

Ultrasonic Flowmeters

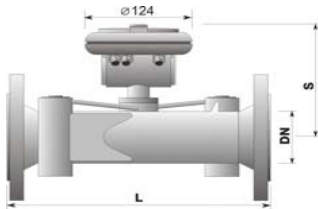
FL series in-line Ultrasonic flowmeter



Battery-powered ultrasonic water and flow meters of the FLOMIC FL50X4 type series are intended for technological and commercial flow-rate, pressure and water consumption measurements and data storage in water works, water treatment and supply plants and other industries. The meter design and parameters comply with the requirements of standard CSN EN 14154. The technological capabilities and parameters of the meters make them suitable not only for water consumption measurements but also for monitoring of water leakage and general water-supply network conditions with optional connection to a remote data processing station via a data transfer channel.

- Battery powered design
- Sizes up to 12"
- Optional Analogue output
- Bi-directional designs

Dimensional Information



DN	32	40	50	65	80	100	125	150	200
L (mm)	260	300	300	300	350	350	350	350	350
S (mm)	140	145	150	155	160	165	180	190	205
Weight (kg)	4.5	7	10	11	15	17.5	22.5	26	36.5

Technical Information

nominal diameter DN		32	40	50	65	80	100	125	150	200
overload flowrate Q4 (m ³ /h)		12.5	20	31.25	50	78.75	125	200	312.5	500
penament flowrate Q4 (m ³ /h)		10	16	25	40	63	100	160	250	400
transitional flowrate Q4 (m ³ /h)	FL 5024	0.2	0.32	0.5	0.8	1.26	2.0	3.2	5.0	8.0
	FL 5044				0.64	1.0	1.6	2.5	4.0	6.4
minimum flowrate Q4 (m ³ /h)	FL 5024	0.125	0.2	0.312	0.5	0.787	1.25	2.0	3.125	5.0
	FL 5044				0.4	0.63	1.0	1.6	2.5	4.0
pulse output constant Ki (litres/pulse)		10	10	25	50	50	100	100	100	250
water pressure class		MAP 16								
temperature class		T50								
flow-profile sensitivity class	before meter	U5 (FL 5044), U10 (FL5024)								
	after meter	D3 (FL 5044), D5 (FL5024)								
pressure loss class		ΔP 10								
climate and mechanical resistance class		B								
Electromagnetic environment		E1, E2								
Flowrate sampling period		1 sec								
Display unit		Single-line 8-digit LC display								
Power supply		Lithium battery 3.6 V/19 Ah, minimum lifetime 8 years in standard meter version								
Protection class		IP 68								
Output (insulated)		measured flowrate values indicated in the form of passive pulse output U = 3 to 30 V, I = 0.002 to 10 mA timp = 30 ms								
optional accessories		passive current output 4 to 20 mA, U = 10 to 24 V								
	Bi-directional flowrate measurement	+ passive pulse output, U = 3 to 30 V, I = 0.002 to 10mA timp = 30 ms - passive pulse output, U = 3 to 30 V, I = 0.002 to 10mA timp = 30 ms								
		Passive current output 4 to 20mA, U = 10 to 24V, in combination with passive electric contact for indication of the actual flowrate direction								
		Optically isolated interfaces USB, RS 232 or RS 232 + USB convertor GSM module								

Ordering Information

Part Number:	Contact Flowtechnik
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Vortex Flowmeters

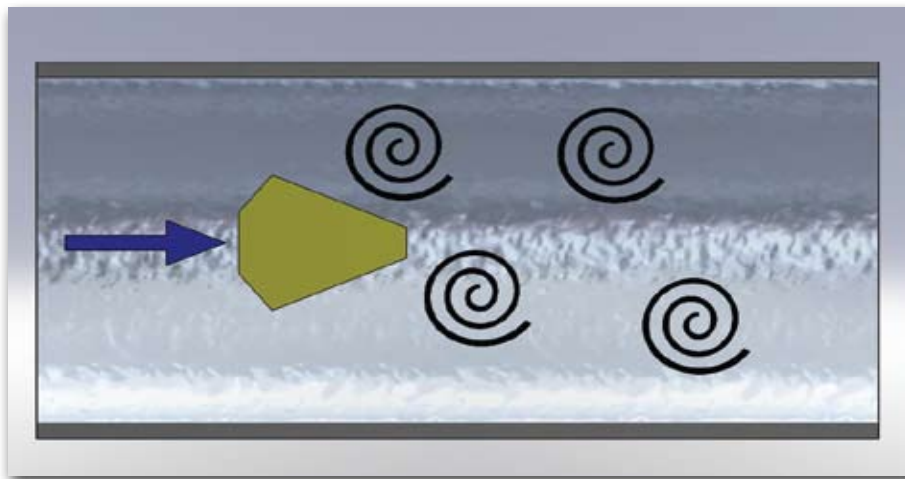
Vortex flowmeters - principle of operation

Principle of operation

Vortex Flowmeters use a phenomenon first described by Theodore Karman whereby a body or bluff body as it is known, placed across a laminar flow will alternatively shed 'Karman' vortices from its trailing edge. These vortices or eddies shed in a continuous stream with a frequency which is proportional to the velocity of the fluid flowing passed the bluff body, and produce low pressure and disturbed regions in the fluid which can be detected using pressure or vibration sensors.

The Karman vortex effect can be seen with a variety of fluids such as air, steam and water like liquids, making this type of flowmeter extremely versatile as one unit can do all three applications (usually with only minor modifications). Vortex flowmeters tend to be relatively expensive, although low cost moulded versions for water applications are becoming more common.

With plenty of different flowmeter types to measure water like liquids, Vortex flowmeters are more commonly associated with steam and larger air applications and tend to be used with a flow computer to give mass flow rate.



Media application guide



Water ✓



Air/Gases ✓



Hazardous ✓



Steam ✓