

## Shelf Mount Installation

This section describes 100W/100W+ and 100WP/100WP+ ERT module installation using a shelf mount adapter to mount the ERT module in a pit lid slot.

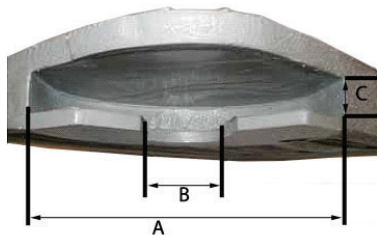


**Caution** Observe the following guidelines for mounting the ERT module using the shelf mount procedure:

- ERT module positioning other than upright could negatively affect radio performance and battery life.
- Use only Itron-approved splice kits or inline connectors.

The pit lid and slot must have the correct dimensions for the ERT module assembly to fit properly.

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



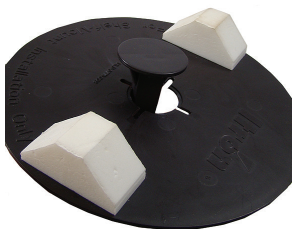
Pit Lid Slot Dimensions		
Dimension	Minimum (inches)	Maximum (inches)
A	6 3/4	N/A
B	2	5 3/4
C	3/4	1

## Required Hardware

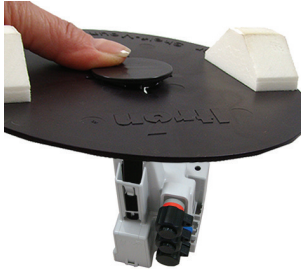
Itron 100W Series Shelf Mount Kit

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

1. With the foam spacers facing up, insert the shelf mount adapter into the opening in the disk.



2. Push the adapter into the opening gently until the adapter snaps into place. Insert the shelf mount adapter into the ERT module antenna slot pushing firmly with your thumb until the adapter tab locks into place in the ERT module antenna slot opening.



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



#### Correct position for foam spacers

**Caution** Do not install the adapter assembly in a manner that provides little or no support under disk's edge.



#### Incorrect mounting position for foam spacers.

4. The installed ERT module position must be vertical and upright when the lid is replaced on the pit.

**Caution** When placing the pit lid on to the pit box after the shelf mount adapter installation, use care to avoid pinching or damaging the ERT module to meter cable. Any ERT module position other than upright may negatively affect radio performance and battery life.

## Through Lid Installation

This section provides instructions to mount the 100W/100W+ and 100WP/100WP+ ERT module in a pit lid with a drilled, round 1-3/4-inch, 1-7/8-inch, or 2-inch hole.

## Through Lid Mount Required Tools and Hardware

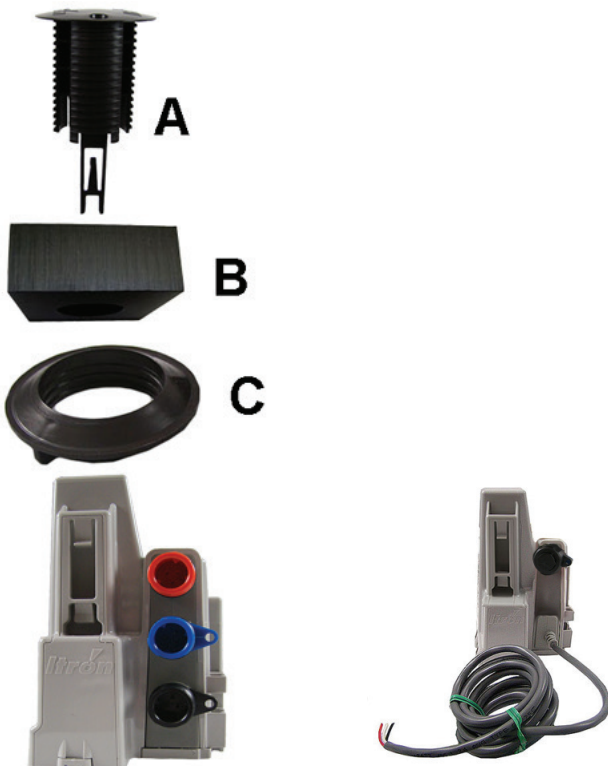
This mounting method requires the Pit Lid Mounting Kit. Refer to the 100W Installation Methods Overview (PUB-1300-004) for guidance on which kit to install for different pit lid material and traffic conditions.

