

Spectrum® Wave Ultrasonic Meter

Product Datasheet

Overview

The Spectrum Wave ultrasonic meter is an advanced water metering instrument. Its measuring unit is based on a “See Through” ultrasonic technology. With this concept, the two sensors, used alternatively for the transmission and the reception of the ultrasonic signal into the water pipe, are installed on each end of a straight section of the water pipe. With such a mechanical configuration, the water flow remains free of any mechanical structure that would increase the drop of pressure inside the meter. The meter provides a very wide range with low flow accuracy to 0.05 gpm which will capture the highest levels of revenue.

This free pipe design gives the following advantages to the product:

- There are no obstacles mounted inside the water pipe and thus, no unnecessary pressure losses generated inside the pipe.
- The meter will easily pass most particles with no damage or effect.
- The abrasive effect of the particles inside the water has no impact, nor on a short or long term, on the quality of the accuracy for the meter.

The Spectrum Wave has a highly functional display which provides the meter read plus indicators for direction of flow, empty pipe, battery level, diagnostics and radio signal levels.

Communications

The Spectrum Wave meter is equipped with a built-in cellular module and internal antenna which provides seamless integration into the WaterScope® water management system. The meter does have an external antenna port for challenging environments, but in most residential applications, the utility will not need to deal with any external cables.



Design Features

- High accuracy – exceeding high and low range of AWWA residential standards
- Accurate measurement above 1/20th gpm
- Unaffected by sand or small debris in line
- Resistant to friction wear
- No straight pipe requirements upstream or downstream of meter
- No strainer requirement
- Lightweight and tough composite meter body



Materials

The Spectrum Wave meter is designed and manufactured to meet or exceed AWWA C715 standard design and performance specifications. All models are maintained with NSF-61G lead-free certifications.

Standards

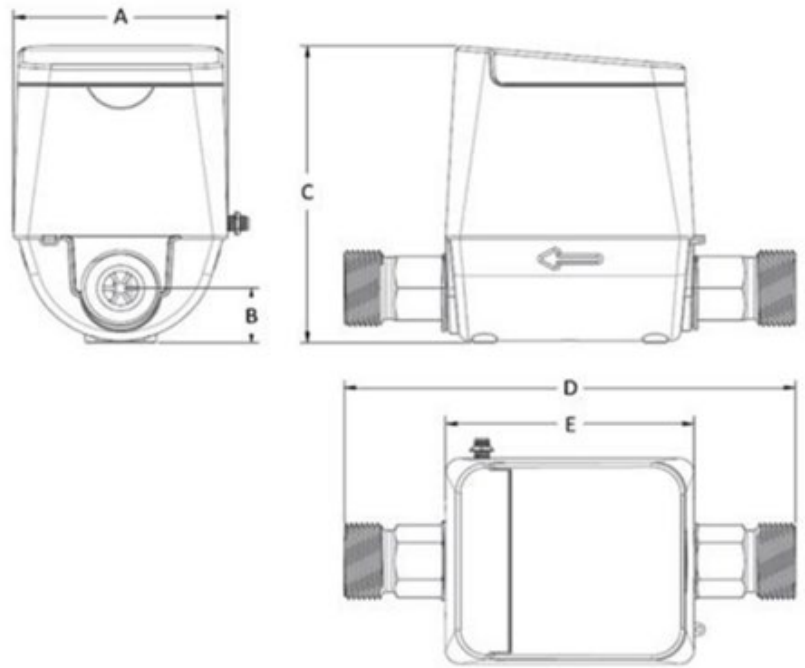
AWWA C715 – Cold-Water Meters – Electromagnetic and Ultrasonic Type for Revenue Applications

NSF-61G – Drinking Water System Components Health Effects

Mechanical Specifications

DIMENSIONS

Size	AWWA 5/8x3/4" (15x20mm)
Lay Length, D	7.5" (190 mm)
Overall Height, C	5.13" (130.3 mm)
Height below pipe axis, B	0.95" (24 mm)
Overall Width, A	3.5" (90.2 mm)
Box Length, E	4.12" (104.6mm)
Weight	2.36 lb (1.069 kg)
Threads	1" NPSM



