

# Water Solutions

## 60WP Endpoint Installation Guide

*Putting knowledge to work.*

## Identification

60WP Endpoint Installation Guide

Part number: PUB-0771-002 Revision 003

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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.

Complies with IC: R.S.S.-210

## Transportation Classification

The Federal Aviation Administration prohibits operating transmitters and receivers on all commercial aircraft. When powered, endpoints are considered operating transmitters and receivers and cannot be shipped by air. **All product returns must be shipped by ground transportation.**

## Repairs and Modifications

**WARNING!** Attempts to repair this device by unauthorized personnel may subject the person to shock hazard if removal of protective covers is attempted. Unauthorized repair may void the warranty and/or maintenance contract with your company.

**WARNING!** This unit cannot be modified and is not repairable. Modification of this device could cause non-compliance with FCC rules. Attempts to modify this device will void the warranty.

## Lithium Batteries

**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, or incinerate the lithium battery.
- Keep the lithium battery away from children.

## Support

If you have questions or comments about this product, contact Itron Technical Support:

### North America

- E-mail: [support@itron.com](mailto:support@itron.com)
- Phone: 1 800 635 8725

### Australasia

- E-mail: [helpdesk@itron.com.au](mailto:helpdesk@itron.com.au)
- Phone within Australia: 1 800 246 377
- Phone outside Australia: 61 2 9299 5744

### International

- E-mail: [support.emea@itron.com](mailto:support.emea@itron.com)
- Phone: +31 20 60 65 220

### Web Support

<http://eKnowledge.itron.com>

## Itron Website

<http://www.itron.com>

## Suggestions

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

## Document Revision

The content of this publication was last edited on 5/23/2008.

# Contents

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<b>Before You Begin .....</b>	<b>v</b>
How This Document is Organized.....	v
Documentation Conventions .....	vi
 <b>Chapter 1 About the 60WP Endpoint .....</b>	 <b>7</b>
Battery Life .....	7
Installation Options.....	7
Operating Modes.....	8
Included Materials .....	9
Accessories .....	10
Installation Process Overview .....	10
 <b>Chapter 2 Installing the 60WP Endpoint.....</b>	 <b>11</b>
Rod Mount Installation.....	11
Required Tools and Hardware - Rod Mount Installation.....	11
Wall Mount Installation .....	16
Required Tools and Hardware - Wall Mount Installation .....	16
Installing Using a Wall Mount.....	16
Through-Lid Mounting .....	18
Pit Lids with Holes.....	18
Required Tools and Hardware.....	18
Installing Through New Lid .....	20
Required Tools and Hardware.....	21
Shelf Mount Installation .....	23
Required Tools and Hardware .....	24
 <b>Chapter 3 Connecting the 60WP .....</b>	 <b>27</b>
Using an Inline Connector .....	27
Using a 5-Foot Cable .....	29
Using an Extended Cable.....	30
 <b>Chapter 4 Programming and Verifying 60WP Endpoint Operation .....</b>	 <b>31</b>
Activating Programming Mode .....	31
Programming the 60WP Endpoint.....	32
Verifying Operation of the 60WP Endpoint .....	34



## CHAPTER

# Before You Begin

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This document describes the installation of the 60WP Endpoint for rod mount, wall mount, through-lid, and shelf mount installations. The 60WP Endpoint is available in the following cable configurations:

- Inline connector with approximately six inches of cable
- 5-foot open-end cable
- 6-inch open-end cable

These cable combinations allow easy interface to several types of pulser meter registers.

The 6-inch cable variant allows meter manufacturers to integrally mount the endpoint to their respective meter registers. When installing a meter register in a water pit box that is configured in this manner, it is important to recognize that the distance from which the endpoint's radio signal can be detected will be significantly reduced as the meter is located deeper in the pit box. When a point is reached where read reliability is compromised, a new installation method must be selected.

## How This Document is Organized

This document is organized as shown in the following table.

Chapter	Description
Before You Begin	Provides information about this publication.
About the 60WP Endpoint	Gives an overview of the 60WP endpoint installation, including installation options, positioning, and required tools.
Installing the 60WP Endpoint	Provides step-by-step instructions for installing the endpoint using the rod mount, wall mount, through lid mount, or pit lid shelf mount.
Connecting the Endpoint to the Register	Provides information about wiring the endpoint to a register using the inline connector, a 5-foot cable, or an extended cable.
Programming the 60WP Endpoint	Describes how to activate programming mode, program the endpoint, and verify operation of the endpoint.

## Documentation Conventions

The following documentation conventions are used in this guide:

Convention	Example
Iron product part numbers are noted in parentheses.	To install the endpoint (ERW-0771-3XX), perform the following steps.
Hypertext links are in blue.	See <a href="#">Installation Process Overview</a> on page 10 for a diagram of the installation process.



