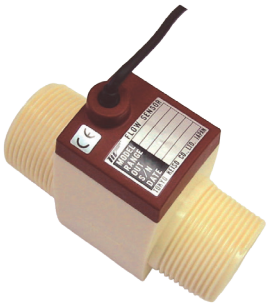
VF-2300 Vortex Flow Sensor

DESCRIPTION

The VF-2300 Flow Sensor is an improved version of well-received VF-2000 and expands the flow range to 250 L/min.
The VF-2300 Flow Sensor offers a cost-effective instrument for the measurement of liquid flow.
A simple and compact design makes the VF-2300 a good choice for the measurement of water, pure water, cooling water.
Current output model, Pulse output model and Display model with current / alarm outputs are available. Fitting is selectable from various types according to use.



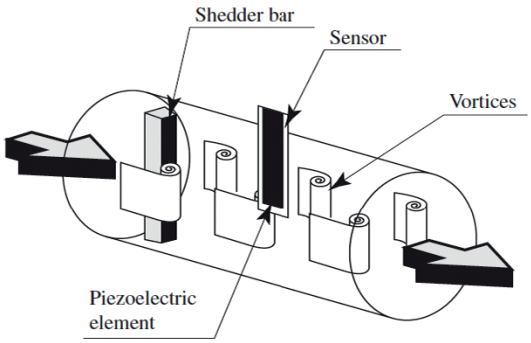


KEY FEATURES

- **Simple and compact design**
  The VF-2300 Flow Sensor is assembled with a few pieces of components. The sensor body and Shedder bar (vortex generator) are molded as one component. This design approach has reduced the cost as well as the size and weight of the flowmeter. Sensor body is made of PPS (Polyphenylene sulfide) and is designed to eliminate deposits.
- **No maintenance cost**
  Since the VF-2300 has no moving parts, no maintenance is needed.
- **Low pressure loss**
  A combination of straight flow path and Shedder bar gives a lower pressure loss. (27 kPa at 200 L/min)
- **Various fittings are lined-up**
  In addition to Taper Pipe Threads (R), TS socket, Flange (JIS 10K), Taper Pipe Threads (Rc) are available.
- **Display model with current and alarm output**
  3-digit LED display for flow rate, current output and alarm outputs (2-point) are provided in compact design.
- **CE Marking**
  The VF-2300 meets the EC directive for CE mark.

OPERATING PRINCIPLE

A bluff body or Shedder bar in the flow generates a street of vortices downstream. The VF-2300 Flow Sensor measures the flow rate by counting the number of vortices with a piezoelectric sensor.



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STANDARD SPECIFICATIONS

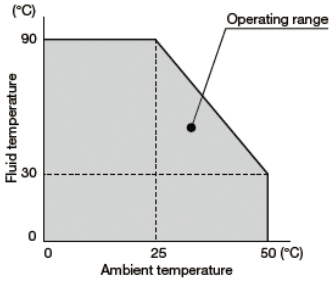
Specifications			Model		
			Current Output Model	Pulse Output Model	Display and Current Output Model
			VF-2316	VF-2326	VF-2336
Measurable Fluid			Pure water, Water, Low viscosity chemical liquid		
Flow Range *1			25 to 250 L/min		
Accuracy (Additinal Error for LED display) *1			±3%F.S.		±3%F.S. (1digit)
Repeatability			±0.5%F.S		
Fluid Pressure			Body : 1MPa Max. *2		
Fluid Temperature			Body : 0 to 90°C *2		
Ambient Temperature			0 to 50°C		0 to 50°C (Refer to "Fluid and Ambient Temperature")
Ambient Humidity			5 to 90%RH		
Operating Voltage			10.8 to 26.4V DC		
Rated Power			1W	0.5W	2W
Display		Flow	—		3-digit LED
		Alarm	—		2 LED
Display Resolution			—		1 L/min
Output			●Current output 4 to 20mA DC (3-wire) Load: 0 to 250 ohms at 12V DC 250 to 600 ohms at 24V DC (Refer to "Load Resistance Range") Damping Time Constant 1 sec (63% response)	●Unscaled pulse output Open collector, Max. 10mA/30V DC Pulse duty factor; approx. 50% Output frequency at 100% flow *1 750Hz	●Current output 4 to 20mA DC (3-wire) Load: 0 to 250 ohms at 12V DC 250 to 600 ohms at 24V DC (Refer to "Load Resistance Range") Damping Time Constant 1 sec (63% response) ●Alarm output (2-point) Open collector, Max. 80mA/30V DC Hysterisis ; equal to display resolution
Cable			0.2mm² × 3C (AWG24), 3m, Outside diameter 3.5mm (Soldered end finish)		0.2mm² × 5C (AWG24), 3m, Outside diameter 4.5mm (Soldered end finish)
Mass		Body	145g		175g
		Cable	75g		90g
Enclosure Classification			IP64		
Min. Straight Pipe Run			Upstream 10D, Downstream 5D (D: Normal Pipe Size)		
Process Connection			Taper pipe Thread (R1 1/4), TS socket Fitting (Nominal diameter 30mm) attached, 32A JIS10K FF Flange fittings attached or Taper Pipe Threads fitting (Rc1 1/4) attached		
Body Materials	Wetted part	Body	PPS (Polyphenylene sulfide)		
		Sensor	Piezoelectric element molded with PPS		
		O-ring	Fluorine rubber (FKM) or Etylene propylene rubber (EPDM)		
	Cover		Poly-butylene trephthalate (PBT)		
	Cable sheath		Heat-resistant PVC		
Fitting Materials		Fitting	PVC		
		O-ring	Fluorine rubber (FKM) or Etylene propylene rubber (EPDM)		

