

GENERAL

ALIADPFLOW The MultiVariable Transmitter APT9600 Series is adaptable and capable of multivariable measurements of differential pressure, static pressure and process temperature. The Transmitter includes flow equations for steam, gases and liquids. This device is also engineered with built-in flow calculations for fully compensated mass flow measurements. Multivariable Transmitter designed to meet challenging processes.

FEATURES

- ❑ Converter can be rotated at 4 directions for easy installation
- ❑ Multiple variables Measures, streamline process and cost-efficiency
- ❑ Fully compensation available for gas and steam measurements
- ❑ Liquid mass measurements can be density compensated by temperature
- ❑ 0.075% accuracy
- ❑ Parameter setting by keypad directly
- ❑ 4-20 mA output, HART communication
- ❑ Transmitter allows multivariable measurements in combinations of differential and static pressure and temperature

STANDARD SPECIFICATION

- | | | | |
|------------------------|--|----------------------|--|
| ● Process Fluid | : Liquid, Gas, Steam | ● Display | : 8-Digit totalizer, 6-Digit flow rate
: 5-Digit Pressure, 5-Digit Temp. |
| ● Application | : Differential pressure, Static pressure
: Temperature, Flow | ● Display Unit | : 32 Flow engineering unit |
| ● DP range | : 0-200 kPa | ● Keypad | : 3 Internal keys for programming
: and output setting |
| ● Pressure Range | : 0-25 MPa (0-250 bar) | ● Current Output | : 4-20 mA (2-Wire)
: with HART signal (Compatible)
Load : Rohm= (VDC-12) * 50 |
| ● Temperature | : -25~500 °C (-13 °F ~ 932 °F) RTD (PT1000) | ● Power Supply | : 12-32 VDC |
| ● Flow Range | : 0-999999 | ● Damping | : 0-32 Seconds |
| ● Turndown Ratio | : 100:1 | ● Humidity Limit | : 0-100% Relative Humidity |
| ● Accuracy | : +/-0.075% of span
: Class A (Temperature) | ● Turn on Time | : 2 Seconds with minimum damping |
| ● Stability | : +/-0.15% of URL for 2 years | ● Zero Calibration | : Automatic zero calibration by press-button |
| ● Working Temperature | : -25~95 °C | ● Cable Entry | : M20 Conduit Threads / 1/2" NPT (Female) |
| ● Ambient Temperature | : -25~70 °C | ● Protection Class | : IP67 (Standard)
: Intrinsically Safe, Eex ia IIC T5 (Standard)
: Explosion Proof, Ex db IIC T6 |
| ● Material | Flange / Adapter : Stainless Steel 304 / Stainless Steel 316
Drains / Vents : Stainless Steel 304 / Stainless Steel 316
Diaphragm : Stainless Steel 316L / Hastelloy C
Wetted O-Ring : Buna N / Viton / PTFE
Bolts & Nuts : Carbon Steel / Stainless Steel 316 | ● EMI / RFI Effect | : Follow SAMA PMC 33.1 from 20-1000 MHz
: and for field strengths up to 30 V/m |
| T. Sensor wetted parts | : Stainless Steel 316L / Hastelloy C | ● Vibration Effect | : +/-0.05% of URL per g to 200 Hz in any axis |
| Converter Housing | : Low copper cast aluminum alloy with
: polyurethane, light blue paint | ● Process Connection | : 1/4"-18 NPT
: 1/2"-14 NPT (with adapter) |
| ● Fill Fluid | : Silicone Oil | ● Dimensions | : 102 mm (W) * 188 mm (H) * 130 mm (D) |
| ● Mounting | : Direct Mounting / Bracket on 2" Pipe | ● Weight | : 3.5 kg |

