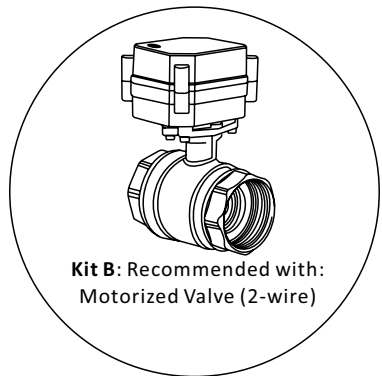
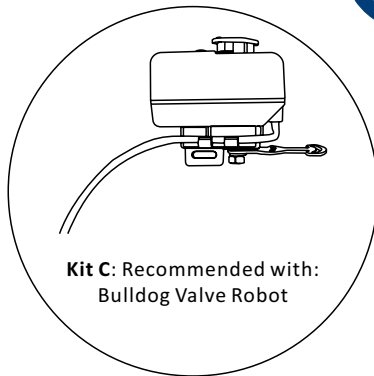


**Kit A:** Recommended with:  
Gas/Water Valve Manipulator



**Kit B:** Recommended with:  
Motorized Valve (2-wire)



**Kit C:** Recommended with:  
Bulldog Valve Robot

# YOLINK

## Gas/Water Valve Controller

YS4909-UC  
Installation & User Guide  
*(for Kit A/Kit B/Kit C)*

Rev 1.2

**Thank you** for purchasing YoLink products and for entrusting us with your smart home needs! Your 100% satisfaction is our goal. If you experience any problems with setting up your new YoLink Gas/Water Valve Controller, please give us a chance to assist you, before returning your purchase.

We at Customer Support are here for you. If you need any assistance installing, setting up or using a YoLink product or our app.

Find additional support and ways to reach us at:



**[www.yosmart.com/support-and-service](http://www.yosmart.com/support-and-service)**

Or scan this QR code with your smartphone



Email us, 24/7 at:



**[service@yosmart.com](mailto:service@yosmart.com)**

Call us, 9AM to 5PM Pacific Standard Time at:



**(949) 825-5958**

You may chat with us on Facebook (non-urgent matters):



**[www.facebook.com/YoLinkbyYoSmart](http://www.facebook.com/YoLinkbyYoSmart)**

Sincerely,

**Queenie, Clair, James, Eric**

Customer Support Team



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Revised: 09/14/2021

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# A. In the Box

## A-1. Kit A - YS4909-UC Gas/Water Valve Controller + Valve Manipulator

### Box 1

A. Gas/Water Valve Controller

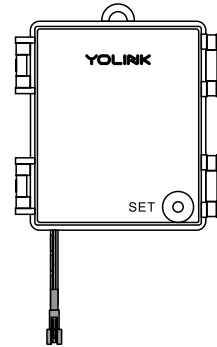
B. Mounting Hook

C. Quick Start Guide

Batteries are not included. This device requires four AA batteries. For outdoor applications, especially extreme hot or cold temperature, we recommend lithium type AA batteries, for optimal performance.



A.



B.



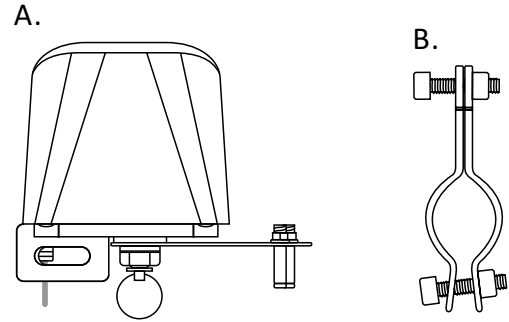
C.



## Box 2 (Optional Accessory)

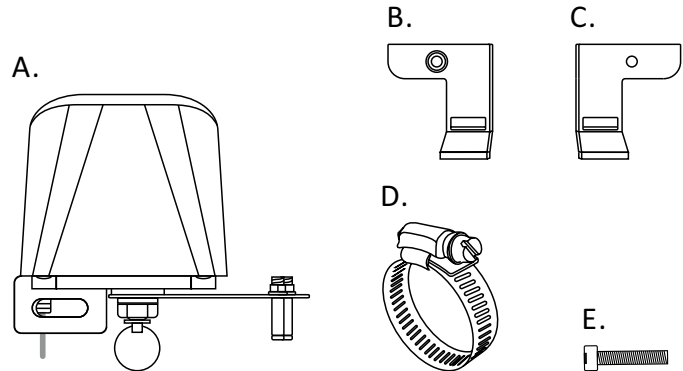
### Type A

- A. Gas/Water Valve Manipulator
- B. Bracket (2) (with 2 mounting bolts)



### Type B

- A. Gas/Water Valve Manipulator
- B. Bracket (*with threaded hole*)
- C. Bracket (*without threaded hole*)
- D. Stainless Steel Hose Clamp
- E. Mounting Screw



## A-2. Kit B - YS4909-UC Gas/Water Valve Controller + Motorized Valve

### Box 1

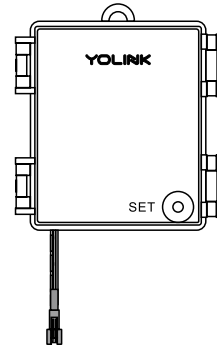
A. Gas/Water Valve Controller

B. Mounting Hook



Batteries are not included. This device requires four AA batteries. For outdoor applications, especially extreme hot or cold temperature, we recommend lithium type AA batteries, for optimal performance.

A.



B.



C.

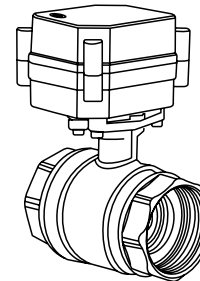


---

### Box 2 (Optional Accessory)

A. Motorized Valve (DN15/DN20  
/DN25/DN32, 2-wire)

A.



## A-3. Kit C - YS4909-UC Gas/Water Valve Controller + Bulldog Valve Robot

### Box 1

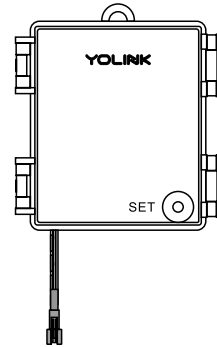
A. Gas/Water Valve Controller

B. Mounting Hook



Batteries are not included. This device requires four AA batteries. For outdoor applications, especially extreme hot or cold temperature, we recommend lithium type AA batteries, for optimal performance.

A.



B.



C.



---

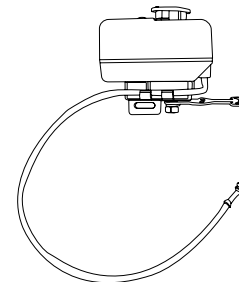
### Box 2 (Optional Accessory)

A. Bulldog Valve Robot

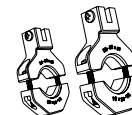
B. Brackets (24-36 x 50 & 36-52 x 54)

C. Handle-supporting Bolt (2) & Bottom Support Bracket

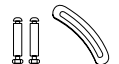
A.



B.

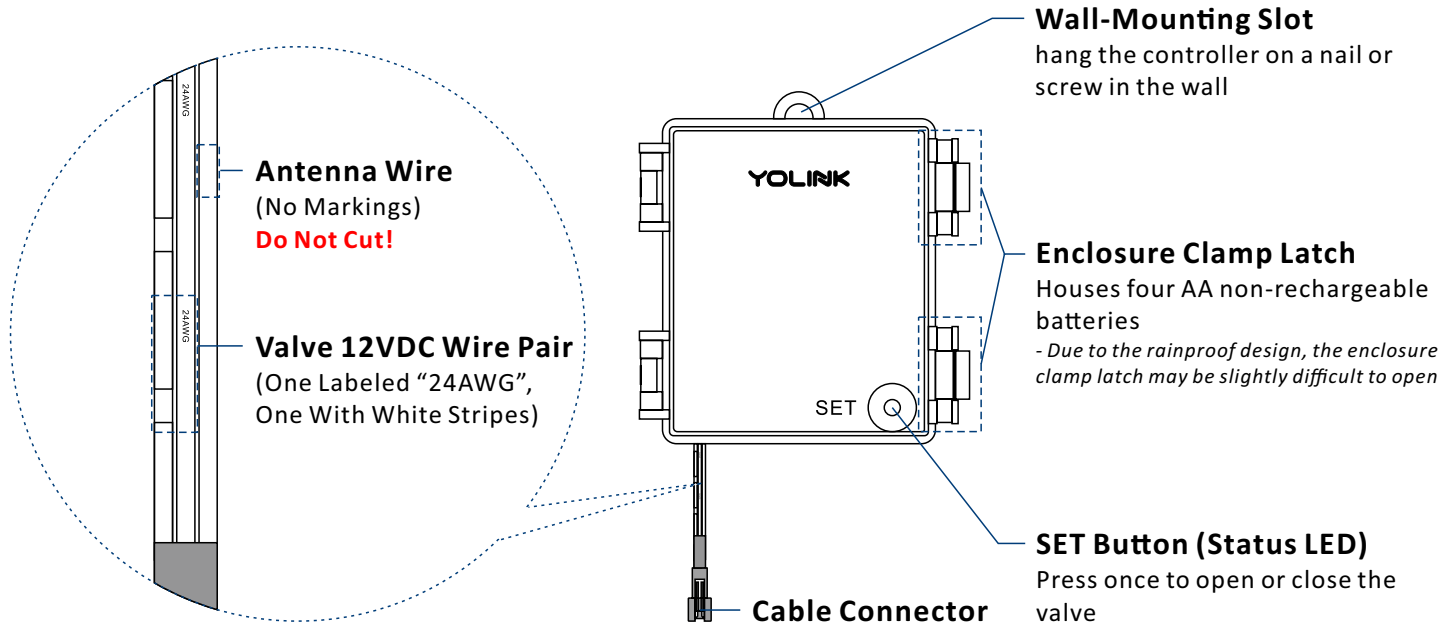


C.



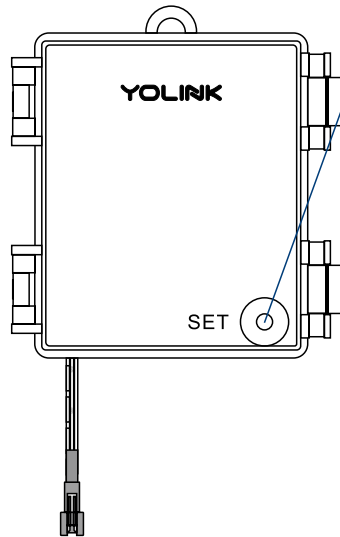
## B. Introduction










The YoLink Gas/Water Valve Controller is a smart device that can control a 12 VDC ball-type (only) gas or water valve manipulator remotely with the YoLink app on your smartphone or tablet or using the SET button on the device. Pressing "Open" or "Close" on the app will mechanically rotate the handle 90 degrees in the appropriate direction, to close or open the valve.





The LED light indicates the current status of the Gas/Water Valve Controller:



-  **Blinking Red Once, Then Green Once**  
Device turned on
-  **Blinking Red And Green Alternately**  
Restoring to Factory Defaults
-  **Blinking Green Once**  
Turn on the manipulator/valve
-  **Blinking Green**  
Connecting to Cloud
-  **Slow Blinking Green**  
Updating
-  **Fast Blinking Green**  
Establishing Connection with YoLink System (YoLink *Control*)
-  **Blinking Red Once**  
Turn off the manipulator/valve or device is connected to the cloud and is functioning normally
-  **Fast Blinking Red**  
Removing Connection to YoLink System (YoLink *Control*)
-  **Fast Blinking Red Every 30 Seconds**  
Batteries are low; please replace the batteries (see page 68)

## C. Set Up

### C-1. Set Up - First-Time YoLink Users *(Existing users proceed to C-2. Add Device, next page)*

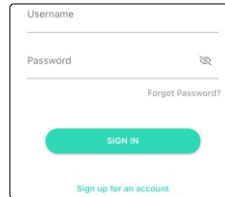
- 1 Download the YoLink app through Apple App Store or Google Play Store (Search in the store or use the QR code on the right)



**!**  
Apple iPhone or tablet that is iOS 9.0 or higher, or an Android phone or tablet that is Android 4.4 or higher

- 2 Log in to the YoLink app

**!** Create a new account if required

A screenshot of the YoLink app login screen. It features a "Username" field, a "Password" field with an eye icon, and a "Forgot Password?" link. A green "SIGN IN" button is at the bottom. Below the button is a link that says "Sign up for an account".

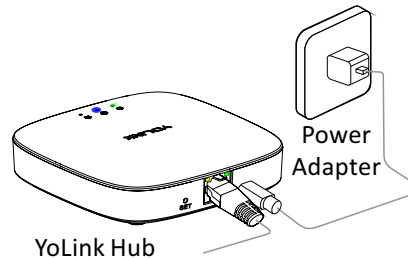
**!**

1. Make sure your Hub is connected to the internet (green LED indicator is blinking, blue LED indicator is always on)
2. Ethernet patch cable (included) to your network (router, switch, etc.), **recommended**. Otherwise connect your Hub to your home 2.4 GHz Wi-Fi network (only when necessary). Refer to the Hub set up manual for more information:




YS1603-UC  
User Guide

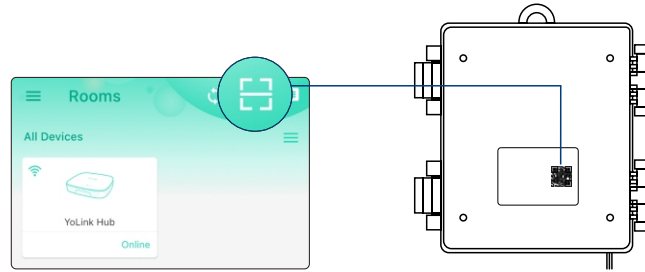
- 3 The YoLink Hub is required to set up your Gas/Water Valve Controller. Please set up your YoLink Hub first (refer to YoLink Hub manual)



## C-2. Add Device

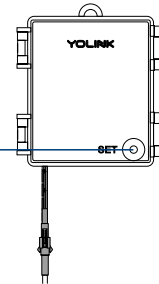
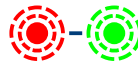
- 1 Tap “

You must press “Bind Device” to pair the device to your account



- 2 Press the SET button once to turn on the device after installation. The Status LED will blink red once, then green several times, indicating your device has connected to the cloud and is ready to use

SET Button



1. You will need to press the SET button once again if the device failed to connect to the cloud
2. Pressing the SET button at any other time after this initial process will result in the LED blinking red/green once, only. This indicates the device is connected to the cloud and is functioning normally
3. If the red LED does NOT blink as noted this may indicate a problem with the controller. Please see the troubleshooting section and the contact section for technical support

# D. Installation

## D-1. Install with Ball-type Manipulator (Type A)

**Rocker Arm and  
Handle-supporting Bolt**

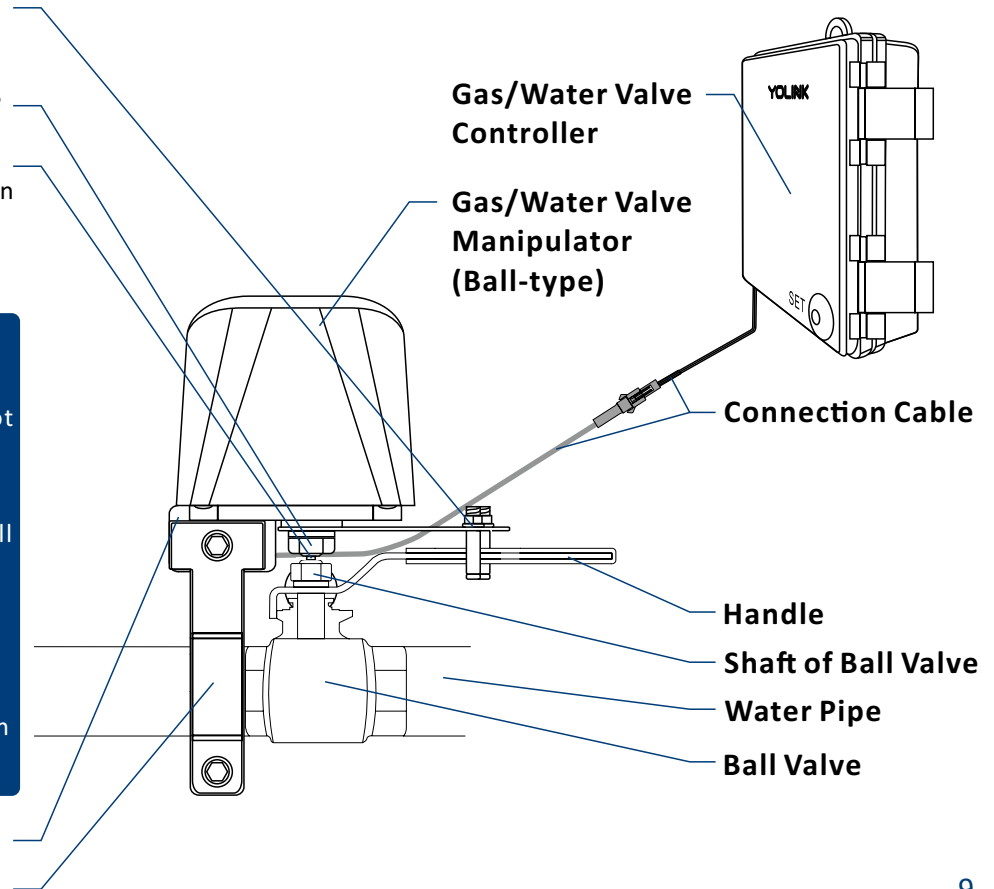
**Output Shaft of Manipulator**

**Clutch**

Hold the ring and keep pulling down on the clutch, you can rotate the handle manually to open or close the valve

