Rosemount™ BP20E Power Module for Wireless Corrosion Transmitters
**NOTICE**

This guide provides basic guidelines for the installation of the Rosemount™ Power Module for the Rosemount Wireless Permasense Corrosion Transmitter. It does not provide instructions for configuration, diagnostics, maintenance, service, troubleshooting or intrinsically safe (I.S.) installations. Refer to the Rosemount Wireless Permasense Corrosion Transmitter Reference Manual for more instruction. The manual and this guide are also available electronically on Emerson.com |Permasense.

**WARNING**

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.

Electrical shock could cause death or serious injury.

Avoid contact with the leads and terminals. High voltage that may be present on leads can cause electrical shock. The power module may be replaced in a hazardous area. The power module has surface resistivity greater than one gigaohm and must be properly installed in the wireless device enclosure. Care must be taken during transportation to and from the point of installation to prevent electrostatic charge build-up.

**WARNING**

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**

Each BP20E power module contains two “D” size primary lithium battery. Primary lithium batteries are regulated in transportation by the U.S. Department of Transportation, and are also covered by IATA (International Air Transport Association), ICAO (International Civil Aviation Organization), and ARD (European Ground Transportation of Dangerous Goods). It is the responsibility of the shipper to ensure compliance with these or any other local requirements. Please consult current regulations and requirements before shipping.

The power module 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.
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1 Overview

1.1 Warning on product labels

The Rosemount™ BP20E Power Module for Wireless Corrosion Transmitters each have a warning printed on them. In each case the warning text is the same. Below is a figure that shows the label. The text of the warning is: “Use only with approved sensor – see instructions. Potential static hazard.”
2  Physical installation

2.1  Compatibility
Rosemount™ Wireless Permasense WT100 Corrosion Transmitter
Rosemount Wireless Permasense WT210 Corrosion Transmitter
Rosemount Wireless Permasense ET210 Corrosion Transmitter
Rosemount Wireless Permasense ET310 Corrosion Transmitter
Rosemount Wireless Permasense ET410 Corrosion Transmitter

2.2  Required tooling
Tooling is supplied in the Permasense IK220 Installation Kit:
• Hex key, 2.5mm, for power module retaining bolts

2.3  Power module installation
To install the power module:
1. Check power module and sensor 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 2.5mm AF hex key.
5. The sensor will resume normal operation. No configuration is required.

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 2.5mm AF hex key.

2. Depress the clip on the front of the power module (on the opposite side to the sensor label).

3. Pull off the power module.

**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.

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

3.1 Sensor operation

Correct sensor operation can be verified by:

- Checking the join status in Gateway Manager software, OR
- Checking in Data Manager that data has been received once the sensor 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 battery. Under normal conditions, the battery materials are self-contained and are not reactive as long as the batteries and the battery pack integrity are maintained. Care should be taken to prevent thermal, electrical, or mechanical damage. Contacts should be protected to prevent premature discharge.

Use caution when handling the power module. It may be damaged if dropped 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

Rev: 0.1

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/Rosemount.

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/17/SUW/00281
Markings: CLASS I, DIV 1, GP ABCD, T4, Tamb = -50 °C to +75 °C, IP67

5.5 Canada

Certificate: SGSNA/17/SUW/00281
Standards: CAN/CSA C22.2 No. 157-92 (R2012) +Upd1 +Upd2
Markings: CLASS I, DIV 1, GP ABCD, T4, Tamb = -50°C to +75°C, IP67

5.6 Europe

Certificate: Baseefa 18ATEX0144X
Standards: EN IEC 60079-0:2018
   EN 60079-11: 2012

Markings: II 1 G, Ex ia IIC T4 Ga, Tamb = -50 °C to +75 °C, IP67

Specific Conditions for Safe Use (X):
1. The polymer enclosure may present a potential electrostatic ignition hazard and must not be rubbed or cleaned with a dry cloth.

5.7 International

Certificate: BAS 14.0022X


Markings: Ex ia IIC T4 Ga, Tamb = -50 °C to +75 °C, IP67

Specific Conditions for Safe Use (X):
1. The polymer enclosure may present a potential electrostatic ignition hazard and must not be rubbed or cleaned with a dry cloth.