MATERIALS

Body	Nylon composite
Register housing	Thermoplastic

MARKINGS

Engraved on meter body: Model, Serial Number, Date of Manufacture, UL (NSF-61G), Direction of Flow arrow

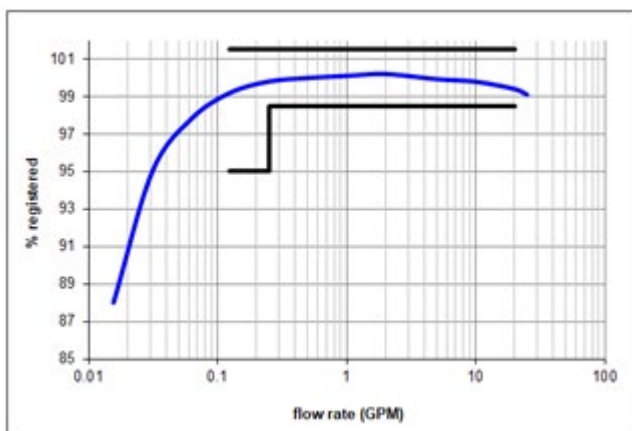
Flow & Pressure Specifications

Normal Operating Range (98.5 to 101.5%)	0.20 to 25 gpm	(46 to 5678 l/hr)
Low Flow (95 - 105% min)	0.1 gpm	(23 l/hr)
Extended Low Flow	0.05 gpm	(0.2 l/m)
Max Continuous Duty ¹	20 gpm	(4542 l/hr)
Safe Maximum Operating Capacity ²	25 gpm	(5678 m3/hr)
Pressure Loss at Max Continuous	10.0 psi	(0.69 bar)
Max Operating Pressure	175 psi	(12 bar)
Max Operating Temperature	140 °F	(60 °C)

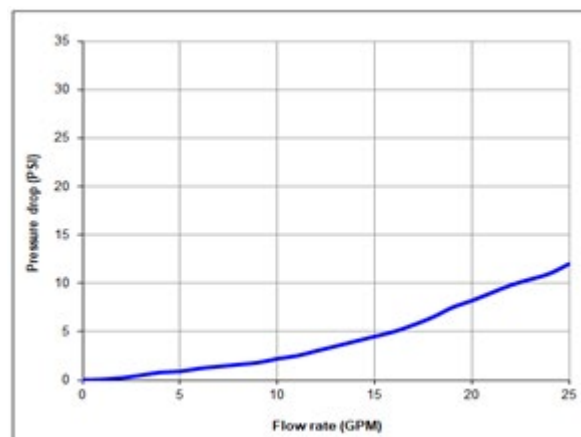
Notes

- 1 Max Continuous defined by AWWA as flow rate which can be maintained 24 hrs/day x 7 days/week
- 2 Max Intermittent defined as flow rate which can be maintained 1 hr/day average

