



# ALIAVA

## Metal Tube Variable Area Flowmeter

### Model AVF250 Series

## GENERAL

**ALIAVA** AVF250 Series is a common used various flowmeter in Auto-industry process control. It's with small volume, wide range and easily operation.

It could also measure liquid, gas and steam flowrate, especially fit for small flowrate application.

## FEATURES

- ❑ 4 digit flowrate & 8 digit totalizer
- ❑ Local indication without auxiliary power
- ❑ 4-20 mA & Scale pulse output
- ❑ Low pressure lost on gas and steam application
- ❑ Damper for Gas/Steam application
- ❑ Consistent overall length
- ❑ Heating jacket design
- ❑ Intrinsically safe & explosion proof for hazardous area

## SPECIFICATION

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>● Size : 15,20,25,40,50,65,80,100,125,150,200 mm</li> <li>● Measuring Range : Liquid - 1 ~ 200000 Liter/Hr<br/>: Gas - 0.03 ~ 4000 M3/Hr</li> <li>● Turndown Ratio : 10:1 (20:1 Optional)</li> <li>● Accuracy : +/-1.6%(Standard)<br/>: +/-1.0%(Optional)</li> <li>● Repeatability : +/-0.5% of reading</li> <li>● Material : Tube &amp; Float : Stainless Steel 304<br/>: Stainless Steel 316<br/>: Stainless Steel 316L<br/>: Stainless Steel + PTFE Liner</li> <li>● Standard Pressure : 40 Kg/cm2 (15mm ~ 50mm)<br/>: 16 Kg/cm2 (65mm ~ 200mm)</li> <li>● Temperature : -80 ~ +200 °C (Standard)<br/>: -25 ~ +100 °C (LCD Display)<br/>: 0 ~ +85 °C (PTFE Liner)<br/>: -80 ~ +400 °C (Optional)</li> <li>● Flange Type : JIS 10K / JIS 20K / JIS 40K<br/>ANSI 150# / ANSI 300# / ANSI 600#<br/>DIN PN 10 / PN 16 / PN25 / PN 40</li> <li>● Fluid Viscosity : 300 CP Max.</li> <li>● Communication : RS485(MODBUS Protocol)<br/>HART Signal</li> </ul> | <ul style="list-style-type: none"> <li>● Local Display : Mechanical Indicator (standard)<br/>Digit Display : 4 Digit Flowrate<br/>: 8 Digit Totalizer</li> <li>● Current output : 4-20 mA(2 Wire)<br/>Load : Max. 600 Ω</li> <li>● Pulse output : Open collector (Scale pulse)<br/>Rating : 3 to 30Vdc, 100 mA Max.</li> <li>● Data Storage : Operation parameters and totalization<br/>figures are stored by EEPROM for more<br/>then 10 years</li> <li>● Alarm output : 2 point (open collector)<br/>Rating : 3 to 30Vdc, 100 mA Max.</li> <li>● Keyboard : 3 keys from internal for programming<br/>and display control.</li> <li>● Ambient temperature : -25 to +60 °C</li> <li>● Protection class : IP 65<br/>: Intrinsically Safe, Eex ia IIC T5<br/>: Explosion Proof, Ex d IIB T6</li> <li>● Housing Material : Aluminum Alloy</li> <li>● Cable entry : M20 * 1.5</li> <li>● Pressure Drop : 0.07 ~ 0.7 Kg/cm2</li> <li>● Power supply : 11 ~ 36VDC( 2 wire 4-20 mA)<br/>: Ni-MH Battery(3 years working hours)</li> </ul> |
|--|--|



With LCD Display



Local Indication



Explosion Proof

## ALIA GROUP INC.

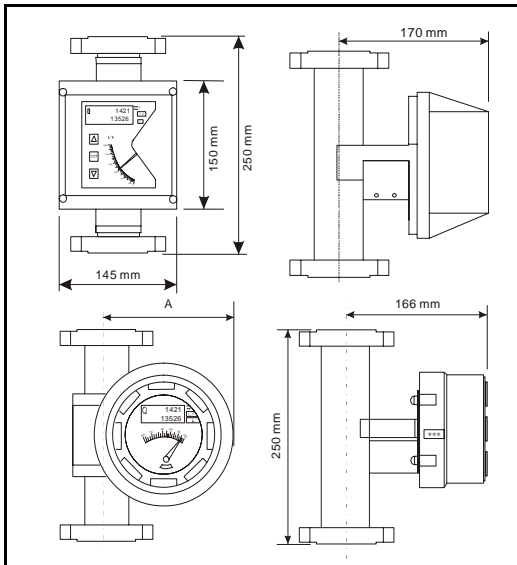
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AVF250V1.1.3en

