LONGRUN

ULTRASONIC FIOWMETER SAMPLE BOOK

TYPE:LRF-3300H

Concentrating on Flow Measurement

LONGRUN
Industrial Instrument
Co., Ltd

LRF-3300H Ultrasonic Flowmeter

Introduction

LRF-3300H is an ultrasonic flow meter based on transit-time schematic design.

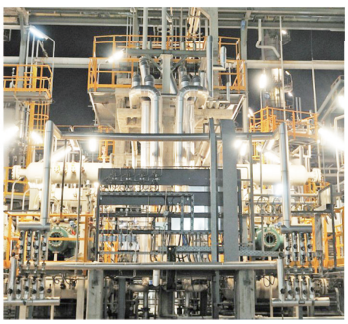
LRF-3300H Designed using the digital technology and low-voltage integrated circuit,it has broadband pulse transmission.While principally designed for full-pipe and clean liquid applications.

LRF-3300H is tolerant of liquids with small amounts of air bubbles or suspended solids found in most industrial environments.Integration design and high integration reduce the link between PCB boards,more reliable.

LRF-3300H have friendly menu selections make flow meter simple and convenient to use.It can easy to check daily,monthly and yearly totalizer flow.Parallel operation of positive,negative and net flow totalizesr.

Application

Widely used in chemicals, Irrigation, industrial process water, water supply, water treatment, boiler, etc.



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LRF-3300H Ultrasonic Flowmeter

Specification

Performance specifications	
Flow range	0～±40 ft/s (0 ～±12 m/s)
Accuracy	±0.5% of measured value (±0.01m/s~12m/s)
Repeatability	0.15%
Linearity	±0.5%
Pipe size	1 inch to 200 inches (25mm to 5000mm)
Function specifications	
Outputs	Analog output:4 ～20mA (max load 750O)
Power supply	Built-in lithium battery (16 hour)
Keypad	20 key with tactile action
Display	3.5" TFT LCD 480*320
Temperature	Transmitter: -40°C~60°C (-40°F~140°F) Transducer: -40°C~80°C (-40°F~176°F) (standard)
Humidity	UP to 95% RH, non-condensing
Physical specifications	
Transmitter	Die-cast aluminum
Transducer	Cable Length (Std.): 16 ft (5 m) Extension length: 66ft (20m), per 16ft extension
Weight	Transmitter: approximately 1.85 lb (0.84kg) Transducer: approximately 2.21lb (1.29kg) (standard)

