

## GENERAL

SMARTMEASUREMENT's ALDPT-MV measures three separate process variables simultaneously and provides dynamic calculation of fully compensated mass flow rate for steam and liquids respectively and standard volume flow for gases. It measures differential pressure and absolute pressure from a single sensor and process temperature from a standard PT 100 Resistance Temperature Detector (RTD). Flow calculations include compensation of pressure and/or temperature as well as more complex variables such as discharge coefficient, thermal expansion, Reynolds number and compressibility factor.

The ALDPT-MV includes flow equations for steam, gases and liquids so that one model is all you need in your system. It can also measure static pressure with both integral or remote electronics. Many plants calculate mass flow in a host computer using a simplified mass flow equation. The ALDPT-MV provides full compensation of over 25 different parameters to achieve a 5x improvement in flow performance compared to uncompensated DP flow. The ALDPT-MV is ideally suited to work with SMC's ACONE primary flow elements.

## FEATURES

- Multi-functional: a single transmitter for up to three measured parameters
- Used for level and flow measurement of gas, liquid and steam
- Modular: Interexchangeable electronics with self-reconfiguration
- Advanced diagnostics capabilities
- Process value and alarms
- Convenient: configurable via local operating keypad
- Linearization for primary elements
- Analog 4~20 mA<sub>DC</sub> two wire linear output
- HART protocol
- Mass and standard volume flow in accordance with AGA 3 or DIN EN ISO 5167
- Dynamic flow correction with continuous calculation of Reynolds's Number and flow

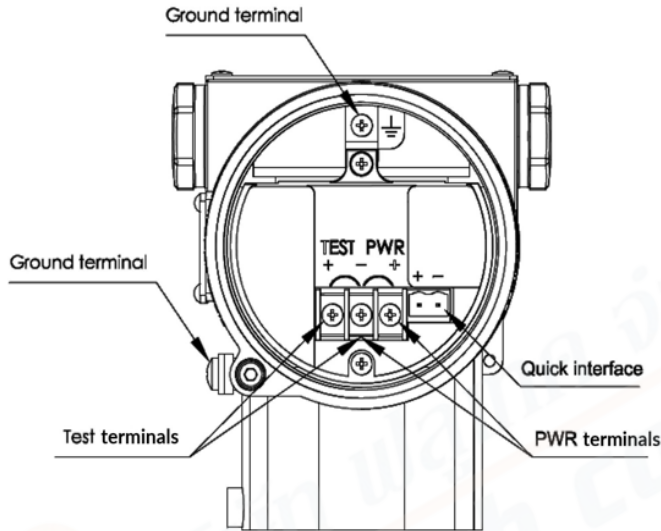


## SPECIFICATIONS

- |                        |  |                         |   |
|------------------------|--|-------------------------|---|
| • Measuring Range:     | Differential: 200Pa ~ 2000 kPa<br>Absolute: up to 40 MPa | • Bolts:                | Stainless Steel   |
| • Fluids:              | Liquid, Gas and Steam                                    | • Electrical Enclosure: | Low Copper Aluminum Alloy   |
| • Temperature:         | -4°F ~ 752°F (-20°C ~ 400°C)                             | • Approvals:            | Isolated explosion ExdII BT5 or ExdII CT6<br>Intrinsic safety ExiaII CT6 or ExibII CT6  |
| • Accuracy:            | 0.5% of reading, 0.2% optional                           | • Output signal:        | 4 ~ 20 mA <sub>DC</sub>   |
| • Turn-down:           | 100:1  | • Power supply:         | 24 V <sub>DC</sub> supply,<br>R ≤ (U <sub>s</sub> - 12V) / I <sub>max</sub> kΩ, I <sub>max</sub> = 23 mA<br>Voltage up to 42V <sub>DC</sub> Min to 12 V <sub>DC</sub><br>15V <sub>DC</sub> (with display)<br>230Ω to 600Ω for digital communication |
| • Drift (Micro):       | 0.1%FS/3 years   | • Protection:           | IP67/NEMA 6   |
| • Relative humidity:   | 0 ~ 100% RH  | • Weight:               | 8 lb (does not include options)   |
| • O ring material:     | Perbunan, Viton, Teflon                                  |                         |   |
| • Filled fluid:        | Silicon oil or inert oil                                 |                         |   |
| • Start time:          | <15 seconds after power up                               |                         |   |
| • Storage temperature: | -4°F ~ 150°F (-20°C ~ 400°C)                             |                         |   |

