

# iPERL™ Water Management System

## Electromagnetic Flow Measurement System

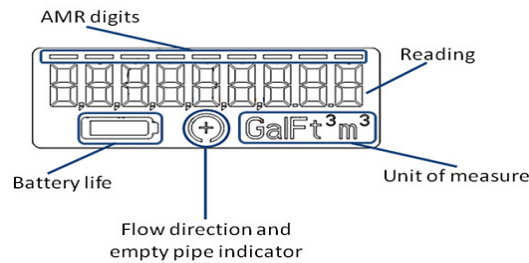
## Description

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

With no moving parts, the Sensus iPERL water management system is based on innovative electromagnetic flow measurement technology. The iPERL system family has an operating range of 0.03 gpm (0.007 m<sup>3</sup>/hr) @ 95% minimum to 55 gpm (12.5 m<sup>3</sup>/hr) @ 100% ± 1.5% registration of actual throughput.



Electronic Register LCD Display



## Features

### CONFORMANCE TO STANDARDS

The iPERL system far exceeds the most recent revision of ANSI/AWWA Standard C-700 and C-710 for accuracy and pressure loss requirements. All iPERL systems are NSF/ANSI Standard 61 Annex F and G compliant and tested to AWWA standards.

### PERFORMANCE

The patented measurement technology of the iPERL system allows enhanced accuracy ranges at both low and high flows and perpetual accuracy over the life of the product over the full measurement range when installed horizontal, vertical or diagonal.

### CONSTRUCTION

The iPERL system is an integrated unit that incorporates an electronic register and measuring device encased in an external housing. The measuring device is comprised of a composite alloy flowtube with externally-threaded spud

ends. Embedded in the flowtube are magnetic flow sensors. The all electronic, programmable register is hermetically sealed with a tempered glass cover. The iPERL system has a 20 year life cycle, along with a 20 year battery life guarantee.

### ELECTRONIC REGISTER

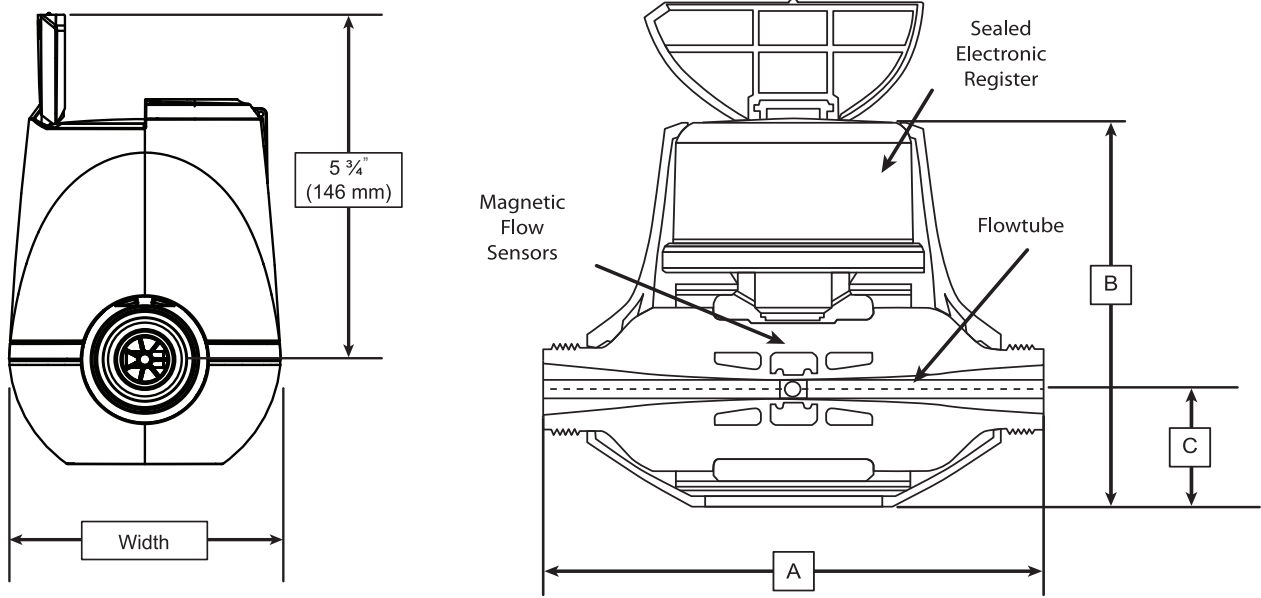
The high resolution 9-digit hermetically sealed electronic register with LCD display was designed to eliminate dirt, lens fogging issues and moisture contamination in pit settings with built in tamper protection. The tempered glass register cover displays readings with the AMR digits highlighted. Direction of flow and units of measure are also easily readable on the register display. The iPERL register features; AMR resolution and unit of measure that are fully programmable, integral customer data logging compatible with UniPro software tools. The large, easy to read display also includes battery life, empty pipe and forward/reverse flow indicators.

