

Natural Gas Solutions

2.4GZ OpenWay Gas Module Installation Guide - Remote Mount

Putting knowledge to work.

Identification

2.4GZ OpenWay Gas Module Installation Guide - Remote Mount
09/08/2009 TDC-0838-000 Preliminary

2.4GZ Gas Module Endpoint part numbers: OWG-5001-501, OWG-5001-502, OWG-5001-503, OWG-5001-504
OWG-5002-501, OWG-5002-502, OWG-5002-503, OWG-5002-504

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Suggestions

If you have comments or suggestions on how we may improve this documentation, send them to TechnicalCommunicationsManager@itron.com

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Safety Approvals

Intrinsically safe per UL Class I, Division 1, Groups C & D

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. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Operation 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.

Transportation Classification

The Federal Aviation Administration prohibits operating transmitters and receivers on all commercial aircraft. When powered, the 2.4GZ OpenWay Remote Mount Module 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.



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.

Document Conventions

The following documentation conventions are used:



Caution A Caution 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 A Warning alerts you 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.



Tip A Tip provides the user with extra hints/tips to make a task easier to perform or a concept easier to understand.



Note A Note supplies generic information to the user. The information could be ignored and the user could continue with a task without suffering any adverse consequences.

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2.4GZ OpenWay Remote Mount Gas Module Installation

2.4GZ OpenWay Remote Mount Gas Modules are radio-frequency (RF) devices operating over the 2.4 GHz frequency. The 2.4GZ OpenWay Remote Mount Gas Modules communicate with ZigBee®-compliant electric meters to transmit gas consumption data bytes. Modules store 40 days of hourly intervals and are programmed to bubble-up every 12 or 24 hours. Alternatively, the 2.4GZ OpenWay Remote Mount Gas Module can be awakened with an Itron magnet for programming or for binding to an OpenWay electric meter. When 2.4GZ Openway Gas Modules are installed alongside Itron OpenWay electric meters, the OpenWay solution for combo gas and electric utilities provides unprecedented management flexibility.

This installation guide provides step-by-step instructions for installing the 2.4GZ OpenWay Remote Mount Gas Module on a wide variety of meters. 2.4GZ OpenWay Remote Mount Gas Module compatible meters are listed in the Meter Compatibility List.

Transmission Modes

The 2.4GZ OpenWay Remote Mount Gas Module can be set to transmit to Standard, Daily or Hourly Mode.

- Standard Mode - The 2.4GZ Remote Mount Gas Module transmits the current index read and Daily Freeze Time read; Daily Freeze Time read is programmable for any hour.
- Daily Mode - In addition to transmitting Standard Mode information, the 2.4GZ Remote Mount Gas Module transmits 40 days of daily interval data based on Daily Freeze Time reads.
- Hourly Mode - In addition to transmitting Standard Mode information, the 2.4GZ Remote Mount Gas Module transmits the last 24 hourly intervals.

Programming Modes

The 2.4GZ OpenWay Gas Module is programmed or reprogrammed to Normal, Sleep, or Doze Mode as defined in the configuration file. The table below describes these modes.

Mode	Description/Use Case	Radio	Metering (counting)	How to Enter this Mode	How to Exit this Mode
Normal	Normal Operating Mode. Used for Field Programming when electric meters are present or being installed.	On	On	Mag Swipe or Programmer	Programmer (can reprogram to any mode specified)
Sleep	For Shipping or Storage of modules Uses the least amount of battery current since the module does not communicate with the electric meter.	Off	Off	Programmer	Mag Swipe (to normal) or Programmer (to specified)
Snooze	Pre-program modules and deploy so they try to join the network automatically when they are installed in the field. The flow of gas or Mag Swipe triggers the module to change to Normal Mode.	Off	On	Programmer	Mag Swipe (to normal) Programmer (to specified) or Count Increment (to normal)
Doze	Pre-program meters in factory and deploy so they do not try to join the network when installed (for example, install gas before electric OR in factory counts will be added after programming and user does not want the radio turned on).	Off	On	Programmer	Mag Swipe (to normal) or Programmer (to specified)

Specifications

The following tables list the functional and operational specifications for the 2.4GZ OpenWay Remote Mount Gas Module.