**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 and instructions.



**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.

**NOTE!** This type of note provides additional information to the user.

## CHAPTER 1

# About the 60WP Endpoint

---

The 60WP Endpoint is an Automatic Meter Reading (AMR) module that collects consumption and tamper information and reports in a bubble-up fashion. Approximately every seven seconds, the 60WP Endpoint transmits a standard consumption message (SCM) at approximately +10dBm (10 milliwatts) between 910-920 MHz.

The 60WP Endpoint supports protocols for a variety of meter manufacturer's registers, including but not limited to AMCO, Badger, Sensus and Actaris registers. Refer to Itron part number PUB-0063-002, *Water Meter Compatibility List*, for the list of meter manufacturers currently supported.

The 60WP Endpoint features the following capabilities:

- **Leak Detection**—The 60WP Endpoint indicates by meter reading software that a potential system leak exists if a zero consumption value does not occur over a seven day period of hourly register reads. Upon detecting a zero consumption the leak message will be changed to an "Off" status and the seven day test period will be reset.
- **Tamper Indicators**—To minimize the possibility of theft, the 60WP Endpoint features cut cable tamper reporting as well as a security seal to indicate physical tampering. A cut cable tamper is reported when the cable connecting the register and endpoint has been cut or disconnected. The tamper indicator will continue incrementing until the problem has been resolved.

## Battery Life

Powered by a non-replaceable long life dual lithium battery pack, the 60WP Endpoint has an expected battery life of approximately 15 years.

## Installation Options

The 60WP Endpoint can be installed using the following methods:

- **Rod Mount**—Rod mount installation allows the endpoint to be mounted on a 1/2 inch outside diameter rod.
- **Wall Mount**—Wall mount installation attaches the endpoint to a wall or other vertical surface within a meter pit.
- **Through Lid**—Requires the pit lid mounting kit, enabling the endpoint to be mounted in lids with hole sizes from 1 3/4 inches to 2 inches. This method is used for passive radiator antenna applications.
- **Shelf Mount**—Used in conjunction with the shelf mount adaptor, this option allows the endpoint to slide into a pit lid slot.

Generally, for water pit boxes, the type of installation method chosen will be based on two factors: the type of lid material and the current lid configuration. Metal lids usually require a through-lid solution for optimal endpoint radio performance. Plastic lids and other composite materials are acceptable for any of the installation methods described above with some lids having an underneath shelf design.



**NOTE** For the shelf mount option, the pit lid slot must be the correct dimensions for the 60WP Endpoint assembly to fit. Evaluate each type of pit lid to determine the proper installation option. See [Shelf Mount Installation](#) on page 23 for more information.

## Operating Modes

The 60WP Endpoint provides the following operating modes:

- **Programming Mode** - Use the programming magnet (Itron part number MSE-0159-003) to activate the unit and put it into Programming Mode. The 60WP Endpoint stays in Programming Mode for 15 minutes. For the location of the magnet see [Activating Programming Mode](#) on page 31.



### NOTES!

- Hold the magnet in position for three seconds to activate Programming Mode. If it is held there longer than 15 minutes, you must remove the magnet for three seconds and then put it back into position to reactivate Programming Mode.
- You must activate Programming Mode in the 60WP Endpoint to verify operation. For more information see [Verifying Operation of the 60WP Endpoint](#) on page 34.
- **Normal Mode** - Following the 15-minute Programming Mode, the endpoint goes into Normal Mode and begins to operate as programmed.
- **Quiet Mode** - In Quiet Mode the endpoint turns off its transmitter and receiver functions. The unit can be put into Normal Mode by adding counts to the attached register or into Programming Mode using the magnet.
- **Off Mode** - The 60WP Endpoint is shipped in Off Mode. In Off Mode the unit does nothing unless activated by a magnet for programming.

You can program the 60WP Endpoint using an FC200SR handheld computer running the Endpoint-Link software. For more information about programming the endpoint, see [Programming the 60WP Endpoint](#) on page 32.

## Included Materials

The following materials are supplied by Itron:

- 60WP Endpoint with inline connector, protective cover for inline connector, and tamper seal for security - (ERW-0771-301) (Figure 1)
- OR
- 60WP endpoint with a 5-foot cable - (ERW-0771-311) (Figure 2)



**NOTE!** The 6-inch cable variant is only available to meter manufacturers and, therefore, installation for this model is not covered in this document.

*Figure 1: 60WP Endpoint with Inline Connector and Tamper Seal*



*Figure 2: 60WP Endpoint With 5-Foot Cable*



## Accessories

The following additional materials may be needed depending on your type of installation.

