

# SOLID STATE REGISTER (SSR)



## Features

**APPLICATIONS:** The Mueller Systems™ Solid State Register (SSR) is available for use on all current Mueller Systems positive displacement meters in 5/8" through 2" sizes. The SSR register provides the granular data required for use in the latest AMR and AMI applications without the friction and loss of accuracy associated with electromechanical registers. Improved accuracy and reading resolution make the SSR the sensible choice for improving revenue now and in the future.

The SSR register uses no hazardous substances within the electronic equipment. The PCB, components and solder are all lead free making the SSR register a "green" choice.

The SSR register provides up to 10 digits of visual resolution and up to 9 digits of electronic resolution for outstanding granularity when used in conjunction with current Mueller Systems AMR and AMI systems. Granularity of data and frictionless operation permit customers to capture maximum revenue and be proactive in leak detection and resource conservation. Two new optional magnetic tamper detection features provide notification of register or measuring chamber removal from the meter or interference by external magnetic fields. The combination of proven mechanical meter technology and solid state register design provide the basis for empowered and satisfied utility customers when used in conjunction with Mueller Systems AMR/AMI systems.

The large LCD display provides crystal clear meter reading opportunities during visual verification of radio frequency transmissions or field testing. Intuitive icons on the LCD display provide concise information to assist utility personnel in all field operations. The unique 10 digit serial number on the Mueller Systems SSR register display and housing identify it as the basis for all systems communication. The display provides information specific to the registration units, model, size, date of manufacture, direction of flow, battery status, billing units and tamper indication codes to provide verifiable and retrievable data in the event it is required visually.

**CONFORMANCE TO STANDARDS:** Mueller Systems Solid State Register complies with the latest revision of ANSI/AWWA Standard and C707 for Encoder Remote Reading Systems as well as the American Standard Code for Information Interchange or ASCII.

**CONSTRUCTION:** Mueller Systems utilizes a UV stable, molded enclosure and lid made of thermoplastic to permanently house the SSR electronics. A heat treated, tempered glass lens provides a scratch resistant barrier to the elements in all meter box environments. A variety of integral and wired AMR/AMI options is available.

The SSR is compatible with all bayonet style locking mechanisms offered on Mueller Systems meters. The SSR is tamper protected by an integral installation ring making tampering readily apparent to field technicians. The register and installation ring can be replaced without removing the meter from the service line when required due to vandalism or damage.

**OPERATION:** The SSR encoder register detects the rotation of the drive magnet incorporated into the meter measuring element. As the four pole magnet turns, sensors inside the register capture minimal movements of the magnet to provide exceptional accuracy without the introduction of friction or loss of revenue normally associated with electromechanical devices.



Solid State Register (SSR)<sup>§</sup>

SSR

When interrogated by a Mueller Systems AMR/AMI device, the SSR register communicates the unique 10 digit serial number, up to 9 digit electronic reading and all tamper codes in ASCII format where it can be recorded and maintained within the reporting structure of the AMR/AMI system. In the event that field testing is required, the optical port on the face of the display allows the SSR register to be placed into test mode. Test mode permits technicians to conduct valid field tests to determine the accuracy of the meter.

**MAINTENANCE:** The Mueller Systems SSR encoder register is designed and manufactured to provide a 20 year service life with virtually no maintenance required. Register installation rings and lids are available as replacement components in the event of vandalism or the need for meter retrofits.

## Materials and Specifications

MODEL	Solid State Register (SSR)
REGISTER TYPE	Solid State Absolute Encoder Register
SIZES	All 5/8" through 2" Positive Displacement Meters
STANDARDS	Manufactured and tested to meet or exceed all applicable parts of ANSI/AWWA C707 Standard and the American Standard Code for Information Interchange (ASCII)
TEMPERATURE OPERATING RANGE	14°F (-10°C) to 176°F (80 °C)
STORAGE TEMPERATURE RANGE	-40°F (-40°C) to 185°F (85°C)
CONNECTION OPTIONS	5' or 25' Nicor Connector, 5' or 25' Itron In-Line Connector, Integral Hot Rod or Mi.Node with no exposed wire, 5' or 25' wired Hot Rod, or Mi.Node with factory potted connections
MATERIALS	Register housing and lid - thermoplastic; Register lens – glass; Battery – Lithium Thionyl Chloride; LCD Display – 10 digit visual resolution and up to 9 digit electronic resolution with Mueller Systems AMR/AMI systems
AMR/AMI COMPATIBILITY	Mueller Systems Hot Rod AMR system, MegaNet AMI system, Mi.Net AMI system and other AMR/AMI systems that can utilize the Mueller Systems standard encoder protocol output. The SSR register is not compatible with touch pad technology.