- 1. The handle must rotate at an angle of 90 degrees, otherwise the valve cannot be fully opened or closed
- 2. Manually opening or closing (only) the valve will cause the wrong valve position to be indicated in the app. To prevent this, manually return the valve to the position indicated in the app

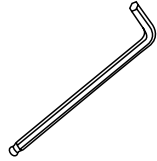
**Mounting Ear  
Brackets**



## 1. These Tools may be Required



Phillips Screwdriver



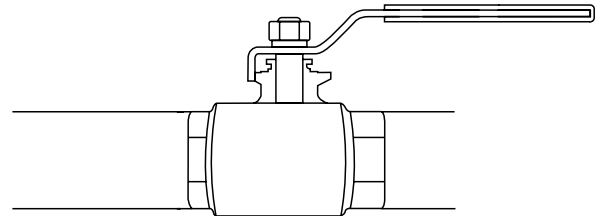
Allen Wrench -  
Number 5 Metric



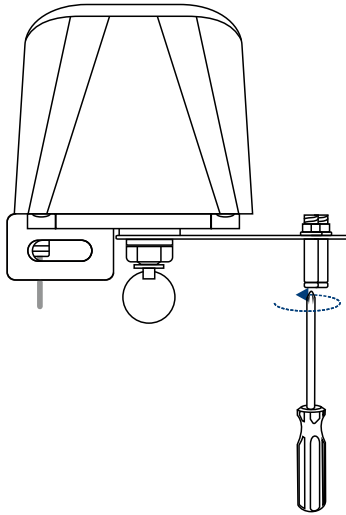
1. The manipulator has moving parts and must not be too close to the wall or other obstructions.
2. The manipulator should be installed in a position convenient for manual operation

## 2. Get Ready

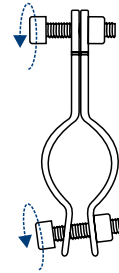
- 1 Turn the ball valve to OPEN status (keep the center axis of ball valve aligned to the water pipe)



- 2 Loosen the two screws on the two handle-supporting bolts



- 3 Loosen the brackets into two separate parts (carefully place the two bolts aside)

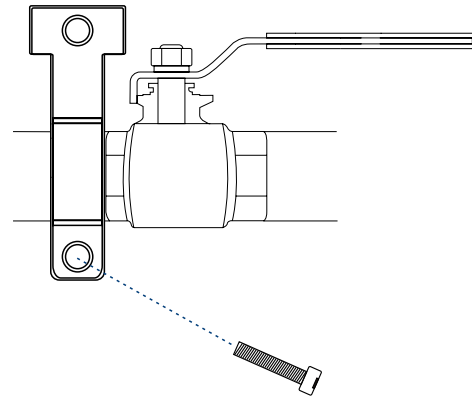


### 3. Begin Installation

1. The manipulator bracket should be installed as close to the ball valve as possible ( on the ball brass rather than on the pipe, if possible)
2. Ensure the clutch and rocker arm can be moved freely

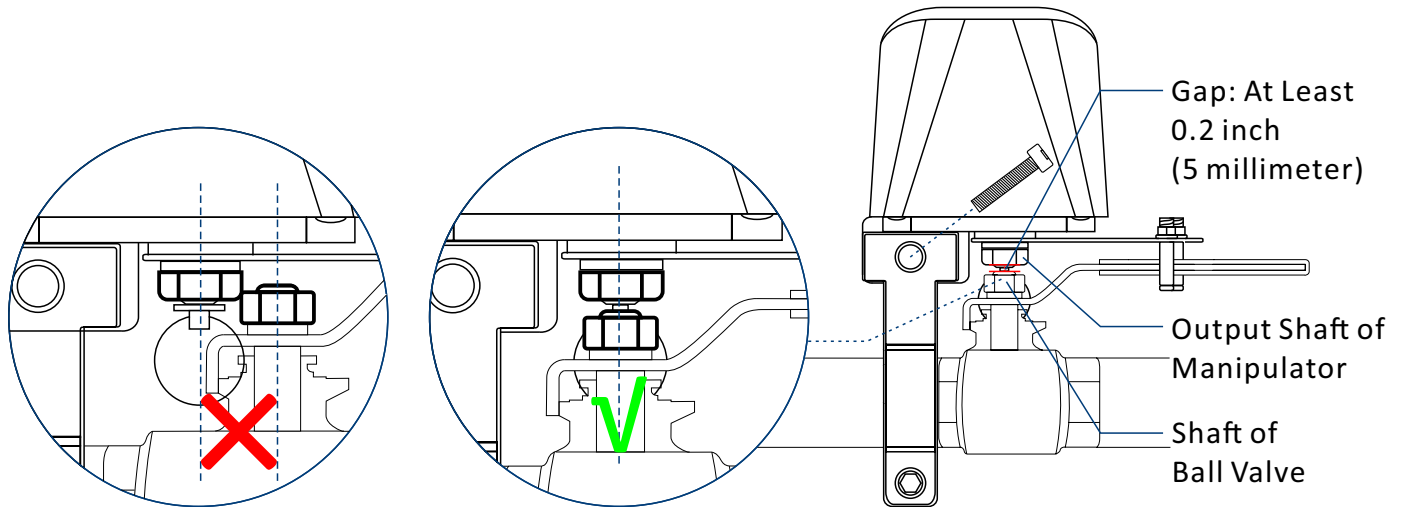
- 1 Insert the screw through the bottom of brackets with the non-threaded hole (the threaded hole should be facing inside, *do not tighten the screw*)

The brackets are intentionally offset. Do not attempt to bend or adjust the brackets



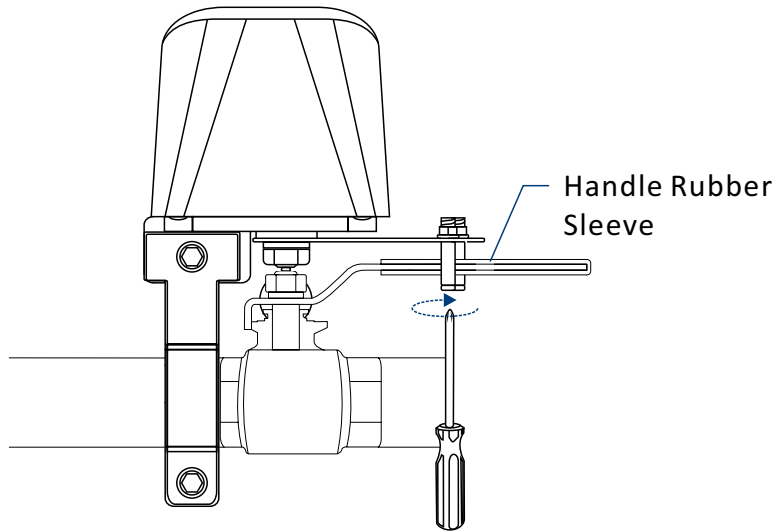
- 2 Insert the screw through the top of the brackets and the mounting ear of the manipulator with the non-threaded hole (*place the two handle-supporting bolts on either side of the handle*)

1. Keep the center axis of the output shaft of manipulator aligned with the center axis of the shaft of ball valve
- ! 2. Keep at least 0.2 inch (5 millimeter) gap between the output shaft of manipulator and the shaft of ball valve



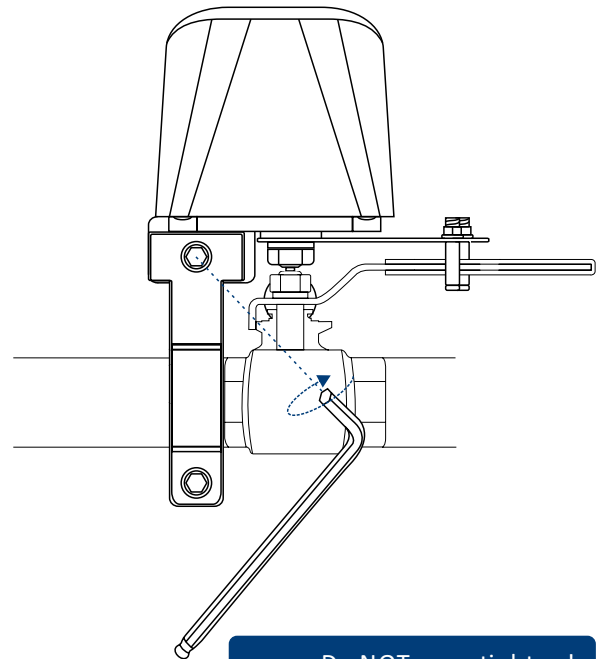


- 3 Securely tighten the two screws on the two handle-supporting bolts using a Phillips screwdriver



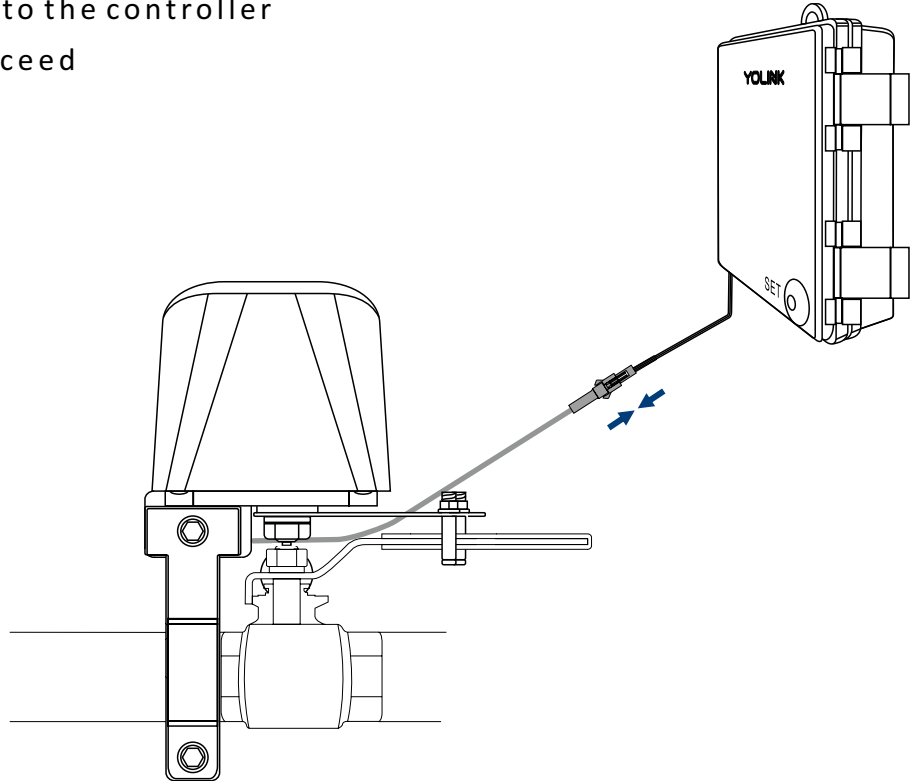
- 1. The handle's rubber sleeve may affect the tightness of the rocker arm and the handle. It is recommended to remove it as needed
- 2. The two handle arm pins should roll freely but snug to the handles needed

- 4 Securely tighten the two screws on the brackets using a Number 5 metric Allen wrench



- Do NOT over-tighten! Over-tightening may crush or rupture the pipe

- 5 After the manipulator is securely installed (all screws tight, etc.), refer to “Install or Replace the Batteries (Gas/Water Valve Controller)” section on page 53 for the installation of batteries for the controller
- 6 Connect the manipulator to the controller
- 7 After the connection, proceed to page 33-35, for testing



## D-2: Install with Ball-type Manipulator (Type B)

**Rocker Arm and  
Handle-supporting Bolt**

**Output Shaft of Manipulator**

**Clutch**

Hold the ring and keep pulling down on the clutch, you can rotate the handle manually to open or close the valve

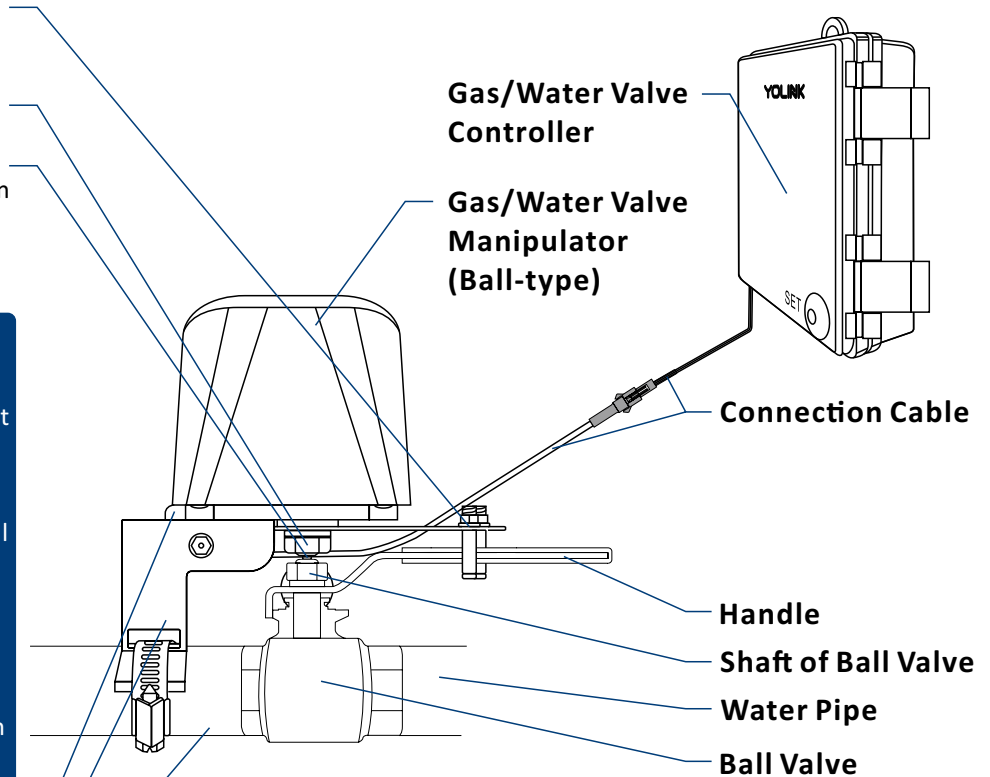
1. The handle must rotate at an angle of 90 degrees, otherwise the valve cannot be fully opened or closed
2. Manually opening or closing (only) the valve will cause the wrong valve position to be indicated in the app. To prevent this, manually return the valve to the position indicated in the app

**Mounting Ear**

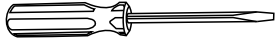
**Brackets**

**Stainless Steel Hose Clamp**

Adjustable diameter: 0.83 - 1.73 inch



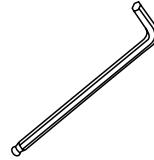
## 1. These Tools may be Required



Slotted Screwdriver



Phillips Screwdriver



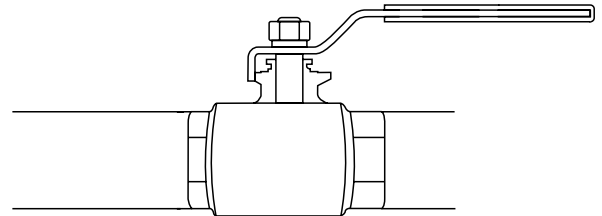
Allen wrench -  
Number 5 metric



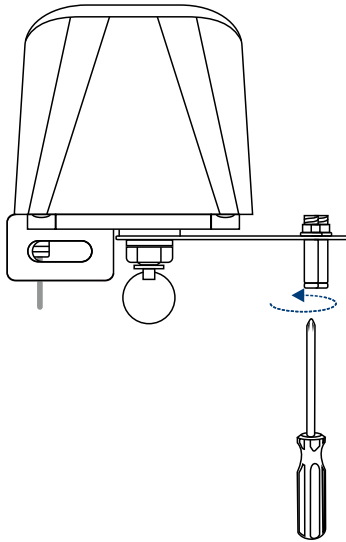
1. The manipulator has moving parts and must not be too close to the wall or other obstructions. Ensure at least 1 inch clearance between the manipulator and the wall or any objects, pipes, etc.
2. The manipulator should be installed in a position convenient for manual operation

## 2. Get Ready

- 1 Turn the ball valve to OPEN status (keep the center axis of ball valve aligned to the water pipe)

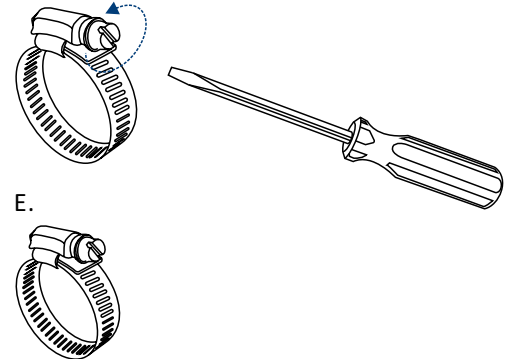


- 2 Loosen the two screws on the two handle-supporting bolts



Adjustable diameter:  
0.83 - 1.73 inch

- 3 Loosen the stainless steel hose clamp using a slotted screwdriver, insert the hose clamp through the slots in the brackets (*positioning the screw mechanism on the easiest side to reach for tightening*)

