

Inline Single Channel Ultrasonic Flow /Calori Meter





Overview

QTFB Inline ultrasonic Calori / Flow adopts transit-time ultrasonic technology in which the signal is transmitted and received alternately between two flowsensors 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

01

The flowmeter is divided into two types: one-piece and split-type, which are suitable for more applications.

02

Non-conductive/special medium measurement.

03

Low voltage multi-pulse balanced transmission and reception.

04

Positive/negative/net accumulators.

05

Isolated RS-485 interface, support MODBUS RTU.

06

Anti-interference design, electrically isolated DC power supply.

07

Built-in heat measurement/calorimeter (optional function).



Application

Water Company	Environmental protection	Food Grade	Chemimcal Industry	Oil Industry
River water running water Reservoir water	waste water Greening water	Beer Vegetable oil	Alcohol Cooling water deionized water	Diesel Gasoline Kerosene



(0543) 543 91 70
(0212) 422 67 41



www.rst-elektronik.com



info@rst-elektronik.com



Technical Specification

Description	Inline Ultrasonic Flow / BTU Meter
Principle	Transit-time
Pipe Size	DN15~DN300 (½"~ 12")
Accuracy	±1% FS (0.5-10 m/s)
Repeatability	0.2%
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





Product Picture



Compact
DN40~DN300 / 1½"~12"



Remote
DN40~DN300 / 1½"~12"



Compact with flange connection
DN15~DN32 / ½"~ 1¼"



Compact with thread connection
DN15~DN32 / ½"~ 1¼"

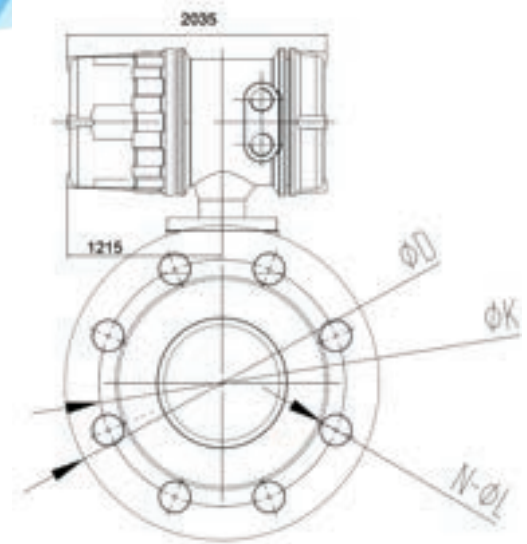
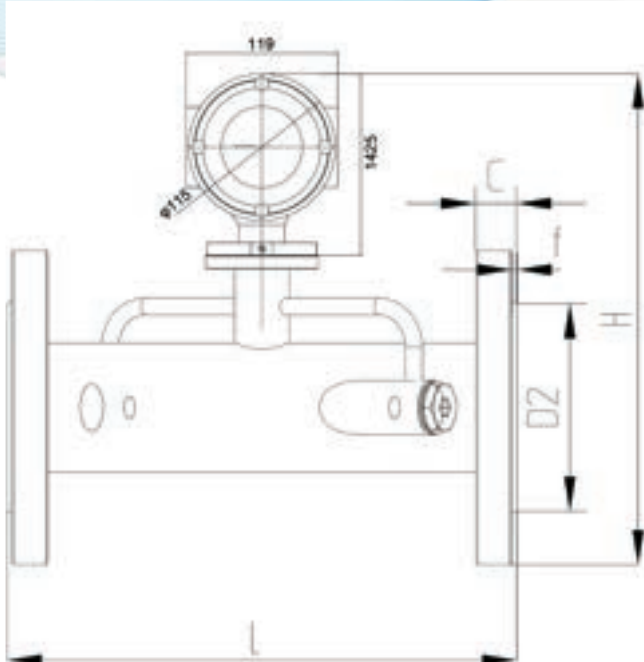


Remote
DN15~DN32 / ½"~ 1¼"





