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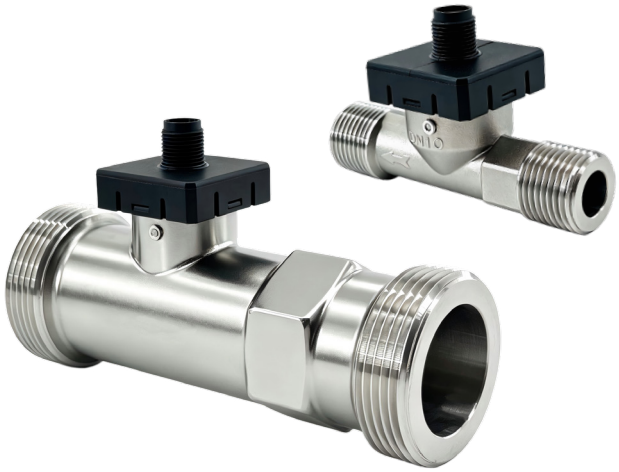
VF51 Vortex Flowmeter

Features

- Karmen Vortex Street principle, no moving parts
- Wetted material 304SS, FKM, PA6T nylon, high temperature resistance, low water absorption
- Medium compatibility
- Less temperature effect
- Output 0 - 10V, 4 - 20mA, pulse or RS485
- Reliable for OEM application

Typical Uses

- Liquid Cooling / CDU
- Heat Recovery
- Medical Equipment



Specifications

Measuring Range:	1.8~32 L/min (DN10) 3.5~50 L/min (DN15) 5.0~85 L/min (DN20) 9.0~150 L/min (DN25) 14.0~240 L/min (DN32)
Max./Min. Ratio:	14:1 to 17:1
Accuracy:	±1% F.S (50% range or below) ±2% reading (50% range or above) (Water@25°C)
Operating Temperature:	-20~90°C
Ambient Temperature:	-30~65°C
Storage Temperature:	Solid front with pressure relief back
Wetted Material:	SUS304, FKM, PA6T nylon
Medium:	Deionized water, Water - glycol
Window Material:	Glass (STD.), acrylic window (OPT.), shatterproof glass (OPT.)
Max. Pressure:	1.8 Mpa
Life:	>10 years
Output:	0~10V, 4~20mA, Frequency / Pulse, RS485
Electrical Connection:	M12, 5-pin
Process Connection:	G1/2, G3/4, G1, G1-1/4, G1-1/2, male
Dimension:	Overall length 85mm to 135mm, per DN

Working Principle

When fluid flows past the internal flow-restricting element (vortex generator) inside the pipe, stable alternating vortices are shed alternately on its left and right sides; the vortex shedding frequency is proportional to the flow velocity. The flow rate can be calculated by detecting this frequency.

Contant US
400-187-6586
ashcroft.com.cn
sales@ashcroft.com.cn

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Ordering Code Example::	VF51	7	S	DN20	42
Product Type					
VF51 - Vortex Flow Meter	VF51				
Accuracy					
7 - ±1% F.S(50%range or below); ±2% Reading(50%range or above), Water@25°C		7			
Wetted Materials					
S - SS304 housing, with FKM and Nylon PA6T			S		
Size					
DN10 - Range 1.8~32 L/min,Thread G1/2					
DN15 - Range3.5~50 L/min,Thread G3/4					
DN20 - Range5.0~85 L/min,Thread G1				DN20	
DN25 - Range9.0~150 L/min,Thread G1-1/4					
DN32 - Range14~240 L/min,Thread G1-1/2					
Output					
42 - 4-20mA					42
10 - 0-10Vdc					
R4 - RS485					
FQ - Frequency					
PL - Pulse					

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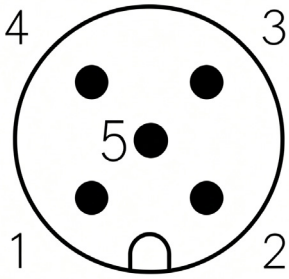
Output & Wiring



M12- 5 pin

Output	4 - 20 mA	0 - 10 Vdc	RS485	Frequency / Pulse
Supply	12 - 33 Vdc	10 - 33 Vdc	4.75 - 33 Vdc	4.75 - 33 Vdc
Pin#1	V+	V+	V+	V+
Pin#2	V-	Output	n/a	Frequency / Pulse
Pin#3	n/a	V-	V-	V-
Pin#4	n/a	n/a	485B	n/a
Pin#5	n/a	n/a	485A	n/a

