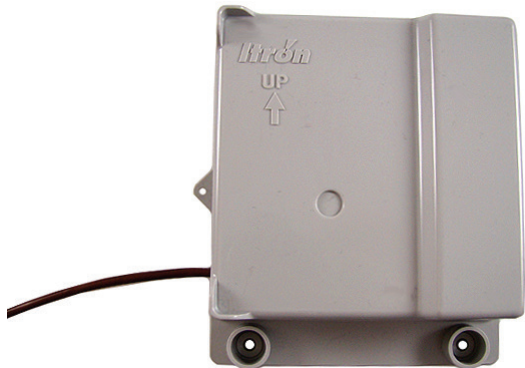2. Align the ERT module backplate with the mounting screw holes. Verify the Itron logo and arrow point up.
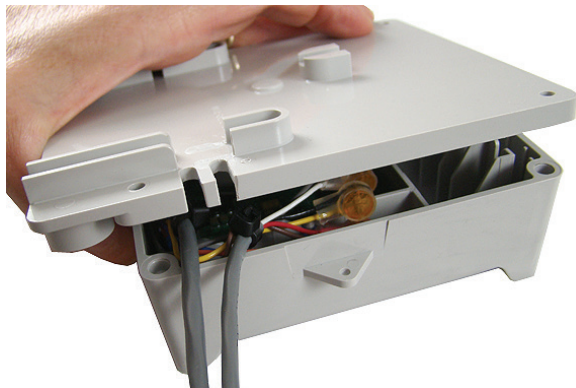

3. Insert a backplate mounting screw in one corner and tighten two to three turns. Insert the remaining three screws, tightening a few turns.

4. Completely tighten all the screws in an alternating fashion.

To attach an encoder/pulser and leak sensor backplate

1. Route the register cable and Leak Sensor cable through the dual-port backplate. Ensure the cable strain reliefs are inside the module housing and backplate assembly.

2. Route the register cable through the appropriate backplate cutout and the Leak Sensor cable through the remaining cutout.

3. Align the ERT module backplate with the mounting screw holes. Verify the Itron logo and arrow point up.

4. Insert a backplate mounting screw in one corner and tighten two to three turns. Insert the remaining three screws, tightening a few turns.
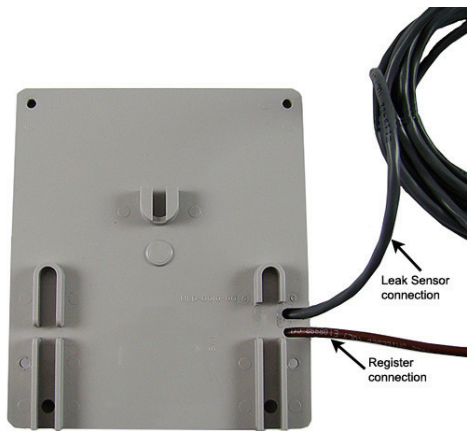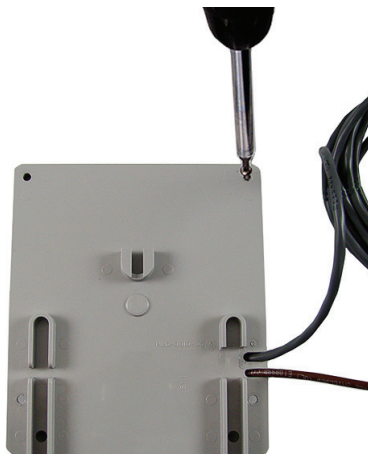

5. Completely tighten all screws evenly, in an alternating fashion.

Pipe Mount Installation

The ERT module can mount on a pipe vertically, diagonally, or horizontally using a Pipe Mounting Kit and Remote Mount Kit (see 100W-R/100W-R+ and 100WP-R/100WP-R+ ERT Module Accessories).

To mount the adapter plate on a vertical pipe

1. Take the pipe bracket and band clamp from the Pipe Mount Kit.

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

3. Push the end of the band through the hole in the pipe bracket.


4. Place the band clamp around the pipe. Push the end of the band through the hole in the band clamp and into the entrance to the screw assembly. Tighten the band clamp until you can push the end of the band into the hole in the pipe bracket.
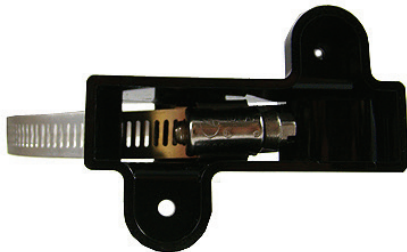
5. Tighten the clamp screw three or four more turns to make sure the end of the band does not pop back out on this side of the pipe bracket. Verify the pipe clamp is in the final installation position on the pipe and completely tighten the band clamp screw.

