



# ALIADPFLOW

## Smart Transmitter for Differential Pressure Flowmeter

### Model ADF9500 Series

## GENERAL

**ALIADPFLOW** ADF9500 series is a transmitter of differential pressure pressure can be converted into flow value via microcomputer technology and flowrate, totalizer, flowmeter. The differential and differential pressure can be displayed directly in LCD screen. It's equipped with strong output function: 4-20mA, pulse and HART. ADF9500 is widely used in differential pressure sensors such as orifice, venturi, annubar, v-cone etc.. It has high stability and high accuracy.

## FEATURES

- Converter can be rotated at six directions for easy installation
- Can display flow rate, totalizer and differential pressure at the same time
- Two years stability of 0.2%
- 0.075% accuracy
- Parameter setting by keypad directly
- 4-20 mA and pulse output, HART communication
- Automatic zero calibration by press-button
- Explosion proof and weather proof housing

## STANDARD SPECIFICATION

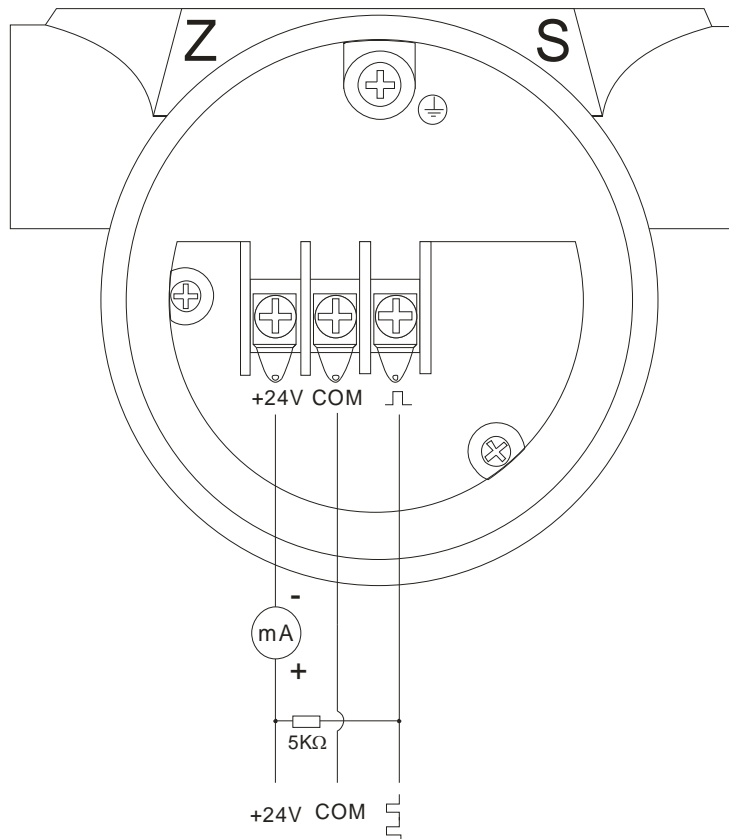
- Process Fluid : Liquid, Gas or Vapor
- Application : Differential pressure flow measurement
- Pressure Range : 0 - 2000Kpa / 0...290 PSI
- Flow Range : 0 - 999999
- Turndown Ratio : 20 : 1
- Accuracy : +/- 0.075% of span
- Stability : +/-0.15% of URL for 2 years
- Working Temperature : -25 to +95 °C / -25...203°F
- Max. Pressure : 40 Mpa / 5,801 PSI
- Material
  - Flange/Adapter : Stainless Steel 304 / Stainless Steel 316
  - Drains/Vents : Stainless Steel 304 / Stainless Steel 316
  - Diaphragm : Stainless Steel 316L / Hastelloy B / Hastelloy C / Monel / Tantalum
  - Wetted O-Ring : Buna N / Viton / PTFE
  - Bolts & Nuts : Carbon Steel / Stainless Steel 316
  - Mounting Bracket : Carbon steel / Stainless Steel 304 / 316
  - Name / Tag Plate : Stainless Steel 304 / Stainless Steel 316
  - Converter Housing : Low copper cast aluminum alloy with polyurethane, light blue paint
- Fill Fluid : Silicone / Fluorine Oil
- Protection Class : IP67 (Standard)
  - : Intrinsically Safe EEx ia IIC T5 (Standard)
  - : Explosion proof Ex D IIB T5 (Optional)
- Mounting : Direct Mounting / Bracket on 2" Pipe
- Display : 9-digit totalizer, 6-digit flow rate
- Display Unit : 32 flow engineering unit
  - 5 Digits programmable for special unit
- Keypad : 3 internal keys for programming and output setting
- Current Output : 4 - 20 mA 2 wires
  - with Hart signal (Compatible)
  - Load :  $R_{ohm}=(V_{dc}-9)*50$
- Pulse Output : Scale Pulse
- Power Supply : 9 - 36 VDC
- Damping : 0 - 32 seconds
- Humidity Limit : 0 to 100% Relative Humidity
- Turn on Time : 2 Seconds with minimum damping
- Zero Calibration : Automatic zero calibration by press-button
- Cable Entry : M20 Conduit Threads / 1/2" NPT (Female )
- Temperature Effect : +/-0.18% of span per 20 °C
- Vibration Effect : +/-0.05% of URL per g to 200 Hz in any axis
- EMI/RFI Effect : Follow SAMA PMC 33.1 from 20 to 1000 MHz and for field strengths up to 30 V/m
- Process Connection : 1/4 - 18 NPT
  - : 1/2 - 14 NPT (with adapter)
- Ambient Temperature : -25 to +80 °C
- Dimensions : 102 mm (W) \* 188 mm (H) \* 130 mm (D)
- Weight : 3.5 Kg / 7.72 Lbs