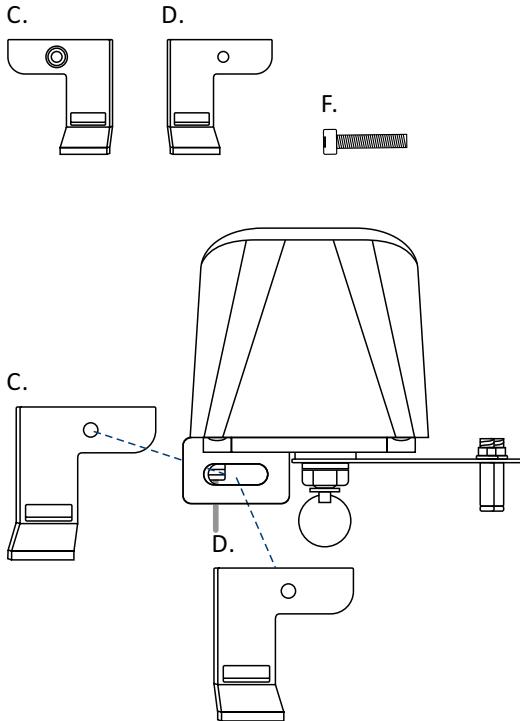


### 3. Begin Installation

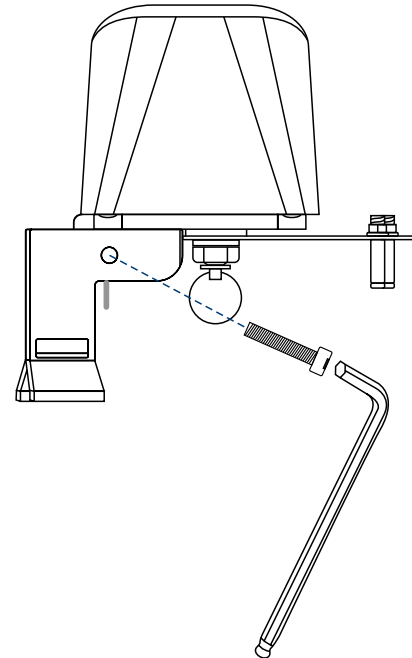


1. The manipulator bracket should be installed as close to the ball valve as possible ( on the ball brass rather than on the pipe, if possible)
2. Ensure the clutch and rocker arm can be moved freely

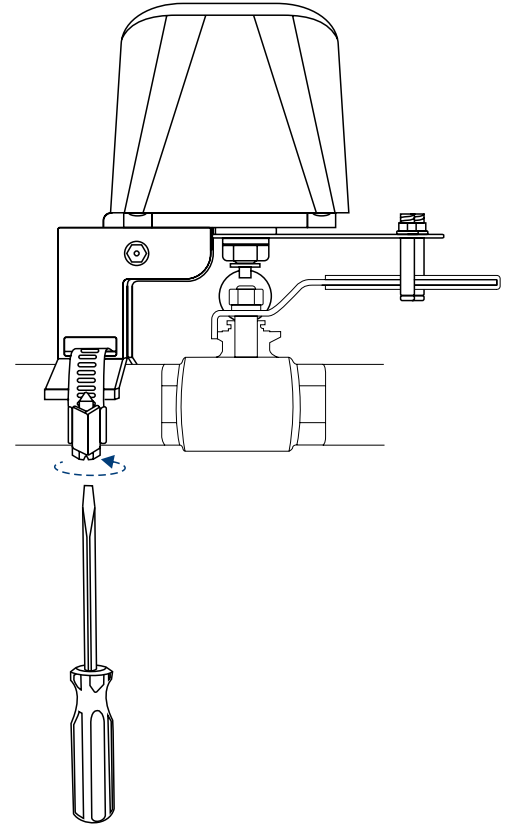
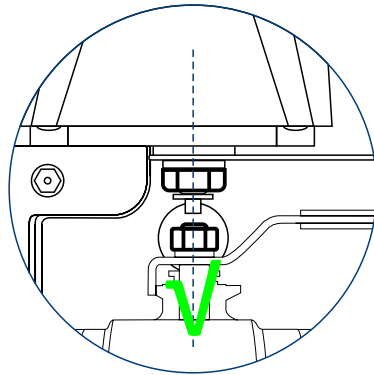
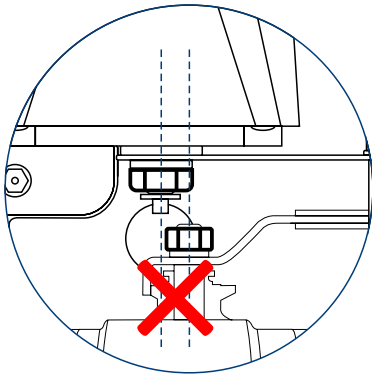
- 1 Install the bracket to the valve operator through the slot on the bottom (*The bent tabs should be facing outward*)



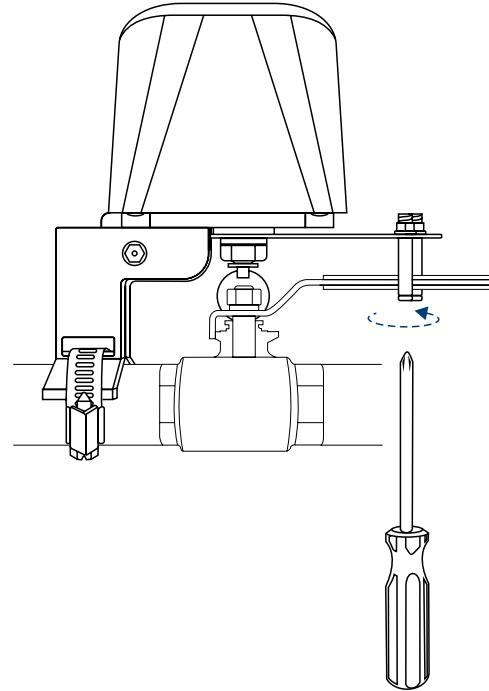
- 2 Insert the screw through the bracket with the larger, non-threaded hole and secure the screw into the threaded hole in the second bracket using a Number 5 metric allen wrench



- 3 Place the valve operator on the water pipe valve so that the hose clamp is around the base of the ball valve on the opposite side from the lever
- 4 Secure the hose clamp screw using a slotted screwdriver until the valve operator will just stay in place

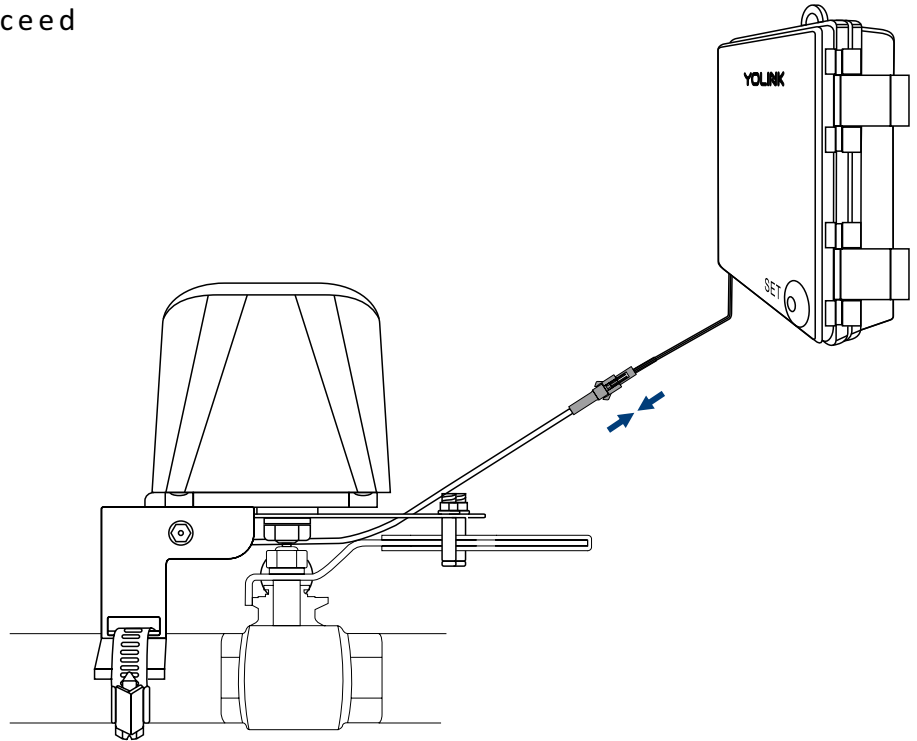


- 5 Keep pulling down the clutch, rotate the valve operator so that the two handle-supporting bolts are on either side of the valve handle. Close these handle-supporting bolts so that they hold the water pipe valve handle between them. Tighten securely using the a Phillips screwdriver

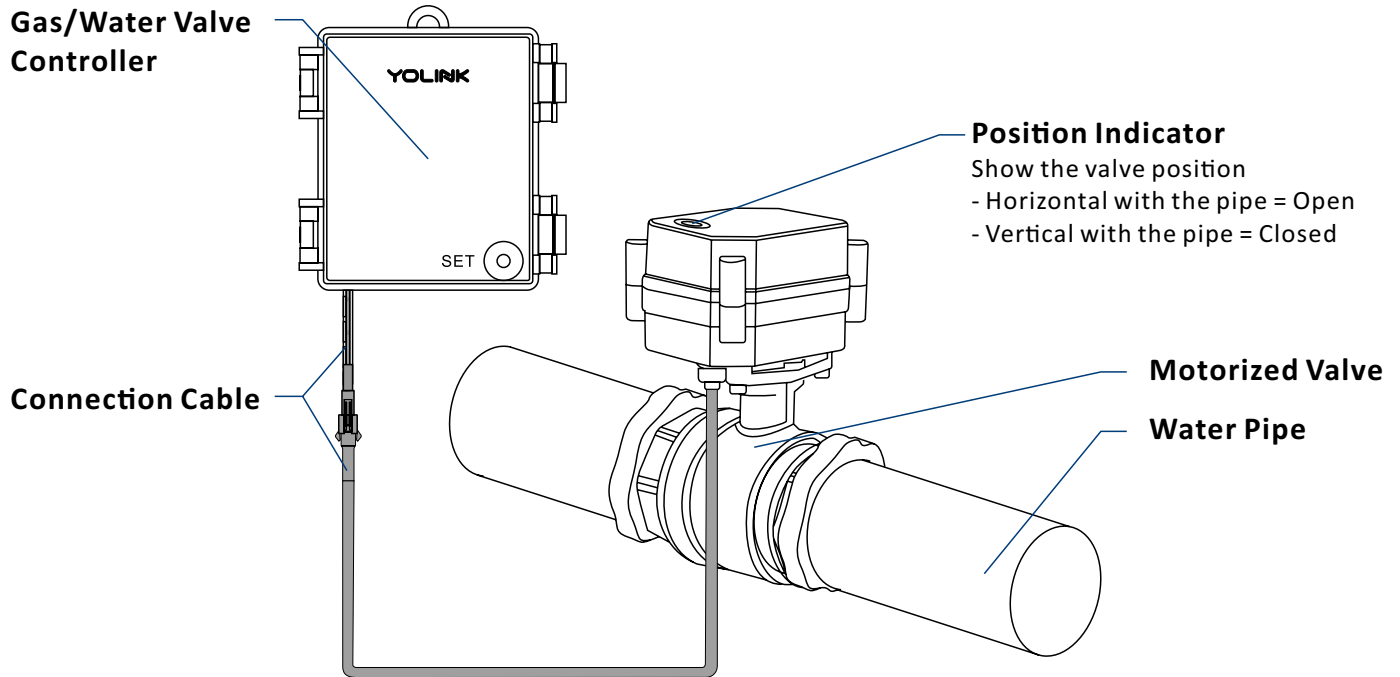




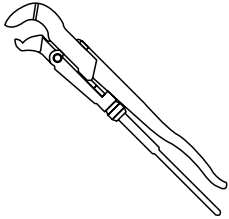
- ⑥ After the manipulator is securely installed (all screws tight, etc.), refer to “Install or Replace the Batteries (Gas/Water Valve Controller)” section on page 53 for the installation of batteries for the controller
- ⑦ Connect the manipulator to the controller
- ⑧ After the connection, proceed to page 33-35, for testing



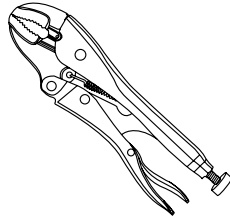
## D-3: Install with Ball-type Motorized Valve (2-Wire)



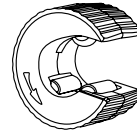
## 1. These Tools or Parts may be Required



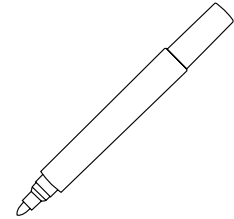
Pipe Wrench



Locking Pliers



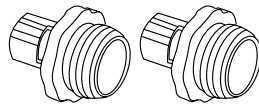
Copper Pipe Cutter



Aqueous Marker



Teflon (TM)  
Waterproof  
Sealing Tape



NPT Water Pipe  
Connector (2)  
(Size appropriate  
for pipe)



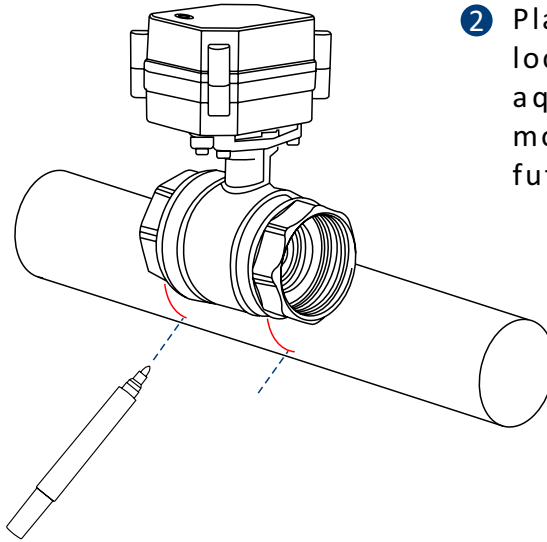
Note: YoSmart recommends SharkBite brand pipe connectors, for copper, CPVC and PEX pipe applications. Visit <https://www.sharkbite.com/products/brass-push-male-adapter> for more information

## 2. Important !!

- These instructions cover installing the motorized valve on copper pipe, using threaded fittings. Assumptions are made you or the installer of the valve possess the required skills and tools to perform this installation safely:
  - a) If soldering the fittings, instead, is required or desired
  - b) If your installation involves CPVC or PEX pipe, you have the appropriate connectors and tools, to adapt the valve to your application
- If you are not comfortable with working with plumbing tools and pipe, please consult or hire a professional plumber
- Please refer to the valve manufacturer's installation guide for more information:  
<https://m.media-amazon.com/images/I/81iA78dQJbL.pdf>
- If you have questions at any time please contact us. Refer to the contact information just after this manual's cover page

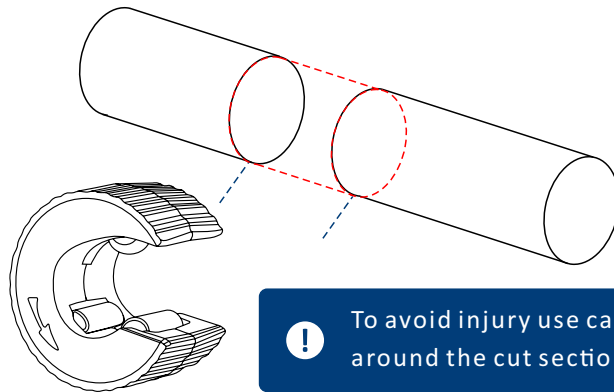
### 3. Get Ready

- 1 Shut-off the main valve of the water pipe, then turn on a tap to run out the water left in the water pipe



- 2 Place the motorized valve at the desired location, then mark an outline (with a aqueous marker, tape, etc.) of the motorized valve on the water pipe for future reference

Local plumbing/building codes may require a standard non-electric or non-motorized valve for the main water shut-off; do not replace a non-electric shut-off valve with this motorized valve without first consulting with the applicable code authorities. If installing this valve to shut off the main water line, we suggest installing this adjacent to the (non-electric) shut-off valve

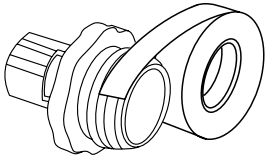


To avoid injury use care when working around the cut sections of pipe

- 3 Cut the water pipe through the mark using a copper pipe cutter, then remove the cut section of the water pipe
- 4 Wipe off the cut section of pipe with a clean cloth

## 4. Begin Installation

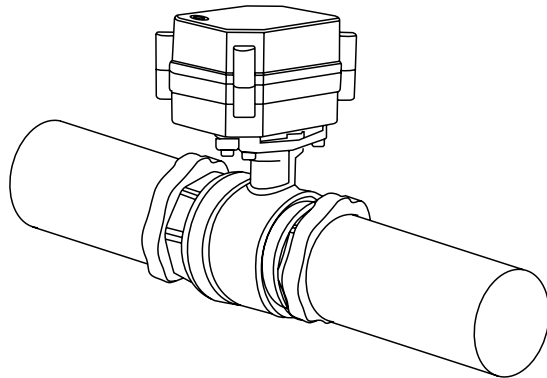
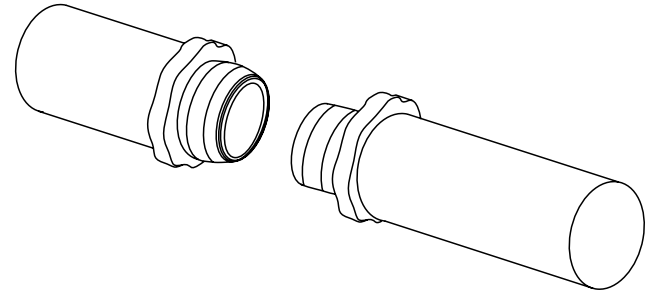
- 1 We recommend the use of Teflon tape to ensure a good seal on the threading, as shown in the figure



- 2 Install and secure tightly the water pipe access with two water pipe connector

