

# SR<sup>®</sup> Meter

## Displacement Type Magnetic Drive Cold Water Meters

### 5/8" (DN 15mm), 3/4" (DN 20mm) and 1" (DN 25mm) Sizes

#### DESCRIPTION

**Applications:** Measurement of cold water where flow is only in one direction; in residential, commercial and industrial services.

**Conformance To Standards:** Sensus Sealed Register<sup>®</sup> Water Meters comply with ANSI/AWWA Standard C700, latest revision. Each meter is tested to insure compliance.

**Construction:** Sensus SR Water Meters consist of three basic components: maincase; measuring chamber; and permanently, hermetically-sealed register. Maincases are of bronze with externally-threaded spuds. Measuring chambers are of Rocksyn<sup>®</sup>, a corrosion-resistant thermoplastic material. Bronze measuring chambers are available as an option.

Maincase bottom plates are available in bronze or, if frost protection is desired, in cast iron or synthetic polymer. Simplicity of design and precise machining of components allows interchangeability of parts among like-size meters to provide ease of maintenance. The register, measuring chamber and strainer can be removed without removing the maincase from the installation.

**Sealed Register:** Permanently, hermetically sealed; proven magnetic drive design; with integral tamper-proof locking device. Guaranteed for 25 years. The standard register includes a straightreading, odometer-type totalization display; a 360° test circle with center sweep hand; and a low flow (leak) detector. Gears are self-lubricating, molded plastic for long life and minimum friction. The hermetic sealing of the register eliminates dirt and moisture, tampering, and lens fogging problems.

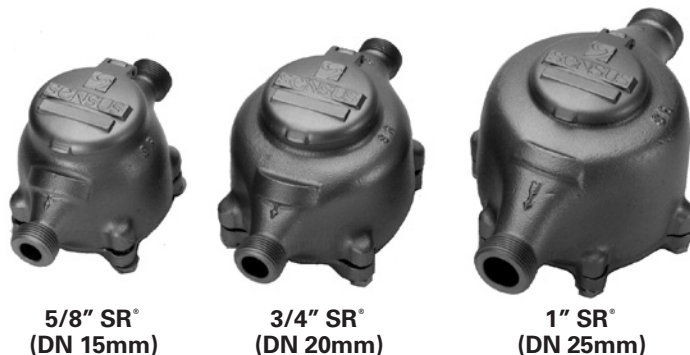
No change gears are required for accuracy calibration. Encoded-type remote reading systems are available for all SR Water Meters. (See back of sheet for additional information.)

**Tamperproof Features:** Removing the register to obtain free water is prevented by a locking system inside the meter. Removing the register requires a special tool that is available only to water utilities.

**Magnetic Drive:** The unique design of the direct magnetic drive is a positive, reliable, dependable drive coupling, proven in millions of SR Water Meters.

**Operation:** Water flows through the meter's strainer and into the measuring chamber where it operates the piston. The piston, which moves freely, oscillates around a central hub, guided by the rubber-coated division plate.

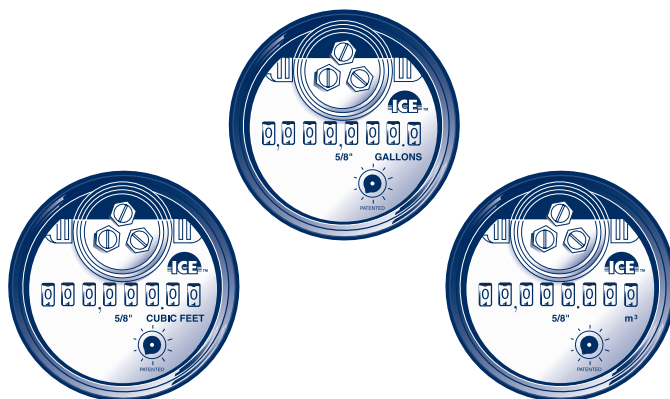
A drive magnet, incorporated in the piston, rotates around the outside of the hermetically sealed register well and



5/8" SR<sup>®</sup>  
(DN 15mm)

3/4" SR<sup>®</sup>  
(DN 20mm)

1" SR<sup>®</sup>  
(DN 25mm)



5/8" (DN 15mm) Dials Shown

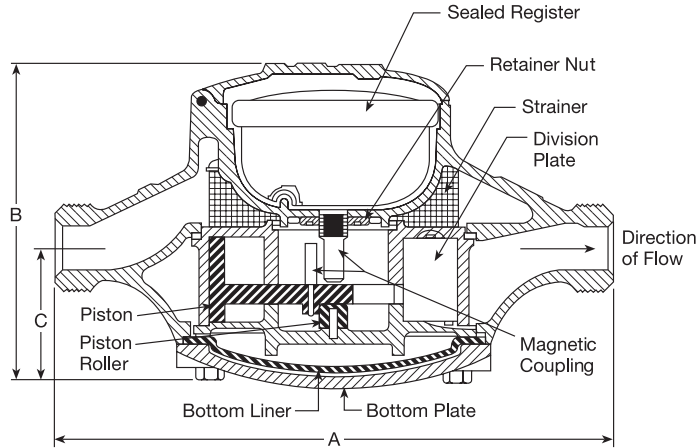
magnetically drives the "follower" magnet sealed within the well. The "follower" magnet drives a crank connected to the register gear train, which translates the number of piston oscillations into volume totalization units displayed on the register face.

**Maintenance:** Sensus Sealed Register<sup>®</sup> Water Meters are engineered to provide long-term value and virtually maintenance-free operation because of their design simplicity and interchangeability of modules. Sensus SR<sup>®</sup> Water Meters are easy to repair, even without removing the maincase from the installation. As an alternate to repair by the utility, Sensus offers various maintenance programs which provide factory reconditioning of the maincase and replacement of components at low fixed prices.