6. Place the adapter plate on the pipe bracket. The adapter-plate screw boss goes into the pipe-bracket recess.

7. Using the two shortest (1/2-inch) adapter-plate mounting screws from the Remote Mount Kit, connect the adapter plate to the pipe bracket using the screw holes shown below.
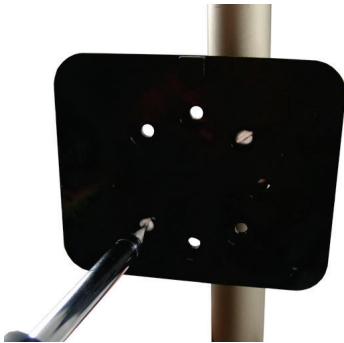
8. Tighten both screws to 9 to 12 inch-pounds of torque.

### *To mount the adapter plate in other positions*

The installation procedure in the previous section shows how to mount the adapter plate on a vertical pipe.

The following pictures show the adapter plate on 45 degree angle and horizontal pipes. Regardless of the angle of the pipe, the adapter plate mounting lug (1) must always be at the top.
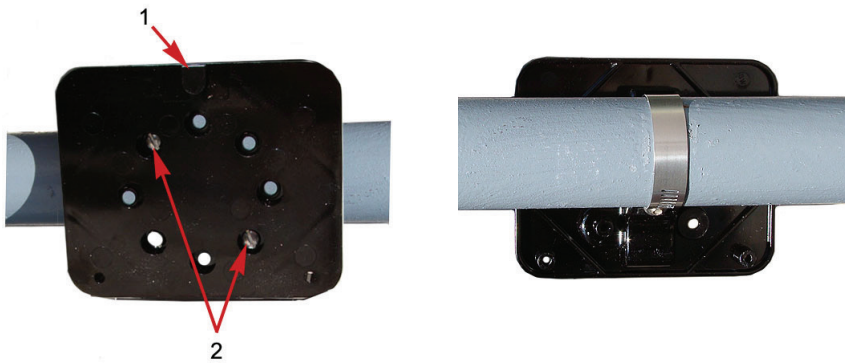
If the pipe is at a 45 degree angle up to the right, install the adapter plate with the mounting screws (2) as shown in the pictures below.
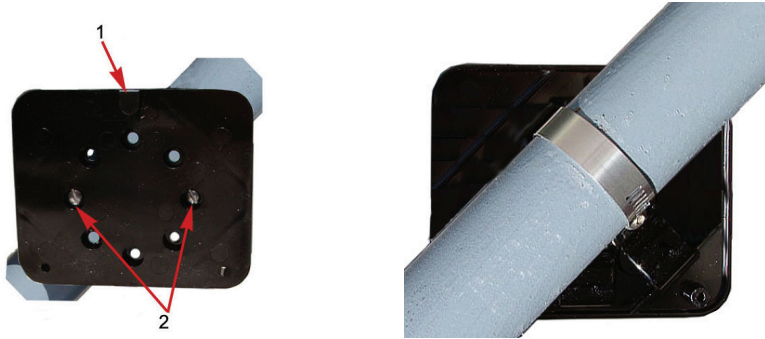
If the pipe is at a 45 degrees angle up to the left, install the adapter plate as shown in the pictures below.
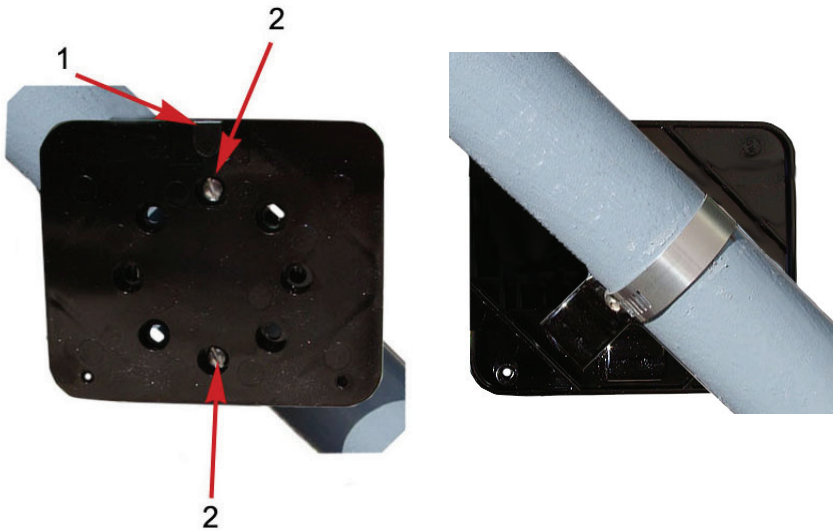
If the pipe is horizontal, install the adapter plate as shown in the pictures below.