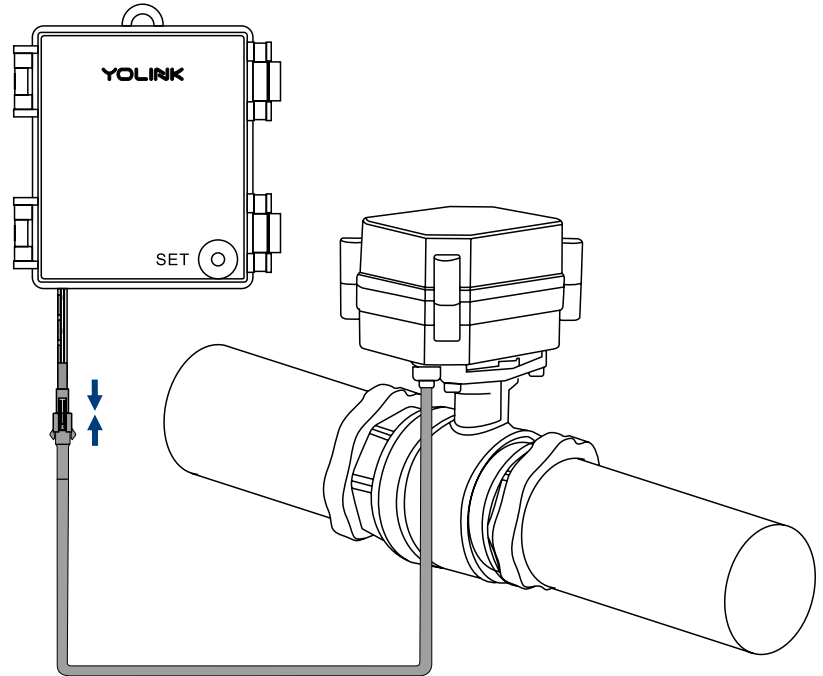


Water pipe will probably leak if the access were not being secured tightly with the connector



- 3 Connect the motorized valve to the water pipe connector, then tighten securely the valve using a pipe wrench and a locking plier

- 4 After the motorized valve is securely installed (all screws tight, etc.), refer to “Install or Replace the Batteries (Gas/Water Valve Controller)” section on page 53 for the installation of batteries for the controller
- 5 Connect the motorized valve to the controller
- 6 After the connection, proceed to page 33-35, for testing



## D-4: Install with EcoNet Bulldog Valve Robot

Handle and Position Indicator

Rocker Arm and Handle-supporting Bolt

Output Shaft of Bulldog

Mounting Ear

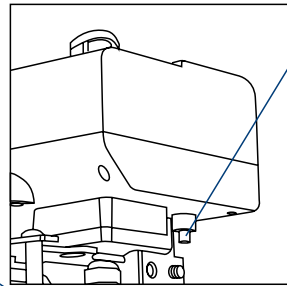
Brackets

Shaft of Ball Valve

Handle

Water Pipe

Ball Valve



### Clutch Pin

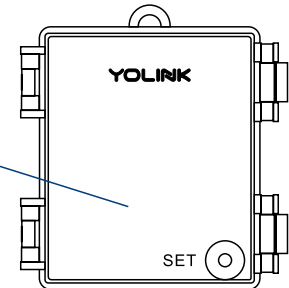
Push and hold the clutch pin and use the valve handle (recommended) or Robot handle to open or close the valve



1. The handle must rotate at an angle of 90 degrees, otherwise the valve cannot be fully opened or closed
2. Manually opening or closing (only) the valve will cause the wrong valve position to be indicated in the app. To prevent this, manually return the valve to the position indicated in the app

EcoNet Bulldog Valve Robot (Ball-type)

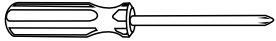
Gas/Water Valve Controller



Connection Cable



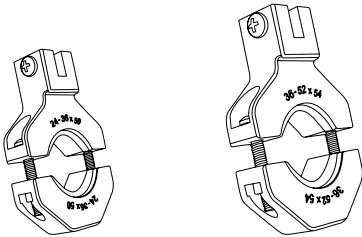
## 1. Tools Required



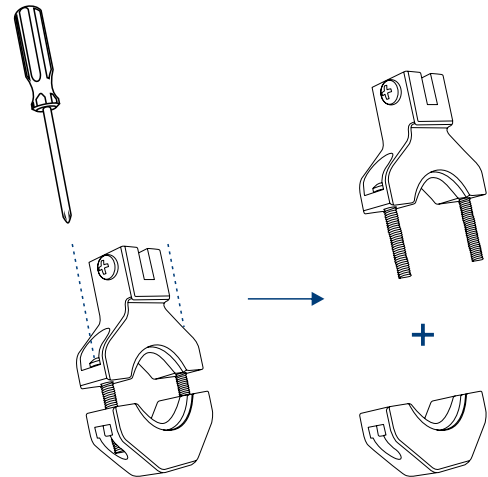
Phillips Screwdriver

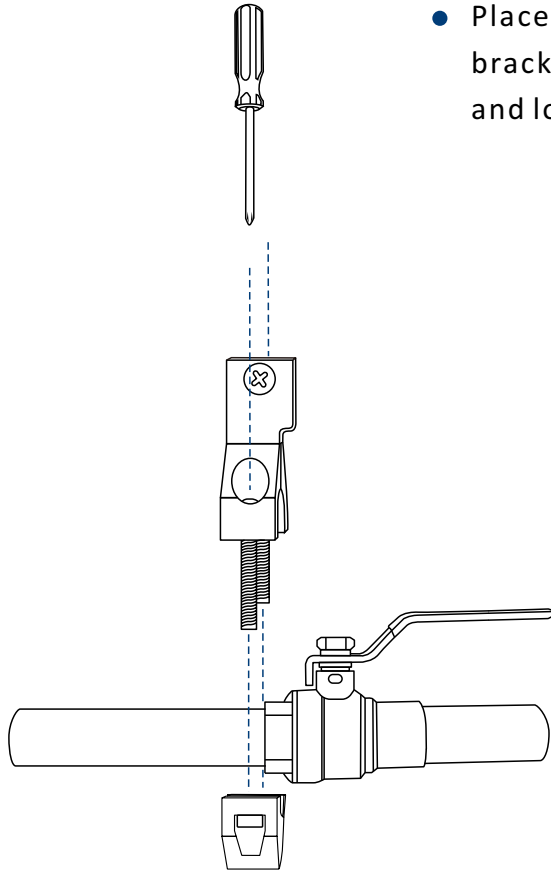
## 2. Begin Installation

- 1 Attach the bracket
- Select the suitable bracket for your installation: 24-36 x 50 or 36-52 x 54



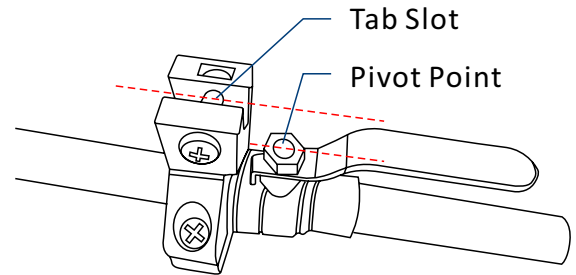
- Loosen the two screws to separate the bracket into two pieces as shown



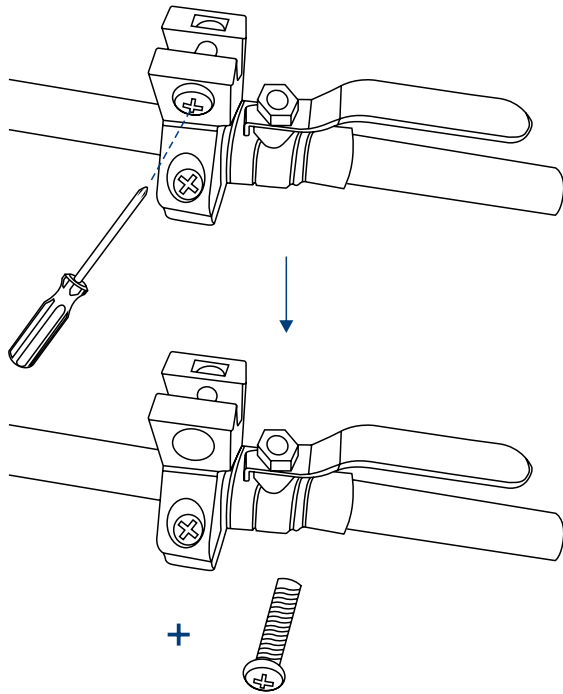


- Place the upper bracket and lower bracket on the valve, as shown, and loosely tighten the screws

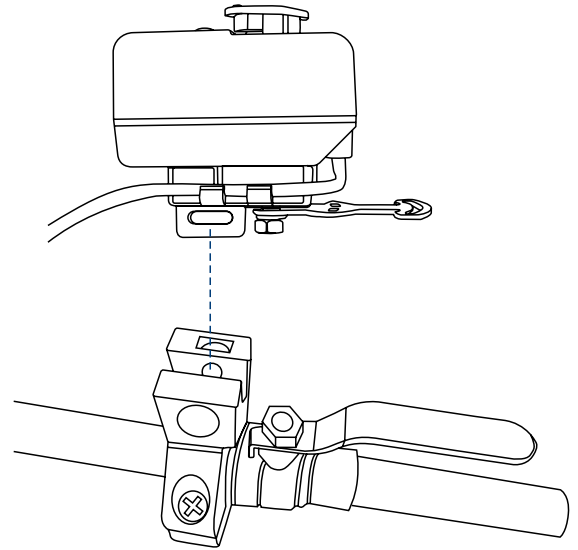
- 
- Position the bracket so that the tab slot is aligned with the valve pivot point



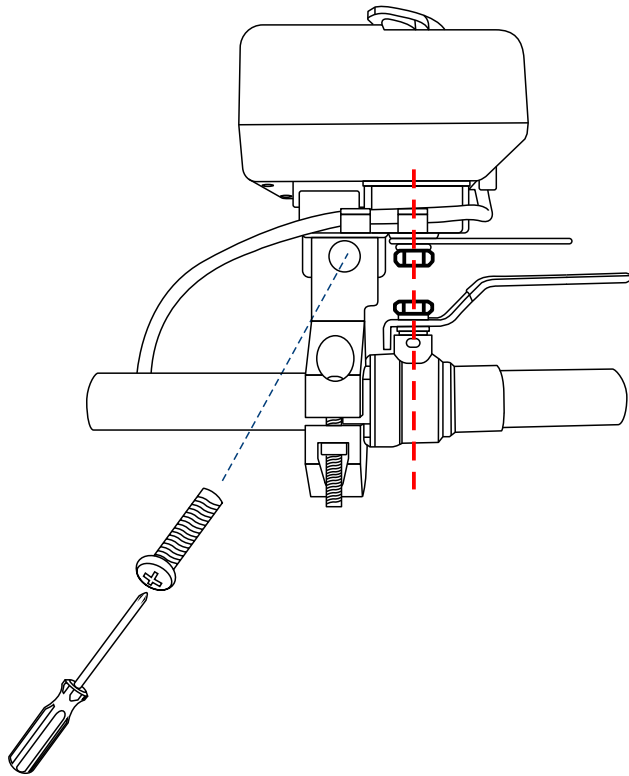
- 2 Attach the Bulldog Valve Robot
- Momentarily remove the screw from the tab slot, as shown



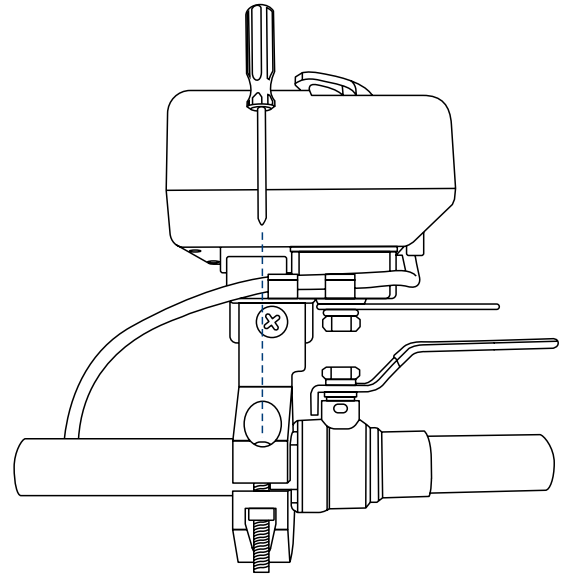
- Attach Valve Robot to the bracket



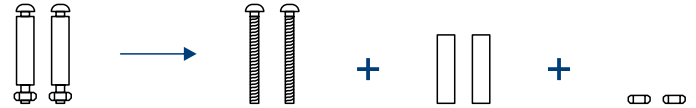
- Keeping the center axis of the Valve Robot's shaft aligned with the ball valve shaft (as indicated by the red dashed line), reinsert and tighten the tab slot screw



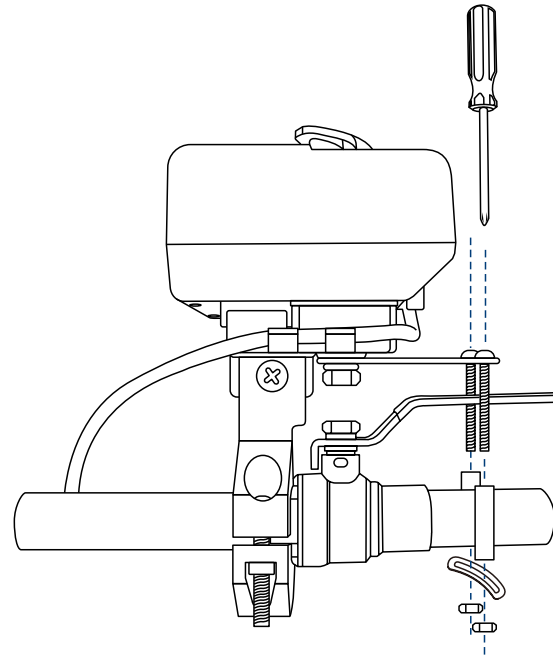
- 
- Securely tighten the two screws on the bracket. Gently tug on the Bulldog, confirming that it is firmly secured to the valve



- Remove the nuts and collars from the two handle supporting bolts as shown

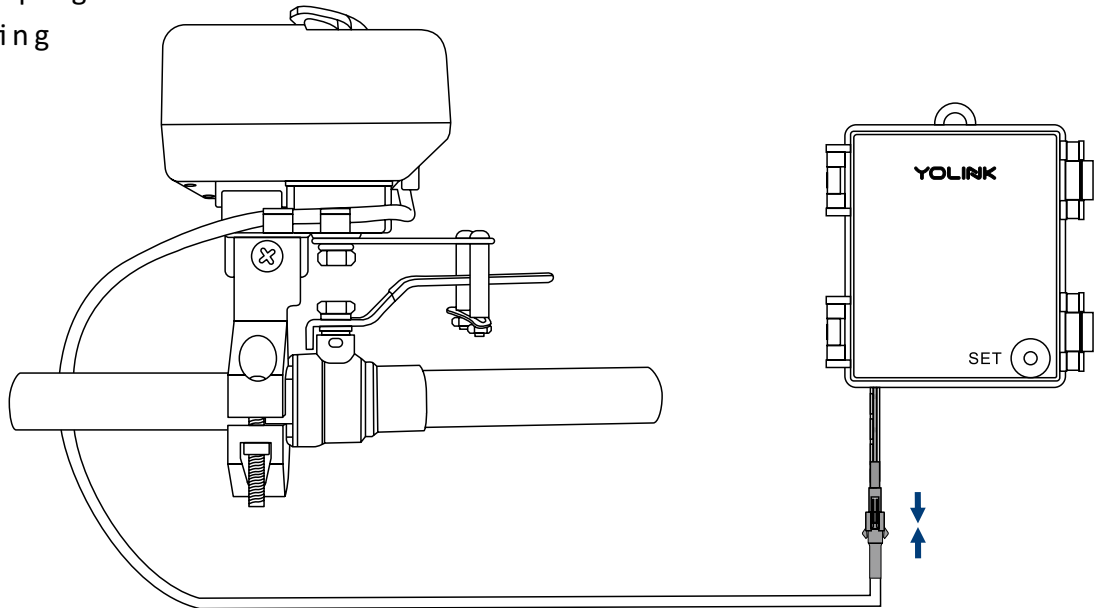


- Place the bolts in the slot on the rocker arm, with one on each side of the valve handle, as shown
- Put the collars back on the bolts
- Next, while holding the bolts and collar pieces in place, attach the bottom supporting bracket as shown. Then, attach and loosely tighten the nuts to the bolts
- Finally, position both bolts and collars so that they are snug against each side of the valve lever



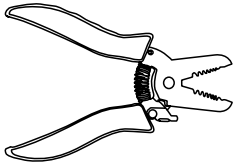
3 Connect the Bulldog Valve Robot to the Controller

- After the motorized valve is securely installed (all screws tight, etc.), refer to “Install or Replace the Batteries (Gas/Water Valve Controller)” section on page 53 for the installation of batteries for the controller
- Connect the motorized valve to the controller
- After the connection, proceed to page 33-35, for testing

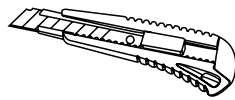


## D-5. Instructions for installing the Gas/Water Valve Controller for use with an existing Valve Manipulator (Non-smart, 12VDC only!)

