METRON Spectrum® PD

Spectrum® PD Ultra-Low Flow Meter

Product Datasheet

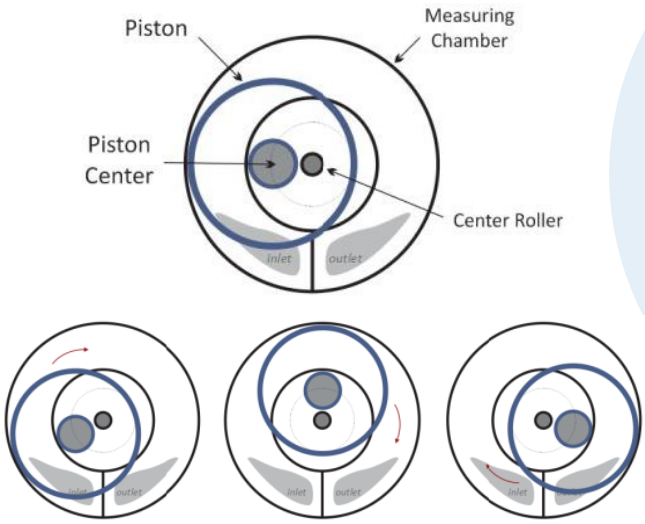
Applications

The Spectrum PD is a high performance oscillating piston water meter providing extreme low flow measurement. It improves upon traditional positive displacement meters with a unique self-cleaning mechanism, which allows the meter to operate with dirty, gritty water. The composite meter is extremely light and does not require any straight pipe for installation.

The Spectrum PD meter is paired with the Prism register to provide smart metering capabilities with high resolution data-logging and a variety of AMR and AMI options. This combination of design simplicity, superior grade materials, and high quality manufacturing standards allows for years of virtually new meter performance with no maintenance.

Operations

The Spectrum PD meter is designed with an oscillating piston with unique features to eliminate friction due to debris in the water. As shown, water enters from inlet, drives the piston around the center roller and then exits the outlet.



Artistic rendering only

The Spectrum PD residential meter utilizes the Prism register. This sealed electronic register provides a high resolution interface to the meter and has multiple cellular, AMR, AMI and SCADA outputs. The register is attached with a robust tamper-resistant housing.

Design Features

- High accuracy – exceeding high and low range of AWWA residential standards
- Accurate measurement above 1/30th gpm
- Unaffected by sand or small debris in line
- Resistant to friction wear
- Accurate in any orientation
- No measurement of air in line
- No straight pipe requirements upstream or downstream of meter
- No strainer requirement
- Lightweight and tough composite meter body

Materials

The Spectrum PD meter is designed and manufactured to meet or exceed AWWA C710 standards design and performance specifications. All models are maintained with NSF-61G lead-free certifications.

Standards

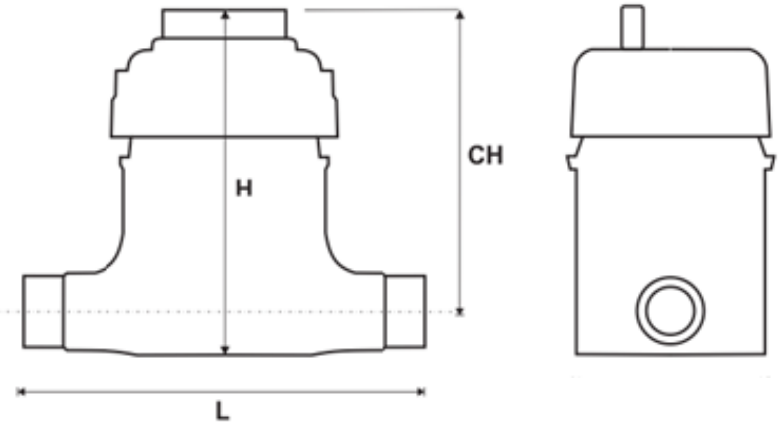
AWWA C710 – Displacement Type, Plastic Case

NSF-61G – Drinking Water System Components Health Effects

Mechanical Specifications

DIMENSIONS

Size	AWWA 5/8x3/4” (15x20mm)
Lay Length, L	7.5” (190 mm)
Overall Height, H	6.5” (165 mm)
Centerline Height, CH	5.75” (146 mm)
Overall Width	3.4” (86 mm)
Weight	2.05 lb (0.93 kg)
Threads	1” NPSM



MATERIALS

Body and top plate	Nylon composite
Register housing	Thermoplastic

MARKINGS

Engraved on meter body: Model, Serial Number, Date of Manufacture, NSF-6, Direction of Flow arrow