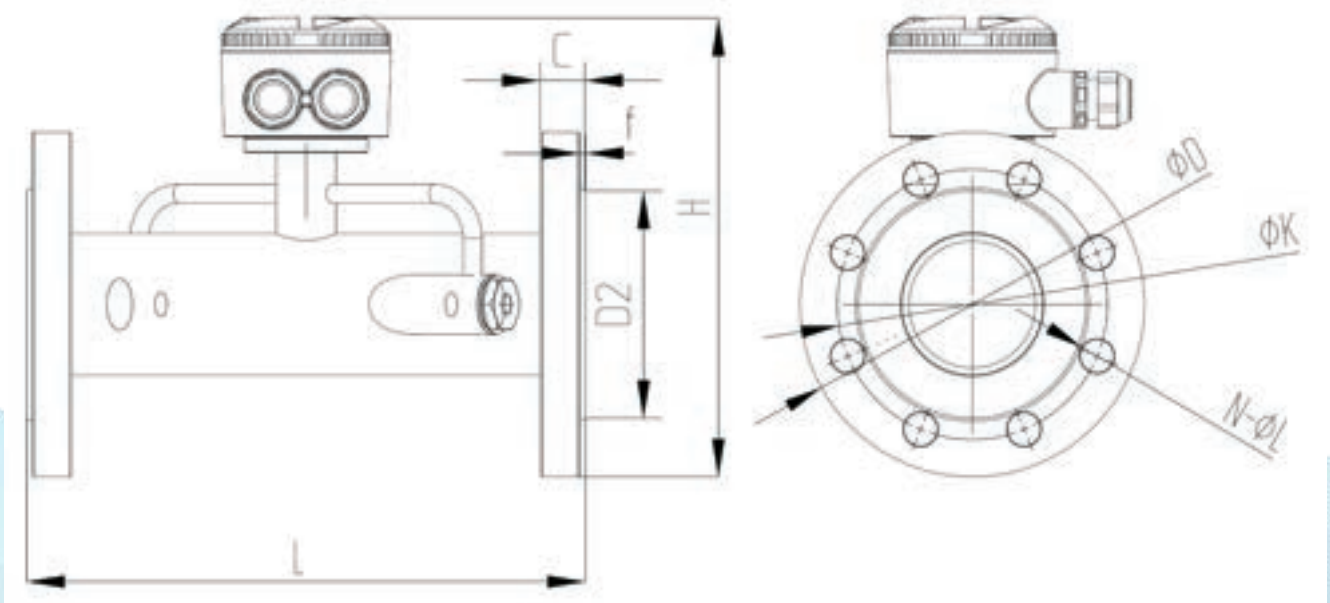
Dimension (flange standard is DIN PN16, other standards can be provided on request)



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

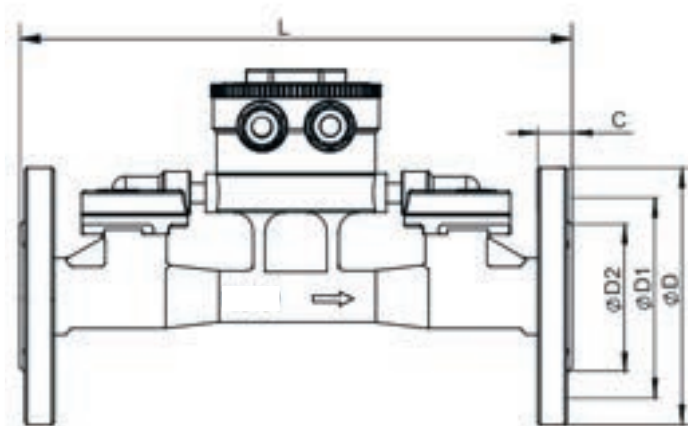




Remote: DN40-DN300 / 1½"~12"