- Cable Ties (15-inch for indoor pipe mounting installation) - Itron part number CFG-0771-003 (Qty 72)

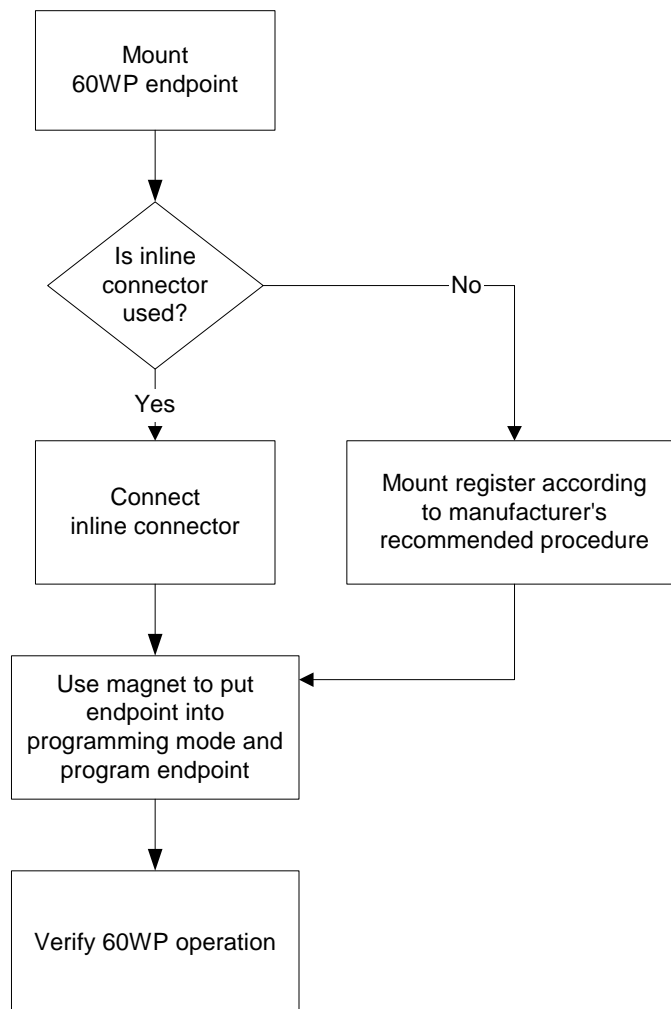


**IMPORTANT!** These cable ties are not intended to be used for mounting the 60WP in an outdoor or pit box environment. Use Panduit PLT4H-76 (or equivalent) cable ties for outdoor and pit box applications.

- Through-Lid Mounting kit - Itron part number CFG-0771-010 (Minimum order: 36)
- Shelf Mount Adaptor - Itron part number CFG-0771-007 (Minimum order: 36)

## Installation Process Overview

The process for installing a 60WP Endpoint is illustrated below.



## CHAPTER 2

# Installing the 60WP Endpoint

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This chapter shows you how to install the 60WP endpoint. Use one of the following procedures to mount the 60WP endpoint:

- [Rod Mount Installation](#) on page 11
- [Wall Mount Installation](#) on page 16
- [Through-Lid Mounting](#) on page 18
- [Shelf Mount Installation](#) on page 23

## Rod Mount Installation

The 60WP endpoint can be mounted below the pit lid on a customer-supplied rod. The example installation described in this section utilizes a 1/2-inch fiberglass rod. For supplier information on the rod material, see information under Compatibility Chart at the following Itron website address:

[www.itron.com/pages/products\\_detail.asp?ID=itr\\_000428.xml&pgtype=&subID=ar](http://www.itron.com/pages/products_detail.asp?ID=itr_000428.xml&pgtype=&subID=ar)



**WARNING!** You must ensure that the area where the rod will be installed is free from other pipes, wires, or facilities that may be damaged by driving a rod into the ground.



**CAUTION!** You must follow local codes when using the rod mount installation method.

## Required Tools and Hardware - Rod Mount Installation

The following items are required for the rod mount installation:

- Hammer
- 3/8-inch to 1/2-inch outside diameter rod (1/2-inch diameter is preferred for new installations)
- Tape measure
- Cutting tool for adjusting rod length

The following figure shows a bottom view of the rod mount. The 1/2-inch diameter rod hole is indicated in the photo.

*Figure 3: Rod Mount, Bottom View*



The following figure shows a side view of the rod mount, also indicating the 1/2-inch diameter rod hole.

*Figure 4: Rod Mount, Side View*



***To install using a rod mount***

1. Remove the pit lid. Inspect the area to make sure there are no buried cables, pipes, or other obstructions.
2. Measure the depth of the pit box from the top of the lip on which the lid will rest to the bottom of the pit. Be sure to measure the depth at the point where the rod will be driven into the ground.
3. Add 12 inches to the pit box depth measurement taken in step 1.2. The resulting total represents the minimum length of rod needed. Soil types and moisture conditions may require longer rod lengths to ensure the endpoint is well supported and remains vertical.
4. Without touching the meter body or adjacent pipes, position the rod as close to the center of the pit as possible, and then drive it into the ground.

