Group II Category 3D (3G)
   Ex tc [ic IIC Gc] IIIC T90° Dc (-40°C ≤ T_a ≤ +65°C)

Harmonized Standards:
   EN IEC 60079-0:2018
   EN 60079-7: 2015 + A1:2018
   EN 60079-11:2012
   EN 60079-15:2010
   EN 60079-31:2014

Page 2 of 7

EMERSON

EU Declaration of Conformity
No: RMD 1157 Rev. C

C E

ATEX Notified Bodies

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

ATEX Notified Body for Quality Assurance

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

EMC Directive (2014/30/EU)

Harmonized Standards:
EN 61326-1: 2013

Page 5 of 5

No: 1143 Rev. A

EMERSON   **Declaration of Conformity**   CE / UK CA

We,

Rosemount Inc.
8021 Innovation Blvd
Shakopee, MN 55379
USA

declare under our sole responsibility that the product,

Rosemount™ 1410D1 Wireless Indoor Gateway

Authorized Representative in Europe:	For product compliance destination sales questions in Great Britain, contact Authorized Representative:
Emerson S.R.L., company No. J12/88/2006, Emerson 4 street, Parcul Industrial Tetarom II, Cluj-Napoca 400638, Romania	Emerson Process Management Limited at ukcompliance@emerson.com or +44 11 6282 23 64. Regulatory Compliance Department.
Regulatory Compliance Shared Services Department Email: europe.regulatorycompliance@emerson.com Phone: +40 374 132 509.	Emerson Process Management Limited, company No. 00671801, Meridian East, Leicester LE19 1UX, United Kingdom

to which this declaration relates, is in conformity with:

1)   the relevant statutory requirements of Great Britain, including the latest amendments, as shown in the attached schedule.

2)   the provisions of the European Union Directives, including the latest amendments, as shown in the attached schedule.

_____
(signature & date of issue)

Mark Lee | Vice President, Quality | Shakopee, MN, USA
(name)   (function)   (place of issue)

EMC Directive 2014/30/EU
Harmonized Standards:
EN 61326-1:2013

Electromagnetic Compatibility Regulations 2016 (S.I. 2016/1091)
Designated Standards:
EN 61326-1:2013

For more information: **Emerson.com**

ROSEMOUNT™

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