

KUF100B Economical Ultrasonic Transit-Time Flow Meter



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1.Introduction

The KUF100B Economical Transit-Time Ultrasonic Flow Meter is a flowmeter specifically designed for water. Compared with other ultrasonic flowmeters on the market, it not only has the characteristics of high response rate, low power consumption, and high stability, but also continues to use the self-developed TGA technology.

TGA is a process time measurement algorithm for high-speed and high-precision measurement that our company has successfully developed by researching ultrasonic time measurement algorithms and referring to various existing TDC algorithms. The time measurement accuracy of "TGA" can reach dozens of picoseconds.

Meanwhile, it also has the characteristics of simple installation and convenient use. The installation can be completed without pipe cutting or water supply interruption.

2.Feature

- It can be used with an RTD model and a temperature sensor to become an energy meter for measuring heat and cold consumption in heating pipelines and air-conditioning refrigeration pipelines.
- Two types of sensors, insertion-type and external-clamp-type, are available. A pair of sensors can be used for all pipe diameters.
- The temperature upper limit of the standard insertion-type sensor is 130°C.

3.Applications

- Building air conditioning system
- Thermal power plant
- Petrochemical industry
- Water treatment

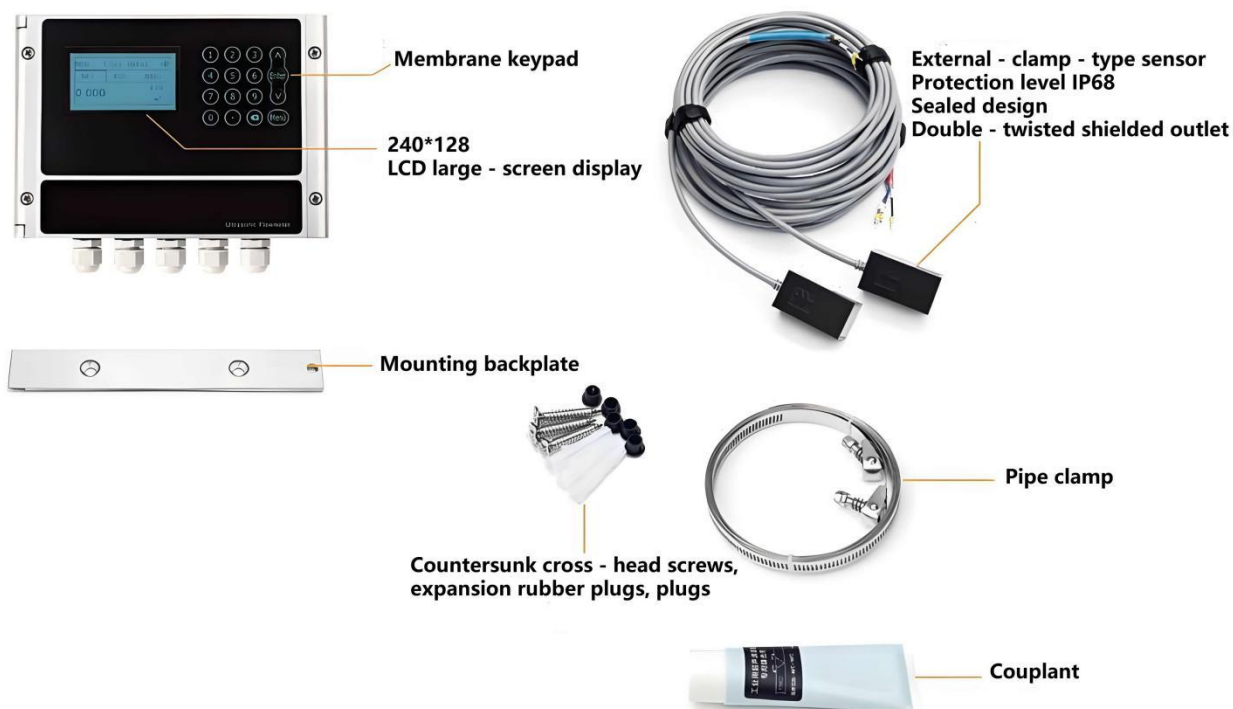


4. Technical Parameters

Performance Description	
Flow Range	$\pm 0.03\text{m/s} \sim \pm 5\text{m/s}$
Accuracy	$\pm 1\%$
Repeatability Accuracy	0.2%
Linearity	$\pm 1\%$
Pipe Diameter	15mm ~ 1200mm
Medium	Water
Functions	
Output	Analog output: 4 - 20mA, maximum load 750 Ω Pulse output: 0 - 10KHz
Communication	RS232/RS485 Modbus
Power Supply	10 - 36VDC/1A
Display	240*128 LCD
Temperature	Transmitter: -20 $^{\circ}\text{C}$ - 60 $^{\circ}\text{C}$
Humidity	Sensor: -40 $^{\circ}\text{C}$ - 75 $^{\circ}\text{C}$, standard
Physical Characteristics	
Transmitter	PC/ABS, IP65 IP68
Sensor	Sealed design Double - twisted shielded outlet Standard/maximum cable length: 9m/274m

