

LeakBreaker®

SUPERSEDES: August 1, 2016

EFFECTIVE: June 6, 2017

Plant ID No. 001-4237

Application

The Taco LeakBreaker® is a leak detection and water shutoff device. It is designed to detect a water leak and shutoff the incoming water supply to a water heater. It is suitable for use with many other water appliances that have a 3/4" (or smaller) connection requiring leak protection.

Ease of Installation / Operation

The valve can be installed in either vertical or horizontal piping and in any direction or orientation. LeakBreaker consists of a control panel, full port electrically actuated ball valve, floor sensor and is powered by batteries, AC adaptor or both. The components are connected with easy to use plug in quick connects. A multi-function LED on the control module identifies the current state of the LeakBreaker and aides with troubleshooting.

Valve Installation



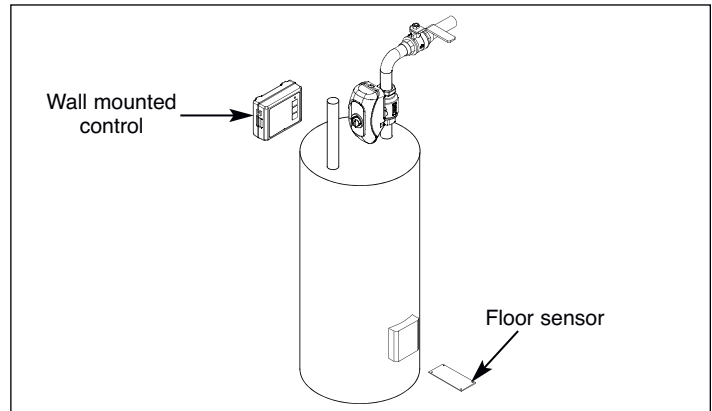
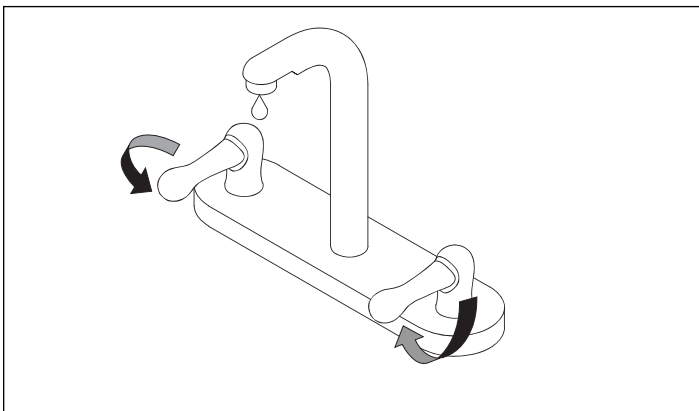
Warning: Never place any body parts or objects into the valve opening, doing so may result in severe injury!



Caution: Installation should only be performed by qualified persons familiar with normal plumbing practices. These instructions should be considered in addition to local codes. Consult your local authority regarding any instructions contradictory to code requirements.

Note: Depending on your piping system, additional fittings not supplied with this product may be required.

1. Shut off the main water supply.
2. Open a fixture nearest the water heater to relieve water pressure.



3. Install the LeakBreaker valve into the cold water supply to the water heater.



CAUTION: If using a threaded to sweat adaptor on the valve installation, the actuator must be removed from the valve body before soldering (see instructions for removing actuator). The ball valve must be in the full open position before soldering. The valve is shipped in the closed position. Use of a solder with a melting point below 600°F is recommended. Do not overheat! Make sure the ball valve is in the FULL OPEN position during soldering. Direct flame tip away from the center of the valve. Cool valve quickly with a wet cloth.

Actuator Removal and Installation

1. Actuator Removal: Remove the valve actuator prior to soldering by pushing in and holding the release clip at the front of the actuator and lifting upward approximately 3/4" (see Figure D).
2. To re-assemble the actuator to the valve body: Position actuator such that the "D" shaped valve stem aligns properly with the "D" shaped actuator drive cavity. (Note: The "D" shaped stem design allows for correct insertion every time.) Next, slide the valve stem into the actuator cavity, push in and hold the release clip until the actuator slips over the valve locking posts (see Figure D). Once the actuator is flush to the valve body, let go of the release clip. Using very little force, try to take the actuator off of the valve body without using the release clip. Both locking posts should be firmly attached to the actuator. If the actuator slides up the stem, repeat the assembly process.