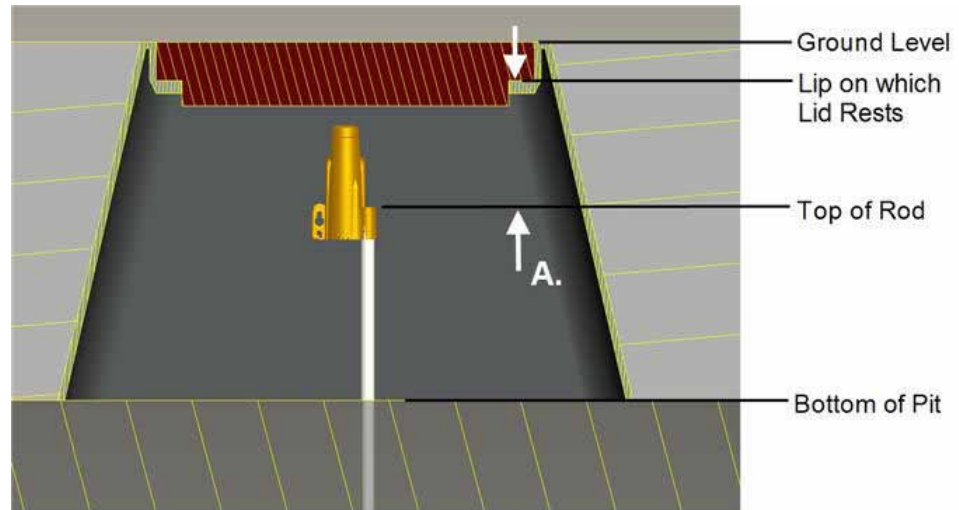
Ensure that the rod remains vertical.



5. Drive the rod into the ground to a depth that achieves dimension A in the illustration below.
  - If rod cannot be driven in sufficiently to achieve the 5 3/4 inch spacing, cut the remaining rod length to the proper height by using an abrasive cut off tool.
  - If the rod is driven to the correct depth but remains loose in the soil the rod should be replaced with a longer version.



**CAUTION!** When cutting fiberglass, use proper safety precautions when using cut-off tools and to prevent exposure to fiberglass dust particles.



A. Top of rod should be 5 3/4 inches below the lip on which the lid rests. (For pit lids extending more than 2 inches below the pit box lip, add the excess to the 5 3/4 inches)

6. Place the endpoint onto the rod, making sure the rod is completely seated into the Rod Mount hole of the endpoint. The endpoint should slide freely onto the rod; it should not be forced.



7. When the installation is complete the endpoint should be perpendicular to the underside of the lid. The endpoint should not contact the pit structure or lid.



**CAUTION!** If the endpoint module installation is too high, too low, or touching any of the surrounding surfaces, then adjust as necessary.



## Wall Mount Installation

For locations other than a water pit box, select a flat vertical mounting surface. Install the endpoint in an upright position, ensuring that the arrow on the endpoint label is pointing upward. Mounting the unit in an upside-down orientation will shorten battery life.

To mount the endpoint to a water pit box, select a mounting location on the inside the pit box and try to maintain a distance of one to three inches from the bottom of the pit box lid.



**NOTE** For cable lengths exceeding 150 feet, see Connecting With an Extended Cable.

## Required Tools and Hardware - Wall Mount Installation

The following items are required for a wall mount installation:

- Drill and drill bits for expected pit box material.
- Common hand tools for the type of fastening method selected.
- Mounting screws. Select a #10 size pan head screw that is appropriate for the type of box material.

## Installing Using a Wall Mount

To install the 60WP Endpoint using the wall mount method, mount the endpoint on the pit box wall so that the top of the endpoint is between one and three inches below the bottom of the lid.

Always mount the endpoint in a vertical position. When mounting to a curved surface, such as a round pit box, only tighten the mounting screws to a point where the endpoint is secure. Over-tightening could fracture the plastic mounting tabs.



**CAUTION!** When using the wall mount method, be careful not to over-tighten the mounting screws; the mounting tabs on the endpoint may break as a result.

### Procedure

1. Select a vertical surface in the meter box.
2. Position the endpoint vertically and approximately 1 inch from the top of the lid lip and mark location of top mounting hole.
3. Pre-drill a pilot hole in the pit box wall. Follow the screw manufacturer's recommendation to determine the size of the pilot hole.
4. For concrete-type pit boxes, it may be necessary to use a screw anchor. Choose an anchor that will accommodate a #10 pan head screw.

5. Start a screw into the pilot hole. Using the top hole of the endpoint, set the endpoint over the screw head and slide it down so the screw is now at the top of the notch as shown below. Tighten the screw until snug. Do not over tighten as this could potentially crack the endpoint housing.



6. Keeping the 60WP endpoint in the upright position, drill the second pilot hole using the bottom mounting hole as a template.



**NOTE!** If using a screw anchor, mark the location of the bottom anchor, remove the endpoint, drill the required hole, insert the anchor and reattach the endpoint.



**IMPORTANT!** Any endpoint position other than upright may negatively affect radio performance and battery life.

7. Screw the bottom screw into the pilot hole until snug.



**IMPORTANT!** Over tightening the screws may crack the endpoint housing plastic around the screw.

## Through-Lid Mounting

This section describes mounting the 60WP Endpoint in a pit lid that has an 1 3/4-inch, 1 7/8-inch, or 2-inch round hole drilled through it.



