

# Natural Gas Solutions

## 100G Datalogging Installation Guide - Direct Mount

*Putting knowledge to work.*

## Identification

100G Datalogging Installation Guide - Direct Mount  
03/6/2009 TDC-0823-000

Endpoint Part Numbers: 100G Endpoint: ERG-5000-001, ERG-5000-002, ERG-5000-003, ERG-5000-004, ERG-5000-005, ERG-5000-006, ERG-5000-007, ERG-5000-008  
100G Datalogging Endpoint: ERG-5002-001, ERG-5002-002, ERG-5002-003, ERG-5002-004, ERG-5002-005, ERG-5002-006, ERG-5002-007, ERG-5002-008

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## Applicable Patents

U.S. Patent Numbers: 4,614,945; 4,753,169; 4,768,903; 4,799,059; 4,867,700  
Canadian Patent Numbers: 1,254,949; 1,267,936; 1,282,118

## Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation of this device is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference that may cause undesirable operation.

This device must be permanently mounted such that it retains a distance of 20 centimeters (7.9 inches) from all persons in order to comply with FCC RF exposure levels.

## Compliance Statement

This equipment has been tested and found to comply with the limits, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Operation is subject to the following conditions:

- This device may not cause interference.
- This device must accept any interference that may cause undesired operation of the device.

## Compliance Statement

This equipment complies with policies RSS-210 and RSS-GEN of the Industry Canada rules. 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.

## Trademark Notice

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All other product names and logos in this documentation are used for identification purposes only and may be trademarks or registered trademarks of their respective companies.

## Suggestions

If you have comments or suggestions on how we may improve this documentation, send them to [TechnicalCommunicationsManager@itron.com](mailto:TechnicalCommunicationsManager@itron.com)

If you have questions or comments about the software or hardware product, contact Itron Technical Support:

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- Phone: 1 800 635 8725



**WARNING! Follow these procedures to avoid injury to yourself or others:**

- The lithium battery may cause a fire or chemical burn if it is not disposed of properly.
- Do not recharge, disassemble, heat above 100° Celsius (212° Fahrenheit), or incinerate the lithium battery.
- Keep the lithium battery away from children.
- Replace the lithium battery only with batteries meeting Itron specifications. Any other battery may cause a fire or explosion.



**WARNING! Only authorized Itron personnel should attempt repairs on Itron equipment.**

Attempts to do so by others might void any maintenance contract with your company.

Unauthorized service personnel might also be subject to shock hazard on some Itron equipment if removal of protective covers is attempted.



**WARNING! To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing.**



**WARNING! Substitution of components may impair intrinsic safety.**

**Transportation Classification**

The Federal Aviation Administration prohibits operating transmitters and receivers on all commercial aircraft. When powered, the 100G Datalogging Endpoint is considered an operating transmitter and receiver and cannot be shipped by air. All product returns must be shipped by ground transportation.

**Modifications and Repairs**

To ensure system performance, this device and antenna shall not be changed or modified without the expressed approval of Itron. Any unauthorized modification will void the user's authority to operate the equipment.

**Meter Installation/Removal**

In the event of malfunction, all repairs should be performed by Itron. It is the responsibility of users requiring service to report the need for service to Itron.

## Document Conventions

The following documentation conventions are used:



**CAUTION!** This type of note warns the user that failure to heed the information in the note could result in loss of data. Be sure to carefully read a CAUTION note and heed the advice/instructions.



**WARNING!** This type of note is used to warn of potential physical harm to the user or hardware. It is critical that you pay strict attention to WARNING notes, read the information carefully, and heed the advice, instructions.



This type of note provides the user with extra hints/tips to make a task easier to perform or a concept easier to understand.



This type of note supplies generic information to the user. The information could be ignored and the user could still continue with a task without suffering any adverse consequences.

