LONGRUN

ULTRASONIC FLOWMETER SAMPLE BOOK

TYPE:LRF-3300S

Concentrating on Flow Measurement

LONGRUN
Industrial Instrument
Co., Ltd

LRF-3300S Dual Channel Ultrasonic Flowmeter

Introduction

LRF-3300S is a premier ultrasonic flowmeter for flexibility and permanent installation. The dual-channel design allows the user to install two pairs of transducers on a single pipe for locations whichcould make the measurement high accuracy (+/- 0.5%) and more stable performance.
LRF-3300S providing the user with a comprehensive specification and a list of configuration options. The practical modular design and the wide variety of different transducer types available ensure this instrument is suitable for everything from simple water flow measurements to energy flow monitoring and automated process control.

Features

- Dual flow monitoring
- Process outputs including current, pulse, relay
- Communication options RS 485 (Modbus) and HART* compatible output
- 16G data logger and software for sampling and data transfer
- Optional heat/ cool (energy) measurement functionality

Type

Clamp on type

Insertion type

24 hours service: +86-186-5435-6933 Tel: +86-543-3382666 Fax: +86-543-3615999
E-mail: info@ultrasonicscn.com skype: Longruncn Website: www.longrun-flowmeter.com LONGRUN

LRF-3300S Dual Channel Ultrasonic Flowmeter

Specification

Performance	
Flow range	±0.09ft/s ~ ±40ft/s (±0.03m/s ~ ±12m/s)
Accuracy	±0.5% of reading (for ±1.5ft/s~±40ft/s)
Repeatability	0.15% of measured value
Linearity	±0.5%
Pipe size	1"to 200" (25mm to 5000mm). Pipe size under 1" is an option
Function	
Outputs	Analog output: 4~20mA, max load 750Ω. Pulse output: 0~9999Hz, OCT, (min. and max. frequency is adjustable) Relay output: SPST, max 1Hz,(1A@125VAC or 2A@30VDC)
Communication	RS485，HART*(option)
Memory	TF card (16G)
Power supply	90 to 245 VAC, 48 to 63 Hz. Or 10 to 36VDC
Display	240*128 back lit LCD
Temperature	Transmitter: -40℉~140℉(-40℃~60℃) Transducer:-40℉~266℉(-40℃~130℃)
Humidity	Up to 99% RH,non-condensing
Physical	
Transmitter	IP65
Transducer	IP68 Encapsulated design Double-shielded transducer cable Standard/maximum cable length:30ft/900ft(9m/274m)

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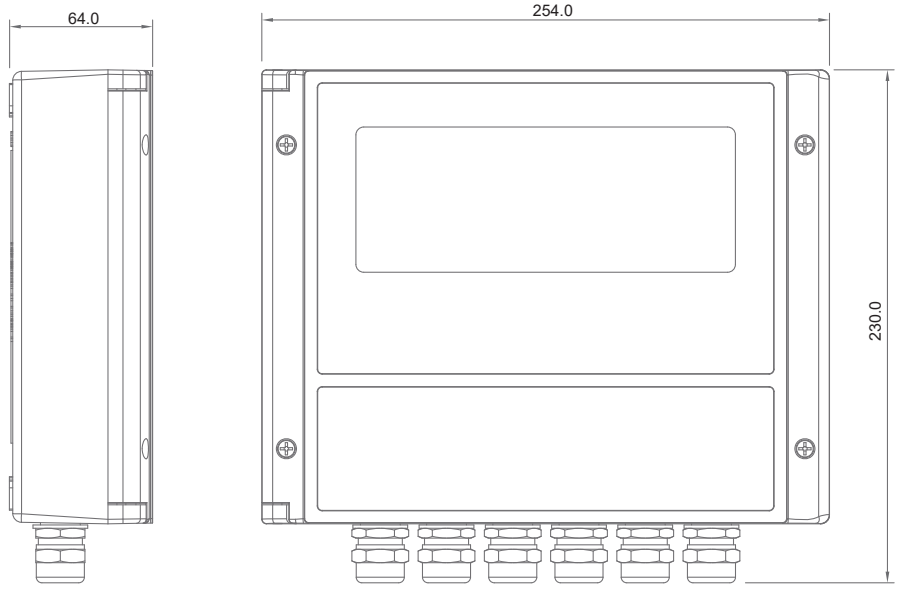
Product size