5.Product Accessories

Product accessories for the flowmeter

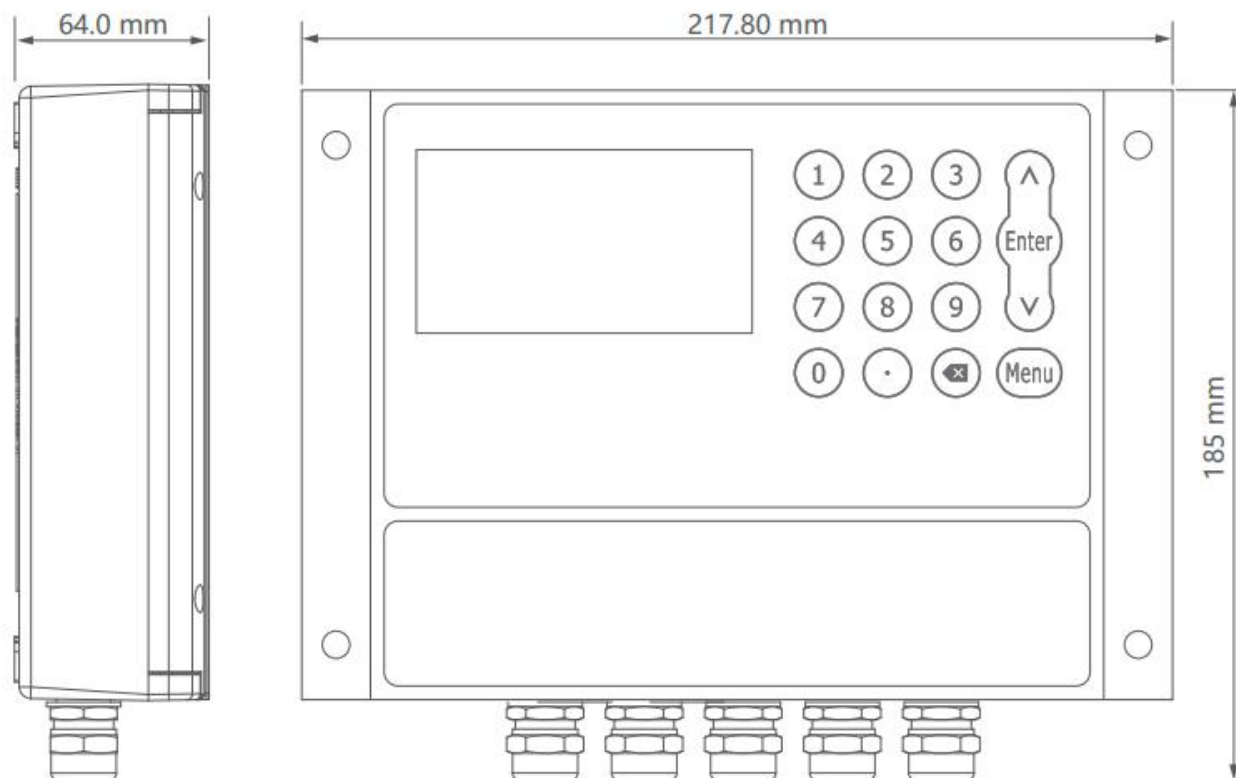


Example diagram of CD01 optional DT double - rail mounting bracket

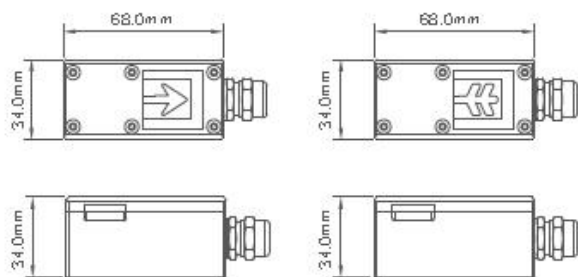


※ The DT double - rail mounting bracket is applicable to CD01, C1, C1U, and C1H.

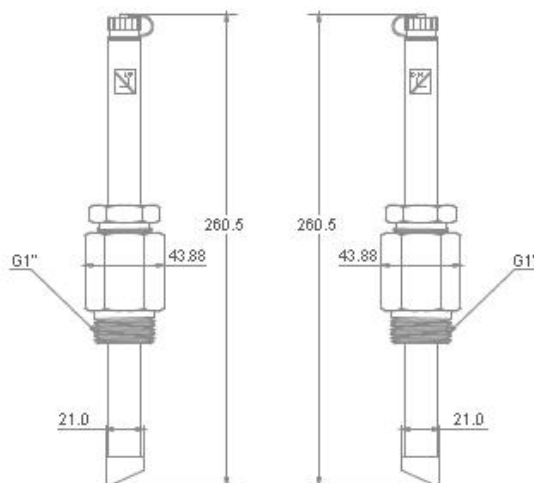
6.Dimensions



Transmitter Dimensions



Clamp-on



Insertion

7.Selection Table

Type	☐ Accuracy $\pm 1.0\%$
Sensor	☐ CD01: Clamp-on sensor (IP68, $-40^{\circ}\text{C} \sim +75^{\circ}\text{C}$) ☐ C1U: Clamp-on sensor (IP68, $-40^{\circ}\text{C} \sim +130^{\circ}\text{C}$) ☐ W1: Insertion sensor (IP68, $-40^{\circ}\text{C} \sim +130^{\circ}\text{C}$)
Signal Output	☐ 1: OCT, relay output, RS232/485, 4 - 20mA ☐ 2: OCT, relay output, RS232/485, 4 - 20mA, RTD (configuration for heat - cold meter)
Temperature Sensor	☐ Default: None ☐ T: PT1000
Connection Method	☐ D: Connection ☐ P: Cable ☐ M: With digital display meter
Cable Length (Unit: m)	☐ Standard length: 9m ☐ Customizable length, longest 274m
Optional	☐ AC power supply, 90~245VAC ☐ SD card (32G) ☐ H: Hart communication protocol ☐ DT: Double - rail mounting bracket applicable to CD01, C1U

Selection example 1:

CD01-1-P9: clamp-on sensor, OCT, relay output, RS232/485, 4-20mA, cable length 9 meters.