Pit Lid Mounting Kit (CFG-1300-004)



**Note** The Pit Lid Mounting Kit is not intended for applications involving vehicular traffic. Use the Remote Antenna Kit in incidental traffic areas (such as residential environments).

This section provides the instructions to install the 100W/100W+ and 100WP/100WP+ ERT module in a pit lid with a hole using the Pit Lid Mounting Kit (CFG-1300-004). Verify you have the following items to complete the installation.



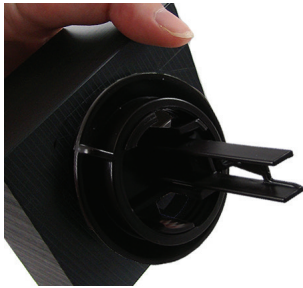
- A Retainer clip
- B Pit lid with a pre-drilled hole (simulated pit lid material shown)
- C Retainer clip collar
- D 100W/100W+ and 100WP/100WP+ ERT module

**To install in lids with holes using the Pit Lid Mounting Kit (CFG-0771-011)**

1. Insert the retainer clip into the pit lid hole with the convex surface on the top of the pit lid.



2. From the bottom side of the lid, screw on the threaded retainer clip collar until the beveled top rests against the pit lid.

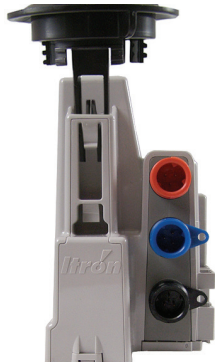


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**Note** Ensure the beveled edge of the clip collar is toward the top of the pit lid.

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3. Align and insert the retainer clip tab into the retainer clip receptacle on the ERT module housing.

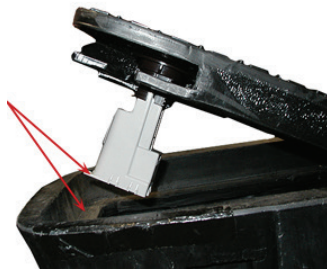


- Verify the clip locks into place in the housing.



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**Caution** Carefully align the ERT module through lid assembly. If the assembly is improperly aligned, the pit lid may not close.



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Pit lid mounting installation is complete.

### Optional Leak Sensor Installation

This section describes installation of the Leak Sensor (LS) in a 100W/100W+ and 100WP/100WP+ ERT module system.

The ERT module stores 20 days of LS data. On the 21st day, the ERT module begins to write over stored data in a first in, first out manner.

The ERT module automatically detects the presence of connected LS devices. The ERT module will automatically detect the LS within 22.5 minutes and begin reading LS data. To immediately detect the LS and begin reading data, perform a **Check ERT** with a handheld computer running FDM software.

The LS is used in conjunction with both indoor (basement) and outdoor (mounting on the exterior of the house) 100W/100W+ and 100WP/100WP+ ERT module installations. LS devices are mounted on a water service pipe or meter insetter (meter horn) and connect to the LS connector on the ERT module as described in [To connect the Leak Sensor to the 100W/100W+ and 100WP/100WP+ ERT module](#) on page 26. The mounting bracket shipped with the LS accommodates an (up to) 1-1/2-inch OD pipe. An optional mounting bracket is available for pipe sizes (up to 2 1/2-inch OD).

