FMU854 Series Dual Channel Two-wire Ultrasonic Flowmeter

MAIN FEATURES

FMU854 dual channel two-wire pipe section ultrasonic flowmeter adopts two-wire system (loop power supply) design, which makes it easier to integrate with the system and provide excellent cost performance. The dual channel sensor can achieve + 0.5% measurement accuracy.

FMU854 dual channel two wire system (loop power supply) pipe section ultrasonic flowmeter is the best choice for measuring various conductive or non-conductive liquids. Widely used in process control, production measurement and trade settlement, it has been deeply applied to water supply and drainage, metallurgy, chemical industry, energy field and heating industry.

SPECIFICATION

Category	Performance	Parameters
Hosts	Principle	Principle of ultrasonic time difference, 4-byte IEEE754 floating-point operation
	Accuracy	Segment Type: Flowmeter: ±0.5%; Calorimeter: ±1.0%
		Clamp Type: Flowmeter: ±1.0%; Calorimeter: ±2.0%
		Plug-in type: Flowmeter: ±1.0%; Calorimeter: ±2.0%
	Operating	Four-button operation with magnetic bar touch or finger touch; simulation keyboard software
	Signal output	1 channel 4-20mA current output, impedance: 0-1k, accuracy: 0.1%
		1 way OCT pulse output
		1 relay output
	Signal input	3 4-20mA current input, accuracy: 0.1%; can collect pressure, temperature, level and other signals, can be connected to the 3-wire system
		The PT100 temperature sensor measures heat.
	Data interface	Isolated RS485 serial interface, flow meter can be upgraded via PC PC Support MODBUS communication protocol.
Special cable	Custom twisted-pair cable, generally limited to 50 meters, use RS 485 communication protocol, transmission distance up to more than kilometers	
Pipeline	Tube material	Steel, stainless steel, cast iron, cement pipe, copper, PVC, aluminum, fiberglass, and other dense pipes, allowing lining
	Bore size	DN15mm-DN6000mm
	Straight section	The sensor installation point is best to meet: upstream 10D, downstream 5D; 30D from the pump outlet (D is the pipe segment).
Measuring medium	Media type	Water, seawater, industrial wastewater, acid, alkali, alcohol, beer, various oils,
	Temperature -30°C-160°C	
	Turbidity	≤10000ppm, and small bubble content
	Velocity	0-10m/s
Working environment	Temperature	Host: -20°C -60 °C; flow sensor: -30 °C -160 °C.
	Humidity	Converters and sensors can work under water with underwater depth ≤ 2m (completely sealed).
Power supply	DC8-36V;AC85-264V(optional)	
Power consumption	1.5W	
Protection	IP68	

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OUTLINE CONSTRUCURE

• CLAMP ON TYPE

Clamp-on Type	Picture	Model	Accuracy	Protection	Caliber	Medium Temperature
Standard		TS-2	±1%	IP68	DN25-100mm	-30℃~90℃
		TM-1	±1%	IP68	DN50-700mm	-30℃~90℃
		TL-1	±1%	IP68	DN300-6000mm	-30℃~90℃
High Temperature Standard		TS-2-HT	±1%	IP68	DN25-100mm	-30℃~160℃
		TM-1-HT	±1%	IP68	DN50-700mm	-30℃~160℃
		TL-1-HT	±1%	IP68	DN300-6000mm	-30℃~160℃

• INSERTION TYPE

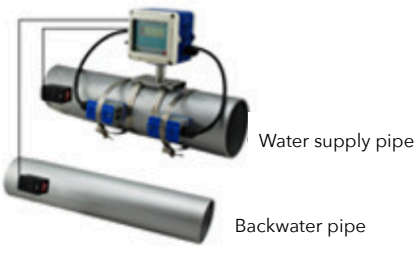
Insertion Type	Picture	Model	Accuracy	Protection	Caliber	Medium Temperature
Standard Type Wall thickness ≤20mm		TC-1	±1%	IP68	DN50-6000mm	-30℃~160℃
Extended Type Wall thickness ≤70mm		TC-2	±1%	IP68	DN50-6000mm	-30℃~160℃
Prallel Type（no enough space）		TP-1	±1%	IP68	DN80-6000mm	-30℃~160℃

