

Solid State Register[§] Frequently Asked Questions

When will “always on” SSR be available for shipment?

Mueller Systems is currently accepting orders for SSR registers beginning February 18th, 2017. Any positive displacement meter that is currently manufactured can be ordered with an “always-on” SSR register effective this date. Parts orders for retrofits of SSR registers compatible with all currently manufactured positive displacement meters are also available effective February 18th, 2017.

How can I be sure I’ll receive the proper SSR register resolution and programming?

Before an order can be placed, Mueller Systems works with each customer to create a customer specification detailing all the programmable parameters for the SSR. This process is very similar to the current specification generated for all our Translator registers and only takes a few minutes to set up. Our sales and customer care group is responsible for assisting you in setting up these specifications and can be reached locally or at 1-800-323-8584. Be aware that limitations of the billing and meter reading software may limit the resolution of the SSR register that can be processed. The SSR with extended protocol is capable of transmitting up to 9 digits electronically.

What parameters are programmable in the SSR register?

Most electronic parameters can be specified by the customer for factory programming. The SSR register is available with standard and extended protocols to provide the appropriate granularity and data to the system of your choice. Any number of digits can be returned electronically to the AMR/AMI system including 4, 5, 6, 7, 8, or 9 digits based on individual requirements to achieve the most granular resolution possible for system management, leak detection and environmental concerns.

How is the SSR different from electro/mechanical registers that other manufacturers offer?

The SSR register utilizes sensors inside its unique composite housing that detect precise magnet rotations generated by water flow. The solid state design has no moving parts eliminating the possibility of wear or friction that can contribute to meter inaccuracy. Gears, odometer wheels, spindles, and pinions are found in all electro/mechanical registers. The SSR register eliminates these concerns with a Liquid Crystal Display (LCD) and solid state components, providing outstanding accuracy and repeatability. The housing is finished with a hardened glass lens and full cover lid that provides protection in all environments.

How is the SSR register different from solid state registers offered by other manufacturers?

The SSR register provides a unique set of features not found on any other electro/mechanical or solid state registers. A visual code is provided on the LCD in the event of register removal (ERR 008) or magnetic interference (ERR 001) that is associated with tampering or theft at the account. A customized backflow alert (BACKFLOW) on the LCD provides notification of backflow occurrences. An LCD “HIGH” icon indicates high ambient light conditions that may inhibit the sensor’s ability to switch the SSR from standard operating mode to TEST mode. Simply shading the LCD with your hand or the lid provides relief from this issue. Large digits and icons make visual reading of the SSR register easy. The SSR register housing permits 358 degree rotation of the register on the meter body for the best possible reading position.

What other icons and displays are available on the SSR register?

In addition to the unique features found only on the SSR register, the LCD displays all the standard features normally found on most electro/mechanical and solid state registers. These include the units of consumption (gallons, cubic feet or cubic metres), a battery icon warns of when approximately 6 months of battery life remaining, a low flow/leak indicator icon which also shows direction of flow, lines above and below the total display which indicate the numbers utilized for billing units, and decimal places in the visual reading as required based on the desired granularity of the register.

The SSR register indicates NO FLOW and then changes to FLOW. What does that mean?

The presence of the word FLOW indicates water is flowing through the meter. It is illuminated to indicate leaks and small amounts of water are flowing that may not be apparent in the least significant digit of the meter reading. Normally, leaks can be detected in this manner too. In the event of reverse flow, check the least significant digit displayed on the total. It will begin to decrement from the total when enough backflow has occurred. Due to the high degree of granularity on the 10 digit visual display, minute amounts of flow can be detected. This is further enhanced by the specifiable BACKFLOW detection icon on the LCD.

How is the SSR register identified?

A unique, never duplicated 10 digit serial number is etched on the SSR register lid and housing to permanently identify each register. In addition to the serial number, the size, model number, and date of manufacture are permanently etched on the housing pad. A three part label secured to the side of the SSR register provides the part number, description, serial number, the electronic resolution, appropriate approval logos, and three bar codes (two of which are removable) to facilitate recording serial numbers on installation paperwork.

What does it mean if I get an ERR message on the SSR? I see an ERR 008 message alternating with the meter reading. What should I do?

An ERR 008 indicates that the SSR register may have been removed from the meter and the magnetic coupling between the register and the meter may have been broken. While it is not a guarantee that the register meter and register have been tampered with, it does indicate that the meter should be inspected for telltale

signs of tampering. A broken register housing and scuff marks on the register housing are signs that the register may have been removed.

The ERR 001 message was visible on my register but then it went away. What does that mean?

The ERR 001 magnetic interference and ERR 008 register removal messages are related to magnetic tampers typically associated with attempts at water theft. These are not guarantees that an attempted theft has taken place but are indicators that the meter should be inspected by the utility to determine the cause of the tamper alert. Upon activation, these alerts remain visible on the SSR for 90 days but do not affect register operation. If no additional tampers are detected, the alert will clear and no longer be visible. Additional tampers restart the 90 day timer.

I want to retrofit some meters in the field. Won't the ERR 008 message be displayed on all my SSR registers when I receive them?

No, the SSR register was designed so that the tamper messages are activated only after the equivalent of 10 gallons of flow are recorded on the register for smaller sizes of meters and an appropriate volume as the size of the meter increases.

What about other programming parameters? Can I change them in the field?

Each electronic parameter is customer specifiable at the factory and cannot be changed in the field. Practically any feature set can be specified to meet the requirements of most customers' systems. Any changes must be done by authorized Mueller Systems technicians at the manufacturing facility in Cleveland, NC. Normally, a standard group of programming parameters are used based on the billing software and system hardware, firmware, and software capabilities.

At what level should I set my specifiable leak detection?

This will be dependent on the customer's required level of notification. The level is set at a default that prevents unnecessary notifications based on historical system performance. If the notification is set too low, the possibility exists that the customer will be inundated by BACKFLOW alerts on the register. The current default setting for display of the BACK FLOW icon on the SSR register is to utilize a

multiplier of 20 and the published low flow capability of the meter. As an example, a 420 PD meter with a minimum low flow of 1/8 GPM X the multiplier of 20 equals 2.5 gallons. The default time period is set at 5 minutes. A reverse flow of 2.5 gallons within 5 minutes sets the BACK FLOW at the register. As soon as the meter experiences positive flow, the BACK FLOW icon is turned off on the display.

What AMR and AMI systems is the SSR register compatible with?

The SSR register is compatible with Mi.Net and MegaNet AMI systems offered by Mueller Systems. It is also compatible with Mueller Systems' Hot Rod AMR system. We anticipate adding additional system compatibilities as more testing takes place. The SSR register utilizes an industry standard encoder protocol for communication in ASCII format that is generally compatible with most systems.

What is the warranty for the SSR register?

The warranty on the SSR register is the same 20 year warranty provided on the Translator register. The first 10 years are covered at 100% while the remaining 10 years are prorated per our standard Mueller Systems warranty.

Can I see and determine flow rate on the SSR register for testing purposes?

No; our customer research indicated that flow rates in the field are usually set by test meter register outputs and are not required very often. We opted to provide additional functionality in other areas like the magnetic tamper features which we felt provided more customer value.

Can I utilize a touch pad or Hersey TRuRead remote display to read the SSR register?

The SSR is not compatible with touch pads or TRuRead displays with the SSR register.

Additional Questions?

In all things, Mueller Systems strives to provide exceptional value in our products at a competitive price. If you'd like to see the SSR or just have questions regarding its operation, contact your local sales representative or our customer care group.