

RFK-375W1

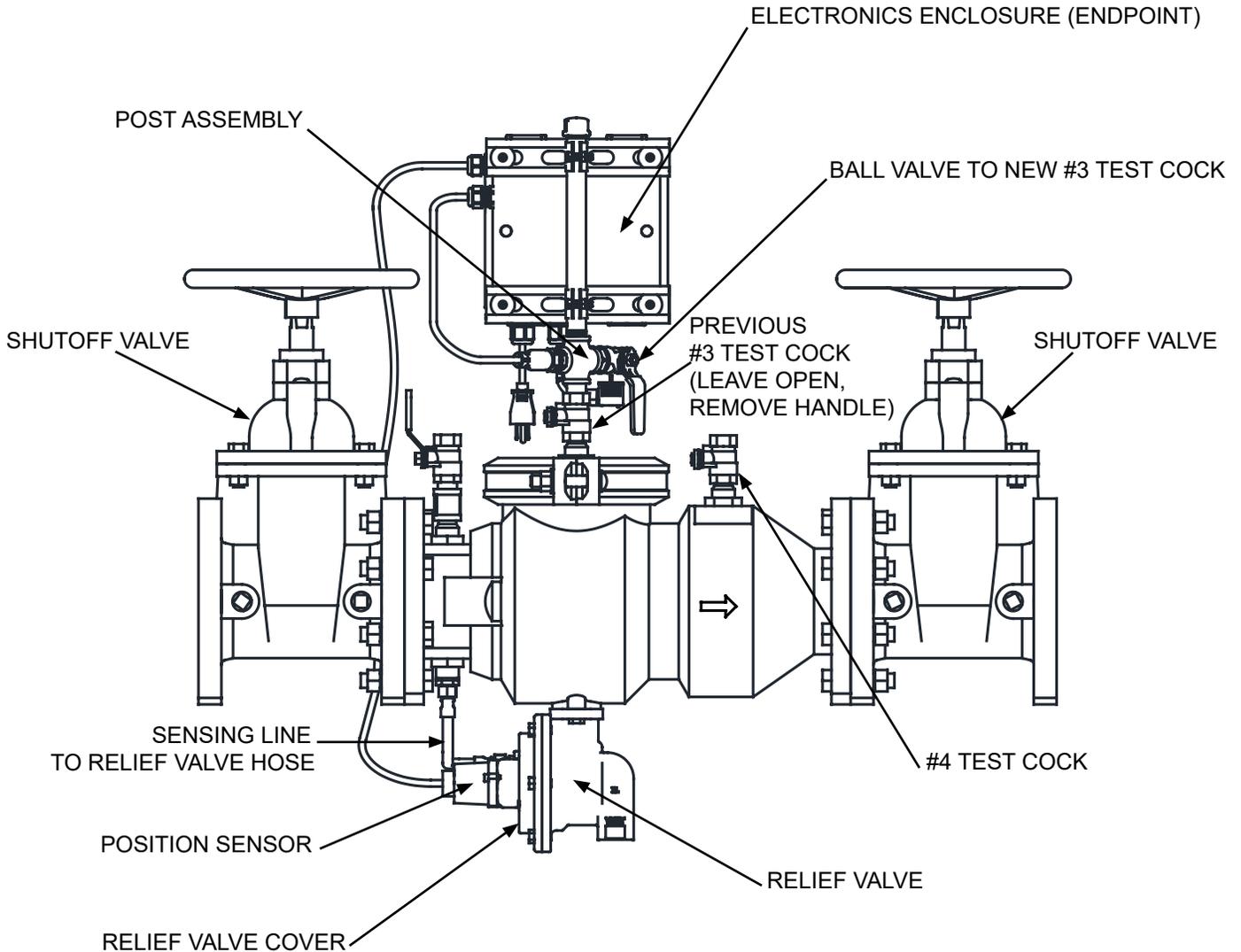
Zurn Connected Backflow With Relief Valve Monitor
Retrofit Kit

LEAD-FREE*



❑ Installation ❑ Testing ❑ Maintenance Instructions

The RFK-375W1 Connected Backflow With Relief Valve Monitor Retrofit Kit continually monitors your system water pressure and relief valve discharge volume and transmits data to plumbSMART™, the secure web portal powered by Zurn. The maximum system water pressure cannot exceed 175 psi.



⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov
⚠ **ADVERTENCIA:** Cáncer y daño reproductivo - www.P65Warnings.ca.gov
⚠ **AVERTISSEMENT:** Cancer et néfastes sur la reproduction - www.P65Warnings.ca.gov



Call Before You Install Your Connected Backflow With Relief Valve Monitor

If you already have a Gateway installed and access to plumbSMART™, skip to Install Your Connected Backflow With Relief Valve Monitor section.

1. Document the serial number from inside the electronics enclosure. The serial number is printed on the left side of the label below the QR code.
2. Visit www.zurn.com/plumbSMART-connect to save time and money on your installation. You can also call us at 844-987-6737.
3. Provide the serial number and contact name, email address, and basic information about the installation site.
4. We will activate your plumbSMART™ account, set up your enterprise, and give you guidance on how to register each connected product as you install it.
5. We will send a confirmation email with a link, or you can go to plumbsmart.zurn.com to log into your plumbSMART™ account for the first time.
6. Add other users and installers to your plumbSMART™ account.
7. Make sure you and/or your installers have the plumbSMART™ mobile app, which you can download from the iPhone App Store or Google Play.
8. Using the mobile app, scan or enter the serial number to register and locate each connected plumbing product as you install it.
9. Watch the how-to videos in the plumbSMART™ portal's support section if you get stuck, or call us at 844-987-6737 for support.



Request and Install Your Zurn Gateway

Install Zurn Gateway

Once you've received your Zurn Gateway, please follow the steps below for installation. More detailed instructions are also included with your Zurn Gateway.

1. Choose a location that is within 1000 feet of the Zurn Connected Product(s) you're installing. Typically, your building's walls should not be an issue. However, be sure to avoid major obstructions, such as thick concrete walls or metal reflective surfaces that will weaken the signal reception.
2. As with any electronic or networking device, install your Zurn Gateway in a cool, dry, dust-free location. In general, air conditioned offices or server rooms work best.
3. Make sure you have access to a standard 120V electrical outlet to plug in your Zurn Gateway.
4. Then, depending on your choice of gateway, please follow the instructions below.

Ethernet LAN

STEP 1: Plug the power cord into the electrical outlet to power up your gateway.

STEP 2: If the network is secured, ask your network administrator to authorize this gateway. You can provide the MAC address for the gateway, which is printed on the bottom of the label.

STEP 3: Confirm the status of the two LED indicators (Status and LoRa) to complete your setup.

- Status LED double-flashes green every two seconds
- LoRA LED is ON (solid green) two minutes after being powered

LTE Cellular

STEP 1: Check that the location isn't obstructed for sending and receiving cellular signals. You can use your own AT&T cellular device's connectivity as an indicator.

STEP 2: Once location is confirmed, plug the power cord into the electrical outlet.

STEP 3: Confirm the status of the three LED indicators (Status, LoRa and Cell) to complete your setup.

- Status LED double-flashes green every two seconds
- LoRA LED is ON (solid green) two minutes after being powered
- Cell LED is ON (solid green) two minutes after being powered

Install Your Connected Backflow With Relief Valve Monitor

The Connected Backflow With Relief Valve Monitor should be installed indoors in a dry location. Outdoor installations, direct sunlight, or high humidity may affect the life of the product. Avoid installing the device where the device or cables may extend into walkways or present a tripping hazard.

