

## CHAPTER 3

# Rotary Meter Installation

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This chapter provides the instructions to install the 2.4GZ OpenWay Remote Mount Gas Module on rotary gas meters. Reference the Gas Endpoint Meter Compatibility List (see [Related Documents](#) on page 3) for rotary meters compatible with the 2.4GZ OpenWay Remote Mount Gas Module.



American rotary meter



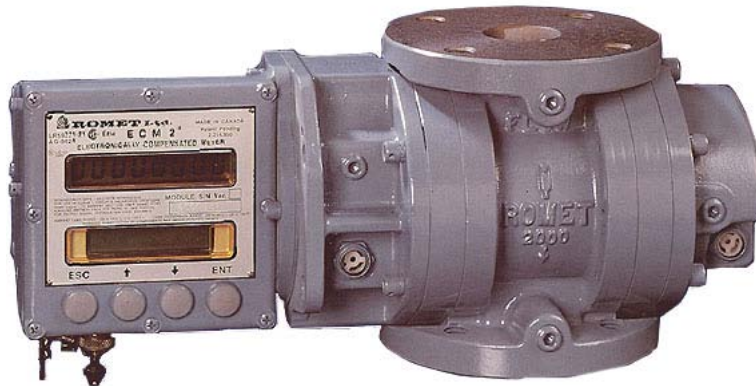
Dresser ROOTS® Series LMMA rotary meter



Dresser ROOTS® series B3 meter



Romet Imperial series RM meter



Romet Imperial ECM2 meter

## Required Installation Materials Available from Itron

The materials in the following table are required to install a 2.4GZ OpenWay Remote Mount Gas Module.

**Itron Part Number**

OWG-5001-502 IPP

OWG-5002-502 SEP



OWG-5001-503 IPP

OWG-5002-503 SEP

Note: this remote mount endpoint comes standard with 12" lead wires and may be shipped directly to the meter manufacturer for a factory-installed cable (interface).



**Important** The interface cable must be purchased directly from the meter manufacturer.

CFG-0005-003

Remote Endpoint Mounting Kit



## Connecting the 2.4GZ OpenWay Remote Mount Module to the Rotary Meter Cable

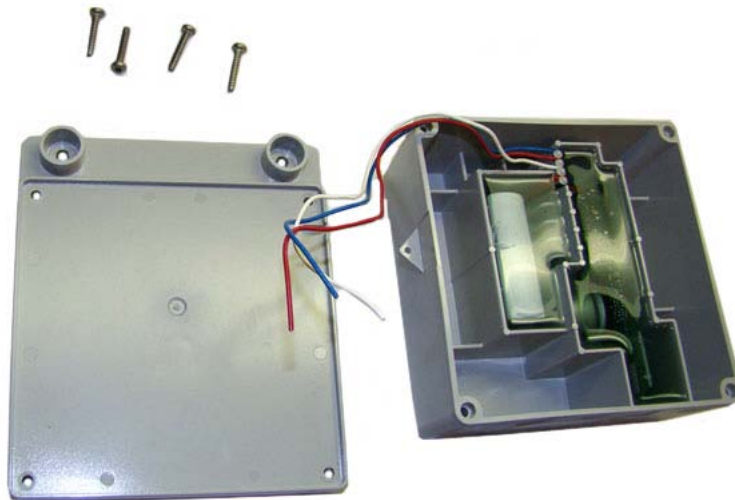
You may ship the Itron 2.4GZ OpenWay Remote Mount Gas Module directly to the meter manufacturer for a factory-installed cable. If you connect the endpoint to the meter using an existing cable purchased from the meter manufacturer, complete the following cable installation procedure.



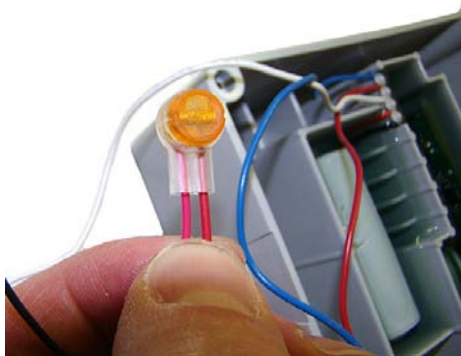
**Caution** The purchased cable must have a mating connector compatible to the meter receptacle. Meter manufacturer's cables may be wired in different configurations for specific applications. If necessary, contact your meter's manufacturer for wiring diagrams for your specific application.