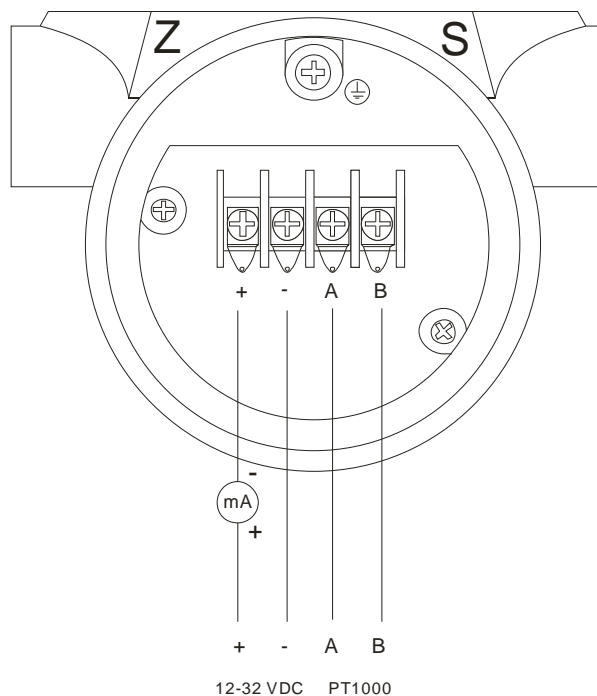


MEASURING RANGE

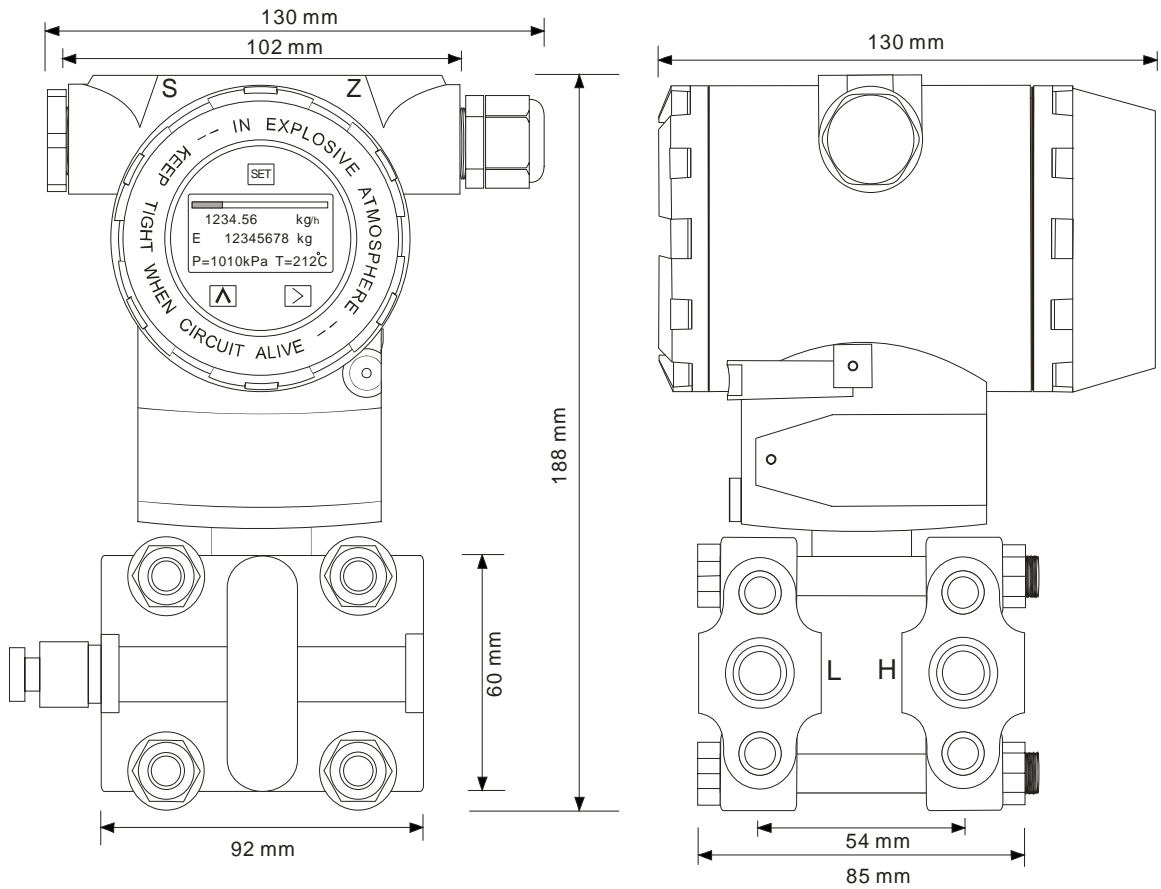
Range Code	Differential Pressure Range			
	Low Range	High Range	Low Range	High Range
3	0-1.0 kPa	0-6.0 kPa	0-102.0 mmH ₂ O	0-611.82 mmH ₂ O
	0-10 mbar	0-60 mbar	0-4.015 inH ₂ O	0-24.088 inH ₂ O
	0-0.145 psi	0-0.87 psi	0-0.010 kgf/cm ²	0-0.061 kgf/cm ²
4	0-6.0 kPa	0-40 kPa	0-611.82 mmH ₂ O	0-4078 mmH ₂ O
	0-60 mbar	0-400 mbar	0-24.088 inH ₂ O	0-160.6 inH ₂ O
	0-0.87 psi	0-5.802 psi	0-0.061 kgf/cm ²	0-0.408 kgf/cm ²
5	0-40 kPa	0-200 kPa	0-4.079 mH ₂ O	0-20.39 mH ₂ O
	0-400 mbar	0-2000 mbar	0-160.6 inH ₂ O	0-802.9 inH ₂ O
	0-5.802 psi	0-29.0 psi	0-0.408 kgf/cm ²	0-2.039 kgf/cm ²