**CAUTION!** Some pit lids have a molded, recessed cavity that allows Itron 40W-1, 50W-1, and 50W-2 ERT modules to sit flush with the top surface of the lid. However, the dome of the endpoint retainer for the 60-series endpoints, and passive radiator antenna, have a smaller diameter and do not fill the pit lid cavity. This can make the cavity a trip hazard. Itron does not recommend using this type of pit lid with the 60-series endpoints.

## Pit Lids with Holes

This section describes how to install the 60WP Endpoint in a pit lid that already has a 1 3/4-inch, 1 7/8-inch or 2-inch hole in the lid. The Pit Lid Mounting Kit or the Passive Radiator Antenna Kit can be used for this application. This section will explain how to install both types of kits. Please refer to publication PUB-0771-010 for guidance on which kit to install for different pit lid material and traffic conditions.



**NOTE** For lids that require a hole to be drilled, see [To install in new lids](#) on page 21.

## Required Tools and Hardware

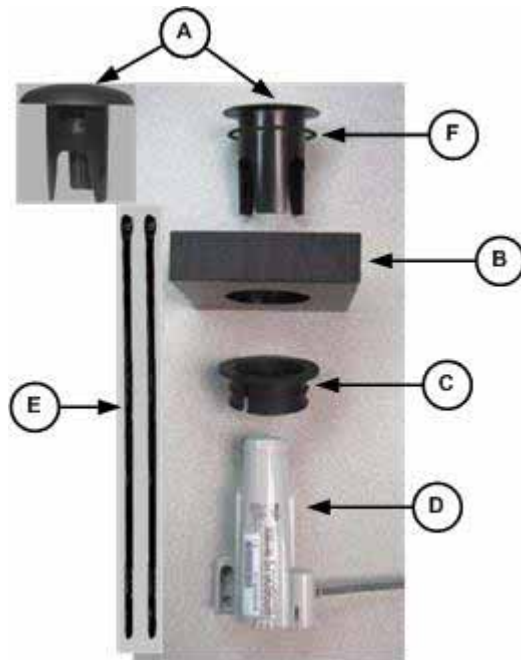
- Pit lid mounting kit (Itron part number CFG-0771-010) or passive radiator antenna kit (Itron part number CFG-0771-006)
- Cable tie gun



**NOTE** The pit lid mounting kit is not intended for applications involving vehicular traffic. The passive radiator antenna should be used in incidental traffic areas, such as residential environments.

**To install in lids with holes**

1. Make sure you have all the following items to complete the installation.



- |   |   |
|---|---|
| A | Retainer clip or passive radiator antenna         |
| B | Simulated pit lid                                 |
| C | Retainer clip collar                              |
| D | 60WP Endpoint                                     |
| E | Cable ties  |
| F | O-ring spacer (not required for 1 3/4-inch holes) |
- 
2. Measure the diameter of the hole in the pit lid. If the hole diameter is 1 3/4-inch, an O-ring spacer is not required.
  3. For 1 7/8-inch or 2-inch holes place the appropriate O-ring spacer over the pit lid mounting kit, or passive radiator antenna.
  4. Insert the retainer clip, or passive radiator antenna, into the hole in the pit lid.
  5. From the underneath side of the lid, place the retainer clip collar around the retainer clip and snug the collar to the bottom side of the pit lid. Ensure that the top of the retainer clip is seated against the lid surface as shown below.

6. Secure the assembly with 2 cable ties (A).



7. Align and insert the top of the 60WP Endpoint into the offset cavity (A) of the retainer clip, or passive radiator antenna, and push until it snaps into place.



The finished assembly is shown below.



## Installing Through New Lid

This section describes how to install the 60WP Endpoint in a pit lid that does not have a hole drilled through it.



**NOTE** For lids with holes already drilled, see [Pit Lids with Holes](#) on page 18.

## Required Tools and Hardware

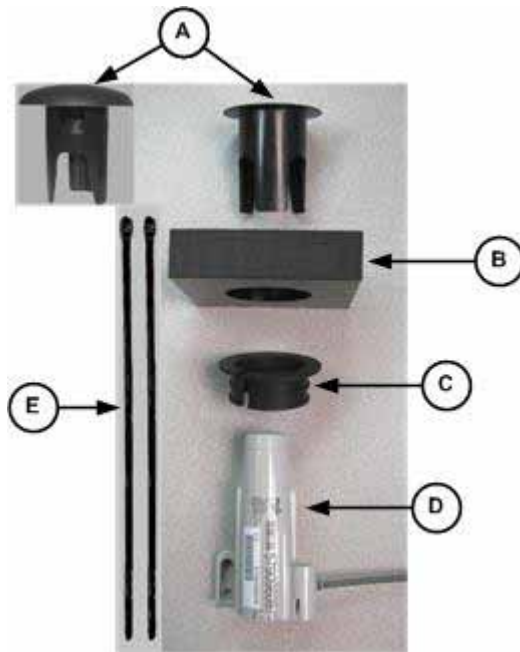
- Drill
- 1 3/4-inch drill bit appropriate for the lid material
- Pit lid mounting kit (Itron part number CFG-0771-010) or passive radiator antenna kit (Itron part number CFG-0771-006)
- Cable tie gun



**NOTE** The pit lid mounting kit is not intended for applications involving vehicular traffic. The passive radiator antenna should be used in incidental traffic areas, such as residential environments.

