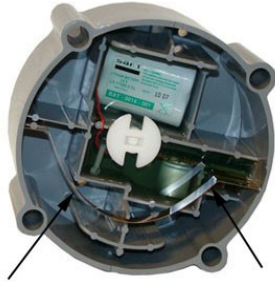


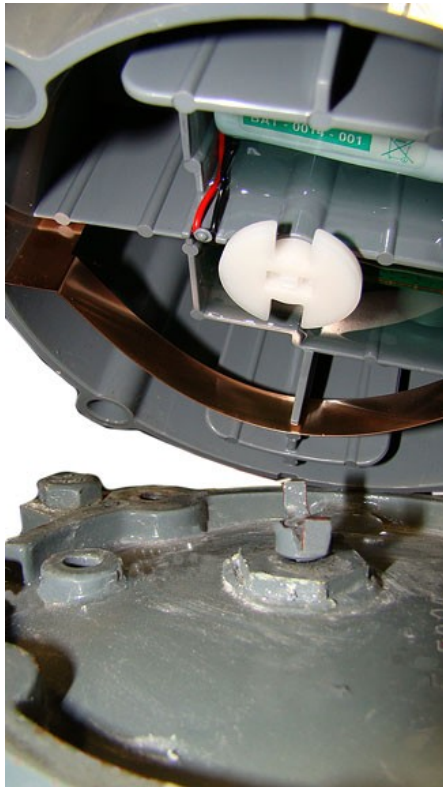
To attach the 100G Datalogging commercial gas endpoint to the Elster American Meter commercial meter



Warning Handle the 100G Datalogging commercial gas endpoint carefully so the metal passive radiator antenna is not damaged.



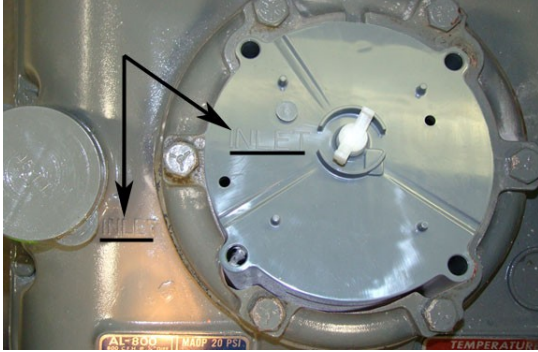
1. Tilt the 100G Datalogging commercial gas endpoint at an angle and turn the wriggler until the drive notches line up with the meter wriggler's drive teeth.



2. Align the endpoint so the screw holes line up with the meter's top screw holes. Carefully lower the endpoint on the meter with the wiggler notches lining up with the meter's wiggler teeth.



Warning The INLET label on the 100G Datalogging commercial gas endpoint must line up with the INLET label on the meter case.



3. Verify the bottom of the endpoint and the top of the meter meet. The endpoint housing should rest on top of the meter without gaps.

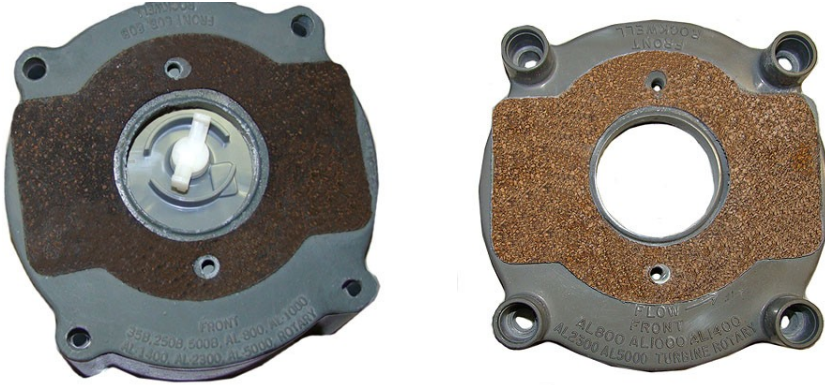


Warning Do not press down on the 100G Datalogging commercial gas endpoint if a gap exists between the endpoint and the meter. A gap may be caused by misalignment of the endpoint wiggler and meter wiggler's drive teeth. Pushing down on the endpoint could damage the endpoint wiggler or meter drive teeth. To eliminate a gap, slowly turn the endpoint's upper wiggler back and forth until the endpoint aligns with the meter's drive teeth.



- 4.

5. Place the index cover mounting plate on the 100G Datalogging commercial gas endpoint so the printing "FLOW FRONT AL800 AL1000 AL1400 AL2300 AL5000 TURBINE ROTARY" stamped on the plate is toward the front of the meter. (A gap between the mounting plate and meter at the screw locations is normal.)



6. Install four mounting screws included with the 100G Datalogging commercial gas endpoint and tighten them in an alternating diagonal sequence.
- For metal mounting plates with a flat screw surface, use endpoint mounting screws with internal tooth washers.
 - For plastic mounting plates with tamper screw cups, use endpoint mounting screws (Use O-rings AS-568A-011, 5/16" ID x 7/16" OD for a maximum moisture seal). Turn each screw 1/4 to 1/2 turn after it contacts the mounting plate.

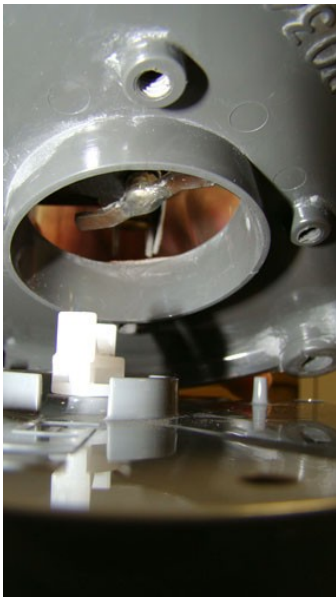
If you have access to a torque driver, tighten mounting screws to 72 inch-pounds.



7. Place new tamper seals over screws (if mounting plate has tamper seal cups) and press into place with an 11/32" nut driver or similar blunt tool.

To attach the index/cover assembly on the meter

1. Place the mounting plate gasket (previously removed) on the index cover mounting plate. Align the gasket and index cover mounting plate screw holes.
2. Place the index/cover assembly on the index mounting plate. (The index must face the direction it faced before removal.) Attach the index/cover assembly on the mounting plate using original index screws. Insert one screw and tighten two turns to hold it in place on the mounting plate. Insert the second mounting screw and tighten until secure. Completely tighten the first mounting screw. Each index cover mounting screw must be tightened evenly.
3. Turn the 100G Datalogging commercial gas endpoint wriggler so it intersects with the index wriggler. Carefully lower the index-cover mounting plate assembly onto the 100G Datalogging commercial gas endpoint.



