

# Rosemount™ BP20E Power Module for Wireless Corrosion and Erosion Transmitters



**Failure to follow these installation guidelines could result in death or serious injury. Only qualified personnel should perform the installation.**

## **⚠ DANGER**

### **Explosion hazard**

Explosions could result in death or serious injury.

Installation of this power module 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.

## **⚠ WARNING**

### **Electrostatic hazard**

The power module may be replaced in a hazardous area. However, its enclosure has surface resistivity greater than one gigaohm. Care must be taken during transportation to and from the point of installation to prevent electrostatic charge build-up.

### **Physical access**

Unauthorized personnel may potentially cause significant damage to and/or misconfiguration of end users' equipment. This could be intentional or unintentional and needs to be protected against.

Physical security is an important part of any security program and fundamental to protecting your system. Restrict physical access by unauthorized personnel to protect end users' assets. This is true for all systems used within the facility.

## **⚠ CAUTION**

### **Shipping consideration**

Each BP20E power module contains two "D" size primary lithium batteries. 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 and any other local requirements. Before shipping, please consult current regulations and requirements.

The power module must be installed correctly to avoid risk of becoming detached and falling.

Do not short-circuit, recharge, puncture, incinerate, crush, force discharge, expose contents to water, or expose to temperatures above 212 °F (100 °C). Risk of fire or explosion.

## **NOTICE**

This guide provides basic guidelines for the installation of the Rosemount BP20E Power Module for the Rosemount Wireless Corrosion Transmitter. It does not provide instructions for configuration, diagnostics, maintenance, service, troubleshooting or Intrinsically Safe (IS) installations. For more information, refer to the [Rosemount Wireless Corrosion Transmitter Reference Manual](#). The manual and this guide are also available electronically on [Emerson.com/Global](http://Emerson.com/Global).

**Contents**

Overview..... 5

Physical installation..... 6

Verify operation.....8

Disposal/recycling..... 9

Product certifications..... 11



# 1 Overview

## 1.1 Warning on product labels

The Rosemount BP20E Power Module for Wireless Corrosion and Erosion Transmitters each have a warning printed on them. In each case, the warning text is the same. The text of the warning is: "Use only with approved sensor – see instructions. Potential static hazard."

## 2 Physical installation

### 2.1 Compatibility

Permasense WT100 Corrosion Transmitter

Rosemount Wireless WT210 Corrosion and Erosion Transmitters

Rosemount Wireless ET210 Corrosion and Erosion Transmitters

Rosemount Wireless ET310 Corrosion and Erosion Transmitters

Rosemount Wireless ET410 Corrosion and Erosion Transmitters

Rosemount Wireless ET310C Corrosion and Erosion Transmitters

### 2.2 Required tooling

Tooling is supplied in the IK220 Installation Kit:

- Hex key, 2.5 mm, for power module retaining bolts

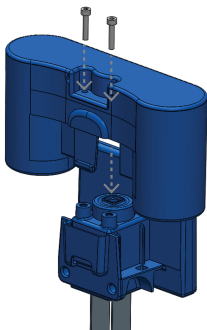
### 2.3 Power module installation

To install the power module:

1. Check power module and transmitter terminals are clean and corrosion free.
2. Ensure the ring seal around the connector on the power module is present.
3. Clip on the power module as shown in [Figure 2-1](#).
4. Fit the two M3 retaining bolts using a 2.5 mm AF hex key.
5. The transmitter will resume normal operation. No configuration is required.

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**Figure 2-1: Rosemount BP20E Installation**



## 2.4 Power module removal

To remove the power module:

1. Remove the two M3 retaining bolts using a 2.5 mm AF hex key.
2. Depress the clip on the front of the power module (on the opposite side of the transmitter label).
3. Pull off the power module.

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**Note**

There is a secondary clip mechanism in the electrical connector. Some force may be required to remove the power module, especially in cold weather.

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4. Dispose of old power module according to local regulations. Refer to the relevant power module datasheet.

## 3 Verify operation

### 3.1 Transmitter operation

Correct transmitter operation can be verified by:

- Checking the join status in Gateway Manager software,  
OR
- Checking in Plantweb Insight Non-Intrusive Application that data has been received once the transmitter has joined the gateway.



## 4 Disposal/recycling

### 4.1 Disposing of depleted power modules

1. Dispose in accordance with applicable laws and regulations in your country and state.
2. Disposal should only be performed by authorized professionals in accordance with applicable requirements for hazardous waste transportation and disposal.
3. Incineration should only be performed by trained professionals in authorized facilities.