Functional Specifications	Description
Power Source	Two "A" cell lithium batteries
Tamper Detection	Tilt tamper and magnetic tamper
FCC Compliance	Part 15 certified
Industry Canada Compliance	RSS-210 certified
Measurement Canada Approval	Pending
Intrinsic Safety	UL Class I, Division 1, Groups C and D
Product Identification	Numeric and bar coded 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% relative humidity
Frequency Band	2.405 to 2.475 GHz ISM band
Modulation	Direct Sequence Spread Spectrum
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
2.4GZ OpenWay Remote Mount Gas Module Specification Sheet	Publication 100818SP-XX
Endpoint Link Programming Guide	TDC-0744

2.4GZ OpenWay Remote Mount Gas Module Meter Compatibility List

This table lists meters compatible with the 2.4GZ OpenWay Remote Mount Gas Module. Due to continuous research, product improvements, and enhancements Itron reserves the right to change this list without notice.

Meter	Model	Description	Class	Comments	Module Type	Module Part Number
Elster/American/ Canadian	10 Metric (10B)	Iron case	Residential	IPP*	2.4GZ OpenWay Remote	OWG-5001-501
				SEP* 2.5' cable with encoder	2.4GZ OpenWay Remote	OWG-5002-501
Sensus/Invensys	Sonix 12,16,25,57, 600,880,2000	Pulser Metric Cubic foot	Commercial	IPP*	2.4GZ OpenWay Remote 5' cable	OWG-5001-502
				SEP*	2.4GZ OpenWay Remote 5' cable	OWG-5002-502
				IPP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5001-503
				SEP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5002-503
National/ Lancaster	All meters	Where direct mount is not compatible	Residential	IPP*	2.4GZ OpenWay Remote	OWG-5001-501
				SEP* 2.5' foot cable with encoder	2.4GZ OpenWay Remote	OWG-5002-501
Itron/Actaris Schlumberger/ Sprague	1A	Where direct mount is not compatible	Residential	IPP*	2.4GZ OpenWay Remote	OWG-5001-501
				SEP* 2.5' cable with encoder	2.4GZ OpenWay Remote	OWG-5002-501
Itron/Actaris/ Schlumberger/ Sprague	Metris 250	Straight Face meter	Residential	IPP*	2.4GZ OpenWay Remote	OWG-5001-501
				SEP* 2.5' cable with encoder	2.4GZ OpenWay Remote	OWG-5002-501
Schlumberger/ Sprague	400	#3 flat-face meter		IPP*	2.4GZ OpenWay Remote	OWG-5001-501
				SEP* 2.5' cable with encoder	2.4GZ OpenWay Remote	OWG-5002-501

2.4GZ OpenWay Remote Mount Gas Module Meter Compatibility List

Meter	Model	Description	Class	Comments	Module Type	Module Part Number
Itron/Actaris/ Schlumberger/ Sprague	675, 1000	Front mount index	Commercial	IPP*	2.4GZ OpenWay Remote	OWG-5001-501
				SEP*	2.4GZ OpenWay Remote	OWG-5002-501
Elster/American/ Romet	TC and STD CTR	American RPM series rotary meters including TC and non-TC.	Commercial	IPP*	2.4GZ OpenWay Remote 5' cable	OWG-5001-502
				SEP*	2.4GZ OpenWay Remote 5' cable	OWG-5002-502
				IPP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5001-503
				SEP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5002-503
Romet	RM Series	ECM2	Commercial	IPP*	2.4GZ OpenWay Remote 5' cable	OWG-5001-502
				SEP*	2.4GZ OpenWay Remote 5' cable	OWG-5002-502
				IPP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5001-503
				SEP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5002-503
				Meter must have connector pin with factory-installed pulse output. Purchase endpoint from Itron and correct cable interface from appropriate meter manufacturer.		
				Meter must have connector pin with factory-installed pulse output. Purchase endpoint from Itron and correct cable interface from Romet. ECM2 must be configured for 750ms "off-time" between pulses. The ECM2 must have firmware version J or later.		