**Leak Sensor Installation Equipment**

<b>Equipment</b>	<b>Itron Part Number</b>	<b>Description</b>
Leak Sensor	LDS-0001-002	LS with inline connector, environmental connector cap; 5-foot cable, and mounting bolt (fits up to 1 1/2-inch OD pipe).
Optional mounting bracket	CFG-0349-002	Mounting bolt fits up to 2 1/2-inch OD pipe.
<b>ERT module</b>		
100W three-port ERT module	ERW-1300-203	Triple port encoder ERT module for connection to register, Leak Sensor, and optional remote antenna.
100W+ three-port ERT module	ERW-1300-303	Triple port encoder ERT module for connection to register, Leak Sensor, and optional remote antenna, ISM
100W, 5-ft. flying leads, two-port ERT module	ERW-1300-206	Three-port encoder ERT module for connection to register using 5-ft. flying leads, Leak Sensor and optional remote antenna connection with inline connectors.
100W+, 5-ft. flying leads, two-port ERT module	ERW-1300-306	Three-port encoder ERT module for connection to register using 5-ft. flying leads, Leak Sensor and optional remote antenna connection with inline connectors, ISM
100W, 20-in. flying leads, three-port encoder ERT module	ERW-1300-218	Three-port encoder ERT module for connection to register using 20-in. flying leads, Leak Sensor, and optional remote antenna connection with inline connectors.
100W+, 20-in. flying leads, three-port encoder ERT module	ERW-1300-318	Three-port encoder ERT module for connection to register using 20-in. flying leads, Leak Sensor, and optional remote antenna connection with inline connectors, ISM
100WP three-port ERT module	ERW-1300-209	Three-port pulser ERT module for connection to register, Leak Sensor, and optional remote antenna.
100WP+ three-port ERT module	ERW-1300-309	Three-port pulser ERT module for connection to register, Leak Sensor, and optional remote antenna, ISM
100WP, 5-ft. flying leads, two-port ERT module	ERW-1300-212	Three-port pulser ERT module for connection to register using 5-ft. flying leads, Leak Sensor, and optional remote antenna connection with inline connectors.
100WP+, 5-ft. flying leads, two-port ERT module	ERW-1300-312	Three-port pulser ERT module for connection to register using 5-ft. flying leads, Leak Sensor, and optional remote antenna connection with inline connectors, ISM
100WP, 20-in. flying leads, three-port pulser ERT module	ERW-1300-220	Three-port pulser ERT module for connection to register using 20-in. flying leads, Leak Sensor, and optional remote antenna connection with inline connectors.
100WP+, 20-in. flying leads, three-port pulser ERT module	ERW-1300-320	Three-port pulser ERT module for connection to register using 20-in. flying leads, Leak Sensor, and optional remote antenna connection with inline connectors, ISM
25-foot extension cable (optional)	CFG-0349-101	25-foot cable with coordinating connectors (LS blue connector, register black connector).
100W LS environmental replacement cap	MSC-0019-008	Protects Leak Sensor connector when the LS is not connected to the 100W ERT module.
Itron Security Seal	MSC-0018-001	Indicates module tampering and ensures the protective cover stays intact.



**Warning** When the 100W/100W+ or 100WP/100WP+ is installed but the LS is not attached, you must protect the blue port with the universal environmental cap (MSC-0019-008). If you remove the LS from the ERT module, the environmental cap must be replaced to protect the connector.

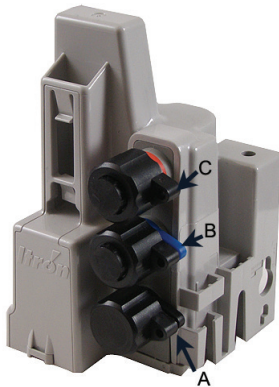
**To connect the Leak Sensor to the 100W/100W+ and 100WP/100WP+ ERT module**

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**Caution** Verify you have the correct 100W/100W+ or 100WP/100WP+ ERT module. Leak Sensors must mount to Port B (middle blue port) of the ERT module. Connecting the LS to Port A (bottom port) or Port C (top port) will cause electrical damage to the LS and ERT module.

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1. Remove the environmental cap from the ERT module's blue connector (B).

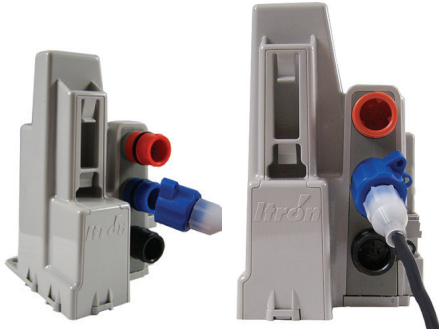


- C. **Red** connector: Optional antenna connection
- B. **Blue** connector: Leak Sensor connection
- A. **Black** connector: register connection

2. Remove the environmental cap from the Leak Sensor connector. Verify the connectors (the ERT module's LS connector and the Leak Sensor connector) are clean and dry.



