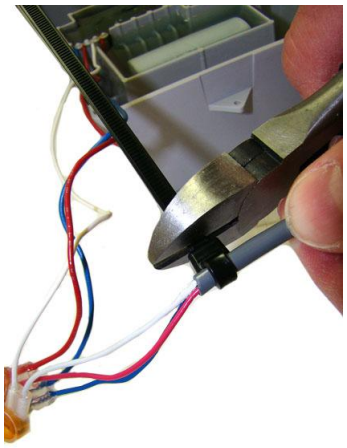
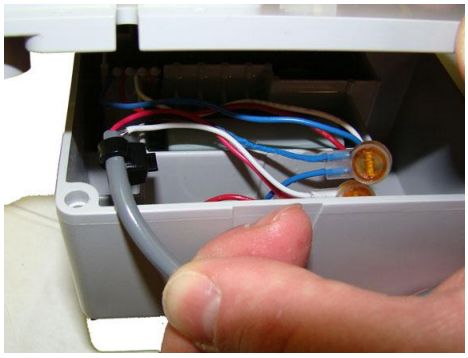
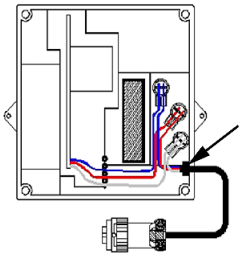
3. Dresser ROOTS IMC/W2 and MC2 cables are typically delivered with a cable tie installed. If the meter cable does not include a cable tie, install a tie to the cable just below the exposed colored lead wires on the cable insulation. Remove the excess cable tie using a hand-held sidecutter pliers. The cable tie performs as a cable strain relief to mitigate the risk of destructive tension on the lead wires.



4. Tuck the three gel connectors and cable tie inside the endpoint housing, as shown. Position the cable tie as shown by the arrow.





5. Install the 100G Datalogging FN remote ERT module backplate using the four screws previously removed from the ERT module and a Torx T-15 screwdriver.

Important Verify the cable tie and gel connectors are inside the module housing and the cable extends out of the slot in the backplate. Torque the backplate mounting screws to 9-12 inch-pounds.

Installing the ERT Module to the Dresser ROOTS® Micro Corrector (IMC/W2 or MC2)

Dresser ROOTS® Meters and Instruments offer a mounting bracket kit assembly to direct mount Itron's 100G Datalogging FN ERT module to the IMC/W2.

Dresser ROOTS® Meters Instruments Mounting Bracket Kit (Dresser ROOTS Part Number 057783-000)

Quantity	Description	Dresser ROOTS® Part Number
1	Mounting bracket	015951-000
1	Screw, 8-32 x 7/16-inch	000163-277
2	Screw, 8-32 x 3/4-inch	000163-282
3	Nut, 8-32	012829-005
4	Spacer, #10	053669-001
4	ERT module/bracket mounting screw, M6 x 20 mm	013444-002

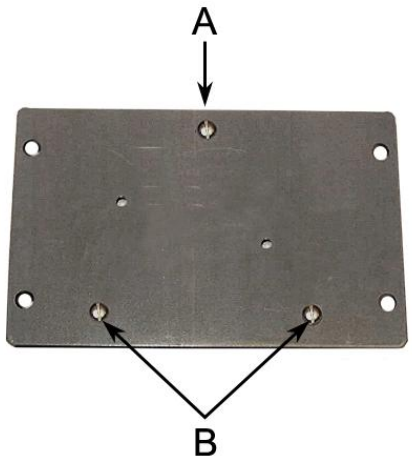
Important Dresser ROOTS® mounting bracket kit does not include the cable required to connect the 100G Datalogging FN remote ERT module to the Amphenal connector on the IMC\W2.

Dresser ROOTS® Accessories

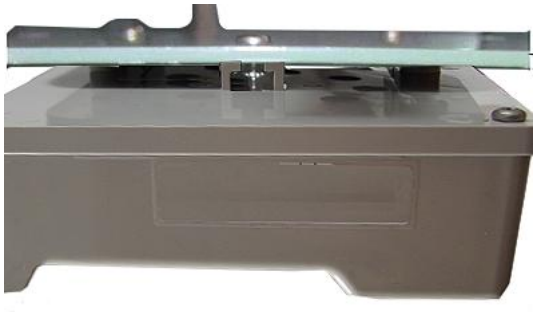
Description	Dresser ROOTS® Part Number
9" A-B male cable	054983-012
9" D-E male cable	054983-010

To attach the ERT module to the IMC\W2 and MC2

1. Insert the 8-32 x 7/16-inch screw (A) into the top of the mounting bracket. Insert the two 8-32 x 3/4-inch screws (B) into the bottom of the mounting bracket.



2. Insert one 3/32-inch nut on the top 7/16-inch bracket screw (A). Slide the 100G Datalogging FN remote ERT module mounting lug over the top of the bracket screw and nut.



3. Secure the bottom 100G Datalogging FN remote ERT module mounting holes over the two 8-32 x 3/4-inch screws with the remaining two 8-32 nuts.

4. Insert the #10 spacers into the four mounting holes on the back of the IMC\W2.

Caution Upright vertical positioning is very important because:

- 100G Datalogging FN remote ERT modules are designed with the antenna in a vertical direction so the antenna is parallel to the reading device (which has a vertical antenna). Matching antenna polarity can greatly affect RF performance and enable easy ERT module reading.
- 100G Datalogging FN remote ERT modules are designed so the tilt tamper is vertical. It is important to maintain vertical positioning in the field to enable tilt tamper stability.
- 100G Datalogging FN remote ERT module batteries must be vertical (installed with the positive terminal upward) or battery life is compromised.

