

GENERAL

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

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

FEATURES

- ❑ 5 Digit Flowrate & 8 Digit Totalizer
- ❑ Local indication without auxiliary power
- ❑ 4-20 mA & 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

STANDARD SPECIFICATION

- | | | | |
|---------------------|---|-----------------------|--|
| ● Size | : 15,20,25,40,50,65,80,100,125,150,200 mm | ● Local Display | : Mechanical Indicator (Standard) |
| ● Measuring Range | : Liquid -1~200000 L/hr | Digit Display | : 5 Digit Flowrate |
| | : Gas -0.03~3000 m ³ /hr | | : 8 Digit Totalizer |
| ● Turndown Ratio | : 10:1 (20:1 Optional) | ● Current Output | : 4-20 mA (2 Wire) |
| ● Accuracy | : +/-1.6% (Standard) | Load | : Max. 600 Ω |
| | : +/-1.0% (Optional) | ● Pulse Output | : Open collector (Scale pulse) |
| ● Repeatability | : +/-0.5% FS | Rating | : 3-30 VDC, 100 mA Max. |
| ● Material | | ● Data Storage | : Operation parameters and totalizer figures are stored by EEPROM for more than 10 years |
| Tube & Float | : Stainless Steel 304 | ● Alarm Output | : 2 Point (Open collector) |
| | : Stainless Steel 316 | Rating | : 3-30 VDC, 100 mA Max. |
| | : Stainless Steel 316L | ● Keypad | : 3 Internal keys for programming and display control |
| | : Stainless Steel + PTFE Liner | ● Ambient Temperature | : -25~60 °C |
| ● Standard Pressure | : 40 kgf/cm ² (15-50 mm) | ● Protection Class | : IP65 |
| | : 16 kgf/cm ² (65-200 mm) | | : Intrinsically Safe, Eex ia IIC T5 |
| ● Temperature | : -25~200 °C (Standard) | | : Explosion Proof, Ex d IIB T6 |
| | : -25~100 °C (LCD Display) | ● Housing Material | : Aluminum Alloy |
| | : 0~80 °C (PTFE Liner) | ● Cable Entry | : Standard: M20 Option: 1/2"NPTF |
| | : -80~400 °C (Optional) | ● Pressure Loss | : 0.07-0.7 kgf/cm ² |
| ● Flange Type | : JIS 10K / JIS 20K / JIS 40K | ● Power Supply | : 12-36 VDC (2 wire 4-20 mA) |
| | ANSI 150# / ANSI 300# / ANSI 600# | | : Ni-MH Battery (3 years working hours) |
| | DIN PN10 / PN16 / PN25 / PN40 | | |
| ● Fluid Viscosity | : 300 cP Max. | | |
| ● Communication | : RS485 (MODBUS Protocol) | | |
| | : HART signal (Compatible) | | |