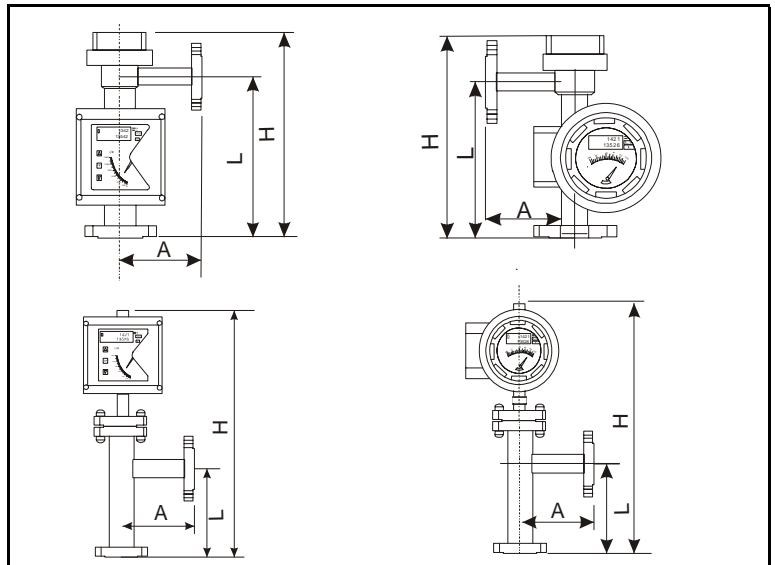
**FLOW RANGE**

Size				Float No.	S.S.304 / 316 / 316L	S. S. + PTFE	S.S.304 / 316 / 316L		
					Water , 20°C			Air, 0°C, 1 ATM	
					Liter/Hr		Liter/Hr	M3/Hr	
15 mm	1/2"	20 mm	3/4"	F15.0	1.0 - 10		0.03 - 0.3		
				F15.1	1.6 - 16		0.07 - 0.7		
				F15.2	2.5 - 25	1.6 - 16	0.11 - 1.1		
				F15.3	4.0 - 40	2.5 - 25	0.18 - 1.8		
				F15.4	6.3 - 63	4.0 - 40	0.28 - 2.8		
				F15.5	10 - 100	6.3 - 63	0.4 - 4.0		
				F15.6	16 - 160	10 - 100	0.7 - 7		
				F15.7	25 - 250	16 - 160	1.0 - 10		
				F15.8	40 - 400	25 - 250	1.6 - 16		
				F15.9	63 - 630	40 - 400	3.0 - 30		
25 mm	1"	40 mm	1-1/2"	F25.0	63 - 630				
				F25.1	100 - 1,000	63 - 630	3.0 - 30		
				F25.2	160 - 1,600	100 - 1,000	4.5 - 45		
				F25.3	200 - 2,000				
				F25.4	250 - 2,500	160 - 1,600	7.0 - 70		
				F25.5	320 - 3,200				
				F25.6	400 - 4,000	200 - 2,000	12 - 120		
				F25.7	500 - 5,000	250 - 2,500			
				F25.8	630 - 6,300	320 - 3,200	18 - 180		
50 mm	2"	65 mm	2-1/2"	F50.0	500 - 5,000				
				F50.1	630 - 6,300	400 - 4,000	18 - 180		
				F50.2	1,000 - 10,000	630 - 6,300	25 - 250		
				F50.3	1,600 - 16,000	1,000 - 10,000	40 - 400		
				F50.4	2,000 - 20,000	1,600 - 16,000			
80 mm	3"			F50.5	2,500 - 25,000		63 - 630		
				F80.0	1,600 - 16,000				
				F80.1	2,000 - 20,000				
				F80.2	2,500 - 25,000	1,600 - 16,000	70 - 700		
				F80.3	4,000 - 40,000	2,500 - 25,000	120 - 1,200		
100 mm	4"	125 mm	5"	F80.4	6,300 - 63,000	4,000 - 40,000	180 - 1,800		
				F100.0	4,000 - 40,000				
				F100.1	6,300 - 63,000	4,000 - 40,000	180 - 1,800		
				F100.2	8,000 - 80,000	6,300 - 63,000			
150 mm	6"			F100.3	10,000 - 100,000	8,000 - 80,000	300 - 3,000		
				F150.0	8,000 - 80,000				
				F150.1	10,000 - 100,000	8,000 - 80,000	300 - 3,000		
200 mm	8"			F150.2	15,000 - 150,000				
				F150.3	20,000 - 200,000				
				F200.0	15,000 - 150,000				
				F200.1	20,000 - 200,000				

