ALIAVA

Metal Tube Variable Area Flowmeter

Model AVF250 Series

GENERAL

ALIAVA The AVF250 Series flowmeter is commonly used in locations that require on-site analog flow indication.

The meter accurately measures small volumes / wide ranges of liquids, gases and steam.

With LCD Display

Local Indication

FEATURES

- 5 Digit Flowrate & 7 Digit Totalizer
- Integrated temperature and pressure compensation
- Local indication without auxiliary power
- 4-20 mA and scale pulse output
- Low pressure loss in gas and steam application
- Damper for Gas / Steam application
- Consistent overall length
- Heating jacket design
- Intrinsically safe & explosion proof for hazardous area

T & P Compensation

Explosion Proof

STANDARD SPECIFICATION

- Size : 15,20,25,40,50,65,80,100,125,150,200 mm
- Measuring Range : Liquid _1~200000 L/hr
  : Gas _0.03~3000 m^3/hr
- Turndown Ratio : 10:1 (20:1 Option)
- Accuracy : +/-1.6% (Standard)
  : +/-1.0% (Option)
- Repeatability : +/-0.5% FS
- Material
  Tube & Float : Stainless Steel 304
  : Stainless Steel 316
  : Stainless Steel 316L
  : Stainless Steel + PTFE Liner
- Standard Pressure : 40 kgf/cm^2 (15-50 mm)
  : 16 kgf/cm^2 (65-200 mm)
- Temperature : -25~200 °C (Standard)
  : -25~100 °C (LCD Display)
  : 0~80 °C (PTFE Liner)
  : -80~400 °C (Option)
- Flange Type : JIS 10K / JIS 20K / JIS 40K
  ANSI 150# / ANSI 300# / ANSI 600#
  DIN PN10 / PN16 / PN25 / PN40
- Fluid Viscosity : 300 cP Max.
- Communication : RS485 (MODBUS Protocol)
  : HART signal (Compatible)
- Local Display : Mechanical Indicator (Standard)
  Digit Display : 5 Digit Flowrate
  : 7 Digit Totalizer
- Current Output : 4-20 mA (2-Wire)
  Load : Max. 600 Ω
- Pulse Output : Open collector (Scaled pulse)
  Rating : 3-30 VDC, 100 mA Max.
- Data Storage : Operation parameters and totalizer figures are stored by EEPROM for more than 10 years
- Limit Switches : 2-Wire NAMUR (For Exia / Exd)
  3-Wire transistor
- Keypad : 3 Internal keys for programming and display control
- Ambient Temperature : -25~60 °C
- Protection Class : IP65
  : Intrinsically Safe, Eex ia IIC T5
  : Explosion Proof, Ex d IIC T6
- Housing Material : Aluminum Alloy
- Cable Entry : Standard: M20 Option: 1/2" NPTF
- Pressure Loss : 0.07-0.7 kgf/cm^2
- Power Supply : 12-32 VDC
  : Ni-MH Battery (3 years working hours)
- Option : Temp. & Pressure compensation

CE

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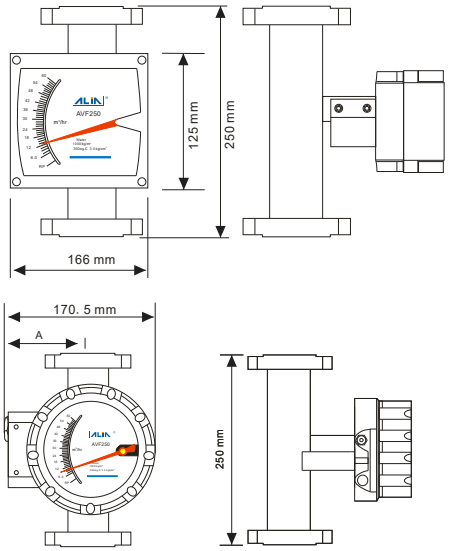
AVF250V1.2.3.r8.A4.en

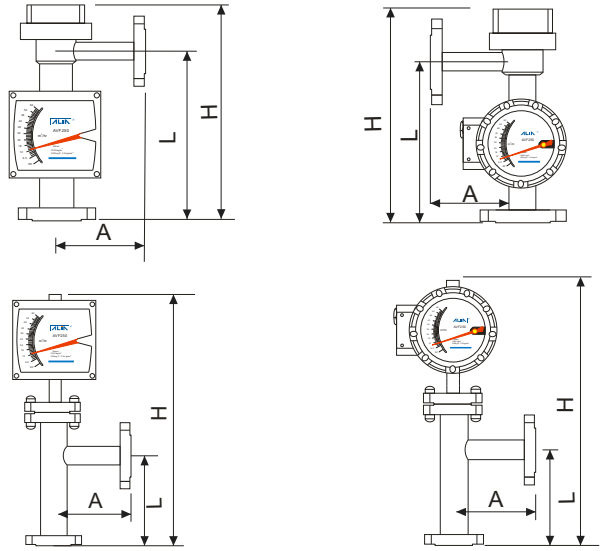
FLOW RANGE

Size					Float No.	S.S. 304 / 316 / 316L	S. S. + PTFE	S.S. 304 / 316 / 316L
						Water, 20 °C		Air, 0 °C, 1 ATM
						L/hr	**L/hr**	**m^3/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	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"				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	
		65 mm	2-1/2"		F50.5	2,500 - 25,000		63 - 630
80 mm	3"				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
					F80.4	6,300 - 63,000		180 - 1,800
100 mm	4"				F100.0	4,000 - 40,000	2,500 - 25,000	
					F100.1	6,300 - 63,000	4,000 - 40,000	180 - 1,800
					F100.2	8,000 - 80,000		
		125 mm	5"		F100.3	10,000 - 100,000		300 - 3,000
150 mm	6"				F150.0	8,000 - 80,000		
					F150.1	10,000 - 100,000		300 - 3,000
					F150.2	15,000 - 150,000		
200 mm	8"				F200.0	15,000 - 150,000		
					F200.1	20,000 - 200,000		