## DIMENSIONS

### Terminal Configuration

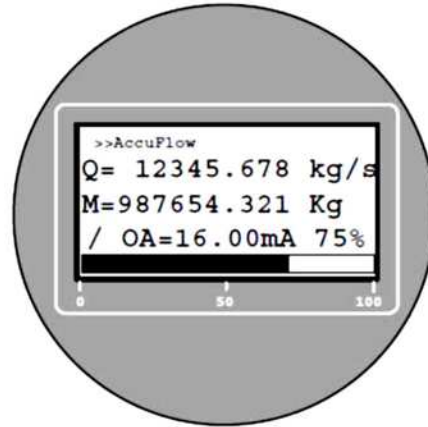


Note: Quick interface functionally equivalent to the signal terminal

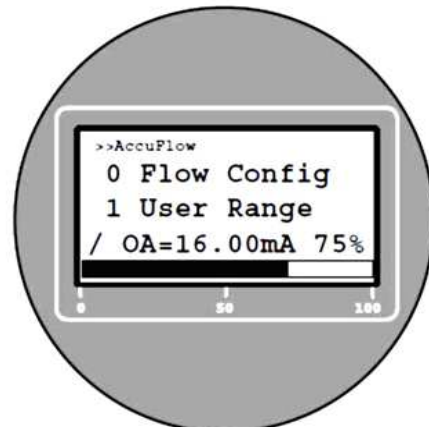
### Display



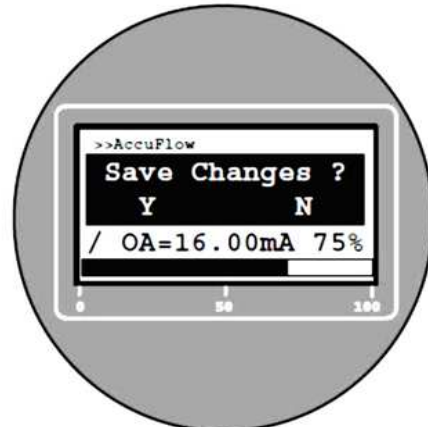
DP display



Flow display



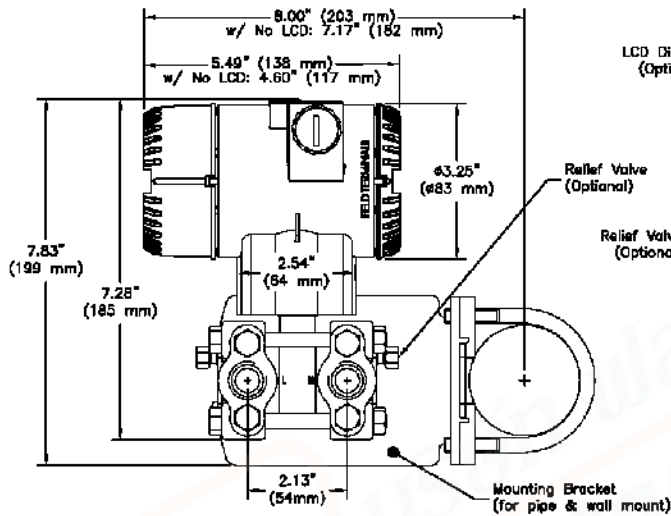
Menu



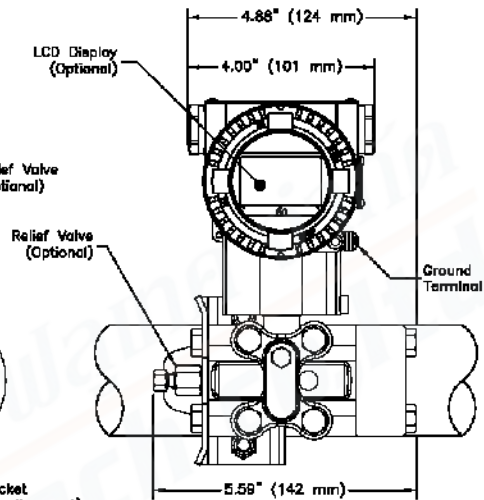
Save data

## OTHER ACCESSORIES

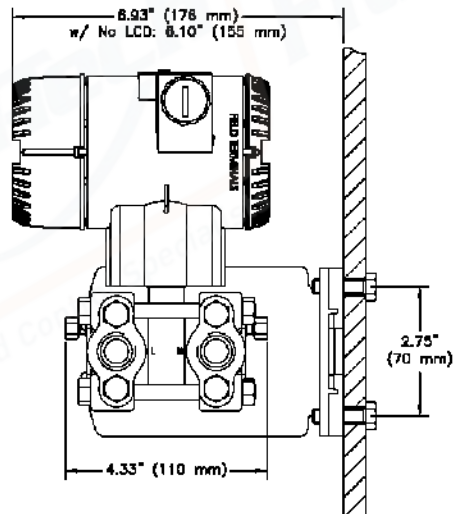
**Horizontal Impulse Pipe Mounting (Side View)**



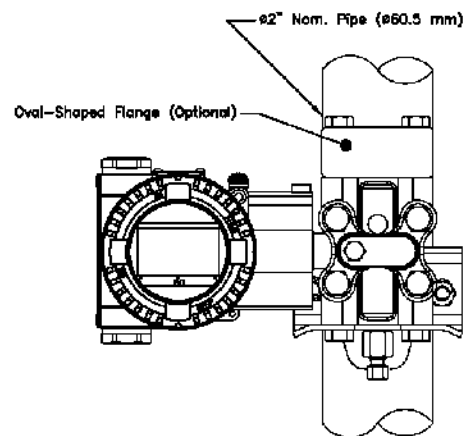
**Horizontal Impulse Pipe Mounting (Front View)**



**Horizontal Impulse Wall Mounting (Side View)**



**Vertical Impulse Pipe Mounting (Front View)**



**Valve manifold (options)**