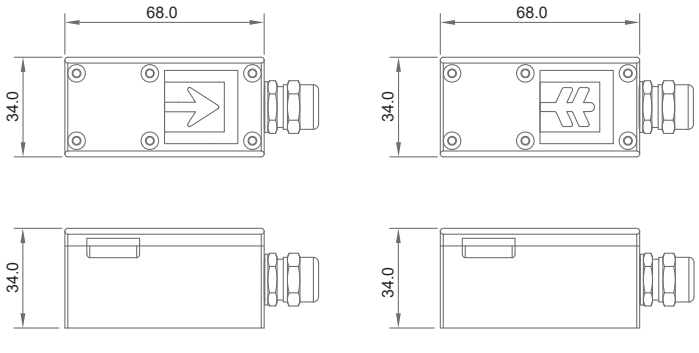
Transmitter size

Units: mm

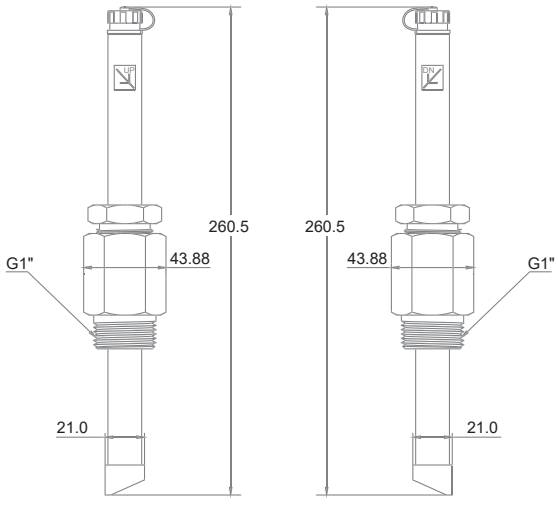


Transducer size

Units: mm



Clamp on type



Insertion type

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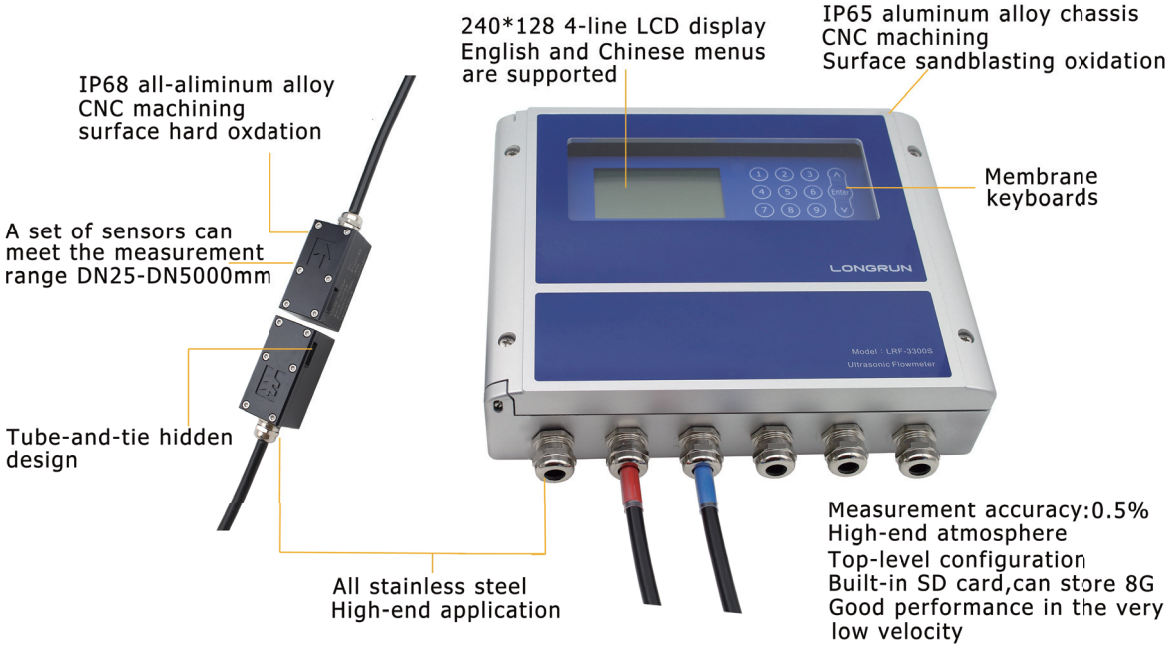
Transmitter



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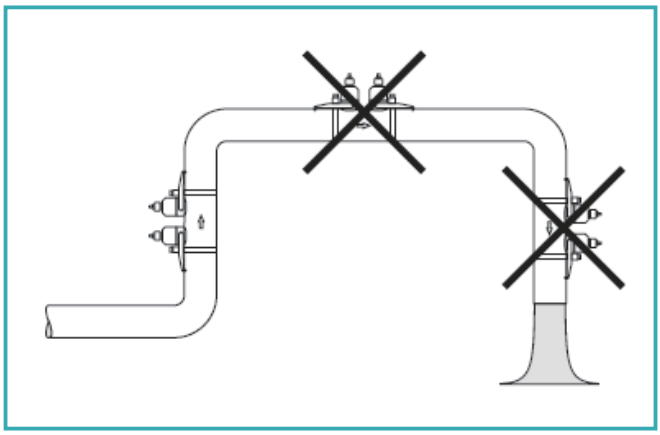
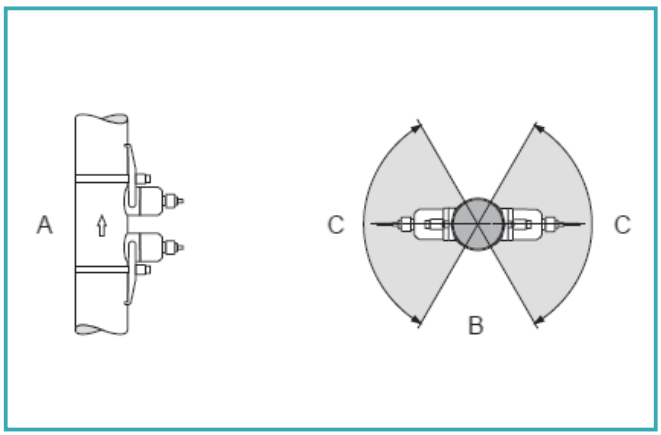
Installation site selection