Meter	Model	Description	Class	Comments	Module Type	Module Part Number
Dresser ROOTS®	B3/LMMA	Dresser ROOTS® rotary meters equipped with WeigandWire solid state pulsers	Commercial	IPP*	2.4GZ OpenWay Remote 5' cable	OWG-5001-502
				SEP*	2.4GZ OpenWay Remote 5' cable	OWG-5002-502
				IPP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5001-503
				SEP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5002-503
				Meter must have factory-installed pulser with connector output. Purchase endpoint from Itron and correct cable interface from Dresser. Dresser pulser must be version 17 or higher to be compatible.		
Itron/Actaris	Dattus fM2/fM3		Commercial	IPP*	2.4GZ OpenWay Remote 5' cable	OWG-5001-502
				SEP*	2.4GZ OpenWay Remote 5' cable	OWG-5002-502
				IPP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5001-503
				SEP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5002-503
				For all meter types, pulse width must be set to .050 seconds. Meter type 11M or smaller must have pulse weight minimum of 10 cubic feet or 1 cubic meter. Meter type 16M or greater must have pulse weight minimum of 100 cubic feet or 1 cubic meter.		

2.4GZ OpenWay Remote Mount Gas Module Meter Compatibility List

Meter	Model	Description	Class	Comments	Module Type	Module Part Number
Mercury Correctors	EC-AT Mini-P Mini-AT Mini-Max	Pressure and temperature electronic volume correctors	Commercial	IPP*	2.4GZ OpenWay Remote 5' cable	OWG-5001-502
				SEP*	2.4GZ OpenWay Remote 5' cable	OWG-5002-502
				IPP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5001-503
				SEP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5002-503
				Correctors must have a Form A board; Form C is NOT supported. Item #056 Pulse Scaling Factor must be set to 2.0. Item #096 Cor Vol Display must be set at 1, 2, 3, or 4 blanks. endpoint does NOT support a setting of 0 blanks. Item #115 Output Pulse Code must be set at 1, 2, 3, or 4. endpoint does NOT support an Output Pulse Code of 0.		
Mercury Correctors	TCI		Commercial	IPP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5001-504
				SEP*	2.4GZ OpenWay Remote 12" lead wires	OWG-5002-504

*IPP: Itron Private Profile; SEP: Smart Energy Profile

Installation Prerequisites

The following tools are required to install, program, and check the 2.4GZ OpenWay Remote Mount Gas Module. Some specific tools may be required dependent on meter or instrument type.

- Medium flat-blade screwdriver
- Small flat-blade screwdriver
- Medium Phillips-drive screwdriver
- Hand pliers
- Side-cutting pliers - to cut wires and/or cables
- 1/4" nut driver or similar blunt tool - to seat endpoint tamper seals
- One-inch width putty knife
- Adjustable wrench
- 3M Scotchlock E-9Y crimping tool, 3M Scotchlock E-9C cartridge tool, or similar crimping tool
- All-weather electrical tape
- Size T-10 Torx screwdriver
- FC200SR loaded with Endpoint-Link or Endpoint-Link Pro software - to program and check endpoint.



Note Reference the appropriate programming guide or specification sheet for correct software version.



Caution Program the 2.4GZ OpenWay Remote Mount Gas Modules using FC200SR Handheld computer loaded with Endpoint-Link or Endpoint-Link Pro software version 5.3 or later.

CHAPTER 2

Mounting the 2.4GZ OpenWay Remote Mount Gas Module




This chapter provides the instructions to mount the 2.4GZ OpenWay Remote Mount Gas Module on a pipe or other flat vertical surface (wall).

Installation Options

Mount the 2.4GZ OpenWay Remote Mount Gas Module using the Pipe Mount or Wall Mount (Flat Surface) procedure.

- Pipe Mount - Pipe mounting is used in conjunction with the Remote Mount Kit (Itron part number CFG-0005-003). The pipe mount option places the endpoint on a pipe near the meter or instrument (not on a wall surface). This option requires a meter manufacturer's cable to connect the endpoint to the meter or instrument.
- Flat Vertical (Wall) Mount - Installation using the wall mount option places the endpoint on a wall or other vertical surface. A cable connects the endpoint to the meter or instrument.