### ***To connect the 2.4GZ OpenWay Remote Mount Gas Module to the rotary meter cable***

1. Remove the backplate (4 screws) from the 2.4GZ OpenWay Remote and expose the module's lead wires. The backplate and screws will be re-installed on the gas module later in this procedure so store them (temporarily) in a safe, secure place.



2. Insert the lead wires from the 2.4GZ OpenWay Remote Mount Gas Module into new 3M gel connectors (Itron part number CON-0023-001) together with the same colored lead wire from the meter cable (see the wiring table below) and crimp using a 3M hand-held crimping tool.

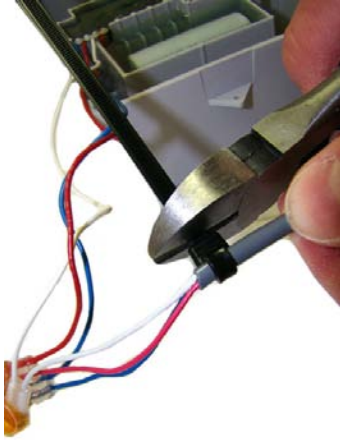


**Note** Do not strip lead wire prior to inserting the wire in the gel connector.

**Rotary Meter to Remote Module Wire Table**

Rotary Meter Wire	Remote module wire
Red	Red
White	White
Blue	Blue

3. After completing the wiring connections, install a cable tie to the meter cable just below the exposed colored lead wires on the cable insulation. Remove the excess cable tie using a hand-held sidecutter pliers. The cable tie performs as a cable strain relief to mitigate the risk of destructive tension on the lead wires.



4. Tuck the three gel connectors and cable tie inside the module housing, as shown.



5. Install the 2.4GZ OpenWay Remote Mount Gas Module backplate using the four screws previously removed from the module and a Torx T-15 screwdriver. Install the new 2.4GZ OpenWay Remote Mount Gas Module on the wall or a pipe using the Remote Endpoint Mount Kit (Itron part number CFG-0005-003). See [Mounting the 2.4GZ OpenWay Remote Mount Gas Module](#) on page 9 for mounting instructions.

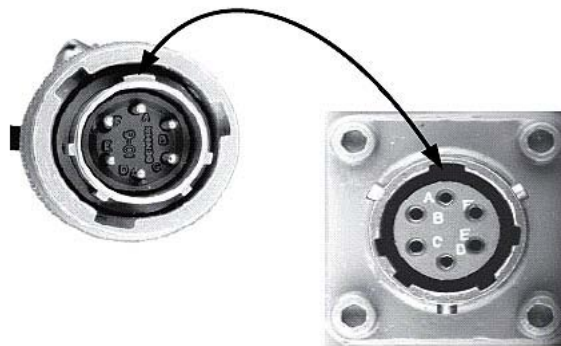


**To connect the 2.4GZ OpenWay Remote Mount Gas Module cable assembly to the rotary meter**

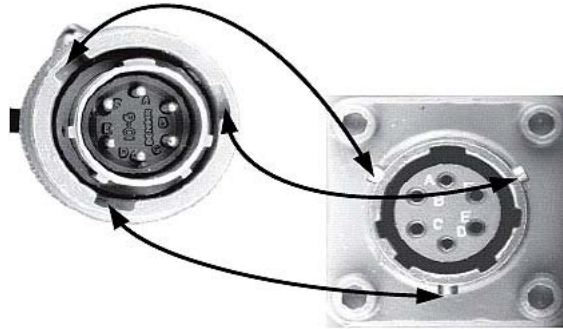


**Caution** Verify the cable connector mates with the meter connector. Meter manufacturers use different connector styles (types).

1. Align the large lug on the 2.4GZ OpenWay Remote Mount Gas Module connector with the large notch on the meter connector.



2. Align the lock ring notches on the module cable connector with the pins on the meter connector.



3. Hold the lock ring on the module connector back and push the plug into the meter connector until it is securely seated.
4. Turn the lock ring clockwise as far as it will go. You will feel it snap into place when it locks.