With LCD Display

Local Indication

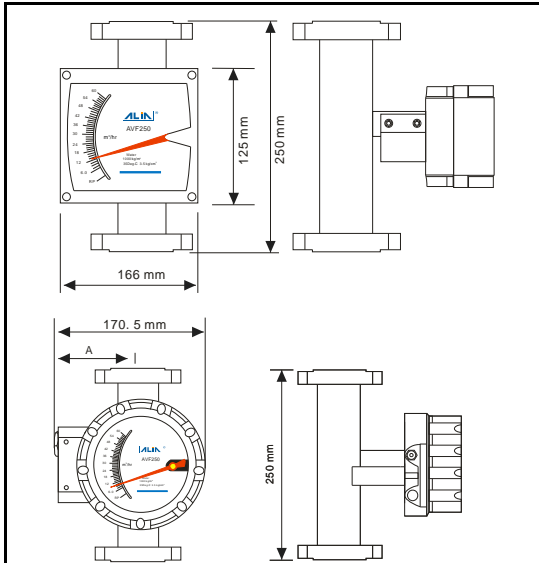
Explosion Proof



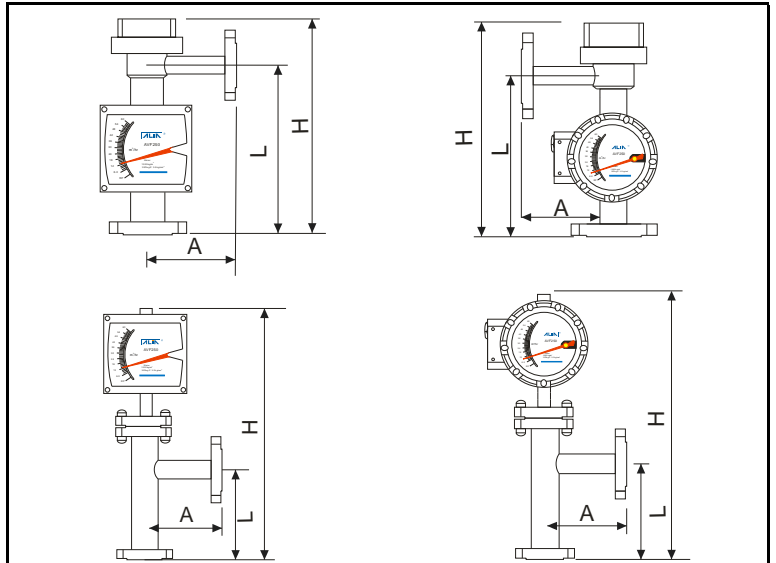
FLOW RANGE

| 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 |
| 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 | 6,000 - 60,000 | |
| 150 mm | 6" | | | F100.3 | 10,000 - 100,000 | | 300 - 3,000 |
| | | | | F150.0 | 8,000 - 80,000 | | |
| | | | | F150.1 | 10,000 - 100,000 | | 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 | | |

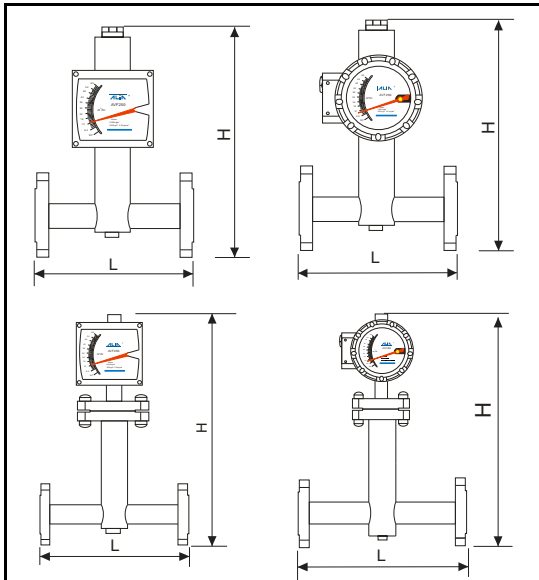
➤ DIMENSIONS



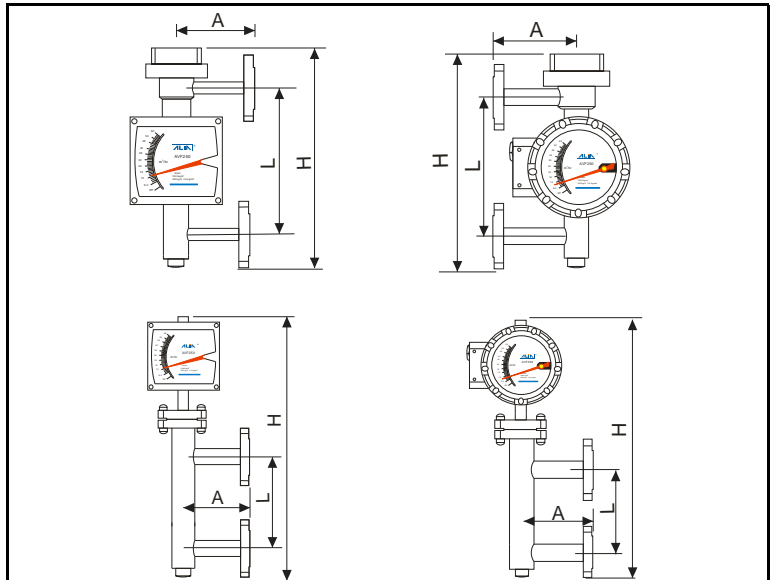
| BT (Bottom-Top) | | | |
|-----------------|------|-----------|-----------------|
| Size mm | A mm | Weight kg | ΔP mbar |
| 15 | 108 | 3.7 | 140 |
| 25 | 99 | 5.6 | 190 |
| 50 | 84 | 9.7 | 230 |
| 80 | 71 | 15 | 330 |
| 100 | 61 | 17 | 420 |
| 150 | 42 | 34 | 600 |
| 200 | 12 | 49 | 700 |



| BR (Bottom-Top Side) | | | | | |
|----------------------|------|------|------|-----------|-----------------|
| Size mm | H mm | L mm | A mm | weight kg | ΔP 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 | 575 | 250 | 150 | 25 | 350 |
| 100 mm | 690 | 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 | ΔP 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 | ΔP 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 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 IIB 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) | |
| | | | | | | | -T | Max. Temp. higher than 200 °C (100 °C for LCD Display) | |
| | | | | | | | -PT | Cable Entry 1/2" NPTF | |