**Connections:** Tailpieces/Unions for installing the meters on a variety of pipe types and sizes are available as an option.

**AMR / AMI Systems:** Meters and encoders are compatible with current Sensus AMR/AMI systems.

**Guarantee:** Sensus SR<sup>®</sup> Water Meters are backed by "The Sensus Guarantee." Ask your Sensus representative for details, or see Bulletin G-500.



**DIMENSIONS AND NET WEIGHTS**

Metric Size	A	B	B <sup>2</sup>	C	Width	Net Weight <sup>1</sup>
5/8" (DN 15mm)	7-1/2" (190mm)	4-9/16" (115mm)	6-1/8" (155mm)	2-1/8" (55mm)	4-5/8" (120mm)	5 lb. 12 oz. (2.6 kg)
5/8" x 3/4" (DN 15mm x 33mm)	7-1/2" (190mm)	4-9/16" (115mm)	6-1/8" (155mm)	2-1/8" (55mm)	4-5/8" (120mm)	5 lb. 15 oz. (2.7 kg)
3/4" (DN 20mm)	9" (230mm)	5-1/8" (130mm)	6-3/4" (171mm)	2-9/32" (60mm)	5-1/4" (135mm)	8 lb. (3.6 kg)
3/4" short (DN 20mm)	7-1/2" (190mm)	5-1/8" (130mm)	6-3/4" (171mm)	2-9/32" (60mm)	5-1/4" (135mm)	8 lb. (3.6 kg)
1" (DN 25mm)	10-3/4" (275mm)	5-3/4" (145mm)	7-3/8" (187mm)	2-5/8" (70mm)	6-13/16" (175mm)	12 lb. (5.5 kg)

<sup>1</sup> With Rocksyn measuring chamber.  
<sup>2</sup> The measurement to the top of a TR/PL on an ICE register.

**SPECIFICATIONS**

<b>SERVICE</b>	Measurement of cold water with flow in one direction only.
<b>NORMAL OPERATING FLOW RANGE <sup>1</sup></b>	5/8" (DN 15mm) size: 1 to 20 gal/min. (0.25 to 4.5 m <sup>3</sup> /h) 3/4" (DN 20mm) size: 2 to 30 gal/min. (0.45 to 7.0 m <sup>3</sup> /h) 1" (DN 25mm) size: 3 to 50 gal/min. (0.7 to 11.0 m <sup>3</sup> /h)
<b>ACCURACY</b>	100% ± 1.5% of actual thruput
<b>LOW FLOW REGISTRATION</b>	5/8" (DN 15mm) size: 95% at 1/4 gal/min. (0.96 m <sup>3</sup> /h) 3/4" (DN 20mm) size: 95% at 1/2 gal/min. (0.10 m <sup>3</sup> /h) 1" (DN 25mm) size: 95% at 3/4 gal/min. (0.15 m <sup>3</sup> /h)
<b>MAXIMUM PRESSURE LOSS</b>	5/8" (DN 15mm) size: 10.8 psi at 20 gal/min. (0.7 bar at 4.5 m <sup>3</sup> /h) 3/4" (DN 20mm) size: 11.0 psi at 30 gal/min. (0.8 bar at 7.0 m <sup>3</sup> /h) 1" (DN 25mm) size: 10.9 psi at 50 gal/min. (0.8 bar at 11.0 m <sup>3</sup> /h)
<b>MAXIMUM OPERATING PRESSURE</b>	150 psi (10.0 bar)
<b>MEASUREMENT ELEMENT</b>	Oscillating piston
<b>REGISTER</b>	Straight reading, hermetically sealed magnetic drive. Remote reading unit optional.
<b>REGISTRATION</b>	5/8", 3/4", 1": 10 gallons, 1 cubic foot, 0.01 m <sup>3</sup> or 0.1 m <sup>3</sup> /sweep hand revolution. 5/8", 3/4", 1": odometer wheels (10,000,000 gallons, 1,000,000 cubic feet or 100,000 m <sup>3</sup> )

<b>METER CONNECTIONS <sup>2</sup></b>	5/8" (DN 15mm) size: 3/4" (26.44mm) threads 5/8" x 3/4" (DN 15mm x 33mm) size: 1" (33.25) threads 3/4" (DN 20mm) size: 1" (33.25mm) threads 3/4" x 1" (DN 20mm x 42mm) size: 1-1/4" (41.91mm) threads 1" x 1-1/4" (DN 25mm x 48mm) size: 1-1/2" (47.75mm) threads (All threads are straight pipe, external type, conforming to ANSI B1.20.1, or ISO R228, if specified.)
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<b>MATERIALS <sup>3</sup></b>	Maincase—Bronze Measuring chamber—Rocksyn Bottom plate—Bronze, cast iron or synthetic polymer Magnets—Alnico Trim—Stainless Steel Casing bolts—Stainless Steel Strainer—Thermoplastic
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<sup>1</sup> Maximum rates listed are for intermittent flow only. Maximum continuous flow rates as specified by AWWA are:  
 5/8" (DN 15mm)—10 gal/min (2.3 m<sup>3</sup>/h)  
 3/4" (DN 20mm)—15 gal/min (3.4 m<sup>3</sup>/h)  
 1" (DN 25mm)—25 gal/min (5.7 m<sup>3</sup>/h)  
<sup>2</sup> Unless otherwise noted, 5/8" size and 5/8" x 3/4" characteristics are identical.  
 5/8" x 3/4" designates 5/8" with 3/4" connection thread. Metric designation is the normal bore x the outside diameter.  
<sup>3</sup> Synthetic polymer maincase bottom plate available on 5/8" meter only.