

## GENERAL

**ALIAVA** The AVF25HCS Series is a horizontally mounted metal tube variable area flowmeter. With its unique design, it can provide a mechanical pointer display without power supply, as well as intrinsically safe and explosion-proof to suit various operating conditions.

## FEATURES

- ❑ Spring type horizontal mounted metal tube flowmeter
- ❑ 5 Digit flowrate & 8 digit totalizer
- ❑ 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
- ❑ Intrinsically safe & explosion proof for hazardous area

## 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<sup>3</sup>/hr
- Turndown Ratio : 10:1 (20:1 Optional)
- Accuracy : +/-2.5% (Standard)  
: +/-1.5% (Optional)
- Repeatability : +/-0.8% FS
- Material : Tube & Float : Stainless Steel 304  
: Stainless Steel 316
- Standard Pressure : 40 kgf/cm<sup>2</sup> (15-50 mm)  
: 16 kgf/cm<sup>2</sup> (65-200 mm)
- Temperature : 0-100 °C (Standard)
- 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)
- Data Storage : Operation parameters and totalizer figures are stored by EEPROM for more than 10 years



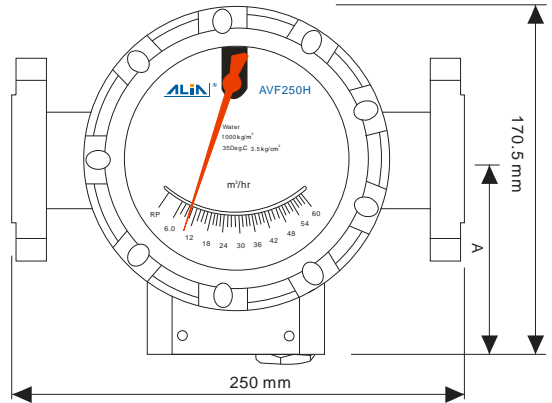
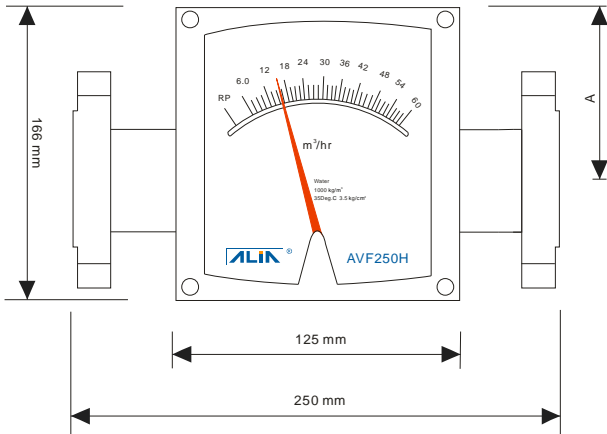
- Local Display : Mechanical Indicator (Standard)  
Digit Display : 5 Digit Flowrate  
: 8 Digit Totalizer
- Current Output : 4-20 mA (2 wires)  
Load : Max. 600 Ω
- Pulse Output : Open collector (Scaled pulse)  
Rating : 3-30 VDC, 100 mA Max.
- Alarm Output : 2 Point (Open collector)  
Rating : 3-30 VDC, 100 mA Max.
- Keypad : 3 Internal keys for programming and display control
- Ambient Temperature : 0-60 °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<sup>2</sup>
- Power Supply : 12-36 VDC  
: Ni-MH Battery (3 years working hours)