1. Close the backflow preventer shutoff valves.
2. Open #4 test cock to bleed pressure from assembly, then close #4 test cock.
3. Open #3 test cock to allow relief valve to drain.
4. It is recommended that you remove the handle from test cock #3, ensuring that the ball valve remains in the open position.
 - a. The "flats" on the handle stem must be facing vertically to ensure ball valve is open.
5. Add the ball valve warning tag to #3 test cock.
6. Thread the Backflow Endpoint/Post Assembly into #3 test cock of backflow preventer.
 - a. Use Teflon tape or thread sealant to ensure a leak-free connection.
 - b. Use pipe bushing provided for 3/4" size test cocks used on 6" and larger valves
7. Remove existing relief valve assembly from backflow preventer:
 - a. Detach sensing line from relief valve cover.
 - b. Detach relief valve by removing the two screws that hold it to the backflow preventer body.
8. Attach new relief valve assembly to the body, making sure the new o-ring is seated fully into the o-ring groove:
 - a. New o-ring and hardware are inside the electronics enclosure.
 - b. Note that the longer (1") bolts are for stainless valves and the shorter 3/4" bolts are for ductile iron valves. Both are provided in this retrofit kit.
 - c. Reattach sensing line to relief valve cover.
9. Remove and discard plastic part covering the magnet on relief valve (part is only used for shipping).
10. Connect the endpoint to the relief valve sensor by attaching the black position sensor housing on the end of the cable to the relief valve cover using screws and an allen wrench.
11. Pressurize backflow valve and bleed all air from the valve.
 - a. Check the Endpoint/Post Assembly and Relief Valve connections for leaks.

NOTE: Verify a Zurn Gateway is installed with 1,000 feet of your Connected Backflow With Relief Valve Monitor to completing the next step. If a Zurn Gateway is still needed, please refer to proceeding section to request and install your Zurn Gateway to connect your product.

12. Power up the Endpoint electronics using supplied power cable. If not previously completed, you can register your Connected Backflow With Relief Valve Monitor (See registration instructions on next page). The system will take about two minutes to boot up and start transmitting data.
13. Follow instruction on label inside of the endpoint box to zero the position sensor.



Test Your Network and Register Your Products

It is recommended to test your network when installing a new Gateway. For the following steps, ensure you have the serial number recorded from inside the Endpoint electronics enclosure. The serial number is printed on the left side of the label below the QR Code.

Test Your System Network

Make sure your gateway and products communicate now that everything is installed by conducting a system connection test:

1. If not already complete, plug in the Connected Backflow Endpoint, ensuring it is within 1,000 feet of the Zurn Gateway.
2. Browse plumbsmart.zurn.com/install by typing in the product serial number.
3. Click on the 'Validate' button. If the system recognizes the Zurn Connected Product, it will instantly connect to the Zurn Cloud.

Register Your Products

Prior to registering, the building, floor, and room must be setup in plumbSMART™. You may then register your product in plumbSMART™ to start receiving data.

Use the plumbSMART™ mobile application for quick registration:

1. Using the mobile app, scan or enter the serial number to register and locate each connected plumbing product as you install it.

Or register using the plumbSMART™ online portal:

1. Ensure you have the product serial number from inside the Connected Backflow Endpoint electronics enclosure.
2. Go to plumbsmart.zurn.com Log in to your plumbSMART™ account and select the 'Register Products' option from the Products' menu within the main blue navigation bar.
3. Follow the prompts to complete the registration.
4. At this point, you can give your Zurn Connected Product a unique name and assign it to a specific building location.
5. Finally, confirm or adjust your alert parameters based on your desired system operation.

More instructional videos can be found on the support page in the plumbSMART™ portal.

Testing

To check accuracy of pressure readings: Install a calibrated pressure gauge in the test port. Read gauge. Power cycle the Connected Backflow Endpoint by unplugging and plugging the electronics enclosure power cord back in. After five minutes, a new pressure reading should be available on the portal. Compare pressure reading on portal to pressure gauge. If a system shutoff valve is installed between the pipe line and the Connected Backflow Endpoint, you can close this valve, then open the test cock to bleed pressure down to zero. Now power cycle the Endpoint again. Verify the new pressure reading on the portal is zero psi +/-4psi.