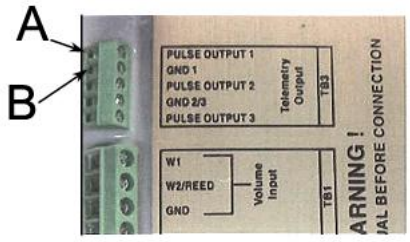
5. Secure the endpoint/bracket assembly on the IMC\W2 using four endpoint/mounting bracket screws (M6 x 20 mm).

6. There are two options to connect the 100G Datalogging FN remote ERT module to Dresser ROOTS to the IMC\W2:
   1. For the Amphenol connector: plug the connector from the Itron ERT module to the IMC\W2 volume input connector.

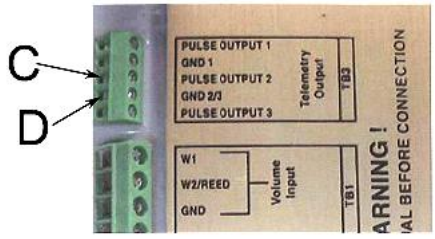
2. For the cable gland or conduit fitting:

a. Route the cable from the 100G Datalogging FN remote ERT module through the IMC\W2 cable gland/conduit connector.

To receive uncorrected reads: connect the red wire to the terminal block 3 (TB3 telemetry output) GND1 (ground) position (B). Connect the white and blue wires to the pulse output 1 position (A).



To receive corrected reads: connect the red wire to the GND 2/3 (ground) TB3 telemetry output position (C). Connect the white and blue wires to the pulse output 2 position.



b. Tighten the cable gland fitting around the cable. Apply 15 inch-pounds torque.

Note 100G Datalogging FN remote ERT modules using the flying lead cable assembly (Dresser ROOTS® part number 055018-700) are factory wired to terminal block 3 (TB3) according to IMC\W2 pulse output default configuration. Consult the customer specification for other wiring configurations.

To test the 100G Datalogging FN remote ERT module IMC\W2 installation

1. Connect the IMC\W2 to the PC using the serial cable.
2. Using the Dresser ROOTS® User Terminal (UT) communications software, connect to the IMC\W2.
3. Read the uncorrected or corrected count number on the 100G Datalogging FN remote ERT module with the Itron endpoint reading device. Compare the IMC\W2 uncorrected or corrected amounts to the 100G Datalogging FN remote ERT module
4. Input approximately 20 pulses to the 100G Datalogging FN remote ERT module. Verify the uncorrected or corrected counts on the IMC\W2 and the Datalogging FN remote ERT module are the same.

Programming the 100G Datalogging FN Remote ERT Module

Caution You must program the 100G Datalogging FN remote ERT module before use. Follow the steps in this section to properly program the ERT module.

Program the 100G Datalogging FN remote ERT modules using:

- A FC200SR handheld computer with Endpoint-Link® or Endpoint-Link Pro version 5.3 or higher or Field Deployment Manager (FDM) software version 1.1 or higher
  or
- A FC300 with SRead handheld computer with Endpoint-Link or Endpoint-Link Pro version 5.5 or higher or Field Deployment Manager (FDM) software version 1.1 or higher
  or
- A 900MHz Belt Clip Radio with Endpoint-Link version 5.5 or higher or Field Deployment Manager (FDM) software version 1.1 or higher and a customer-supplied laptop. The Belt Clip Radio connects to the user-supplied laptop using a USB cable or Bluetooth.
- See the *Endpoint-Link* v5.3 (or higher) *Endpoint Programming Guide* (TDC-0744) or the *Field Deployment Manager Endpoint Tools Mobile Application Guide* (TDC-0934) for more complete programming information.

FC200SR

FC300 with SRead

900MHz Belt Clip Radio

To program the 100G Datalogging FN remote ERT module

1. Program the meter drive rate into the 100G Datalogging FN remote ERT module using a handheld computer or Belt Clip Radio and laptop computer. For all programming and **Check Endpoint** operations using a handheld computer, hold the handheld as close to vertical as possible. For best success, keep the handheld within six feet of the target ERT module. Verify you have the correct programming mode (Fixed Network Mode, Mobile High Power Mode, Mobile/Handheld Mode, or Hard to Read Mobile/Handheld Mode) for your application. Programming parameters are based on the configuration file loaded into the programming device. During programming, the100G Datalogging FN remote ERT module is set to the nearest 100 cubic feet; the last two digits (tens and units) are programmed as zeros (0). After programming is complete, the ERT module assembly will read to the nearest cubic foot.
2. **Read** or **Check** the 100G Datalogging FN remote ERT module using the handheld computer or Belt Clip Radio.
    - If the read result is higher than the number programmed in step 1, the 100G Datalogging FN remote ERT module is counting correctly.
    - If the read result is not higher than the number programmed in step 1, replace the 100G Datalogging FN remote ERT module.

CHAPTER 5

Diaphragm Meter Installation

This chapter provides the instructions to install Remote 100G Datalogging FN remote ERT modules (Itron part number ERG-5003-501 with 2.5 foot cable and encoder) on the diaphragm gas meters where a direct mount endpoint is not possible. Reference the Itron *Gas Endpoint Meter Compatibility List* (PUB-0117-002 or the 100G Datalogging FN Remote ERT Module Meter Compatibility List on page 3 for compatible diaphragm meters.

Tools and Materials Supplied By You

Note 100G Datalogging FN remote ERT module installation to a diaphragm meter may require additional tools and materials over those listed in Installation Prerequisites on page 5.