**Warning** To remove the module connector plug from the meter connector jack, push in on the lock ring, turn the lock ring counterclockwise as far as possible, and pull out the plug body. Do not pull on the module's connector cable.



## Programming 2.4GZ OpenWay Remote Mount Gas Module for Dresser ROOTS® Rotary Meters

To program 2.4GZ OpenWay Remote Mount Gas Modules for use with Dresser ROOTS® rotary meters, use the meter drive rates from the drive rate table in this section.

### B3, LMMA & S3A CTR/TC Meter Pulse Rates for Remote Module Programming



**Caution** Do not use these meter drive rates to program residential direct-drive or commercial direct-drive modules. Use the information in the following tables to program 2.4GZ OpenWay Remote Mount Gas Modules connected to Dresser ROOTS® rotary meters.

B3 CTR Meter Size	B3 CTR Meter Pulse Rate	LMMA CTR Meter Size	LMMA CTR Meter Pulse Rate
8C	10	1.5M	10
11C	10	3M	10
15C	10	5M	10
2M	10	7M	10
3M	10	11M	10
5M	10	16M	100
7M	10	23M	100
11M	10	38M	100
16M	100	56M	100
23M	100	102M	100
38M	100		
56M	100		
LMMA CTR Meter Size	LMMA CTR Meter Pulse Rate	LMMA TC Meter Size	LMMA TC Meter Pulse Rate
1.5M	10	1.5M	10
3M	10	3M	10
5M	10	5M	10
7M	10	7M	10
11M	10	11M	10
16M	100	16M	100



<b>B3 CTR Meter Size</b>	<b>B3 CTR Meter Pulse Rate</b>	<b>LMMA CTR Meter Size</b>	<b>LMMA CTR Meter Pulse Rate</b>
23M	100		
38M	100		
56M	100		
102M	100		
<b>Meters built 1/99 and beyond</b>		<b>Meters built prior to 1/99</b>	
<b>B3 TC Meter Size</b>	<b>B3 TC Meter Pulse Rate</b>	<b>B3 TC Meter Size</b>	<b>B3 TC Meter Pulse Rate</b>
8C	10	8C	50
11C	10	11C	50
15C	10	15C	50
2M	10	2M	50
3M	10	3M	50
5M	10	5M	50
7M	10	7M	50
11M	10	11M	50
16M	100	16M	500
<b>S3A CTR Meter Size</b>	<b>S3A CTR Meter Pulse Rate</b>	<b>S3A TC Meter Size</b>	<b>S3A TC Meter Pulse Rate</b>
1.5M	10	1.5M	10
3M	10	3M	10
5M	10	5M	10
7M	10	7M	10
11M	10	11M	10
16M	100	16M	100

## Installing the 2.4GZ OpenWay Remote Mount Gas Module to the Elster American Meter RPM Series Rotary Meter

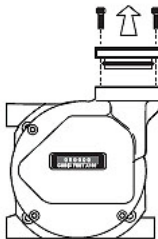
Some meter manufacturers provide endpoint mounting kits and installation procedures for their meters.



If 2.4GZ OpenWay Remote Mount Gas Module to Elster American RPM meter installation instructions are not available, follow the installation procedure in this section.

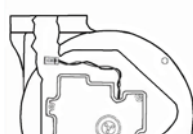
### ***To install the 2.4GZ OpenWay Remote Mount Gas Module on an Elster American RPM series meter***

1. Remove the meter's top plate by removing the two (2) 5mm screws and carefully prying up on the plate. The plate is secured with an o-ring seal. Remove the o-ring from the plate.