4. Install four endpoint mounting screws (SCR-0062-001, see [Installation Prerequisites](#) on page 7). Tighten screws in an alternating diagonal pattern.
 - Insert the first screw and tighten enough to hold index assembly in place.
 - Insert the second screw diagonal to first screw and tighten two to three turns.
 - Insert the third screw, tightening two or three turns.
 - Insert the fourth screw and tighten until secure.
 - Tighten the first, second, and third screws until secure. Turn each screw 1/4 to 1/2 turn after it contacts the cover.Tighten each endpoint mounting screw evenly. If you have access to a torque-driver, tighten mounting screws to 72-inch pounds.
5. Install new tamper or wire seals. If tamper seals are installed, press into place with an 11/32 nut driver or similar blunt tool. Crimp the seal if utility-approved wire seals are installed.

This completes installation of the 100G Datalogging commercial gas endpoint on an Elster American Meter commercial meter.



Installing the 100G Datalogging Commercial Gas Endpoint on an Itron Commercial Meter

This section provides instructions for installing the 100G Datalogging commercial gas endpoint on Itron/Sprague/Schlumberger 675A, 800A, and 1000A commercial meters. Installation requires an Itron adapter kit available from Itron, Owenton, KY.

Itron Adapter Kit (Part Number 80005901-001)

Adapter plate



Endpoint mounting screws (4)



Screw bushings (4)



Tamper seals



Extension driver



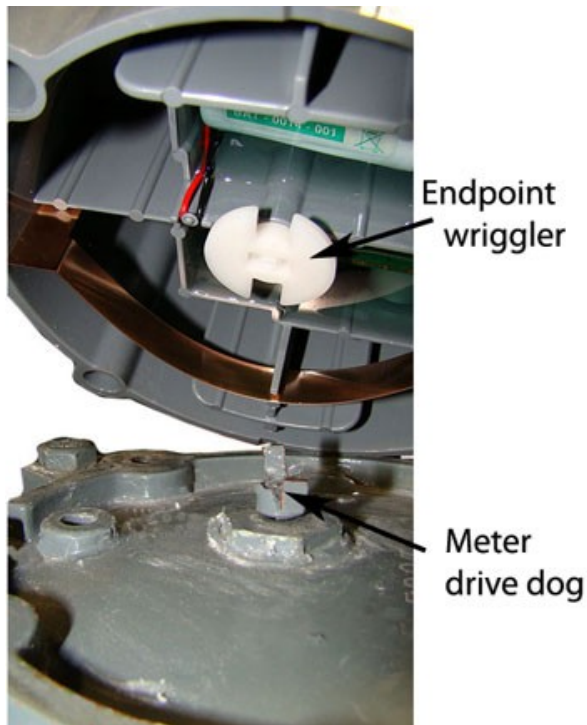
Follow [Removing the Index/Index Assembly from the Meter](#) on page 52 to prepare the Itron/Schlumberger meter for installation. Program the 100G Datalogging commercial gas endpoint (see [Programming the 100G Datalogging Gas Endpoint Assembly](#) on page 55) prior to installation.

To attach the 100G Datalogging commercial gas endpoint to the meter

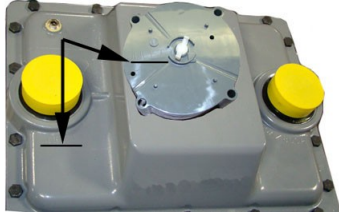
1. Turn the 100G Datalogging commercial gas endpoint over and place the four mounting screw bushings into the screw holes on the endpoint.



2. Turn the 100G Datalogging commercial gas endpoint on its side and align the wiggler with the meter's drive dog.



3. Inlet lettering on the 100G Datalogging commercial gas endpoint must line up with Inlet lettering on the meter. Slowly lower the endpoint on the Itron/Sprague/Actaris/Schlumberger commercial meter aligning the drive dog and wiggler. The endpoint housing should rest on the top of the meter without gaps.

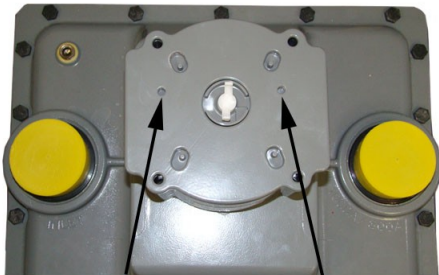


Warning Do not press down on the 100G Datalogging commercial gas endpoint if a gap exists between the endpoint and the meter. A gap may be caused by misalignment of the endpoint wiggler and meter wiggler's drive teeth. Pushing down on the endpoint could damage the endpoint wiggler or meter drive teeth. To eliminate a gap, remove the 100G Datalogging commercial gas endpoint and repeat steps 2 and 3.



To attach the index/cover assembly on the meter

1. Place the Itron adapter plate on the 100G Datalogging commercial gas endpoint with the two small screw holes in the adapter plate to the back of the meter.

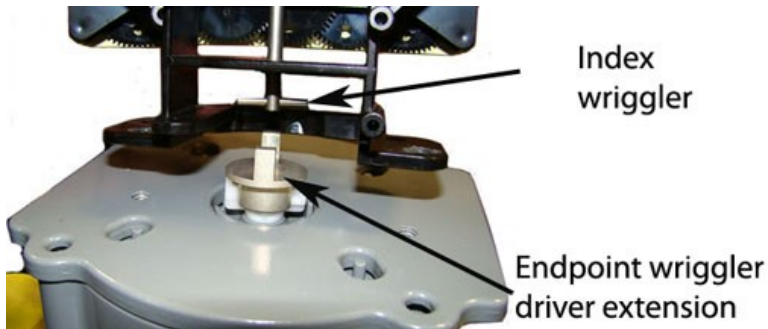


Front of Meter

2. Place the extension driver on the 100G Datalogging commercial gas endpoint wiggler securely.



3. Align the index wiggler with the commercial 100G Datalogging commercial gas endpoint wiggler driver extension.



4. Install the two index mounting screws. Tighten the first screw two or three turns. Install second screw and tighten to secure. Tighten the first screw to a snug fit. Tighten each index mounting screw evenly.



