

**LONGRUN**

**ULTRASONIC  
FLOWMETER  
SAMPLE BOOK**

**TYPE:LRW-2000K**

Concentrating on Flow  
Measurement

**LONGRUN**  
**Industrial Instrument**  
**Co., Ltd**



## ● Introduction

Sandwich Insertion Ultrasonic Water Meter is a new series of patented product developed by LONGRUN INDUSTRIAL INSTUMENT CO.,LTD.It is a new-style water meter specifically designed for agricultural irrigation,garden management and water resource supervision.

Advantages of this water meter include low cost, high accuracy, low power consumption, stability and reliability. 1 inch thickness of the meter helps to save the installation space, and all parts achieve to IP68 enable the water meter work in any severe environment. Due to the unique design structure, there will be no pressure loss and different water medium will have no influence on measurement. This ultrasonic water meter will be a major breakthrough for water measurement in agricultural irrigation.

## ● Characteristics



### ● Protection Class IP68

- Whole machine Waterproof : the seal property of whole machine achieve to IP68
- Parts waterproof : each part achieve to IP68 separately, ensure long term work even if the meter get into the water.

### ● Built-in Quantitative Controllers Built-in Time Accumulator

- Automatically start the controller at the set time, achieve to supply water automatically, regularly and quantitatively.
- Time-sharing flow accumulation within the set period of time, to achieve gradient rate..

### ● Ultrasonic measurement, No Rotation, No worn parts

- Ensure long-term high measuring accuracy.
- Apply to varieties of water quality, including the water contain gravel and weeds

### ● Ultra-thin design

- 1 inch thickness of the meter helps to save installation space
- Made of nylon, high strength and corrosion Resistance, very low cost.
- No pressure loss.

# LRW-2000K Standwich Insertion Ultrasonic Water Meter

## ● Display and Operation

### 58X22mm LCD

Display the instantaneous flow, cumulative flow and other working status

### Support Bi-directional Flow Measurement

Could measure instantaneous flow and cumulative under the forward and backward direction separately

### Various of Units Selected

Cumulative flow:  
m<sup>3</sup>, ft<sup>3</sup>, GAL, L  
Instantaneous flow:  
m<sup>3</sup>/h, GPM, L/m

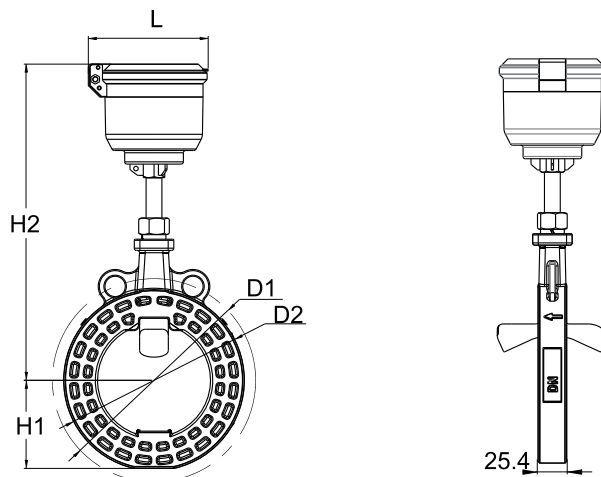
### Smart Touch Key

Easy for operation with finger

### Infrared Communication Interface

Support CJ-188 and M-bus communication protocol  
Support software upgrade

## ● Size and Weight



Unit : mm

Nominal Size DN(mm)	Dimension			Flange Size				Weight kg	Pressure MPa
	L	H1	H2	Outer Diameter D1	Central circle diameter of bolt holes D	Bolt Hole			
						Bore diameter ×Quantity Φ × n	Quantity		
DN80	147	68	280	140	160	18×8	2	2.2	1.6
DN100	147	78	270	160	180	18×8	2	2.3	1.6

