Ultrasonic Transit-Time Flowmeter

Model 205 Innova-Sonic™

Features

- **Accuracy better than 0.5% of reading**

- **Wide operating temperature range -40F to +212F (-40C to 100C)**

- **One meter for a wide range of pipe sizes 1-200" (25mm-5000mm)**

- **Clamp-on sensors are simple to install, leading to lower installation and labor costs**

- **Clamp-on sensors mean no pipe cutting or process interruption and no plant shut-down**

- **Hygienic measurement, no risk of contamination, suitable for ultra clean liquids**

- **Wide bi-directional Flow range of 0 to 40 fps**

- **Daily, monthly and yearly totalized flow**

- **Internally configured batch controller makes batch control convenient**

- **Measurement is independent of fluid conductivity meaning a wider applicability than magnetic meters**

Description

Our Innova-Sonic™ ultrasonic flowmeter is a state-of-the-art universal transit-time flowmeter incorporating the latest developments in digital signal processing. Sophisticated electronics coupled with powerful ultrasonic transducers deliver highly accurate flow measurement for liquids in full pipes. While principally designed for clean liquid applications, the instrument is tolerant of liquids with the small quantity of air bubbles or suspended solids common in most industrial applications.

Innova-Sonic™ offers low power consumption, high reliability, and outstanding applicability at an economical price. An easy to read display and clear, user-friendly menu selections make using the instrument simple and convenient. The instrument can be configured via keypad without any additional programming devices, is packaged in a die cast NEMA 4X (IP65) housing, and is available in your choice of non-invasive clamp-on or insertion transducer configurations.

Innova-Sonic™ features a self-contained 4-20 mA current loop signal output for instantaneous flow, as well as two independent temperature inputs for thermal energy monitoring. The instrument also features a 7 digit alpha-numeric display, parallel operation of positive, negative and net flow totalizers (with user-selectable scale factors) and configurable pulse and frequency outputs (transmitted via relay and open collector) for totalized flow. SD data logging capabilities is included and energy monitoring is fully supported at no additional charge.

For information online: www.sierrainstruments.com

Performance Specifications

Flow Range:
0 to ±40 ft/s (0 to ±12 m/s)

Accuracy:
±0.5% of reading

Repeatability: ±1.0% of reading (for 1.5 to 40 ft/s or −1.5 to -40 ft/s)

Linearity: ±1.0%

Pipe Size: 1 in to 200 in (25mm to 5000mm)

Operating Specifications

Output:
Analog:	0/4 to 20mA (max load 750Ω)
Pulse output:	0 to 9999Hz, OCT, (min. and max. frequency is adjustable)
Relay output:	SPST, max 1Hz, (IA@125VAC or 2A @ 30VDC) RS232C

Power Supply: 90 to 245 VAC, 48 to 63Hz.
Or 10 to 36 VDC (both are standard)

Keypad: 16 (4×4) key with tactile action

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

Temperature: Transmitter: -40F to 140F (-40C to 60C)
Transducer: -40F to 212F standard (-40C to 100C)

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

Physical Specifications

Transmitter: NEMA 4X (IP65), Die-cast aluminum

Transducer: Encapsulated design Standard/maximum cable length:
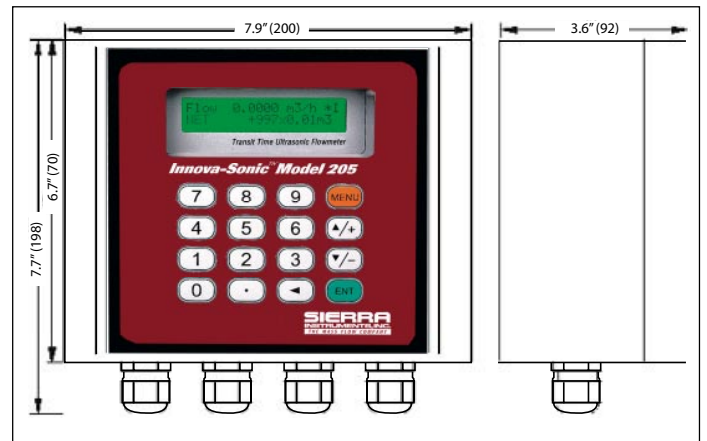30ft/1000ft (9m/305m)

Weight Transmitter: Approximately 4.7 lb (2.15kg)
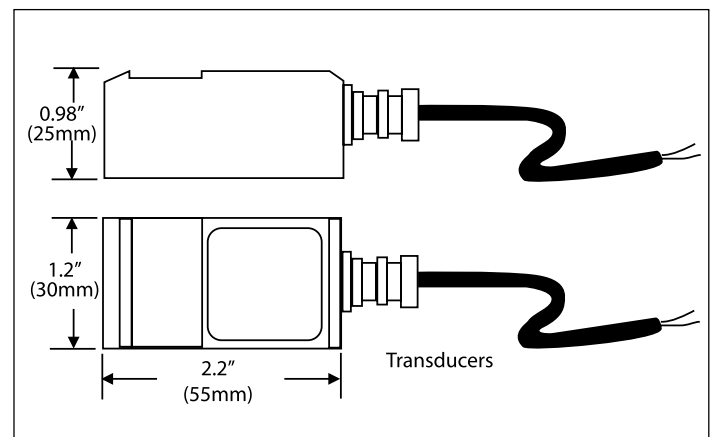Transducer: approximately 2.0 lb (0.9kg) (standard)