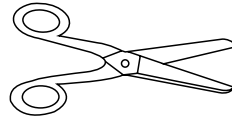
### 1. These Tools may be Required



Wire Cutter/Stripper



Utility Knife



Scissors



Wire Nuts  
/Connectors (2)



Electrical Tape

1. Your existing manipulator must be 2-wire, 12 VDC, non-smart, and functional

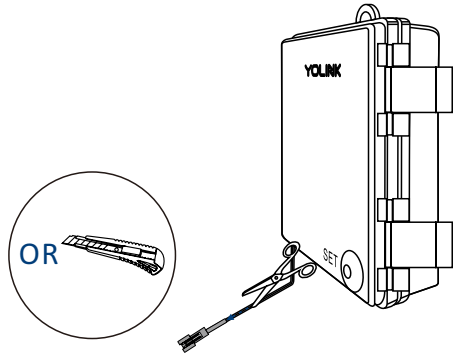


2. Wire nuts (twist-on connectors) are the recommended wire splicing method. Other methods may be acceptable as long as they provide a secure electrical connection, with no exposed conductors

### 2. Get Ready

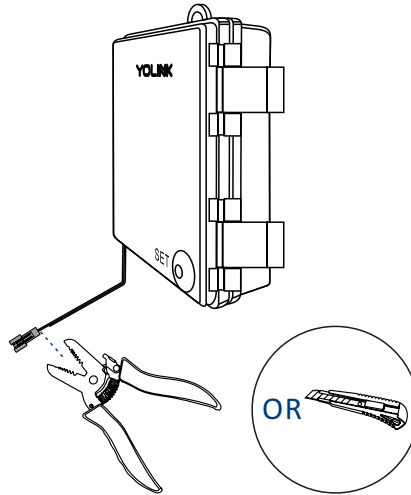
- 1 Remove power from the manipulator by disconnecting the connection cable
- 2 Examine the connector on the manipulator connection cable. If compatible with the controller's connection cable connector, connect the two cables together and proceed to page 16

### 3. Prepare for Installation of the Valve Controller

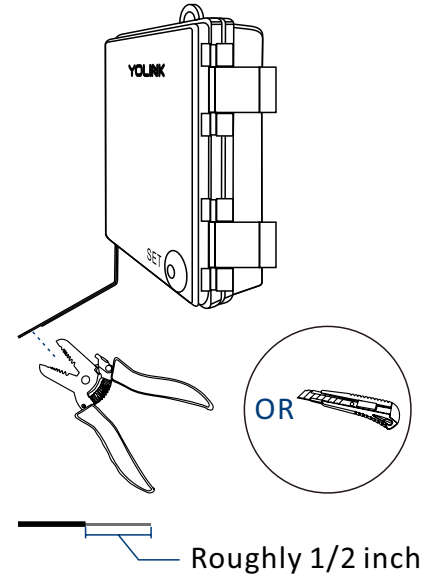


- 1 Using a scissors or utility knife, carefully remove the outer jacket/insulation on the cable. Use care to avoid cutting or nicking the internal conductors and the antenna

- 2 Use a wire cutter/stripper to remove the connector on the new controller. Use care to avoid cutting or nicking the antenna



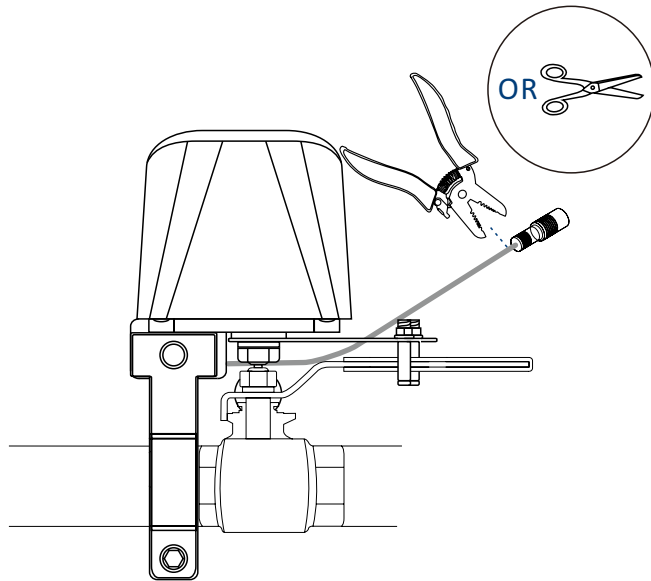
- 3 Using a wire stripper, remove the insulation on each conductor, leaving roughly half an inch of exposed conductor





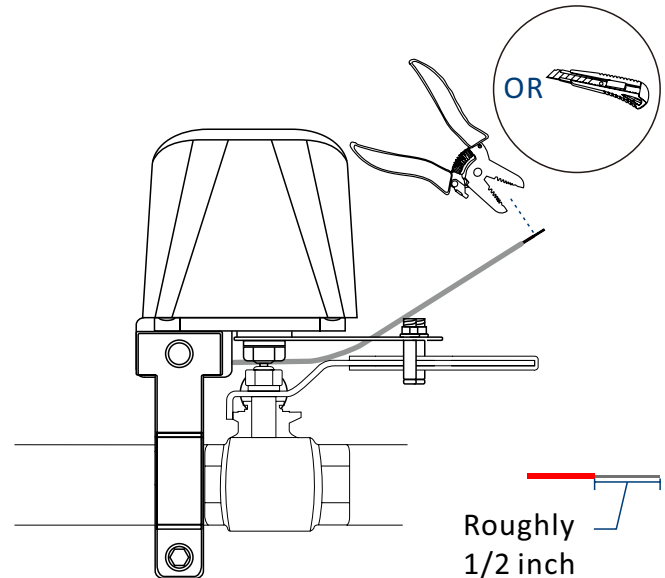
#### 4. Prepare for Installation of the Manipulator

- 1 Use a wire cutter/stripper to remove the connector on the existing manipulator



- 2 Using a wire stripper or utility knife, carefully remove the outer jacket/insulation on the cable. Use care to avoid cutting or nicking the internal conductors

Using a wire stripper, remove the insulation on each conductor, leaving roughly half an inch of exposed conductor

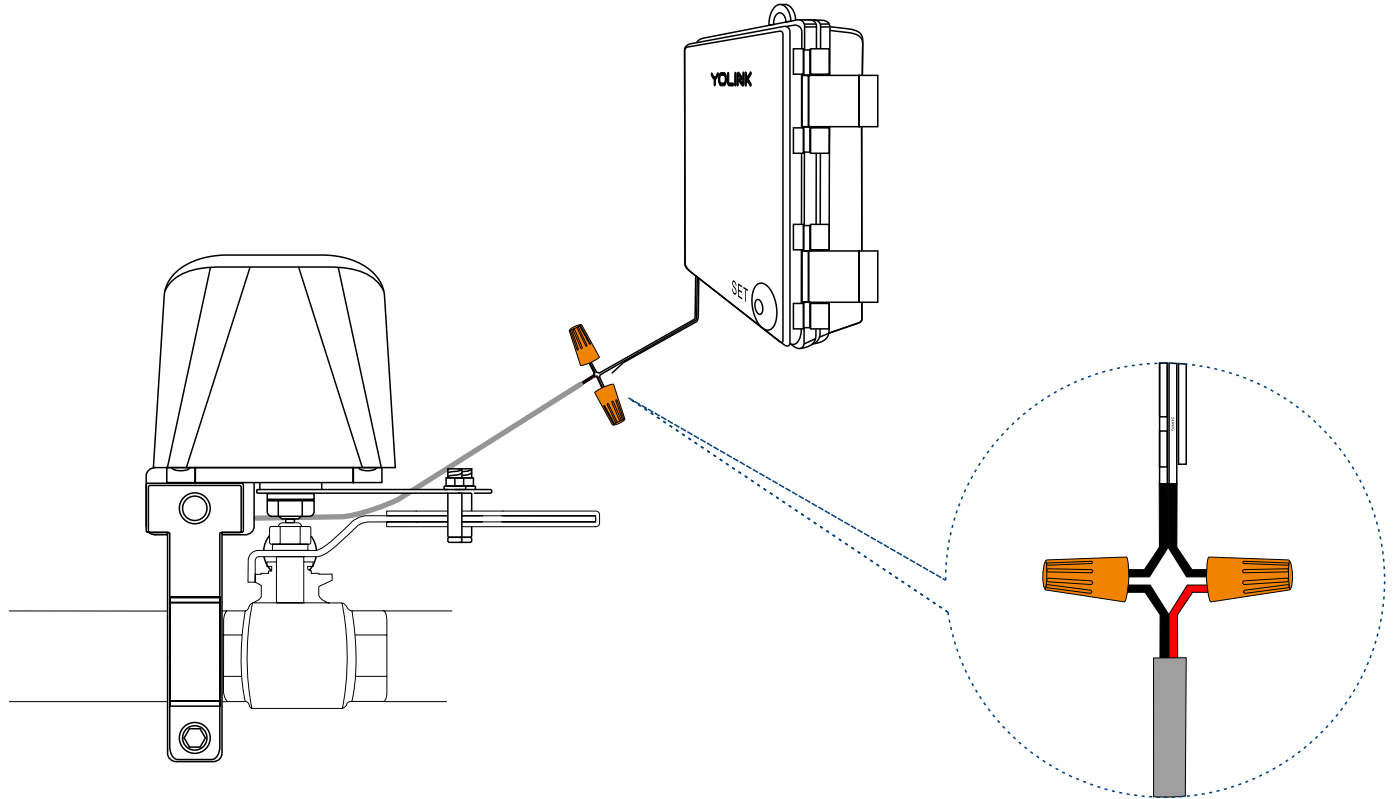


## 5. Connect the Manipulator to the Controller

- 1 Using a wire nut, twist the black wire with text marked “24AWG” (positive) wire from the controller together with the positive (red, typically) wire on the manipulator (wires may be white and black, with white positive and black negative)
- 2 Using a wire nut, twist the black with half white (negative) wire from the controller together with negative (black, typically) wire on the manipulator
- 3 Ensure there are no exposed wire conductors (visible copper). If so, redo the connections. You may optionally wrap the splices with electrical tape
- 4 Refer to “Install or Replace the Batteries (Gas/Water Valve Controller)” section on page 68 for the installation of batteries for the controller
- 5 After the connection, proceed to page 46-48, for testing

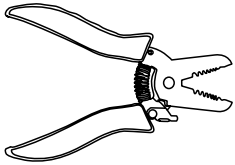


Reversing the wiring connection may be required if the manipulator does not operate. Do this by moving each controller wire to the opposite wire on the manipulator

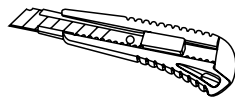


## D-6. Instructions for installing the Gas/Water Valve Controller for use with an existing Motorized Valve (Non-smart, 2-wire, 12VDC only!)

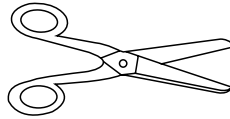
### 1. These Tools may be Required



Wire Cutter/Stripper



Utility Knife



Scissors



Wire Nuts  
/Connectors (2)



Electrical Tape

1. Your existing motorized valve must be 2-wire, 12 VDC, non-smart, and functional

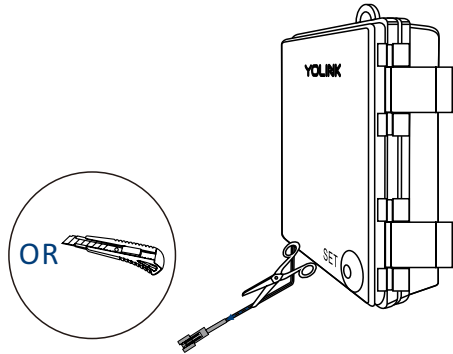


2. Wire nuts (twist-on connectors) are the recommended wire splicing method. Other methods may be acceptable as long as they provide a secure electrical connection, with no exposed conductors

### 2. Get Ready

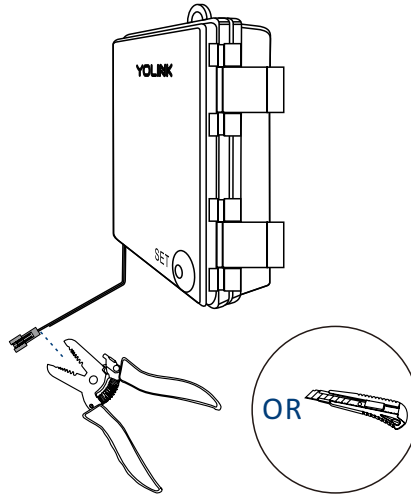
- 1 Remove power from the motorized valve by disconnecting the connection cable
- 2 Examine the connector on the motorized valve connection cable. If compatible with the controller's connection cable connector, connect the two cables together and proceed to page 16

### 3. Prepare for Installation of the Valve Controller

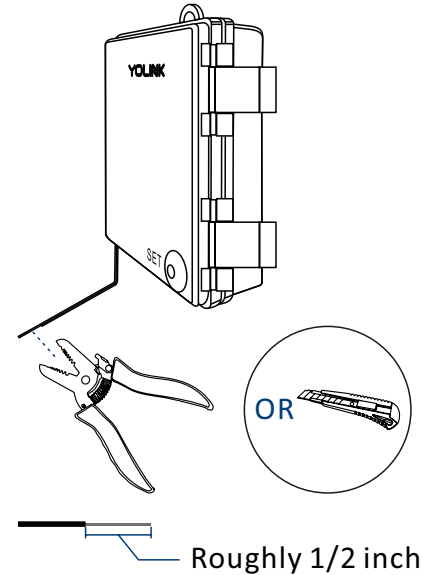


- 1 Using a scissors or utility knife, carefully remove the outer jacket/insulation on the cable. Use care to avoid cutting or nicking the internal conductors and the antenna

- 2 Use a wire cutter/stripper to remove the connector on the new controller. Use care to avoid cutting or nicking the antenna

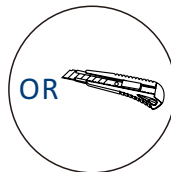
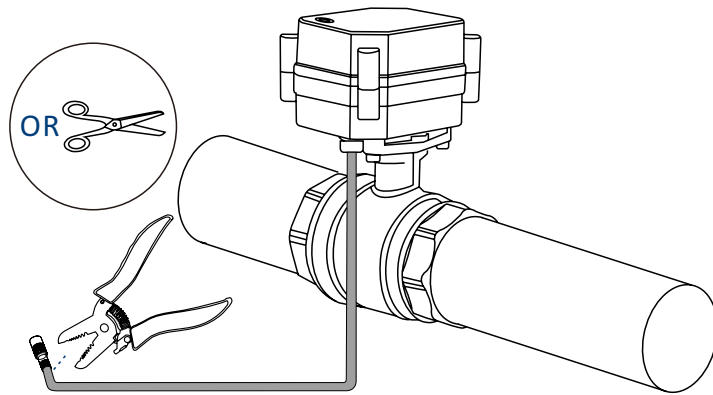


- 3 Using a wire stripper, remove the insulation on each conductor, leaving roughly half an inch of exposed conductor



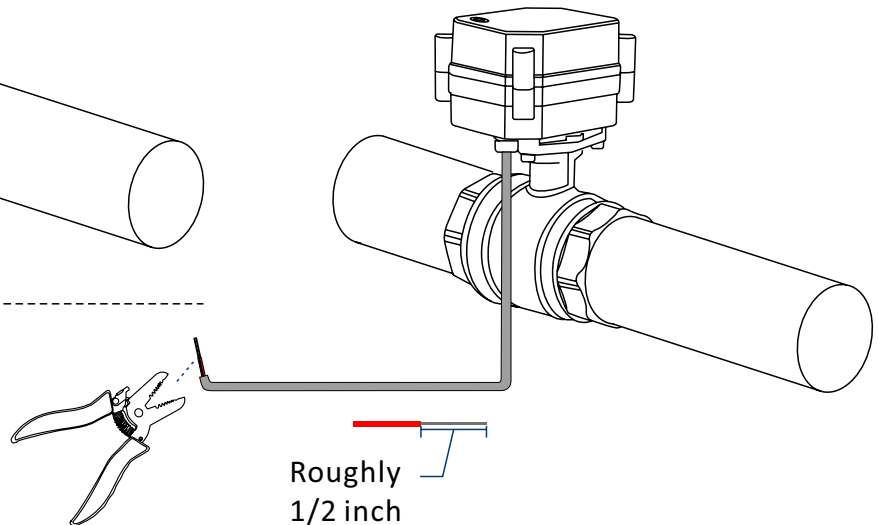
#### 4. Prepare for Installation of the Motorized Valve

- 1 Use a wire cutter/stripper to remove the connector on the existing motorized valve



- 2 Using a wire stripper or utility knife, carefully remove the outer jacket/insulation on the cable. Use care to avoid cutting or nicking the internal conductors

Using a wire stripper, remove the insulation on each conductor, leaving roughly half an inch of exposed conductor