5. Place the index cover over the index with the clear side covering the index dials for easy reading. Align the holes in the index cover with the endpoint adapter plate mounting holes. Secure with the four mounting screws from the adapter kit. Tighten the mounting screws in a diagonal alternating pattern.
- Insert the first screw and tighten enough to hold the index in place.
 - Insert the second screw and tighten two to three turns.
 - Insert the third mounting screw and tighten two to three turns.
 - Insert the fourth mounting screw and tighten.

Tighten the first, third, and second screws. Turn each screw 1/4 to 1/2 turn after the screw contacts the index cover. Tighten each index mounting screw evenly. If you have access to a torque-driver, tighten mounting screws to 72-inch pounds.



6. Insert tamper seals in the tamper seal cups on the index cover and press into place with an 11/32 nut driver or similar blunt tool.



This completes installation of the commercial 100G Datalogging commercial gas endpoint on the Itron Commercial meter.



CHAPTER 7

Sensus/Rockwell Commercial Meter Installation

This chapter provides instructions to install the 100G Datalogging commercial gas endpoint on a Commercial Sensus/Rockwell diaphragm meter.



Removing the Index/ Index Assembly from the Meter

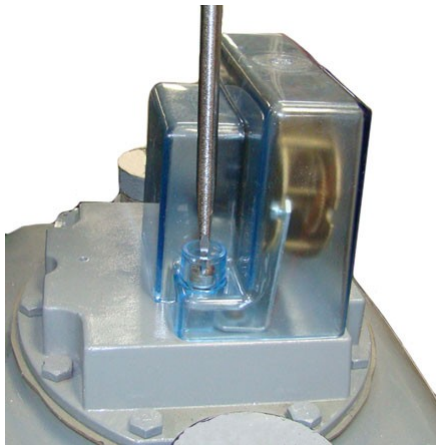
100G Datalogging commercial gas endpoints can be mounted on Sensus/Rockwell Commercial Meters in various configurations. These instructions show the index assembly mounted without a mounting plate.



Note Sensus/Rockwell diaphragm commercial meters do not require an index assembly mounting plate. Indexes can be mounted directly to the endpoint.

To remove the index/index assembly from the meter

1. Remove any tamper seals (or wire seals) from the index cover and remove the index cover mounting screws. You will re-install it later in these instructions.



2. Remove the index screws from the meter. Set the index cover aside where it will not be damaged or fill with dirt, rain or snow. You will re-install the index later in this procedure.



Note Properly dispose all unused screws, old index covers, gaskets, tamper seals, and other leftover materials. Do not leave materials on customer premises.

Programming the 100G Datalogging Gas Endpoint

Program 100G Datalogging gas endpoints using:

- A FC200SR handheld computer with Endpoint-Link® or Endpoint-Link Pro version 5.3 or higher *or*
- A FC300 with SRead handheld computer with Endpoint-Link or Endpoint-Link Pro version 5.5 or higher *or*
- A 900MHz Belt Clip Radio with Endpoint-Link version 5.5 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) for more complete programming information.



FC200SR

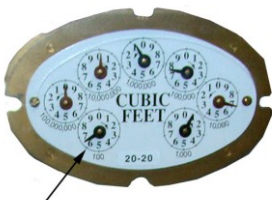
FC300 with SRead

900MHz Belt Clip Radio



Caution The 100G Datalogging commercial Sensus/Rockwell endpoint must be programmed before use. Follow the steps in this section to properly program the endpoint.

Take note of the index drive rate shown on the index. The endpoint is programmed based on the drive rate. Sensus/Rockwell commercial meter index drive rates may be 5-, 10- or 100-cubic feet. The seven-dial index shown is a 100-cubic feet drive rate.



To program the 100G Datalogging commercial gas endpoint

1. Program the index drive rate into the commercial endpoint using the endpoint programming device. For all programming and "Check Endpoint" operations, hold the handheld programmer as close to vertical as possible. For best success, keep the handheld programmer within 6 feet of the target endpoint. Verify you have the correct programming mode (Fixed Network 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 endpoint programming device.
During programming, the 100G Datalogging commercial gas endpoint 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 endpoint assembly will read to the nearest cubic foot.
2. Slowly turn the endpoint's drive wiggler two turns in the direction shown on the index drive rate. This verifies the endpoint is counting properly.



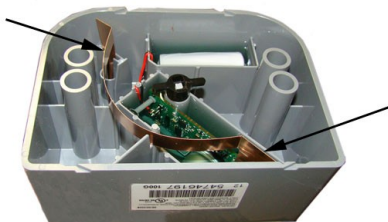
Caution Do not turn the drive wiggler faster than one turn per second.

3. **Read** or **Check** the 100G Datalogging commercial gas endpoint using the endpoint programming device.
 - If the read result is higher than the number programmed in Step 1, the 100G Datalogging commercial gas endpoint is counting correctly.
 - If the read result is not higher than the number programmed in Step 1, replace the 100G Datalogging commercial gas endpoint.

Attaching the 100G Datalogging Commercial Endpoint to a Sensus/Rockwell Commercial Diaphragm Meter

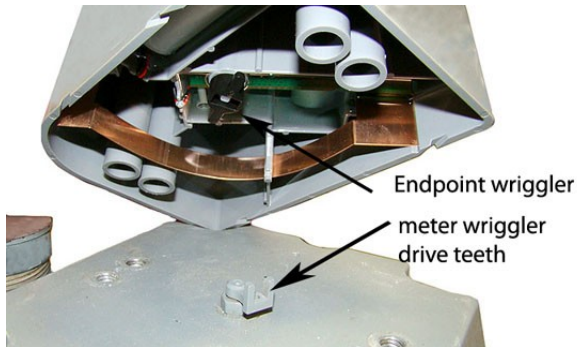


Warning Handle the 100G Datalogging commercial gas endpoint carefully so the metal passive radiator antenna is not damaged.



To attach the 100G Datalogging commercial gas endpoint on the Sensus/Rockwell commercial meter

1. Tilt the 100G Datalogging commercial gas endpoint at an angle and turn the wriggler until the drive notches line up with the meter wriggler's drive teeth.



2. Align the 100G Datalogging commercial gas endpoint so the screw holes line up with the meter's top screw holes. Carefully lower the endpoint on the meter so the wriggler's bars line up with the meter drive dog. Itron recommends installation with one bar inserted into the meter drive dog's u-shaped gear.



Warning The INLET label on the 100G Datalogging commercial gas endpoint must line up with the INLET label on the Sensus/Rockwell meter case.



3. Verify the bottom of the 100G Datalogging commercial gas endpoint and the top of the meter meet. The endpoint housing should rest on top of the meter without gaps.