### 4.2 Shipping regulations

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.

### 4.3 Handling considerations

Each power module contains two “D” size primary lithium batteries. 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.

#### NOTICE

Care must be taken to prevent thermal, electrical, or mechanical damage. Contacts must be protected to prevent premature discharge.

#### NOTICE

Use caution when handling the power module. It may be damaged if dropped onto a hard surface. Battery hazards remain when cells are discharged.

## 4.4 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.

## 5 Product certifications

### 5.1 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/global](https://www.emerson.com/global).

### 5.2 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).

### 5.3 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.

### 5.4 USA

**Certificate:** SGSNA/19/BAS/00003

**Standards:** UL 913 - 8th Edition, Revision Dec 6 2013

**Markings:** CLASS I, DIV 1, GP ABCD, T4, T<sub>amb</sub> = -50 °C to +75 °C, IP67

### 5.5 Canada

**Certificate:** SGSNA/19/BAS/00003

**Standards:** CAN/CSA C22.2 No. 157-92 (R2012) +Upd1 +Upd2

**Markings:** CLASS I, DIV 1, GP ABCD, T4, T<sub>amb</sub> = -50 °C to +75 °C, IP67

### 5.6 Europe

**Certificate:** Baseefa18ATEX0144X

**Standards:** EN IEC 60079-0:2018  
EN 60079-11: 2012

**Markings:** ⓂII 1 G, Ex ia IIC T4 Ga,  $T_{amb} = -50\text{ °C to }+75\text{ °C}$ , IP67

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

Battery pack enclosures manufactured with Valox V3900WX may present a potential electrostatic ignition hazard and must not be rubbed or cleaned with a dry cloth. See manufacturer's documentation for further information.

## 5.7 International

**Certificate:** IECEX BAS 18.0088X

**Standards:** IEC 60079-0:2017 Edition 7.0, IEC 60079-11: 2011 Edition 6.0

**Markings:** Ex ia IIC T4 Ga,  $T_{amb} = -50\text{ °C to }+75\text{ °C}$ , IP67

#### Specific Condition For Safe Use (X):

Battery pack enclosures manufactured with Valox V3900WX may present a potential electrostatic ignition hazard and must not be rubbed or cleaned with a dry cloth. See manufacturer's documentation for further information.

## 5.8 Brazil

#### Safety - UL

**Certificate:** UL 19.1144X

**Standards:** ABNT NBR IEC 60079-0:2013, ABNT NBR IEC 60079-11:2013

**Markings:** Ex ia IIC T4 Ga ( $-50\text{ °C} \leq T_{amb} \leq +75\text{ °C}$ )

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

See certificate for specific conditions of safe use.

## 5.9 China

#### China (NEPSI)

**Certificate:** GYJ20.1347X

**Standards:** GB3836.1-2021, GB3836.4-2021

**Markings:** Ex ia IIC T4 Ga

#### Specific Condition For Safe Use (X):

See certificate for specific conditions of safe use.

## China (CCC)

<b>Certificate:</b>	2020322303000948
<b>Standards:</b>	GB3836.1-2021, GB3836.4-2021
<b>Markings:</b>	Ex ia IIC T4 Ga

## 5.10 EAC - Kazakhstan

### IM (EAC) Intrinsic Safety

<b>Included on sensor certificates:</b>	KZ 7500525.01.01.00804
<b>Standards:</b>	TP TC 012/2011

### Specific condition for safe use (X):

See certificate for specific conditions of safe use.

## 5.11 Korea

### IP Korea (KCs) Intrinsic Safety

<b>Certificate:</b>	20-KA4BO-0501X
<b>Markings:</b>	Ex ia IIC T4

### Specific Condition For Safe Use (X):

See certificate for specific conditions of safe use.

## 5.12 India

### Safety - PESO

<b>Equipment reference number:</b>	P539646/1
<b>Applicable standards:</b>	IEC 60079-0:2017, IEC 60079-11:2011
<b>Markings:</b>	Ex ia IIC T4 Ga

### Specific condition for safe use (X):

See certificate for specific conditions of safe use.

## 5.13 Japan

### I4 CML Intrinsically Safe (IS)





<b>Included on sensor certificates:</b>	CML 17JPN2097X, CML 19JPN2339X, CML 17JPN2140X, CML 22JPN2619X
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**Markings:** Ex ia IIC T4 Ga (-50 °C ≤ T<sub>amb</sub> ≤ +75 °C)

**Specific condition for safe use (X):**

See certificate for specific conditions of safe use.

