KANAGAWA INSTRUMENTS

Portable Ultrasonic Flow Meter

Model: KPUF



Introduction

KPUF is a full function handle transfer time ultrasonic flow meter. No matter you want to quickly verify the flow reading of another meter or to data log flow system values over an extended time period, our KPUF is the suitable tool. The KPUF portable meter has the clamp on transducers no tapping or cutting is required, just clamp outside of the pipe. The meter can be easily moved and installed in different pipe and convenient to carry site to site.Its portability makes it an excellent choice for measuring flows throughout the plumbing infrastructure to verify sensor, pump and valve performance.

Features

Clamp-on ultrasonic transducers, no pipe cutting or process interruption required
Suitable for a wide range of pipe sizes and materials
High measurement accuracy and repeatability
Bidirectional flow measurement
Built-in data logger for long-term monitoring
Easy installation and quick setup
Portable and lightweight design for field applications

Applications

Verification of existing flow meters
Pump and valve performance monitoring
HVAC and utility systems
Water distribution networks
Industrial process monitoring

Advangates

No contact with the process fluid
Maintenance-free operation
Easy relocation between measurement points
Cost-effective solution for flow analysis

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Technical Parameters

Performance specifications	
Flow range	±0.03 ft/s ~ ±40 ft/s (±0.01 m/s~ ±12 m/s)
Accuracy	±1% of measured value
Pipe size	Clamp-on:1"~48"(25mm~1200mm)
Fluid	Single medium liquid
Pipe material	Carbon steel,stainless steel,PVC and other compact material pipe
Function specifications	
Outputs	Analog output: 4~20mA, Max 750 Ω . Modbus: RS485
SD card	16G
Interval	1 ~ 99999seconds
Key broad	Digital keys
Display	240*128 backlit LCD
Power supply	Rechargeable Lithium Battery Power， 3000mAh (Continuous operation of main battery 16 hours).
Temperature	Transmitter: -40℃~60℃ Transducer: -40℃~80℃ (-40℃~80℃ is standard; -40℃~120℃ is an option)
Humidity	Up to 99% RH,non-condensing
Physical specifications	
Transmitter	NEMA13,IP54.
Transducer	Encapsulated design,IP68
Transducer cable	Standard cable length: 5m (16ft).

Accessories





1. Carrying Bag 1 piece
2. Transmitter (Electronic) 1 piece
3. Transducer (Sensor) 1 piece
4. Mounting track*1 set, ST or DT
5. Pipe straps *2 pairs
6. Coupling compound (Grease)*1 pc, Battery charge*1pc, Output cable*1pc and Tapeline*1



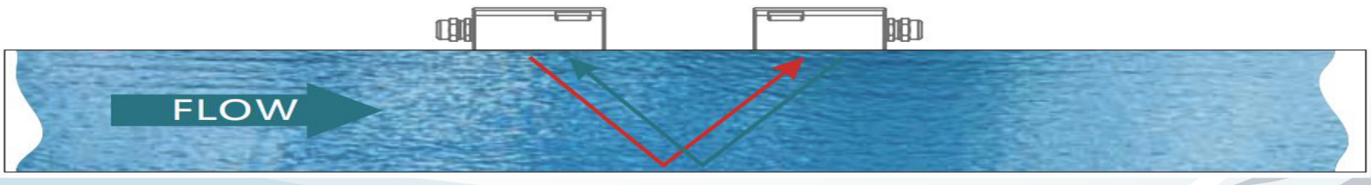
Single guide mounting type bracket



Dual guides mounting type bracket

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.



Measuring principle

An ultrasonic meter equipped with heat flow capabilities measures the rate and quantity of heat delivered or removed from devices such as heat ex-changers. By measuring the volumetric flow rate of the heat ex-changer liquid, the temperature at the inlet pipe and the temperature at the outlet pipe, the energy usage can be calculated.

Ordering Code

Model	Description
KPUF	Portable Ultrasonic Flow Meter Installation method: Hand-held Flow Range:±0.03 ft/s ~ ±40 ft/s (±0.01 m/s~ ±12 m/s) Accuracy: ±1% of measured value Repeatability: 0.2% Output: 4-20mA, RS485 Internal lithium power supply: 3000mAh Pipe size range: 1″~48″(25mm~1200mm) Transducer: IP68, D series transducer, 5m cable with mounting kits.