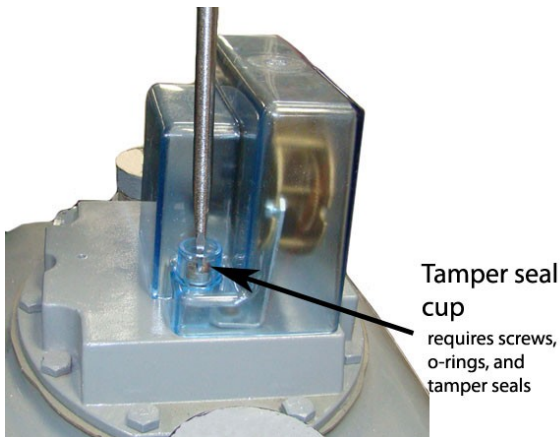
Warning Do not press down on the 100G Datalogging commercial gas endpoint if a gap exists between the endpoint and the meter. A gap may be caused by misalignment of the endpoint wriggler and meter wriggler's drive teeth. Pushing down on the endpoint could damage the endpoint wriggler or meter drive teeth. To eliminate a gap, slowly turn the 100G Datalogging commercial gas endpoint's upper wriggler back and forth until the endpoint aligns with the meter's drive teeth.



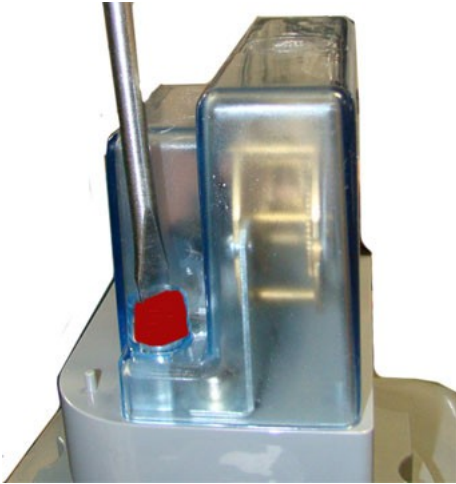
- Align the 100G Datalogging commercial gas endpoint with the index mounting holes. Verify the index drive dog intersects with the endpoint's wriggler. Install the endpoint mounting screws (SCR-0062-003 see [Installation Prerequisites](#) on page 7 for screw information). Turn each screw 1/4 to 1/2 turn after it contacts the index/endpoint assembly.



- Install the index cover. For index covers with flat-surface screw holes, use screws (SCR-0062-002), flat washers (WSH-0020-005), and cork washers (WSH-0032-001). For index covers with tamper seal cups, use screws, (AS-568A-011, 5/16" ID x 7/16 OD) O-rings, and tamper seals.



6. Place new tamper seals over screws (if mounting plate has tamper seal cups) and press into place with an 11/32" nut driver or similar blunt tool. If your mounting assembly requires a utility-approved wire seal, pass wires through holes in the screw heads and crimp the approved wire seal.



This completes installation of the 100G Datalogging commercial gas endpoint on the Sensus/Rockwell commercial diaphragm meter.



Mounting a 100G Datalogging Commercial Gas Endpoint on a Rockwell 750 meter with an Aluminum BOX Direct Reading (VDR)

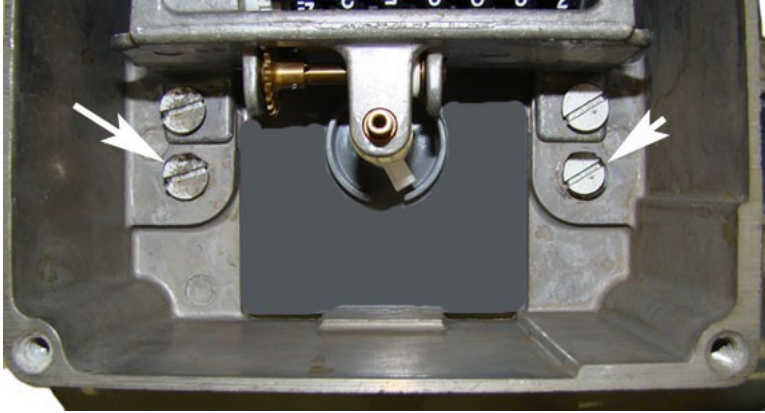
Installing the 100G Datalogging commercial endpoint on a Sensus/Rockwell commercial meter with an Aluminum Box Direct Reading (VDR) Index requires two Itron SCR-0062-001 mounting screws (see [Installation Prerequisites](#) on page 7) - purchased separately.

To remove the index from the

1. Remove tamper seals and screws from the top of the Aluminum Box Direct Reading Index. Set the cover and screws aside. You will use them later in the installation.



2. Remove the screws holding the aluminum box to the meter.



3. Carefully remove the aluminum box and set it aside. You will use it later in this installation.

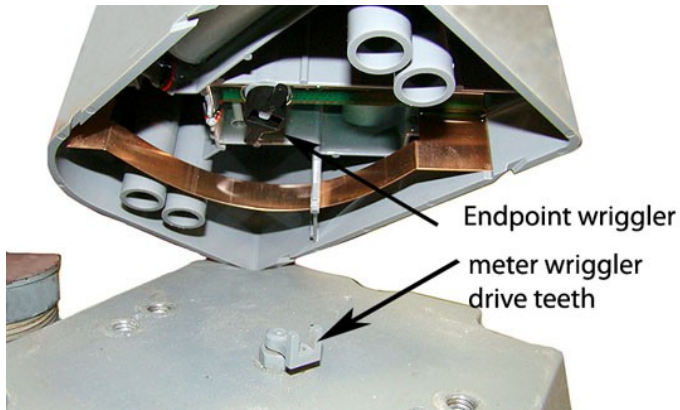
Program the 100G Datalogging Sensus/Rockwell Commercial endpoint before attaching it to the Sensus/Rockwell meter (see [Programming the 100G Datalogging Commercial Gas Endpoint](#) on page 70).

To install the 100 Datalogging commercial gas endpoint on a Rockwell 750 meter with an Aluminum Box Direct Reading (VDR) Index

1. Using a side-cutter, remove the two rear housing pins from the 100G Datalogging commercial endpoint.



2. Tilt the 100G Datalogging commercial gas endpoint at an angle and turn the wriggler until the drive notches line up with the meter wriggler's drive teeth.