## To install in new lids

1. Make sure you have all the following items to complete the installation.



- |   |   |
|---|---|
| A | Retainer clip or passive radiator antenna |
| B | Simulated pit lid                         |
| C | Retainer clip collar                      |
| D | 60WP Endpoint                             |
| E | Cable ties                                |

2. Select a location for the hole that will give sufficient clearance on the bottom side of the lid to attach the retainer clip collar and cable ties.
3. Drill a 1 3/4 inch hole in the lid.



**NOTE** The O-ring spacers included with the Pit Lid Mounting Kit are not used with this size hole. You can discard the O-rings.

4. Insert the retainer clip, or passive radiator antenna, into the hole in the pit lid.
5. From the underneath side of the lid, place the retainer clip collar around the retainer clip and snug the collar to the bottom side of the pit lid. Ensure that the top of the retainer clip is seated against the lid surface as shown below.
6. Secure the assembly with 2 cable ties (A).



7. Align and insert the top of the 60WP Endpoint into the offset cavity (A) of the retainer clip, and push until it snaps into place.



The finished assembly is shown below.



## Shelf Mount Installation

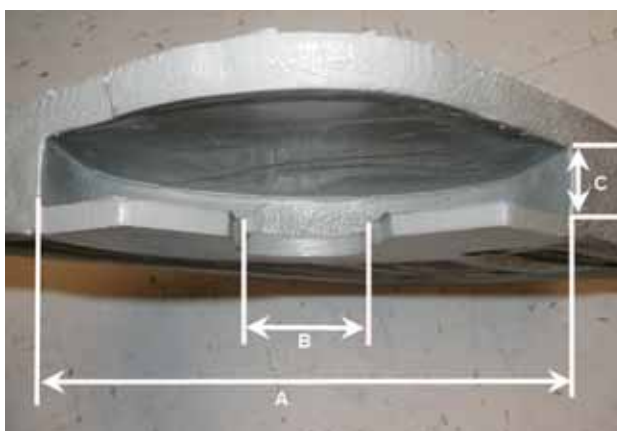
This section describes 60WP Endpoint installation when using a shelf mount adaptor to mount the endpoint in a pit lid slot.



**IMPORTANT!** The pit lid and slot must have the correct dimensions for the 60WP assembly to fit properly.

The following illustration and the accompanying table give pit lid slot dimensions that will accommodate the shelf mount installation method.

*Figure 5: Pit Lid Slot Dimensions*

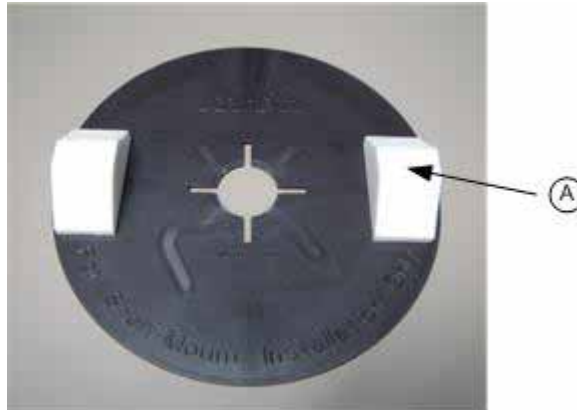


Dimension	Minimum (Inches)	Maximum (Inches)
A	6 3/4	N/A
B	2	5 3/4
C	3/4	1

## Required Tools and Hardware

The following tools and hardware are required when installing the 60WP Endpoint using a shelf mount adaptor for a pit lid slot:

- Shelf Mount Adapter (Itron part number CFG-0771-007)



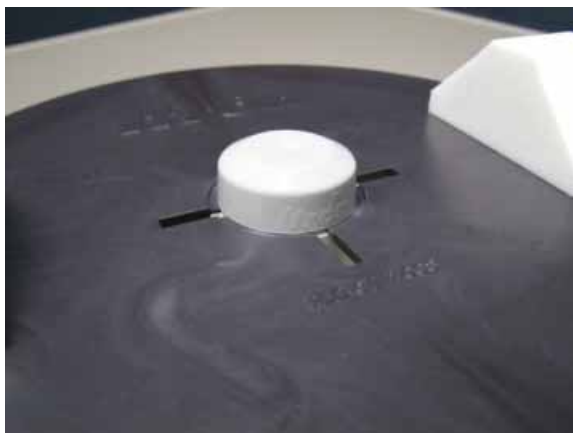
A Foam spacers

### *To install using the shelf mount adapter*

1. With the foam spacer side of the adaptor up, snap the top of the 60WP into the shelf mount adaptor.



2. Ensure that all 4 snap fingers are engaged in the groove around the 60WP endpoint.



3. Slide the adapter assembly into the pit lid with the foam spacers positioned on each side of the pit lid slot.

*Figure 6: Correct Position With Foam Spacers on Each Side of Slot*



A Correct position for foam spacers



**IMPORTANT!** Do not install the adapter assembly in a manner that provides little or no support under the foam spacers. The following is an example of an incorrect position for foam spacers.