Range Code	Maximum Pressure Range			
	Type	Range	Overload Pressure	Burst Pressure
1	Static Pressure	0-1 MPa	200%FS	400%FS
2	Static Pressure	0-2 MPa	200%FS	400%FS
3	Static Pressure	0-3 MPa	200%FS	400%FS
4	Static Pressure	0-4 MPa	200%FS	400%FS
5	Static Pressure	0-16 MPa	200%FS	400%FS
6	Static Pressure	0-25 MPa	150%FS	400%FS

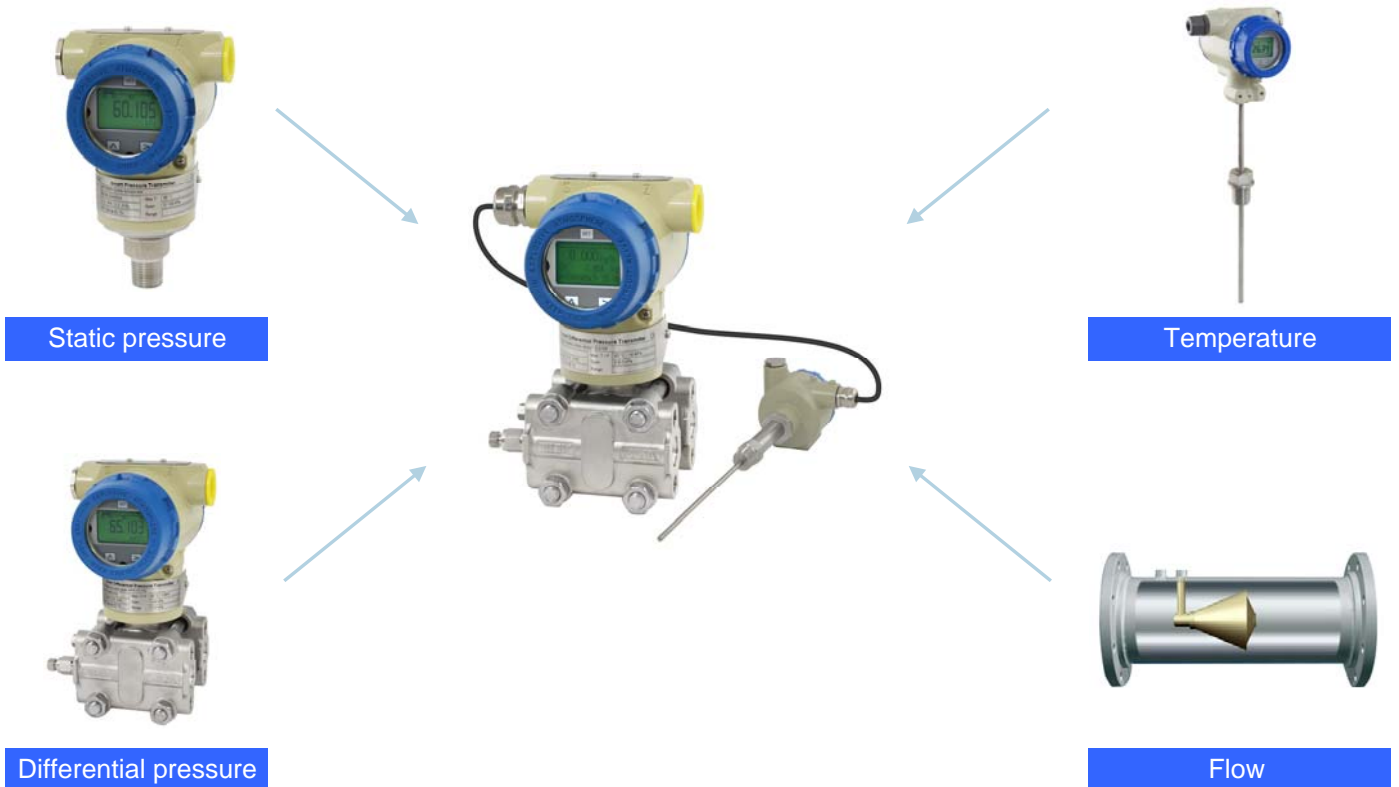
WIRING DIAGRAM



➤ DIMENSIONS



➤ APPLICATION EXAMPLES



MODEL SELECTION GUIDE

APT9600 Series													
Example: APT9600-3-NNS-XNN-NN1T-EX/S6													
APT9600-	X	-X	X	X	-X	X	X	-X	X	X	X	-XX	Description
Differential Pressure Range	3												0-1.0 (0.06) kPa ... 0-6.0 kPa
	4												0-6.0 (0.4) kPa ... 0-40 kPa
	5												0-40 (2.0) kPa ... 0-200 kPa
Diaphragm Material	-N												Stainless Steel 316L
	-C												Hastelloy C
Process Flanges, Drain / Vent valve Material	N												Stainless Steel 304
	S												Stainless Steel 316
Bolts / Nuts Material	N												Carbon Steel
	S												Stainless Steel 316
Mounting Bracket Material	-N												Carbon Steel
	-4												Stainless Steel 304
	-6												Stainless Steel 316
	-X												Direct mounting, without 2" Mounting Bracket
Wetted O-ring Material	N												Buna-N
	V												Viton
	P												PTFE
Fill Fluid						N						Silicone Oil	
Process Connection								-N					1/4"-18 NPT
								-A					1/2"-14 NPT (with Adapter)
								-Z					Other
Cable Entry								N					M20 Conduit Threads
								P					1/2" NPT (Female)
								Z					Other
Maximum Pressure Limit			1									1 MPa	
			2									2 MPa	
			3									3 MPa	
			4									4 MPa	
			5									16 MPa	
			6									25 MPa (With DP range code 5 only)	
Temperature Sensor								N					Without RTD Temperature sensor
								T					With RTD PT1000 (Class A). See ATT1000 Series
Option								-NN					None
								-EX					Explosion Proof, Ex db IIC T6
								-S6					Stainless Steel 316 Name Plate and Tag Plate
								-HT					HART Signal (Compatible)
								-RS					Customized range setting
								-RC					Customized range calibration
								-ZZ					Others