

## Economical Ultrasonic Transit-Time Flow Meter for Water Applications

### Features

- Accuracy +/- 1.0% of reading (from 1.5 to 13 fps; 0.5 to 4.0 mps)
- Repeatability +/- 0.3% of reading
- Wide operating temperature range 32°F to 140F (0°C to 60°C)
- Wide bi-directional Flow range of 0 to 40 ft/s (0 to 12 m/s)
- One meter for a wide range of pipe sizes from 1" to 48" (25mm to 1200mm)
- Configurable pulse and relay output
- RS 232 (RS 485 optional)
- 10-24 VAC or 10-36 VDC, 1A
- Daily, monthly and yearly totalized flow
- 16 (4 x 4) keyboard with 20 x 2 line display
- Clamp-on encapsulated IP 68 sensors require no pipe cutting, no plant shut-down, are a hygienic measurement leading to lower installation and labor costs
- Daily, monthly and yearly totalized flow
- Lightweight (0.7 kg; 1.5 lb) PC/ABS IP 65 transmitter
- Measurement is independent of fluid conductivity meaning a wider applicability compared to magnetic meters
- Programmable frequency output and VAC power emulates turbine/propeller meters

# Innova-Sonic® 203



### Description

**S**ierra's new Innova-Sonic® 203 ultrasonic flow meter delivers highly accurate and repeatable flow measurement for water at a significantly reduced cost. Incorporating the core technologies of Sierra's flagship 205i, the design of the 203 universal transit-time flow meter is focused on those features that optimize the measurement of water flows in HVAC, irrigation, and other water applications.

Ideal for pipes up to 48" (1200 mm) in diameter, the 203 promises accuracy to +/-1.0% of reading, repeatability of +/-0.3% of reading and a temperature range of 32°F to 140°F (0°C to 60°C).

The 203 offers low power consumption and high reliability at a very competitive price. An easy to read display and clear, user-friendly menu selections make using the instrument simple and convenient. It can be configured via a 4x4 keypad without additional programming devices and features a 20 x 2 digit alpha-numeric display.

The 203 features a programmable frequency output, a relay output and a programmable current loop output. RS 232 and MODBUS RTU are standard, while RS 485 is optional.

The Innova-Sonic® 203 is packaged in a lightweight polycarbonate IP65 housing and includes clamp-on encapsulated IP 68 sensors that are easy to install and require no pipe cutting, thereby reducing installation and labor costs.



[www.sierrainstruments.com](http://www.sierrainstruments.com)

## Performance Specifications

### Flow Range:

0 to +/- 40 ft/s (0 to +/- 12 m/s)

### Accuracy:

+/- 1.0% of reading (from 0.5 to 4.0 mps; 1.5 to 13 fps)

### Repeatability:

+/- 0.3% of reading

### Pipe Size:

1" to 48" (25mm to 1200mm)

## Operating Specifications

### Output:

Analog: 0/4 to 20mA (max load 750  $\Omega$ )  
 Pulse output: 0 to 9999Hz, OCT, (min. and max. frequency is adjustable)  
 Relay output: SPST, max 1 Hz, (0.3 A@ 125VAC or 1A @ 30VDC)  
 Digital output: RS 232 (RS 485 optional)

**Power Supply:** 10 to 24 VAC, 1A and 10 to 36 VDC

**Keypad:** 16 (4x4) key with push buttons

**Display:** 40 character, 2 line (20x2) lattice alphanumeric, backlit LCD

**Temperature:** Transmitter: 14°F to 122°F (-10°C to 50°C)

Clamp-on transducer: 32°F to 140°F (0°C to 60°C)

