

IDENTIFICATION

The Badger® ORION® Integral Transmitter is packaged in a single piece enclosure with Badger's Recordall® Transmitter Register (RTR®) or Absolute Digital Encoder (ADE®) for connectivity to Badger's complete line of Recordall Disc, Turbo, and Compound Meters. The single piece design provides a solution for utilities requiring an ORION 'wireless' solution. All Badger ORION Integral Transmitters are factory programmed, tested, and ready for installation.

Each Badger ORION Transmitter is identified using a unique serial number located on the side of the bracket that attaches the transmitter to the encoder register. In addition to the serial number, a product description indicates whether it is for a metal pit lid, non-metal pit lid, or remote applications.

It is essential that the Badger ORION Integral Transmitter be installed only in the correct applications. Failure to do so results in a violation of FCC regulations.

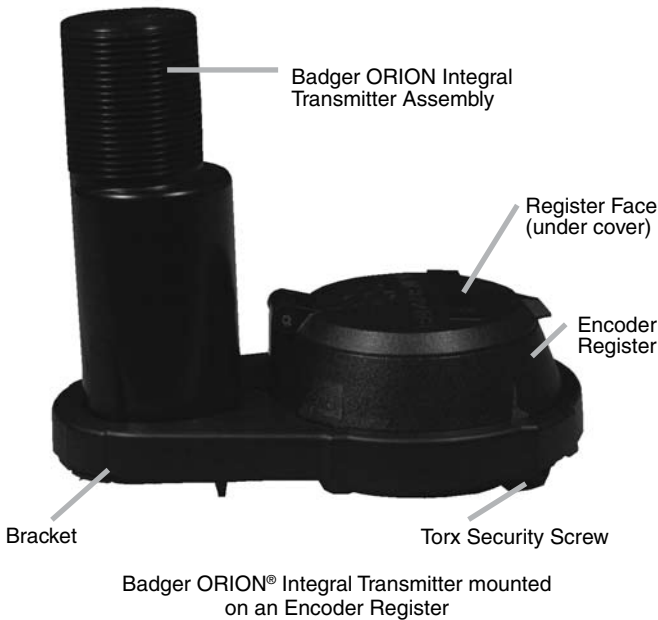


Figure 1

UNPACKING

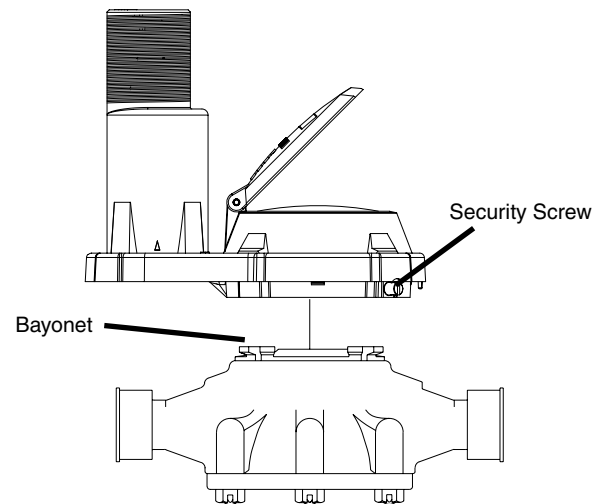
Carefully remove the Badger ORION Integral Transmitter from the shipping carton and inspect it for damage.

Prior to installing any transmitter, it is important to determine whether it is manufactured for a metal lid, non-metal lid, or remote application. To determine the proper application, look at the serial number tag on the side of the bracket that attaches the transmitter and the encoder register. At the end of the serial number the product is identified for metal pit lids, non-metal pit lids, or remote applications.

INSTALLATION

The Badger ORION Integral Transmitter can be installed on any Recordall Disc, Turbo, and Compound Meters by mounting the assembly onto the bayonet of the Recordall meter and rotating it into its locking position.

Note the security screw must be loosened prior to installing the Badger ORION Integral. After the Badger ORION Transmitter is mounted to the meter tighten the security screw to secure the assembly to the register. (See Figure 2)



Recordall Meter with Badger® ORION® Integral Transmitter

Figure 2

TRANSMITTER INSTALLATION

Badger Meter recommends that when a pit-set transmitter is installed, a wired transmitter be mounted either through or under the lid of a non-metal pit lid for efficient propagation of the radio transmission. If the transmitter is being installed indoors, a wired radio transmitter should be mounted on the outside of the building or in the floor joist near the outside wall of the building, for efficient propagation of the radio transmission. The integral non-wired transmitter is not recommended for network reading applications in either a pit or below grade basement application.

TESTING

Once a Badger ORION Integral Transmitter is installed, its radio performance must be checked.

If connected to an RTR, the Badger ORION Integral Transmitter begins broadcasting as soon as the sweep hand advances one position.

If connected to an ADE, the Badger ORION Integral begins broadcasting RF signals up to one-hour after the number wheel stack rolls over to all zeros. The delay in broadcasting with an ADE is due to latency, which affects all mechanical and absolute encoder technology products.

If the utility wishes to turn on or change the status of a transmitter prior to you leaving a site, the Badger® ORION® Integral can be turned on at anytime with an IR communication protocol using your Badger ORION laptop or handheld reading equipment.

Badger ORION Integral Transmitter with 3 ft of Wire Option

The Badger ORION Integral Transmitter may also be sold with an optional 3' of wire inside the integral housing. The transmitter with 3' of wire can be removed from the integral housing a single time to remotely mount the transmitter from the ADE® or RTR® register. **Prior to disassembling the Badger ORION Integral Transmitter, it is important to verify that the transmitter actually has 3 ft of wire packaged with the assembly. This information can be found on the Badger ORION Integral Transmitter serial number label located on the side of the integral bracket. Badger ORION Integral Transmitters with 3 ft of wire will have "3 ft wire" at the end of the serial number label. Do not continue with the steps listed below if your ORION Integral Transmitter does not have this description on the serial number label because it will damage the transmitter.**

1. Remove the Encoder Register and Transmitter Assembly from the meter by removing the seal screw and turning the Badger ORION Integral Transmitter a 1/4 turn to the left. (See Figure 3)



Remove the Badger ORION Integral Transmitter Assembly

Figure 3

2. Turn the Encoder Register and Transmitter over. Grasp the pull tab located to the right of the encoder seal screw with pliers and remove the bottom piece from the housing. Removing this piece exposes the wire. Using your fingers, remove the wire from the housing. (See Figure 4)



Figure 4

3. Holding the Encoder Register, rotate the Transmitter Assembly to the left 1/4 turn. (See Figure 5)
4. Remove the Transmitter from the Encoder Register. (See Figure 5)



Rotate the Transmitter to the left

Remove the Transmitter from the Encoder Register

Figure 5

5. Using the three feet of wire, mount the transmitter according to Badger's recommended installation instructions.
6. Place the Register back on the Meter and tighten seal screws.

LICENSE REQUIREMENTS

This device complies with Part 15 of the FCC Rules. Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes made by the user not approved by Badger Meter can void the user's authority to operate a Badger ORION meter reading system.

Badger®, ADE®, ORION®, Recordall® and RTR® are registered trademarks of Badger Meter, Inc.



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Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists.