

Inline Signal Channel Ultrasonic Flow Meter

KWQTFB Series



The Ketwells, KWQTFB Inline ultrasonic flow meter adopts transit-time ultrasonic technology in which the signal is transmitted and received alternately between two flow sensors and the "time of flight" determines the flow rate. It also can measure energy of hot and cold water by adding 1 pair of temperature sensor. It has the characteristics of high measurement accuracy, good stability, and maintenance-free.

Feature

- The flowmeter is divided into two types: one-piece and split-type, which are suitable for more applications.
- Non-conductive/special medium measurement.
- Low voltage multi-pulse balanced transmission and reception.
- Positive/negative/net accumulators.
- Isolated RS-485 interface, support MODBUS RTU.
- Anti-interference design, electrically isolated DC power supply.
- Built-in heat measurement/calorimeter (Optional Function).

Applications

- Water treatment
- Water distribution
- Industrial waste water
- Industrial processes
- Slurries Irrigation
- Pumping station
- Dams
- Mining

Inline Signal Channel Ultrasonic Flow Meter

KWQTFB Series



Technical Data

Description	Inline Ultrasonic Flow / BTU Meter
Principle	Transit-time
Pipe Size	DN15~DN300 (½" ~ 12")
Accuracy	±1% FS (0.5-10 m/s)
Repeatability	0.20%
Velocity	0.5~10 m/s
Turbidity	≤10000 ppm with little bubble, particle diameter ≤ 2mm
Power Supply	8~36 VDC, 85~264 VAC
Output	One way 4~20 mA analog, electric resistance: 0~1K, accuracy: 0.1%
	One way OCT pulse
	One way Relay
Input	3 ways 4~20 mA analog, accuracy: 0.1%. Acquisition signal of temperature, press and level
	Achieve heat measurement by connecting three-wire PT100 temperature sensor
Communication	RS485 Modbus
Unit	Flow: Cubic Meter, Liter, US Gallon, Million US Gallon, Cubic Feet, US Liquid Barrel,
	Imperial, Liquid Barrel, Oil Barrel
	Heat: GJ, KC, KWh, BTU
Structure	Compact, Remote
Signal Cable Length	5m x 2 standard, 100m Max Optional
Temperature	Transmitter: -10°C~80°C
	Transducer: -30~85 °C Standard, -30~150 °C Optional
Operation	4-key manipulation with magnetic bar touch or finger touch, simulation keyboard software
Display	2 line LCD with backlight
Pipe Material	Carbon Steel (standard), SS304 / SS316 (Optional)
Function	Self-diagnosis
Protection Grade	Transmitter: IP65
	Transducer: IP65 Standard, IP68 Optional
Power Consumption	Less than 5W

Inline Signal Channel Ultrasonic Flow Meter

KWQTFB Series

Selection Table

Series	KWQTFB			
Nominal Size		XXXX	DN15~DN1000, 1/2"... 40"	
Structure			C	Compact
			R	Remote
Electrode Material			CS	Carbon Steel
			S4	SS304
			S6	SS316
Process Temperature			T1	-30°C... 85°C
			T2	-30°C... 150°C
Power Supply			DC	8... 36 VDC
			VC	85... 264 VAC
Cable Length			DC	5m x 2 (Standard Signal Cable Length)
			VC	Optional Cable Length
Protection			5	IP65 Transmitter + IP65 Transducers
			8	IP65 Transmitter + IP68 Transducers
Temperature Sensor			WT	Without Temperature Sensor
			W	With PT100 Temperature Sensor
Process Connection	Flange		D**	DIN D10: PN10, D16: PN16
			A**	ANSI A15: 150#
			J**	JIS J10: 10K, J20: 20K
	Thread		T	



Compact with Flange Connection
DN15~DN32 / 1/2"~ 1 1/4"

Compact with Thread Connection
DN15~DN32 / 1/2"~ 1 1/4"

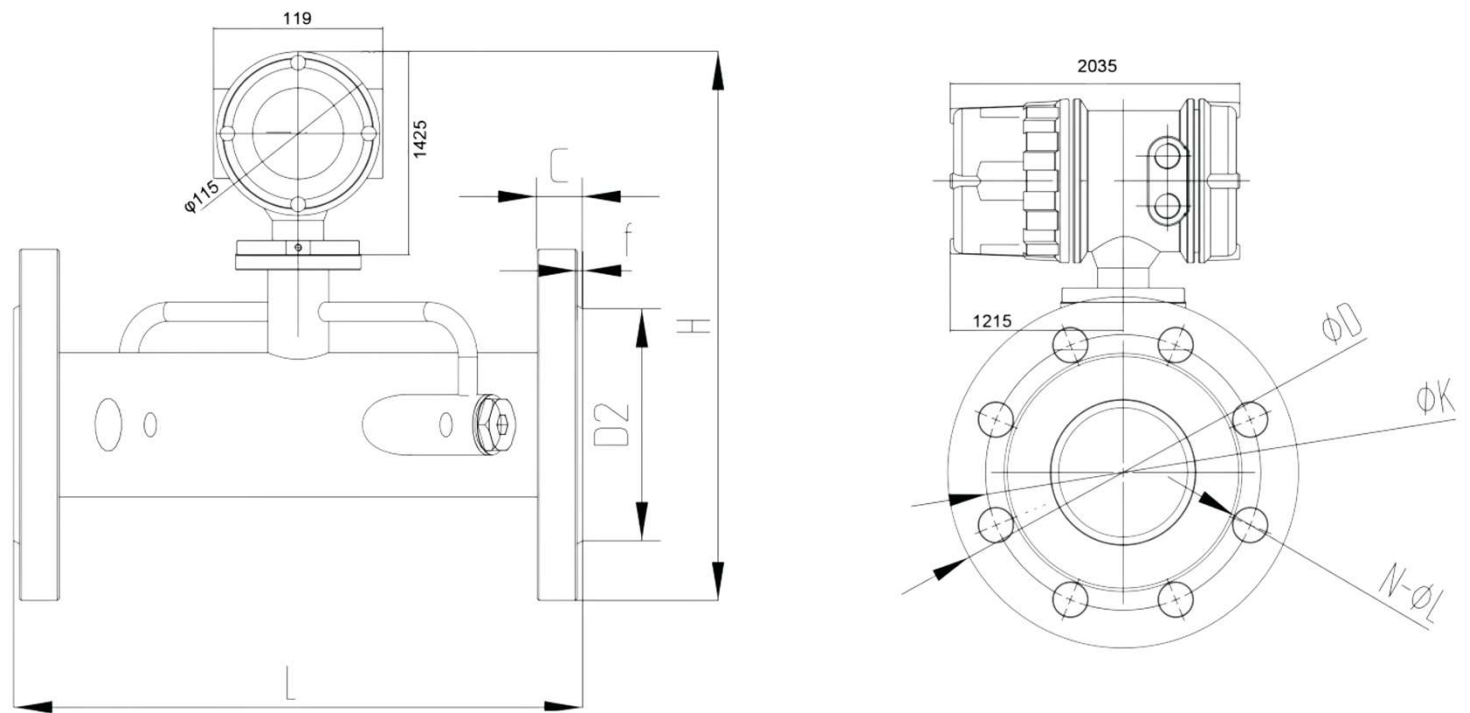
Remote
DN15~DN32 / 1/2"~ 1 1/4"

Inline Signal Channel Ultrasonic Flow Meter

KWQTFB Series



Compact: DN40-DN300 / 1½"~12"



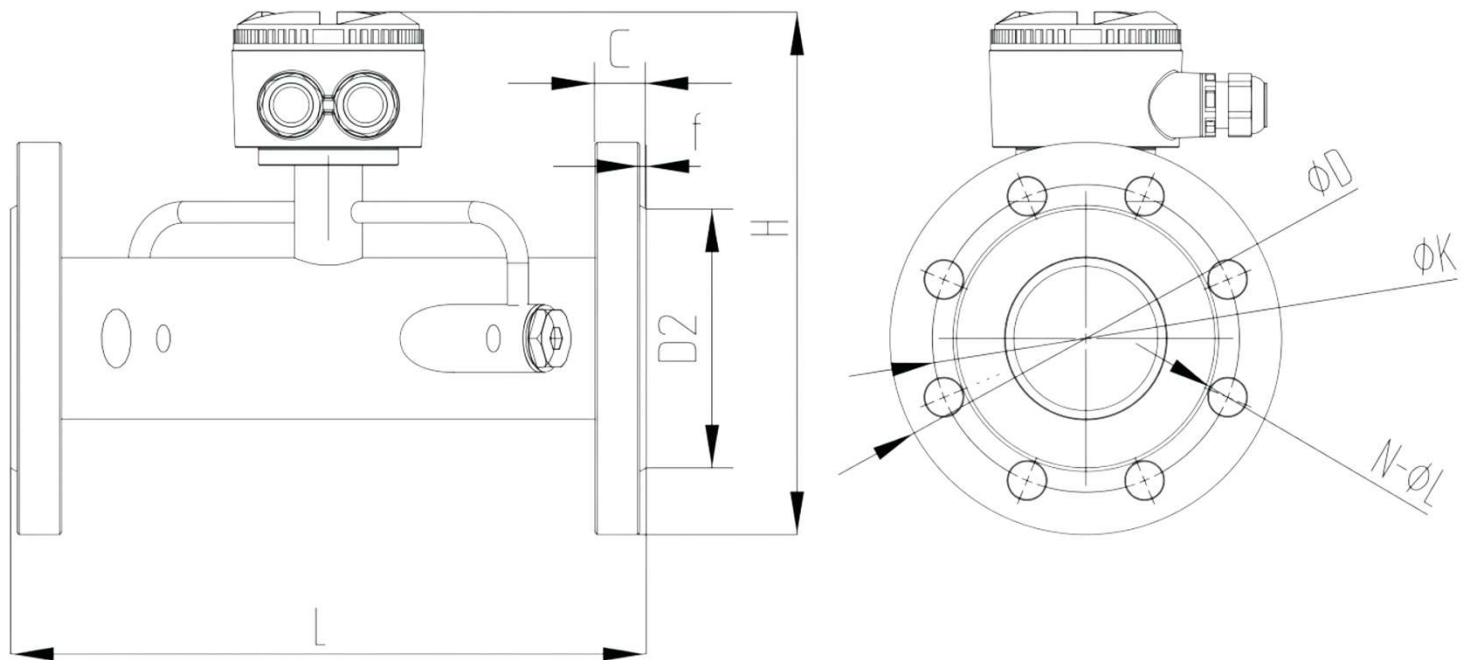
Nominal Size (DN)	Nominal Pressure (Mpa)	L (mm)	H (mm)	Flange Size						
				ΦD (mm)	ΦK (mm)	ΦL (mm) X N	D2 (mm)	Flange Thickness (mm)		Bolt Specification
								C	F	
40	DIN 1.6	300	289	150	110	Ø18X4	88	18	2	M16X65
50		300	301	165	125	Ø18X4	102	20	2	M16X70
65		300	321	185	145	Ø18X4	122	20	2	M16X70
80		250	335	200	160	Ø18X8	138	22	2	M16X70
100		250	354	220	180	Ø18X8	158	22	2	M16X80
125		300	382	250	210	Ø18X8	188	24	2	M16X80
150		300	412	285	240	Ø22X8	212	24	2	M20X80
200		350	470	340	295	Ø22X12	268	26	2	M20X90
250		450	529	405	355	Ø26X12	320	28	2	M24X100
300		500	582	460	410	Ø26X12	378	30	2	M24X100

Inline Signal Channel Ultrasonic Flow Meter

KWQTFB Series



Remote: DN40-DN300 / 1½"~12"



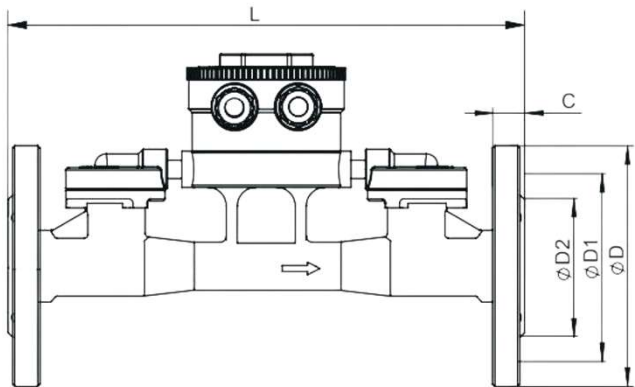
Nominal Size (DN)	Nominal Pressure (Mpa)	L (mm)	H (mm)	Flange Size						
				ØD (mm)	ØK (mm)	ØL (mm) X N	D2 (mm)	Flange Thickness (mm)		Bolt Specification
								C	F	
40	DIN 1.6	300	214	150	110	Ø18X4	88	18	2	M16X65
50		300	226	165	125	Ø18X4	102	20	2	M16X70
65		300	246	185	145	Ø18X4	122	20	2	M16X70
80		250	260	200	160	Ø18X8	138	22	2	M16X70
100		250	279	220	180	Ø18X8	158	22	2	M16X80
125		300	307	250	210	Ø18X8	188	24	2	M16X80
150		300	337	285	240	Ø22X8	212	24	2	M20X80
200		350	395	340	295	Ø22X12	268	26	2	M20X90
250		450	454	405	355	Ø26X12	320	28	2	M24X100
300		500	507	460	410	Ø26X12	378	30	2	M24X100

Inline Signal Channel Ultrasonic Flow Meter

KWQTFB Series

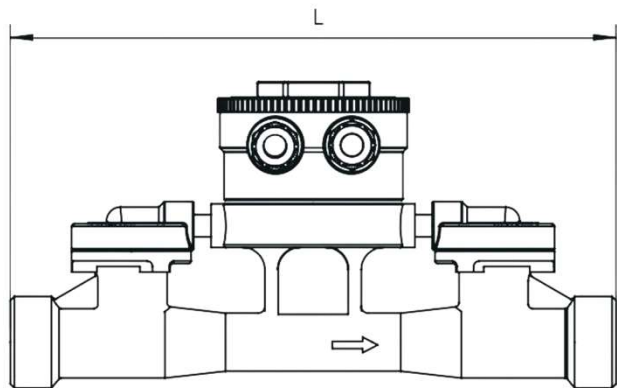


Remote with flange connection: DN15~DN32 / ½"~ 1¼"



Size (DN)	DN15	DN20	DN25	DN32
Pressure (Mpa)	2.5	2.5	2.5	2.5
L (mm)	226	226	226	226
D	95	105	115	140
D1	65	75	85	100
Φ*n	14*4	14*4	14*4	18.4
D2	46	56	65	76
C	16	18	18	18
f	2	2	2	2
Bolts	M12*50	M12*50	M12*50	M12*50
Flange Standard	DIN PN16			

Remote with thread connection: DN15~DN32 / ½"~ 1¼"



Size (DN)	Pressure (Mpa)	L (mm)	Thread
DN15	2.5	220	G3/4B
DN20	2.5	220	G1B
DN25	2.5	260	G1 1/4B
DN32	2.5	260	G1 1/2B

Measuring Heat/Energy

Multi-channel Ultrasonic Flow Meter could connect temperature sensor to become one calorimeter