3. Align the Leak Sensor connector with the ERT module's blue connector and insert.



4. Rotate the connector locking ring until the security holes align.



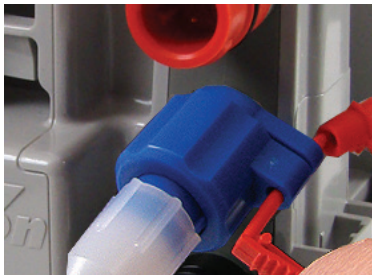
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**Caution** Do not force the connector ends together. While you hold the LS connector, engage the ERT module's connector by rotating the locking ring until both connectors securely connect. Twist only the connector locking ring, not the body of the connector. Twisting the connector body could damage the connector's pins.

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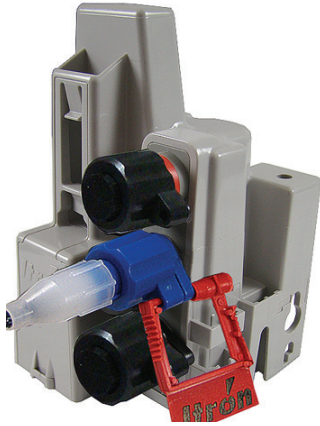
***To attach an Itron Security Seal through the connector security hole***

1. Insert the pointed end of the security seal through the inline connector and the ERT module connector security holes.





2. Insert the pointed end of the security seal into the capped end and push until the seal locks.



This completes the ERT module and Leak Sensor connections.

### Pipe Preparation

Clean any dust or dirt from the pipe to facilitate direct contact with the LS surface.

#### ***To install the Leak Sensor on a pipe or meter insetter***

1. Select a Leak Sensor mounting location within 5-feet of the ERT module. Mount the sensor on the water input side of the meter.

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**Caution** Mount the Leak Sensor on the water input side of the meter. Failure to follow this mounting requirement could result in errors in the leak detection data. Installation requires Itron mounting hardware. Repair costs and service charges relating to the use on non-compliant mounting hardware will be charged to the customer. Contact Itron Support for more information.

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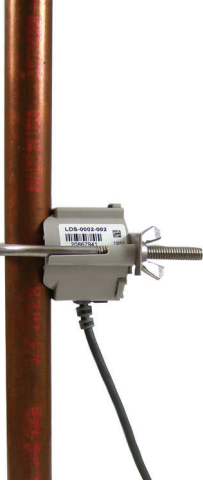
2. Verify the pipe's mounting surface is free from dirt and debris. Place the curved surface of the LS against the pipe.



3. Insert the mounting U-bolt over the pipe and into the LS mounting holes.

**Caution** Do not mount the Leak Sensor on a pipe coupler, joint, or nut.

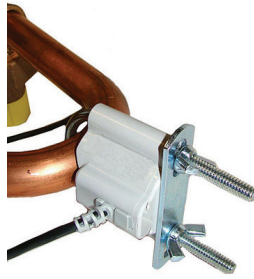
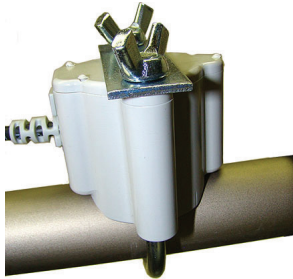
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4. Insert the mounting plate over the U-bolt's threaded screw ends. Attach the two wing nuts over the clamp screw ends and tighten the wing nuts until snug (to a minimum of 5-inch pounds) to prevent device rotation on the pipe. After you tighten the second wing nut, check the Leak Sensor to verify the device is snug. If the sensor moves, tighten the wing nuts until there is no movement.

**Caution** Do not tighten the Leak Sensor to more than 20 inch-pounds. Over-tightening could damage the Leak Sensor housing and/or the pipe.

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**Note** Leak Sensor mounting orientation is not critical. Orient the sensor to best accommodate your installation. The most important installation practice is to mount the sensor securely to the pipe.

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