# LONGRUN

ULTRASONIC FIOWMETER SAMPLE BOOK

TYPE:LRF-2000H

Concentrating on Flow Measurement

LONGRUN
Industrial Instrument
Co., Ltd



#### I Features I

High Accuracy measuring

Accuracy:  $\pm$ 1%, linearity: 0.5%, repeatability: 0.2%

Wide measuring range

Several types transducer for selection, measuring pipe size from DN25mm to DN6000mm

- Large capacity battery Built-in rechargeable Ni-MH battery, provide over 12 hours of continuous operation
- Non-intrusive measuring Non-intrusive, clamp-on transducer, no pressure drop, no pipe disturbance
- Support Multiple Language Menu Chinese, English, Italian and other languages can be customized
- Large LCD display

Display instantaneous flow, accumulated flow (positive, negative and net), velocity, working status etc.

Built-in data logger

Built-in 24K data logger, store over 2000 lines measuring data

24 hours service: +86-186-5435-6933 Tel: +86-543-3382666 Fax: +86-543-3615999

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## LRF-2000H Handheld Ultrasonic Flowmeter

## Liquid Type

This flowmeter can be virtually applied to a wide range of measurement. A variety of liquid applications can be accommodated: ultra-pure liquids, potable water, chemicals, raw sewage, reclaimed water, cooling water, river water, plant effluent. etc

### Measuring Diagram



#### Clamp on Transducers

- Install the clamp on transducer(with magnet) on the pipe, can finish the flow measurement. No pressure drop, no need cut off pipe.
- Several types transducers for selection, measuring pipe size from DN25mm to DN 6000mm.
- Several types transducers for selection,



#### Clamp on Mounting Bracket Transducers

- Bracket transducer can simplify the ultrasonic flowmeter installation process, shorten installation time and improve installation accuracy.
- Install the clamp on bracket transducer(with magnet)on the pipe, can finish the flow measurement. No pressure drop, no need cut off pipe.
- Several types bracket transducers for selection, measuring pipe size from DN25mm to Dn700mm.
- Several types bracket transducers for selection, measuring temperature range from -30°C to 160°C.

#### Applications

Water supply and drainage

Heating

Construction of Energy-saving

Metallurgy



Petrochemical

Power













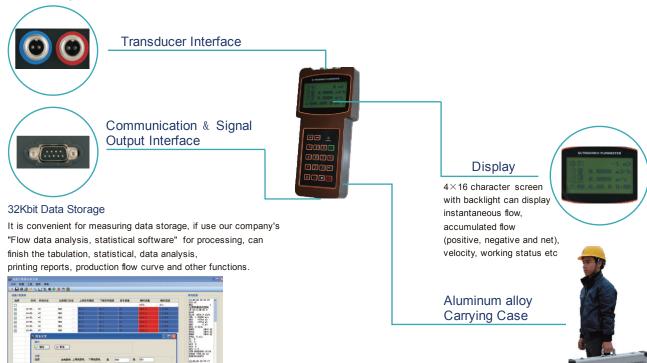
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## Parts Descriptions



## Optional Transducer

| Types                                                  | Picture | Spec.       | Model   | Measurement Range | Temperature | Dimension    |
|--------------------------------------------------------|---------|-------------|---------|-------------------|-------------|--------------|
| Clamp on                                               |         | Small Size  | TS-2    | DN25~DN100        | -30~90℃     | 45×25×32mm   |
|                                                        | 00      | Medium Size | TM-1    | DN50~DN700        | -30~90℃     | 64×39×44mm   |
|                                                        |         | Large Size  | TL-1    | DN300~DN6000      | -30~90℃     | 97×54×53mm   |
| High<br>Temperature<br>Clamp on                        |         | Small Size  | TS-2-HT | DN25~DN100        | -30~160℃    | 45×25×32mm   |
|                                                        | 99      | Medium Size | TM-1-HT | DN50~DN700        | -30 ~160 ℃  | 64 ×39 ×44mm |
|                                                        | 9       | Large Size  | TL-1-HT | DN300~DN6000      | -30 ~160 ℃  | 97×54×53mm   |
| Mounting<br>Bracket<br>Clamp on                        |         | Small Size  | HS      | DN25~DN100        | -30~90℃     | 318×59×85mm  |
|                                                        | al da   | Medium Size | НМ      | DN50~DN300        | -30~90℃     | 568×59×85mm  |
|                                                        | •       | Extended    | EB-1    | DN300~DN700       | -30~90℃     | 188×59×49mm  |
| High<br>Temperature<br>Mounting<br>Bracket<br>Clamp on |         | Small Size  | HS-HT   | DN25~DN100        | -30~160℃    | 318×59×110mm |
|                                                        |         | Medium Size | HM-HT   | DN50~DN300        | -30 ~160 ℃  | 568×59×110mm |
|                                                        |         | Extended    | EB-1-HT | D N300 ~ D N700   | -30~160℃    | 188×59×49mm  |