3. Align the 100G Datalogging commercial gas module so the screw holes line up with the meter's top screw holes. Carefully lower the module on the meter so the wriggler's bars line up with the meter drive dog. Itron recommends installation with one bar inserted into the meter drive dog's u-shaped gear.



Warning The INLET label on the 100G Datalogging commercial gas module must line up with the INLET label on the Rockwell meter case.



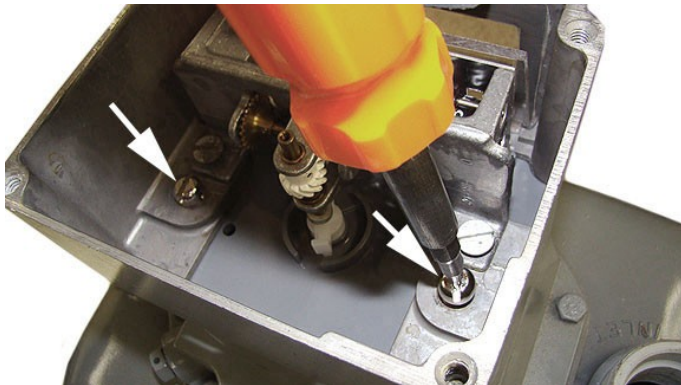
4. Verify the bottom of the 100G Datalogging commercial gas endpoint and the top of the meter meet. The endpoint housing must rest on top of the meter without gaps.



Warning Do not press down on the 100G Datalogging commercial gas endpoint if a gap exists between the module and the meter. A gap may be caused by misalignment of the module wiggler and meter wiggler's drive teeth. Pushing down on the endpoint could damage the module wiggler or meter drive teeth. To eliminate a gap, slowly turn the 100G Datalogging commercial gas endpoint's upper wiggler back and forth until the module wiggler aligns with the meter's drive teeth.



5. Align the index drive wiggler with the 100G Datalogging wiggler and mounting holes. Attach using two SCR-0062-001 Itron mounting screws.



6. Attach the index cover with the original index cover screws and insert tamper seals in the tamper seal cups. Push tamper seals into place using an 11/32" nut driver or similar blunt tool.

This completes installation of the 100G Datalogging commercial endpoint with an Aluminum Box Direct Reading (VDR) Index on a Sensus/Rockwell commercial meter.



Dresser ROOTS® Commercial Rotary Meter Installation

This chapter provides the instructions to mount 100G Datalogging gas endpoints (residential and commercial) on Dresser ROOTS® Commercial Rotary Meters.

Some commercial AMR applications require a Dresser ROOTS® Rotary Meter with a residential 100G Datalogging gas endpoint. Only Elster American version residential 100G Datalogging gas endpoints are compatible with Dresser ROOTS® series rotary gas meters. This chapter provides the instructions to mount an Elster American residential 100G Datalogging gas endpoint on Dresser ROOTS® AMR-ready Rotary Commercial Meters. Installation requires an AMR adapter kit supplied by Dresser. Refer to the [Meter Compatibility List](#) on page 2 for Dresser AMR adapter kit part numbers.

Installation Prerequisites

Materials Supplied By Itron

- 100G Datalogging gas endpoint
- New tamper seals - if applicable

Materials Supplied by You

- AMR-ready Dresser ROOTS® Rotary Meter
- Adapter Kit from Dresser
- Elster American Meter index if mounting to 5C15 or 8C15 Rotary Meter



Note Follow the Dresser Field Installation Instructions to modify the AMR-ready Dresser ROOTS® Meter for 100G Datalogging gas endpoint installation. Contact Dresser distributor or Dresser representative for installation instructions specific to the required AMR adapter kit.

Installation Examples

The following pictures show typical installations.



Dresser B3 CTR/TC



Dresser LMMA CTR



Dresser LMMA TC



Dresser 8C15

Programming the 100G Datalogging Gas Endpoint Assembly

Program the 100G Datalogging gas endpoints using:

- A FC200SR handheld computer with Endpoint-Link® or Endpoint-Link Pro version 5.3 or higher *or*
- A FC300 with SRead handheld computer with Endpoint-Link or Endpoint-Link Pro version 5.5 or higher *or*
- A 900MHz Belt Clip Radio with Endpoint-Link version 5.5 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) for more complete programming information.



FC200SR

FC300 with SRead

900MHz Belt Clip Radio



Caution The 100G Datalogging gas endpoint must be programmed before use. Follow the steps in this section to properly program the endpoint.

For 5C15 and 8C15 Rotary Meters, program as 4 dial, 2 cubic foot index. For all other residential 100G Datalogging gas endpoints, refer to [B3](#), [LMMA](#), and [S3A CTR/TC Dresser ROOTS Series Register Settings and Direct Drive Programming Information](#) on page 84.

To program the 100G Datalogging gas endpoint

1. Program the meter drive rate into the 100G Datalogging gas endpoint using the endpoint programming device. For all programming and "Check Endpoint" operations, hold the handheld computer as close to vertical as possible. For best success, keep the handheld computer within 6 feet of the target endpoint. Verify you have the correct programming mode (Fixed Network 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 endpoint programming device.
During programming, the 100G Datalogging gas endpoint 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 endpoint assembly will read to the nearest cubic foot.
2. Slowly turn the endpoint's drive wiggler two turns in the direction shown on the index drive rate. This verifies the endpoint is counting properly after assembly.



Caution Do not turn the drive wiggler faster than one turn per second.

3. **Read** or **Check** the 100G Datalogging gas endpoint using the endpoint programming device.
 - If the read result is higher than the number programmed in Step 1, the 100G Datalogging gas endpoint is counting correctly.
 - If the read result is not higher than the number programmed in Step 1, replace the 100G Datalogging gas endpoint.

