

<b>Model ADE™</b>	<b>Absolute Digital Encoder</b>	<b>Installation Data</b>
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**IDENTIFICATION**

The Badger Meter Absolute Digital Encoder (ADE) is available for all remote and pit settings where a Badger Meter water meter can be located. The ADE is permanently sealed to eliminate moisture, dirt, and other contaminants to insure reliable operation in submerged or indoor applications. As part of the foundation for Badger Meter's MRT products, including ORION®, Badger® ERT®, BadgerTouch™, and other Badger approved AMR solutions, the ADE provides an output for superior electronic resolution.

Available for all Recordall® Disc, Turbo, Compound and Fire Service Meters, each ADE is clearly identified on the face of the dial with an assembly number, unit of measure, and meter model (see figure 1.)

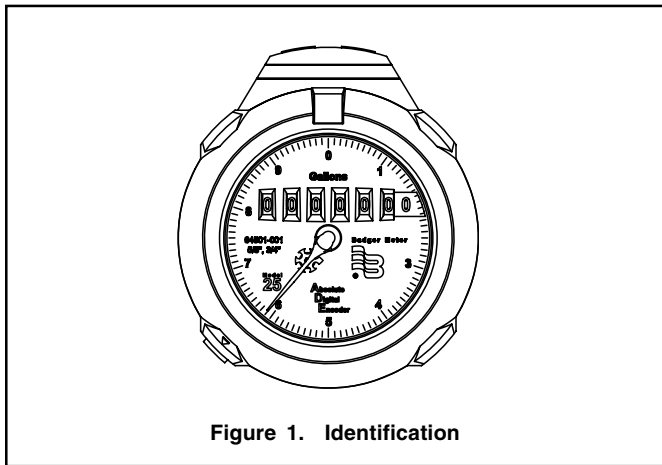


Figure 1. Identification

**REQUIRED MATERIAL**

62084-001 Field Splice Kit

- Contents: (3) 59761-001 Gel-Connectors
- (2) 34776-001 Cable Ties
- (1) 62085-001 Splice Enclosure

**SUGGESTED TOOLS**

- 59983-001 Gel-Splice Crimping Tool
- 59989-001 Coax Stripper
- 59991-001 Wire Cutting Pliers
- 59993-001 Wire Stripper
- TORX® Driver
- 59987-001 VOM Multimeter (Analog) (OPTIONAL)

Before proceeding with installation, be certain that the meter type and size correspond, and that the proper ADE configuration has been supplied for the application.

**CONNECTING ADE**

**⚠ CAUTION**

The ADE should only be connected to a Badger Meter approved product. Connection to an unapproved product will void the ADE warranty.

Your ADE will either have a factory installed two-conductor cable (black) or a factory installed three-conductor cable (brown) for connection to an AMR module.

If the wire is cut or broken on either a 2 or 3 wire ADE and requires a field splice after initial installation, connect like color wires to maintain proper installation.

To connect to an AMR module, strip approximately 1½" of outer insulation sheath from the ADE and AMR module cables using the 59989-001 Coax Stripping Tool. Use caution in removing the outer sheath so that the inner signal wire insulation is not damaged.

Unwind the outer foil shield from the ADE cable and cut it off even with the outer sheath using the wire cutting pliers. For two conductor cables, do not cut the uninsulated shield drain wire.

**ADE WITH THREE WIRES (BROWN CABLE)**

For connection to an ORION® Transmitter, verify the ADE has a brown cable. Using the chart below, connect the ADE™ conductors to the AMR module conductors using insulation displacement gel-filled splices, P/N 59761-001 provided in the installation kit. Crimp the cables completely using a parallel jaw crimper, P/N 59983-001.

For connection to an Itron® remote ERT®, verify that the ADE has a brown cable and contains an ADE on the label. For more information on the installation instructions for the Itron remote ERT, please refer to Itron's Installation Remote ERT Modules 40W-1 and 50W-1.

