

PRELIMINARY

Product Certifications  
00880-0200-4418, Rev AA  
August 2025

# Rosemount™ 3408 Wireless Level Transmitter

Non-Contacting Radar with *WirelessHART*® Protocol



ROSEMOUNT™

  
EMERSON

# 1 Product certifications

Rev 0.10

## 1.1 European directive information

A copy of the EU Declaration of Conformity can be found at the end of the document. The most recent revision of the EU Declaration of Conformity can be found at [Emerson.com/Rosemount](https://www.emerson.com/Rosemount).

## 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).

## 1.3 Environmental conditions

**Table 1-1: Environmental Conditions (Ordinary Location and Low Voltage Directive (LVD))**

Type	Description
Location	Indoor or outdoor use
Maximum altitude	6562 ft. (2000 m)
Ambient temperature	-67 to +158 °F (-55 to +70 °C)
Installation category	Battery supplied
Electrical supply	Battery (7.8 V max)
Mains supply voltage fluctuations	N/A
Pollution degree	2

## 1.4 Telecommunication compliance

### Measurement principle

Frequency Modulated Continuous Wave (FMCW), 80 GHz

### Maximum output power

+5 dBm (3.2 mW)

### Frequency range

77.25 to 80.96 GHz

76-77 GHz in applicable countries, contact Emerson for details.

**LPR (Level Probing Radar)** equipment are devices for measurement of level in the open air or in a closed space. Valid for ATAP lens antenna (code SCA). Hardware Version Identification Number (HVIN) is 3408LW1.

**TLPR (Tank Level Probing Radar)** equipment are devices for measurement of level in a closed space only (i.e metallic, concrete or reinforced fiberglass tanks, or similar enclosure structures made of comparable attenuating material). Hardware Version Identification Number (HVIN) is 3408TW1.

## 1.5 FCC

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**FCC ID**

K8C3408W

## 1.6 IC/ISED

This device complies with Industry Canada's license-exempt RSS standard. Operation is subject to the following conditions:

1. This device may not cause interference.
2. This device must accept any interference received, including interference that may cause undesired operation.
3. The installation of the LPR/TLPR device shall be done by trained installers in strict compliance with the manufacturer's instructions.

4. The use of this device is on a “no-interference, no-protection” basis. That is, the user shall accept operations of high-powered radar in the same frequency band which may interfere with or damage this device. However, devices found to interfere with primary licensing operations will be required to be removed at the user’s expense.
5. Devices operating under TLPR conditions (i.e. not operating in “Open Air” Mode) shall be installed and operated in a completely enclosed container to prevent RF emissions, which can otherwise interfere with aeronautical navigation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux conditions suivantes:

1. l'appareil ne doit pas produire de brouillage.
2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
3. L'installation d'un dispositif LPR ou TLPR doit être effectuée par des installateurs qualifiés, en pleine conformité avec les instructions du fabricant.
4. Ce dispositif ne peut être exploité qu'en régime de non-brouillage et de non-protection, c'est-à-dire que l'utilisateur doit accepter que des radars de haute puissance de la même bande de fréquences puissent brouiller ce dispositif ou même l'endommager. D'autre part, les capteurs de niveau qui perturbent une exploitation autorisée par licence de fonctionnement principal doivent être enlevés aux frais de leur utilisateur.
5. Un dispositif visé comme TLPR doit être installé et exploité dans un réservoir entièrement fermé afin de prévenir les rayonnements RF qui pourraient autrement perturber la navigation aéronautique.

**Certificate** 2827A-3408W

**HVIN** 3408LW1 (LPR; ATAP antenna (Antenna model code SCA) only)  
3408TW1 (TLPR)

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

This device complies with ETSI EN 302 372 (TLPR), ETSI EN 302 729 (LPR), EN 301 489-1, EN 301 489-17, EN 301 489-33 and EN 300 328 (*WirelessHART*), and EN 62479.