The following user/installer-supplied tools and materials are required to install, program, and check the 100G Datalogging FN remote ERT module:

- Medium flat-blade screwdriver
- Medium flat-blade, torque-measuring screwdriver
- Medium Phillips screwdriver
- Pliers
- Side-cutting pliers or similar tool
- 1/4-inch nut driver or other blunt tool for seating ERT module tamper
- Itron programming device to program and check 100G Datalogging FN remote ERT module installation and operation:

  FC200SR handheld computer with Endpoint-Link or Endpoint-Link Pro software version 5.3 or higher or Field Deployment Manager (FDM) version 1.1 or higher

  or

  FC300 with SRead with Endpoint-Link or Endpoint Link Pro version 5.5 or higher Field Deployment Manager (FDM) version 1.1 or higher

  or

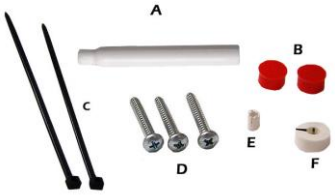
  900 MHz Belt Clip Radio with Endpoint-Link version 5.5 or higher or Field Deployment Manager (FDM) version 1.1 or higher and a customer-supplied laptop

  Note Reference the appropriate programming guide or specification sheet for correct software version (see Related Documents on page 2).

- 1-inch putty knife or similar tool to remove old gasket material from the meter and index cover
- Replacement temperature compensation (TEMP COMP) meter index stickers (if required)

Materials Available from Itron

The following items are required for each 100G Datalogging FN remote ERT module installation to a diaphragm gas meter:

Itron Part Number	Description	
ERG-5003-501	100G Datalogging FN Remote ERT Module with 2.5' encoder cable	
CFG-0081-001	Remote Mount Encoder Kit A acetone applicator stick B tamper seals C cable ties D mounting screws E magnet hub spacer F magnet hub	
013-1723-112	Encoder Spacing Tool (Use the Encoder Spacing Tool to ensure the encoder mounts the correct distance from the magnet hub on the meter index.)	

Replacement Gaskets

The Itron replacement index cover gaskets shown below are thicker than standard gaskets and have a special slot to accommodate the encoder cable. *Gaskets are designed for Schlumberger/Sprague model 675 and 1000 commercial diaphragm meters. These gaskets may be incompatible on meters from other manufacturers; alternate cable relief procedures may be necessary.*

4-hole front cover gasket: Itron part number FAB-0014-003

2-hole front cover gasket: Itron part number FAB-0014-002

1-hole front cover gasket: Itron part number FAB-0014-001

Installing the 100G Datalogging FN Remote ERT Module

The 100G Datalogging FN remote ERT module mounts on a pipe using the Remote Mount Installation Kit (Itron part number CFG-0005-003) or a vertical flat (wall) surface. Always mount the 100G Datalogging FN remote ERT module with the printed label right-side-up (arrow pointing up -1), and the encoder wires (2) and tamper seals (3) at the bottom, as shown.

Caution Upright vertical positioning is very important because:

- 100G Datalogging FN remote ERT modules are designed with the antenna in a vertical direction so the antenna is parallel to the reading device (which has a vertical antenna). Matching antenna polarity can greatly affect RF performance and enable easy endpoint reading.
- 100G Datalogging FN remote ERT modules are designed so the tilt tamper is vertical. It is important to maintain vertical positioning in the field to enable tilt tamper stability.
- 100G Datalogging FN remote ERT module batteries must be vertical (installed with the positive terminal upward) or battery life is compromised.

Installing 100G Datalogging FN Remote ERT Module Encoders

Caution To insure proper adhesion, the 100G Datalogging FN remote ERT module encoder must be installed at temperatures between 40° to 95° Fahrenheit.

There are four tasks when installing the Datalogging FN remote ERT module with an encoder on a diaphragm meter:

1. Remove the index cover and any gasket residue.
2. Install the 100G Datalogging FN remote ERT module encoder on the index.
3. Program the 100G Datalogging FN remote ERT module.
4. Attach the index cover to the meter.

To remove the index

Note Properly dispose all unused screws, old index covers, gaskets, tamper seals, and other leftover materials. Do not leave materials on customer premises. Replace any stripped, worn, or corroded mounting screws.

1. Cut and remove any wire seal routed through the index cover screws. Remove the index cover and set aside. Remove the index mounting screws in an alternating fashion.

2. Remove the two index screws in an alternating fashion. Loosen the left index screw two turns, loosen the index screw three to four turns. Hold the index while removing the screws to keep the index from falling. Set the index aside where it will not be damaged.

3. Remove the old gasket and any gasket residue from the meter and the index cover.

4. Use the FC200 or FC300 to read the 100G Datalogging FN remote ERT module. Record the reading for comparison with progressive readings as installation is completed.

To install the encoder

1. Remove the magnet hub from the Encoder Installation kit (Itron part number CFG-0081-001). Verify there is only one magnet in the hub.

Note If there is no magnet or if there are two magnets in the magnet hub, discard the magnet hub and use a hub with one magnet.

2. Briefly place the magnet side of the magnet hub into the curved indentation in the encoder, as shown.

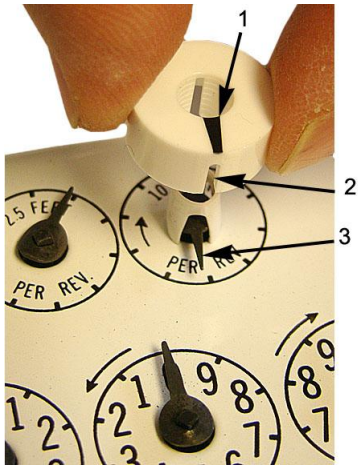
3. Remove the magnet hub from the encoder and set it at least one inch away from the encoder.
4. Use the endpoint programming device to read the 100G Datalogging FN remote ERT module. If this reading is higher than the reading taken after removing the index, the ERT module is counting and working properly.