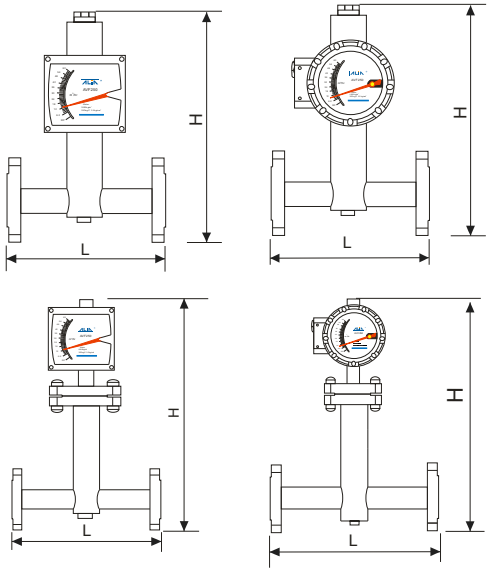
DIMENSIONS



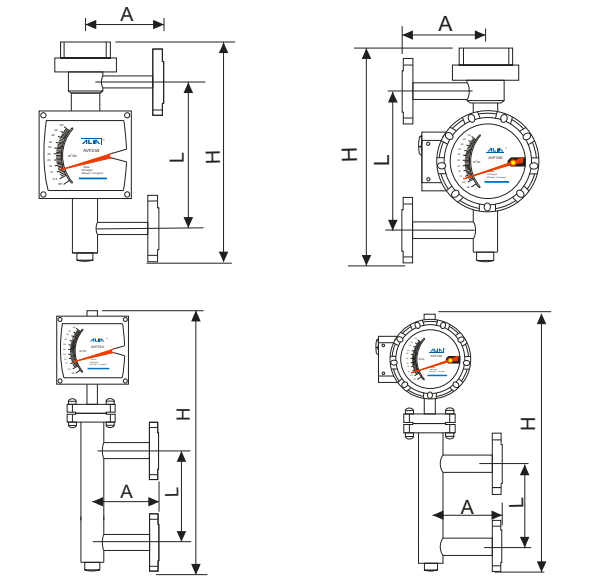
BT (Bottom-Top)			
Size mm	**A mm**	**Weight kg**	**Δ P mbar**
15	133	3.7	140
25	121	5.6	190
50	106	9.7	230
80	93	15	330
100	84	17	420
150	65	34	600
200	29	49	700



BR (Bottom-Top Side)					
Size mm	**H mm**	**L mm**	**A mm**	**weight kg**	**Δ P mbar**
15 mm	330	250	120	7.0	180
25 mm	340	250	120	8.0	220
50 mm	560	250	120	15	280
80 mm	595	250	150	25	350
100 mm	600	250	150	29	450
150 mm	690	300	180	53	580
200 mm	780	350	200	61	700



LR / RL (Horizontal)				
Size mm	**H mm**	**L mm**	**weight kg**	**Δ P mbar**
15	355	250	7.5	300
25	370	250	9	350
50	643	250	18	400
80	690	400	29	450
100	720	400	35	500
150	793	500	60	630
200	970	550	73	850



RR (Bottom Side-Top Side)					
Size mm	**H mm**	**L mm**	**A mm**	**weight kg**	**Δ P mbar**
15	380	250	120	7.2	200
25	400	250	120	8.7	280
50	643	250	120	16.6	360
80	675	250	150	28.2	450
100	700	250	150	33.5	580
150	832	300	180	58	630
200	950	350	200	68	700

MODEL SELECTION GUIDE

AVF250 Series								
Example: AVF250-050-S6ABT-B-IT-D								
AVF250-	XXX	-XX	X	XX	-X	-XX	-X	Description
Size	015-200							15-200 mm (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
Process 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 5 digit / Totalizer 7 digit + 4-20 mA
					-C			Local Indication + Rate 5 digit / Totalizer 7 digit (Battery Power)
					-F			Local Indication + One point Alarm (2-Wire NAMUR or 3-Wire transistor)
					-G			Local Indication + Two point Alarm (2-Wire NAMUR or 3-Wire transistor)
Protection Class						-NN		IP65
						-IT		Intrinsically Safe, Eex ia IIC T5
						-EX		Explosion Proof, Ex d IIC T6
Option							-N	None
							-C1	RS485 (MODBUS Protocol)
							-C2	HART Signal (Compatible)
							-D	Damper (For Steam & Gas Application)
							-H	Heating Jacket
							-P1	Pulse Output * 1 (With Function B Only)
							-P2	Alarm Output * 2 (With Function B Only)
							-R2	Reley Output * 2 (1A@30 VDC, 0.5A@125 VAC) (With Function B Only)
							-T	Max. Temp. higher than 200 °C (100 °C for LCD Display)
							-PT	Cable Entry 1/2" NPTF
							-TC	Temperature compensation *Note
							-PC	Pressure compensation *Note
							-CM	Temp. and Pressure compensation *Note

Note: With Size 15-100, Material S4/S6/SL, Flow Direction Bottom-Top, Function B Only.