BadgerTouch®

Automated Meter Reading System Remote Module
Model ESERIESBT and HREBT

TOOLS AND MATERIAL

BadgerTouch® Remote Module with Installation Kit

63705-004

Suggested Tools

- Electric drill
- 3/16 in. carbide tip masonry drills
- 1/4 in. drill bit for anchor screws
- Blade and Phillips screwdrivers
- T-25 wire stapler and staples
- Touch reading device for installation verification

Application includes:

- (1) BadgerTouch Module assembly
- (2) 55211-231 screw, Phillips head
- (2) 62359-001 screw, anchor 10-12 (1/4 in. drill bit required)
- (2) 34776-001 cable tie

Optional Material

56088 GE RTV-162 Adhesive Sealant

APPLICATION

Coupled with the next generation E-Series® G2 Ultrasonic meter or the High Resolution Encoder (HR-E®), the BadgerTouch Remote Module is a complete electronically encoded close-proximity automated meter reading system, specifically designed for single point remote meter installations. BadgerTouch Remote Modules are supplied as standalone modules for field connection to an E-Series G2 Ultrasonic meter, or to an HR-E encoder with all Recordall® Disc, Turbo, Compound, Combo, and Fire Series meters and assemblies.

Interrogation of the Remote Module displays the unique meter serial number and the meter reading.

Figure 1: Remote Module

INSTALLATION

NOTE: Make sure to locate the corresponding Ultrasonic meter or HR-E encoder for installation.

Unpacking

Carefully remove the BadgerTouch Remote Module (*Figure 1*) from the shipping carton. Retain the contents of the installation kit for connecting the meter/encoder.

Location

Choose an accessible outdoor location to install the BadgerTouch Remote Module within the limits of the meter/encoder cable.

Remote Module Installation

Follow the steps in this section to:

- Connect the meter/encoder to the Remote Module.
- Mount the Remote Module. The Remote Module must be securely mounted to a rigid surface. Avoid mounting on loose siding of any type, as this may lead to wire breakage.

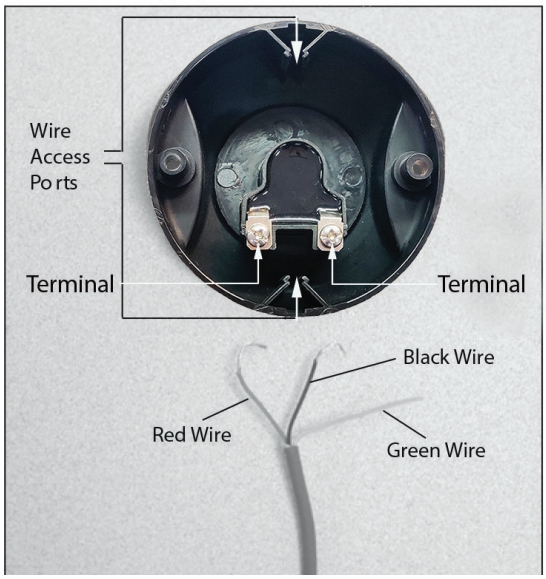

Figure 2: Remote Module connection

1. After choosing the location for installation, use the Remote Module as a template to position the two mounting holes on the outside of the building that houses the meter/encoder. The Remote Module should be located within 75 feet maximum wire distance of the meter/encoder using Belden 9770 wire. Additional wire length and other wire types may affect performance.

2. Drill a 3/16 inch wire entry hole in the building wall to accommodate the meter/encoder cable. Cut the protective gel cap off the end of the meter/encoder cable. Feed the cable through the wall and then cut the cable to the proper length, making sure you have sufficient wire to make the connection to the Remote Module.

3. Access the Remote Module with the meter/encoder cable from the rear, or through a bottom or top access port. When using rear access, allow approximately 8 inches of extra cable behind the Remote Module to facilitate making the wiring connections. If using the bottom or top access port for the cable, 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.

4. Strip-back about 1 inch of the outer insulation of the cable to expose the wires, being careful not to nick the inner conductors. Strip about 3/4 inch of insulation from the red and black wires.

   The green wire is not used and can be cut off.

5. 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. The two cable ties act as strain relief, as shown in *Figure 3*, to eliminate the possibility of breaking the wire connection at the terminals if the wire is pulled.

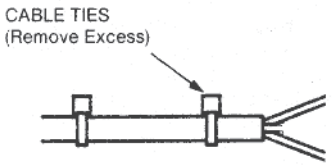

Figure 3: Strain relief detail

6. Tightly wrap one bare wire around one of the Remote Module terminal screws in a clockwise direction. (**NOTE**: You can connect the red or black wire on either terminal since the device is not polarity sensitive.) Tighten the terminal screw to firmly grip the wire between the screw head and terminal. Repeat this procedure with the other wire and the other terminal screw. Cut off excess bare wire ends.

7. If the Remote Module is to be installed in a wet or humid environment, coat the terminals and exposed wires 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.

8. Fasten the Remote Module to the structure using the mounting hardware provided. If you used the top or bottom access ports for the meter/encoder cable, fasten any exposed 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.

TESTING

After the connections have been made from the Remote Module to the remote cable and from the remote cable to the meter/encoder, test the BadgerTouch remote system.

To perform the test, a compatible device capable of reading BadgerTouch or Industry Standard ASCII protocol can be used. Place the reading device on the Remote Module to collect the meter reading. The reading should correspond to the reading on the meter odometer stack.

LICENSE REQUIREMENTS

This device complies with Part 15 of the FCC Rules. Operation of this device is subject to the following 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 of the device. Any changes made by the user not approved by Badger Meter can void the user's authority to operate the equipment.

In accordance with FCC Regulations, "Code of Federal Regulations" Title 47, Part 2, Subpart J, Section 1091, transmitters pass the requirements pertaining to radiation exposure. However, to avoid public exposure in excess of limits for general population (uncontrolled exposure), a 20 centimeter distance between the transmitter and the body of the user must be maintained during operation.

No license is required by the utility to operate a BadgerTouch meter reading system.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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