



CONNECTED SENSORS



Hardware Installation Guide

Mini Water Stopper



Thank you for purchasing the Mini Water Stopper. The Mini Water Stopper with integrated AMI endpoint provides 2-way communication between the service location and the Connected Sensor Cloud-based web & mobile applications. The integrated AMI endpoint supports either pulse or encoded output meters, via 2 or 3-wire serial cable, to collect, store, and transmit meter readings at user configurable check-in intervals. On-valve configurable leak and burst protection can provide flow-based detection, with immediate notification and automatic shutoff capabilities for constant flow and high flow conditions.

To install our product, you will need the services of a qualified plumber. Electrical and networking services for power and network infrastructure installation may be required as well. Please get in touch with your sales rep with any questions or concerns about your installation.

NOTE: This document contains instructions for installing the Mini Water Stopper valve/meter combo. You must complete the setup of any LoRaWAN gateways included in your deployment for the Mini Water Stopper to communicate successfully with the cloud. Please refer to the LoRa Network Configuration and Device Activation Process document for specific instructions.

BEFORE YOU BEGIN

- Tools required: T8 Torx screwdriver, 2.5mm flathead screwdriver
- Hardware required: (1) Mini Water Stopper, (1) Water Meter, (2) Meter couplers

CONNECT THE METER CABLE TO THE MINI WATER STOPPER

Follow these instructions if your order includes any pulse or ultrasonic meters.

Open the Valve:

1. Open the lid on your smart valve by removing the four screws on the top side of the valve - this requires a T8 Torx bit
2. Insert the meter cable into the middle gasketed cable entry hole at the cable end of the valve. Refer to the example photo of the Kamstrup meter connection for cable entry gasket orientation.
3. For a 2-wire, reed switch, non-polarity pulse output meter, attach one wire to Ground (Gnd), and the other wire to Data. See Figure 1. A 2.5mm standard screwdriver is required.
4. For a 3-wire, encoded output meter. attach each of the 3-wires according to the meter cable specifications to Ground (Gnd), Data, and Clock (Clk). See Figure 2.

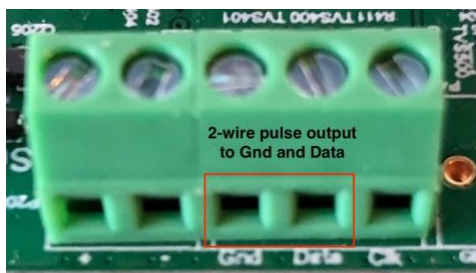


Figure 1

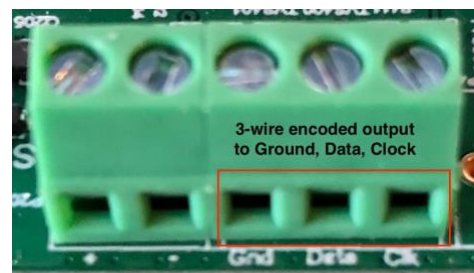
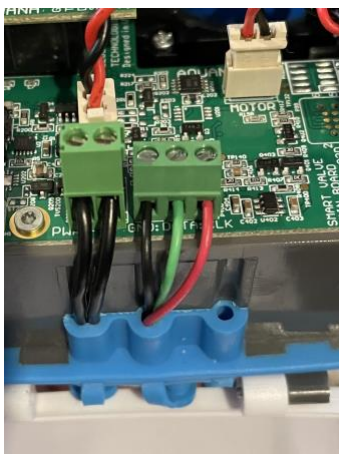


Figure 2

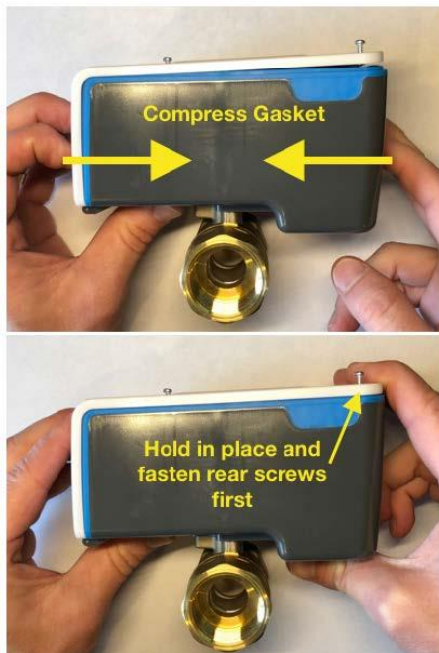
This is an example of a connection for a Kamstrup flowIQ2100 meter. Black=Ground
Green=Data, Red=Clock.



CLOSING THE LID

1. Close and secure the lid with the four T8 torx bit screws provided.
 - a. The Mini Water Stopper uses a compression gasket to remove any moisture that may come in contact with the unit. To create the best seal and align the lid holes, you must apply pressure from the sides, as shown.
 - b. Compress the short white side of the lid to form a firm seal and allow the lid screw holes to align with the case screw posts.
 - c. Screw in the lid screws to a snug fit. **DO NOT OVERTIGHTEN**, or you can damage the seal.

2. If you plan to use AC power, simply plug the included power supply into a wall socket once your valve is plumbed.



PLUMBING THE HARDWARE

NOTE: Please ensure that a manual shutoff valve is installed where the water supply enters the home or property unit, before the Mini Water Stopper.

NOTE: Please install the water meter according to the manufacturer's instructions. We have provided additional information below.

1. The meter should be installed just downstream of the main manual shutoff valve.
2. The Mini Water Stopper should be installed on the outlet/downstream side of the meter.
3. Each of our residential-size valve bodies has a male NPSM connection on one end for connection to the existing plumbing system using a standard meter coupler and a female NPSM swivel nut for connecting directly to a water meter. An additional meter coupler is needed for connecting the male NPSM meter thread to the existing plumbing. Gaskets are supplied for each connection. **GASKETS MUST BE INSTALLED**, and connections tight to seal correctly.
4. The Mini Water Stopper requires approximately 2.5" of "lay length" along the dimension the pipe runs, and the case requires approximately a 6" clearance radius around the pipe.
5. The water meters require approximately 5" of "lay length." The total lay length of the valve/meter combo is approximately 7.5". If the valve is installed with a 7.5" meter, the full lay length is approximately 10".
6. We recommend orienting the Mini Water Stopper with the logo side of the lid facing up, parallel and level with the ground. However, other orientations are supported if required. Please note, **DO NOT INSTALL THE MINI WATER STOPPER UPSIDE DOWN** or this will shorten the battery life of the device.
7. Be sure the lid can open completely once installed, and that the inside compartment is accessible for future battery or meter replacement, if needed.
8. Refer to the photo below of a complete Mini Water Stopper valve/meter connection.
9. **IMPORTANT:** After the Mini Water Stopper is installed, we recommend closing the valve and checking that the water is off downstream.



Meter Coupler
1" NPSM female to
3/4" NPT male

Mini Water
Stopper Body,
1" male NPSM

Mini Water
Stopper Body, 1"
female NPSM
swivel nut

Water meter with
1" NPSM male
connections

Water meter with
1" NPSM male
connections