*Figure 7: Wrong Position for Spacers - Spacers are not supported!*



A Unsupported foam spacer

4. The installed position of the endpoint should be vertical and upright when the lid is replaced on the pit.



**IMPORTANT!** Any endpoint position other than upright may negatively affect radio performance and battery life.

## CHAPTER 3

# Connecting the 60WP

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This chapter contains information about connecting the 60WP Endpoint to the water meter using an inline connector, a 5-foot cable, or a longer cable.

## Using an Inline Connector

This section describes how to connect the 60WP Endpoint to the water meter register using an inline connector assembly. Follow the manufacturer's recommended procedure for installing the water meter register on the meter.

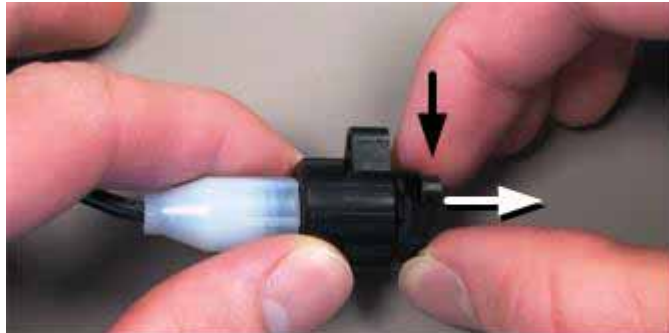
### ***To connect the inline connector***



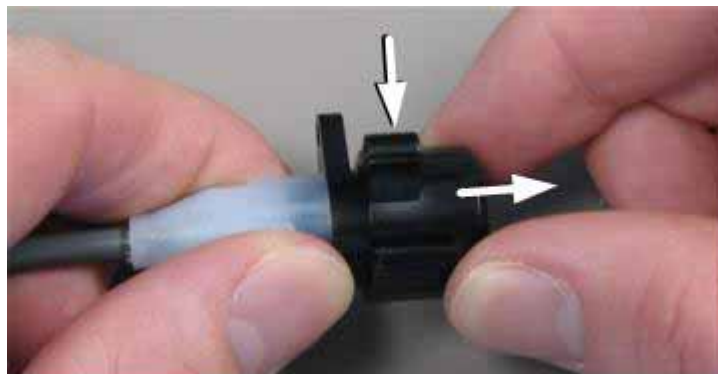
**NOTE** Skip this step if an inline connector is not being used and the 60WP is already connected to the water meter register.

1. Remove the protective cover from the connector by twisting the two halves in opposite directions, and then pull the halves apart.

*Figure 8: Register or Reed Switch Connector*



*Figure 9: Endpoint Connector*





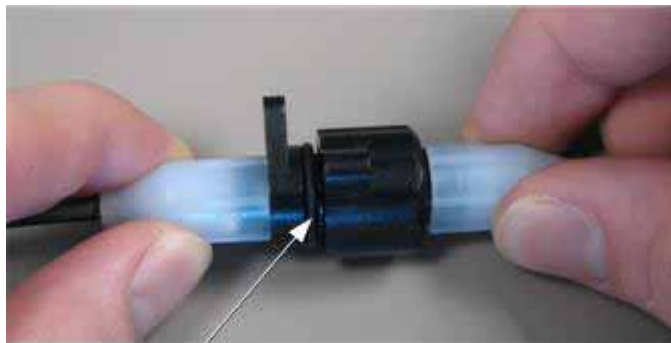
**IMPORTANT!** Make sure the connector halves are clean and dry before assembly.



**CAUTION!** If any of the following conditions occur, do not install the endpoint:

- Any of the three pins are damaged or missing
- The O-ring is missing
- The cable is cut or nicked

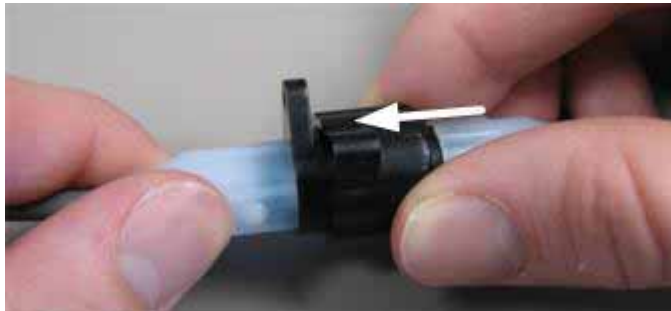
2. Connect the endpoint to the register cable connector. Holding the connectors by the back shells, rotate one end to align the keyed slots. Push until snug.