Note If the reading is not higher than the previous reading, the 100G Datalogging FN remote ERT module is not reading. Repeat steps 3, 4, and 5. If the ERT module is still not counting, replace the 100G Datalogging FN remote ERT module and perform steps 3, 4, and 5.

5. Align the large notch in the side of the magnet hub spacer with the needle of the meter drive rate dial (1-foot or 2-foot for residential diaphragm meters; 5-, 10-, or 100-foot for commercial diaphragm meters).

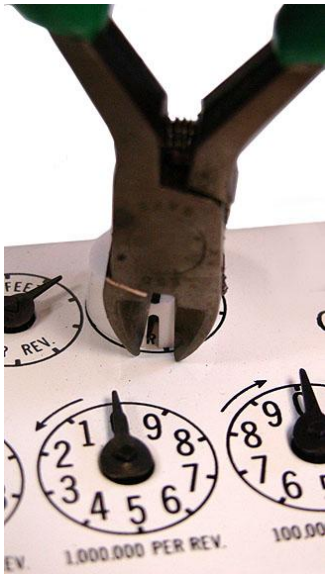
6. Press the magnet hub spacer down over the dial needle as far as possible. The tip on the bottom of the spacer may touch index face. Turn the dial in the direction noted on the index after hub spacer installation to verify the index dial functions with a smooth, easy rotation.

7. Align the pointer (1) on the top of the magnet hub and the notch (2) in the side of the magnet hub with the needle (3) of the meter drive rate dial.



8. Press the magnet hub down over the hub spacer as far as possible. The bottom of the hub spacer may touch the index face. Turn the dial after magnet hub installation to verify the index dial functions with a smooth, easy rotation.

9. If the tip of the dial needle sticks out past the edge of the magnet hub, cut off the end of the dial needle as close as possible to the magnet hub with a sharp, side-cutting pliers.



10. Remove the acetone stick applicator from the Remote Encoder Installation Kit (Itron part number CFG-0081-001).

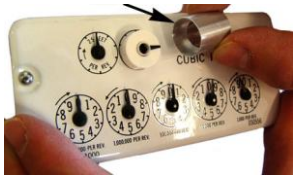
11. Select a location on the index face next to the magnet hub. After encoder installation, the encoder cable must not interfere with the index dials.

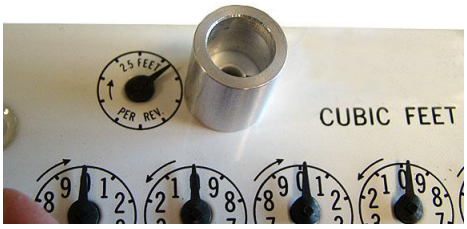
Note If a TEMP COMP sticker is attached to the index where the encoder cable will mount, remove it before cleaning with the acetone stick. If the sticker (or replacement sticker) must be put back on the register face, place it in a new location on the index face after the encoder is attached.

12. Tilt the acetone stick vertically with the wick end down. Squeeze the acetone stick on the black dot until the packet inside the pen breaks. Continue to hold the acetone stick vertical until the acetone wicks into the foam applicator end.

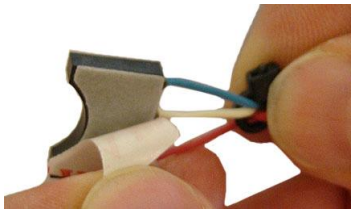
13. Thoroughly apply acetone to the area where you will install the encoder. Do not touch the cleaned area of the index face before the encoder is installed.

14. Slide the thin end of the encoder spacing tool down over the magnet hub.





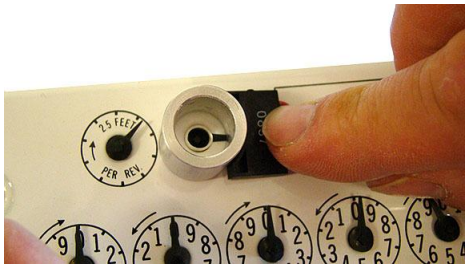
15. Peel the strip of protective plastic off the adhesive side of the module's encoder.



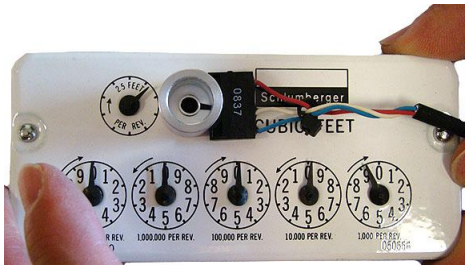
Important You must do the next two steps exactly as described or the 100G Datalogging FN remote ERT module will not work properly.

16. Press the curved side of the encoder firmly against the side of the encoder spacing tool as shown below, with the adhesive side down.

17. Slide the encoder down along the side of the encoder spacing tool until it touches the surface of the index (as shown below). Using moderate pressure, hold the encoder firmly against the index, without moving, for 15 seconds to permanently apply the encoder.



The photo below shows how the encoder spacing tool and encoder will look after the 15 second wait time.



18. Remove the encoder spacing tool and lay the index on a flat, horizontal surface, to diminish strain on the encoder cable.
19. Program the index reading (with the encoder mounted) into the 100G Datalogging FN remote ERT module.
20. Read the 100G Datalogging FN remote ERT module If this reading is the same as the reading programmed into the 100G Datalogging FN remote ERT module, the ERT module is programmed correctly.