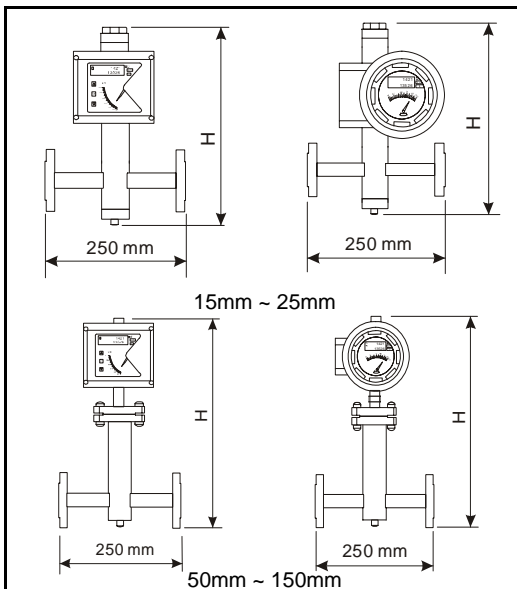
**➤ DIMENSIONS**



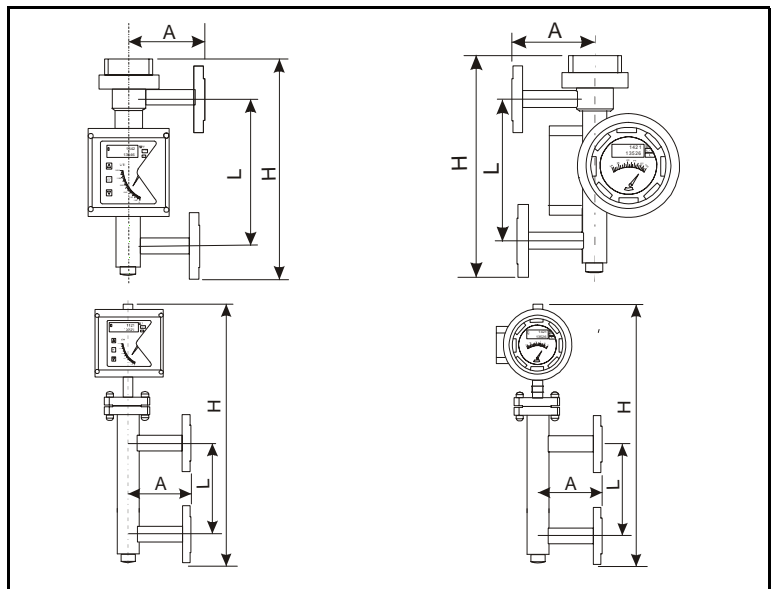
BT ( Bottom - Top )			
Size mm	A mm	Weight Kg	Δ P mbar
15	173	3.7	140
25	173	5.2	190
50	173	8.7	230
80	173	14	330
100	173	15	420
150	178	34	600
200	180	49	700



BR ( Bottom - Top Side )					
Size mm	H mm	L mm	A mm	weight Kg	Δ P mbar
15 mm	350	250	120	7.0	180
25 mm	350	250	120	8.0	220
50 mm	600	250	120	15	280
80 mm	700	250	150	25	350
100 mm	700	250	150	29	450
150 mm	760	300	180	53	580
200 mm	800	350	200	61	700



LR / RL ( Horizontal )			
Size mm	H mm	weight Kg	Δ P mbar
15	430	6.5	300
25	450	10.5	350
50	540	21	400
80	557	32	450
100	570	48	500
150	620	95	630



RR ( Bottom Side - Top Side )					
Size mm	H mm	L mm	A mm	weight Kg	Δ P mbar
15	500	250	120	5.1	200
25	500	250	120	8.2	280
50	650	250	120	14	360
80	800	300	150	31	450
100	800	300	150	50	580
150	850	350	180	67	630
200	880	400	200	81	700

➤ Model Selection Guide

AVF250 Series									
Example:AVF250-050-S6ABT-B-IT-DP									
AVF250-	XXX-	XX	X	XX	-X	-XX	-X	Description	
Size	015 - 200							15 ~ 200mm (1/2" ~ 8")	
Material	-S4							Stainless Steel 304	
	-S6							Stainless Steel 316	
	-SL							Stainless Steel 316L	
	-4P							Stainless Steel 304+ PTFE Liner	
	-6P							Stainless Steel 316+ PTFE Liner	
Connection	1							PN10	
	2							PN16	
	3							PN25	
	4							PN40	
	A							ANSI 150 #	
	B							ANSI 300 #	
	C							ANSI 600 #	
	J							JIS 10K	
	K							JIS 20K	
	L							JIS 40K	
Z							Others		
Flow direction	BT							Bottom - Top	
	BR							Bottom - Top Side	
	RR							Bottom Side - Top Side	
	LR							Left - Right (Horizontal)	
	RL							Right - Left (Horizontal)	
Function	- A							Local Indication	
	- B							Local Indication + Rate 4 digit/Totalizer 8 digit + 4-20 mA	
	- C							Local Indication + Rate 4 digit/Totalizer 8 digit (Battery power)	
	- D							Local Indication + One point Alarm (Reed Switch, 1A, 30VDC)	
	- E							Local Indication + Two point Alarm (Reed Switch,1A, 30VDC)	
Protection	- NN							IP65	
	- IT							Intrinsically Safe, Eex ia IIC T5	
	- EX							Explosion Proof, Ex d IIB T6	
Option	-N							None	
	-C1							RS485(Modbus Protocol)	
	-C2							HART Signal	
	-D							Damper (For Steam & Gas application)	
	-H							Heating Jacket	
	-P1							Pulse/Alarm output * 1(With Function B only)	
	-P2							Pulse/Alarm output * 2(With Function B only)	
	-T							Max. Temp. higher then 200 °C(100 °C for LCD Display)	