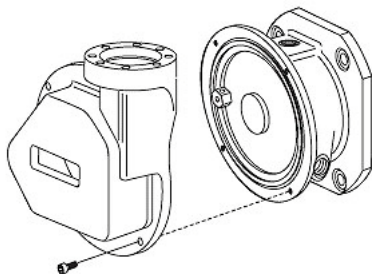


**Caution** If the o-ring is damaged during removal, obtain a replacement from Elster American Meter Co.

2. Look into the meter tower and find the meter switch lead and connector (4-pin).

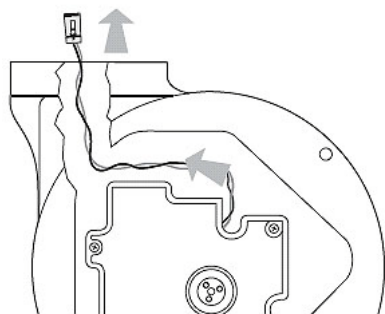


3. If the lead and connector are not visible or cannot be found, remove the four (4) 5mm mounting screws and the register cover. The meter switch lead and connector will be visible inside the cover.

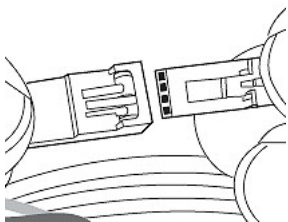


**Note** Save any meter tags. You will re-install them later in the installation process.

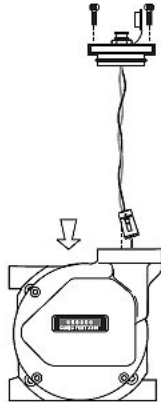
4. Feed the lead and connector into the register cover tower.



5. If you removed the register cover, replace the cover using the four (4) 5mm mounting screws.
6. Attach the 4-pin male connector on the Elster American Meter adapter plate to the 4-pin female connector inside the meter's tower. The connectors will slide together and latch.



7. Carefully push the connectors and wires into the meter tower housing.



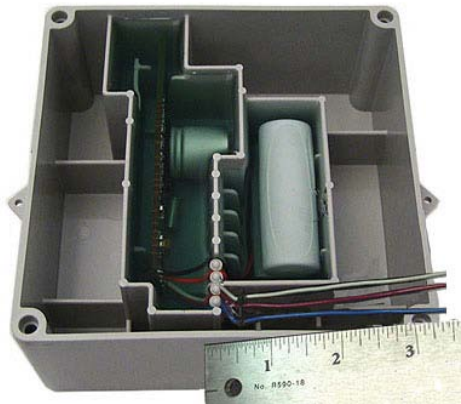
8. Lubricate the o-ring with o-ring lubricant and install the o-ring on the adapter plate. Insert the adapter plate into the tower and tighten the (2) 5 mm screws.

**To connect the manufacturer cable to the endpoint**



**Note** Connection to an Elster American Meter requires a cable interface compatible to an Elster American Meter RPM rotary meter.

1. Trim the 2.4GZ OpenWay Remote Mount Gas Module wires to 3.5".



2. Carefully strip the insulation covering from the meter cable (purchased from the meter manufacturer) approximately 1 1/2" from the end.



**Caution** Do not cut through the individual wire insulation.

3. Separate the black, white, and blue wires for connection to the 2.4GZ OpenWay Remote Mount Gas Module. Cut off the unused wires even with the outer covering (insulation).

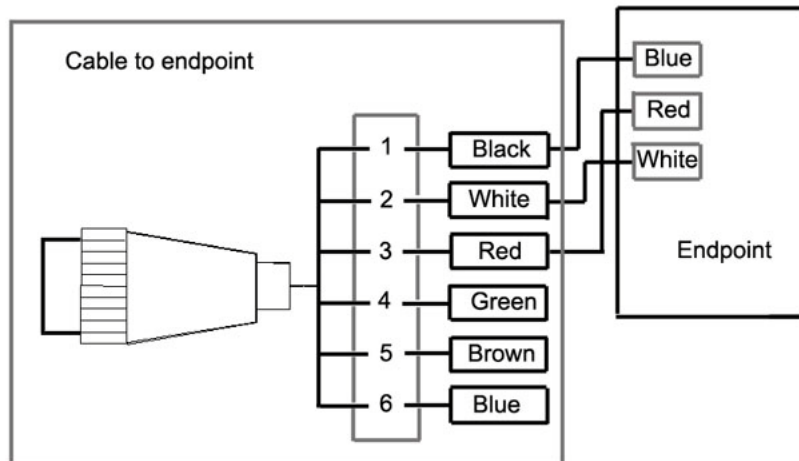
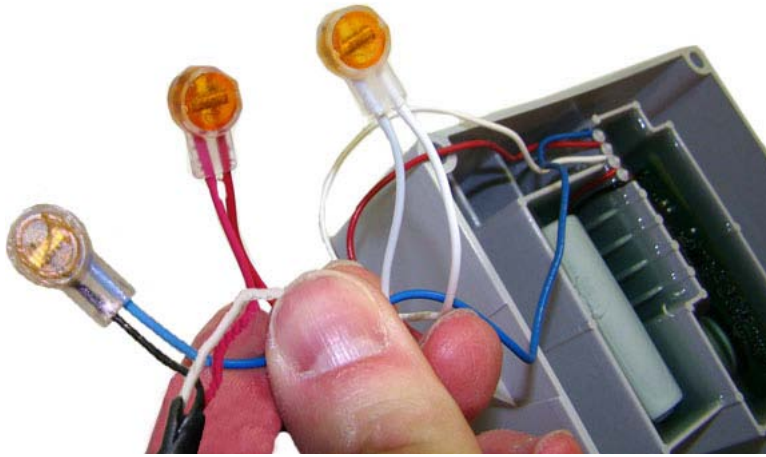