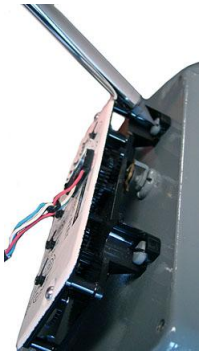
Index Cover Installation Required Materials

Use the correct replacement index cover gasket for your index (see Replacement Gaskets on page 53 for Itron 4-hole, 2-hole, or 1-hole gasket part numbers).

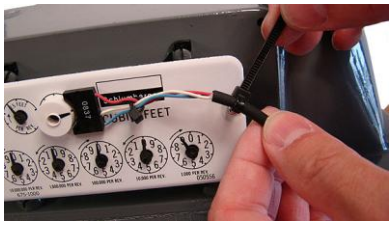
To install the meter index covers over the ERT module encoder cable

1. Remove the gasket center and index cover hole plugs from the new gasket.

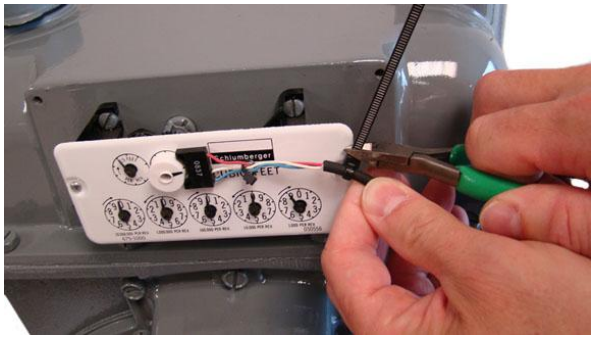
2. Insert the index/encoder assembly through the gasket center. Verify the gasket's adhesive-backed side is facing the meter face.
3. Align the index wriggler with the meter's drive dog. Install the index on the meter using the index mounting screws. Tighten one index screw two turns. Install and tighten the remaining index screw. Tighten the first index mounting screw completely (alternating fashion).



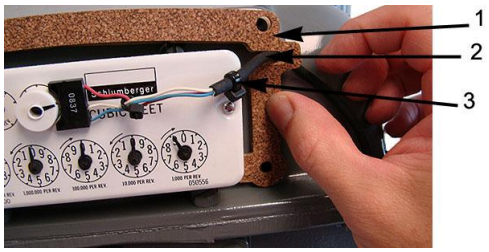
4. Install a strain-relief cable tie about 1-1/4-inch from the encoder cable's stripped end. The cable tie must be inside the index cover after the cover is installed on the meter.



5. Remove the excess cable tie with a side-cutting pliers. Dispose excess cable tie properly.



6. Remove the protective backing on the replacement gasket to expose the adhesive side of the gasket. Align the gasket (1), encoder cable (2), and cable tie (for strain-relief) (3) on the meter as shown.



Caution Route the encoder cable inside the index cover to provide strain relief (minimize pulling or twisting on the encoder). Verify the strain-relief cable tie on the encoder cable is inside the index cover when the cover is installed on the meter. The gasket must align with the index cover screw holes and adhere to the meter face to insure a proper seal after the index cover is installed.

7. Install the four index cover screws and tighten just enough to hold the screws in place.

8. Verify the encoder cable is in the cable slot of the gasket. Fully tighten the screws in an alternating fashion. If required, install utility-approved security wire seals.

100G Datalogging FN remote ERT module encoder/index installation is complete.

Programming the 100G Datalogging FN Remote ERT Module

Caution You must program the 100G Datalogging FN remote ERT module before use. Follow the steps in this section to properly program the ERT module.

Program the 100G Datalogging FN remote ERT modules using:

- A FC200SR handheld computer with Endpoint-Link® or Endpoint-Link Pro version 5.3 or higher or Field Deployment Manager (FDM) software version 1.1 or higher
  or
- A FC300 with SRead handheld computer with Endpoint-Link or Endpoint-Link Pro version 5.5 or higher or Field Deployment Manager (FDM) software version 1.1 or higher
  or
- A 900MHz Belt Clip Radio with Endpoint-Link version 5.5 or higher or Field Deployment Manager (FDM) software version 1.1 or higher and a customer-supplied laptop. The Belt Clip Radio connects to the user-supplied laptop using a USB cable or Bluetooth.
- See the *Endpoint-Link* v5.3 (or higher) *Endpoint Programming Guide* (TDC-0744) or the *Field Deployment Manager Endpoint Tools Mobile Application Guide* (TDC-0934) for more complete programming information.

FC200SR

FC300 with SRead

900MHz Belt Clip Radio

To program the 100G Datalogging FN remote ERT module

1. Program the meter drive rate into the 100G Datalogging FN remote ERT module using a handheld computer or Belt Clip Radio and laptop computer. For all programming and **Check Endpoint** operations using a handheld computer, hold the handheld as close to vertical as possible. For best success, keep the handheld within six feet of the target ERT module. Verify you have the correct programming mode (Fixed Network Mode, Mobile High Power Mode, Mobile/Handheld Mode, or Hard to Read Mobile/Handheld Mode) for your application. Programming parameters are based on the configuration file loaded into the programming device. During programming, the 100G Datalogging FN remote ERT module is set to the nearest 100 cubic feet; the last two digits (tens and units) are programmed as zeros (0). After programming is complete, the ERT module assembly will read to the nearest cubic foot.
2. **Read** or **Check** the 100G Datalogging FN remote ERT module using the handheld computer or Belt Clip Radio.
   - If the read result is higher than the number programmed in step 1, the 100G Datalogging FN remote ERT module is counting correctly.
   - If the read result is not higher than the number programmed in step 1, replace the 100G Datalogging FN remote ERT module.

CHAPTER 6

DATTUS Meter Installation

This section provides the instructions to install the 100G Datalogging FN remote ERT module with Itron DATTUS fM2 and fM3 meters.

