KANAGAWA INSTRUMENTS

Ultrasonik Flow Meter

Model: KUF



Introduction

Kanagawa KUF Series is a wall-mounted, clamp-on type ultrasonic flow meter utilizing advanced transit-time measurement technology. Designed with an FPGA chip and low-voltage broadband pulse transmission, it delivers high accuracy, reliability, and stable performance across a wide range of flow measurement applications.

The KUF Series supports both Clamp-on Sensors and Insertion Sensors, providing flexible installation options without interrupting process operations.

Equipped with a 240 × 128 backlit LCD display and an intuitive 4-line menu interface, the KUF Series offers clear visualization and user-friendly operation, making configuration and monitoring simple and convenient.

Features

Easy-to-install design minimizes installation time and reduces overall project costs.
Causes no pressure loss in the pipeline and contains no moving parts, resulting in minimal maintenance requirements.

Optional BTU measurement function enables energy consumption monitoring; the KUF Series can also operate as a portable ultrasonic energy meter.
Provides extensive data storage capacity and supports advanced data analysis software for comprehensive process monitoring.

Application

The KUF Series is suitable for a wide variety of liquid flow measurement and energy monitoring applications in:

HVAC systems
Building automation
Water treatment facilities
Industrial process control
District heating and cooling systems
Energy management projects

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Technical Specifitation

Performance

Flow range	±0.03m/s ~ ±12m/s
Accuracy	±0.5% of measured value
Repeatability	0.2% of measured value
Linearity	±1%
Pipe size	1"to 48" (25mm to 1200mm).Pipe size under 1” is an option
Fluid	Water

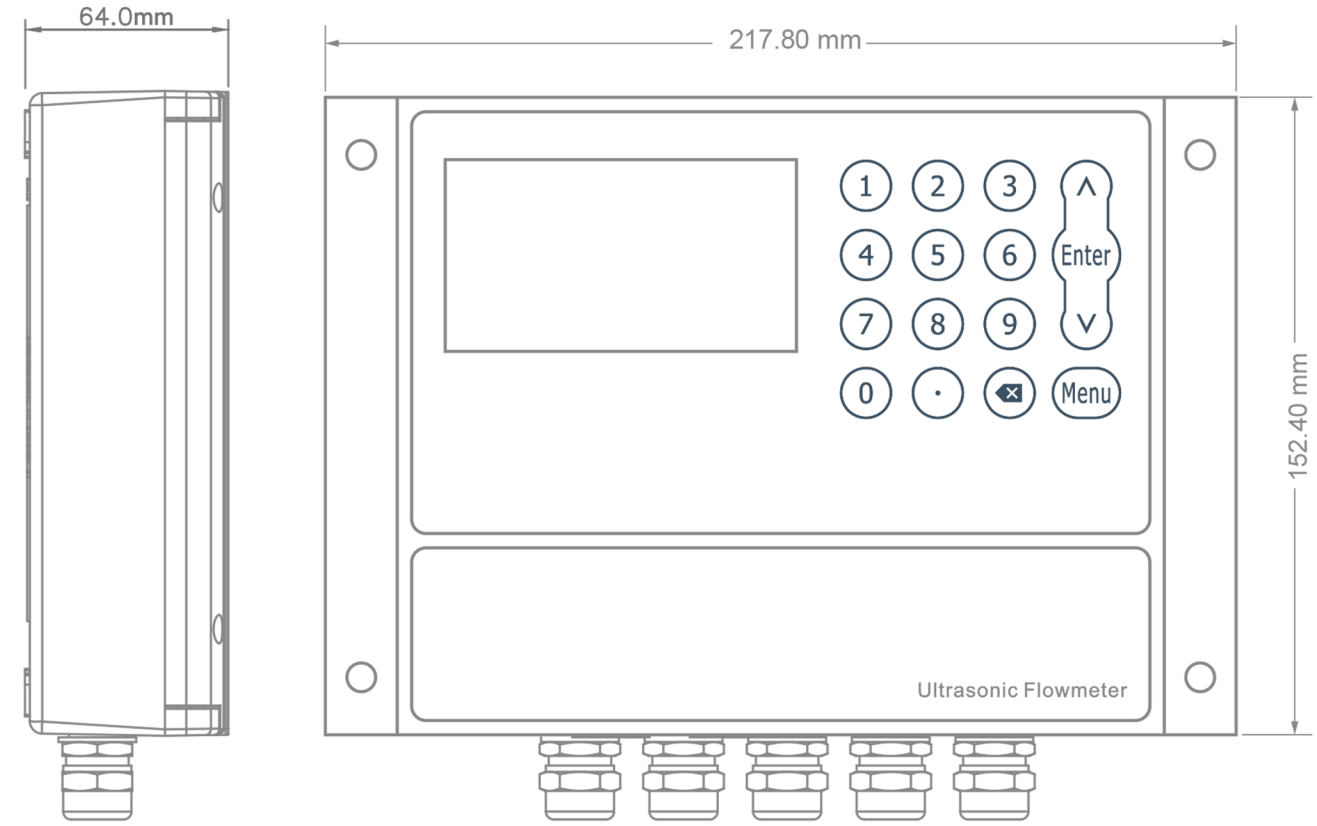
Function

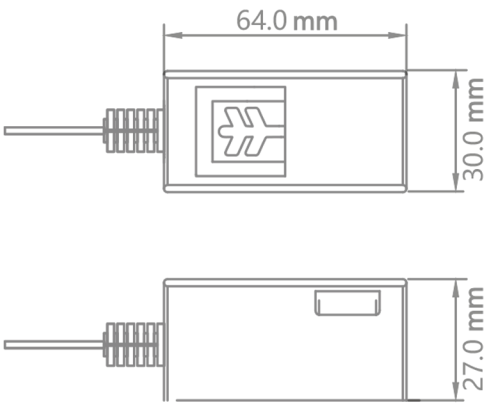
Outputs	Analog output: 4~20mA, max load 750Ω. Pulse output: 0~10KHz
Communication	RS232/RS485 Modbus
Power supply	10~36VDC/1A
Display	240*128 back lit LCD
Temperature	Transmitter: -14℉~140℉(-20℃~60℃) Transducer:-40℉~266℉(-40℃~130℃, standard -40℃~75℃)
Humidity	Up to 99% RH,non-condensing