The first condition for ultrasonic flow meter is the pipe must be full of liquid, the bubbles will greatly influence the accuracy of the measurement, please avoid the follow installation position:



The suggestion installation area is as following:

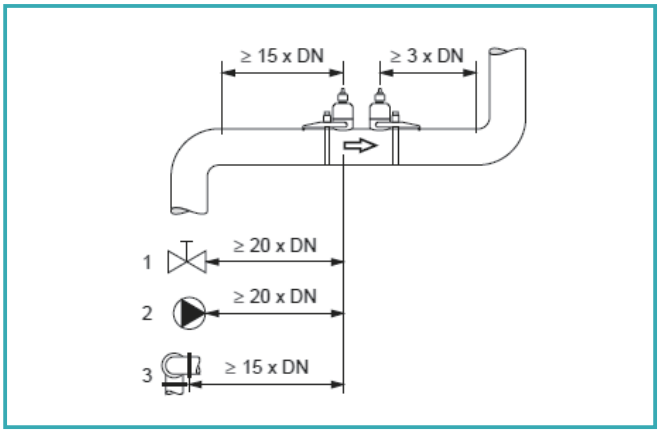


- A is for upright pipeline, please notice the water direction is from the bottom to top.
- B is for horizontal pipeline, the transducers need to be installed inside the C area, angle for area C, max 120°.

Straight pipe demand

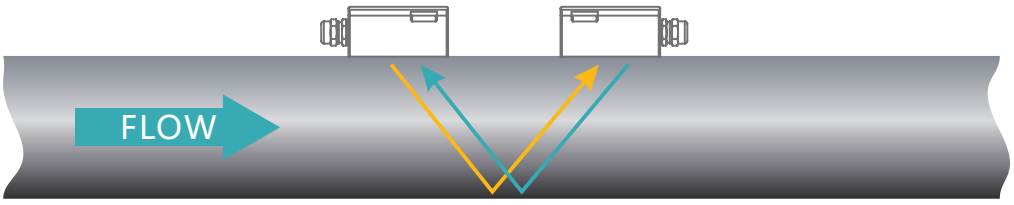
We suggest avoiding the valve, T-branch pipe and elbows if the condition allow. Please satisfied the hardest position installation requirements when you face more than one interfering resource.

1. Valve
2. T-branch
3. Elbows



Measuring principle

Transfer time technical means the ultrasonic signal from the transducer is transmitted and received through the moving liquid, there will be a difference between the upstream and downstream transit time, which can be used to calculate flow and velocity.



Ordering confirmation

Model	Transmitter
LRF-3300S	Dual channel - Ultrasonic flowmeter Wall mount Flow range：±0.01m/s ~ ±12m/s Accuracy ： ±0.5% of the measure value Repeatability：0.15% of the measure value Display：240*128 backlit LCD Power supply：90-250VAC，48-63Hz or 10-36VDC Output：4-20mA，OCT，Relay Communication ： RS485，Modbus
Code	Output
1	Flow meter
2	Energy meter (Heat/ Cool measurement, need work with a pair temperature sensor)
Code	Transducer
TT02	Clamp-on type,IP68 Operating temperature -40℉ ~ +176℉(-40℃ ~ +80℃)
TT03	Clamp-on,IP68 Operating temperature32℉ ~ +266℉(0℃ ~ +130℃)
TT05	Insertion type, IP68 Operating temperature-40℉ ~ +266℉(-40℃ ~ +130℃)
XXX	Transducer cable length
30	Standard length 30ft (9m)
XXX	Max length to 900ft (274m)
Code	Temperature sensor
PT1000	PT1000 temperature sensor
Code	Opinions
H	HART Communication

Standard model:
Clamp on typeflow meter: LRF-3300S-1-2TT02-030
Description: standard ensure clamp-on type ultrasonic flowmeterwith 2 pairs of TT02 clamp on transducers, OCT,Relay, RS485, 4-20mA, 30ft cable.
Insertion typeflow meter:LRF-3300S-1-2TT05-030
Description: standard ensure clamp-on type ultrasonic flowmeterwith 2 pairs of TT05 insertion transducers, OCT,Relay, RS485, 4-20mA, 30ft cable.