### TAMPERPROOF FEATURES

The integrated construction of the iPERL system prevents removal of the register to obtain free water. The magnetic tamper and low field alarms will both indicate any attempt to tamper with the magnetic field of the iPERL system.

### AMR / AMI SYSTEMS

iPERL systems are compatible with current Sensus AMR/AMI systems.



**DIMENSIONS AND NET WEIGHTS**

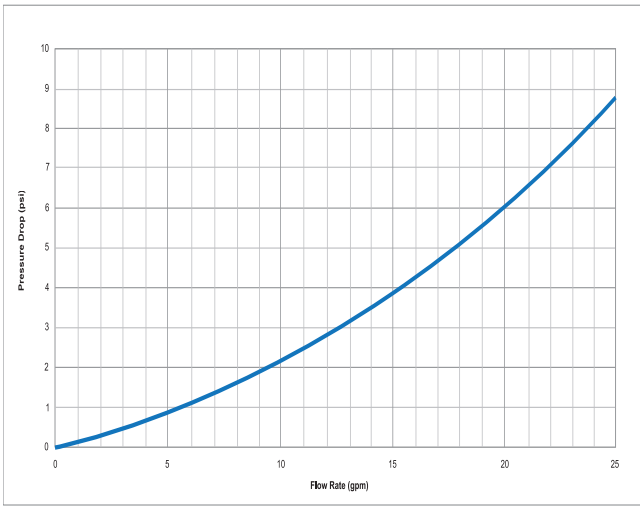
Size	A (lay length)	B	C	Spud Ends	NPSM Thread Size	Width	Net Weight
5/8" (DN 15 mm)	7-1/2" (190 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	5/8" (15 mm)	3/4" (19 mm)	4-1/2" (114 mm)	3.1 lb. (1.4 kg)
3/4"S (5/8" x 3/4") (DN 20 mm)	7-1/2" (190 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	3/4" (20 mm)	1" (25 mm)	4-1/2" (114 mm)	3.1 lb. (1.4 kg)
3/4" (DN 20 mm)	9" (229 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	3/4" (20 mm)	1" (25 mm)	4-1/2" (114 mm)	3.2 lb. (1.5 kg)
1" (DN 25 mm)	10-3/4" (273 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	1" (25 mm)	1-1/4" (32 mm)	4-1/2" (114 mm)	3.3 lb. (1.6 kg)