Flow & Pressure Specifications

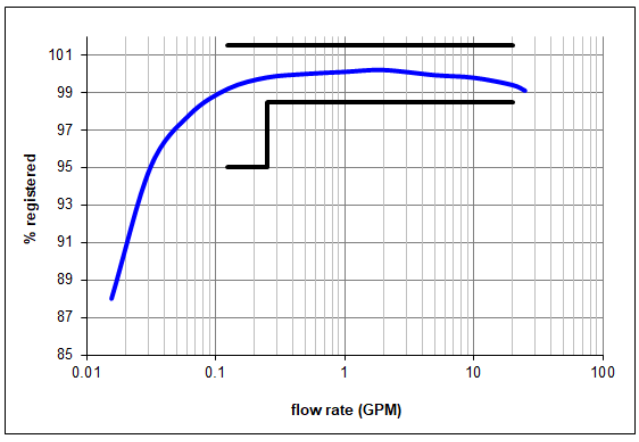
Normal Operating Range (98.5 to 101.5%)	0.10 to 25 gpm	(0.022 to 5.68 m3/hr)
Low Flow (95% min)	0.03 gpm	(0.0068 m3/hr)
Max Continuous Duty[1]	15 gpm	(2.3 m3/hr)
Safe Maximum Operating Capacity[2]	30 gpm	(6.8 m3/hr)
Pressure Loss at Max Continuous	4.0 psi	(0.28 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	140 °F	(60 °C)

Notes

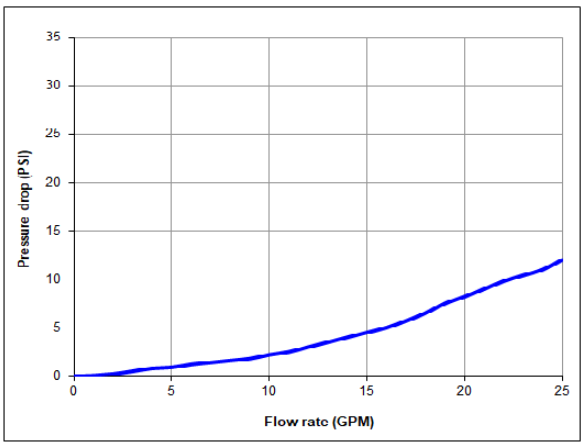
1 Max Continuous defined by AWWA as flow rate which can be maintained 24 hrs/day x 7 days/week

2 Max Intermittent defined as flow rate which can be maintained 1 hr/day average

Flow Accuracy

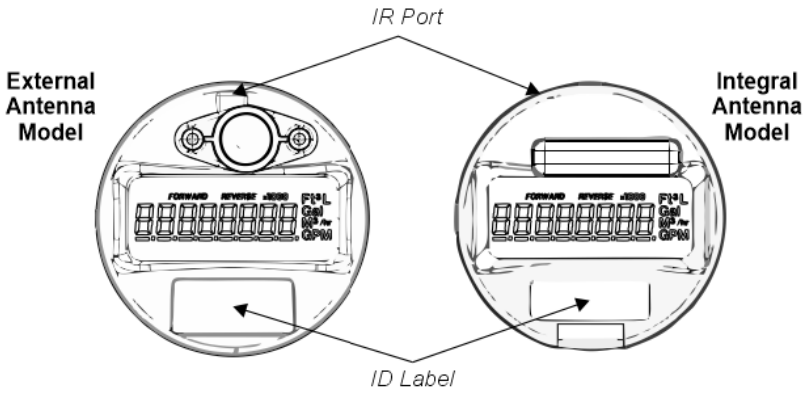


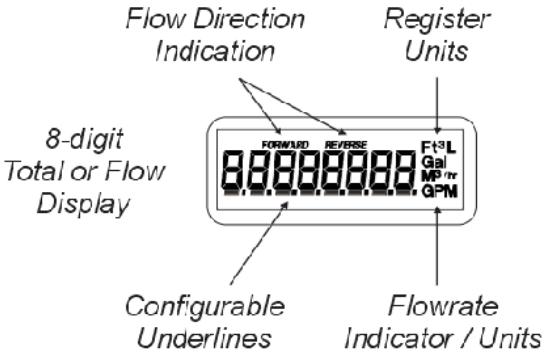
Pressure Drop



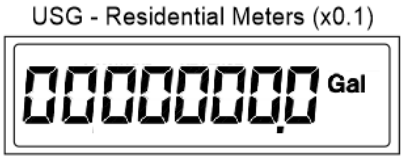
Registers

The Prism™ electronic register is the water industry's new standard for register performance, offering maximum resolution, a multitude of standard features, on-board data logging and a variety of cellular, AMI, AMR and SCADA output options. The Prism is designed for all environments and incorporates the largest battery available for utility applications. It can be deployed on any Metron Spectrum Jet and Spectrum PD water meter.

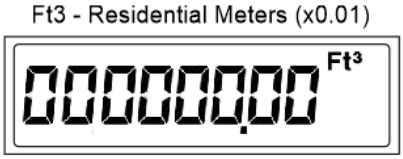


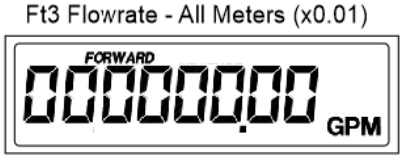


USG Configuration
0.1 Gallon Resolution

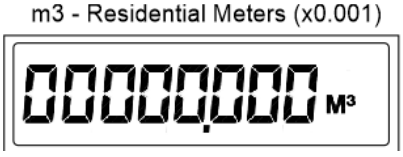


Ft3 Configuration
0.01 Ft3 Resolution





m3 Configuration
0.001 m3 Resolution



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.