*1 Conditions for calibration
Fluid: Water, Fluid temperature: 20°C, Ambient temperature: 23°C, Supply voltage: 24V DC
*2 Specifications of pressure and temperature may change depending on specification of fitting.

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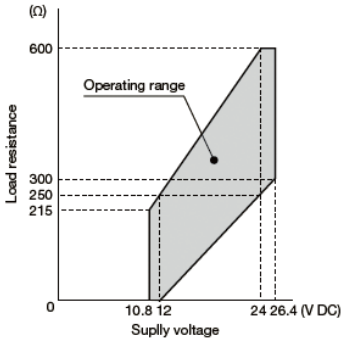
Fluid and Ambient Temperature

(only for Display type VF-2336)



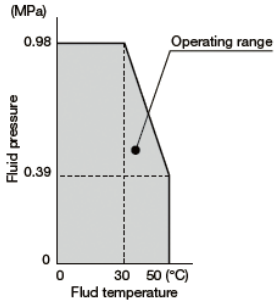
Load Resistance Range

(VF-2316, VF-2336)



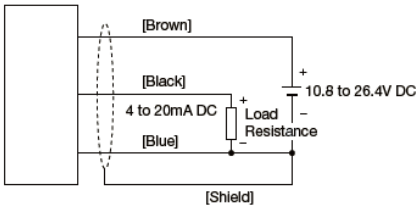
Fluid Pressure and Temperature

● Fitting material : PVC

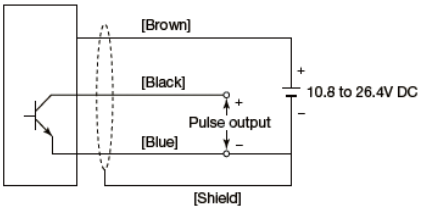


WIRING DIAGRAM

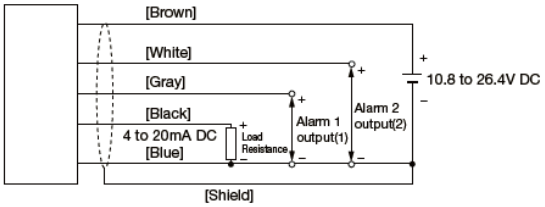
● Current Output Model (VF-2316)



● Pulse Output Model (VF-2326)



● Display / Current Output Model (VF-2336)