**SPECIFICATIONS**

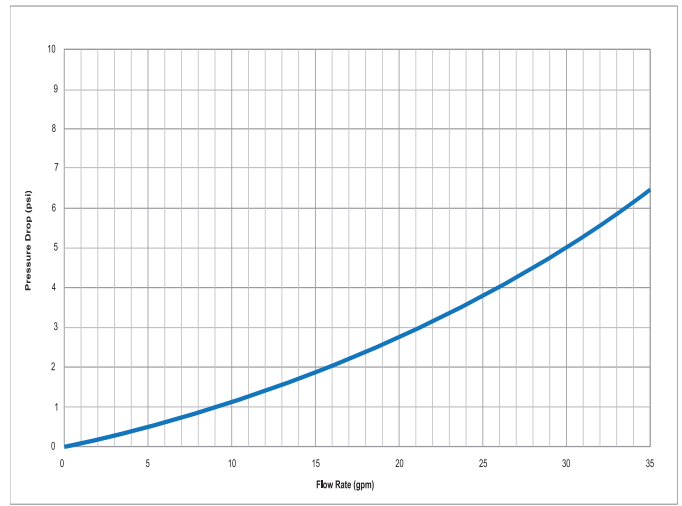
<b>SERVICE</b>	Measurement of cold water. Operating temperature range of 33 °C (0.56 °C) - 150 °F (65.6 °C)
<b>NORMAL OPERATING FLOW RANGE</b> (100%±1.5% of actual throughput)	5/8" (DN 15mm) size: 0.11 to 25 gpm (0.02 to 5.7 m³/hr) 3/4" (DN 20mm) size: 0.11 to 35 gpm (0.02 to 8.0 m³/hr) 1" (DN 25mm) size: 0.4 to 55 gpm (0.09 to 12.5 m³/hr)
<b>LOW FLOW REGISTRATION</b> (95% - 101.5%)	5/8" (DN 15mm) size: 0.03 gpm (0.007 m³/h) 3/4" (DN 20mm) size: 0.03 gpm (0.007 m³/h) 1" (DN 25mm) size: 0.11 gpm (0.025 m³/h)
<b>MAXIMUM PRESSURE LOSS</b>	5/8" (DN 15mm) size: 4 psi at 15 gpm (0.3 bar at 3.4 m³/h) 3/4" (DN 20mm) size: 2 psi at 15 gpm (0.1 bar at 3.4 m³/h) 1" (DN 25mm) size: 2 psi at 25 gpm (0.1 bar at 5.7 m³/h)
<b>MAXIMUM OPERATING PRESSURE</b>	200 psi (13.8 bar)
<b>MEASUREMENT TECHNOLOGY</b>	Solid state electromagnetic flow

<b>REGISTER</b>	Hermetically sealed, 9-digit programmable electronic register AMR/AMI compatible iPERL system register programmable using the UniPro programming package
<b>MATERIALS</b>	External housing – Thermal plastic Flowtube – Polyphenylene sulfide alloy Electrode – Silver/silver chloride Register cover – Tempered glass
<b>ALARM DEFAULTS</b>	Alarm Duration – 90 days Leak Duration – 24 hours Datalog Interval – 1 hour Alarm Mask – All alarms reported History Mask – All event types reported

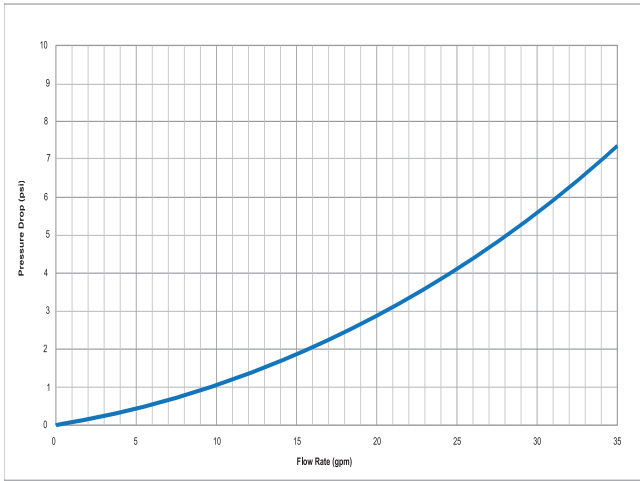
## HEADLOSS CURVES



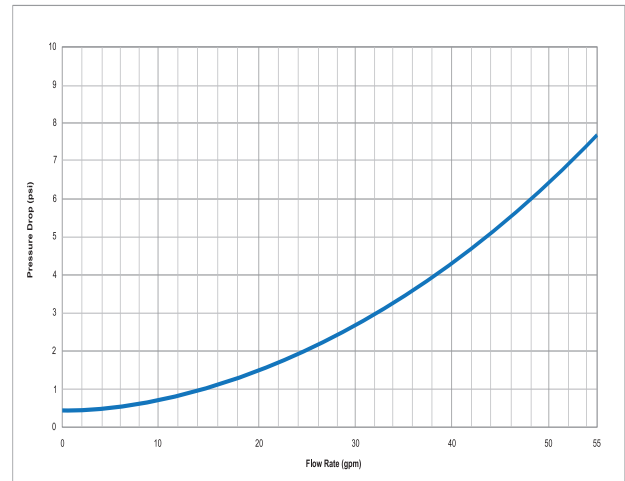
5/8" Headloss Curve



3/4" Short Headloss Curve



3/4" Headloss Curve



1" Headloss Curve

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