Figure D:

Actuator Removal

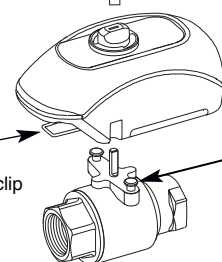
Step 2:

Move actuator upward approximately 3/4"

Step 1:

Push in and hold release clip at the front of the actuator

Locking Post



Control Panel and Wiring

1. Press the tabs on the side of the control panel and pull apart to separate the front panel from the back panel.
2. Using the hardware provided mount the back of the control panel in a location close enough to the water heater so that the both the actuator and sensor wiring can be connected to the control panel.
3. If using batteries install into the battery holder. Be sure to insert each battery in the correct orientation as indicated in the battery holder. If electrical power is being used the power cord may also be connected. LeakBreaker® can be powered by batteries, power supply or both.
4. Assemble the front on the control panel to the back of the panel.
5. With screws on the sensor quick connect facing toward the back of the controller, plug the sensor wiring into the control panel port marked sensor. Place the sensor on the floor, at the base of the water heater, making sure it is located where water is likely to flow. If the water heater is in a pan place the sensor inside of the pan.
- 5a. If the sensor is installed in a metal pan or on a damp surface insert the 4 feet provided into the 4 holes on the corners of the sensor. If additional sensors were purchased locate them in different areas around the water heater.
6. With the screws on the actuator quick connect facing toward the back of the controller, plug the actuator wiring into the control panel port marked valve.

NOTE: When attaching the wires to the actuator quick connect the black wire must match up to the "B" on the control and the red wire must match up to the "R" on the control. **The LeakBreaker will not function correctly if it is not wired correctly.**

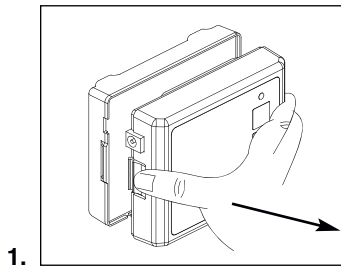
NOTE: If using multiple sensors break off the tab at the end (as shown in Note Fig. 5b) on all sensors except for the last one in the chain. Never remove the tab when using a single sensor or for the last sensor in the chain. See multiple sensor wiring diagram for wiring

Two (2) sets of dry contacts are provided, each set includes normally open and normally closed connections. They can be used to send a signal to any device requiring an open or close signal, such as a security system.

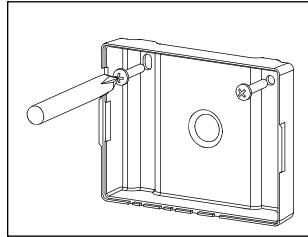
Testing Your Installation

1. Press the open button on the front panel to open the valve, watch the indicator on the top of the valve to make sure the valve rotates to the open position, press the close button to close the valve and watch the indicator on the top of the valve to make sure the valve rotates to the closed position.
2. Close any open fixtures and open any shut-off valves that were closed during the installation the valve. Make sure there are no leaks.
3. With the valve in the open position place the sensor in water. The valve should close, the LED should flash red and the audible alarm should sound. Once the valve closes press the mute button to silence the alarm.
4. To reset the LeakBreaker completely dry off the sensor and then press the open button.

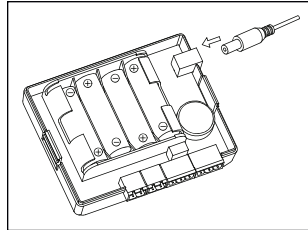
Congratulations on the successful installation of your LeakBreaker!