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## 100G Datalogging Gas Endpoint

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Itron 100G Datalogging Gas Endpoints are radio-frequency (RF) devices designed to transmit meter data to an RF meter reading device within transmission distance of the endpoint. 100G Datalogging Gas Endpoints have the same increased output power as the first generation 100G Gas Endpoints for greater RF transmission distance. The 100G direct-mount endpoint reads and transmits a Standard Consumption Message (SCM) with magnetic-tamper and tilt-tamper data. The Itron 100G Datalogging direct-mount endpoint adds functionality by storing up to 40 days of hourly data.

This installation guide provides step-by-step instructions for installing the 100G Gas Endpoint and the 100G Datalogging Gas Endpoint on a wide variety of meters. This installation guide refers to both 100G endpoint versions as the 100G Datalogging Endpoint. Mechanical installation procedures are identical for both modules. 100G Datalogging Gas Endpoint compatible meters are listed in the Meter Compatibility List.

### Transmission Modes

The 100G Datalogging Gas Endpoint transmits in one of three modes:

- **Fixed Network Mode** In this mode, a 100G Datalogging Gas Endpoint transmits a high-powered RF message every 60 seconds. Output power in this mode is 250 milliwatts or +24dBm; expected battery life is 20 years.
- **Mobile and Handheld Mode** In this mode, a 100G Datalogging Gas Endpoint transmits a medium-powered RF message every 15 seconds. Output power in this mode is 10 milliwatts or +10dBm; expected battery life is 20 years.
- **(Optional) Hard to Read Mobile and Handheld Mode** In this mode, a 100G Datalogging Gas Endpoint transmits a high-powered RF message every 30 seconds. Output power in this mode is 250 milliwatts or +24dBm; expected battery life decreases to 15 years in this mode. The *Hard to Read Mobile and Handheld Mode* should only be used for exceptionally hard-to-read applications (such as meters installed on roof tops or in sub-basements).

An FCC license is not required to read 100G Datalogging Gas Endpoint.

## Specifications

| Functional Specifications  | Description   |
|----------------------------|---|
| Power Source               | Two "A" cell lithium batteries  |
| 100G<br>100G Datalogging   | One "A" cell lithium battery  |
| Tamper Detection           | Tilt tamper and magnetic tamper   |
| FCC Compliance             | Part 15 certified   |
| Industry Canada Compliance | RSS-210 certified   |
| Intrinsically Safe per     | UL Class I, Division 1, Groups C and D                                  |
| Product Identification     | Numeric and barcoded endpoint type and serial number                    |
| Construction Materials     | Gray polycarbonate housing and back plate with encapsulated electronics |

| Operational Specifications | Description                             |
|----------------------------|---|
| Operating Temperatures     | -40° to 158° F (-40° to +70° C)         |
| Operating Humidity         | 5 to 95 percent relative humidity       |
| Program Frequency          | 908 MHz                                 |
| Transmit Frequency         | Spread spectrum 908 to 924 MHz ISM band |
| Data Integrity             | Verified in every data message          |

## Related Documents

| Document Title                        | Document Part Number    |
|---------------------------------------|-------------------------|
| Gas Endpoint Meter Compatibility List | PUB-0117-002            |
| Gas Endpoint Ordering Guide           | PUB-0117-001            |
| 100G Datalogging Specification Sheet  | Publication 100941SP-01 |
| Endpoint Link® Programming Guide      | TDC-0744                |

## Meter Compatibility List

The Meter Compatibility table lists meters compatible with the 100G Datalogging Gas Endpoint. Due to continuous research, product improvements, and enhancements, Itron reserves the right to change this list without notice.



**Note** On rare occasions the location of endpoint-to-meter mounting holes on older diaphragm gas meters might not match up with the mounting holes on the 100G Datalogging Gas Endpoint. This can prevent the 100G Datalogging Gas Endpoint from properly mounting to the meter.