B3, LMMA, and S3A CTR/TC Dresser ROOTS® Series Register Settings and Direct Drive Programming Information

Use the information in the following tables to program Dresser ROOTS® Series B3, LMMA, and S3A Non-compensated Counter (CTR) and Temperature Compensated (TC) registers. Reference the Meter Compatibility List to confirm compatibility.

| Settings for Series B3 Registers | | | Settings for LMMA Registers | | |
|----------------------------------|-------------------|---|-----------------------------|------------|---|
| Model | Meter size | Settings | Model | Meter Size | Settings |
| CTR | 8C-15C and 2M-11M | Number of dials: 5 Drive rate: 10 PCOMP factor: NONE | CTR | 1.5M-11M | Number of dials: 5 Drive rate: 10 PCOMP factor: NONE |
| | 16M-56M | Number of dials: 6 Drive rate: 100 PCOMP factor: NONE | | 16M | Number of dials: 6 Drive rate: 100 PCOMP factor: NONE |

| | | | | | |
|----|-------------------|--|----|----------|---|
| TC | 8C-15C and 2M-11M | Number of dials: 5 Drive rate: 100 PCOMP factor: NONE | TC | 1.5M-11M | Number of dials: 5 Drive rate: 50 PCOMP factor: NONE |
| | 16M | Number of dials: 6 Drive rate: 1000 PCOMP factor: NONE | | 16M | Number of dials: 6 Drive rate: 500 PCOMP factor: NONE |

| Settings for Series S3A Registers | | |
|-----------------------------------|------------|--|
| Model | Meter Size | Settings |
| CTR | 1.5M - 11M | Number of dials: 5 Drive rate: 10 PCOMP factor: NONE |
| | 16M | Number of dials: 6 Drive rate: 100 PCOMP factor: NONE |
| TC | 1.5M - 11M | Number of dials: 5 Drive rate: 100 PCOMP factor: NONE |
| | 16M | Number of dials: 6 Drive rate: 1000 PCOMP factor: NONE |

B3, LMMA and S3A CTR/TC Meter Drive Rates: Residential Direct Drive Programming*

| B3 CTR Meter Size | B3 CTR Meter Drive Rate | B3 TC Meter Size | B3 TC Meter Drive Rate |
|-------------------|-------------------------|------------------|------------------------|
| 8C | 10 | 8C | 100 |
| 11C | 10 | 11C | 100 |
| 15C | 10 | 15C | 100 |
| 2M | 10 | 2M | 100 |
| 3M | 10 | 3M | 100 |
| 5M | 10 | 5M | 100 |
| 7M | 10 | 7M | 100 |
| 11M | 10 | 11M | 100 |
| 16M | 100 | 16M | 1000 |
| 23M | 100 | | |
| 38M | 100 | | |

| B3 CTR Meter Size | B3 CTR Meter Drive Rate | B3 TC Meter Size | B3 TC Meter Drive Rate |
|---------------------|---------------------------|--------------------|--------------------------|
| 56M | 100 | | |
| LMMA CTR Meter Size | LMMA CTR Meter Drive Rate | LMMA TC Meter Size | LMMA TC Meter Drive Rate |
| 1.5M | 10 | 1.5M | 50 |
| 3M | 10 | 3M | 50 |
| 5M | 10 | 5M | 50 |
| 7M | 10 | 7M | 50 |
| 11M | 10 | 11M | 50 |
| 16M | 100 | 16M | 500 |
| S3A CTR Meter Size | S3A CTR Meter Drive Rate | S3A TC Meter Size | S3A TC Meter Drive Rate |
| 1.5M | 10 | 1.5M | 100 |
| 3M | 10 | 3M | 100 |
| 5M | 10 | 5M | 100 |
| 7M | 10 | 7M | 100 |
| 11M | 10 | 11M | 100 |
| 16M | 100 | 16M | 1000 |



Caution Drive rates in these tables are for direct-mount residential style endpoints only (NOT commercial or remote endpoints).



Note S3A rotary meters are LMMA meters retrofitted with a Series 3 accessory.

Installing the Residential 100G Datalogging Gas Endpoint Assembly to the Dresser ROOTS® Rotary Meter

After 100G Datalogging gas endpoint programming is complete, attach the endpoint assembly to the Dresser ROOTS® Rotary Meter. This mounting procedure applies to B3 CTR/TC, LMMA CTR/TC, and 8C15 series Dresser ROOTS® Meters.

To attach the 100G Datalogging gas endpoint

Refer to [Installation Examples](#) on page 81.

1. The 100G Datalogging gas endpoint must be mounted on the adapter plate in an upright position. Align the 100G Datalogging gas endpoint wiggler with the opening between the tabs of the adapter's drive dog.
 - Insert one endpoint mounting screw and tighten enough to hold the endpoint. Do not completely tighten.
 - Insert the second mounting screw and tighten two turns.
 - Insert the third mounting screw and tighten two turns.

- Insert the last mounting screw and tighten until snug. Tighten the remaining mounting screws in an alternating, diagonal pattern until snug. Tighten all mounting screws evenly.



Warning A gap may be caused by misalignment of the endpoint wiggler and meter wiggler's drive teeth. Pushing down on the endpoint could damage the endpoint wiggler or meter drive teeth. To eliminate a gap, remove the endpoint assembly and re-align the endpoint wiggler with the meter drive dog.

2. Complete necessary paperwork and verify all excess materials are removed from the customer's premises.

100G Datalogging residential gas endpoint installation on the Dresser ROOTS® Rotary Meter is complete.

Installing the 100G Datalogging Commercial Gas Endpoint on a Dresser ROOTS® Rotary Meter with an Instrument Drive

The information in this section guides you through the installation of the 100G Datalogging commercial gas endpoint on Dresser ROOTS® rotary meters.



Note This installation procedure requires a Dresser ROOTS® rotary gas meter with an instrument drive. These instructions show an Elster American 100G Datalogging commercial gas endpoint. The installation procedure is identical for the Sensus/Rockwell 100G Datalogging commercial gas endpoint.

100G Datalogging Elster American Commercial Gas Endpoint



100G Datalogging Sensus/Rockwell Commercial Gas Endpoint



Installation Overview

Installation requires the following items:

- One index mounting plate (if applicable)
- Gasket and drive cover kit (if applicable)
- An Elster American Meter or Sensus/Rockwell 100G Datalogging commercial gas endpoint
- A flat, slot-drive screwdriver

Programming the 100G Datalogging Commercial Gas Endpoint Assembly

Program the 100G Datalogging gas endpoints using:

- A FC200SR handheld computer with Endpoint-Link® or Endpoint-Link Pro version 5.3 or higher *or*
- A FC300 with SRead handheld computer with Endpoint-Link or Endpoint-Link Pro version 5.5 or higher *or*
- A 900MHz Belt Clip Radio with Endpoint-Link version 5.5 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) for more complete programming information.



FC200SR

FC300 with SRead

900MHz Belt Clip Radio



Caution The 100G Datalogging gas endpoint must be programmed before use. Follow the steps in this section to properly program the endpoint.

The endpoint is programmed based on the meter's drive rate. See [B3](#), [LMMA](#), and [S3A CD/TD Dresser ROOTS® Series Meter Drive Rates](#) on page 89.

