Emerson™ Wireless 1420 Gateway
NOTICE

This guide provides basic guidelines for the Emerson Gateway. It does not provide instructions for diagnostics, maintenance, service, or troubleshooting. Refer to the Emerson Gateway Reference Manual for more information and instructions. This guide and the manual are available electronically on www.emerson.com.

WARNING

Explosions could result in death or serious injury.

- Installation of this device in an explosive environment must be in accordance with the 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 the leads and terminals. High voltage may be present on leads and can cause electrical shock.

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.

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1.0 Wireless considerations

1.1 Power up sequence

The Emerson Wireless Gateway (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 Antenna position

The antenna should be positioned vertically, and be approximately 3 ft. (1 m) from large structures or buildings to allow for clear communication to other devices.

1.3 Mounting height

For optimal wireless coverage, the Gateway or remote antenna is ideally mounted 15 to 25 ft. (4.6 to 7.6 m) above ground or 6 ft. (2 m) above obstructions or major infrastructure.

1.4 Gateway redundancy

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

2.0 General considerations

2.1 PC requirements

Operating system (optional software only)
- Microsoft® Windows™ XP Professional, Service Pack 3
- Windows Server 2003 Service Pack 2
- Windows Server 2003 R2 Service Pack 2
- Windows Server 2008 (Standard Edition), Service Pack 2
- Windows 7 Professional, Service Pack 1
- Windows 7 Enterprise, Service Pack 1

Applications
- Internet Explorer® 6.0 or higher
- Mozilla Firefox® 1.5 or higher
- .Net Framework 2.0 (for OPC proxy only)

Hard disk space
- AMS Wireless Configurator: 1.5 GB
- Gateway Setup CD: 250 MB
3.0 Initial connection and configuration

3.1 DeltaV™ ready

If the Gateway was ordered DeltaV Ready (Data Protocols Code 5), then skip to “Physical installation” on page 10, and connect the Gateway to a DeltaV 10.3 or newer control network.

3.2 Initial connection and configuration

To configure the Gateway, a local connection between a PC/laptop and the Gateway needs to be established.

**Powering the Gateway**

Bench top power will be needed to power the Gateway by wiring a 24 VDC (nominal) power source, with at least 250 mA, to the power terminals.

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**Figure 1. Legacy Gateway Terminal Block Diagram**

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**Figure 2. Power over Ethernet (PoE) Terminal Block Diagram**
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**Note**
Figure 1 depicts the terminal block of legacy Gateways prior to the introduction of PoE capabilities. Figure 2 shows the terminal block arrangement of a PoE version of the Gateway. If the Gateway will be powered via the standard 24 volt power input terminals, and no PSE is desired, it is not necessary to change the default settings of the PoE jumper matrix.

**Note**
The Gateway enclosure case should always be grounded in accordance with national and local electrical codes. The most effective grounding method is a direct connection to earth ground with minimal impedance.

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**Figure 3. Emerson 1420 PoE Jumpering Matrix (Located on 1420 Board)**
Black fill below indicates jumper.

**Legend:**
ETH1: Ethernet port 1 selected for PD or PSE
ETH2: Ethernet port 2 selected for PD or PSE
PD: Gateway derived its power off the Ethernet port selected
PSE: The Gateway is powered via the standard 24 volt power input terminals and provides power via the selected Ethernet port to another device with a compatible PD port.
EN: Enabled; this enables the PSE operation
DIS: Disabled; this disables the PSE operation

PoE PD on port 1
(Default jumpering for production. Used for no PoE also)

PoE PD on port 2

PoE PSE on port 1

PoE PSE on port 2
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Note
Electrostatic discharge (ESD) protection required when swapping PoE jumpers.

Note
Only one port and one mode of operation (PD or PSE) can be selected at a time; any other combination of jumpers is invalid.

Note
IEEE 802.3af-2003 PoE standard provides up to 15.4 W of DC power (minimum 44 V DC and 350 mA) to each device. Only 12.95 W is assured to be available at the powered device as some power is dissipated in the cable.

IEEE 802.3at-2009 PoE standard also known as “PoE+” or “PoE plus”, provides up to 25.5 W of power. The 2009 standard prohibits a powered device from using all four pairs for power.

For more information on PoE and frequently asked questions, reference the Emerson Wireless Gateway white paper.