Mounting Screw Specifications

Application	Itron Part Number		Description
To mount adapter plates on pipe brackets	575-9930-016		8-16 x 1/2" length, Type 8 slotted pan-head tapping screw - corrosion-resistant steel
To mount endpoints on adapter plates	575-9930-032		8-16 x 1" Type 8, slotted pan-head tapping screw, corrosion-resistant steel
To mount endpoints on sheet metal surfaces (to mount endpoints to wood surfaces, a comparable wood screw is required)	SCR-0009-001		10-16 x 1 1/2" Type AB thread for sheet metal, Phillips pan-head tapping screw, corrosion-resistant steel

Mounting Installation Considerations

Select a proper mounting location. Itron recommends mounting the 2.4GZ OpenWay Remote Mount Gas Module in close proximity to the meter or instrument. Some applications may require an extended cable-length. The 2.4GZ OpenWay Remote Mount Gas Module supports cable lengths up to 300 feet.

Mount the 2.4GZ OpenWay Remote Mount Gas Module upright in a vertical position with the endpoint label easily read and the directional arrow pointed upward.



Caution Upright vertical positioning is very important because:



- 2.4GZ OpenWay Remote Mount Gas Modules are designed with the antenna in a vertical direction so the antenna is parallel to the reading device (which has a vertical antenna). Matching antenna polarity can greatly affect RF performance and enable easy module reading.
- 2.4GZ OpenWay Remote Mount Gas Modules are designed so the tilt tamper is vertical. It is important to maintain vertical positioning in the field to enable tilt tamper stability.



Warning Do not mount 2.4GZ OpenWay Remote Mount Gas Modules in an orientation other than vertical (module label arrow pointed upward). Violating the mounting orientation requirements on the equipment documentation (label) will void the product warranty.

Mounting the 2.4GZ OpenWay Remote Mount Gas Module on a Pipe

The following items are required to mount the 2.4GZ OpenWay Remote Mount Gas Module on a pipe or vertical flat surface (wall):

Itron Part Number	Description	
OWG-5001-501(IPP) OWG-5002-501(SEP)	2.4GZ OpenWay Remote Mount Gas Module with 2.5-foot cable and encoder	
CFG-0005-003	<p>Remote Mount Installation Kit</p> <p>Kit includes:</p> <ul style="list-style-type: none"> • (2) two band clamps • (2) two tamper seals • pipe bracket • cable ties • adapter plate • Screws - (2) 1/2" - to attach the adapter plate to pipe bracket • (2) 1" - to attach the endpoint to the adapter plate • (3) 1 1/2" - to attach the endpoint to a vertical surface (wall) 	



Warning Install the 2.4GZ OpenWay Remote Mount Gas Module in an upright position. Any position other than upright can negatively affect radio performance and reduce battery life.

To mount the pipe bracket on a vertical pipe

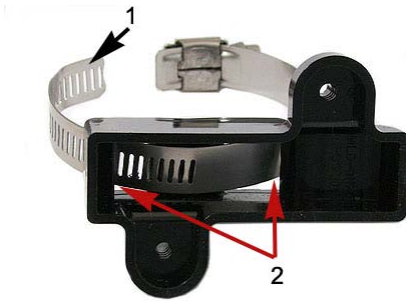
1. Remove the pipe bracket and band clamp from the Remote Mount Installation Kit (Itron part number CFG-0005-003).



2. Loosen the band clamp screw until the end of the band releases.



3. Push the end of the clamp's band (1) through the holes (2) in the pipe bracket. The pipe bracket must be oriented as shown below.



4. Place the band clamp around the pipe. The band will loosely wrap around the pipe. Push the end of the band through the band clamp screw assembly. Turn the band clamp's screw assembly to fit into the pipe bracket opening. Tighten the clamp screw until the band clamp is secure on the pipe.

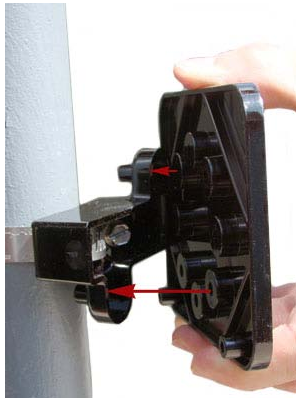


Caution The pipe bracket must fit firmly against the pipe to prevent slippage.