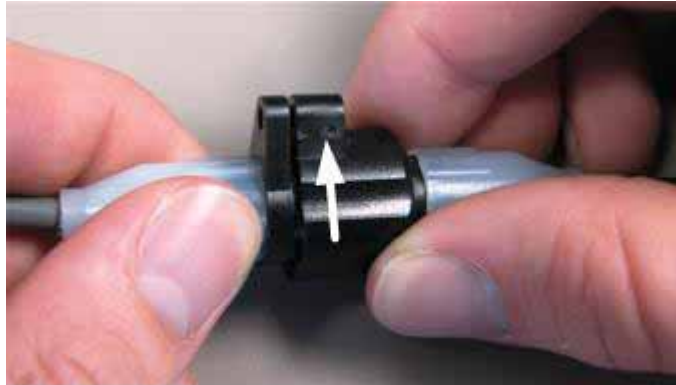
A

O-Ring

3. Slide the black coupling over the O-ring. Make sure the O-ring stays seated. If the O-ring does not stay seated, disconnect and try again.



4. Twist to align the two tabs.



5. Install the security seal as shown. Push it until it snaps into place.



**NOTE!** For future servicing of either the meter or endpoint, break the security seal by pulling apart. The original protective connector covers can be reused if kept clean and dry. Install a new security seal after servicing either device. To order more parts, see the *Water Endpoint Ordering Guide* (PUB-0063-001).



**IMPORTANT!** Be sure to protect connectors with protective covers. Do not leave an exposed connector in the field.

## Using a 5-Foot Cable

This section describes how to connect the 60WP endpoint to the water meter register using the 5-foot cable.

### *To connect the cable to the register*



**NOTE** The wire terminations must be properly coated with a non-conductive gel material to prevent water intrusion, or this configuration should not be used in a pit box environment.

1. Remove the protective cover from the end of the cable.

*Figure 10: 60WP Endpoint With 5-Foot Cable*



2. Connect each cable wire to the appropriate meter register screw terminal as indicated in the table below.

60WP Cable Wire Color	Elster/AMCO Digital Register Screw Terminal
Red	B
White	G
Black	R

## Using an Extended Cable

If you need to extend the length of the existing endpoint cable (up to a maximum of 300 feet), additional cable can be ordered from Itron.

For cable lengths exceeding 150 feet, you must update the endpoint's operating parameters. This is accomplished by reprogramming the endpoint and selecting the appropriate cable length description during the programming operation. Failure to update the parameters could affect the endpoint's ability to count accurately.

For more information, see [Programming the 60WP Endpoint](#) on page 32.

## CHAPTER 4

# Programming and Verifying 60WP Endpoint Operation

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To program the endpoint, first activate Programming Mode using the programming magnet and then program the endpoint using the FC200SR Handheld device.

## Activating Programming Mode

Use the programming magnet (Itron part number MLD-0175-001) to place the endpoint into Programming Mode.

Place the magnet on top of the Rod Mount Hole (A) as shown below and hold it there for three seconds to activate Programming Mode.

*Figure 11: Magnet Placement for Programming Mode*





#### NOTES!

- The 60WP Endpoint will remain in Programming Mode for 15 minutes. After 15 minutes you can reactivate Programming Mode using the magnet.
- If the magnet is held in place longer than 15 minutes, remove the magnet for three seconds and then put it back into position to reactivate Programming Mode.
- Endpoints that have been factory programmed will still require activation with the magnet before they will detect register pulses. The one exception to this rule is units that have been placed in the "Quite Mode". For more information see [Operating Modes](#) on page 8.

## Programming the 60WP Endpoint

To program a 60WP Endpoint, use an FC200SR handheld running the Itron Endpoint-Link or Endpoint-Link Pro software and loaded with the endpoint programming configuration file.

With the handheld, enter the endpoint ID, select the endpoint type (60WP), select the correct meter configuration, select the length of the cable, and enter in the initial reading from the register. When the is successfully programmed, the endpoint enters Normal Mode and operates as programmed.



#### NOTES!

- The FC200SR is the only handheld that supports programming for the 60WP endpoint.
- The endpoint and programmer should be a minimum of 12 inches apart while programming.
- Do not place the programmer antenna directly on the endpoint.

The correct position for programming the endpoint is shown below.

*Figure 12: Programming the 60WP - Correct Position for Handheld Antenna*



An incorrect position for programming the endpoint is shown below.

*Figure 13: Wrong Position for Handheld*



**NOTE!** Do not place the programmer antenna directly on the endpoint.

## Verifying Operation of the 60WP Endpoint

After you have programmed the 60WP Endpoint, verify that it is correctly reporting consumption data. Use one of the following handheld computers to verify consumption:

- G5R
- FC200R
- FC200SR



### NOTES

- Each handheld radio requires special setup and configuration parameters to successfully read and program 60-series products. Refer to the respective meter reading application for specific instructions.
- To verify operation using the Check Endpoint function, you must activate Programming Mode in the 60WP Endpoint. For more information see [Activating Programming Mode](#) on page 31.
- ReadOne Pro, FS2PN and FS3PN readers should not be used to read the 60WP Endpoint. These readers do not keep their receivers on long enough or at the right frequency to reliably capture a 60WP Endpoint transmission.