3.3 Establishing a connection

Note
For information on connecting a Windows 7 PC, see Technical Note (document number 00840-0900-4420).

1. Connect the PC/laptop to the Ethernet 1 (Primary) receptacle on the Gateway.

Figure 4. Gateway PC/Laptop Connection

A. PC/laptop
B. Ethernet 1 receptacle

⚠️ CAUTION
Do not connect to the Ethernet 2 with power (covered) port. This port supplies power and could damage the PC/laptop.

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2. To establish the PC/laptop settings, navigate to Start>Settings>Network Connections.
   a. Select **Local Area Connection**.
   b. Right click to select **Properties**.
   c. Select **Internet Protocol (TCP/IP)**, then select the **Properties** button.

   ![Internet Protocol (TCP/IP) Properties](image)

   **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.

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

   ![Use the following IP address](image)

e. In the **IP address** field, enter 192.168.1.12.
   f. In the **Subnet mask** field, enter 255.255.255.0.
   g. In the **Internet Protocol (TCP/IP) Properties** window, select **OK**.
   h. In the **Local Area Connection Properties** window, select **OK**.
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Note
Connecting to the Gateway's secondary Ethernet port requires different network settings. Refer to Table 1 for additional network settings.

<table>
<thead>
<tr>
<th>Table 1. Default IP Addresses</th>
<th>Gateway</th>
<th>PC/laptop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethernet 1</td>
<td>192.168.1.10</td>
<td>192.168.1.12</td>
</tr>
<tr>
<td>Ethernet 2</td>
<td>192.168.2.10</td>
<td>192.168.2.12</td>
</tr>
<tr>
<td>Ethernet 1 (DeltaV Ready)</td>
<td>10.5.255.254</td>
<td>10.5.255.200</td>
</tr>
<tr>
<td>Ethernet 2 (DeltaV Ready)</td>
<td>10.9.255.254</td>
<td>10.9.255.200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2. Subnet Settings</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Subnet mask</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Default</td>
<td>255.255.255.0</td>
<td></td>
</tr>
<tr>
<td>DeltaV</td>
<td>255.254.0.0</td>
<td></td>
</tr>
</tbody>
</table>

3. Disable proxies.
   a. Open a standard web browser (Internet Explorer, Mozilla Firefox, or other).
   b. Navigate to Tools>Internet Options>Connections>LAN Settings.

c. Uncheck the box under Proxy Server.
3.4 Configure the Gateway

To complete initial configuration for the Gateway:

   a. In the User name field, enter admin.
   b. In the Password field, enter default.

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 Hostname.
   b. Restart application at System Settings>Gateway>Backup And Restore>Restart App.

3. Disconnect the power and Ethernet from the Gateway.
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4.0 Physical installation

4.1 Pipe mount

Tools needed:
- 2-in. (51 mm) mounting pipe or mast
- Two 5/16-in. (7.9 mm) u-bolts supplied with Gateway
- 1/2-in. socket-head wrench

For installing the Gateway with a pipe mount:
1. Insert one u-bolt around the pipe, through the top mounting holes of the Gateway enclosure, and through the washer plate.
2. Use a 1/2-in. socket-head wrench to fasten the nuts to the u-bolt.
3. Repeat steps 1 and 2 for the second u-bolt and lower mounting holes.

Best practice
If the Gateway was ordered with output code 2, run a secondary Ethernet cable when installing cable conduit from the Gateway to a convenient indoor location to simplify future configuration changes.
4.2 Remote antenna (optional)

The remote antenna options provide flexibility for mounting the Gateway based on wireless connectivity, lightning protection, and current work practices.

⚠️ WARNING

When installing remote mount antennas for the Emerson Wireless Gateway, always use established safety procedures to avoid falling or contact with high-power electrical lines.

Install remote antenna components for the Gateway in compliance with local and national electrical codes and use best practices for lightning protection.

Before installing, consult with a local area electrical inspector, electrical officer, and work area supervisor.

The Gateway remote antenna option is specifically engineered to provide installation flexibility while optimizing wireless performance and local spectrum approvals. To maintain wireless performance and avoid non-compliance with spectrum regulations, do not change the length of cable or the antenna type.

If the supplied remote mount antenna kit is not installed per these instructions, Emerson Process Management is not responsible for wireless performance or non-compliance with spectrum regulations.

