

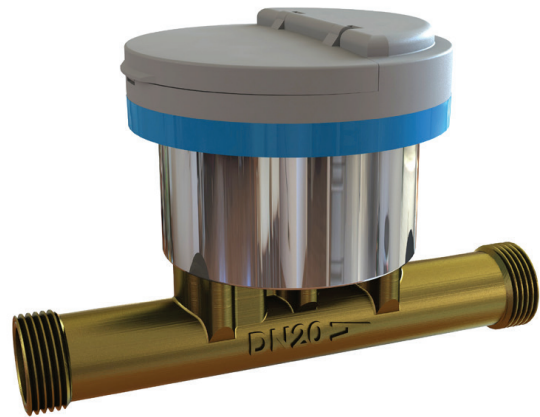


# wPrime™ Series 280W-D

## AWWA ULTRASONIC WATER METER

### Applications

- Revenue metering
- Residential submetering
- Commercial buildings
- Leakage detection
- AMR / AMI and billing
- Drive-by metering



### Features

- Residential potable water consumption metering
- Comply with applicable portions of ANSI / AWWA C700 Standard
- Temperature compensated for cold water as well as hot water up to 140°F
- No moving parts. Wear-free ultrasonic technology
- Durable, corrosion Resistant, Lead Free Brass sensor body solves the challenges in harsh environments
- Lead-free, comply with NSF / ANSI 61, Annex G
- Patented sensor design. provides precise signal, robust performance, and is not impacted by water impurity
- Excellent long-term stability with consistent performance. Accuracy does not degrade over time
- Tamper-proof design. Records when tampering is detected
- Not affected by magnetic interference
- Does not measure entrained air in pipe
- Various alarms available: reverse flow, pipe burst, leakage, battery low
- Wide dynamic range, low starting flowrate
- Detects water leakage
- Unique straight-through sensor design offers no obstruction at all and very low pressure drop
- Large LCD, 9 digits display
- More than 10 years battery life
- Totally encapsulated, water-proof design
- Data Logger with 700 daily totals and 24 monthly totals
- AMR / AMI ready with optional encoder and wireless interfaces

DS-280WD-1605\_Rev.1



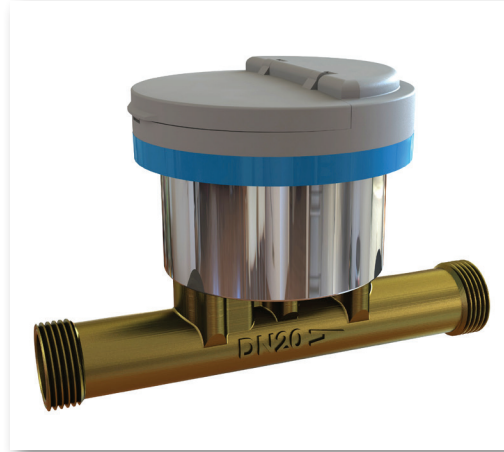
**Spire Metering Technology** LLC, 249 Cedar Hill Street, Marlborough, MA 01752, USA

**Tel** +1 978 263-7100 / 888 738-0188 (toll-free) **Fax** +1 978 418-9170 [sales@spiremt.com](mailto:sales@spiremt.com) [www.SpireMT.com](http://www.SpireMT.com)



# wPrime™ Series 280W-D

## AWWA ULTRASONIC WATER METER



The 280W-D complies with the applicable portion of the AWWA C700 standard (Currently, there is no AWWA standard for ultrasonic water meter yet and it may take a few years for the standard to come out.) It can be used for either new installations or retrofitting AWWA water meters. The performance of the 280W-D far exceeds that of a conventional mechanical water meter. It provides accurate measurement over a wide flowrate span, and the accuracy does not degrade over time.

A member of the wPrime™ Series, the 280W-D AWWA Ultrasonic Water Meter is specially designed for domestic water metering applications where conventional water meters fail due to harsh environment, solids in water, performance degradation, magnetic vandalization or incapable of leakage detection.

The 280W-D comes with a large LCD which can display the flow total, leakage alarm, reverse flow, and more. The meter also has a remote readout which could be configured as M-Bus, Encoder or Modbus.

The 280W-D is a solid state water meter. It offers the most advanced water flow measurement by using state-of-the-art ultrasonic technology. The flow sensor is made from high grade lead free brass and does not have any moving parts to wear and tear. This provides a robust and accurate meter with no maintenance required.

Spire Metering's 280W-D AWWA Ultrasonic Water Meter stands out among its competition due to its robust performance, patented sensor design, tamper-proof feature, multiple AMR / AMI options and capability to detect very low flowrate. It works reliably even when the water has particles and the environment is harsh. Residential installations can profit from the advantage of the wear-free water flow measurement, namely, precision, operation security and long service life.

Unlike the other ultrasonic water meters on the market which have reflectors and reflector support fixture in the middle of the flow tube, the 280W-D uses a unique straight-through sensor design. It does not have any part on the flow path, thus, cause no obstruction to the flow and offers very low pressure drop.