## 100G Series Meter Compatibility List

| Mfg.                         | Model   | Description   | Class       | Comments                       | Endpoint Type            | Endpoint Part No.            |
|------------------------------|---------|---------------|-------------|--------------------------------|--------------------------|------------------------------|
| Elster American/<br>Canadian | W75AL   |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | AL-175  |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | AT-175  |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | ALC-175 |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | AT-210  |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | AL-225  | Canada only   | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | AL-250  |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | AR-250  |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | AC-250  |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | AM-250  |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | AL-310  |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | AL-350  |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | AT-350  |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | AL-425  |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | AC-630  |               | Residential | Aluminum case meters only      | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | 5B 225  | Aluminum case | Residential |                                | 100G<br>100G Datalogging | ERG-5000-001<br>ERG-5002-001 |
| Elster American/<br>Canadian | 35B     | Iron case     | Commercial  |                                | 100G                     | ERG-5000-007                 |
| Elster American/<br>Canadian | 60B     | Iron case     | Commercial  |                                | 100G                     | ERG-5000-007                 |
| Elster American/<br>Canadian | 80B     | Iron case     | Commercial  | Must have front reading index. | 100G                     | ERG-5000-007                 |
| Elster American/<br>Canadian | 250B    | Iron case     | Commercial  |                                | 100G                     | ERG-5000-007                 |
| Elster American/<br>Canadian | 500B    | Iron case     | Commercial  |                                | 100G                     | ERG-5000-007                 |
| Elster American/<br>Canadian | AL800   |               | Commercial  | Aluminum case meters only      | 100G                     | ERG-5000-007                 |

| <b>Mfg.</b>                            | <b>Model</b> | <b>Description</b>        | <b>Class</b> | <b>Comments</b>                            | <b>Endpoint Type</b>     | <b>Endpoint Part No.</b>     |
|--|--------------|---------------------------|--------------|--|--------------------------|------------------------------|
| Elster American/<br>Canadian           | AL1000       |                           | Commercial   | Aluminum case meters only                  | 100G                     | ERG-5000-007                 |
| Elster American/<br>Canadian           | AL1400       |                           | Commercial   | Aluminum case meters only                  | 100G                     | ERG-5000-007                 |
| Elster American/<br>Canadian           | AL2300       |                           | Commercial   | Aluminum case meters only                  | 100G                     | ERG-5000-007                 |
| Elster American/<br>Canadian           | AL3000       |                           | Commercial   | Aluminum case meters only                  | 100G                     | ERG-5000-007                 |
| Elster American/<br>Canadian           | AL5000       |                           | Commercial   | Aluminum case meters only                  | 100G                     | ERG-5000-007                 |
| Sensus/Invensys/<br>Equimeter/Rockwell | R-175        | 11-tooth                  | Residential  | 24- and 30-tooth gears are not compatible. | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell | R-200        | 11-tooth                  | Residential  |  | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell | RT-200       | 11-tooth                  | Residential  |  | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell | RC-225       | 11-tooth<br>(Canada only) | Residential  |  | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell | RT-230       | 11-tooth                  | Residential  |  | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell | R-275        | 11-tooth                  | Residential  | 24- and 30-tooth gears are not compatible. | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell | RT-275       | 11-tooth                  | Residential  |  | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell | R-315        | 11-tooth                  | Residential  | 24- and 30-tooth gears are not compatible. | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell | 250          | 11-tooth                  | Residential  | 24- and 30-tooth gears are not compatible. | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell | 310          | 11-tooth                  | Residential  |  | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell | S-110        | 11-tooth                  | Residential  |  | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell | S-200        | 11-tooth                  | Residential  |  | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell | 175-S        | 18-tooth                  | Residential  | 24- and 30-tooth gears are not compatible. | 100G<br>100G Datalogging | ERG-5000-004<br>ERG-5002-004 |
| Sensus/Invensys/<br>Equimeter/Rockwell | RT-100       | 18-tooth                  | Residential  | 24- and 30-tooth gears are not compatible  | 100G<br>100G Datalogging | ERG-5000-004<br>ERG-5002-004 |
| Sensus/Invensys/<br>Equimeter/Rockwell | S-190        | 18-tooth                  | Residential  | 24- and 30-tooth gears are not compatible. | 100G<br>100G Datalogging | ERG-5000-004<br>ERG-5002-004 |