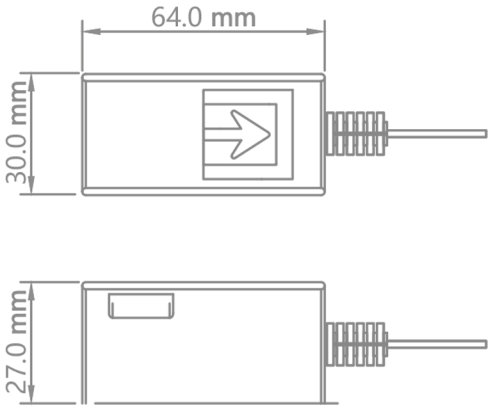
Physical

Transmitter	PC/ABS,IP65
Transducer	ABS,IP68 Encapsulated design Double-shielded transducer cable Standard/maximum cable length:30ft/900ft(9m/274m)

Technical Drawings

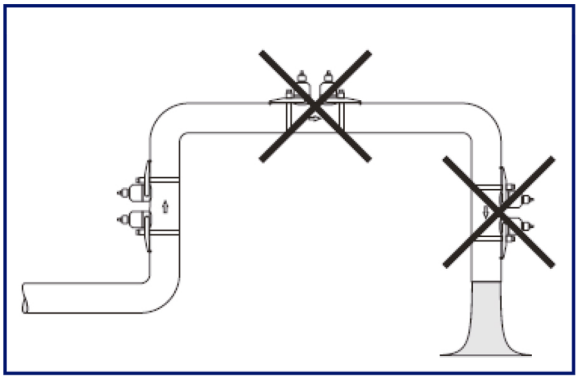




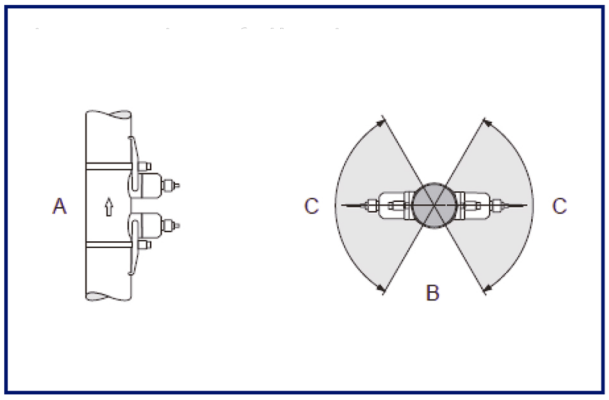


Installation Site Selection

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:



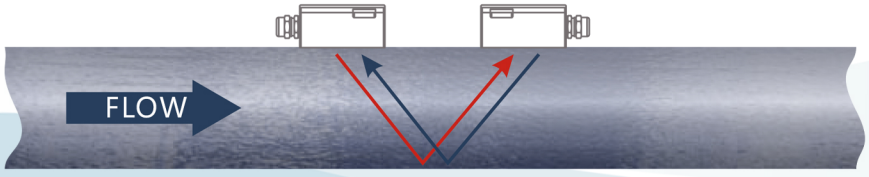
The suggestion installation area is as following:



- 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°.

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 Code

Model	Transmitter
KUF	Ultrasonic flowmeter Wall mount Flow range:±0.03m/s ~ ±12m/s Accuracy : ±0.5%of measured value Repeatability: 0.2% of the measure value Display: 240*128 back lit LCD Power supply: 10-36VDC@1A max Transmitter enclosure: IP65, ABS (Temperature: -20℃~50℃) Output: OCT pulse output 0-10KHz, Relay output, 4-20mA optional Communication: RS232, Modbus Protocol
Code	**Type of Transmitter**
1	OCT, Relay, RS232/RS485, 4-20mA
2	OCT, Relay, RS232/RS485, 4-20mA, RTD
Code	**Type of Transmitter**
CD01	Clamp-on, IP68. Operating temperature: -40℉ ~ +167℉(-40℃ ~ +75℃)
C1	Clamp-on, IP68. Operating temperature: -40℉ ~ +176℉(-40℃ ~ +80℃)
C2	Clamp-on, IP68. 2MHz Pipe size DN15 to DN25 only Operating temperature: 32℉~158℉(0℃ ~ +70℃)
C1U	Clamp-on, IP68. Operating temperature: -40℉ ~ +266℉(-40℃ ~ +130℃)
W1	Insertion, IP68. Operating temperature: -40℉ ~ +266℉(-40℃ ~ +130℃)
XXX	**Transducer cable length**
030	Standard length 30ft (9m), C2 transducer standard length 15ft (5m)
XXX	Max length to 900ft (274m)
Code	**Temperature sensor**
PT1000	Pt1000 temperature sensor
Code	**Option**
AC	AC power, 90 to 245 VAC
SD	SD card
H	HART

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