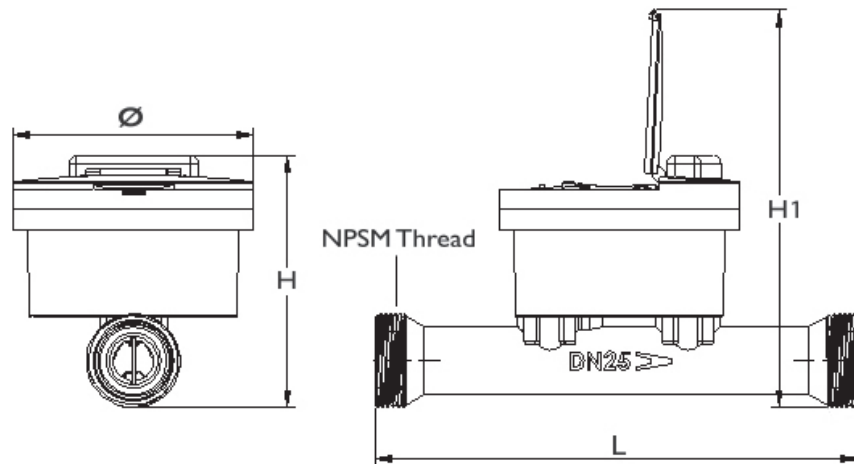
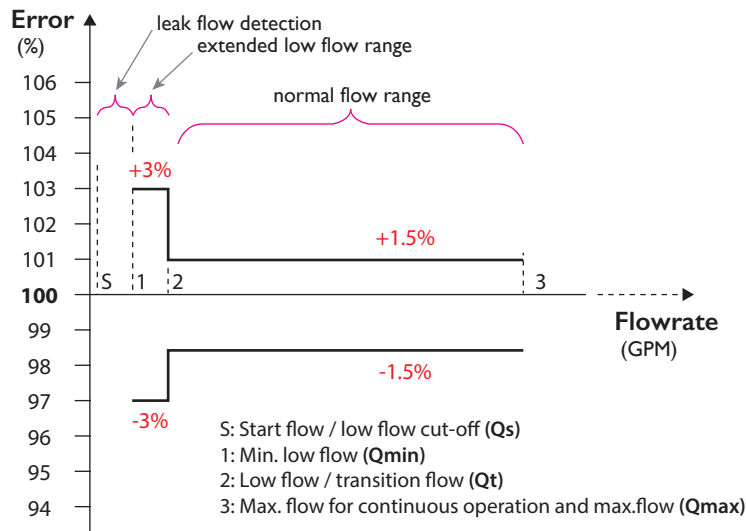
# wPrime™ Series 280W-D

## AWWA ULTRASONIC WATER METER

### Technical Specifications

#### Flow range and Pressure Loss Chart

Size	Qmax		Qt	Qmin	Qs	Pressure Drop	Length L	Spud Thread (NPSM)	Ø	Height H	Height H1	Weight
	GPM	m <sup>3</sup> /hr										
5/8" x 3/4"	25	5.67	0.13	0.08	0.01	<28 @15GPM	7 1/2	1	4.25	11	11	11
3/4"	32	7.26	0.18	0.11	0.02	<21 @15GPM	9	1	4.25	11	11	11
1"	55	12.47	0.29	0.18	0.02	<14 @25GPM	10 3/4	1 1/4	4.25	11	11	11
1 1/2"	100	22.68	0.64	0.40	0.04	<30 @100GPM	12 5/8	2	4.25	11	11	11





# wPrime™ Series 280W-D

## AWWA ULTRASONIC WATER METER

### AMR / AMI Interface

Encoder: standard encoder protocol
MBus: EN13757 protocol
RS485 / Modbus: Standard RS 485 interface supporting Modbus protocol
Wireless: RF or GPRS. Please contact us for details

### Register

Type: Straight reading electronic LCD. Digits are 0.31" (8mm) high
Display Items: Consumption (up to 9 digits), flow rate and alarms
Capacity: 1,000,000.00 Gallons for 5/8 x 3/4", 10,000,000.00 Gallons for 3/4" and 1", 100,000,000.0 Gallons for 1 1/2"
Display Resolution: 0.01 Gallons for 5/8 x 3/4", 3/4" and 1", 0.1 Gallons for 1 1/2"
Top lid to protect LCD from directly sun exposure

### Pressure Rating

Operating Pressure: 175psi (12bar)
Maximum Safety Pressure: 232psi (16bar)

### Temperature Rating

Storage Temperature: -40°F~140°F
Fluid Temperature Range: 34°F~140°F

### Protection Rating

IP68 water-proof. Meter is fully potted
Humidity: 0~100%

### Materials

Flow-cell Body: Lead-free brass, comply with NSF 61, Annex G
Sensing Element: PZT ultrasonic sensors
Register Housing and Lid: 304 stainless steel and PC plastic

### Battery

Lithium battery, 3.6V for more than 10 year lifetime
Potted separately from the core module
Easy to replace



# wPrime™ Series 280W-D

## AWWA ULTRASONIC WATER METER

### Order Specifications

#### Base Unit

280W-D-

#### Meter Size

5/8" X 3/4"	1
3/4"	2
1"	3
1 1/2"	4

#### Attention



You must also order one output interface module from the Required Components table to make a complete system.

#### Required Components (Choose One)

Output Interface Module	Model No.
M-Bus Module (wired)	280WA-MB
RS485 / Modbus Module	280WA-485MOD
Encoder Module for English Unit	280WA-E-INxx
RF Module with Battery	Contact us
RS485 Module (for 485-BACnet / MSTP Adapter only)	280WA-485

#### Optional Components

External Adapter	Model No.
485-BACnet / MSTP Adapter (RS485 Module is required)	280WA-BACTP485



# wPrime™ Series 280W-D

AWWA ULTRASONIC WATER METER

## Memo

---

## About Spire Metering Technology

---

Spire Metering is a global leader in flow and energy management solutions. Through continuous innovation, we transform complex ultrasonic technology into affordable, reliable solutions for accurate flow and energy measurement. Spire Metering offers water, heat, electricity and gas meters as well as AMR/AMI solutions. To find out how we can help today, please tell us about your application.