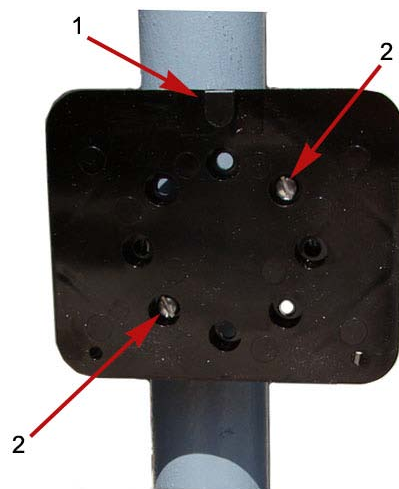


To mount the adapter plate on the pipe bracket

1. Place the adapter plate on the pipe bracket with the mounting lug at the top. The adapter plate screw bosses fit into the pipe bracket recess.



2. Ensure the adapter plate is positioned as shown below with the mounting lug (1) at the top. To install the adapter plate on a vertical pipe, use the two shortest (1/2") adapter plate mounting screws from the Remote Mount Installation Kit. Place the mounting screws (2) in the holes shown below.



3. Tighten both screws securely in an alternating fashion. Itron recommends 9 to 12-inch-pounds of torque.

To mount the 2.4GZ OpenWay Remote Mount Gas Module on the adapter plate

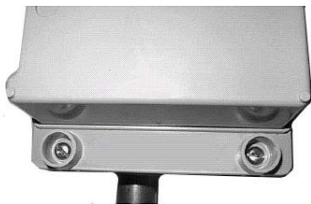
1. Take the 2.4GZ OpenWay Remote Mount Gas Module and the two 1" mounting screws from the Remote Mount Installation kit. Place the back of the remote endpoint against the face of the adapter plate. The adapter plate mounting lug (1) must be positioned just above the endpoint mounting lug recess (2).



2. Push up on the 2.4GZ OpenWay Remote Mount Gas Module until the adapter plate mounting lug (1) is as far as possible inside the endpoint mounting lug recess (2).



3. Install the two 1" endpoint mounting screws from the installation kit.



Caution Verify the 2.4GZ OpenWay Remote Mount Gas Module is in an upright, vertical position with the arrow on the label pointing upward. Upright vertical positioning is very important because:

- 2.4GZ OpenWay Remote Mount Gas Module endpoints are designed with the antenna in a vertical direction so the antenna is parallel to the reading device (which has a vertical antenna). Matching antenna polarity can greatly affect RF performance and enable easy endpoint reading.
- 2.4GZ OpenWay Remote Mount Gas Module endpoints are designed so the tilt tamper is vertical. It is important to maintain vertical positioning in the field to enable tilt tamper stability.

4. Tighten the endpoint mounting screws evenly in an alternating fashion. Itron recommends 9 to 12 inch-pounds of pressure.

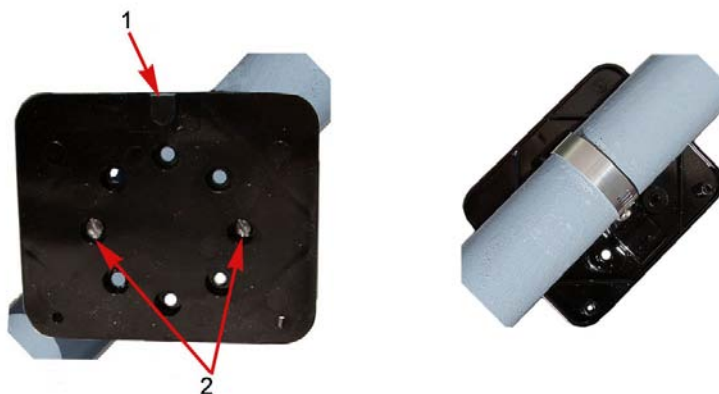
Adapter Plate Mounting Positions

The following pictures show adapter plates mounted on horizontal or 45-degree angle pipes.

