

Meter Spec for 5/8" x 3/4" and 1" Sensus iPERL Water Meters:

Type:

Solid state, battery operated electromagnetic flow measurement system with a hermetically sealed, glass covered, electronic register with a programmable 9-digit display.

Conformance to Standards:

Must conform to American Water Works Standard C-700 and C-715-18 as most recently revised with respect to accuracy and pressure loss requirements, or other American Water Works Standard. Must be compliant with NSF/ANSI Standard 61 Annex F and G.

Register:

The register must be an electronic device encapsulated in glass with 9 programmable digits utilizing a liquid crystal display (LCD). It will have indicators for flow direction, empty pipe, battery life and unit of measurement. The register must be hermetically sealed with a heat tempered glass cover and be tamper resistant. The register shall not be removable from the measuring sensor. The register shall utilize a magnetic coupling technology to connect to a touch read, radio read or fixed base meter reading system in either an inside or pit set installation.

Measuring Element:

The measuring element shall be made of a noncorrosive, lead-free glass fiber reinforced, composite alloy material. A battery powered magnetic flow sensor utilizing silver/silver chloride electrodes will be utilized to measure the velocity of the water which is linearly proportional to the volume. The measuring element will have no moving parts and will be specific for each size. The flow tube will have a clear waterway with no obstructions.

External Housing:

The register and measuring element will be an integrated unit housed within a thermal plastic external casing. This integrated unit will not be removable from the external housing. The system shall have the size and direction of water flow through the system imprinted on the external housing.

Pressure Capability:

System shall operate up to a working pressure of 200 pounds per square inch (psi) for all 5/8" x 3/4" meters and 175 pounds per square inch (psi) for all 1" meters, without leakage or damage to any parts. The accuracy shall not be affected by a variation of pressure up to the above-mentioned psi's.

Performance Warranties:

All meters must maintain their accuracy for a 20 year period. The battery must be guaranteed for 20 years with full replacement for a minimum of 15 years and prorated thereafter. All bidders are

required to submit their most current nationally published warranty statements for water meter maincases, registers and measuring chambers.

Technology:

All meters must have integrated two-way communications for Automated Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) technologies. Meters must have monitoring alarms such as leak detection, reverse flow, empty pipe and magnetic tampering.

Operating Characteristics:

Meter Size	Low Flow (95% Min.)	Operating Range (98.5%-101.5%)	Pressure Loss (Not to Exceed)
5/8" x 3/4"	0.03 gpm	0.18 - 35 gpm	2 psi at 15 gpm
1"	0.11 gpm	0.4 – 55 gpm	2 psi at 25 gpm