**Caution** Do not strip the individual wires.

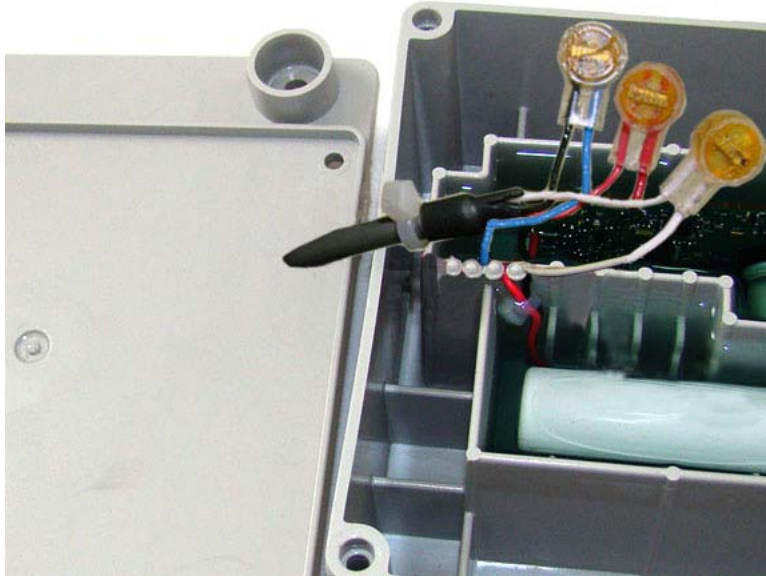
4. Connect the meter cable to the 2.4GZ OpenWay Remote Mount Gas Module using 3M gel-cap connectors. Follow the wire connection table and wiring diagrams below. See [Installation Prerequisites](#) on page 7 for appropriate 3M crimping tools.

**American RPM Meter to 2.4GZ Remote Mount Module Wire Connections**

American RPM Meter wire	2.4GZ Remote Mount module wire
Red	Red
White	White
Black	Blue



5. Insert the meter cable through the slot on the module backplate. Install a cable tie to the meter cable wire below the meter cable insulation to provide strain relief.

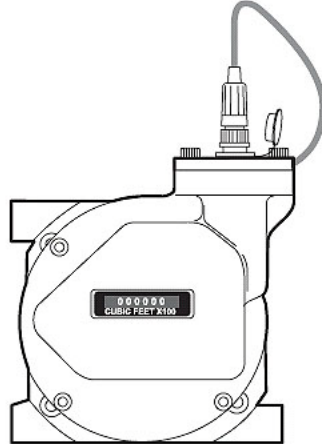


6. Tuck the connectors and cable tie into the endpoint housing. Place backplate on the assembly and tighten the four backplate screws using a size T-10 Torx screwdriver.



**To install the 2.4GZ OpenWay Remote Mount Gas Module cable**

1. Insert the plug on the cable connected to the module into the receptacle on the meter adapter plate.



2. Tighten the threaded collar on the plug onto the American Meter interface receptacle. Verify the connection is hand-tight.