Transmitter Dimensional Specifications

Transducer Dimensional Specifications
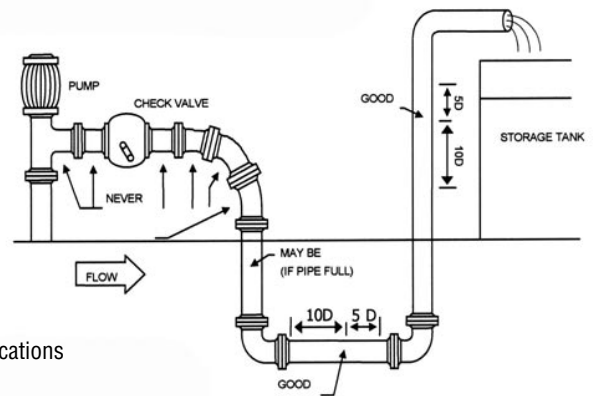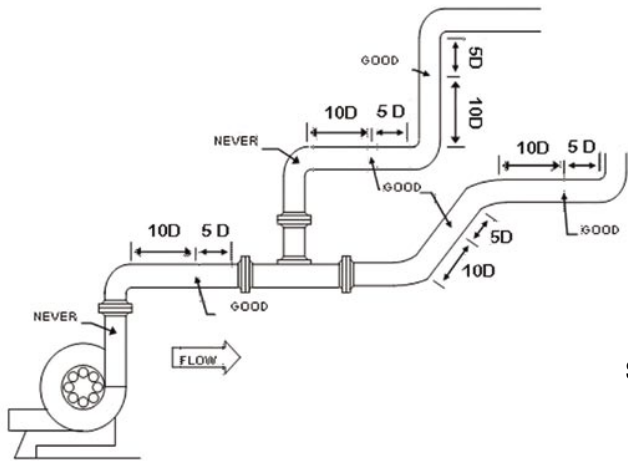

Typical Clamp On Installation

Typical Insertion Installation

Suitable Locations

Suitable locations

Transducer Spacing Requirements

Z Method

V Method
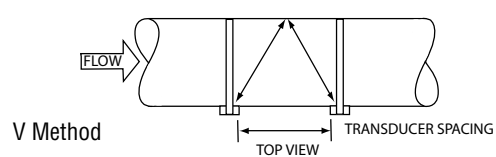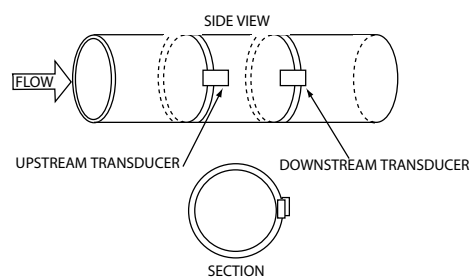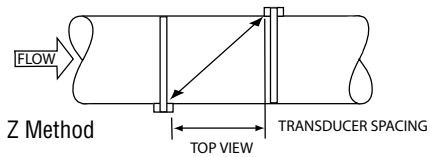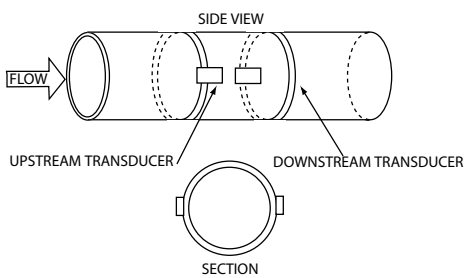
Insertion Transducer

DIMENSIONAL SPECIFICATIONS-INSERTION SENSOR			
No.	Parts	No.	Parts
1	Cable	7	Set Screw
2	End Connector	8	O-Ring
3	O-Ring	9	Nut
4	Alignment Handle	10	Ball Valve
5	Locking Sleeve	11	Monting Collar
6	Locking Collar	12	Transducer Housing

205

PARENT MODEL NUMBER
205 WM   Wall Mount

POWER SUPPLY
1   90-250 VAC, 48-63 Hz and 10-36 VDC (Both are available)

DIGITAL OUTPUTS
1   RS 232--also 0/4-20mA DC, OCT (Open Collector Transistor), Relay (SPST), Frequency.

ENCLOSURE
1   NEMA 4X (IP 65). Die-cast aluminum machined enclosure.

FUNCTION OPTION
1   Keyboard Programming (Standard)

TRANSDUCER
S   Clamp on transducer, Operating temperature: -40C-100C (-40F-212F)
W   Insertion transducer, Operating temperature: -40C-100C (-40F-212F)
Note: Insertion transducers include ball valves (1.5"), installation seat for ball valve, mounting kit (includes 4 screws and four plastic bushings) and seal kits

CABLE LENGTH
30   30ft (9m) Standard cable length
50   50ft (15m) Standard cable length
100   100ft (30m) Standard cable length
150   150ft (45m) Standard cable length
200   200ft (60m) Standard cable length
300   300ft (90m) Standard cable length

Note: S,W transducers come with 30 ft (9m) of cable standard. Prices above represent additional charge for extra length. (cable = $2.00 per foot)