Selection example 2:

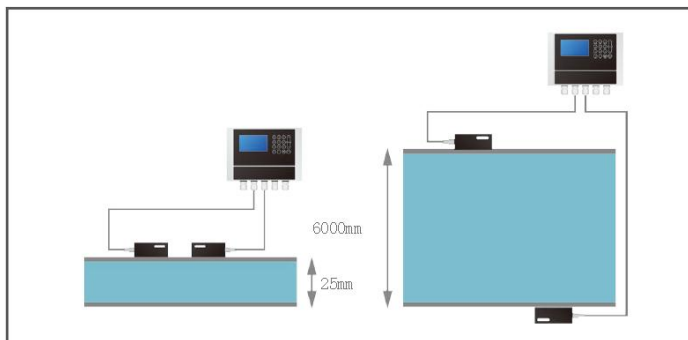
CD01-2-T-P9: clamp-on sensor, OCT, relay output, RS232/485, 4-20mA, RTD, PT1000, cable length 9 meters.

8.Product Selection

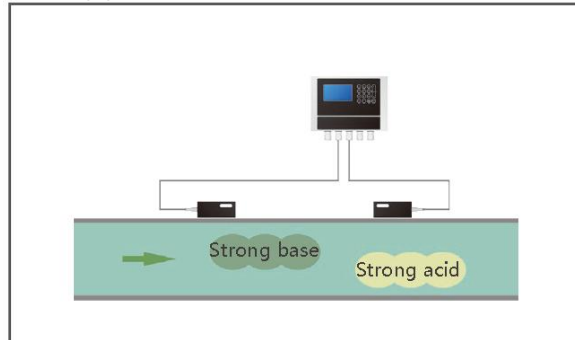
±1% Clamp on ultrasonic flow meter+Transducer CD01 (-40℃~+75℃)	
±1% Clamp on ultrasonic flow meter+Transducer C1U (-40℃~+130℃)	
±1% Insertion ultrasonic flow meter+Transducer W1 (-40℃~+130℃)	
±1% Clamp on energy/ Btu meter+ Clamp PT1000	
±1% Insertion energy/ Btu meter+ Insertion PT1000	

9.Application Scenarios

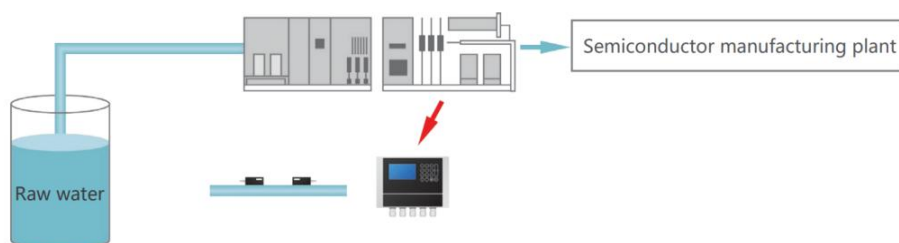
(1)Water supply flow measurement monitoring



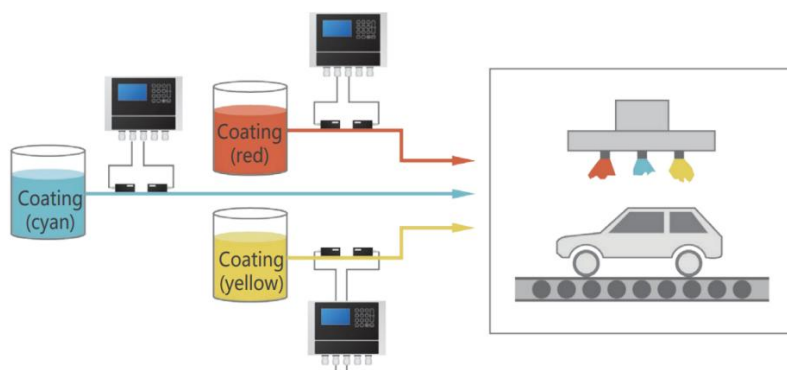
(2)Corrosive fluid flow measurement



(3)Semiconductor industry water treatment management



(4)Coating management



(5)Ultrasonic energy/Btu meter

