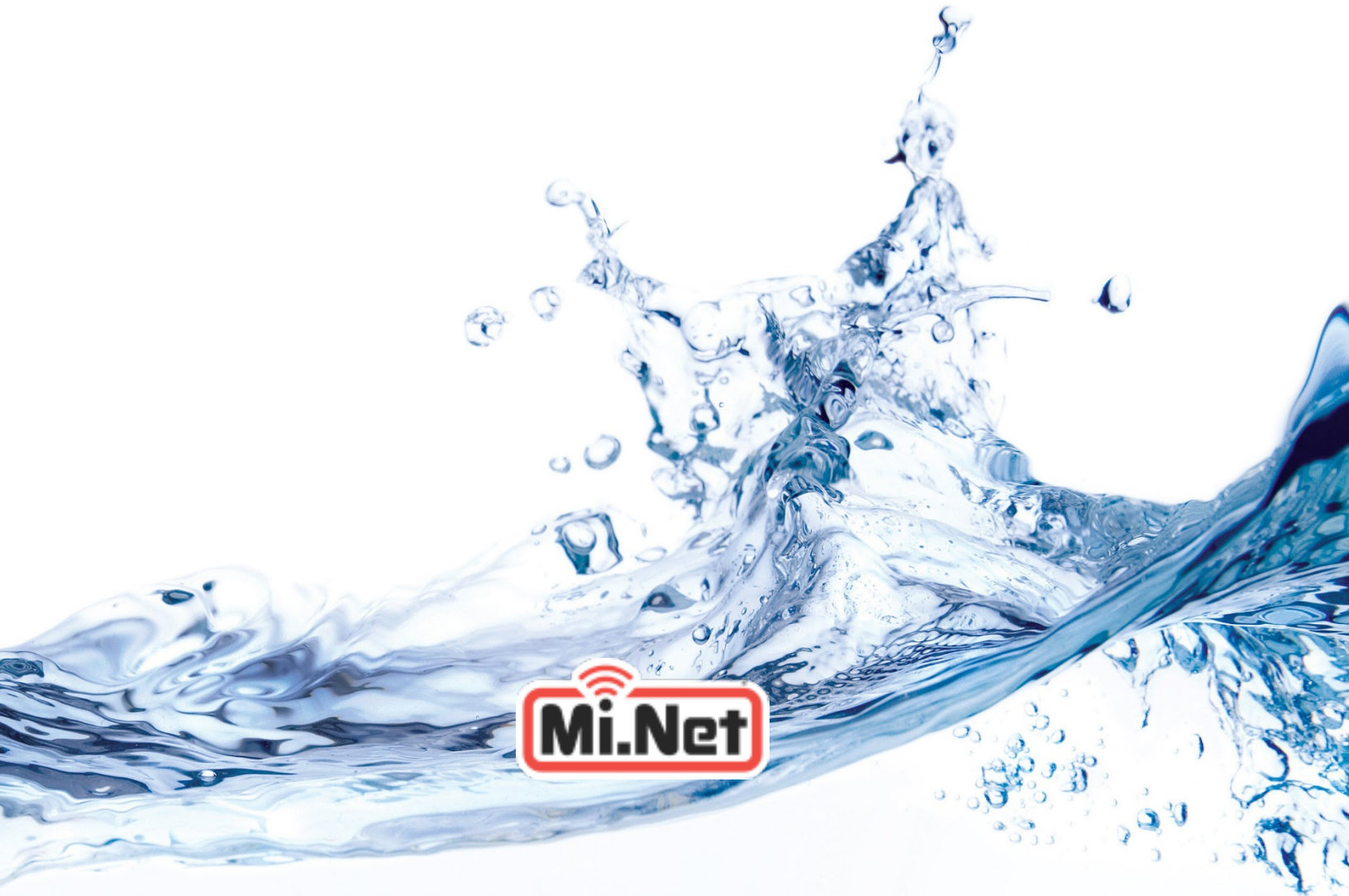
Mueller SYSTEMS

Where Intelligence Meets Infrastructure™

Test Instructions

Solid State Meter (SSM)

Document version v1.0
November 2017



Introduction

The SSM is an electronic water meter that utilizes the ultrasonic measuring principle. The SSM operates on the time transit measurement principle that delivers highly accurate flow rates in the harshest environmental conditions for the entire life of the meter.

Testing Procedure

The SSM meter should be tested per the AWWA C-700 standard provided in the AWWA M6 Water Meter Selection, Installation, Testing, and Maintenance Manual Table 5-3. For volumetric testing, it is recommended to position a straight pipe of a length 10x the meter inlet diameter leading to the meter for the most accurate results.

Before beginning a volumetric test, Mueller Systems recommends running a minimum of 100 gallons at maximum flow to ensure that the meter and test system is free of air and that the meter is completely filled with water. Always begin the meter test with the high flow and then continue with the mid and low flows to ensure that the system remains free of air.

To demonstrate the outstanding performance of the Solid State Meter, test the meter at the flow rates in the table below.

Size		5/8" x 3/4"	3/4" S	3/4" L	1"
Lay length	Inch	7 1/2"	7 1/2"	9"	10 3/4"
High Flow	GPM	15	20	20	40
Volume	Gallon	100	100	100	100
Mid Flow	GPM	0.1	0.1	0.1	0.4
Volume	Gallon	2	2	2	8
Low Flow	GPM	0.05	0.05	0.05	0.25
Volume	Gallon	1	1	1	5

SSM Test Mode

The SSM meter has a test/verification mode option. In test mode, the meter refreshes its LCD data display more frequently. Test mode can be activated using the SSM remote control.

In test mode volume is measured at 8Hz or 8 times per second (versus standard rate of 0.5Hz or 2 times per second) in order to reduce required test volume and duration at ultralow flow rates. When test mode is initiated, the normal volume of 100 gallons is reduced to only 6.5 gallons.

Alternatively, if a direct comparison is required, the standard PD meter tests can be run per the AWWA M6 manual rates and volumes for an appropriately sized PD meter.

To activate the test/verification mode follow these steps:

1. Position the remote control's infrared LED at the optical interface port on the meter.
2. Hold the remote control within 2 inches of the optical interface port of the meter and press the **3** button.
    - After activation, the meter display alternately indicates **Out 4** and the high-resolution volume which provides two additional zeroes to the right of the standard reading mode for additional test resolution , e.g. **0.000** gallons, 0.0000 cubic feet, or 0.00000 cubic meters
3. Execute the volumetric test.
4. After the volumetric test, make sure to deactivate test mode by pressing button **4** on the remote control, while positioning the remote control on the optical interface port of the meter (see Step 1). Verify **Out 4** is no longer displayed on the meter's optical interface.

If the test mode is not deactivated via the remote control the meter will reset itself to field operating mode automatically after three (3) hours.