Installation diagram

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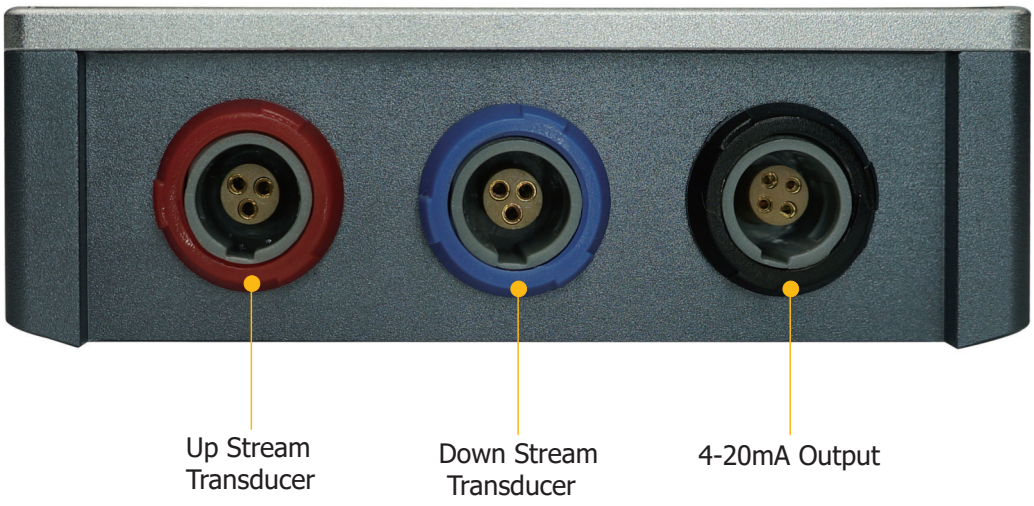
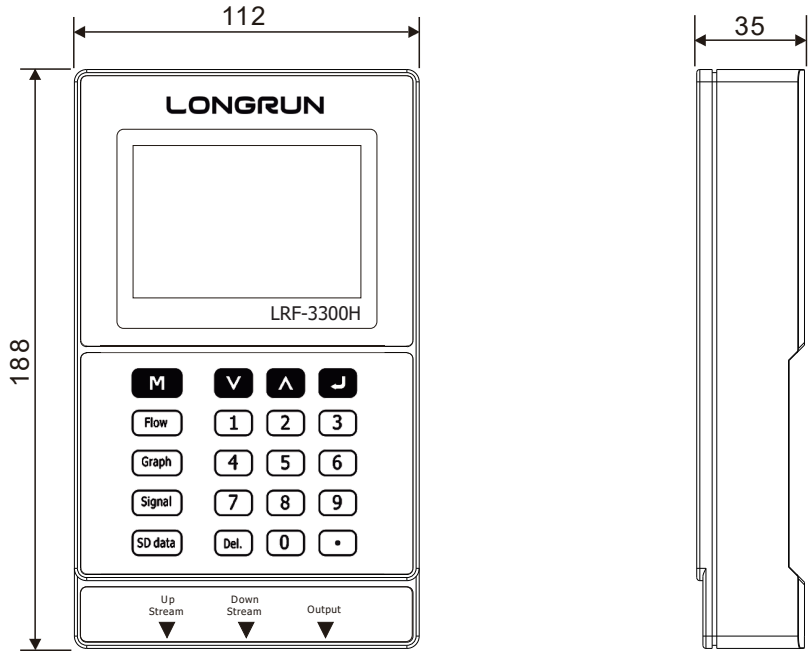
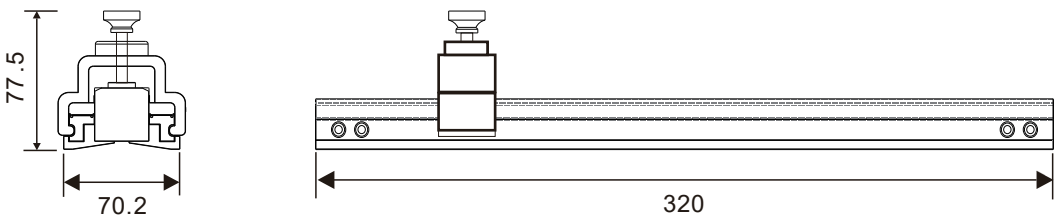
Wiring diagram



Dimensions



Transmitter dimensions(mm)



Rack Size(mm)

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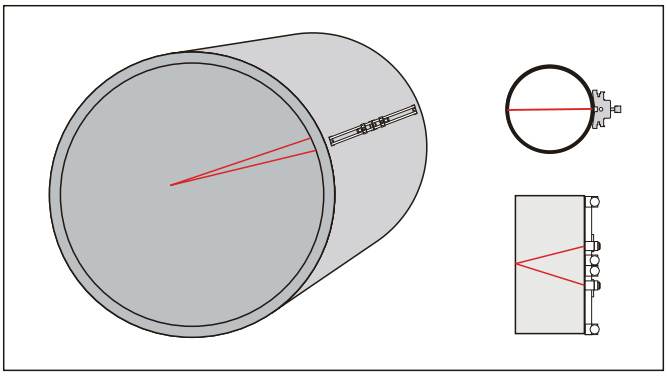
Installation methods