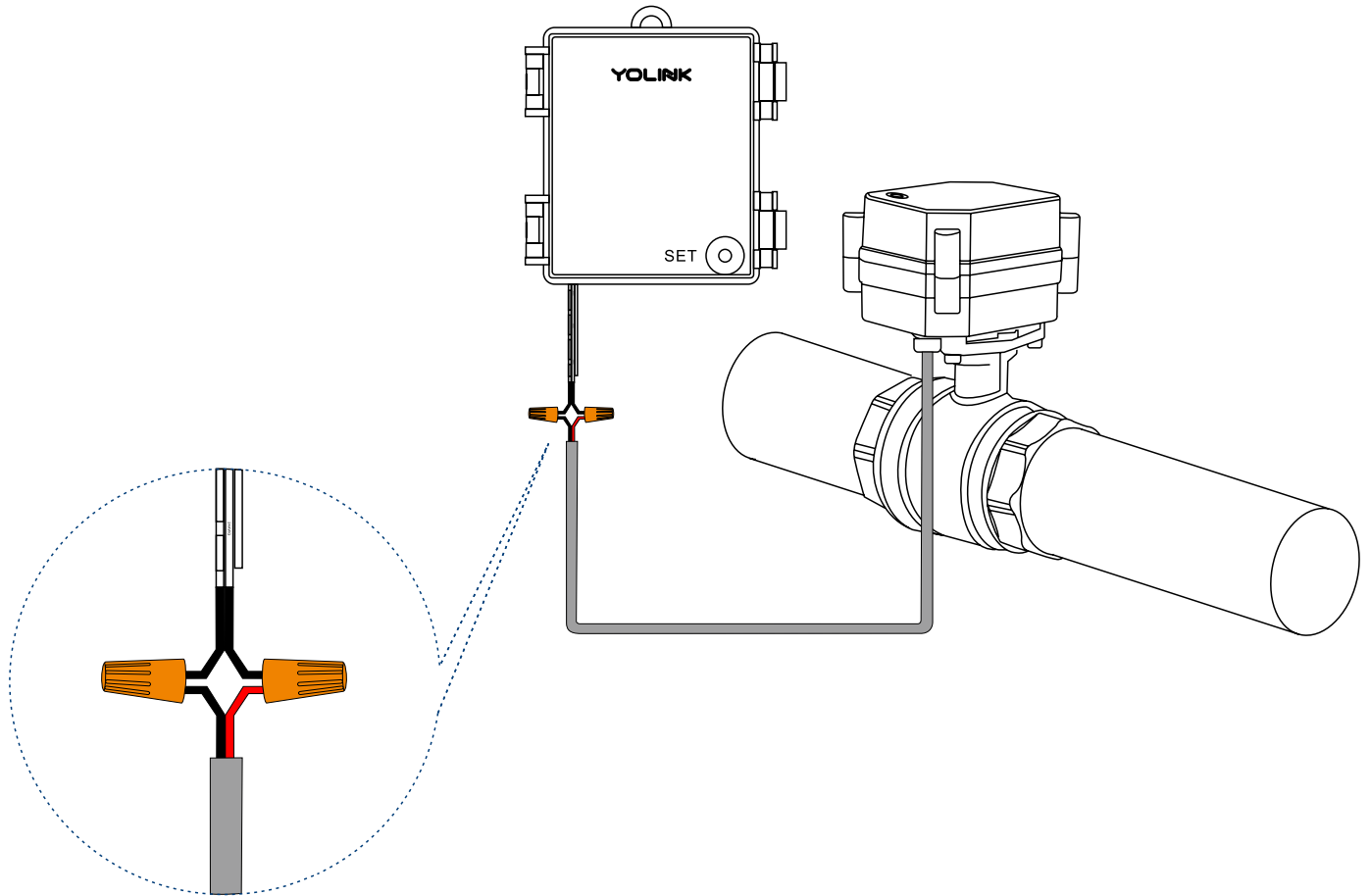


## 5. Connect the Motorized Valve to the Controller

- 1 Using a wire nut, twist the black wire with text marked “24AWG” (positive) wire from the controller together with the positive (red, typically) wire on the motorized valve (wires may be white and black, with white positive and black negative)
- 2 Using a wire nut, twist the black with half white (negative) wire from the controller together with negative (black, typically) wire on the motorized valve
- 3 Ensure there are no exposed wire conductors (visible copper). If so, redo the connections. You may optionally wrap the splices with electrical tape
- 4 Refer to “Install or Replace the Batteries (Gas/Water Valve Controller)” section on page 68 for the installation of batteries for the controller
- 5 After the connection, proceed to page 46-48, for testing



Reversing the wiring connection may be required if the motorized valve does not operate. Do this by moving each controller wire to the opposite wire on the manipulator



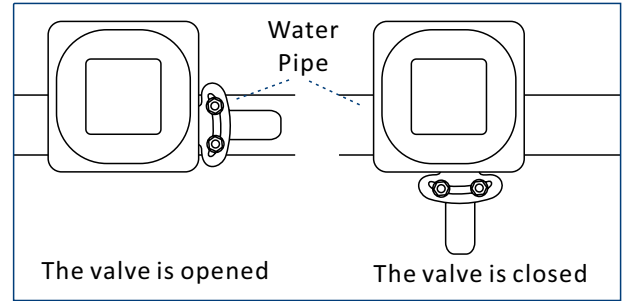
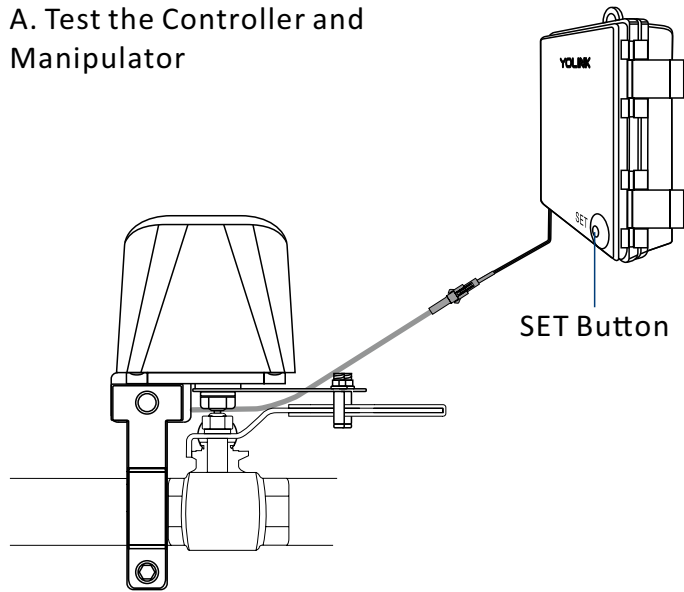


## **D-7. Test the Controller and Manipulator/Motorized Valve/Bulldog Valve Robot**

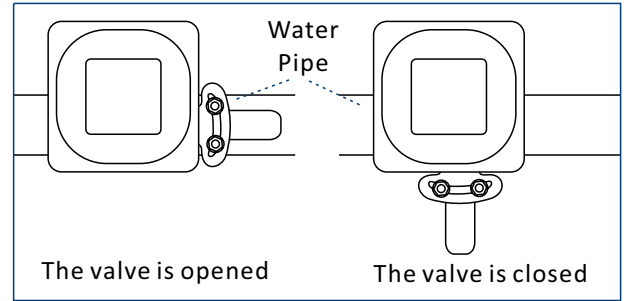
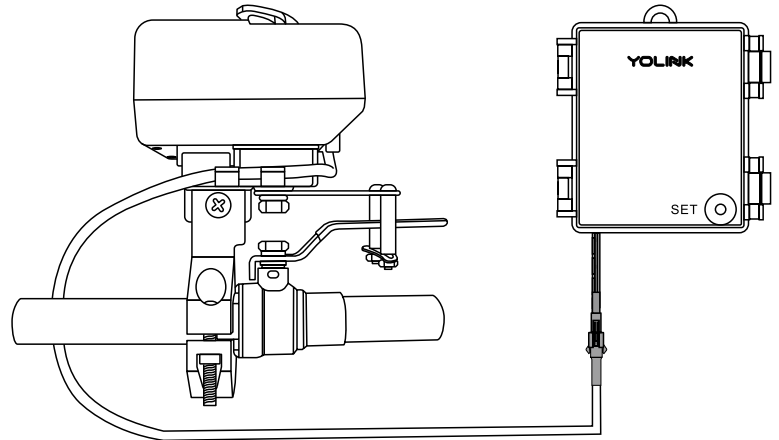
### **D-7-1. Test the Controller and Manipulator/Bulldog Valve Robot (see Illustration Next Page)**

- Test the controller several times by pressing the SET button and watching for the smooth closing/opening of the valve. Then, use the YoLink app to open and close the valve
- If Not Working Properly:
  - Verify the handle can be rotated 90 degrees, otherwise the valve cannot be fully opened or closed
  - With the valve in the closed position, the screws holding the valve operating pins will be much more accessible, so this is a good time to readjust them so that they are grasping the valve handle securely. If needed, use a Phillips screwdriver to tighten the pins securely in place
  - If you are unable to get the controller and/or manipulator/Bulldog Valve Robot to operate correctly, double-check the installation as needed. Do not proceed to the next step until the manipulator/Bulldog Valve Robot opens and closes the ball valve properly
  - If it is still not working properly, Please refer to additional troubleshooting information on page 72, and Customer Service hours and contact information on page 75. For mechanical issues with the manipulator/Bulldog Valve Robot, sending us photos and/or a brief video of the issue may be beneficial in assisting you

## A. Test the Controller and Manipulator

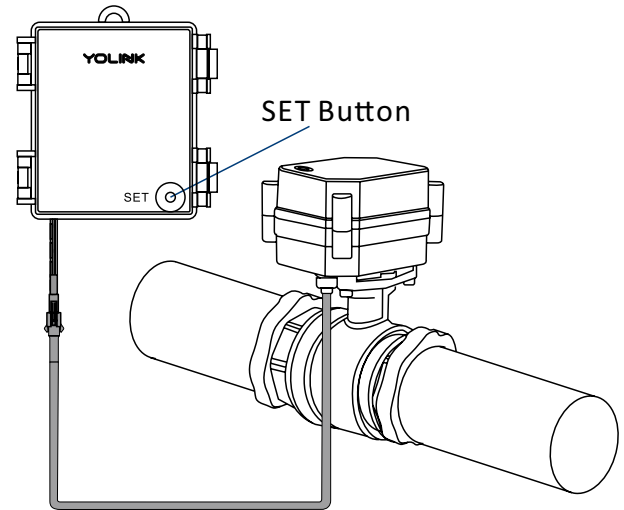


## B. Test the Controller and Bulldog Valve Robot



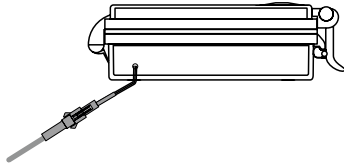
## D-7-2. Test the Controller and Motorized Valve

- Turn on a water tap first, then test the controller several times by pressing the SET button to open or close the valve and confirming that water flow at the tap stops completely (while the valve should be closed) and flows with no loss of pressure (while the valve should be open). Then, use the YoLink app to open and close the valve
- If Not Working Properly:
  - If you are unable to get the controller and/or motorized valve to operate correctly, double-check the installation as needed. Do not proceed to the next step until the motorized valve opens and closes the ball valve properly
  - If it is still not working properly, Please refer to additional troubleshooting information on page 72, and Customer Service hours and contact information on page 75. For mechanical issues with the motorized valve, sending us photos and/or a brief video of the issue may be beneficial in assisting you



## D-8. Installation Methods (Anywhere or Wall-mounting)

- Method A: Place anywhere



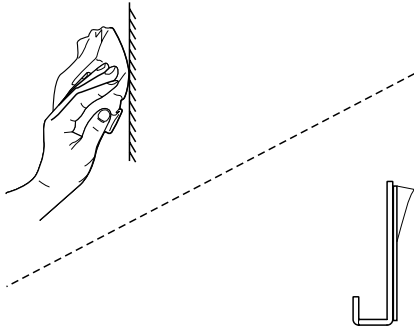
Please refer to device environmental operating range information on page 66, 68, 71. Use this device outside the recommended ranges at your own risk

- Method B: Wall-mounting the controller



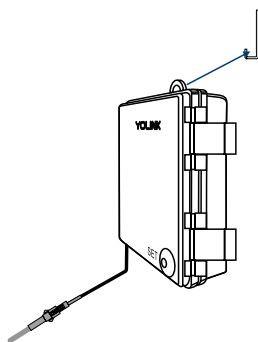
Before installing the hook, place it in the appropriate position for hanging the controller. Ensure the controller connection cable and manipulator/motorized valve cable are connected securely

- 1 Clean the installation area

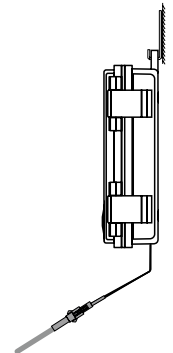


- 2 Remove the protective layer on the double-sided tape on the bottom of the hook

- 3 Place the hook at the pre-determined location then press it firmly for at least 5 seconds

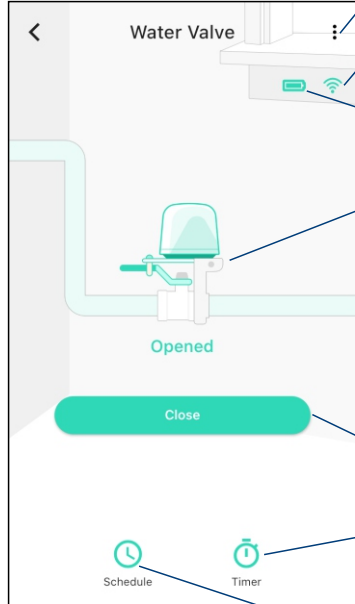


- 4 Hang the controller on the hook



# E. Using the YoLink App

## E-1. Device page




**⋮ Details**  
- Tap to go to Details page (refer to page 51)

**📶 Connection Status**  
of Gas/Water Valve Controller and Hub

**🔋 Current Battery level**  
- Shown red if replacement is required

**🔧 Real-time Status of Gas/Water Valve Controller:**  
Open or closed

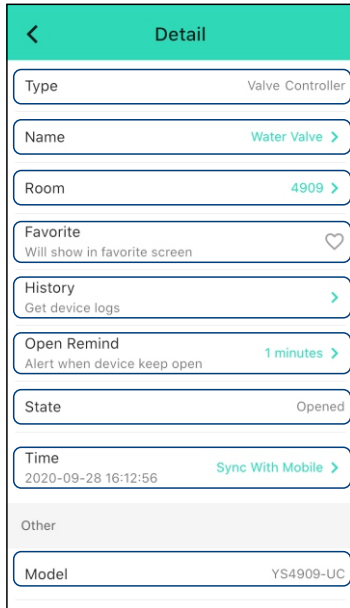


**🔴 Stop On!** **Control Button of Gas/Water Valve Controller:**  
Open or close

**🕒 Timer**  
Set the one-time-timer duration for the relay  
(refer to page 54)

**🕒 Schedule**  
Create on/off schedules to automate your relay  
(refer to page 55)

## E-2. Details page



**a. Device Type**

**b. Rename the Device**

**c. Choose a Room** for device

**d. Add/Remove** from favorites

**e. Device History**

Valve opened or closed, logged with date & time

**f. Send Notification** to you when the valve is left open for a set time

**g. Device Status:** Open or closed

- *Power on again status is default set to Last State*

**h. Device Time**

- *Tap to sync with mobile*

**i. Device Model**

**j. Device EUI (unique)**

**k. Device SN (unique)**

**l. Connection Signal Status**

of controller and Hub: Strong; Good; Weak

**m. Current Battery Level**

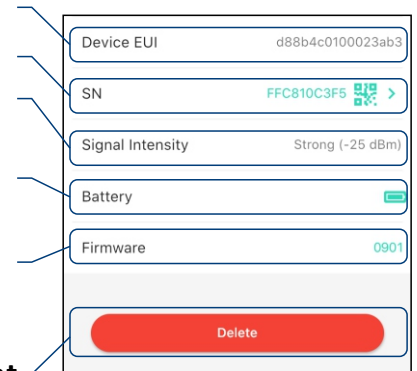
- *Shown red if replacement is required*

**n. Firmware Version**

\* *“#### ready now” indicates a new update is available (refer to page 63)*

**o. Remove Device From Current Account**

\* *Tap to delete the device from your YoLink account*



### E-3. Automation (*Set Up Rules For “If This Then Do That”*)

The most popular use for our Gas / Water Valve Controller is to shut off water automatically in the event that a water leak has been detected. Generally, you have two options for this:

1. Configure an Automation in the app. Settings you make in the app will “tell” the valve controller to shut off the water is detected. In automation terms, this would be written out “IF a water leak is detected, THEN close the water valve.” This is a simple process in our app, and if this is your first time with a smart device and with automation, we will explain it clearly in this section.