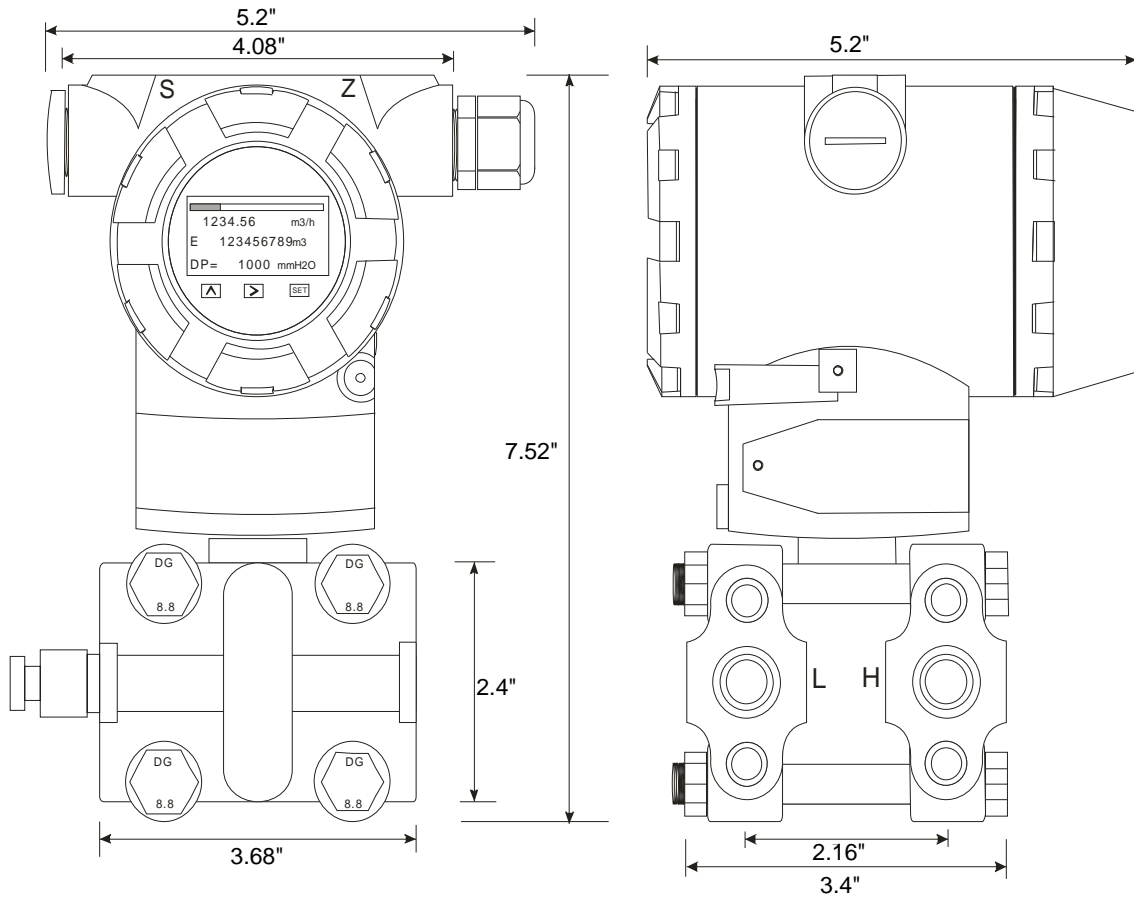
**MEASURING RANGE**

Range Code	Pressure Range			
	Low Range	High Range	Low Range	High Range
<b>2</b>	0 - 0.125 Kpa	0 - 1.5 Kpa	0 - 12.75 mmH2O	0 - 153.0 mmH2O
	0 - 1.250 mbar	0 - 15 mbar	0 - 0.5018 InH2O	0 - 6.022 InH2O
	0 - 0.018 psi	0 - 0.218 psi	0 - 0.001 Kg/cm2	0 - 0.015 Kg/cm2
<b>3</b>	0 - 1.3 Kpa	0 - 7.5 Kpa	0 - 132.6 mmH2O	0 - 764.8 mmH2O
	0 - 13 mbar	0 - 75 mbar	0 - 5.219 InH2O	0 - 30.11 InH2O
	0 - 0.189 psi	0 - 1.088 psi	0 - 0.013 Kg/cm2	0 - 0.076 Kg/cm2
<b>4</b>	0 - 6.2 Kpa	0 - 37 Kpa	0 - 632.2 mmH2O	0 - 3773 mmH2O
	0 - 62 mbar	0 - 370 mbar	0 - 24.89 InH2O	0 - 148.5 InH2O