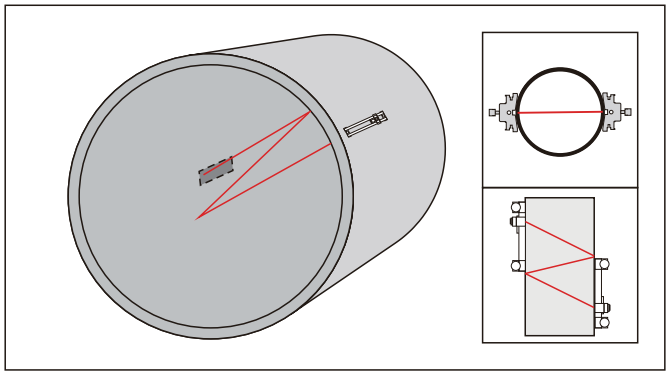
V Method

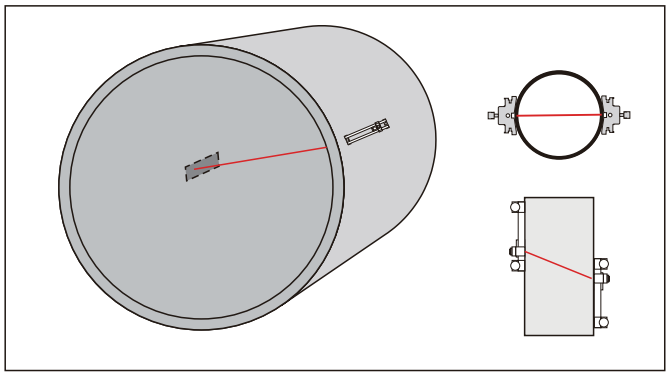
The V method is considered as the standard method. It usually gives a more accurate reading and is used on pipe diameters ranging from 25mm to 400mm (1"~16") approximately. Also, it is convenient to use, but still requires proper installation of the transducer, contact on the pipe at the pipe's centerline and equal spacing on either side of the centerline.

N Method

With the N method,the sound waves traverse the fluid three and bounce twice times off the pipe walls. It is suitable for small pipe diameter measurement.

The measurement accuracy can be improved by extending the transit distance with the N method (uncommonly used).





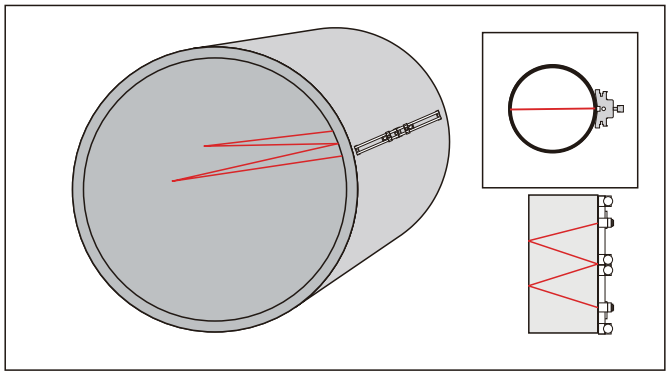
Z Method

The signal transmitted in a Z method installation has less attenuation than a signal transmitted with the V method.This is because the Z method utilizes a directly transmitted(rather than reflected)signal which transverses the liquid only once.

The Z method is able to measure on pipe diameters ranging from 100mm to 5000mm(4" ~200")

W Method

As with the N method,the measurement accuracy can also be improved by extending the transit distance with the W method.The sound wave traverses the fluid four times and bounces three times off the pipe walls.It is suitable for very small pipe (diameters less than 50mm,2")