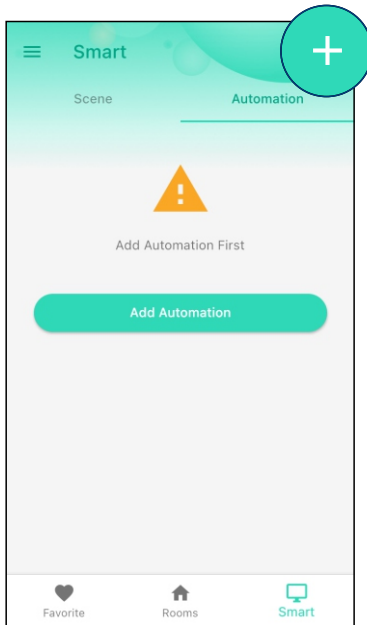
2. Utilize YoLink *Control* to “pair” one or more water leak sensors to the valve controller, so that the water is shut off as soon as a water leak is detected. YoLink *Control* is a unique device-to-device protocol that allows for this to work, without internet and even without power. YoLink *Control* is explained on page 59

#### How to Set Up an Automation (*See Illustration Next Page*)

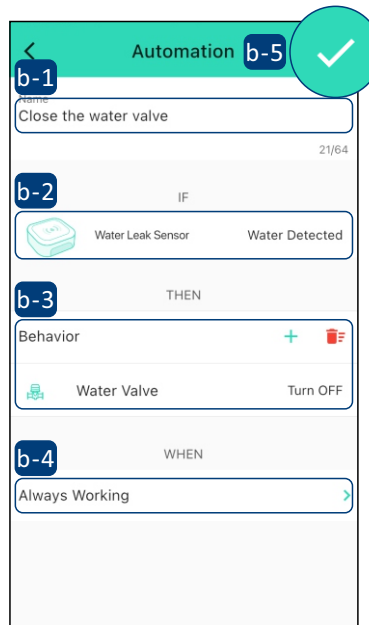
- Go to the “Smart” screen, tap “Automation”



Gas/Water Valve Controller can be set as either a trigger or an action device, with two options: turn on or turn off



a. Tap the “+” icon to add an automation



b. Add an automation

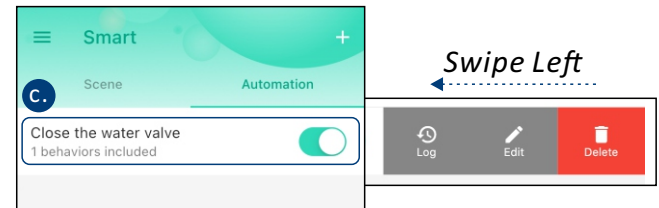
b-1 Edit name

b-2 Edit trigger


b-3 Edit behavior *(You must have at least one action device, or you cannot set a behavior)*

b-4 Edit when *(Set a time range for the automation (always or during specific days or times))*

b-5 Tap to save the settings



c. Click to edit the automation

1. Tap “” button to enable or disable the automation

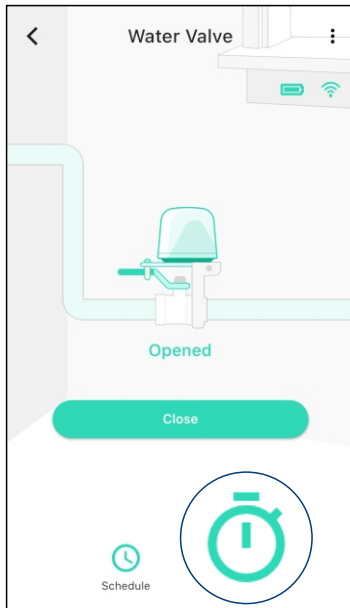
2. Swipe left to view the history logs and to edit or to delete the automation



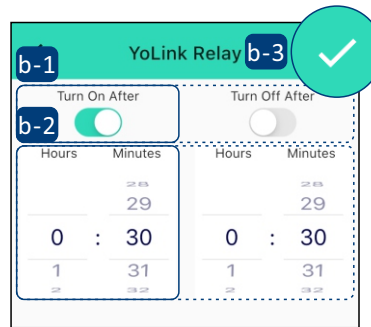
## E-4. Timer



The timer will run only once. You can set a new timer after the timer has already run or after you cancel it



a. Tap the “🕒” icon to edit the timer



b. Edit the timer

b-1 Enable “Turn On After” and (or) “Turn Off After”

b-2 Set the timer duration in “Hours and Minutes”

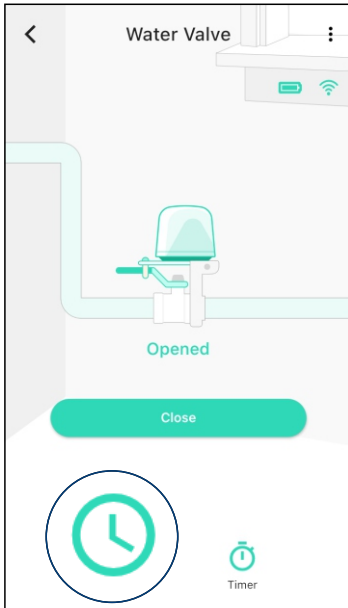
b-3 Tap to save the settings

## E-5. Schedule

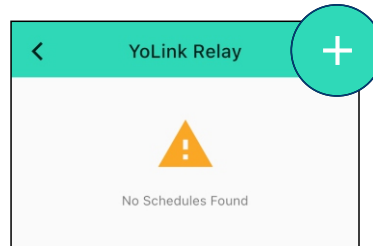
1. You can have a maximum 6 schedules at one time



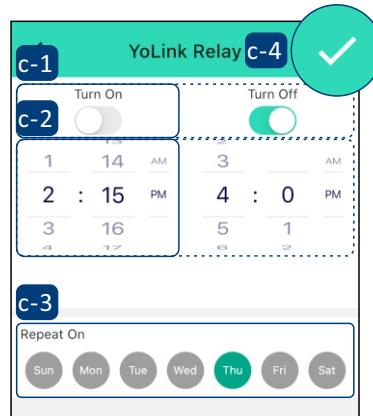
2. You may add as many schedules as you want in Automation settings. Automation settings are saved in the cloud



a. Tap the “⌚” icon to go to Schedule Page



b. Tap the “+” icon to add a schedule



c. Add a schedule

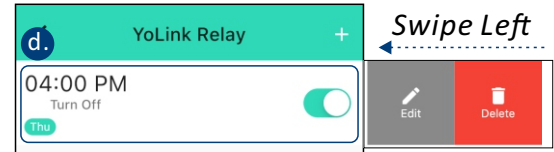
c-1 Set the preferred state

“Turn On” and (or) “Turn Off”

c-2 Set the schedule time

c-3 Set the repeat frequency

c-4 Tap to save the settings



d. Click to edit the schedule

1. Tap “☑” button to enable or disable the schedule

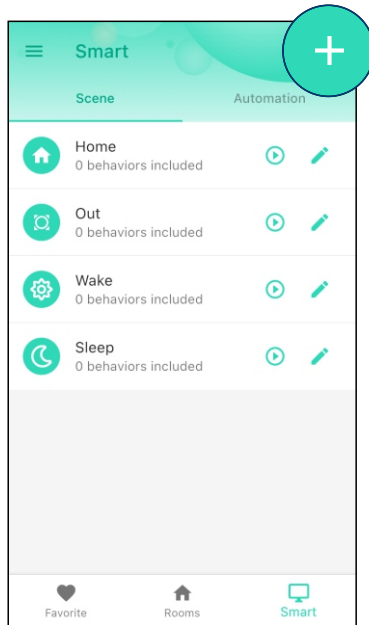
2. Swipe left to edit or to delete the schedule

## E-6. Scene

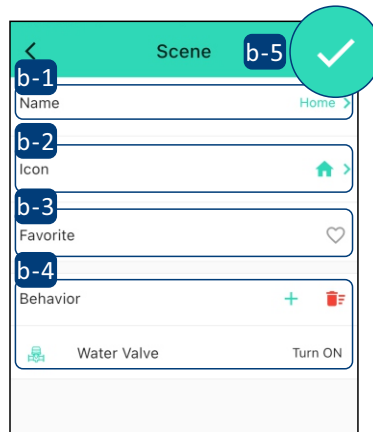
Go to the “Smart” screen, and default is “Scene” screen



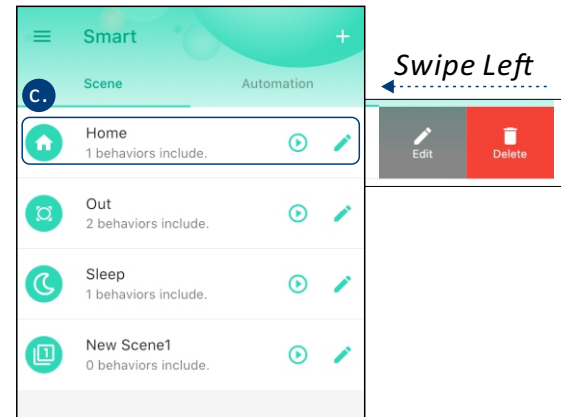
There are four pre-set scenes, you can choose to either edit or delete each of them



a. Tap the “+” icon to add a scene



b. Add a scene  
b-1 Edit name  
b-2 Select an icon  
b-3 Add/remove from favorites  
b-4 Edit behavior (*You must have at least one action device, or you cannot set a behavior*)  
b-5 Tap to save the settings



c. Click to edit the scene  
1. Tap “⏪” button to run the scene  
2. Tap “✎” button to edit the scene  
3. Swipe left to edit or to delete the scene

## E-7. Third-Party Services

With third-party services connected to your YoLink account, your valve controller can be used as action device in automations, routines and applets with smart home/IoT devices and services from third-party (non-YoLink) brands

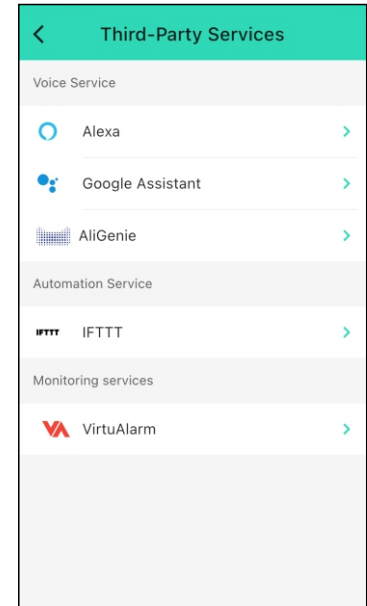
- Tap “☰” in the upper left corner to go to My Profile
- Go to **Settings > Third-Party Services** and select the applicable service
- Follow the instructions, to authorize and add the connection to your YoLink account

Refer to the associated app or website for additional information specific to the third-party service. Additional information may also be found on our website at [www.yosmart.com/support-and-service](http://www.yosmart.com/support-and-service) or by contacting Customer Support (refer to page 75 for contact information)



### E-7-1. IFTTT

- The Gas/Water Valve Controller can be used as an action device for custom applets. Visit [www.ifttt.com](http://www.ifttt.com) for more information and pricing



### **E-7-2. Alexa**

- Open/close the valve by voice command as well as the associated app (For example, “Alexa, turn on/turn off the Water Valve”)
- Turned on/turned off status can be queried by voice command as well as the associated app (For example, “Alexa, what is the status of the Water Valve?” -- “The Water Valve is turned on/turned off”)
- The Gas/Water Valve Controller can be used as an action device for Alexa routines with two options: turn on/turn off

### **E-7-3. Google Assistant**

- Open/close the valve by voice command as well as the associated app (For example, “OK, Google, turn on/turn off the Water Valve”)
- Turned on/turned off status can be queried by voice command as well as the associated app (For example, “OK, Google, what is the status of the Water Valve?” -- “The Water Valve is turned on/turned off”)
- The Gas/Water Valve Controller can be used as an action device for Google routines with two options: turn on/turn off

### **E-7-4. VirtuAlarm**

- Monitoring service provided by VirtuAlarm

## F. About YoLink Control

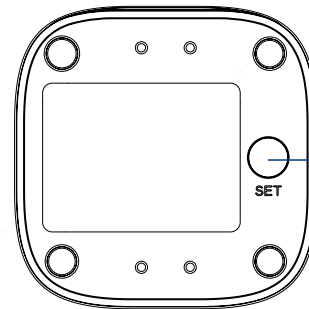
YoLink *Control* is our unique device-to-device control technology. Using YoLink *Control*, YoLink devices can be controlled without the Hub or an internet connection. (Use of YoLink *Control* is optional; you can use the Automation feature in the app OR use YoLink *Control*, but YoLink *Control* offers the benefit of operation without the Hub or internet connection.)

One device controls another, directly. A device that sends out commands is called the controller. A device that receives the commands is called the responder. Examples of a controller are a Water Leak Sensor, while examples of a responder are a Siren or a Gas/Water Valve (Controller)

The Outdoor Alarm Controller can only work as the responder of YoLink *Control* and can only set up YoLink *Control* with YS7903-UC Water Leak Sensor (firmware version V030C or above) and YS7904-UC Water Leak Sensor 2

### F-1. Pairing

- 1 To configure your Water Leak Sensor as a controller, Press and hold the SET button for 5-10 seconds until the LED quickly blinks green, then, release the button



a. SET Button  
(5-10 seconds)



Refer to the Water Leak Sensor manual for more information:

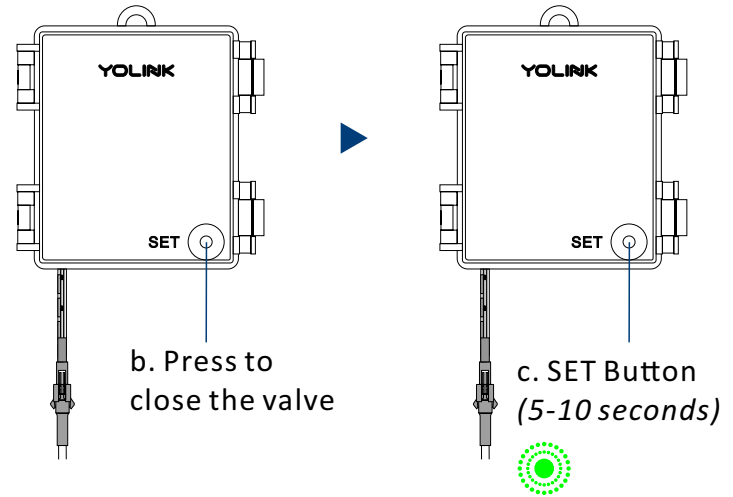


YS7903-UC  
Water Leak  
Sensor

2 To configure a Gas/Water Valve Controller as the responder, close the valve using SET button or via YoLink app (verify the valve is shown to be Closed on the app). Press and hold the SET button for 5-10 seconds until the LED quickly blinks green, then, release the button

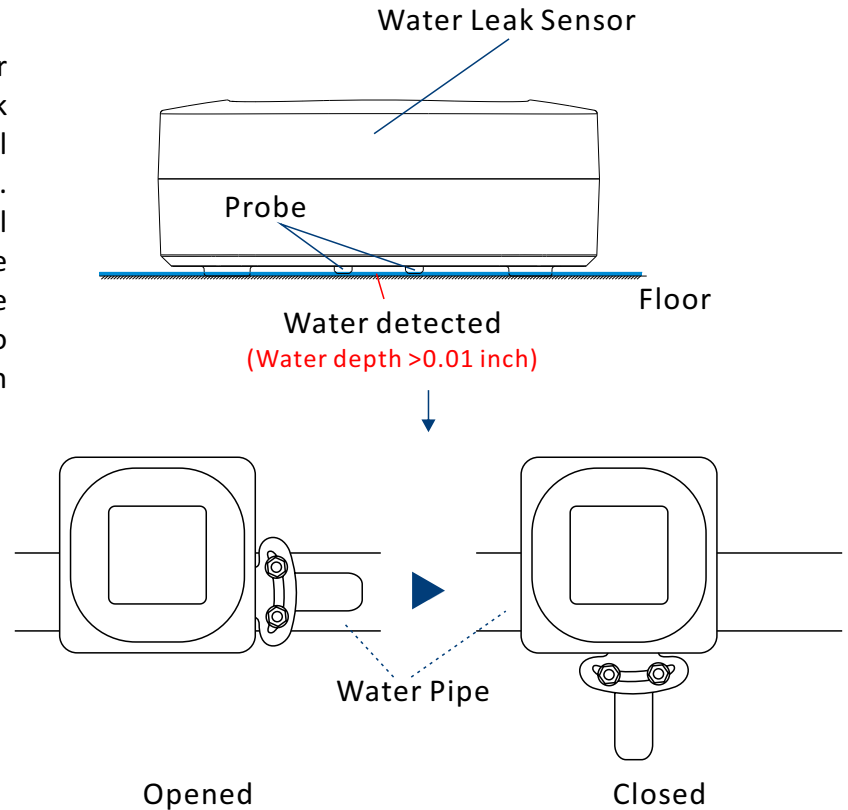
---

3 Upon pairing, the LED will stop blinking (this may happen after only blinking two or three times)



## Operation

- When the Water Leak Sensor detects water, the YoLink Gas/Water Valve Controller will now immediately close the valve. The valve will remain closed until opened via the app or using the SET button; the restoral of the Water Leak Sensor to normal (no water detected) does not open the valve
- More advanced sequences, controlling multiple outputs (e.g. close valve and activate siren) are available via the YoLink app





## F-2. Unpairing

- 1 At the Water Leak Sensor (controller), press and hold the SET button for 10-15 seconds until the LED quickly blinks green, then red, then, release the button

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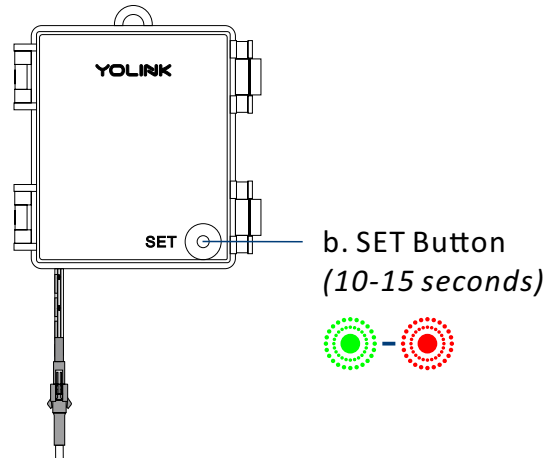
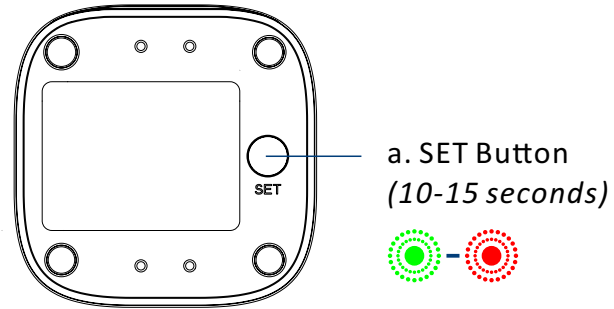
- 2 At the Gas/Water Valve Controller (responder), press and hold the SET button for 10-15 seconds, until the LED quickly blinks green, then red, then, release the button

---

- 3 Upon un-pairing, either the Water Leak Sensor LED or the Gas/Water Valve Controller LED will stop blinking and turn off

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- 4 The Gas/Water Valve Controller will no longer respond to the Water Leak Sensor

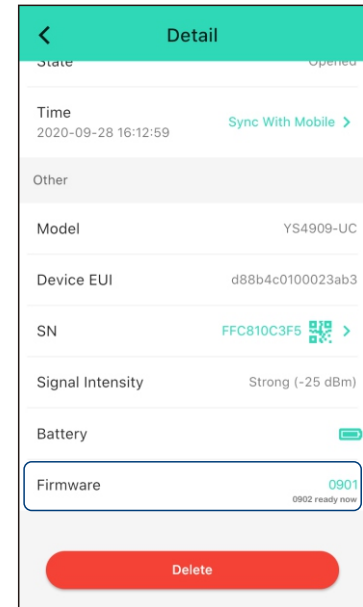
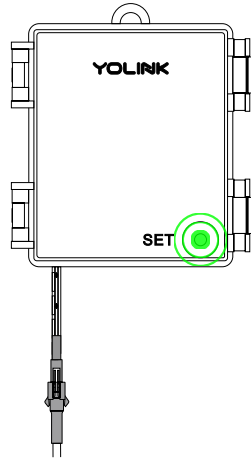