	0 - 0.899 psi	0 - 5.366 psi	0 - 0.063 Kg/cm2	0 - 0.377 Kg/cm2
<b>5</b>	0 - 30 Kpa	0 - 180 Kpa	0 - 3.059 MH2O	0 - 18.35 MH2O
	0 - 300 mbar	0 - 1800 mbar	0 - 120.4 InH2O	0 - 722.6 InH2O
	0 - 4.351 psi	0 - 26.11 psi	0 - 0.306 Kg/cm2	0 - 1.835 Kg/cm2
<b>6</b>	0 - 117 Kpa	0 - 690 Kpa	0 - 11.93 MH2O	0 - 70.36 MH2O
	0 - 1.170 Bar	0 - 6.900 Bar	0 - 469.7 InH2O	0 - 2770 InH2O
	0 - 16.97 psi	0 - 100.1 psi	0 - 1.193 Kg/cm2	0 - 7.036 Kg/cm2
<b>7</b>	0 - 350 Kpa	0 - 2000 Kpa	0 - 35.69 MH2O	0 - 203.9 MH2O
	0 - 3.5 Bar	0 - 20 Bar	0 - 1405 InH2O	0 - 8029 InH2O
	0 - 50.76 psi	0 - 290.1 psi	0 - 3.569 Kg/cm2	0 - 20.39 Kg/cm2