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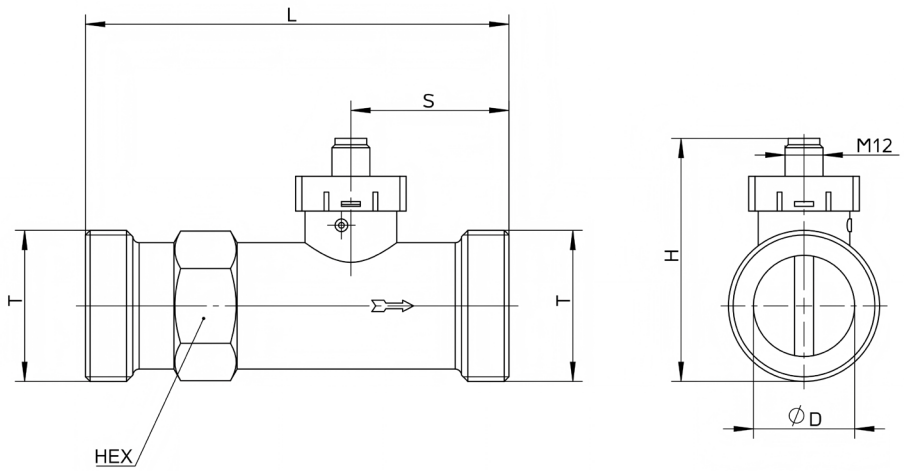
Dimensions (MM)

For reference only, consult Ashcroft for specific dimensional drawings



Size	S	H	T	L	D	Hex
DN10	43	53.5	G½	86	11	19
DN15	36.5	57.5	G¾	87	15	22
DN20	40.5	62.5	G1	105	19	27
DN25	50	69	G1¼	120	24	34
DN32	50	76	G1½	134	32	41

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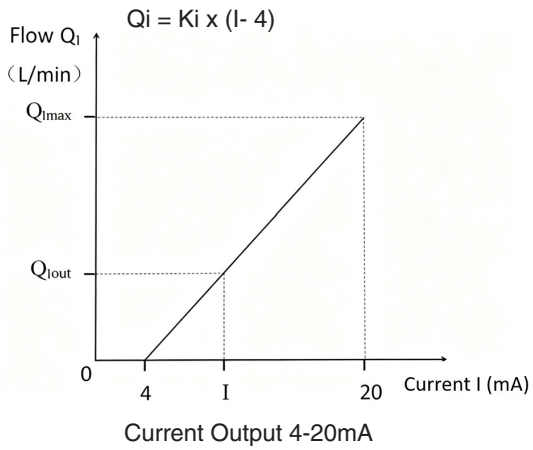
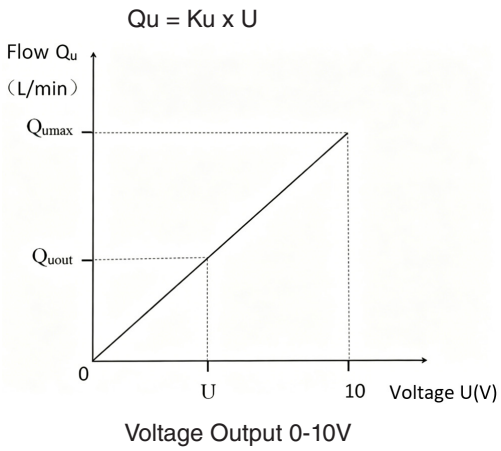
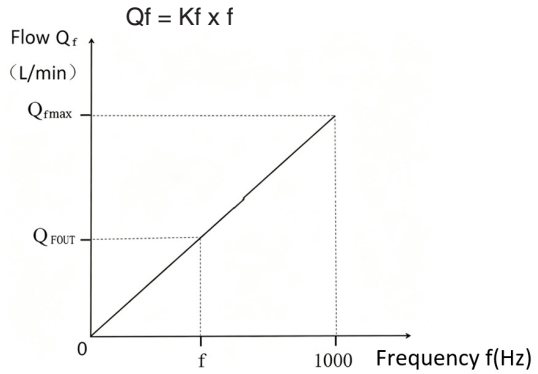
Flow Rate Calculation



Current Output 4-20mA



Voltage Output 0-10V



Frequency Output 0-1000Hz

Size	DN10	DN15	DN20	DN25	DN32
Ki	0.625	3.125	5.313	9.375	15
Ku	3.2	5	8.5	15	24
Kf	0.032	0.05	0.08	0.15	0.24

Ki: Current output coefficient
Ku: Voltage output coefficient
Kf: Frequency output coefficient

I: Current output value
U: Voltage output value
f: Frequency output value

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