### 5.14 Declaration of Conformity

 <b>EMERSON</b>		<b>EU Declaration of Conformity</b>		
<p>We, the manufacturer,</p> <p><b>Permasense Ltd</b>          Alexandra House, Newton Road, Manor Royal, Crawley          RH10 9TT, UK</p> <p>declare under our sole responsibility that the product,</p> <p><b>Rosemount™ BP20E Power Module</b></p> <p>to which this declaration relates, is in conformity with the relevant European Union harmonisation legislation.</p>				
<p><b>ATEX Directive (2014/34/EU)</b></p> <p>EU type examination certificate: Baseefa18ATEX0144X          Ex marking:  II 1G, Ex ia IIC T4 Ga</p> <p>Harmonised standards:          EN IEC 60079-0: 2018          EN 60079-11: 2012</p> <p>SGS Baseefa performed an EU-type examination - the certificate was transferred to SGS Fimko Oy on 11-Nov-2020</p>				
<p><b>ATEX Notified Body for EU Type Examination Certificate:</b>  <b>SGS Fimko Oy</b> (Notified body number 0598)          Takomtie 8          FI-00380 Helsinki          Finland</p>		<p><b>ATEX Notified Body for Quality Assurance</b>  <b>SGS Fimko Oy</b> (Notified body number 0598)          Takomtie 8          FI-00380 Helsinki          Finland</p>		
<p><b>Authorised Representative in Europe and Northern Ireland:</b>  <b>Emerson S.R.L.</b>          company No. J12/88/2006, Emerson 4 street, Parcul          Industrial Tataroim II, Cluj-Napoca 400638, Romania          Regulatory Compliance Shared Services Department          Email: <a href="mailto:europaeproductcompliance@emerson.com">europaeproductcompliance@emerson.com</a>          Phone: +40 374 132 000</p>				
<p><b>Battery Regulation 2023/1542/EU</b></p> <p>Harmonised standard:          EN IEC 60086-4</p> <p>This section of the EU Declaration of Conformity is a <b>self-declaration</b> by <b>Permasense Ltd</b>. There have been no notified bodies (pursuant to the <b>Batteries Regulation (EU) 2023/1542</b>) declared at the time of this document's publication.</p>				
<p>Signed for and on behalf of Permasense Ltd.</p>				
 _____ (Signature)	16 <sup>th</sup> August 2024 _____ (date of issue)	Phillip Pakianathan _____ (Name)	Global Engineering and Operations Director _____ (Function)	Crawley, UK _____ (Place of issue)

## 5.15 China RoHS

**中国 RoHS 2 - 中国《电器电子产品有害物质限制使用管理办法》，2016年第32号令**

**China RoHS 2 - Chinese order No. 32, 2016; administrative measures for the restriction of hazardous substances in electrical and electronic equipment**

作为总部位于美国密苏里州圣路易斯市艾默生电气公司的一个战略性业务单位及艾默生过程管理的一部分（以下简称“艾默生”），永威™意识到于2016年7月1日生效的中国第32号令，即《电器电子产品有害物质限制使用管理办法》（“中国RoHS 2”），并已设立符合规体系以履行艾默生在第32号令项下的相关义务。

Permasense, a strategic business unit of Emerson Electric Co, St. Louis, Missouri and part of Emerson Process Management (“Emerson”), is aware of and has a program to meet its relevant obligations of the Chinese Order No. 32, 2016; Administrative Measures for the Restriction of Hazardous Substances in Electrical and Electronic Equipment (China RoHS 2), which entered into force on 1 July 2016.

艾默生理解中国RoHS 2实施的第一阶段须遵守的与产品标识和信息披露等相关的各项要求。作为一个电器电子设备供应商，艾默生确定供应给贵公司的前述型号产品属于中国RoHS 2的管理范围。

Emerson understands there are numerous requirements with the regulation regarding, among others, marking of product and communications for purpose of the Phase I implementation of China RoHS 2. As a supplier of electrical and electronic equipment, Emerson has determined that the captioned product supplied to your company is within scope of China RoHS 2.

迄今为止，基于供应商所提供的信息，就艾默生所知，前述产品中不存在超过最大浓度限值的中国RoHS管控物质，且该产品上已做相应标识。

To date, based on information provided by suppliers and to Emerson's best knowledge, no China RoHS substances are present at a concentration above the Maximum Concentration Values and the product is marked to reflect this.



**Quick Start Guide**  
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For more information: [Emerson.com/global](https://emerson.com/global)

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