Maintenance

If the Connected Backflow Endpoint is connected to a test port or other area in plumbing system that may accumulate debris, flush the affected zone at least once per year. If you encounter a lot of debris or rust, increase the frequency of flushing.

Electronic Emission Notices

FCC Warning: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Industry Candata (IC) Warning: This device complies with Industry Canada license-exempt RSS standard(s). 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicable aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The following information refers to Zurn Smart Connected Products.

Radiation Exposure Statement: To comply with FCC and Industry Canada RF exposure limits for general population / uncontrolled exposure, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 30mm from all persons and must not be operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

FCC Interference Statement: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference intended for use in non-residential/non-domestic environments. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an authorized dealer or service representative for help.

Zurn is not responsible for any radio or television interference caused by using other than specified or recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

Responsible party: **ZURN INDUSTRIES, LLC** 511 W. Freshwater Way, Milwaukee, WI U.S.A. 53204
Ph. **1-855-ONE-ZURN**, Fax 919-775-3541



Troubleshooting

"Pressure Signal out-of-range" alert posted in plumbSMART™:



Step 1

Check pressure sensor wiring & connections:

- locking tab fully engaged
- no terminal corrosion
- terminals in sensor bent/broken,
- terminals in connector pushed in
- terminals broken, missing

Repair as needed to restore proper electrical connection. Alert on product's page in plumbSMART™ should clear within 1 hour after successful repair. (May need to refresh the web page by clicking on reload icon in the browser to clear the alert.)



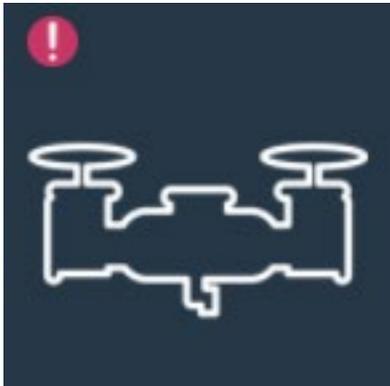
Step 2

Verify actual line pressure is within expected range.

Step 3

If problem persists, replace pressure sensor.

"Device Not Communicating" severe alert posted in plumbSMART™:



Step 1

Verify the Zurn monitor has power. If AC adapter is disconnected or unplugged from the wall outlet, then reconnect or plug into wall outlet. Alert should automatically clear within 1 hour after repowering the monitor. (May need to refresh the web page by clicking on reload icon in the browser to clear the alert.)



Step 2

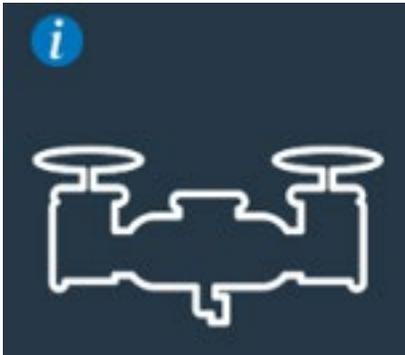
If Zurn monitor has power yet Device Not Communicating severe alert still has not cleared after 1 hour or after refreshing the web page, then verify Zurn gateway has power and its LoRa Status LED is on solid. If AC adapter is disconnected or unplugged from wall outlet, then reconnect or plug into wall outlet. Alert should automatically clear within 1 hour after re-powering the gateway. (May need to refresh the web page by clicking on reload icon in the browser to clear the alert.)



Step 3

If alert persists, then contact Zurn Customer Service at 844.987.6737 for assistance in replacing the Zurn monitor and/or the Zurn gateway.

**“Product Model Selection Error Detected”
information alert posted in plumbSMART™:**



Step 1

Verify the product model installed matches the product model selected in plumbSMART™.

Step 2

If an incorrect product model was selected in plumbSMART™, then contact Zurn Customer Service at 844.987.6737 for assistance in changing the product model selection. Alert should automatically clear within 1 hour after selecting the correct product model. (May need to refresh the web page by clicking on reload icon in the browser to clear the alert.)