### **LPR (Level Probing Radar)**

For a device with ATAP lens antenna (code SCA):

- Install at a separation distance of >4 km from Radio Astronomy sites, unless a special authorization has been provided by the responsible National regulatory authority (a list of Radio Astronomy sites may be found at [www.craf.eu](http://www.craf.eu)).
- Between 4 km to 40 km around any Radio Astronomy site the LPR antenna height shall not exceed 15 m height above ground.

### **TLPR (Tank Level Probing Radar)**

The device must be installed in closed tanks. Install according to requirements in ETSI EN 302 372 (Annex E).

### **Performance under the influence of an interferer signal**

For the receiver test that covers the influence of an interferer signal to the device, the performance criterion has at least the following level of performance according to ETSI TS 103 361.

- Performance criterion: measurement value variation  $\Delta d$  over time during a distance measurement
- Level of performance:  $\Delta d \leq \pm 1 \text{ mm}$

## **1.8 Radio/EMC Australia and New Zealand**

This device complies with the requirements of the relevant ACMA Standards made under the Radiocommunications Act 1992 and the Telecommunications Act 1997 and the relevant Standards made under The New Zealand Radio Communication Act 1989.

In New Zealand, The Rosemount 3408 Wireless transmitter must be installed in closed tanks (metal, reinforced concrete tanks or similar enclosure structures made of comparable attenuating material).

## **1.9 Other radio approvals**

### **1.9.1 Other national spectrum approvals**

Radio devices usually require certification to ensure they adhere to regulations regarding the use of radio frequency (RF) spectrum. Many countries require 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 radio device usage.

## 1.10 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.

### 1.11 USA

#### 1.11.1 I5 Intrinsic Safety, Non-Incendive

<b>Certificate</b>	FM25US0058X
<b>Standards</b>	FM Class 3600:2022, FM Class 3610:2021, FM Class 3810:2021, ANSI/UL 60079-0:2020 (R2024), ANSI/UL 60079-11:2018, ANSI/UL 61010-1:2023, UL50E:2020 (R2024)
<b>Markings</b>	IS CL I DIV 1, GRPS A, B, C, D T4...T2 CL I Zone 0 AEx ia IIC T4...T2 Ga -55 °C ≤ Ta ≤ +70°C, Type 4X When installed per Control Drawing D7000008-431

**Table 1-2: Safety Parameters**

Safety parameter	HART® service port	Battery (power) port
Voltage $U_i$	3.9 V	7.8 V
Current $I_i$	2 mA	2.16 A
Power $P_i$	7.8 mW	830 mW
Capacitance $C_i$	1.05 nF	43 nF
Inductance $L_i$	0 mH	0

**Table 1-3: Supply Parameters**

Supply parameter	HART service port
$U_o$ (Voc)	5.88 V
$I_o$ (Ioc)	12.55 mA
$C_o$ (Ca)	42.9 $\mu$ F
$L_o$ (La)	225.74 mH

**Specific Conditions of Use (X):**

1. Some areas of the Rosemount Model 3408 Wireless Level Transmitter may cause risk from electrostatic discharge. Avoid installation that could cause electrostatic charge buildup and clean only with a damp cloth.
2. The Rosemount Model 3408 Wireless Level Transmitter's enclosure contains metallic materials which are considered to present a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.
3. The applicable temperature class, ambient temperature range and process temperature range of the equipment is as follows:

Temperature class	Ambient temperature range	Process temperature range
T2	$-55\text{ °C} \leq T_a \leq +70\text{ °C}$	$-55\text{ °C to }+200\text{ °C}$
T3	$-55\text{ °C} \leq T_a \leq +70\text{ °C}$	$-55\text{ °C to }+195\text{ °C}$
T4	$-55\text{ °C} \leq T_a \leq +70\text{ °C}$	$-55\text{ °C to }+130\text{ °C}$