**Humidity:** Up to 99% RH, (non-condensing).

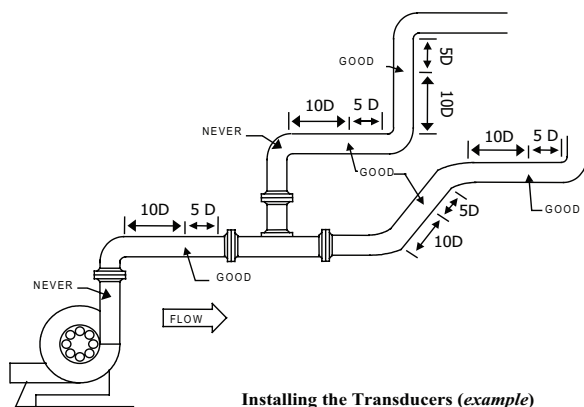
## Physical Specifications

**Transmitter:** IP 65 (PC/ABS)

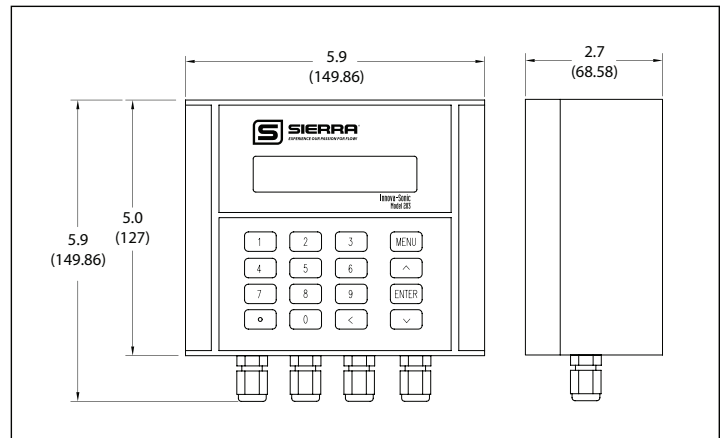
**Transducer:** Encapsulated design IP 68 standard/maximum cable length: 30m/100ft

**Weight Transmitter:** Approximately 1.5 lb. (.7kg) Transducer: approximately 0.9lb. (0.4kg)

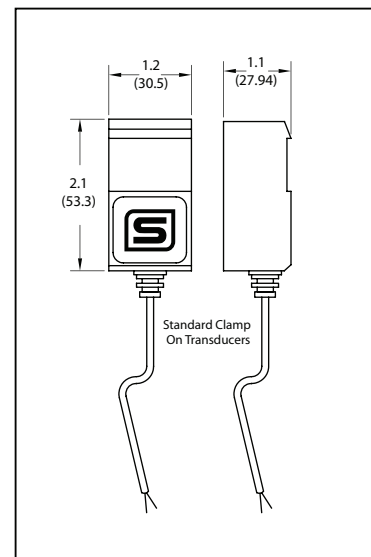
## Suitable Locations



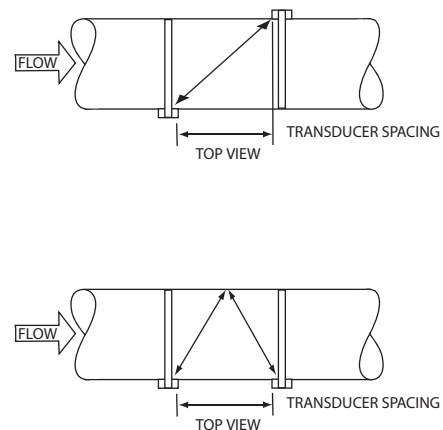
## Transmitter Dimensional Specifications



## Clamp-on Transducer Dimensional Specifications



## Transducer Spacing Requirements



## Ordering the Model 203

203

### PARENT MODEL NUMBER

#### 203 INNOVA-SONIC® ECONOMICAL DIGITAL CORRELATION TRANSIT-TIME FLOW METER

Economical digital correlation transit time flow meter; flow range:  $\pm 0$  to 40 ft/s ( $\pm 0$  to 12 m/s); accuracy 1.0% of reading over  $\pm 1.5$  to 13 ft/s ( $\pm 0.5$  to 4 m/s); Pipe Range 1" to 48" (25 mm to 1200 mm) Pushbutton data entry (4x4) and integral display. 10 to 24 VAC and 10 to 36 VDC at 1A; IP 65, ABS/PC enclosure; 4-20 mA DC output; OCT 0 to 10 kHz. Relay, RS 232 (RS 485 optional) Operating temp 0°C to 60°C (32°F to 140°F). Modbus RTU

### DIGITAL OUTPUTS

- 2 OCT, Relay, RS 485
- 3 OCT, Relay, RS 232, 4-20 mA

### TRANSDUCER

- CP 30ft. (9m) standard cable length clamp on transducers 0 to 60C)
- CP (xxx) Up to 100 ft (30 m)

### OPTION: NIST TRACEABLE

**NIST** Point Calibration Certification traceable to NIST. Add two weeks to standard delivery.

Note: Buy the 203-3-CP online for immediate delivery at [sierrainstruments.com/shop](http://sierrainstruments.com/shop)