

Secure Flow Stop – Valve Shut-Off Manual



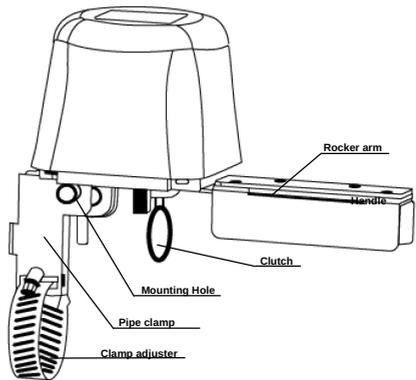
Quick Start

This device is a Z-Wave actuator. For inclusion and exclusion press the red button on the top of the enclosure 3 times. **Attention: You must not move the rocker arm manually without unlocking it mechanically pulling on the ring on the bottom side of the enclosure.**

Product Description

The Flow Stop moves the operating handle of a ball valve allowing to stopping the flow of gas or water. It can be mounted non-intrusive on any pipe size between 0.5 and 1.5 inch. This means the original water or gas pipe will not be opened or manipulated and it is possible to remove the Flow stop again without any damage to the water or gas pipe. Installing the Flow stop will not tamper or change any security measure applied or your gas or water installation.

The device is equipped with a powerful 12 V motor providing sufficient torque to open or close any ball valve within 10 seconds. A complete manual operation of the valve remains possible due to the clutch release bearing.



The device can be operated using the local button and remotely using Z-Wave wireless communication. Various functions protect the flow stop from accidental or intentional misuse:

1. Z-Wave Communication applies enhanced security implementing the Security Command Class. This does not only protect the device against burglars that want to do harm to the home (e.g. waste water by opening the valve to watering system). It's also protecting better against jamming of the communication link.
2. Configuration of the local LED. The user can now decide if the blue LED shall indicate open or close state
3. Unsolicited report of any state change of the flow stop to the controller.
4. Second communication channel to report manual operation of the device. Here up to 5 other devices can be operated independent of the controller, e.g. to announce any local operation.
5. The remote operation of the device can be limited to „no“, „only open“ or „only close“ to further protect against malfunction.

The device is a secure Z-Wave Plus device and can be used in one wireless Z-Wave network with other certified devices regardless of origin and brand. It supports secure communication if the central controller supports secure communication as well. Even if included securely the device is able to communicate unsecured with devices included unsecure using the association groups 2. As a Z-Wave device is will make use of other mains-operated devices in the network as routers if the wireless situation requires so.

Installation Guidelines

Installing the Flow Stop requires some knowledge. Again there is no need to dismantle your existing installation of water or gas supply.

1. Connect the two small mounting plate to the right and the left hand side of the mounting hole of the plastic enclosure using the screw that comes with the two minting plates. If your pipe is very thin you may want to mount them together to narrow the gap between the two angled pieces of the mounting place.
2. Next you need to fin the best position of the flow stop to mount. On one hand the angled parts of the mounting plates shall sit tightly on the pipe or the connecting part of the valve itself. On the other hand the rotating axis of the rocker arm needs to sit right above the rotating axis of the valve itself. Is the two rotating axis are not inline operating the flow stop electrically may damage the mechanics. Last but not least the rocker arm need to “grap” the handle of the valve in order to move it. You have various options to adapt the position of the flow stop on top of the valve. (1) You can adapt the inner gap of the rocker arm. (2) You can move the two mounting plates. (3) You can change the distance of the two mounting plates by having the plastic hole of the enclosure between them or on the side. In extreme positions you can further change the setting using simple distance rings.

However there are two constraints to take into account:

1. Never move the rocker arm without disconnecting the clutch by pulling the ring on the lower side of the enclosure.
2. Make sure the rotating axis of the flow stop is in line with the rotating axis of the valve.

Once you found the perfect position you can tighten the two angle-shaped mounting plates to the pipe using the pipe clamp provided. This pipe clamp is large enough to even support pretty thick pipes.