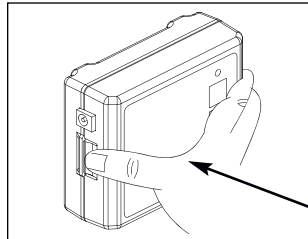
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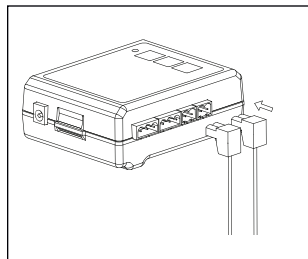
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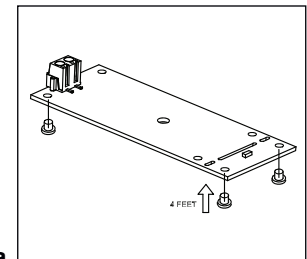
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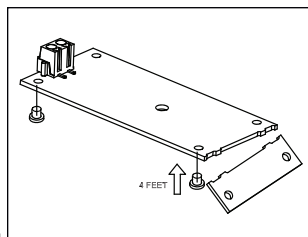
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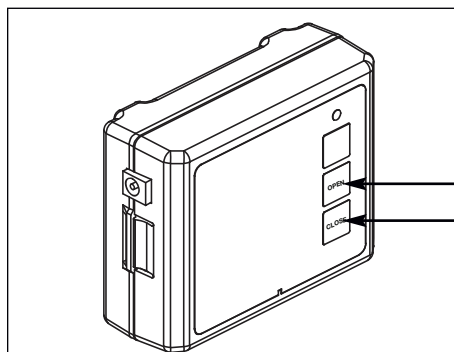
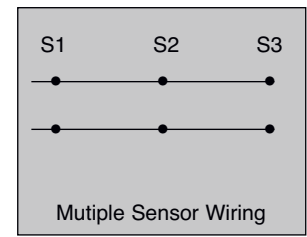
5.



5a.



5b.



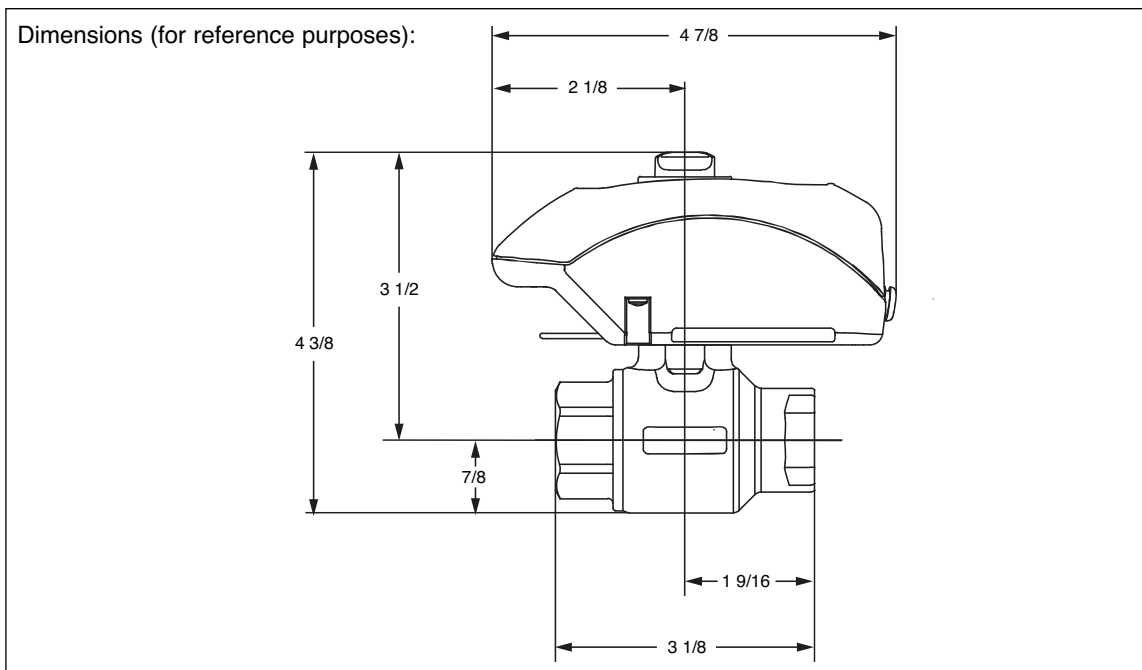
1.

Press Open
Press Close

Multi-Function LED and Troubleshooting:

This troubleshooting table is intended as a helpful guide and is not all inclusive. There could be other causes and solutions for a non-functioning product.