DATTUS fM2

DATTUS fM3

Installation Prerequisites

100G Datalogging FN remote ERT module installation to a DATTUS meter requires the following materials:

- 100G Datalogging FN remote ERT module compatible with the DATTUS meter (see the 100G Datalogging FN Remote ERT Module Meter Compatibility List on page 3).
- Itron DATTUS meter compatible with the 100G Datalogging FN remote ERT module.
- Tools and devices to complete installation and programming (see Installation Prerequisites on page 5)

Programming the DATTUS Meter

Program the DATTUS fM2 or fM3 meter with the correct pulse width and weight. For all DATTUS type meters, the pulse width must be set to .050 seconds.

DATTUS Meter Pulse Weight Settings

Meter type	Pulse weight in cubic feet (CF) or cubic meter (CM)
11M or smaller	10 (CF) or 1 CM
16M or greater	100 CF or 1 CM

Installation Overview

Installing the 100G Datalogging FN remote ERT module to an DATTUS meter involves five tasks:

1. Programming the meter (see Programming the DATTUS Meter on page 66 or the Itron DATTUS programming guide for more information).

2. Installing any necessary Itron retrofit parts. Itron offers installation kits and brackets for endpoint mounting options (see Installing the Remote ERT Module to Itron DATTUS Meters on page 67 or Direct Mounting the Remote ERT Module to the DATTUS Meter on page 68).
3. Mounting the 100G Datalogging FN remote ERT module directly on the meter. If direct-mounting is not an option for your installation, the 100G Datalogging FN remote ERT module may be mounted on a pipe, or flat surface (see Mounting the 100G Datalogging FN Remote ERT Module).
4. Connecting the 100G Datalogging FN remote ERT module to the DATTUS meter (see Connecting the Remote ERT Module to a DATTUS Meter on page 69).
5. Programming the 100G Datalogging FN remote ERT module (see Programming the 100G Datalogging FN Remote ERT Module on page 30).

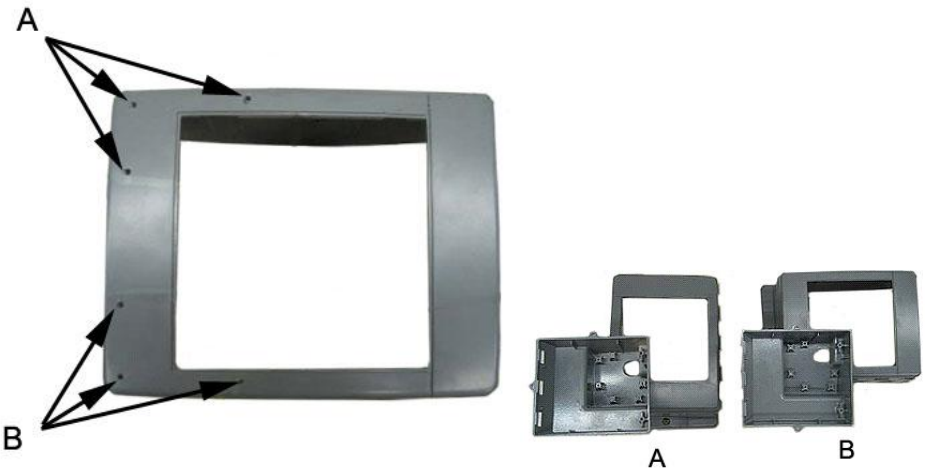
Installing the Remote ERT Module to Itron DATTUS Meters

DATTUS meters provide a an electronic pulse output compatible with the 100G Datalogging FN remote ERT module. The DATTUS meter may be wired to the ERT module using the pulse output cable or the module can be directly mounted to the meter.

When ordering, customers can have the 100G Datalogging FN remote ERT modules drop shipped to Itron's Owenton, Kentucky meter factory to have a factory-installed connector attached to the module's bare leads. The connector directly fits the pulse output on the DATTUS meter.

Direct Mounting the Remote ERT Module to the DATTUS Meter

100G Datalogging FN remote ERT modules can be direct mounted to DATTUS fM2 and fM3 meters with the DATTUS Direct Mount Kit (Itron part number 442491-001). You can rotate DATTUS meter registers to accommodate vertical or horizontal meter. Customers may have Itron, Owenton, Kentucky complete the cover modification and bracket attachment or may order the kit to retrofit the DATTUS meter. The external cover of the DATTUS meter is modified with three holes to mount the endpoint bracket. The modification is dependent on the orientation of the meter installation.



A **Horizontally oriented meter endpoint mounting hole modifications.**

B **Vertically oriented meter endpoint mounting hole modifications.**

Caution The 100G Datalogging FN remote ERT module must be mounted in an upright position with the arrow on the label pointing upward.

After the meter cover and bracket are replaced on the meter, the 100G Datalogging FN remote ERT module is connected to the pulse output of the DATTUS meter by the Binder Connector. The endpoint is seated into the bracket to create a secure assembly.

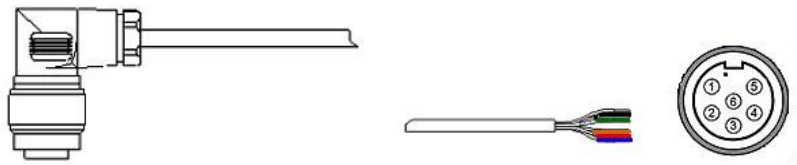
Horizontal installation **Vertical installation**

Connecting the Remote ERT Module to a DATTUS meter

The DATTUS fM2 and fM3 meters have two configurable outputs usable as pulse outputs to the 100G Datalogging FN remote ERT module. Connecting the endpoint following the information in this section requires a pulse output cable, installed at the Owenton, Kentucky Itron location. Pulse output cables are available in 10-foot and 20-foot lengths. Factory-installed cables have a Binder connector on one end and six bare wires on the opposite end.