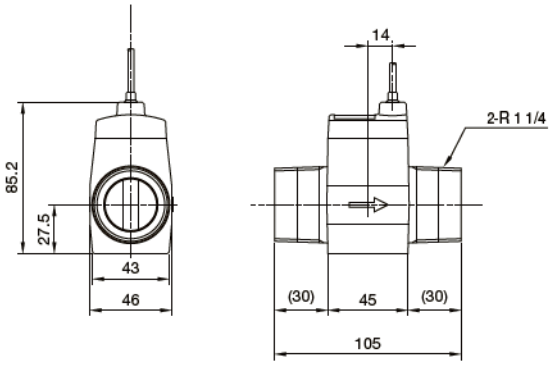
MODEL CODE

Model code							Description
VF - 23	□	□	-□	□	□	/□	
Type/Output	1						Current output : 4 to 20mA DC (3-wire)
	2						Pulse output : Open collector (Unscaled)
	3						Display : Flow rate (3-digit LED), Alarm (2 LED) Current output : 4 to 20mA DC (3-wire) Alerm output : Open collector (2 points)
Flow Range		6					25 to 250 L/min
O-ring Material			-F				Fluorine rubber (FKM)
			-E				Etylene propylene rubber (EPDM)
Process Connection				0			R1 1/4 Taper Pipe
				1			PVC / 30mm TS Socket fittings attached
				2			PVC / 32A JIS 10K FF Flange fitting attached
				3			PVC / Rc1 1/4 Taper Pipe Threads
				9			Others
Flow Unit					1		L/min
Option						/□	Option Code

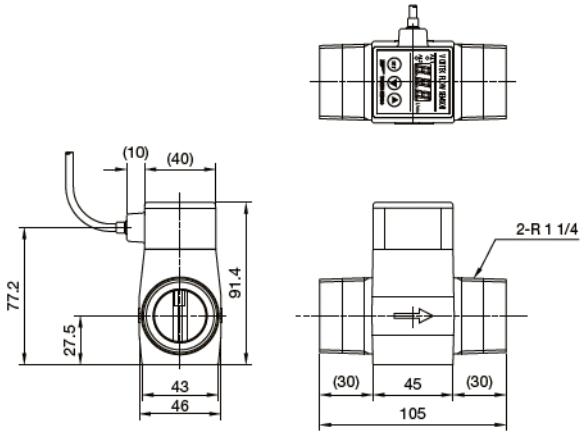
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OUTLINE DIMENSIONS

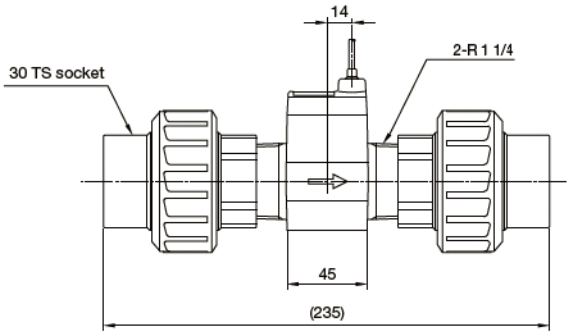
Current output / Pulse output Model



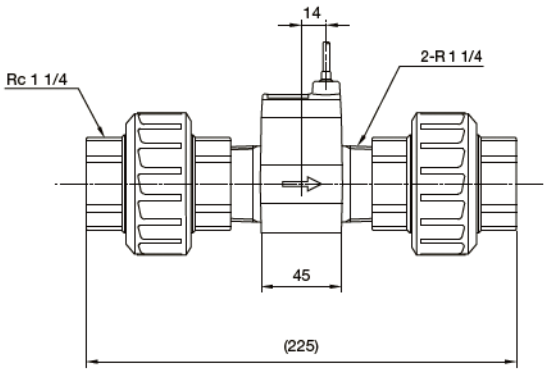
Display / Current output type



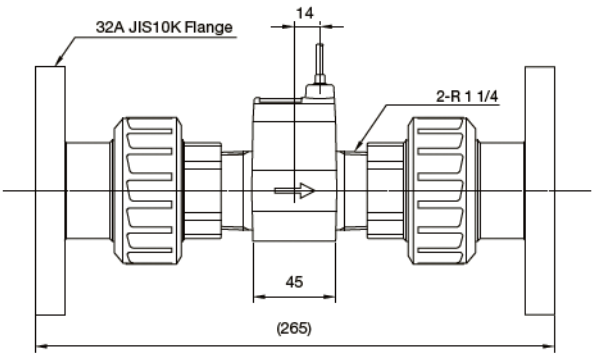
With 30mm TS socket fittings



With Taper pipe thrad (Rc1/4) fittings



With 32A JIS10K FF Flange fittings



ORDERING INSTRUCTION

Specify the following when ordering:

1. Model code
2. Fluid name

*Specification is subject to change without notice.

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