## ● Data Sheet

Item	Specification
Standard	ISO 4064-2005, GBT 778-2007
Measure Fluid	Water, Sewage, Seawater(other liquid need to be customized) The pipeline should be full of liquid.
Medium Temperature	0.1-30℃
Working Environment	Temperature: -30~45℃; Humidity≤100%(RH )
Pressure	1.6MPa
Pressure Loss	None
Upstream Sensitivity	U5
Downstream Sensitivity	D3
Climate and mechanical	C level
Electromagnetic compatibility class	E2 level
Communication Interface	RS485/USART/Infrared
Output Signal	Two way OCT or TTL pulse output/ one way 4-20mA analog output
Power supply	Built-in Lithium battery(3.6V, 19Ah)/ DC8-36V power supply/ two-wire system 4-20mA
Protection Level	Ip68, available to work 2 meters underwater
Digital Display	9 digits cumulative flow and 4 digits instantaneous flow shown in two rows, and varies of state prompt and units.
Data Storage	Use EEPROM/FLASH automatically record the cumulative flow of last 128 months and last 512 days.
Measurement Cycle	Measuring : 1 times/second ; Verification : 4 times/second
Power Consumption	≤ 2.7AH/Year, 6 years battery life

## ● Flow Range

Nominal Diameter (mm)	R	Flow (m³/h)				
		Starting Flowrate	Minimum Flowrate Q1	Transitional Flowrate Q2	Permanent Flowrate Q3	Overload Flowrate Q4
DN80	40	0.625	2.500	4.000	100.000	125.000
DN100	40	1.000	4.000	6.400	160.000	200.000

## ● Error Curve



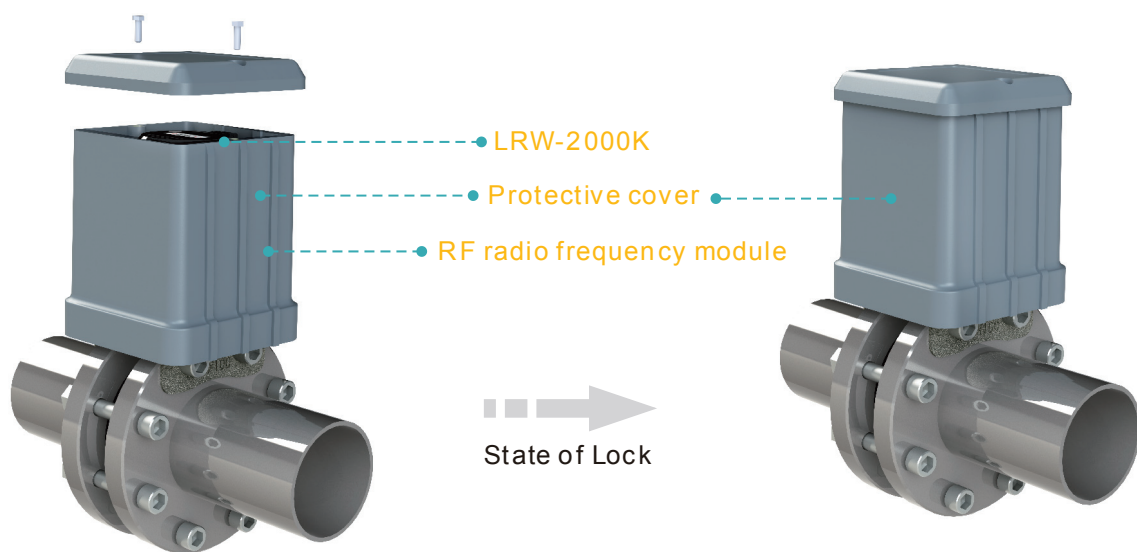
## ● Communications and Networking

LRW - 2000K can achieve short distance wireless communication by connecting RF communication module. Using RF radio frequency, Wireless meter reading with handheld data setter and wirelessGPRS module connection are also available in order to achieve large-scale, far-distance networking.



## ● Optional Accessories

Customers can select the optional protective cover to achieve rain-proof, sun-proof, shock-proof and theft-proof. Built-in antenna and RF module can achieve wireless meter reading and networking communication.