# G. Maintenance

## G-1. Firmware Update

To ensure our customers have the best user experience, we highly recommend you update to the newest version firmware when an update is available

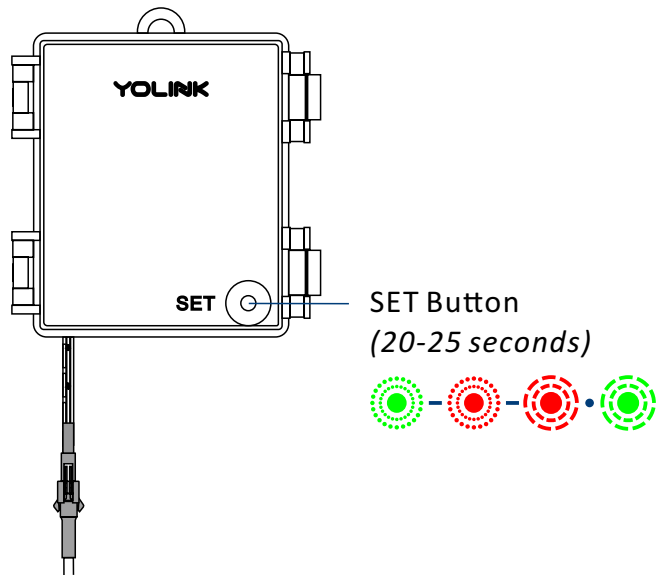
- In “Firmware”, if a new version is listed as available (#### ready now), click it to start the firmware update process
- You may use your device during the update as it is performed in the background. The LED light will slowly blink green during the update and the process will be complete within 2 minutes after the light stops blinking



## G-2. Factory Reset the Gas/Water Valve Controller

Factory reset will erase all of your settings and restore it to factory defaults. After the factory reset, your device will remain in your Yolink account

- Hold the SET button for 20-25 seconds until the status light blinks red and green alternately, then, release the button (*Hold the SET button longer than 25 seconds will ABORT the factory reset operation*)
- Factory reset will be complete when the status light stops blinking

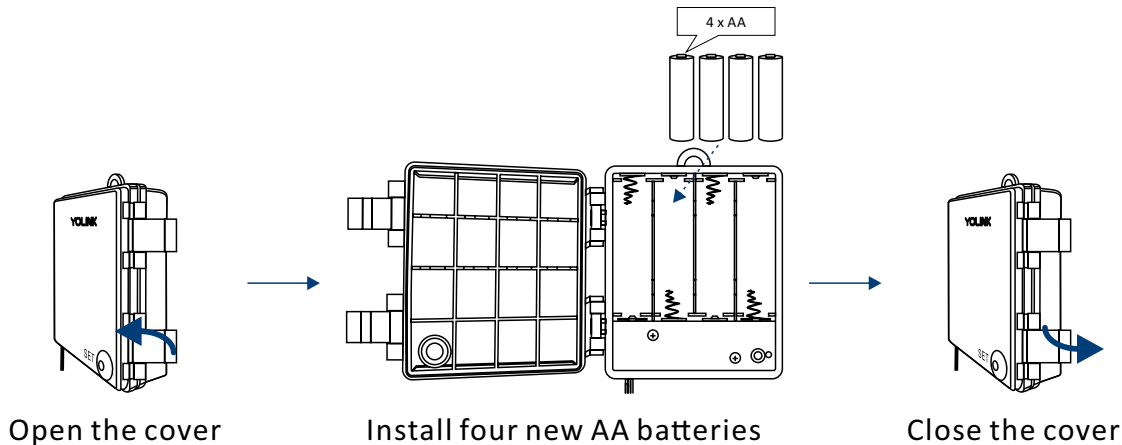


### G-3. Install or Replace the Batteries of Gas/Water Valve Controller

- With a lifting/prying action on the two clamp latches, open the cover on the controller (due to the rainproof design, this step may be slightly difficult)
- Install four new alkaline non-rechargeable AA batteries, and then close the two clamps of the controller
- Using the app, check the online status of the controller and verify there is no low-battery indicator
- Reconnect the controller with the manipulator



1. Do not press the SET button during the entire battery installation or replacement process
2. Do not mix old and new batteries



# H. Specifications

## H-1. Gas/Water Valve Controller

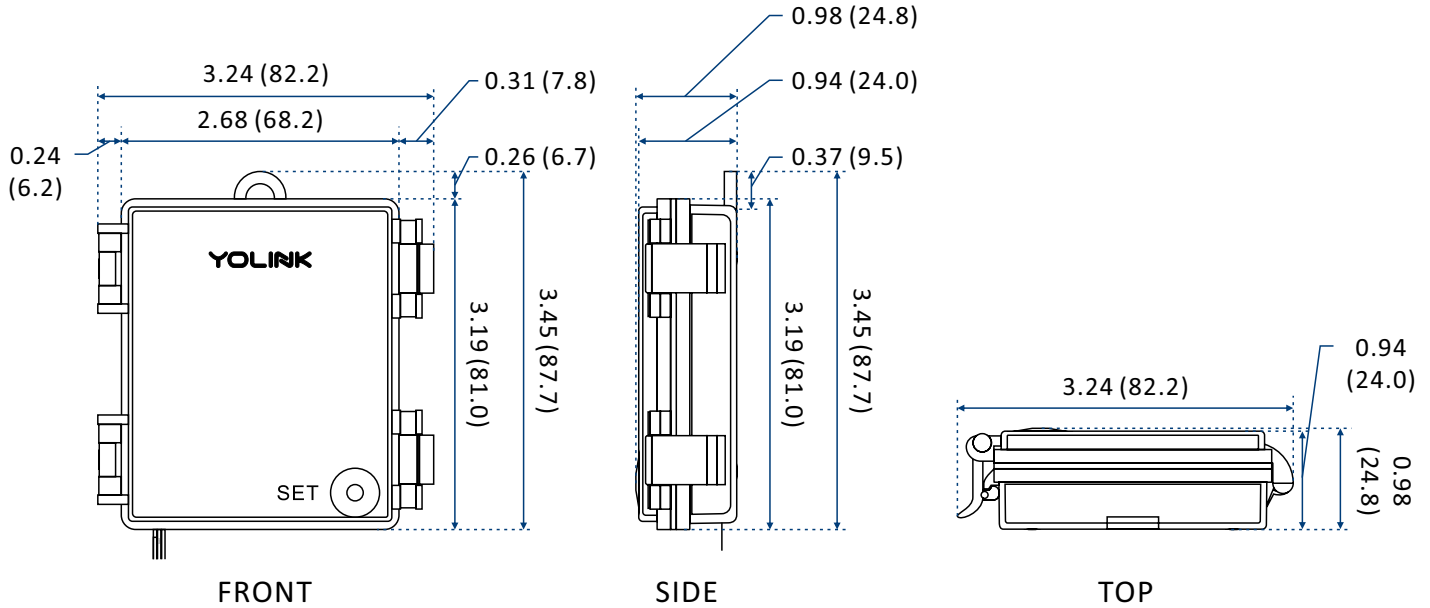
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<b>Battery:</b>	6V DC (four alkaline non-rechargeable AA batteries)
<b>Output Voltage:</b>	12V DC
<b>Device Current Draw:</b>	≤ 160mA (on, without connecting with the manipulator/motorize valve), ≤ 90uA (standby)
<b>IP Rating:</b>	IP63 (Rainproof)
<b>Manipulator Type:</b>	Ball valve type, non-smart control
<b>Environment:</b>	Working Temperature: -4°F - 122°F (-20°C - 50°C) ( <i>The pipe must not freeze</i> ) Working Humidity: ≤95%, non-condensing

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## Dimensions:

Unit: inches (millimeters)



## H-2. Gas/Water Valve Manipulator

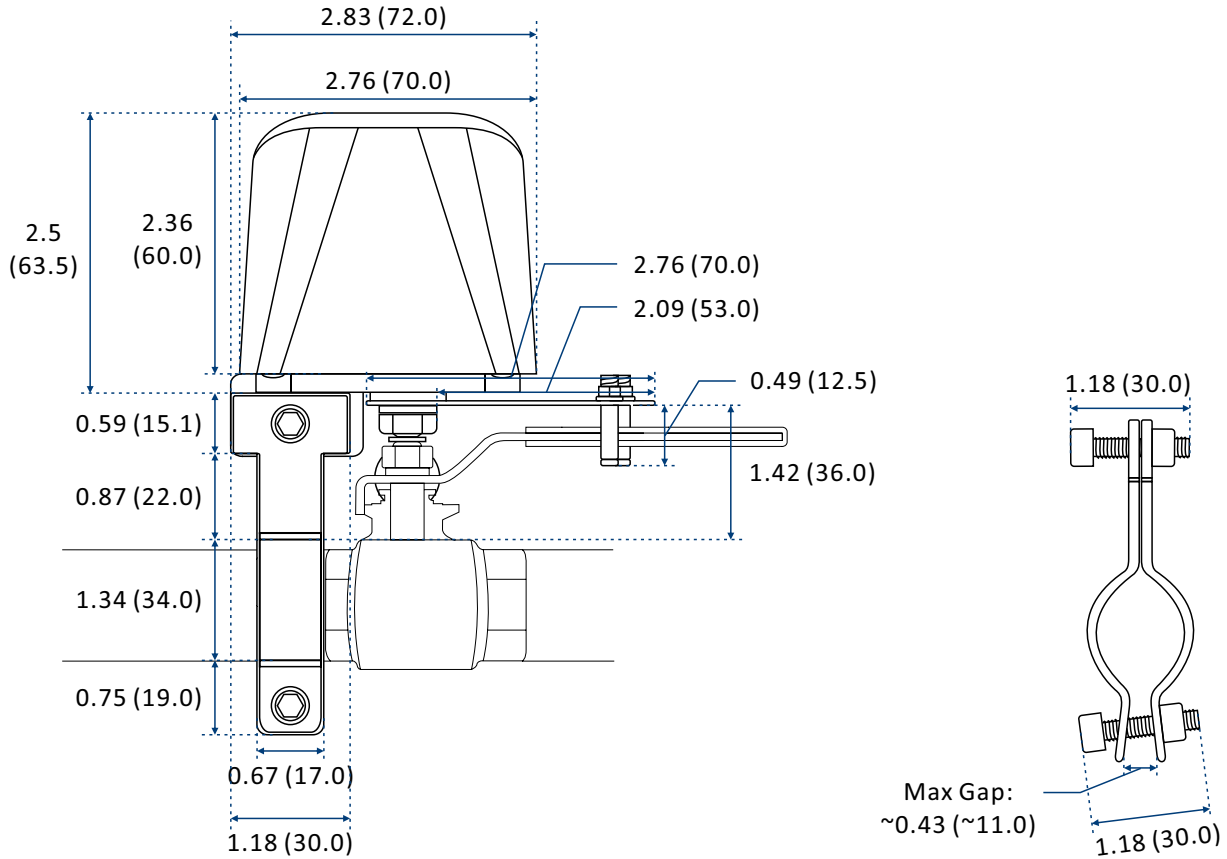
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<b>Working Voltage:</b>	8 - 14V DC
<b>Valve Type:</b>	Ball Valve
<b>Valve Pressure:</b>	80 - 106 KPa
<b>Torque:</b>	40kgf.cm
<b>Electrical Valve Opening/Closing Time:</b>	5 - 10 seconds (max 15 seconds)
<b>Applicable Water Pipe Size:</b>	1/2 inch (DN15), 3/4 inch (DN20), 1 inch (DN25)
<b>Environment: (Indoor Use Only!)</b>	Working Temperature: 14°F - 131°F (-10°C - 55°C) ( <i>The pipe must not freeze</i> ); Working Humidity: <95% Storage Temperature: -13°F - 131°F (-25°C - 55°C)

---

## Dimensions:

Unit: inches (millimeters)





### H-3. Motorized Valve

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<b>Working Voltage:</b>	12V DC
<b>Working Current:</b>	Max 500mA (while valve is opening or closing)
<b>Valve Type:</b>	Ball valve
<b>Suitable Media:</b>	Water, air
<b>Max Working Pressure:</b>	145PSI (1.0Mpa)
<b>Max. Torque Force For Actuator:</b>	2N.m
<b>IP Rating:</b>	IP67 (waterproof)
<b>Open/Closed Time:</b>	5 - 10 seconds (max 15 seconds)
<b>Thread:</b>	NPT
<b>Indicator:</b>	Visual Position Indicator
<b>Cable Length:</b>	1.64 feet (0.5 meters)

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**Valve Body Material:** Brass

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**Actuator Material:** Engineering Plastics

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**Applicable Water Pipe Size:** 1/2 inch (DN15), 3/4 inch (DN20), 1 inch (DN25),  
1-1/4 inch (DN32)

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**Valve Dimension:** Dn15: 1/2" NPT female thread connection, 0.59inch (15mm)  
full bore  
DN20: 3/4" NPT female thread connection, 0.79inch (20mm)  
full bore  
DN25: 1" NPT female thread connection, 0.91inch (23mm)  
reduce bore  
DN32: 1-1/4" NPT female thread connection, 1.14inch (29mm)  
reduce bore

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**Environment:** Working Temperature: 5°F - 122°F (-15°C - 50°C)  
**(Indoor Use Only!)** *(liquid temperature: 35.6°F - 194°F(2°C - 90°C))*

---

# Troubleshooting

## Symptom:

### 1. Device is offline

- If valve is not connected to the cloud, press the SET button on Gas/Water Valve Controller once
- If Hub is offline, reconnect the Hub to the Internet and press the SET button on Gas/Water Valve Controller once
- If Hub is not on, power on the Hub again and press the SET button on Gas/Water Valve Controller once
- If valve is out of range with Hub, relocating the Hub may be required
- For a device with low-battery indicators or alerts or if the condition of the batteries is in question, replace the batteries with four premium “AA” alkaline batteries

### 2. Timer does not run

- The condition of the batteries is in question. Replace the batteries with four premium “AA” alkaline batteries. Press the SET button once to open/close the valve, also you can open/close the valve via YoLink app or set a new timer. (When you add a resetting/one-time-use timer this will need to be amended with that new information.)

**3. Other issues**, contact customer service, **1-949-825-5958 (M-F 9am - 5pm PST)** or email 24/7 at **service@yosmart.com**

## Warning

- Please install, operate and maintain the Gas/Water Valve Controller and Manipulator (or Motorized Valve or Bulldog Valve Robot) only as outlined in this manual. Improper use may damage the unit and/or void the warranty
- Do not install or use the controller and manipulator outside of the temperature and humidity range listed in the Environmental section in Specifications, on page 66, 68, 71. Lithium non-rechargeable batteries, operating in a wider temperature range, are recommended for applications on the hotter or colder end of the controller's operating range (device environmental limitation can be extended to the range of -4°F - 176°F (-20°C - 80°C))
- While the controller is rainproof, to ensure optimal operation and lifetime of the controller, installing the controller with overhead protection from weather is suggested. Do not immerse the controller or allow it to be immersed in water
- Do not install or use the controller and manipulator where it will be subjected to high temperatures and/or open flame
- Install or use the controller and manipulator (or motorized valve) only in clean environments. Dusty or dirty environments may prevent the proper operation of this device, and will void the warranty
- If your Gas/Water Valve Controller or Manipulator does get dirty, please clean it by wiping it down with a clean, dry cloth. Do not use strong chemicals or detergents, which may discolor or damage the exterior and/or damage the electronics, voiding the warranty
- Do not install or use the controller and manipulator where it will be subjected to physical impacts and/or strong vibration. Physical damage is not covered by the warranty

- Power the controller only with four AA batteries (see below, regarding batteries)
- Use only new, name brand, alkaline non-rechargeable AA batteries
- Do not use rechargeable batteries
- Do not use zinc blend batteries
- Do not mix new and old batteries
- Do not puncture or damage batteries. Leakage can cause harm on skin contact, and is toxic if ingested
- Do not dispose of batteries in fire as they may explode! Please follow local battery disposal procedures
- To avoid damaging the controller, if storing the controller for an extended period, remove the batteries
- Please contact Customer Service before attempting to repair, disassemble or modify the device, any of which can void the warranty and permanently damage the device

**If you have any difficulties installing or using YoLink products, please contact our Customer Service department during business hours:**

US Live Tech Support: **1-949-825-5958** M-F 9am - 5pm PST

Email: **service@yosmart.com**

YoSmart Inc. 15375 Barranca Parkway, Ste G-105 Irvine, CA 92618, USA

## **Warranty** 1 Year Limited Electrical Warranty

YoSmart warrants to the original residential user of this product that it will be free from defects in materials and workmanship, under normal use, for 1 year from the date of purchase. User must provide a copy of original purchase receipt. This warranty does not cover abuse or misused products or products used in commercial applications. This warranty does not apply to devices that have been improperly installed, modified, put to a use other than designed, or subjected to acts of God (such as floods, lightning, earthquakes, etc.). This warranty is limited to repair or replacement of the device only at YoSmart's sole discretion. YoSmart will NOT be liable for the cost of installing, removing, nor reinstalling this product, nor direct, indirect, or consequential damages to persons or property resulting from the use of this product. This warranty only covers the cost of replacement parts or replacement units, it does not cover shipping & handling fees

To implement this warranty please give us a call during business hours at 1-949-825-5958, or visit [www.yosmart.com](http://www.yosmart.com)

## FCC Caution

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. Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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 the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.