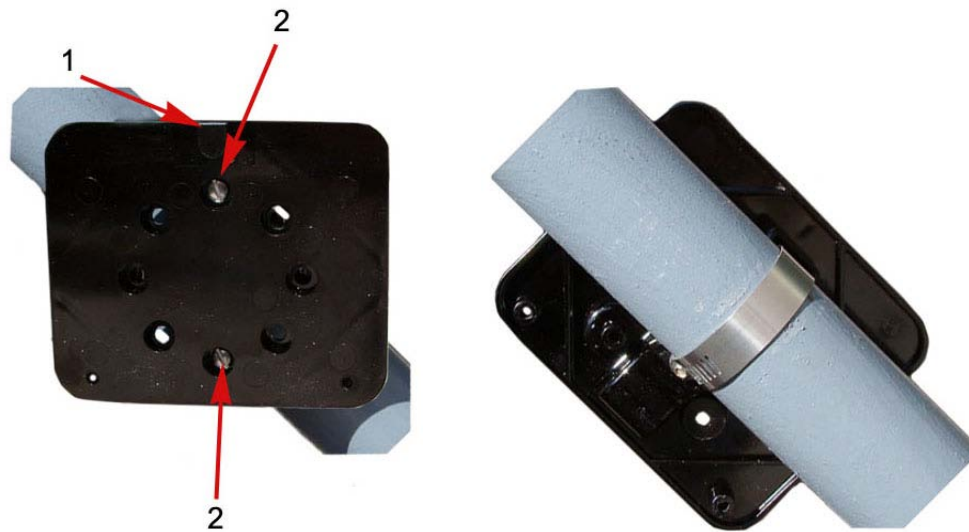


Caution Regardless of the pipe's direction, the adapter plate mounting lug must always be at the top.

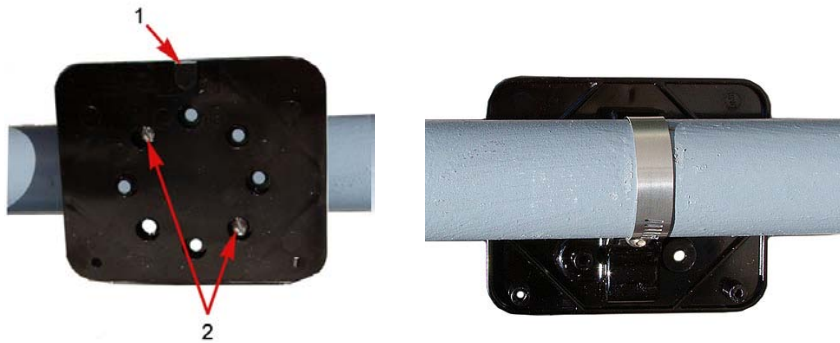
If the pipe is a 45 degree angle up to the right, install the adapter plate as shown below.



If the pipe is a 45 degree angle up to the left, install the adapter plate as shown below.



If the pipe is horizontal, install the adapter plate as shown below.



To install tamper seals and cable ties

1. Place the new tamper seals from the Remote Mount Installation Kit over the 2.4GZ OpenWay Remote Mount Gas Module mounting screws.



2. Firmly push both tamper seals all the way into place with a 1/4-inch nut driver or similar blunt tool.



Note A tamper seal is fully seated when the top of the tamper seal is approximately 1/16 inch below the top of the screw recess.

3. Gather any excess endpoint cable. Loop a cable tie around the pipe and excess endpoint cable.



4. Insert the chiseled end of the cable tie into the locking end and pull the cable tie tight. Cut off and properly dispose the excess cable tie.



2.4GZ OpenWay Remote Mount Gas Module pipe mount installation is complete.

Mounting the 2.4GZ OpenWay Remote Mount Gas Module on a Wall or Other Flat Vertical Surface

To mount the 2.4GZ OpenWay Remote Mount Gas Module on a wall or other flat vertical surface

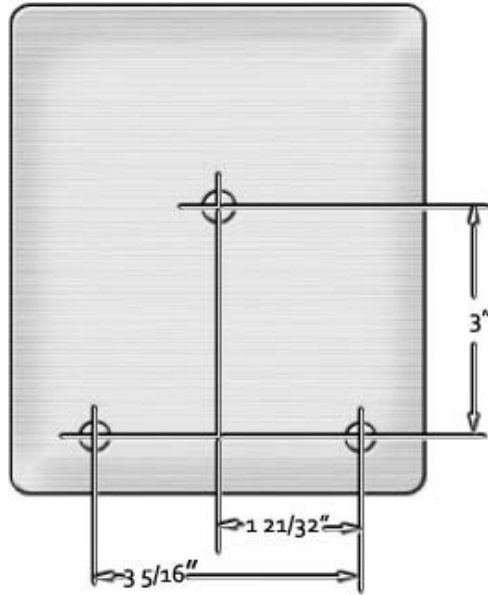
1. For easier installation, you may drill three pilot holes in the mounting surface (use the proper size drill bit to accommodate the endpoint mounting screws, see the Drilling Template below).