The remote mount antenna kit includes coaxial sealant for the cable connections for the lightning arrester and antenna.

Find a location where the remote antenna has optimal wireless performance. Ideally, this will be 15 to 25 ft. (4.6 to 7.6 m) above the ground or 6 ft. (2 m) above obstructions or major infrastructure. To install the remote antenna use one of the following procedures:

4.3 Installation of WL2/WN2 option (outdoor applications)

1. Mount the antenna on a 1.5 to 2-in. pipe mast using the supplied mounting equipment.
2. Connect the lightning arrester directly to the top of the Gateway.
3. Install the grounding lug, lock washer, and nut on top of the lightning arrester.
4. Connect the antenna to the lightning arrester using the supplied coaxial cable ensuring the drip loop is not closer than 1 ft. (0.3 m) from the lightning arrester.
5. Use the coaxial sealant to seal each connection between the wireless field device, lightning arrester, cable, and antenna.
6. Ensure the mounting mast, lightning arrester, and Gateway are grounded according to local/national electrical code.
7. Place any spare lengths of coaxial cable in 12-in. (0.3 m) coils.
4.4 Installation of WL3/WL4 option (indoor to outdoor applications)

1. Mount the antenna on a 1.5 to 2-in. pipe mast using the supplied mounting equipment.
2. Mount the lightning arrestor near the building egress.
3. Install the grounding lug, lock washer, and nut on top of the lightning arrestor.
4. Connect the antenna to the lightning arrestor using the supplied coaxial cable ensuring the drip loop is not closer than 1 ft. (0.3m) from the lightning arrestor.
5. Connect the lightning arrestor to the Gateway using the supplied coaxial cable.
6. Use the coaxial sealant to seal each connection between the Gateway, lightning arrestor, cable, and antenna.
7. Ensure the mounting mast, lightning arrestor, and Gateway are grounded according to local/national electrical codes.
8. Place any spare lengths of coaxial cable in 12-in. (0.3 m) coils.
Note
Weather proofing is required!
The remote mount antenna kit includes coaxial sealant for the cable connections for the lightning arrestor, antenna, and Gateway. The coaxial sealant must be applied to guarantee performance of the wireless field network. See Figure 8 for details on applying weather proofing.

Figure 8. Applying Coaxial Sealant to Cable Connections
Table 3. Remote Antenna Kit Options

<table>
<thead>
<tr>
<th>Kit option</th>
<th>Antenna</th>
<th>Cable 1</th>
<th>Cable 2</th>
<th>Lightning arrestor</th>
</tr>
</thead>
<tbody>
<tr>
<td>WL2</td>
<td>1/2 Wavelength Dipole Omni-Directional +6 dB Gain</td>
<td>50 ft. (15.2 m) LMR–400</td>
<td>N/A</td>
<td>Head mount, jack to plug Gas discharge tube 0.5 dB insertion loss</td>
</tr>
<tr>
<td>WL3</td>
<td>1/2 Wavelength Dipole Omni-Directional +6 dB Gain</td>
<td>30 ft. (9.1 m) LMR–400</td>
<td>20 ft. (6.1 m) LMR–400</td>
<td>In-line, jack to jack Gas discharge tube 0.5 dB insertion loss</td>
</tr>
<tr>
<td>WL4</td>
<td>1/2 Wavelength Dipole Omni-Directional +6 dB Gain</td>
<td>40 ft. (12.2 m) LMR–400</td>
<td>10 ft. (3.0 m) LMR–400</td>
<td>In-line, jack to jack Gas discharge tube 0.5 dB insertion loss</td>
</tr>
<tr>
<td>WN2</td>
<td>1/2 Wavelength Dipole Omni-Directional +8 dB Gain</td>
<td>25 ft. (7.6 m) LMR–400</td>
<td>N/A</td>
<td>Head mount, jack to plug Gas discharge tube 0.5 dB insertion loss</td>
</tr>
</tbody>
</table>

**Note**
The coaxial cables on the remote antenna options WL3 and WL4 are interchangeable for installation convenience.
5.0 Connect to the host system

1. Wire the Gateway’s Ethernet 1 (Primary) or Serial Output connection to the Host System Network or Serial I/O.

2. For serial connections, connect A to A, B to B, making sure all terminations are clean and secured to avoid wiring connection problems.