| Mfg.                                       | Model                     | Description      | Class       | Comments  | Endpoint Type            | Endpoint Part No.            |
|--|---------------------------|------------------|-------------|---|--------------------------|------------------------------|
| Sensus/Invensys/<br>Equimeter/Rockwell     | S-120                     | 11-tooth         | Residential |   | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell     | T-120                     | 11-tooth         | Residential |   | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell     | T-110                     | 11-tooth         | Residential |   | 100G<br>100G Datalogging | ERG-5000-002<br>ERG-5002-002 |
| Sensus/Invensys/<br>Equimeter/Rockwell     | R-415                     | 18-tooth         | Residential | Older meters may have<br>endpoint-to-meter<br>mounting hole variations<br>that can make them<br>incompatible. | 100G<br>100G Datalogging | ERG-5000-004<br>ERG-5002-004 |
| Sensus/Invensys/<br>Equimeter/Rockwell     | RT-360                    | 18-tooth         | Residential |   | 100G<br>100G Datalogging | ERG-5000-004<br>ERG-5002-004 |
| Sensus/Invensys/<br>Equimeter/Rockwell     | MR8<br>(R-275<br>Metric)  | 16-tooth         | Residential |   | 100G<br>100G Datalogging | ERG-5000-003<br>ERG-5002-003 |
| Sensus/Invensys/<br>Equimeter/Rockwell     | MR12<br>(R-415<br>Metric) | 16-tooth         | Residential |   | 100G<br>100G Datalogging | ERG-5000-003<br>ERG-5002-003 |
| Sensus/Invensys/<br>Equimeter/Rockwell     | 750                       |                  | Commercial  |   | 100G                     | ERG-5000-008                 |
| Sensus/Invensys/<br>Equimeter/Rockwell     | 1000                      |                  | Commercial  |   | 100G                     | ERG-5000-008                 |
| Sensus/Invensys/<br>Equimeter/Rockwell     | 1600                      |                  | Commercial  |   | 100G                     | ERG-5000-008                 |
| Sensus/Invensys/<br>Equimeter/Rockwell     | 3000                      |                  | Commercial  | Vertical index only   | 100G                     | ERG-5000-008                 |
| Sensus/Invensys/<br>Equimeter/Rockwell     | 5000                      |                  | Commercial  | Vertical index only   | 100G                     | ERG-5000-008                 |
| Sensus/Invensys/<br>Equimeter/Rockwell     | 10000                     |                  | Commercial  | Vertical index only   | 100G                     | ERG-5000-008                 |
| National/ Lancaster                        | 175                       |                  | Residential | Actaris/Schlumberger/<br>Sprague direct-read<br>(odometer) indexes<br>cannot be used.                         | 100G                     | ERG-5000-006                 |
| National/ Lancaster                        | U175 UL175                |                  | Residential | Actaris/Schlumberger/<br>Sprague direct-read<br>(odometer) indexes<br>cannot be used.                         | 100G                     | ERG-5000-006                 |
| National/ Lancaster                        | 250                       |                  | Residential | Actaris/Schlumberger/<br>Sprague direct-read<br>(odometer) indexes<br>cannot be used.                         | 100G                     | ERG-5000-006                 |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 175                       | 3-hole index box | Residential | Index boxes with 3<br>mounting holes  | 100G                     | ERG-5000-005                 |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 175 WC                    | 3-hole index box | Residential | Index boxes with 3<br>mounting holes  | 100G                     | ERG-5000-005                 |