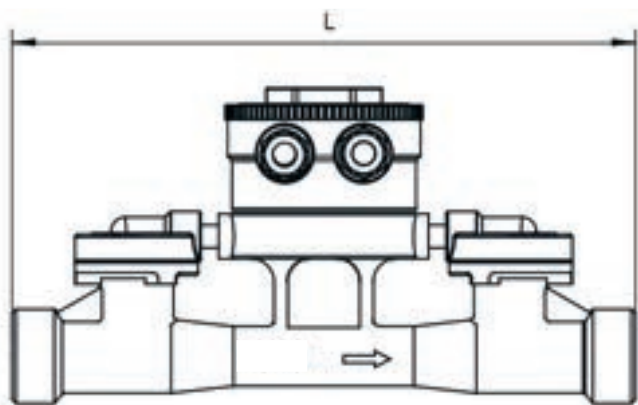
Nominal Size (DN)	Nominal Pressure (Mpa)	L (mm)	H (mm)	Flange Size						
				φD (mm)	φK (mm)	φL (mm) X N	D2 (mm)	Flange Thickness (mm)		Bolt Specification
								C	f	
40	DIN 1.6	300	214	150	110	Ø18X4	88	18	2	M16X65
50		300	226	165	125	Ø18X4	102	20	2	M16X70
65		300	246	185	145	Ø18X4	122	20	2	M16X70
80		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





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



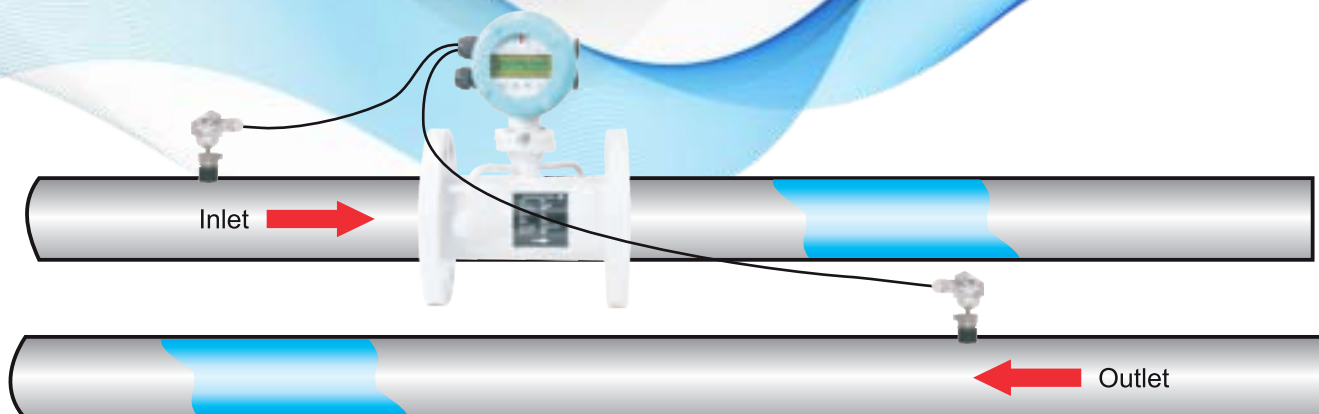
Size(DN)	Pressure (Mpa)	L(mm)	Thread
DN15	2.5	220	G3/4B
DN20	2.5	220	G1B
DN25	2.5	260	G1 1/4B
DN32	2.5	260	G1 1/2B

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



Measuring Heat/Energy

Multi-channel Ultrasonic Flow Meter Could Connect Temperature Sensor to Become One Calorimeter





Model Selection

Model	QTFB	X	X	X	X	X	X	X	X
Nominal Size	DN15~DN1000 1/2"~40"								
Structurer	Compact	C							
	Remote	R							
Sensor Material	Carbon Steel		CS						
	SS304		S4						
	SS316		S6						
Process Temperature	-30°C~85°C			T1					
	-30°C~150°C			T2					
Power Supply	8~36 VDC				DC				
	85~264 VAC				VC				
Cable Length	5m x 2 (standard signal cable length)					DC			
	Optional cable length					VC			
Protection Grade	IP65 transmitter + IP65 transducers						5		
	IP65 transmitter + IP68 transducers						8		
Temperature Sensor	Without temperature sensor							WT	
	With PT100 temperature sensor							W	
Process Connection	Flange	DIN D10: PN10, D16: PN16, D25: PN25, D40: PN40							D**
		ANSI A15: 150#, A30: 300#, A60: 600#							A**
		JIS J10: 10K, J20: 20K, J30: 30K, J40: 40K							J**
	Thread								T





(0543) 543 91 70
(0212) 422 67 41



www.rst-elektronik.com



info@rst-elektronik.com