**FLOW RANGE**

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

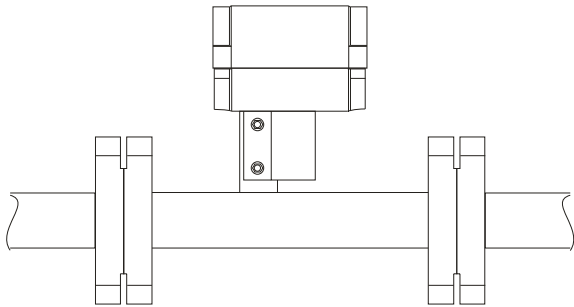
**➤ DIMENSIONS**



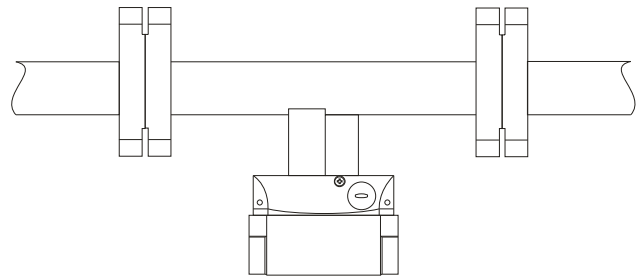
Left-Right / Right-Left			
Size mm	A mm	Weight kg	Δ P mbar
15	106	3.4	590
25	106	5.3	240
50	106	9.4	420
80	116	14.8	320
100	116	16.7	300
150	116	33.4	600
200	116	48.4	700

Left-Right / Right-Left			
Size mm	A mm	Weight kg	Δ P mbar
15	108	3.7	590
25	99	5.6	240
50	84	9.7	420
80	71	15.1	320
100	61	17.0	300
150	42	33.7	600
200	12	48.7	700

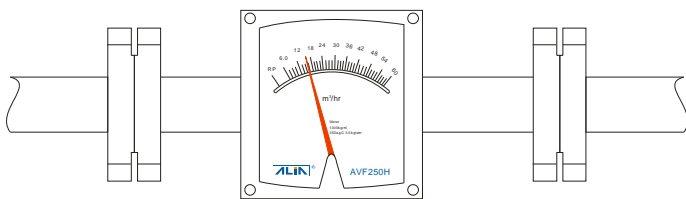
**➤ INSTALLATION DIRECTION**



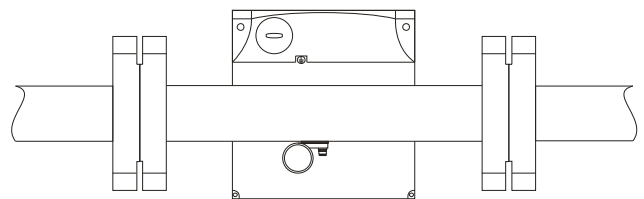
**Top View**



**Bottom View**



**Front View**



**Back View**

**MODEL SELECTION GUIDE**

AVF25HCS Series									
Example: AVF25HCS-050-S6ALR-B-IT-TV-C2									
AVF25HCS-	XXX	-XX	X	XX	-X	-XX	-X	-X	Description
Size	015-200								15-200 mm (1/2"-8")
Material		-S4							Stainless Steel 304
		-S6							Stainless Steel 316
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			LR						Left-Right
			RL						Right-Left
Function				-A					Local Indication
				-B					Local Indication + Rate 5 digit / Totalizer 8 digit + 4-20 mA
				-C					Local Indication + Rate 5 digit / Totalizer 8 digit (Battery Power)
				-D					Local Indication + One point Alarm (Reed Switch, 1 A, 30 VDC)
				-E					Local Indication + Two point Alarm (Reed Switch, 1 A, 30 VDC)
Protection Class					-NN				IP65
					-IT				Intrinsically Safe, Eex ia IIC T5
					-EX				Explosion Proof, Ex d IIC T6
Installation Direction							-TV		Top view (see page 3 for details)
							-BV		Bottom view (see page 3 for details)
							-FV		Front view (see page 3 for details)
							-KV		Back view (see page 3 for details)
							-ZZ		Other directions
Option							-N		None
							-C1		RS485 (MODBUS Protocol)
							-C2		HART Signal (Compatible)
							-P1		Pulse Output * 1 (With Function B Only)
							-P2		Alarm Output * 2 (With Function B Only)
							-PT		Cable Entry 1/2" NPTF