| Mfg.                                       | Model              | Description                                   | Class       | Comments  | Endpoint Type | Endpoint Part No.              |
|--|--------------------|---|-------------|---|---------------|--------------------------------|
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 175<br>Combination | 3-hole index box<br>Integrated<br>regulator   | Residential | Index boxes with 3<br>mounting holes  | 100G          | ERG-5000-005                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 210                |   | Residential |   | 100G          | ERG-5000-005                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 240                | Canadian<br>Version of 250                    | Residential |   | 100G          | ERG-5000-005                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 240<br>Combination | Integrated<br>regulator                       | Residential |   | 100G          | ERG-5000-005                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 240                |   | Residential |   | 100G          | ERG-5000-005                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 240                | 1-hole cover flat<br>face                     | Residential | Requires Itron 1A<br>Adapter P/N<br>CFG-0015-001 Kit                                  | 100G          | ERG-5000-005<br>+ CFG-0015-001 |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 240                | 2-hole cover                                  | Residential |   | 100G          | ERG-5000-005                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 250                |   | Residential |   | 100G          | ERG-5000-005                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 250 WC             |   | Residential |   | 100G          | ERG-5000-005                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 250<br>Combination | Integrated<br>regulator                       | Residential |   | 100G          | ERG-5000-005                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 1A                 | Flat face<br>Includes 3-dial,<br>2cf indexes. | Residential | Requires Itron 1A adapter<br>kit, CFG-0015-001  | 100G          | ERG-5000-005 +<br>CFG-0015-001 |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | METRIS 250         | 3-hole index box<br>Slant-faced               | Residential | Index boxes with 3<br>mounting holes  | 100G          | ERG-5000-005                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 305<br>Combination | Integrated<br>regulator                       | Residential |   | 100G          | ERG-5000-005                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 400                | Slant-faced                                   | Residential |   | 100G          | ERG-5000-005                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 400A               | Slant-faced                                   | Residential |   | 100G          | ERG-5000-005                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 675A               | Top-mount index                               | Commercial  | Requires Itron/Actaris<br>adapter p/n 80005901-001;<br>purchase from<br>Itron/Actaris | 100G          | ERG-5000-007                   |
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 800A               | Top-mount index                               | Commercial  | Requires Itron/Actaris<br>adapter p/n 80005901-001;<br>purchase from<br>Itron/Actaris | 100G          | ERG-5000-007                   |

| Mfg.                                       | Model                             | Description                                   | Class      | Comments  | Endpoint Type   | Endpoint Part No.            |
|--|-----------------------------------|---|------------|---|---|------------------------------|
| Itron/Actaris/<br>Schlumberger/<br>Sprague | 1000A                             | Top-mount index                               | Commercial | Requires Itron/Actaris adapter p/n 80005901-001; purchase from Itron/Actaris              | 100G  | ERG-5000-007                 |
| EMCO                                       | #2 ½                              |   | Commercial |   | 100G  | ERG-5000-008                 |
| EMCO                                       | #3                                |   | Commercial |   | 100G  | ERG-5000-008                 |
| EMCO                                       | #4                                |   | Commercial |   | 100G  | ERG-5000-008                 |
| EMCO                                       | #4 ½                              |   | Commercial |   | 100G  | ERG-5000-008                 |
| EMCO                                       | #5                                |   | Commercial |   | 100G  | ERG-5000-008                 |
| Dresser ROOTS                              | Series B3<br>8C - 56M<br>8C - 16M | CTR<br>TC<br>(No pulser, No instrument drive) | Commercial | To attach an Elster American endpoint, install Dresser's Elster American AMR adapter kit. | 100G<br>100G Datalogging<br>Dresser adapter<br>P/N 059599-000 | ERG-5000-001<br>ERG-5002-001 |
| Dresser ROOTS                              | Series A1<br>(LMMA)<br>1.5M - 5M  | CTR<br>(No pulser, No instrument drive)       | Commercial | To attach an Elster American endpoint, install Dresser's Elster American AMR adapter kit. | 100G<br>100G Datalogging<br>Dresser adapter<br>P/N 058530-610 | ERG-5000-001<br>ERG-5002-001 |
| Dresser ROOTS                              | Series A1<br>(LMMA)<br>7M - 16M   | CTR<br>(No pulser<br>No instrument drive)     | Commercial | To attach an Elster American endpoint, install Dresser's Elster American adapter kit.     | 100G<br>100G Datalogging<br>Dresser adapter<br>P/N 058531-610 | ERG-5000-001<br>ERG-5002-001 |
| Dresser ROOTS                              | Series A1<br>(LMMA)<br>1.5M - 16M | TC<br>(No pulser<br>No instrument drive)      | Commercial | To attach an Elster American endpoint, install Dresser's Elster American AMR adapter kit. | 100G<br>100G Datalogging<br>Dresser adapter<br>P/N 058224-641 | ERG-5000-001<br>ERG-5002-001 |
| Dresser ROOTS                              | 5C/8C15                           | Series Z compact meter                        | Commercial | To attach an Elster American endpoint, install Dresser's Elster American adapter kit.     | 100G<br>100G Datalogging<br>Dresser adapter<br>P/N 059847-000 | ERG-5000-001<br>ERG-5002-001 |
| Dresser ROOTS                              | B3/LMMA                           | Instrument drive<br>CD/TD                     | Commercial | Standard index drive and no instrument.   | 100G  | ERG-5000-007                 |