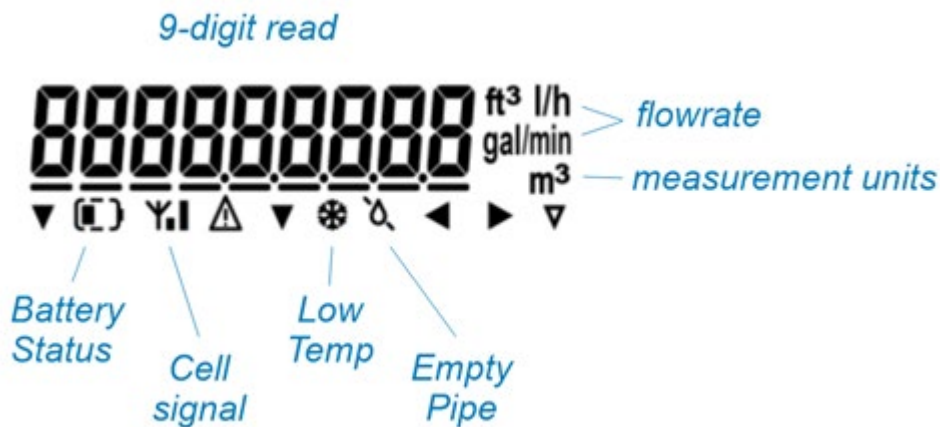
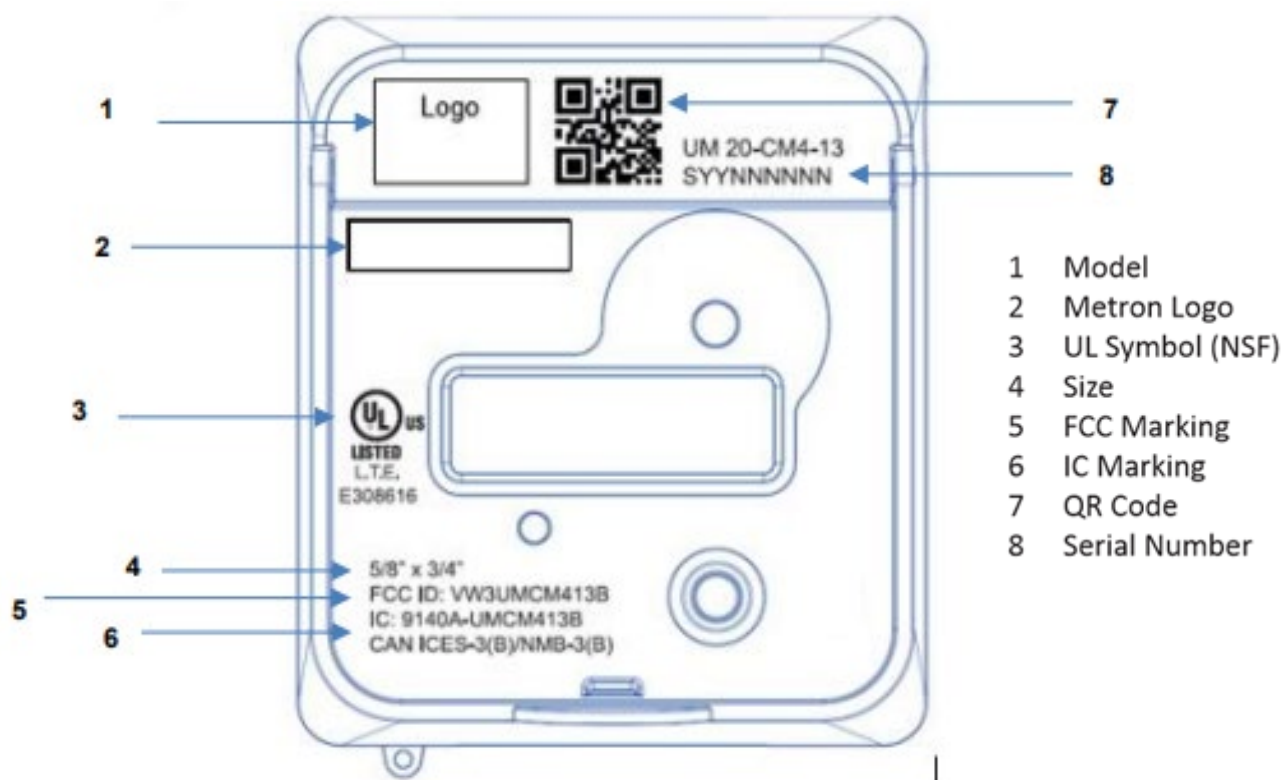
Flow Accuracy



Pressure Drop



Top Plate



Warranty

Please contact your Metron representative for formal warranty certificates.

Legal

Due to updated regulations and product improvements, Metron reserves the right to change the product specifications without notice.