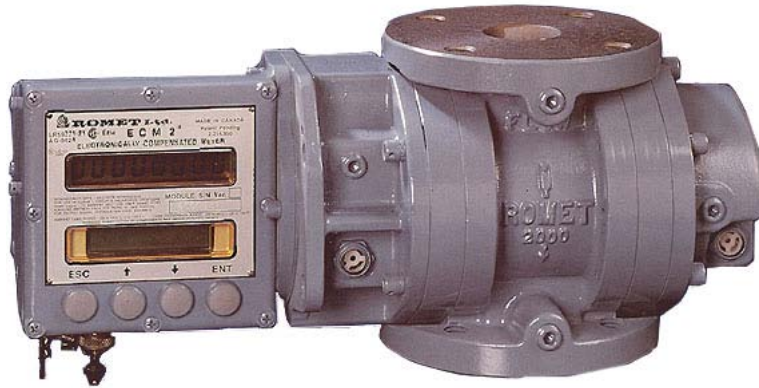
**Mounting the 2.4GZ OpenWay Remote Mount Module**

Select an appropriate mounting location on adjacent piping close to the meter. Using the pipe bracket, mounting plate and band clamps from the Remote Mount Kit (Itron part number CFG-0005-003), secure the 2.4GZ OpenWay Remote Mount Gas Module. Use the cable ties from the kit to secure any excess wire to the piping (see [Mounting the 2.4GZ Remote Mount Module on a Pipe](#) on page 10).





## Installing the 2.4GZ OpenWay Remote Mount Gas Module to the Romet Electronically Compensated Meter (ECM2®)



The Romet ECM2® meter has three Form "A" outputs that can be configured at the factory to provide any combination of the following three outputs:

- Uncorrected volume (UNC VOL)
- Corrected volume (COR VOL)
- Alarm

The pulse weight for the volumetric outputs is configured in *SetUp Mode* at **Menu items>SET UNC OUT** and **SET COR OUT**. Since Setup Mode is fully configurable, the ECM2® module is universally adaptable to all Romet TC meter bodies. Reference the Romet technical manual for specific details on the ECM2®.

## Connecting the 2.4GZ OpenWay Remote Mount Gas Module to the Romet ECM2® Meter

Connect the correct interface wirings and set the output pulse spacing to complete 2.4GZ OpenWay Remote Mount Gas Module installation with the Romet ECM2® meter. See the ECM2® Interface Wiring Table below to complete wire connections.

Function		(+)UC	(-)UC	(+)CC	(-)CC	(+)ALM	(-)ALM	(+)Aux.CC	(-)Aux.CC
Endpoint Wire		White and Blue	Red	White and Blue	Red	White and Blue	Red	White and Blue	Red
Pin location for Cannon Connector Part Number	34-125-20	C	B	A	B	E	D		
	34-125-40	A	B	C	D	E	F		
	34-125-41	A	B	C	D	E	F		
	34-125-42	E	F	A	B	C	D		
	34-125-43			A	B	E	F	C	D
	34-125-44							A	B
	34-125-45	A	B	E	D	C	F		
	34-125-50	3	1	2	5	6	4		
	34-125-51	3	1	2	5			6	4



**Caution** Set the ECM2® output pulse spacing to 750ms for operation with the 2.4GZ OpenWay Remote Mount Gas Module. Output spacing represents an off-time between pulses.

### To mount the 2.4GZ OpenWay Remote Mount Gas Module on the Romet ECM2 meter

This mounting procedure requires the Romet ECM2/Module Mounting Kit (Romet part number 34-444-1-KIT).



1. Remove the module screw from the back of the ECM2 meter and discard.



2. Insert the mounting screw fitted with the three lock washers. Two lock washers are used as spacers as shown.



3. Attach the mounting plate to the meter. Insert the mounting screw where the module screw was removed. Torque the mounting screw to 5 - 7 ft.lbs. to secure the plate to the Romet meter.



4. Mount the 2.4GZ OpenWay Remote Mount Gas Module using the pre-drilled holes on the mounting plate and the module mounting screws. Place new tamper seals over the two screws. Press tamper seals into place using an 11/32" nut driver or similar blunt tool. Connect the module to the meter using the previously installed cable interface.