DATTUS Meter Wiring Accessories (available from Itron, Owenton, Kentucky)

Accessory	Itron Part Number
Pulse output cable - 10 ft.	442461-009
Pulse output cable - 20 ft.	442461-010



Pulse output cable

To wire the 100G Datalogging FN remote ERT module to the DATTUS meter

Pulse Output Cable Pin Descriptions				
			To use Output 3	To use Output 4
Pin	Function	Wire color	ERT wire color	ERT wire color
1	Cut cable	White		Blue
2	Output 4 (+)	Black		White
3	Ground (-)	Green		Red
4	Output 3 (+)	Orange	White	
5	Cut cable	Red	Blue	
6	Ground (-)	Blue	Red	

Mounting the 100G Datalogging FN Remote ERT Module

You can mount the 100G Datalogging FN remote ERT module on a pipe or vertical flat surface (wall). Mounting requires the Itron Remote Mount Kit (Itron part number CFG-0005-003). See Mounting the 100G Datalogging FN Remote ERT Module on page 6 for mounting instructions.

Programming the 100G Datalogging FN Remote ERT Module

Caution You must program the 100G Datalogging FN remote ERT module before use. Follow the steps in this section to properly program the ERT module.

Program the 100G Datalogging FN remote ERT modules using:

- A FC200SR handheld computer with Endpoint-Link® or Endpoint-Link Pro version 5.3 or higher or Field Deployment Manager (FDM) software version 1.1 or higher
  or
- A FC300 with SRead handheld computer with Endpoint-Link or Endpoint-Link Pro version 5.5 or higher or Field Deployment Manager (FDM) software version 1.1 or higher
  or
- A 900MHz Belt Clip Radio with Endpoint-Link version 5.5 or higher or Field Deployment Manager (FDM) software version 1.1 or higher and a customer-supplied laptop. The Belt Clip Radio connects to the user-supplied laptop using a USB cable or Bluetooth.
- See the *Endpoint-Link* v5.3 (or higher) *Endpoint Programming Guide* (TDC-0744) or the *Field Deployment Manager Endpoint Tools Mobile Application Guide* (TDC-0934) for more complete programming information.

FC200SR

FC300 with SRead

900MHz Belt Clip Radio

To program the 100G Datalogging FN remote ERT module

1. Program the meter drive rate into the 100G Datalogging FN remote ERT module using a handheld computer or Belt Clip Radio and laptop computer. For all programming and **Check Endpoint** operations using a handheld computer, hold the handheld as Verify you have the correct programming mode (Fixed Network Mode, Mobile High Power Mode, Mobile/Handheld Mode, or Hard to Read Mobile/Handheld Mode) for your application. Programming parameters are based on the configuration file loaded into the programming device. During programming, the 100G Datalogging FN remote ERT module is set to the nearest 100 cubic feet; the last two digits (tens and units) are programmed as zeros (0). After programming is complete, the ERT module assembly will read to the nearest cubic foot.
2. **Read** or **Check** the 100G Datalogging FN remote ERT module using the handheld computer or Belt Clip Radio.
    - If the read result is higher than the number programmed in step 1, the 100G Datalogging FN remote ERT module is counting correctly.
    - If the read result is not higher than the number programmed in step 1, replace the 100G Datalogging FN remote ERT module.

CHAPTER 7

Sensus Sonix Meter Installation

Sensus Sonix Meter

Programming the Sensus Sonix Meter

Program the Sensus Sonix meter following the Sensus programming guidelines.

Adjusting the Pulse Output for Sonix 600 and 880 Meters

The pulse output sent to the 100G Datalogging FN remote ERT module may be set (using the SonixCom software) as:

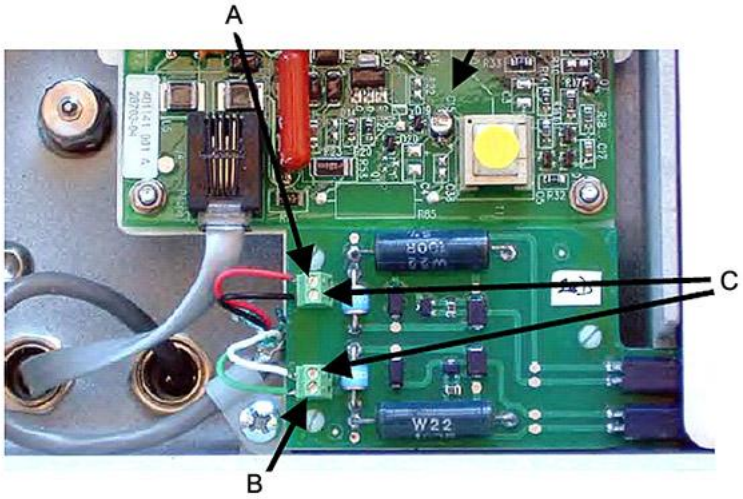
- 1 pulse per 10 cf
- 1 pulse per 100 cf
- 1 pulse per 1000 cf

Contact Sensus North American Gas Customer Service for more information.

Installing the 100G Datalogging FN Remote ERT Module with Sensus Sonix Meters

Sensus Sonix meters provide a standard Form *A* electronic pulse output compatible with the 100G Datalogging FN remote ERT module. You may connect the Sensus Sonix meter to the ERT module using the pulse output cable or you can directly mount the ERT module to the meter.