After tightening the pipe clamp make a simple mechanical test if the mechanics would move (Don't forget to unlock the clutch by pulling the ring). Now you should power the device and use the local red push button to test electrical operation. Finally include the device into your Z-Wave network

Behavior within the Z-Wave Network

On factory default the device does not belong to any Z-Wave network. The device needs to join an existing wireless network to communicate with the devices of this network. This process is called **Inclusion**. Devices can also leave a network. This process is called **Exclusion**. Both processes are initiated by the primary controller of the Z-Wave network. This controller will be turned into exclusion respective inclusion mode. Please refer to your primary controller's manual on how to turn your controller into inclusion or exclusion mode. Only if the primary controller is in inclusion or exclusion mode, this device can join or leave the network. Leaving the network – i.e. being excluded – sets the device back to factory default.

- **For Secure Inclusion and Exclusion press the red inclusion button 3 times.**
- **For Unsecure Inclusion press the red inclusion button 2 times.**
- **To Stop Learning Mode press the red inclusion button 2 times.**

Operating the Device

The Flow Stop can be operated in three different ways.

1. **Remotely** using Z-Wave wireless on/off commands. The device will appear in your controller as a simple on/off switch easy to operate. To protect the device from tampering or wrongdoing you can limit the remote operations using the configuration parameter #1.
2. **Local operation** by simple pushing the red button. Any push of the button will result in a change of the status from open to close or vice versa.
3. **Mechanical overwrite** allows opening or closing the valve even in case of a power failure. Disconnect the valve using the internal clutch by pulling the ring. Keep the ring pulled while moving the handle manually. Never move the handle without having the clutch disconnected. As best it will not work, as worst case it will destroy the device. Operating the valve manually only works without power supply. If the Flow Stop is powered and you operate the valve the motor will drive it into previous position immediately.

Factory reset

To do a factory reset press the button for at least 10 seconds. This procedure should only be used when the primary controller is inoperable.

Node Information Frame

The Node Information Frame is the business card of a Z-Wave device. It contains information about the device type and the technical capabilities. The inclusion and exclusion of the device is confirmed by sending out a Node Information Frame. Beside this it may be needed for certain network operations to send out a Node Information Frame. Every click on the red inclusion button issues a Node Information Frame.

Associations

Z-Wave devices control other Z-Wave devices. The relationship between one device controlling another device is called *association*. In order to control a different device, the controlling device needs to maintain a list of devices that will receive controlling commands.

These lists are called **association groups** and they are always related to certain events (e.g. button pressed, sensor triggers, ...). In case the event happens all devices stored in the respective association group will receive a common wireless command.

Association Groups

1	Lifeline (max. nodes in group: 10)
2	Local Valve Operation (max. nodes in group: 10)

Configuration Parameters

Z-Wave products are supposed to work out of the box after inclusion, however certain configuration can adapt the function better to user needs or unlock further enhanced features.

LED status (Parameter number 0, Size 1)

Value	Description
0	LED always ON (Only on operation OFF)
1	LED always OFF (Only on operation ON)

Shut-off controller behavior (Parameter number 1, Size 1)

The parameter defines how to control the shut-off controller.

Value	Description
0	Remote and manually open/close (Default)
1	Remote open/close only
2	Only remote open; only manually closing
3	Only manually open; only remote closing
4	Manually open/close only

Technical Data

Voltage	12 V, 1 A
Frequency	868.42 MHz (SRD Band)
Wireless Range	Up to 30 m outside
Valve Pressure	1.6 Mpa
Valve size	1/2", 3/4", 1", 1.25", 1.5"
Auto Close Time	5-10 seconds
Auto Open Time	5-10 seconds
Torque	30-60 Kg.cm

Support

Should you encounter any problem, please give us an opportunity to address it before returning this product. Most questions regarding Z-Wave wireless communication standard can be answered through the international community at www.z-wave.info. If your question can't be answered there, please use www.popp.eu/support or contact us by email: info@popp.eu

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