## Installation Prerequisites

Prior to installation, verify you have the following items:

1. 100G Datalogging Gas Endpoints designed for your specific brand of residential or commercial gas meters (endpoints include new tamper seals).
2. A compatible meter (see the [Meter Compatibility List](#) on page 2).
3. A compatible index. Itron 100G Datalogging Gas Endpoints are compatible with standard dial and direct-read (odometer) indexes. Exceptions are noted on the [Meter Compatibility List](#) on page 2.
4. Installation tools (provided by installer or customer)
  - Small and medium flat-blade or Phillips screwdrivers - to remove and tighten index and index-cover screws.
  - Side-cutting plier/wire snips - to cut wire seals, if applicable.
  - Small putty knife - residential meters.
  - Meter seals, wire seal, and seal press - to protect the meter from tampering, if applicable.
  - 11/32-inch nut driver or other blunt tool - to securely seat new tamper plugs over screw holes.
  - FC200SR handheld computer with Endpoint-Link<sup>®</sup> or EndPoint-Link Pro<sup>®</sup> software - to program and check 100G Datalogging Gas Endpoint installation and operation.



**Caution** The 100G Datalogging Gas Endpoints can only be programmed using FC200SR Handheld Computers loaded with EndPoint-Link<sup>®</sup> or EndPoint-Link Pro<sup>®</sup> software version 5.3 or later.

- Replacement screws - to mount the 100G Datalogging Gas Endpoint assembly to the meter and the index to the endpoint housing:

| <b>Replacement Screws</b> |   |                                |  |                                  |
|---------------------------|---|--------------------------------|--|----------------------------------|
| <b>Meter</b>              | <b>To mount the 100G Datalogging Gas Endpoint on the meter:</b>                     | <b>Itron Part Number</b>       | <b>To mount the index on the 100G Datalogging Gas Endpoint housing:</b>  | <b>Itron Part Number</b>         |
| Elster American           | 1/4 - 20 x 5/8" slotted, Fillister head   |                                | 8 - 32 x 3/16" slotted, round pan-head   |                                  |
| Sensus/Rockwell           | 10 - 24 x 5/8" slotted Fillister head   |                                | 6 - 32 x 5/8" slotted, round pan-head  |                                  |
| Itron/Actaris             | 10 - 24 x 5/8" slotted Fillister head   |                                | 10 - 24 x 1/4" slotted, round pan-head   |                                  |
| National/Lancaster        | 10 - 24 x 3/4" Phillips flat-head stainless steel                                   | SCR-0014-004                   | 6 - 19 x 3/8" thread-forming, Phillips pan-head to mount indexes with legs<br>6 - 19 x 3/8" thread-forming, Phillips, Fillister head to mount indexes with screw holes | SCR-0015-001<br><br>SCR-0037-001 |
| <b>Commercial Meter</b>   | <b>To mount the 100G Datalogging Commercial endpoint on the meter:</b>              | <b>Itron Part Number</b>       | <b>To mount the index (and index assembly, if applicable) on the 100G Datalogging Commercial endpoint housing:</b>   | <b>Itron Part Number</b>         |
| Elster American           | 2A x 3.25" length, slotted round-head drilled to accept utility-approved wire seals | SCR-0062-001 (Elster American) | 12 - 24 x 1/2" slotted, Fillister head machine screws, drilled to accept utility-approved wire seals   |                                  |
| Sensus/Rockwell           | 2A x 3.63" length, slotted round-head drilled to accept utility-approved wire seals | SCR-0062-002                   | 2A x 2.94" length, slotted round-head  | SCR-0062-003                     |





## CHAPTER 2

# Elster American Meter Installation

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This chapter provides instructions to install the 100G Datalogging Gas Endpoint on an Elster American Meter.



