BadgerTouch™ Automated Meter Reading System	BadgerTouch™ Remote Module	Installation Data

REQUIRED TOOLS

62658-000 TORX® Screw Driver (10 and 15 bits)

REQUIRED MATERIAL

63705-003 BadgerTouch Installation Kit for Remote Applications, including:
- (2) 55211-231 Screw, Phillips Head
- (2) 62359-001 Screw Anchor 10-12 (1/4" drill bit required)
- (2) 34776-001 Cable Tie

OPTIONAL MATERIAL

56088 GE RTV-162 Adhesive Sealant

Belden 9770 wire (if additional wire length required).

SUGGESTED TOOLS

Electric drill
3/16" carbide tip masonry drills
Common and Phillips Screwdrivers
T-25 Wire Stapler and Staples
Touch reading device for installation verification

IDENTIFICATION

BadgerTouch Remote Modules are supplied as stand alone modules for field connection to Absolute Digital Encoder (ADE™) for all Recordall® Disc, Turbo Series and Compound Series Meters. Each ADE is clearly identified on the face of the dial with an assembly number, unit of measure and meter model number (See Figure 1). The BadgerTouch Remote Module does not contain an identification number. The ADE register contains a unique identification number. The number is shown on the underside of the register cover. Interrogation of the ADE will display the ID number and the meter reading.

Figure 1. Identification - Absolute Digital Encoder

Figure 2. BadgerTouch Remote Module - Front View

INSTALLATION

UNPACKING

Carefully remove the BadgerTouch Remote Module (Figure 2) from the shipping carton. Locate the corresponding ADE for proper coordination during installation. Retain the contents of the installation kit for use in making connections to the ADE transmission line.

LOCATION

The location of the BadgerTouch Remote Module should be selected by the utility to achieve on-site reading in an efficient manner. The remote module should be mounted at waist level for easy access under any environmental conditions.

REMOTE MODULE INSTALLATION

The remote module contains two screw terminals that require connection to the red and black lead wires of the ADE cable. The BadgerTouch system is not polarity sensitive.

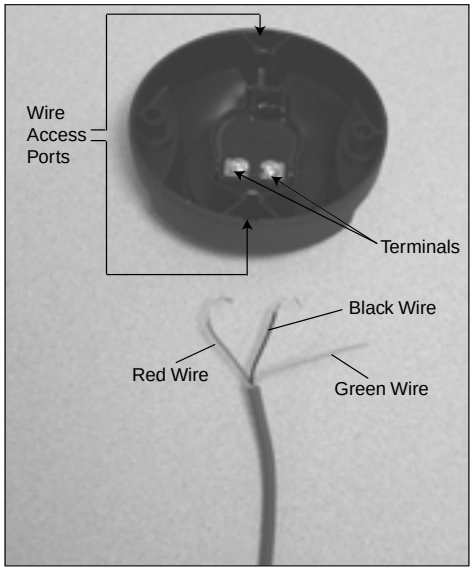

Figure 3. Remote Module Connection

Locate the position of the two mounting holes on the outside of the building by using the remote module as a template. The Remote Module should be located in an easily accessible location but should be within 75 feet maximum wire distance to the water meter and ADE using Belden 9770 wire. Additional wire length and other wire types may affect performance.

Drill a 3/16" wire entry hole at a suitable location in the building wall. Cut the protective gel cap off the end of the ADE cable. Feed the ADE cable from the water meter through the wall. Then cut the cable to proper length, making sure you have sufficient wire to make the connection to the Remote Module.

Wire access to the Remote Module may be from the rear, or through a bottom or top access port. When utilizing rear access, allow approximately 8" of extra cable behind the Remote Module to facilitate making the wiring connections. If using the bottom or top access port, the thin plastic area of the outer shroud needs to be snapped off to expose the wire access port. Use a small wire cutting pliers to snap the plastic.

Strip-back about 1 inch of the outer insulation of the ADE™ cable, being careful not to nick the inner conductors. Strip about ¾" of insulation from the red and black wires; the green wire is not used and can be cut off.

The two cable ties act as strain relief, as shown in Figure 4, to eliminate the possibility of breaking the wire connection at the terminals if the wire is accidentally pulled. Place the two plastic cable ties on the outer insulation of the field wire. Tighten securely and remove the excess cable tie with the wire cutting pliers.

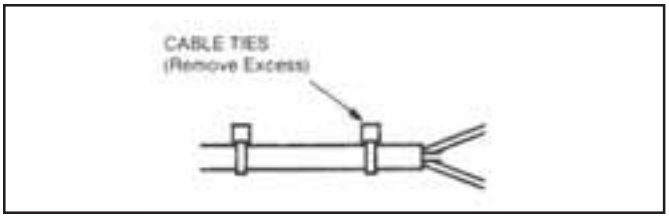

Figure 4. Strain Relief Detail

Tightly wrap one bare wire around one of the terminal screws in a clockwise direction. (Note: you can place either wire on either terminal since the device is not polarity sensitive). The terminal screw should then be tightened to firmly grip the wire between the screw head and terminal. Repeat this procedure with the other wire and the other terminal screw. Excess bare wire ends should be cut off.

If the Remote Module is to be installed in a wet or humid environment, the terminals and exposed wires must be coated with an approved electrical insulating compound, such as GE RTV-162 Adhesive Sealant Dow Corning® 4 Electrical Insulating Compound or Novagard® G661™. These compounds protect the terminals and wires against corrosion which otherwise might affect the performance and reliability of the BadgerTouch™ system.

Fasten the Remote Module to the structure using the mounting hardware that is provided. The module must be securely mounted to a rigid surface; avoid mounting on loose siding or any type, as this may lead to wire breakage. Fasten the field wiring to the building structure and/or existing piping to assure a secure installation. Use standard fasteners or cable ties. If staples are used, be careful not to nick or cut into the outer insulation of the field wiring.

IF ADDITIONAL WIRE LENGTH IS REQUIRED

The ADE is supplied with a pre-determined length of wire. Should an additional length of wire be required, it is important to follow the instructions that are supplied with the ADE regarding splicing. Use Belden 9770 wire. Before proceeding with the installation, be certain that the appropriate field splice kit and gel splice crimping tool are available to assure proper installation and that electrical connections are secure and weather resistant.

TESTING

After all connections have been made from the remote module to the remote cable and from the remote cable to the ADE, the testing of the complete BadgerTouch remote system can begin. To perform the test, a compatible reading device capable of reading Badger ADE or Sensus protocol. can be used. The reading unit should be placed on the remote module and the meter reading collected. This should correspond to the reading on the meter odometer stack.

LICENSE REQUIREMENTS

The 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 a BadgerTouch Meter Reading System.

ISO 9001

Please see our website at
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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