## 1.12 Canada

### 1.12.1 I6 Intrinsically Safe and Non-Incendive Systems

<b>Certificate</b>	FM25CA0027X
<b>Standards</b>	CSA C22.2 No. 0.4-17, CSA C22.2 No. 61010.1:2017, CSA C22.2 No. 60079-0:2019, CSA C22.2 No. 60079-11:2014
<b>Markings</b>	IS CL I DIV 1, GRPS A, B, C, D T4...T2 Ex ia IIC T4...T2 Ga $-55\text{ °C} \leq T_a \leq +70\text{ °C}$ , Type 4X When installed per Control Drawing D7000008-431

**Table 1-4: Safety Parameters**

Safety parameter	HART® service port	Battery (power) port
Voltage $U_i$	3.9 V	7.8 V
Current $I_i$	2 mA	2.16 A
Power $P_i$	7.8 mW	830 mW
Capacitance $C_i$	1.05 nF	43 nF
Inductance $L_i$	0 mH	0

**Table 1-5: Supply Parameters**

Supply parameter	HART service port
$U_o$ (Voc)	5.88 V
$I_o$ (Ioc)	12.55 mA
$C_o$ (Ca)	42.9 $\mu$ F
$L_o$ (La)	225.74 mH


**Specific Conditions of Use (X):**

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Temperature class	Ambient temperature range	Process temperature range
T2	$-55\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$	$-55\text{ }^{\circ}\text{C}$ to $+200\text{ }^{\circ}\text{C}$
T3	$-55\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$	$-55\text{ }^{\circ}\text{C}$ to $+195\text{ }^{\circ}\text{C}$
T4	$-55\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$	$-55\text{ }^{\circ}\text{C}$ to $+130\text{ }^{\circ}\text{C}$

## 1.13 Europe

### 1.13.1 I1 ATEX Intrinsic Safety

<b>Certificate</b>	FM25ATEX00010X
<b>Standards</b>	EN IEC 60079-0:2018, EN 60079-11:2012
<b>Markings</b>	 II 1G Ex ia IIC T4...T2 Ga $-55\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$



**Table 1-6: Safety Parameters**

Safety parameter	HART® service port	Battery (power) port
Voltage $U_i$	3.9 V	7.8 V
Current $I_i$	2 mA	2.16 A
Power $P_i$	7.8 mW	830 mW
Capacitance $C_i$	1.05 nF	43 nF
Inductance $L_i$	0 mH	0

**Table 1-7: Supply Parameters**

Supply parameter	HART service port
$U_o$ (Voc)	5.88 V
$I_o$ (Ioc)	12.55 mA
$C_o$ (Ca)	42.9 $\mu$ F
$L_o$ (La)	225.74 mH

**Specific Conditions of Use (X):**

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T3	$-55\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$	$-55\text{ }^{\circ}\text{C}$ to $+195\text{ }^{\circ}\text{C}$
T4	$-55\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$	$-55\text{ }^{\circ}\text{C}$ to $+130\text{ }^{\circ}\text{C}$

## 1.14 International

### 1.14.1 I7 IECEx Intrinsic Safety

<b>Certificate</b>	IECEx FMG250012X
<b>Standards</b>	IEC 60079-0:2017, IEC 60079-11:2011
<b>Markings</b>	Ex ia IIC T4...T2 Ga -55°C ≤ Ta ≤ +70°C

**Table 1-8: Safety Parameters**

Safety parameter	HART® service port	Battery (power) port
Voltage U <sub>i</sub>	3.9 V	7.8 V
Current I <sub>i</sub>	2 mA	2.16 A
Power P <sub>i</sub>	7.8 mW	830 mW
Capacitance C <sub>i</sub>	1.05 nF	43 nF
Inductance L <sub>i</sub>	0 mH	0

**Table 1-9: Supply Parameters**

Supply parameter	HART service port
U <sub>o</sub> (Voc)	5.88 V
I <sub>o</sub> (Ioc)	12.55 mA
C <sub>o</sub> (Ca)	42.9 µF
L <sub>o</sub> (La)	225.74 mH