Installing the 100G Datalogging Gas Endpoint involves four tasks:

1. Removing the index from the meter.
2. Assembling the 100G Datalogging Gas Endpoint and index.
3. Programming the 100G Datalogging Gas Endpoint assembly.
4. Attaching the 100G Datalogging Gas Endpoint assembly to the meter.



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

### ***To remove the index from the meter***

1. Remove the four index cover screws and the index cover from the Elster American meter. Alternate screw removal following the numbered pattern in the photo.

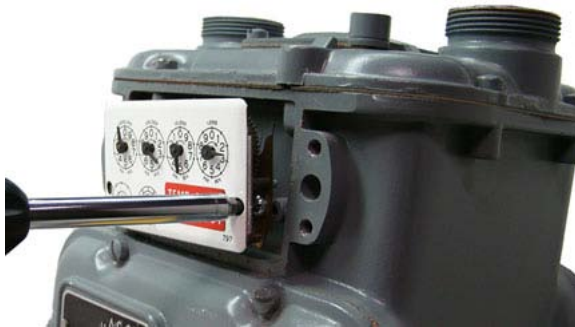


2. Examine the mounting screws. If they are 5/8" long and not corroded, keep them to re-attach the 100G Datalogging Gas Endpoint assembly. If the screws are not the correct length or if the screws are corroded, discard.



**Note** You may use the removed index cover as a temporary storage container for screws. Properly dispose all unused screws, old index covers, gaskets, tamper seals, and other leftover materials. Do not leave materials on customer premises.

3. Unscrew one index mounting screw completely. Hold one hand under the index to catch the screw. While removing the other mounting screw, pull the index away from the meter to keep the index backplate against the back of the screw. Remove the screw completely after the index is free of the meter.



Set the index aside where it will not be damaged or fill with dirt, rain or snow. The index will be mounted to the endpoint later in this procedure. Verify the index mounting screws are 3/16" long and not corroded. If the screws are the correct length and not corroded, retain for later use. If the original screws were discarded, use the correct replacement screws (see [Installation Prerequisites](#) on page 8.)

4. Remove the old gasket, gasket residue and dirt from the meter (if applicable). The meter face must be free of gasket residue before you install the 100G Datalogging Gas Endpoint.



**To Assemble the 100G Datalogging Gas Endpoint and Index**

1. Separate the 100G Datalogging Gas Endpoint housing from the cover by pulling the cover straight out from the housing.



2. Set the endpoint cover aside where it will not be damaged or fill with rain, dirt or snow. The cover will be used later in this installation procedure.



**Note** Elster American meter indexes are available in different models:

**Index wrigglers on one-foot meters  
with drive slots**



**Index meters on two-foot meters  
with drive posts**



**An Elster American index with  
mounting screw holes**



**An Elster American index with  
mounting slots**



If your index has mounting screw slots, skip steps 3 and 4. If your index has mounting screw holes, perform steps 3 and 4, and skip steps 5 and 6.

3. Using the original index mounting screw or a replacement screw, if necessary, place one 8 - 32 3/16" screw into the index's right-hand mounting screw hole.



4. Attach the screw to the endpoint housing's right-index mounting post just enough to hold the screw and the right end of the index in place.



5. Screw one 8 - 32 x 3/16" screw into the right index mounting post one or two turns. Do not tighten the screw.
6. Place the right index mounting screw slot under the screw head. Do not tighten the screw.
7. Slide the index drive post into the endpoint wiggler. Verify positive engagement.



