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**Differential Pressure  
Multi-Parameter  
Mass Flow  
Transmitter  
RF3001-DP**

Suitable for measurement of liquid flow, temperature, pressure and other parameters of the automatic control system in a clean and hygienic environment such as food, pharmaceutical, medical experiment, etc.

### **Salient Features**

- Unique central sensing unit adopting DP sensor for flow measurement
- All stainless steel body, sanitary and no dead angle design
- Measure Instantaneous & Cumulative Flow
- Multi-parameter output such as temperature and pressure
- Internationally accepted multi-standard process connection options available
- Excellent electromagnetic protection performance
- Humanized non-contact digital display operation panel
- Reference flow measurement accuracy up to  $\pm 0.5\%$
- Standard 4-20 mA DC Analog output with RS485 or HART Interface options

[www.rocksensor.in](http://www.rocksensor.in)  
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## RF3001-DP Differential Pressure Mass Flow Transmitter

### Technical Parameters

Characteristics	Parameter	
Medium	Liquid in hygienic applications	
Mass Flow Range	0 – 0.1 ~ 30 t/h	
Flow Meas. Accuracy	±0.5%	±1.0%
Stability	Reference Accuracy x Span/3 years	
Power Supply Impact	±0.001%/10V (12 ~ 36 VDC)	
Output	4-20 mA DC/HART(Digital Comm. Load:230 ~ 600 Ω)	
Output Signal Limit	I <sub>min</sub> = 3.9 mA	I <sub>max</sub> = 20.5 mA
Alarm Current	Minimum = 3.7 mA	Maximum = 21 mA (Standard Set)
T <sub>Ambient</sub>	0° C ~ +65° C	
T <sub>Medium</sub>	0° C ~ +150° C	
T <sub>Storage</sub>	-40° C ~ +85° C	
Response Time	Damping Constant=0.1 s	Time Constant= 0.1 ~ 1.6 s
Up time	< 15 s	
Power Supply	24 VDC (15 – 36 VDC)	
Load	R ≤ (U <sub>s</sub> – 12)V/ I <sub>max</sub> kΩ	I <sub>max</sub> = 23 mA
Working Pressure Limit	3.5 kPa abs to Rated Process Pressure	
Electrical Interface	M16x1.5 Waterproof air socket, Terminal block for 0.5 ~ 2.5 mm <sup>2</sup>	
Process Interface Size	Tri-clamp DN25 ~ DN80	
Measuring Bellows MOC	SS316L	
Diaphragm MOC	SS316L	
Process Conn. MOC	SS316L	
Filling Liquid	Silicon Oil	
Housing & Cover MOC	Housing = SS316L	Cover = SS304
Ingress Protection	IP67	

### RF3001-DP Model Selection Table

10	Accuracy	
	E	±0.5%
	F	±1.0%
20	Flow Measurement Range	
	1	0 – 0.1 ~ 1 t/h
	2	0 – 0.2 ~ 2 t/h
	3	0 – 0.13 ~ 3 t/h
	5	0 – 0.5 ~ 5 t/h
	7	0 – 0.7 ~ 7 t/h
	A	0 – 1.0 ~ 10 t/h
	B	0 – 1.5 ~ 15 t/h
	C	0 – 2.0 ~ 20 t/h
	D	0 – 3.0 ~ 30 t/h
30	Pressure Measurement	
	N	None
	1	0 - 10 bar
	2	0 - 20 bar
40	Temperature Measurement Range	
	N	None
	1	0 – 100° C
	2	0 – 150° C
50	Process Interface Standard	
	A	ASME BPE
	B	ISO 2852
	C	DIN 32676
60	Process Interface Size	Reference Flow (t/h)
	1	Tri-clamp DN25
	2	Tri-clamp DN40
	3	Tri-clamp DN50
	4	Tri-clamp DN65
	5	Tri-clamp DN80
		1, 2, 3, 5
		3, 5, 7, 10
		5, 7, 10, 15
		7, 10, 15, 20
		10, 15, 20, 30
70	Additional Options* (-)	
	1	Calibration Report
	2	Material Test Report
	3	HART Communication

\* Additional Options can be selected with multiple choices

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