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#### Datasheet

| Items                             | Performance & Parameter                                                                 |                                                                                                                                                                                                                                                                                                            |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Convertor                         | Principle                                                                               | Transit-time ultrasonic flowmeter                                                                                                                                                                                                                                                                          |  |  |  |
|                                   | Accuracy                                                                                | ±1%                                                                                                                                                                                                                                                                                                        |  |  |  |
|                                   | Display                                                                                 | 4	imes 16 character LCD with backlight, support the language of Chinese, English and Italy                                                                                                                                                                                                                 |  |  |  |
|                                   | Signal<br>Output                                                                        | 1 way OCT pulse output(Pulse width 6~1000ms, default is 200ms)                                                                                                                                                                                                                                             |  |  |  |
|                                   | Data<br>Interface                                                                       | Insulate Rs232 serial interface, upgrade the flowmeter software by computer                                                                                                                                                                                                                                |  |  |  |
| Pipe<br>Installation<br>Condition | Pipe<br>Material                                                                        | Steel, Stainless steel, Cast iron, Copper, Cement pipe,PVC, Aluminum, Glass steel product, liner is allowed                                                                                                                                                                                                |  |  |  |
|                                   | Pipe<br>Diameter                                                                        | 25~6000mm                                                                                                                                                                                                                                                                                                  |  |  |  |
|                                   | Straight<br>Pipe                                                                        | Transducer installation should be satisfied: upstream10D, downstream 5D, 30D from the pump                                                                                                                                                                                                                 |  |  |  |
| Measuring<br>Medium               | Type of<br>Liquid                                                                       | Single liquid can transmit sound wave, such as Water (hot water, chilled water, city water, sea water, waste water, etc.); Sewage with small particle content; Oil (crude oil, lubricating oil, diesel oil, fuel oil, etc.); Chemicals (alcohol, etc.); Plant effluent; Beverage; Ultra-pure liquids, etc. |  |  |  |
|                                   | Temperature                                                                             | −30~160°C                                                                                                                                                                                                                                                                                                  |  |  |  |
|                                   | Turbidity                                                                               | No more than 10000ppm and less bubble                                                                                                                                                                                                                                                                      |  |  |  |
|                                   | Flowrate                                                                                | 0~±10m/s                                                                                                                                                                                                                                                                                                   |  |  |  |
| Working<br>Environment            | Temperature                                                                             | Convertor: -20~60°C; Flow Transducer: -30~160°C                                                                                                                                                                                                                                                            |  |  |  |
|                                   | Humidity                                                                                | Convertor: 85%RH; Flow Transducer: lp67                                                                                                                                                                                                                                                                    |  |  |  |
| Power<br>Supply                   | 3 AAA built-in Ni-MH batteries 1.2V(for over 12 hours of operation). 90V-260VAC adapter |                                                                                                                                                                                                                                                                                                            |  |  |  |
| Power<br>Consumption              | 1. 5W                                                                                   |                                                                                                                                                                                                                                                                                                            |  |  |  |
| Case Material                     | ABS                                                                                     |                                                                                                                                                                                                                                                                                                            |  |  |  |
| Dimension                         | 200*93*32MM(Convertor)                                                                  |                                                                                                                                                                                                                                                                                                            |  |  |  |

## Accessory Box





## Ordering Code

LRF - 2000H -Optional Transducer Cable length

> $5m \times 2$  (Standard)  $10 \ 10m\times2$

Example: LRF - 2000H+HM+10m

PS: Standard confirguration = LRF - 2000H (convertor)+TM-1+5M\*2 cable +Stretcher+Couplant(1 pc)+ Carrying case+Ruler

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