**Caution** If the index wiggler has a drive slot, place the endpoint wiggler's drive post into the index drive slot. Failure to mate the endpoint wiggler with the index drive post (or slot) can cause binding and lead to poor registration or meter failure.

8. Install and tighten the left index mounting screw (for indexes with either mounting screw slots or holes). Tighten the right index mounting screw.

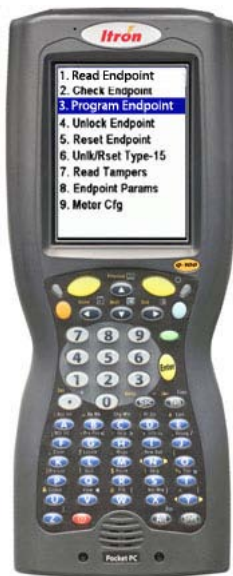


- Slide the endpoint cover over the index and housing. Verify the cover is installed correctly. The endpoint label should be clearly visible and easily read.



## Programming the 100G Datalogging Gas Endpoint Assembly

The 100G Datalogging Gas Endpoint must be programmed with the FC200SR handheld computer loaded with EndPoint-Link® or Point-Link Pro® software version 5.3 or later. See the Endpoint-Link v5.3 (or later) Endpoint Programming Guide (TDC-0744) for more complete programming information.



**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. Take note of the index drive rate shown on a lower left dial on the index. The endpoint is programmed based on the drive rate. Elster American meter index drive rates are either 1-cubic foot or 2-cubic feet.



### To Program the 100G Datalogging Gas Endpoint

1. Program the meter drive rate into the 100G Datalogging Gas Endpoint using the FC200SR. For all programming and "Check Endpoint" operations, hold the FC200SR as close to vertical as possible. For best success, keep the FC200SR 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 mode defined by your system administrator.  
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 the 100G Datalogging Gas Endpoint using the FC200SR.
  - 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.



## Attaching the 100G Datalogging Gas Endpoint Assembly to the Elster American Meter

After 100G Datalogging Gas Endpoint programming is complete, attach the endpoint assembly to the Elster American Meter.



**Warning** For 5B Meters only: If the 100G Datalogging Gas Endpoint will be installed on a 5B-225 aluminum meter, cut 1/16" off each endpoint wiggler post to prevent the wiggler from rubbing on the face of the nut holding the meter drive dog in place.



### **To Attach the 100G Datalogging Gas Endpoint**

1. Align the endpoint wiggler to connect with the drive post (or slot) of the meter.



For one-foot meters: Align the endpoint assembly wiggler perpendicular to the meter drive post.

For two-foot meters: Align the endpoint assembly wiggler perpendicular to the meter drive slot. The pin on the endpoint wiggler may be installed inside or outside the meter drive slot. For easy assembly, Itron recommends installing the pin on the 100G Datalogging Gas Endpoint wiggler outside the meter drive slot.



- Carefully align the endpoint's four screw holes with the holes on the meter. Attach using the original mounting screws if they are the correct size and are not corroded (1/4 - 20 x 5/8" screws.) If the original screws were discarded, use the correct replacement screws (see [Installation Prerequisites](#) on page 8). Tighten in an alternating, diagonal pattern as shown in the photo:



- Insert first screw and tighten 1/4 to 1/2 turn after the screw contacts the meter connection.
- Insert the second screw and tighten 1/4 to 1/2 turn after contact with the meter connection.
- Insert the third screw and tighten 1/4 to 1/2 turn after contact with the meter connection.
- Insert the last screw and tighten 1/4 to 1/2 turn after contact with the meter connection.

Return to the first screw and tighten. Continue with the second, third and last screw until all screws are tight. Use equal screw tension to tighten each screw.



**Note** Meter manufacturers should torque the mounting screws 15 to 20 inch-pounds.

- Place new tamper seals over the two screws with tamper seal mounts. Press tamper seals into place using the 11/32" nut driver or similar blunt tool.



4. Complete necessary paperwork and verify all excess materials are removed from the customer's premises. 100G Datalogging Gas Endpoint installation on the Elster American meter is complete.