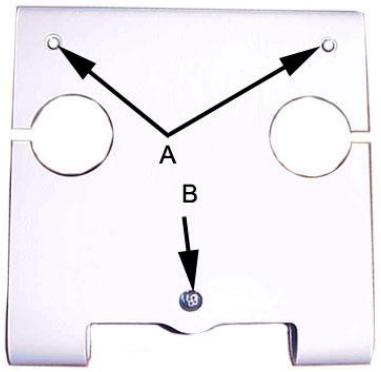
Sensus Sonix2000 Pulse Output Wiring



Sensus Sonix2000 Pulse Output Options			
Option	**(A) Pulse 1 (+)**	**(B) Pulse 2 (+)**	**(C) Ground (-)**
1	Uncorrected	Corrected	
2	LCD index volume	Alarm	

Direct Mounting the Remote ERT Module to the Sonix Meter

The Sensus factory can direct mount the 100G Datalogging FN remote ERT module to Sensus Sonix Meters (contact Sensus North American Gas Customer Service for mounting specifications and ordering information). This section includes the instructions for customers to mount the 100G Datalogging FN remote ERT module on the Sonix meter using the mounting materials available from Sensus Metering Systems.



A Top anchor screw positions

B Bottom anchor position for the endpoint U-shaped mount

Sensus Sonix Direct Mount Brackets* and Mounting Hardware

Sensus Part Number	Description
60025-063-00000	1 1/2" FTP, 45Lt, #3 Spg, 60Lt, #4 Spg
60025-063-01000	2" - 11BS, 2" FTP
60025-063-02000	30Lt, #1A Spg, 1 1/4" NPT, #2 Spg, 20Lt
903376	#8-32 x 3/4" SS Fillister-head screws (2 required)
011-14-286-00	Rubber mounting washer
	Stabilizes bracket/100G Datalogging FN remote ERT module assembly

*Order the correct bracket for your installation requirements from Sensus North American Gas Customer Service. Brackets and mounting hardware are ordered separately.

To direct-mount the 100G Datalogging FN remote ERT module on the Sonix meter

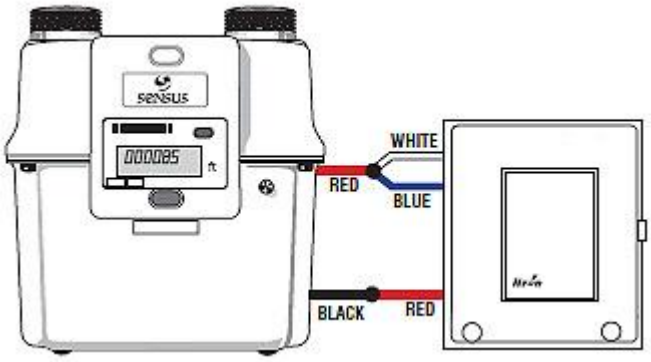
1. Place the endpoint mounting bracket over the inlet or outlet pipe fitting on the Sonix meter. (The default position is over the inlet connection - left side connection looking at the meter front.)
2. Remove the four endpoint backplate screws and turn the backplate so the endpoint mounting screw holes are to the top of the endpoint (the arrow on the endpoint label must point up). Secure with the four endpoint backplate screws previously removed.
3. Slide the mounting lug (now on the bottom of the endpoint) over the bottom anchor. Insert the two top endpoint mounting screws and tighten in an alternating fashion.

Connecting the Remote ERT Module to a Sensus Sonix 600 or 880 Meter

The 100G Datalogging FN remote ERT moduleprovides RF-based data collection for the Sonix 600 or 880 meter.

To wire the 100G Datalogging FN remote ERT module to Sonix 600 and 880 meters

- Connect the Sonix 600 or 880 meter to the 100G Datalogging FN remote ERT module following the wiring diagram below.



Programming the 100G Datalogging FN Remote ERT Module

Caution You must program the 100G Datalogging FN remote ERT module before use. Follow the steps in this section to properly program the ERT module.

Program the 100G Datalogging FN remote ERT modules using:

- A FC200SR handheld computer with Endpoint-Link® or Endpoint-Link Pro version 5.3 or higher or Field Deployment Manager (FDM) software version 1.1 or higher
  or
- A FC300 with SRead handheld computer with Endpoint-Link or Endpoint-Link Pro version 5.5 or higher or Field Deployment Manager (FDM) software version 1.1 or higher
  or
- A 900MHz Belt Clip Radio with Endpoint-Link version 5.5 or higher or Field Deployment Manager (FDM) software version 1.1 or higher and a customer-supplied laptop. The Belt Clip Radio connects to the user-supplied laptop using a USB cable or Bluetooth.
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FC200SR

FC300 with SRead

900MHz Belt Clip Radio

To program the 100G Datalogging FN remote ERT module

1. Program the meter drive rate into the 100G Datalogging FN remote ERT module using a handheld computer or Belt Clip Radio and laptop computer. For all programming and **Check Endpoint** operations using a handheld computer, hold the handheld as close to vertical as possible. For best success, keep the handheld within six feet of the target ERT module. Verify you have the correct programming mode (Fixed Network Mode, Mobile High Power Mode, Mobile/Handheld Mode, or Hard to Read Mobile/Handheld Mode) for your application. Programming parameters are based on the configuration file loaded into the programming device. During programming, the 100G Datalogging FN remote ERT module is set to the nearest 100 cubic feet; the last two digits (tens and units) are programmed as zeros (0). After programming is complete, the ERT module assembly will read to the nearest cubic foot.
2. **Read** or **Check** the ERT module using the handheld computer or Belt Clip Radio.
   - If the read result is higher than the number programmed in step 1, the 100G Datalogging FN remote ERT module is counting correctly.
   - If the read result is not higher than the number programmed in step 1, replace the 100G Datalogging FN remote ERT module.

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