| LED STATUS POWER | LED STATUS BATTERY ONLY | INDICATES | POSSIBLE CAUSE | POSSIBLE SOLUTION | Audible Alarm |
|--------------------------------|--|---|---|---|---|
| Solid Green | ----- | Normal | | | |
| ----- | 1 Green Blink every 10 Seconds (Approximately) | Normal | ----- | ----- | ----- |
| Solid Green with one red blink | ----- | Low Batteries | Low Batteries | Replace batteries | Chirp every 60 second |
| | | | Batteries installed incorrectly | Install batteries correctly | Chirp every 60 second |
| Not illuminated | ----- | Power off | Power supply not plugged in | Plug in power supply | ----- |
| ----- | Not illuminated | Power off | Batteries installed incorrectly or not at all | Install batteries correctly/ install batteries | ----- |
| | | In between cycles | Normal | Wait 15 seconds for indication blinks | |
| Solid Red with 2 red blinks | Solid dim Red with 2 red blinks | Sensor error | Bad wire connection | Make sure wiring connections are solid and tight and the quick connect is all the way in | Chirp every 60 seconds |
| | | | | Make sure sensors wired per instructions | Chirp every 60 seconds |
| Solid Red with 3 red blinks | Solid Dim Red with 3 red blinks | Valve error | Valve is not connected to the control | Connect the valve to the control | Chirp every 60 seconds |
| | | | Bad wire connection | Make sure wiring connections are solid and tight and the quick connect is all the way in | Chirp every 60 seconds |
| Solid Red with 3 red blinks | ----- | AC power error | Wrong power supply | Use power supply provided | Chirp every 60 seconds |
| Continuous Red blinks | Continuous Red blinks | LeakBreaker has Triggered | Sensor has detected water | Determine the water source and correct. Dry the sensor and reset the LeakBreaker. Press the open button to reset. | Constant alarm. Press the mute button to silence the alarm. |
| Solid Red | Solid Red | LeakBreaker® has triggered and the water on the sensor has dried up | Sensor has detected water | Determine the water source and correct. Press the open to reset. | Constant alarm. Press the mute button to silence the alarm. |



| PRODUCT SPECIFICATIONS | |
|----------------------------------|--|
| Maximum Static Pressure | 300 PSI (2,100 kPa) |
| Maximum Shutoff Pressure | 125 PSI (875 kPa) |
| Maximum Ambient Temperature | 135°F |
| Fluid Temperature Range | 33° to 220°F, (1° to 105°C) |
| Service | Potable water |
| Seat Leakage | Drop-Tight Close-Off |
| Electrical | Input: 120VAC 60 HZ, Output 6VDC 600mA Power Supply or 4 AA Batteries |
| Auxiliary Switch Rating | Class 2. 1Amp 24Volts |
| MATERIALS OF CONSTRUCTION | |
| Control Panel | |
| Body | High Performance Engineered Polymer |
| Actuator | |
| Body | High Performance Engineered Polymer |
| Gears | High Performance Internally Lubricated Engineered Polymer |
| Valve | |
| Body | Forged Brass |
| Stem | Brass |
| Press Ring | Brass |
| Ball | Brass (Chrome Plated) |
| Seat | Modified Teflon® |
| O-rings | Viton® |

LIMITED WARRANTY STATEMENT

Taco, Inc. will repair or replace without charge (at the company's option) any product or part which is proven defective under normal use within one (1) year from the date manufacture.

In order to obtain service under this warranty, it is the responsibility of the purchaser to promptly notify the local Taco stocking distributor or Taco in writing and promptly deliver the subject product or part, delivery prepaid, to the stocking distributor. For assistance on warranty returns, the purchaser may either contact the local Taco stocking distributor or Taco. If the subject product or part contains no defect as covered in this warranty, the purchaser will be billed for parts and labor charges in effect at time of factory examination and repair.

Any Taco product or part not installed or operated in conformity with Taco instructions or which has been subject to misuse, misapplication, the addition of petroleum-based fluids or certain chemical additives to the systems, or other abuse, will not be covered by this warranty.

If in doubt as to whether a particular substance is suitable for use with a Taco product or part, or for any application restrictions, consult the applicable Taco instruction sheets or contact Taco at [401-942-8000].

Taco reserves the right to provide replacement products and parts which are substantially similar in design and functionally equivalent to the defective product or part. Taco reserves the right to make changes in details of

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TACO WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF ITS PRODUCTS OR ANY INCIDENTAL COSTS OF REMOVING OR REPLACING DEFECTIVE PRODUCTS.

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Taco, Inc., 1160 Cranston Street, Cranston, RI 02920 | Tel: (401) 942-8000 | FAX: (401) 942-2360

Taco (Canada), Ltd., 8450 Lawson Road, Suite #3, Milton, Ontario L9T 0J8 | Tel: (905) 564-9422 | FAX: (905) 564-9436

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