## ● Selection Coding

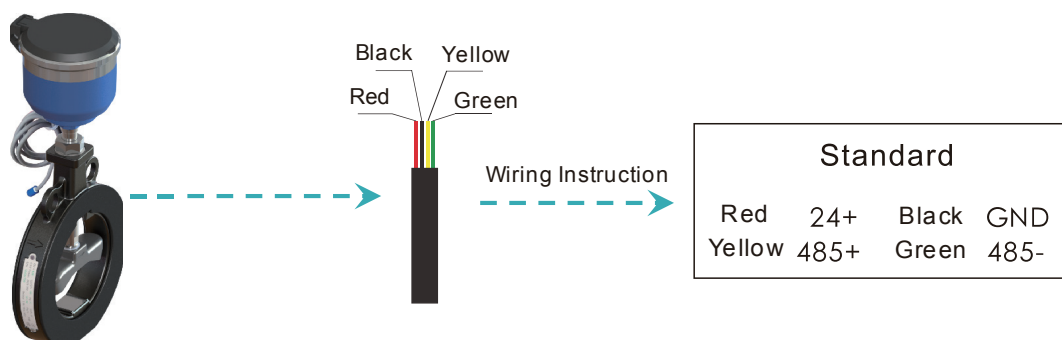
LRW - 2000K-B-□-□-□-□-□-□

Letter	Parameter	Explanation	Remarks
<b>A</b>	Calibre	DN80, DN100	Please select the diameter required
<b>B</b>	Communication Interface	0 None 1 RS485 2 M-BUS	Standard configuration 1
<b>C</b>	Output Signal/ External Power	0 None 1 DC8-36V 2 Two-wired system 4-20mA (could be directly connected with 24V as auxiliary power supply) 3 OCT1 (open-collector output 1) 4 OCT2 (open-collector output 2) 5 C1 (TTL level pulse output 1) 6 C2 (TTL level pulse output 2)	Standard configuration 1
<b>D</b>	Wireless meter reading	0 None 1 RF communication module	It is not available to select B or C if D is selected.
<b>E</b>	Output Cable	-m	Standard is 1m. Other length: waterproof junction box + extended output cable (default)
<b>F</b>	Protective Cover	0 None      1 Optional	

Note: From Band C, up to 2 options could be selected.

Example: LRW-2000K-B-100-1-1-0-1m-1

Explanation: DN100 sandwich ultrasonic water meter - mainbody made of nylon, header made of 403 stainless steel, communication interface: RS485 - external power supply: DC8- wireless meter reading has not been available - Standard 1m signal cable, optional protective cover





# LRW-2000K Standwich Insertion Ultrasonic Water Meter

## Typical Applications

### Irrigation of Agricultural motor-pumped Wells

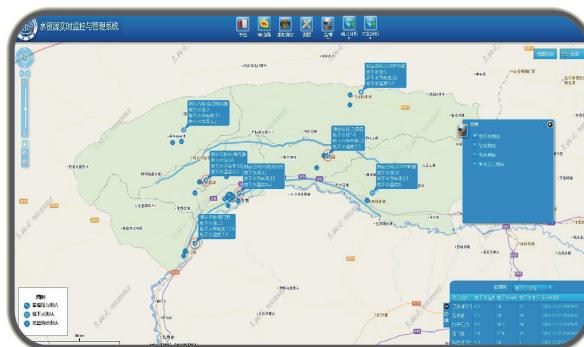
On the site of agricultural water-saving irrigation, LRF-2000W-B can be used with motor-pumped wells to achieve remote efficient management of agricultural water, save water resources.



Wells room

### Management of water resources

Can be used in water settlement, remote monitoring and computer management.



### Industrial water measurement

Settlement of production water, internal and external water supply



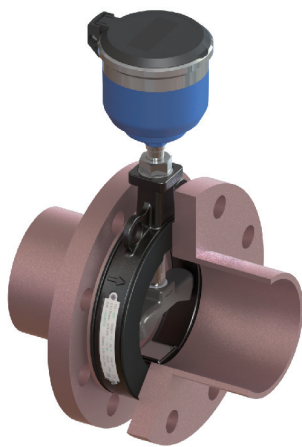
### Irrigation and Landscaping

Flow control function can set the water-supply time to achieve water-saving irrigation and scientific irrigation. It is also available to centrally manage timed and quantitative irrigation by using computer networking.

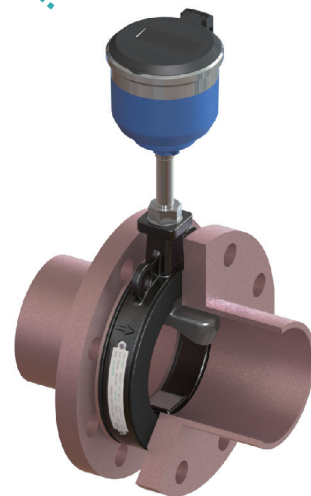




Before Installation



During Installation



Measuring State