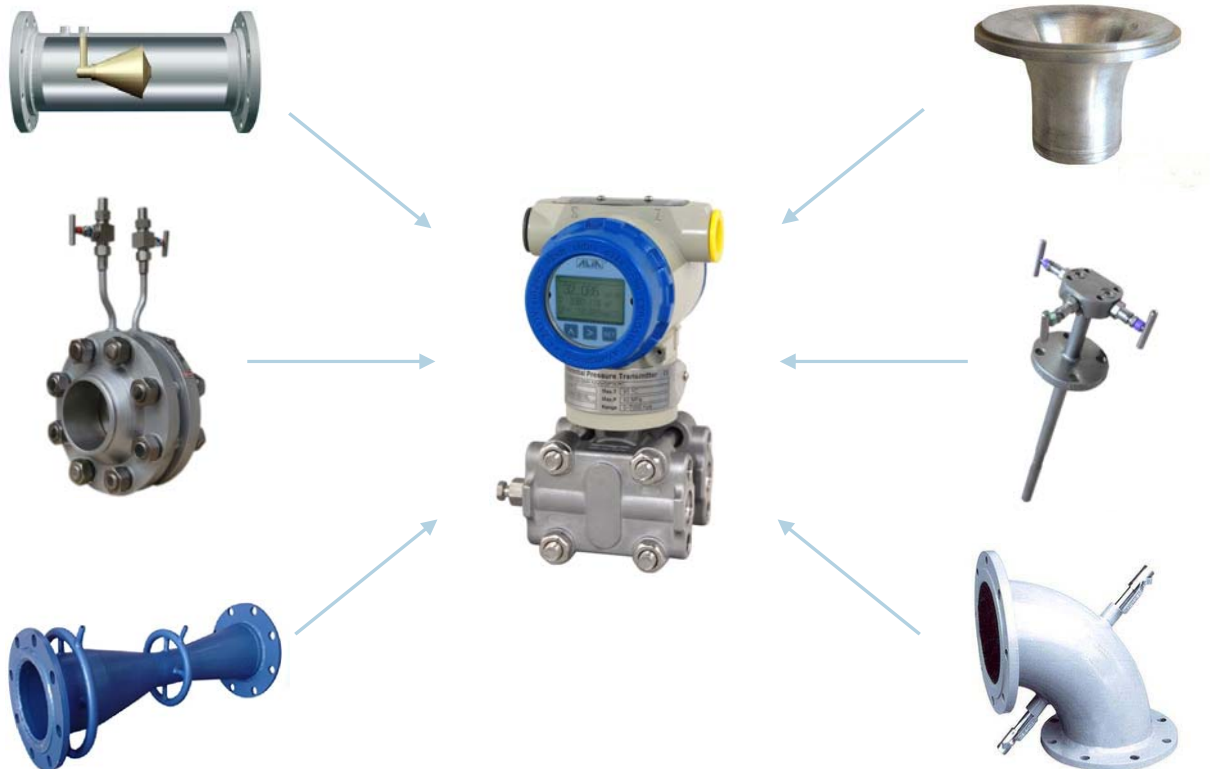
**WIRING DIAGRAM**



**➤ DIMENSIONS**



**➤ APPLICATION EXAMPLES**



**MODEL SELECTION GUIDE**

ADF9500 Series															
Example: ADF9500-3-CNS-6NF-NNN-EX/S6															
ADF9500-	X	-X	X	X	-X	X	X	-X	X	X	-XX	Description			
Pressure Range	2											0 - 0.125 (0.015) Kpa ... 0 - 1.5 Kpa			
	3											0 - 1.3 (0.075) Kpa ... 0 - 7.5 Kpa			
	4											0 - 6.2 (0.37) Kpa ... 0 - 37 Kpa			
	5											0 - 30 (1.8) Kpa ... 0 - 180 Kpa			
	6											0 - 117 (6.9) Kpa ... 0 - 690 Kpa			
	7												0 - 350 (20) Kpa ... 0 - 2000 Kpa		
Diaphragm Material		-N										Stainless Steel 316L			
		-B										Hastelloy B			
		-C										Hastelloy C			
		-P										Monel			
		-T										Tantalum			
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			
									F			Fluorine			
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												N	4 MPa		
													1	6.4 MPa	
														2	16 MPa
															3
Option													-NN	None	
														-EX	Explosion proof Ex D IIB T5
														-S6	Stainless Steel 316 Name Plate and Tag Plate
														-HT	Hart Signal (Compatible)
															-ZZ