#### Specific Conditions of Use (X):

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3. The applicable temperature class, ambient temperature range and process temperature range of the equipment is as follows:

Temperature class	Ambient temperature range	Process temperature range
T2	$-55\text{ °C} \leq T_a \leq +70\text{ °C}$	-55 °C to +200 °C
T3	$-55\text{ °C} \leq T_a \leq +70\text{ °C}$	-55 °C to +195 °C
T4	$-55\text{ °C} \leq T_a \leq +70\text{ °C}$	-55 °C to +130 °C



### Figure 1-1: D7000008-431 - System Control Drawing

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[www.Emerson.com](http://www.Emerson.com)

## 1.16 EU Declaration of Conformity

Figure 1-2: EU Declaration of Conformity

	<h1 style="margin: 0;">Declaration of Conformity</h1>	
Rev. #1		
<p>We,</p> <p style="margin-left: 40px;"><b>Rosemount Tank Radar AB</b>  <b>Layoutvägen 1</b>  <b>S-435 33 MÖLNLYCKE</b>  <b>Sweden</b></p>		
<p>declare under our sole responsibility that the product,</p> <p style="margin-left: 40px;"><b>Rosemount™ 3408 Wireless Level Transmitter</b></p>		
<p>manufactured by,</p> <p style="margin-left: 40px;"><b>Rosemount Tank Radar AB</b>  <b>Layoutvägen 1</b>  <b>S-435 33 MÖLNLYCKE</b>  <b>Sweden</b></p>		
<p>to which this declaration relates, is in conformity with the provisions of the European Union Directives, including the latest amendments, as shown in the attached schedule.</p>		
<p>Assumption of conformity is based on the application of the harmonized standards and, when applicable or required, a European Union notified body certification, as shown in the attached schedule.</p>		
	<p>Sr. Manager Product Approvals</p>	
<p>_____ (signature)</p>	<p>_____ (function)</p>	
<p>Dajana Prastalo (name)</p>	<p>24-Jun-25; Mölnlycke (date of issue &amp; place)</p>	
<p>Page 1 of 3</p>		



# Declaration of Conformity



## EMC Directive (2014/30/EU)

Harmonized Standards: EN 61326-1:2013

Other Standards Used: IEC 61326-1:2020

## ATEX Directive (2014/34/EU)

**FM23ATEX00010X** - Intrinsic Safety (WirelessHART)

Equipment Group II, Category 1G, Ex ia IIC T4...T2 Ga

Harmonized Standards:

EN IEC 60079-0:2018

EN 60079-11:2012

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

Harmonized Standards:

ETSI EN 302 372 V2.1.1

ETSI EN 302 729 V2.1.1

ETSI EN 300 328 V2.2.2

ETSI EN 301 489-1 V.1.9.2

ETSI EN 301 489-1 V.2.2.3

EN 62479: 2010

EN 18031-1: 2024

Other Standards Used:

ETSI EN 301 489-17 V3.2.4

ETSI EN 301 489-33 V.2.2.1

## Low Voltage Directive (2014/35/EU)

Harmonized Standards:

EN 61010-1:2010/A1:2019/AC:2019-04

## RoHS Directive (2011/65/EU)

Harmonized Standards: EN IEC 63000:2018





## Declaration of Conformity



### ATEX Directive Notified Body

**FM Approvals Europe Ltd.** [Notified Body Number: 2809]  
One Georges Quay Plaza  
Dublin. D02 E440  
Ireland

### ATEX Notified body for Quality Assurance

**DNV Product Assurance AS** [Notified Body Number: 2460]  
Veritasveien 3  
1363 Høvik  
Norway





# PRELIMINARY



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**00880-0200-4418, Rev. AA**  
**August 2025**

For more information: [Emerson.com/global](https://emerson.com/global)

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