

# METRIS<sup>®</sup> RD

## Remote Disconnect Meter with 100G Datalogging ERT<sup>®</sup> Module

### Introduction

Amidst increasing demand, tightened supplies and continued economic strain, today's natural gas providers are faced with mounting challenges—yet expected to operate more and more efficiently and to drive down costs whenever possible. Our innovative new METRIS Remote Disconnect (RD) meter with 100G Datalogging Gas ERT module helps streamline operations, improve customer service and enhance the revenue stream.

This new, integrated solution combines Itron's reliable METRIS residential gas meter with the 100G Datalogging gas ERT module, enabling remote disconnect functionality. With a shut-off valve incorporated into the meter, the METRIS RD meter allows utilities to efficiently disconnect gas service at critical times. Using a handheld computer, a meter reader or field service representative issues a command to disconnect service.

### Features and Benefits

Remote disconnect plays a pivotal role in streamlined and cost-effective operations, for a variety of reasons:

#### *Increased Safety*

In addition to being able to disconnect service from a safe distance in an emergency, field workers don't have to deal with aggressive animals or confrontational customers in their day-to-day activities. Once proper notification has been given, service shut-off can occur without incident.

#### *Efficient Non-Payment Shut-Off*

Historically, gas utilities have had to accept that a certain number of accounts would not have service disconnected due to backlogged workload and seasonal shut-off constraints. But with remote disconnect capability, a single field worker can disconnect multiple sites in a day as part of their routine activities. As a result, uncollectable accounts are disabled and lost revenue is decreased.

#### *Streamlined Move-Out Operations*

In areas with high transient rates, rolling a truck and sending a field worker to a meter each time a move-out occurs is costly and time-intensive. With this solution, workers can efficiently gather a final reading and disconnect service at the same time.

#### *Entry to Limited-Access Sites*

In difficult to access sites indoors, behind fences or gates, disconnect activities can be accomplished without the need for direct access to the meter. In apartment complexes without individual valves for each unit, service is disconnected at the meter itself with this solution, providing utilities with greater control of their resources.

#### *Simplified Installation*

The METRIS RD meter is sold and shipped as a complete package, assembled at Itron's factory. Meter installation for this solution is the same as any other—no special training necessary. And because everything is assembled at the factory and shipped in regular packaging, there is no external indication to curious customers that a shut-off valve is contained within the meter.



## Specifications

### Functional Specifications

- > Power source:
  - ERT module (reading/datalogging functions): "A" cell lithium thionylchloride battery
  - Stepper motor (disconnect valve functions): "A" cell lithium manganese dioxide battery
- > Tamper detection:
  - ERT module: mercury-free tilt tamper and magnetic tamper
- > Operating environment:
  - 100G Datalogging ERT modules and METRIS meters can be installed indoors or outdoors above grade
- > Product identification:
  - ERT module: Numeric and bar-coded module type and serial number
  - Meter: Embossed aluminum manufacturer badge with serial number standard, customer badge optional

### Approved Remote Actuation Devices

- > The remote disconnect valve can be operated using an FC300 with SRead or FC200SR handheld computer with Endpoint-Link® or Endpoint-Link® Pro version 5.5 or higher. Version 5.5 introduces the disconnect functionality; for programming-only requirements, see *Programming Device* section. The disconnect operation can be performed from up to 500 feet away, with a clear line of sight, using approved handheld devices (FC200SR models must be equipped with long-range radio, FC2-0005-004 or FC2-0006-004)

Note: Older versions of SR radio are optimized for short-range performance only and appropriate for valve actuation at the meter.

### Programming Device

- > 100G Datalogging ERT modules can be programmed using any FC300 with SRead or FC200SR handheld computer with Endpoint-Link® or Endpoint-Link® Pro version 5.3 or higher



METRIS Remote Disconnect Meter with 100G Datalogging Gas ERT® Module

### Battery and Design Life

- > When programmed to mobile/handheld mode or fixed network mode, battery life for the ERT module is 20 years
- > When programmed to hard-to-read mobile/handheld mode, ERT module battery life is 15 years
- > The remote disconnect design provides for 40 complete open/close cycles for the 20 year life of the stepper motor, or approximately two (2) open/close cycles per year for 20 years
- > All 100G Datalogging ERT modules are designed for a 20-year total life

### Regulatory & Standards

- > Safety approvals:
  - ERT module: Intrinsically safe per UL Class I, Division 1, Groups C & D
  - METRIS: Intrinsically safe per UL Class I, Division 1, Group D, T3C
- > Gas valve is tested in accordance with performance criteria from ASME B16.44, Manually Operated Metallic Gas Valves for Use in Above-Ground Piping Systems Up to 5 PSI, sections 5.2 and 5.7
- > Meter is built and tested in accordance with ANSI B109.1

### Operational

- > All 100G Datalogging ERT modules operate without the need for an FCC license
- > Transmit frequency: Spread spectrum 908 to 924 MHz ISM band
- > Program frequency: 908 MHz
- > Data integrity: Verified in every message
- > Device not intended for permanent shut-off
- > Valve must be actuated once every 3 years