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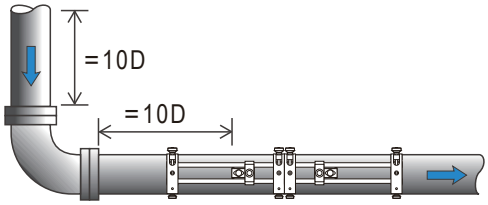
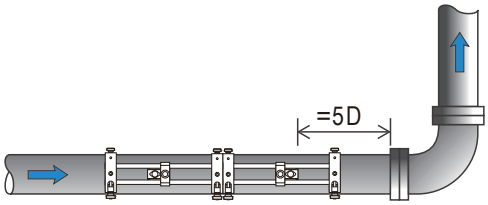
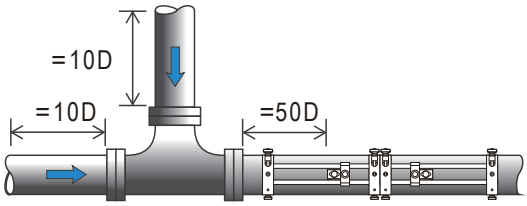
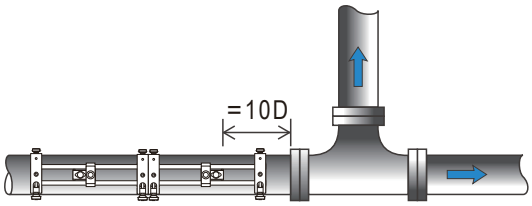
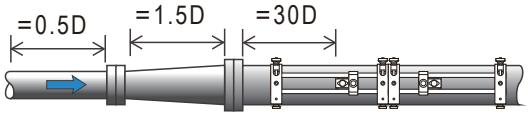
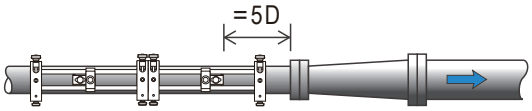
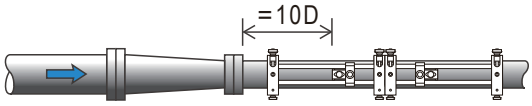
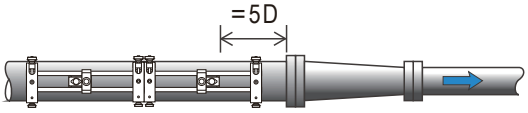
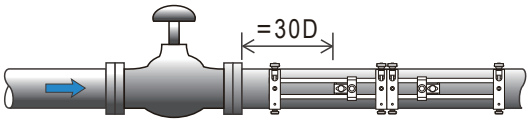
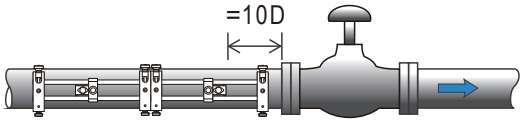
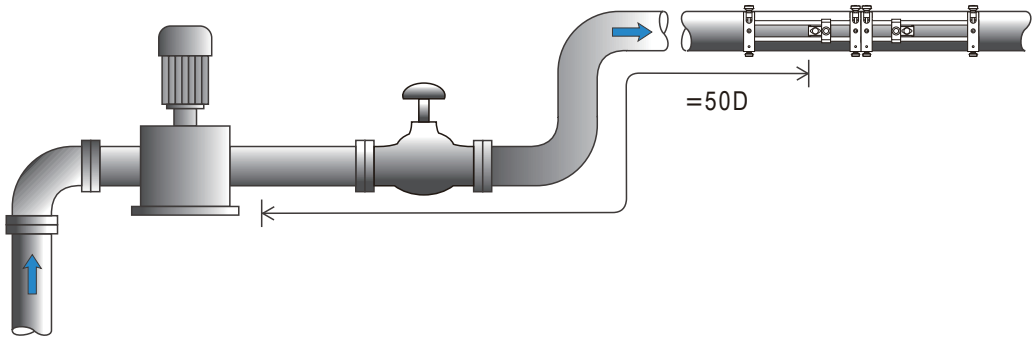
Installation site selection

Choose a section of pipe,which is always full of liquid,such as a vertical pipe with flow in the upward direction or a full horizontal pipe.Ensure that the pipe surface temperature at the measuring point iswithin the transducer temperature limits.

Consider the inside condition of the pipe carefully.If possible,select a section of pipe where theinside is free excessive corrosion or scaling.Choose a section of sound conducting pipe.

Examples acceptable measurement site selection is illustrated on the figure on the below.

Site	Installation point front straight section	Straight pipe section after installation point
90° bend		
Tee		
Diffuser		
Reduce		
Valve		
Pump		

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LRF-3300H Ultrasonic Flowmeter

Ordering information

Code	Description
LRF-3300H	Portable Ultrasonic Flow meter Installation method: Portable Flow range: 0~±40 ft/s (0~±12 m/s) Accuracy: ±0.5% of measured value (±0.01m/s~12m/s) Repeatability: 0.15% Linearity: ±0.5% Pipe size: 1 inch to 200 inches (25 mm to 5000mm) Keypad: 20 key with tactile action Display: 3.5" TFT LCD 480*320 Power supply: Built-in lithium battery (16 hour) Transmitter enclosure: IP54, die-cast aluminum machined enclosure Output: 4~20mA
Code	**Input and output**
1	4-20mA
Code	**Transmitter enclosure area classification**
1	IP54, die-cast aluminum machined enclosure
2	Customer specific requirements
Code	**Type of transducers**
CP8	Rack transducer. Operating temperature: -40°F~176°F (-40°C~80°C)
Code	**Transducer cable length**
016	Cable length 16.5 feet (5m)
xxx	Extended length, up to 66 feet (20m), per 16 feet (5m) is a lengthen unit

Product Component

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