**Figure 9. Legacy Gateway Terminal Block Diagram**

**Figure 10. PoE Terminal Block Diagram**

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**CAUTION**

Do not connect the Host System to the Ethernet 2 with power (covered) port on the Gateway to avoid damaging the system.

**Best practice**

In accordance with Emerson WirelessHART® security guidelines, the Gateway should be connected to the Host System via a LAN (Local Area Network) and not a WAN (Wide Area Network).

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.
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Power

Power the Gateway as directed in Step 1.

6.0 Software installation (optional)

The 2-disk software pack contains the Security Setup Utility (only required for secure host connections or OPC communications) and AMS Wireless Configurator. The Security Setup Utility is located on Disk 1. To install the software:

1. Exit/close all Windows programs, including any running in the background, such as virus scan software.
2. Insert Disk 1 into the CD/DVD drive of the PC.
3. Follow the prompts.

AMS Wireless Configurator is located on Disk 2. To install the software:

1. Exit/close all Windows programs, including any running in the background, such as virus scan software.
2. Insert Disk 2 into the CD/DVD drive of the PC.
3. Select Install from the menu when the AMS Wireless Configurator setup begins.
4. Follow the prompts.
5. Allow AMS Wireless Configurator to reboot PC.
6. Do not remove the disk from the CD/DVD drive.

Note
Installation will resume automatically after login.

7. Follow the prompts.

Note
If the autorun function is disabled on the PC, or installation does not begin automatically, double click D\SETUP.EXE (where D is the CD/DVD drive on the PC) and select OK.


7.0 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. If the Gateway has been connected and configured properly, the security alert will be displayed followed by the log in screen.
The Gateway is now ready to be integrated into the host system. If wireless field devices were ordered with the Gateway, they were preconfigured with the same network ID and join key information. Once the field devices are powered, they will appear on the wireless network and communications can be verified under the Explore tab using the web interface. The time needed for the network to form depends on the number of devices.

### 8.0 Product specifications

#### 8.1 Input power

10.5 – 30 VDC (must be a Class 2 power supply)

#### 8.2 Current draw

Operating current draw is based on 3.6 W average power consumption. Momentary startup current draw up to twice operating current draw.

Maximum permissible current: 1A
8.3 PoE\(^{(1)}\)

**Input voltage**
- Normal Operation (no PSE or IEEE 802.3af): 10.5 – 30 VDC
- PoE + PSE Operation (IEEE 802.3at): 17.5 – 30 VDC

**PSE mode**
- 50 V – 57 VDC Output (per IEEE 802.3at 2009)
- 25.5 W Maximum

8.4 Radio frequency power output from antenna

- Maximum of 10 mW(10 dBm) EIRP
- Maximum of 40 mW(16 dBm) EIRP for WN2 High Gain option

8.5 Environmental

**Operating temperature range**
- –40 to 140 °F (–40 to 70 °C)

**Operating humidity range**
- 10 – 90% relative humidity

8.6 Physical specifications

**Weight**
- 10 lb (4.54 kg)

**Material of construction**

**Housing**
- Low-copper aluminum, NEMA® 4X

**Paint**
- Polyurethane

**Cover gasket**
- Silicone Rubber

**Antenna**
- Integrated Antenna: PBT/PC
- Remote Antenna: Fiber glass

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1. The current consumption is for Gateway operation only. If using PSE, calculations will need to be made to include the device being powered.
8.7 Communication specifications

**Isolated RS485**
- 2-wire communication link for Modbus® RTU multidrop connections
- Baud Rate: 57600, 38400, 19200, or 9600
- Protocol: Modbus RTU
- Wiring: Single twisted shielded pair, 18 AWG
- Wiring distance: up to 4,000 ft. (1,524 m)

**Ethernet**
- 10/1000base-T Ethernet communication port
- Protocols: EtherNet/IP™, Modbus TCP, OPC, HART-IP™, HTTPS (for Web Interface)
- Wiring: Cat5E shielded cable
- Wiring distance: 328 ft. (100 m)

**Modbus**
- Supports Modbus RTU and Modbus TCP with 32-bit floating point values, integers, and scaled integers.
- Modbus Registers are user-specified.

**OPC**
- OPC server supports OPC DA v2, v3

**Ethernet/IP**
- Supports Ethernet/IP protocol with 32-bit floating point values and integers.
- Ethernet/IP assembly input-output instances are user configurable.
- Ethernet/IP specifications are managed and distributed by ODVA.