Note When drilling pilot holes to mount the 2.4GZ OpenWay Remote Mount Gas Module, the holes for the two bottom screws must be on a horizontal line. If the endpoint will be mounted on a sheet metal surface, use the mounting screws included with the 2.4GZ OpenWay Remote Mount Gas Module mounting kit. Use a comparable wood screw to mount the endpoint on a vertical wood surface.

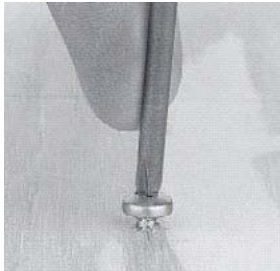


Warning Carefully select a mounting location free from electrical wires. The mounting location must have the proper clearance to accommodate the 1 1/2" endpoint mounting screws so nothing is damaged by the drill or mounting screws.

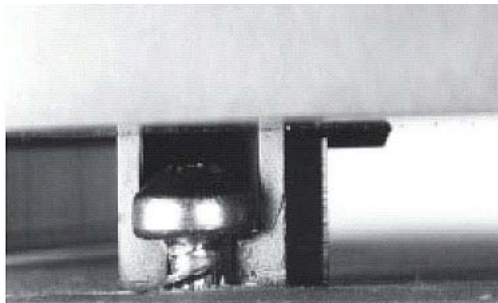


2.4GZ OpenWay Remote Mount Gas Module drilling template

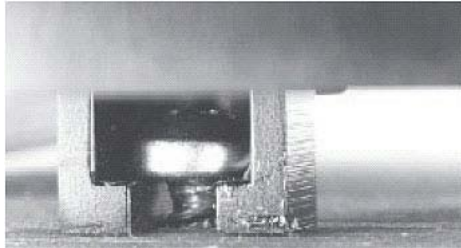
2. Using the three 1 1/2" mounting screws from the Remote Mount Installation Kit, turn the mounting screw for the mounting lug (top of endpoint) part way into the mounting surface.



3. Place the 2.4GZ OpenWay Remote Mount Gas Module mounting lug recess (on the top of the endpoint backplate) just under the screw head.



- Slide the endpoint upward until the screw head fits completely inside the mounting lug recess. Several adjustments may be necessary to properly position the screw for endpoint mounting.



- Install the bottom two mounting screws. Fasten screws in an alternating fashion until fully tightened to secure the endpoint firmly in position.



To install tamper seals and cable ties

- Place a new tamper seal (from the Remote Mount Installation Kit) over each endpoint mounting screw.

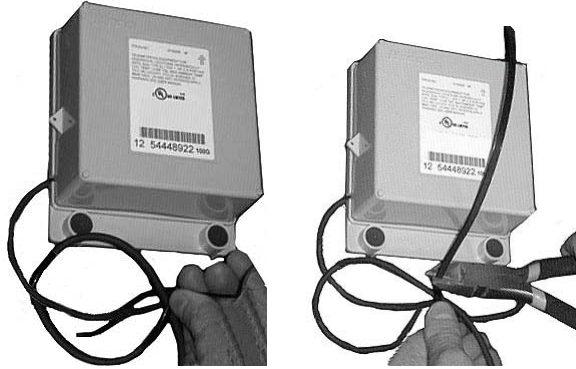


- Firmly push both tamper seals into place with a 1/4" nut driver or similar blunt tool.



Note A tamper seal is fully seated when the top of the tamper seal is approximately 1/16 inch below the top of the screw recess.

3. To reduce the risk of cable damage, secure the excess endpoint cable with the cable ties from the Remote Mount Installation Kit. Pull the cable tight. Remove and properly dispose the excess cable tie.



Caution Upright vertical installation is very important!

- 2.4GZ OpenWay Remote Mount Gas Module endpoints are designed with the antenna in a vertical direction so the antenna is parallel to the reading device (which has a vertical antenna). Matching antenna polarity can greatly affect RF performance and enable easy endpoint reading.
- 2.4GZ OpenWay Remote Mount Gas Module endpoints are designed so the tilt tamper is vertical. It is important to maintain vertical positioning in the field to enable tilt tamper stability.



2.4GZ OpenWay Remote Mount Gas Module installation on a vertical flat surface or wall is complete.