### Physical

- > Remote disconnect electronics in the meter is encapsulated for protection against hazards and tampering
- > Material of construction on all 100G Datalogging ERT module housings is gray polycarbonate
- > ERT module gasket material is molded Santoprene™ and index cover material is clear polycarbonate
- > Valve assembly for disconnect is comprised of a silicone seal and an articulating stainless steel disc

## Specifications

Meter Capacity	250 CFH Natural Gas @ .5 inch w.c. Differential 400 CFH Natural Gas @ 1.0 inch w.c. Differential	
Hub Center-to-Center	6"	
Hub Sizes	#1 Sprague Standard, 10 LT, 20 LT, 30 LT, 1-1/4"	
Meter Type	(TC) Temperature Compensated (NTC) Non-Temperature Compensated	
Units	Imperial (Cubic Feet - ft <sup>3</sup> ) Metric (Cubic Meters - m <sup>3</sup> )	
Index Drive	2 ft <sup>3</sup> /revolution 50 dm <sup>3</sup> /revolution	
Proving / Test Dials	ft <sup>3</sup> - 1/2' and 2' Proving Dials m <sup>3</sup> - 10 dm <sup>3</sup> and 50 dm <sup>3</sup> Proving Dials	
Tangent Crank	14 revolutions/ft <sup>3</sup> or .071 ft <sup>3</sup> /revolution	
Indexes	4 Circle Dial (ft <sup>3</sup> - Standard Pressure, 14 inches w.c., 2 PSIG) 4 Digit Direct Read (ft <sup>3</sup> - Standard Pressure) 5 Digit Direct Read (ft <sup>3</sup> or m <sup>3</sup> - Standard Pressure) Standard = 7 inches w.c. @ 14.73 PSIA base/ 14.4 PSIA atmospheric	
Meter M.A.O.P.	5 PSIG	
Valve M.A.O.P.	2 PSIG	
Meter Operating Temperature Range	-30°F to +120°F	-34°C to +49°C
Valve Operating Temperature Range	32°F to +104°F	0°C to +40°C
Valve Sealing Temperature Range	-40°F to +140°F	-40°C to +60°C
ERT Operating Temperature Range	-40°F to +158°F	-40°C to +70°C
Surface Treatment	ASA 49 Gray Polyester Powder Coat	

	Meters per Layer	Layers per Pallet	Meters per Pallet	Pallet Dimensions	Pallet Weight (lbs)
METRIS Remote Disconnect	20	3	60	48" x 46" x 39"	635
METRIS Remote Disconnect	20	4	80	48" x 46" x 52"	850

Weight of single METRIS RD with 100G Datalogging ERT	9.55 lbs
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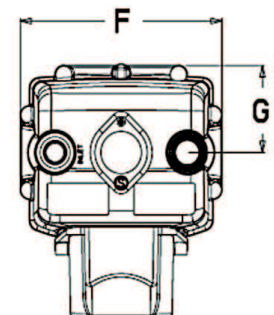
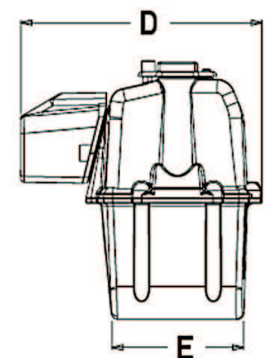
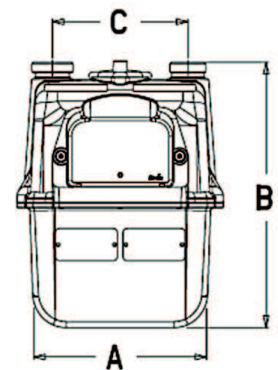
All dimensions and weights provided are approximate

### Additional Information

- > For additional information, see the:
  - 100G Datalogging ERT Module specification sheet (publication 100941SP)
  - METRIS 250 Residential Gas Meter specification sheet (100973SP)
  - FC200 Handheld specification sheet (publication 100272SP)
  - FC300 Handheld specification sheet (publication 100876SP)

Dimensions	Inches	Millimeter
A	7.7	196
B	11.3	287
C	6	152
D	11	279
E	6	152
F	9.2	234
G	3.8	97

All dimensions and weights provided are approximate



### **About Itron Inc.**

*Itron Inc. is a leading technology provider to the global energy and water industries. Our company is the world's leading provider of intelligent metering, data collection and utility software solutions, with nearly 8,000 utilities worldwide relying on our technology to optimize the delivery and use of energy and water. Our products include electricity, gas, water and heat meters; data collection and communication systems, including automated meter reading (AMR) and advanced metering infrastructure (AMI); meter data management and related software applications; as well as project management, installation, and consulting services. To know more, start here: [www.itron.com](http://www.itron.com).*

**Itron, Inc.**  
**Gas Metering – U.S.**  
970 Highway 127 North  
Owenton, Kentucky 40359  
USA  
Phone: 1.800.490.0657  
1.502.484.5747  
fax: 1.502.484.6223



**Corporate Headquarters**  
2111 North Molter Road  
Liberty Lake, WA 99019  
USA  
Phone: 1.800.635.5461  
Fax: 1.509.891.3355  
[www.itron.com](http://www.itron.com)