• PIPE SEGMENT TYPE

Inline Type	picture	Connection	Accuracy	Protection	Caliber	Medium Temperature
π type		Thread	±0.5%	IP68	DN15~32mm	-30℃~160℃
π type		Flange	±0.5%	IP68	DN15~32mm	-30℃~160℃
Standard		Flange	±0.5%	IP68	DN40~1000mm	-30℃~160℃

• HEAT MEASUREMENT DIAGRAM

Clamp on type	Insertion type	Segment type



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• CONNECTION SIZE

• Thread connection

Nominal diameter	Pressure P	Length L	Width W	Heigt H	Threaded connection	Thread length
DN15	2.5	320	121	285	G3/4B	13
DN20	2.5	360	121	285	G1B	15
DN25	2.5	390	121	292	G1 1/4B	16
DN32	2.5	450	121	292	G1 1/2B	22.5

• Flange connection

Nominal diameter	Pressure P	Length L	Flange size					Flange	
			Outside diameter D	Bolt hole center circle diameter D1	Bolt hole Diameter*Quantity Φ*n	Sealing surface diameter D2	Bolt specifications	C	F
DN15	2.5	320	95	65	14*4	46	M12*50	14	2
DN20	2.5	360	105	75	14*4	16	M12*50	16	2
DN25	2.5	390	115	85	14*4	16	M12*60	16	2
DN32	2.5	450	140	100	18*4	16	M16*60	18	2

• DN40 ~ DN2000 Flange connection

Nominal diameter	Pressure	Long	Width	high	Flange size						
					Outside diameter	Bolt hole center	Bolt hole diameter X sealing surface		Flange thickness		Bolt specifications
(DN)	P	L	W	H	D	Circle diameter D1	Quantity φXn	Diameter D2	C	F	
40	1.6	1300	150	336	150	110	18*4	84	18	2	M16*60
50	1.6	300	165	349	165	125	18*4	99	20	2	M16*70
65	1.6	300	185	366	185	145	18*4	118	22	2	M16*70
80	1.6	225	200	381	200	160	18*8	132	20	2	M16*80
100	1.6	250	220	401	220	180	18*8	156	22	2	M16*80
125	1.6	275	250	428	250	210	18*8	184	22	2	M20*80
150	1.6	300	285	459	285	240	22*12	211	24	2	M20*90
200	1.6	350	340	511	340	295	26*12	266	26	2	M22*90
250	1.6	450	405	569	405	355	26*12	319	28	2	M22*90
300	1.6	500	460	621	460	410	23*16	370	32	2	M22*90
350	1.0	550	500	666	500	460	25*16	428	28	4	M20*80
400	1.0	600	565	697	565	515	25*20	482	30	4	M22*90
450	1.0	700	615	774	615	565	25*20	532	30	4	M22*90
500	1.0	800	670	826	670	620	30*20	585	32	4	M22*90
600	1.0	1000	780	931	780	725	25*24	685	36	5	M27*110
700	0.6	1100	860	1021	860	710	30*24	775	32	5	M22*90
800	0.6	1200	975	1129	975	920	30*24	880	32	5	M27*100
900	0.6	1300	1075	1229	1075	1020	30*24	980	34	5	M27*100
1000	0.6	1400	1175	1329	1175	1120	30*28	1080	36	5	M27*110

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ORDER CODE

FMU854	Ultrasonic Flowmeter						
	CODE	type					
	A	Clamp on type					
	B	Insertion type					
	C	Segment n-type type					
	D	Standard segment type					
		CODE	Nominal diameter				
		D15	DN15mm				
		D20	DN20mm				
		…	…				
		D6000	DN6000				
			CODE	Voltage			
			D	DC8-36V			
			A	AC85-264V			
				CODE	Working temperature		
				1	-30 °C -90 °C		
				2	-30 °C -160 °C		
				3	Other customized		
					CODE	Signal output	
					S1	1 channel 4-20mA current output	
					S2	1 way OCT pulse output	
					S3	1 relay output	
					S4	RS485	
					C	Other customization	
						CODE	Other parameters
						A	Flow range_
						B	Normal pressure_Kpa
						C	Protection level IP68
						D	Flameproof level ExdIICT6
						E	Maximum temperature _° C
						F	Other requirements
FMU854	A	D15	D	1	S1	BC	Order example

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