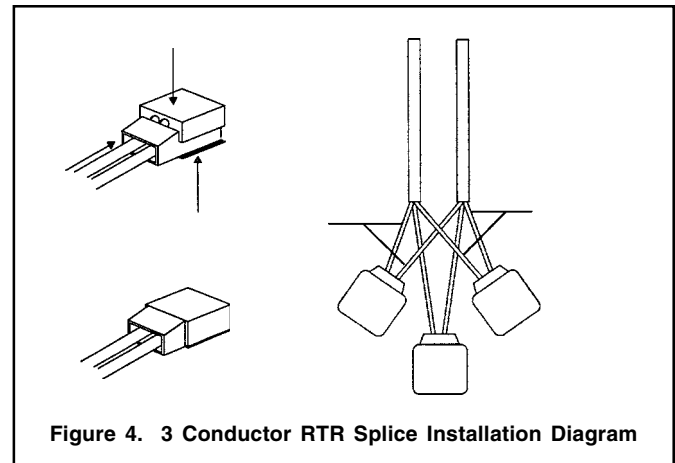


Figure 4. 3 Conductor RTR Splice Installation Diagram

ADE™	ORION®	Itron® Remote	BadgerTouch™
Red	Red	Red	White
Black	Black	Black	White
Green	Green	Green	N/A

If the wire is cut or broken and requires a field splice after initial installation, connect like colors to maintain proper installation.

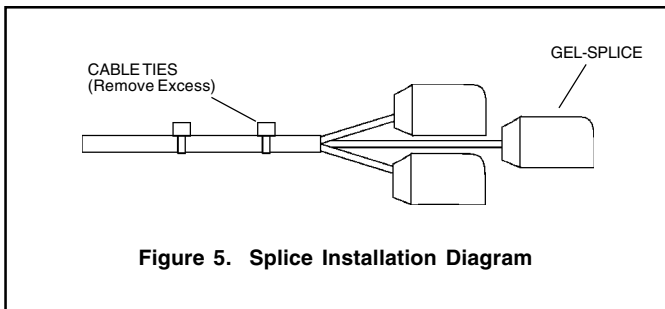
**ADE™ WITH TWO WIRES (BLACK CABLE)**

Connect the ADE cable conductors to the AMR module wires using gel-filled connectors, P/N 59761-001, provided in the installation kit. Crimp the cables completely using a parallel jaw crimper such as Badger Meter P/N 59983-001. Polarity must be observed when connecting the ADE to the remote module. Badger Meter, Inc. wiring standards use the black conductor as the negative (-) conductor and the red as the positive (+) conductor.

<b>ADE™</b>	<b>Itron® Pit</b>
Red	Red
Black	Black
Shield	Shield

**\*For field splice information, please refer to Itron Pit ERT® Modules 40W-1 and 50W-1.**

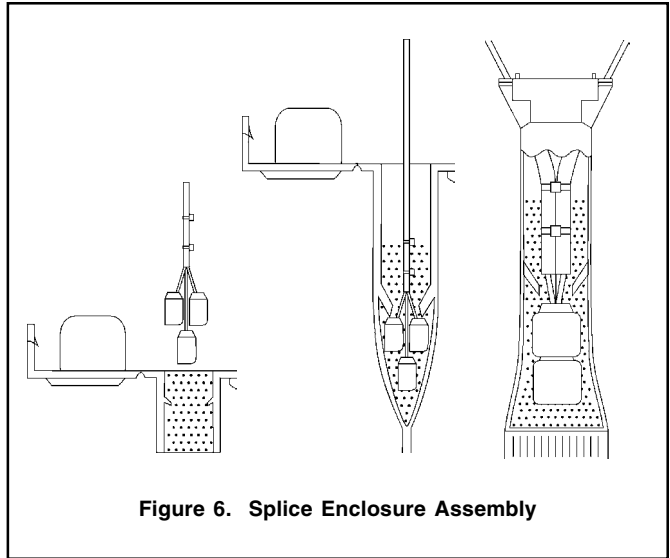
Place the two plastic cable ties P/N 34776-001 on wires and tighten securely for strain relief. Remove excess cable tie with wire cutting device.



**Figure 5. Splice Installation Diagram**

**PIT INSTALLATIONS**

Insert the entire splice assembly into the filled splice tube P/N 62085-001 as indicated in Figure 6. Close the cover with leads exiting alternate sides as indicated in the drawing.



**Figure 6. Splice Enclosure Assembly**

**TESTING**

After connections are complete, test the entire installation including the ADE, wiring, and remote or pit module for proper operation in accordance with the instructions supplied with the module.

Install the ADE on the water meter and secure it using the Torx screw provided.

**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 the equipment. No license is required by the utility to operate an ADE meter reading system.

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Please see our website at [www.badgermeter.com](http://www.badgermeter.com) for specific contacts.

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 bid obligation exists.



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