To Program the 100G Datalogging commercial gas endpoint

1. Program the meter drive rate into the 100G Datalogging Commercial Gas Endpoint using the endpoint programming device. For all programming and "Check Endpoint" operations, hold the handheld programmer as close to vertical as possible. For best success, keep the handheld programmer within 6 feet of the target endpoint. Verify you have the correct programming mode (Fixed Network 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 endpoint programming device. During programming, the 100G Datalogging Commercial Gas Endpoint 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 endpoint assembly will read to the nearest cubic foot.
2. Slowly turn the endpoint's drive wiggler two turns in the direction shown on the index drive rate. This verifies the endpoint is counting properly after assembly.



Caution Do not turn the drive wiggler faster than one turn per second.

3. **Read or Check** the 100G Datalogging Commercial Gas Endpoint using the endpoint programming device.
 - If the read result is higher than the number programmed in Step 1, the 100G Datalogging Commercial Gas Endpoint is counting correctly.
 - If the read result is not higher than the number programmed in Step 1, replace the 100G Datalogging Commercial Gas Endpoint.

B3, LMMA, and S3A CD/TD Dresser ROOTS® Series Meter Drive Rates

Use the information in the following tables to program 100G Datalogging commercial gas endpoints installed on Dresser ROOTS® Series B3, LMMA, and S3A registers. Reference the [Meter Compatibility List](#) to confirm compatibility.



Warning Drive rates listed in the following tables are for commercial module programming. Do not use these settings to program residential or remote modules.


| B3 CD Meter Size | B3 CD Meter Drive Rates | B3 TD Meter Size | B3 TD Meter Drive Rate |
|------------------|-------------------------|------------------|------------------------|
| 8C | 10 | 8C | 100 |
| 11C | 10 | 11C | 100 |
| 15C | 10 | 15C | 100 |
| 2M | 10 | 2M | 100 |
| 3M | 10 | 3M | 100 |
| 5M | 10 | 5M | 100 |
| 7M | 10 | 7M | 100 |
| 11M | 10 | 11M | 100 |
| 16M | 100 | 16M | 1000 |
| 23M | 100 | | |
| 38M | 100 | | |
| 56M | 100 | | |

| LMMA CD Meter Size | LMMA CD Meter Drive Rate | LMMA TD Meter Size | LMMA TD Meter Drive Rate |
|--------------------|--------------------------|--------------------|--------------------------|
| 1.5M | 10 | 1.5M | 100 |
| 3M | 10 | 3M | 100 |
| 5M | 10 | 5M | 100 |
| 7M | 10 | 7M | 100 |
| 11M | 10 | 11M | 100 |
| 16M | 100 | 16M | 1000 |

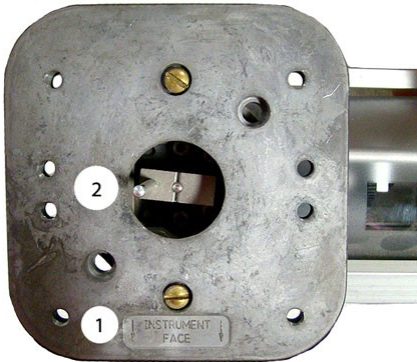
| S3A CD Meter Size | S3A CD Meter Drive Rate | S3A TD Meter Size | S3A TD Meter Drive Rate |
|-------------------|-------------------------|-------------------|-------------------------|
| 1.5M | 100 | 1.5M | 100 |
| 3M | 100 | 3M | 100 |
| 5M | 100 | 5M | 100 |
| 7M | 100 | 7M | 100 |
| 11M | 100 | 11M | 100 |
| 16M | 1000 | 16M | 1000 |


 **Note** S3A rotary meters are LMMA meters retrofitted with Series 3 accessory.

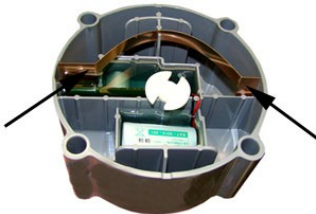
To attach the 100G Datalogging commercial gas endpoint to the meter

 **Note** A cover is installed on the 100G Datalogging commercial gas endpoint mounted to a Dresser ROOTS® Meter with S3A LMMA Accessory Units (or other Dresser ROOTS® adapters with odometer gauges).

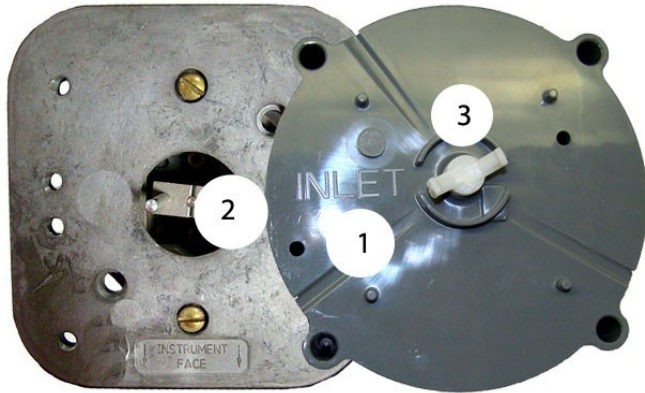
1. Locate the INSTRUMENT FACE stamp (1) and position the meter with the drive dog (2) centered (as shown).



 **Warning** Handle the commercial 100G Datalogging commercial gas endpoint carefully so the metal passive radiator antenna is not damaged.



2. Locate the INLET (1) stamp on the endpoint and position the endpoint as shown. Verify the 100G Datalogging commercial gas endpoint wiggler (3) and drive dog shaft (2) are aligned (See [To attach the 100G Datalogging commercial gas endpoint to the Elster American commercial meter](#) on page 57 or [To attach the 100G Datalogging commercial endpoint on the Sensus/Rockwell commercial meter](#) on page 72.



3. Verify the endpoint wiggler and drive dog shaft are engaged by turning the commercial endpoint wiggler. When properly engaged, you will feel resistance.
4. Place the customer-supplied index mounting plate on the endpoint and install the four mounting screws. Do not disturb the shaft alignment.



5. Install the four 100G Datalogging commercial gas endpoint mounting screws (supplied with the commercial endpoint). Tighten mounting screws in an alternating, diagonal sequence.
 - Turn each screw 1/4 to 1/2 turn after it contacts the cover.
 - If you can utilize a torque wrench, tighten to 72 inch-pounds.Tighten each endpoint mounting screw evenly.