8.8 Self-organizing network specifications

**Protocol**
- IEC 62591 (*WirelessHART*), 2.4 – 2.5 GHz DSSS

**Maximum network size**
- 100 wireless devices @ 8 sec or higher
- 50 wireless devices @ 4 sec
- 25 wireless devices @ 2 sec
- 12 wireless devices @ 1 sec

**Supported device update rates**
- 1, 2, 4, 8, 16, 32 seconds or 1 – 60 minutes
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Network size/latency
100 Devices: less than 10 sec
50 Devices: less than 5 sec

Data reliability
> 99%
9.0 Product Certifications

9.1 European Directive Information

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

9.2 Telecommunication Compliance

All wireless devices require certification to ensure 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 risk of violating country directives or laws governing wireless device usage.

9.3 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.

9.4 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).

9.5 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.

USA

NS  U.S.A. Division 2
Certificate: CSA 70010780
Markings: NI Cl 1, DIV 2, GP A, B, C, D T4; Suitable for use in Cl II, III, DIV 2, GP F, G T4;T4(−40 °C ≤ Tens ≤ +60 °C); Nonincendive outputs to remote antenna when connected per Rosemount drawing 01420-1011; Type 4X

Special Condition for Safe Use:
1. Explosion Hazard. Do not disconnect equipment when a flammable or combustible atmosphere is present.
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Canada

N6  Canada Division 2
Certificate: CSA 70010780
Standards: CAN/CSA C22.2 No. 0-M91 (R2001), CAN/CSA Std C22.2 No. 94-M91 (R2001), CSA Std C22.2 No. 142-M1987, CSA Std C22.2 No. 213-M1987, CSA C22.2 No. 61010-1 - 2012
Markings: Suitable for Class 1, Division 2, Groups A, B, C, and D, T4; when connected per Rosemount drawing 01420-1011; Type 4X

Special Condition for Safe Use:
1. Explosion Hazard. Do not disconnect equipment when a flammable or combustible atmosphere is present.

Europe

N1  ATEX Type n
Certificate: Baseefa07ATEX0056X
Standards: EN 60079-0: 2012, EN 60079-15: 2010
Markings: II 3 G Ex nA IIC T4 Gc, T4(–40 °C ≤ T4 ≤ +65 °C), VMAX = 28 Vdc

Special Conditions for Safe Use (X):
1. The equipment is not capable of withstanding the 500 V insulation test required by clause 6.5.1 of EN 60079-15:2010. This must be taken into account when installing the equipment.
2. The surface resistivity of the antenna is greater than 1 GΩ. To avoid electrostatic charge build-up, it must not be rubbed with a dry cloth or cleaned with solvents.

ND  ATEX Dust
Certificate: Baseefa07ATEX0057X
Standards: EN 60079-0: 2012, EN 60079-31: 2009
Markings: II 3 D Ex tc IIIC T135 °C Dc, (–40 °C ≤ T4 ≤ +65 °C)

Special Condition for Safe Use (X):
1. The surface resistivity of the antenna is greater than 1 GΩ. To avoid electrostatic charge build-up, it must not be rubbed with a dry cloth or cleaned with solvents.

International

N7  IECEx Type n
Certificate: IECEx BAS 07.0012X
Markings: Ex nA IIC T4 Gc, T4(–40 °C ≤ T4 ≤ +65 °C), VMAX = 28 Vdc

Special Conditions for Safe Use (X):
1. The apparatus is not capable of withstanding the 500 V electrical strength test as defined in Clause 6.5.1 of IEC 60079-15:2012. This must be taken into account during installation.
2. The surface resistivity of the antenna is greater than 1 GΩ. To avoid electrostatic charge build-up, it must not be rubbed with a dry cloth or cleaned with solvents.
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NF  IECEx Dust
    Certificate: IECEx BAS 07.0013X
    Markings:   Ex tc IIC T135 °C Dc, (−40 °C ≤ T_a ≤ +65 °C)

Special Condition for Safe Use (X):
1. The surface resistivity of the antenna is greater than 1 GΩ. To avoid electrostatic charge build-up, it must not be rubbed with a dry cloth or cleaned with solvents.