To mount the ERT module on the adapter plate

1. Locate the two 1-inch ERT module mounting screws in the Pipe Mount Kit.
2. Slide the ERT module back cover onto the adapter, pushing up to secure the lug adapter in the lug slot.

3. Install the two 1-inch ERT module mounting screws.

4. Tighten the screws to 9 to 12 inch-pounds of torque.

Optional Leak Sensor Installation

Leak Sensors (LS) analyze water flow sound patterns to detect new, evolving, and pre-existing leaks. LS analysis data is uploaded to mlogonline™ Network Leak Monitoring for data analysis and accessed through a secure Internet portal unique to your utility. This section describes installation of the Leak Sensor (LS) in a 100W-R/100W-R+ and 100WP-R/100WP-R+ ERT module system.

The ERT module stores 20 days of Leak Sensor 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 Leak Sensors. The ERT module will automatically detect the Leak Sensor within 22.5 minutes and begin reading Leak Sensor data. To immediately detect the Leak Sensor 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-R/100W-R+ and 100WP-R/100WP-R+ ERT module installations. LS devices are mounted on a water service pipe or meter insetter (meter horn) and connect to the Leak Sensor connector on the ERT module as described in Connecting the Leak Sensor to the 100W-R/100W-R+ and 100WP-R/100WP-R+ ERT Module. The mounting bracket shipped with the Leak Sensor 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).

Connecting the Leak Sensor to the 100W-R/100W-R+ and 100WP-R/100WP-R+ ERT Module

Connecting a Leak Sensor to the 100W-R/100W-R+ and 100WP-R/100WP-R+ ERT module requires a Leak Sensor enabled ERT module. See 100W-R/100W-R+ and 100WP-R/100WP-R+ Models. Connect the ERT modules flying lead wires to the Leak Sensor (for more information, see Using Gel Cap Connectors) matching wire colors to complete the three connections.

See Connecting the Leak Sensor to the 100W-R/100W-R+ and 100WP-R/100WP-R+ ERT Module for Leak Sensor mounting information.

ⓘ   **Note** If the ERT module will mount on the exterior of the house but the Leak Sensor is on a pipe on the interior, the Leak Sensor cable must run through a hole in the wall before connecting it to the ERT module.

⚠   **Caution** Extension cable lengths must not exceed 300 ft. Extension cabling from Itron is stranded, tinned, and pre-bonded for reliability and proper connection to gel cap connectors. Extension cabling manufactured by non-approved Itron manufacturers may result in unreliable and problematic connections. Contact Itron Support for more information.

Required Equipment

Equipment	Itron Part Number	Description
Leak Sensor	LDS-0002-001	LS with bracket; 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.
100W-R Encoder Remote	ERW-1300-314	100W-R with Leak Sensor, 10-inch flying lead.
100WP-R Pulser Remote	ERW-1300-316	100WP-R with Leak Sensor, 10-inch flying lead.

Leak Sensor   **100W remote ERT module**   **Optional 2 in. mounting bracket**

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. Mount the sensor on the water input side of the meter.

    Caution The Leak Sensor must be mounted 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. Contract Itron Support for more information.

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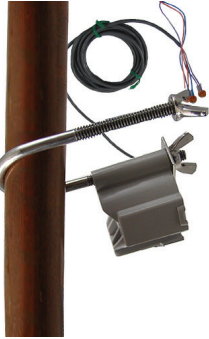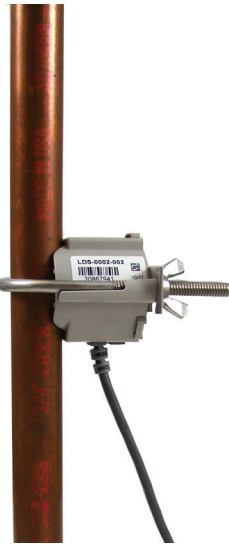

3. Insert the mounting U-bolt over the pipe and into the LS mounting holes.

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

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 the second wing nut is tightened, 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.