6. Insert new utility-approved wire seals and crimp (if required).



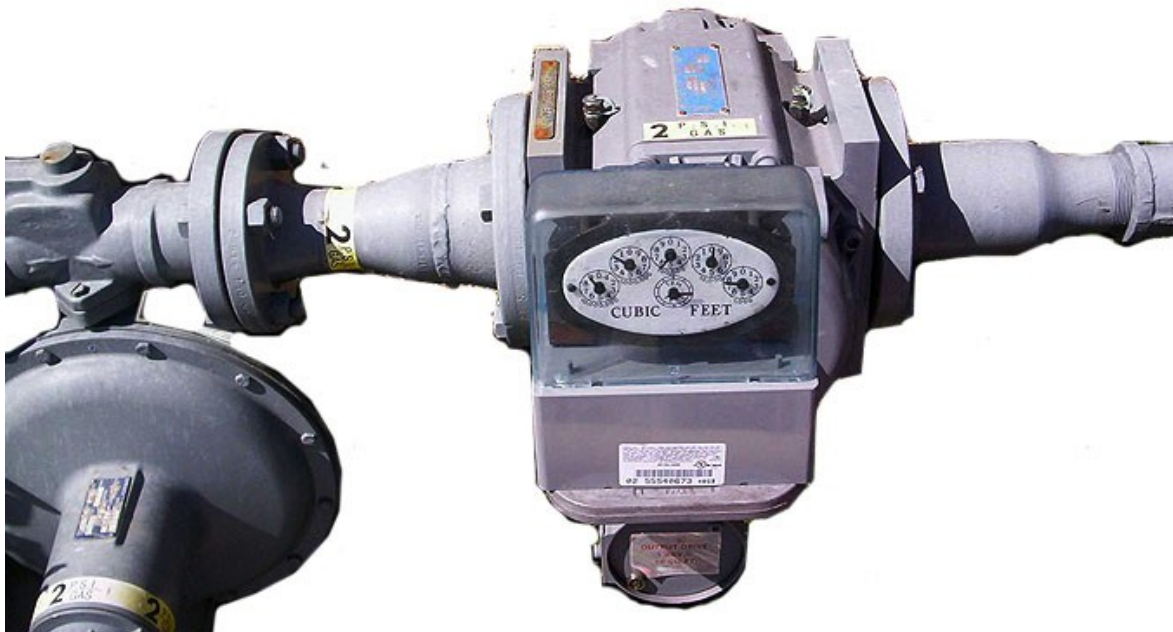
Note To mount an index and index cover on a rotary meter without an accessory odometer unit, remove the domed cover and reference [To attach the index/cover assembly on the meter](#) on page 64.

Completed Installation Examples

**100G Datalogging Elster American Commercial
Gas Endpoint mounted on a Dresser ROOTS® Meter with an Instrument Drive**



**100G Datalogging Sensus/Rockwell Commercial Gas
Endpoint mounted on a Dresser ROOTS® Meter with an Instrument Drive**



Symbols & Numbers

100G Datalogging Gas Endpoint • 1

A

Attaching the 100G Datalogging Commercial Endpoint to a Sensus/Rockwell Commercial Diaphragm Meter • 71

Attaching the 100G Datalogging Gas Endpoint Assembly to Flat-faced Sprague Meters • 35

Attaching the 100G Datalogging Gas Endpoint Assembly to the Itron/Sprague Meter • 32

Attaching the 100G Datalogging Gas Endpoint Assembly to the Meter • 49, 16

Attaching the 100G Datalogging Gas Endpoint Assembly to the Sensus Meter • 25

B

B3, LMMA, and S3A CD/TD Dresser ROOTS® Series Meter Drive Rates • 90

B3, LMMA, and S3A CTR/TC Dresser ROOTS® Series Register Settings and Direct Drive Programming Information • 83

D

Dresser ROOTS® Commercial Rotary Meter Installation • 80

E

Elster American and Itron Commercial Meter Installation • 52

Elster American Meter Installation • 10

I

Installation Examples • 81

Installation Overview • 9

Installation Prerequisites • 7

Installing the 100G Datalogging Commercial Gas Endpoint on a Dresser ROOTS® Rotary Meter with an Instrument Drive • 86

Installing the 100G Datalogging Commercial Gas Endpoint on an Itron Commercial Meter • 62

Installing the Residential 100G Datalogging Gas Endpoint Assembly to the Dresser ROOTS® Rotary Meter • 85

Itron/Sprague Meter Installation • 28

M

Meter Compatibility List • 2

Mounting a 100G Datalogging on a Rockwell 750 meter with an Aluminum BOX Direct Reading (VDR) • 75

N

National/Lancaster Meter Installation • 42

P

Programming the 100G Datalogging Commercial Gas Endpoint • 55

Programming the 100G Datalogging Commercial Gas Endpoint Assembly • 88

Programming the 100G Datalogging Gas Endpoint • 70

Programming the 100G Datalogging Gas Endpoint Assembly • 82, 48, 31, 23, 15

R

Removing the Index/ Index Assembly from the Meter • 68, 52

S

Securing Brass Meter Tags to Flat-faced Meters • 39

Sensus/Rockwell Commercial Meter Installation • 68

Sensus/Rockwell Meter Installation • 19

Specifications • 2

T

To assemble the 100G Datalogging Gas Endpoint and index • 45, 29, 21, 12

To Attach • 85

To attach the 100G Datalogging Commercial Endpoint on the Sensus/Rockwell commercial meter • 72

To attach the 100G Datalogging commercial gas endpoint to the Elster American Meter commercial meter • 57

To attach the 100G Datalogging commercial gas endpoint to the meter • 91

To attach the 100G Datalogging commercial gas endpoint to the meter • 63

To attach the 100G Datalogging Gas Endpoint assembly to Flat-faced • 36

To attach the 100G Datalogging Gas Endpoint to the meter • [50](#), [33](#), [25](#), [17](#)

To attach the index/cover assembly on the meter • [64](#), [60](#)

To install the 100G Datalogging commercial gas endpoint on a Rockwell 750 meter with an Aluminum Box Direct Reading (VDR) Index • [76](#)

To Program the 100G Datalogging commercial gas endpoint • [89](#), [71](#), [56](#)

To program the 100G Datalogging gas endpoint • [83](#), [49](#), [32](#), [24](#), [16](#)

To remove the index assembly • [53](#)

To remove the index from the • [75](#)

To remove the index from the meter • [10](#), [19](#), [28](#), [42](#)

To remove the index/index assembly from the meter • [68](#)

To secure brass meter tags to flat-faced meters • [39](#)
Transmission Modes • [1](#)