Brazil

N2  INMETRO Type n
    Certificate: UL-BR 15.0350X
    Markings:   Ex nA IIC T4 Gc, T4(−40 °C ≤ T_a ≤ +65 °C)

Special Condition for Safe Use (X):
1. See certificate for special conditions.

China

N3  China Type n
    Certificate: CNEx13.1929X
    Standards: GB3836.1 – 2010, GB3836.8 - 2003
    Markings:   Ex nA nL IIC T4 Gc

Special Condition for Safe Use (X):
1. See certificate for special conditions.

Japan

N4  TIIS Type n
    Certificate: T64855
    Markings: Ex nA nL IIC T4

EAC – Belarus, Kazakhstan, Russia

NM  Technical Regulation Customs Union (EAC) Type n
    Certificate: RU C-US.ГБ05.B.00578
    Markings: 2Ex nA IIC T4 X; T4(−40 °C ≤ T_a ≤ +65 °C) IP66;

Combinations

KD  Combination of N1, N5, and N6
We,

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

declare under our sole responsibility that the product,

Rosemount 1420 Smart Wireless Gateway

manufactured by,

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

to which this declaration relates, is in conformity with the provisions of the European Union 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 Union notified body certification, as shown in the attached schedule.

Vice President of Global Quality

Chris LaPoint

1-Feb-19
EMC Directive (2014/30/EU)

Harmonized Standards:
EN 61326-1: 2013


Harmonized Standards:
EN 300 328: V2.1.1
EN 301 489-17: V3.2.0
EN 60950-1: 2006+A11+A12+A1+A2
EN 50371: 2002

ATEX Directive (2014/34/EU)

Baseefa07ATEX0056X – Protection Type a Certificate
Equipment Group II, Category 3 G
Ex nA IIC T4 Gc
Harmonized Standards:
EN 60079-0: 2012 + A11: 2013
EN 60079-15: 2010

Baseefa07ATEX0057X – Dust Certificate
Equipment Group II, Category 3 D
Ex tc IIC T135°C Dc
Harmonized Standards:
TN 60079-0: 2012 + A11: 2013
EN 60079-31: 2014
EU Declaration of Conformity
No: RMD 1067 Rev. P

ATEX Notified Body

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

ATEX Notified Body for Quality Assurance

SGS FIMKO OY [Notified Body Number: 0598]
P.O. Box 30 (Särkinenemietie 3)
00211 HELSINKI
Finland
## List of Parts with China RoHS Concentration above MCVs

<table>
<thead>
<tr>
<th>部件名称</th>
<th>有害物质 / Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>铅 (Pb)</td>
</tr>
<tr>
<td>电子产品 Assembly</td>
<td>X</td>
</tr>
<tr>
<td>外壳组件 Housing Assembly</td>
<td>O</td>
</tr>
</tbody>
</table>

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

**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**: 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.
Global Headquarters
Emerson Automation Solutions
6021 Innovation Blvd.
Shakopee, MN 55379, USA
+1 800 999 9307 or +1 952 906 8888
+1 952 949 7001
RFQ.RMD-RCC@Emerson.com

North America Regional Office
Emerson Automation Solutions
8200 Market Blvd.
Chanhassen, MN 55317, USA
+1 800 999 9307 or +1 952 906 8888
+1 952 949 7001
RMT-NA.RCCRFQ@Emerson.com

Latin America Regional Office
Emerson Automation Solutions
1300 Concord Terrace, Suite 400
Sunrise, FL 33323, USA
+1 954 846 5030
+1 954 846 5121
RFQ.RMD-RCC@Emerson.com

Europe Regional Office
Emerson Automation Solutions
Neuhofstrasse 19a P.O. Box 1046
CH 6340 Baar
Switzerland
+41 (0) 41 768 6111
+41 (0) 41 768 6300
RFQ.RMD-RCC@Emerson.com

Asia Pacific Regional Office
Emerson Automation Solutions
1 Pandan Crescent
Singapore 128461
+65 6777 8211
+65 6777 0947
Enquiries@AP.Emerson.com

Middle East and Africa Regional Office
Emerson Automation Solutions
Emerson FZE P.O. Box 17033
Jebel Ali Free Zone - South 2
Dubai, United Arab Emirates
+971 4 8118100
+971 4 8865465
RFQ.RMTMEA@Emerson.com

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