

**PRESSURE TRANSMITTER**

# AUTOMAC



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PLOT NO. 627/2, GIDC, PALEJ, N..H. 48, DIST. BHARUCH, GUJARAT, INDIA - 392220

CONTACT - 8511188601, EMAIL - [info@automac.in](mailto:info@automac.in), web site - [www.automac.in](http://www.automac.in)

## Differential Pressure Transmitter

### AE1021DP/GP/AP Series

#### ■ DESCRIPTION

AE1021DP/GP/AP series is a digital differential pressure transmitter designed for industrial pressure measurement applications.

The AE1021 can be configured to provide integrated solutions for a broad range of pressure and flow measurement applications.

#### ■ FEATURES

- Updating time of output current in 200 ms
- Improved performance, increased accuracy and greater stability
- Two years stability of 0.2%
- 0.1% accuracy
- Parameter setting by keypad directly
- 4-20 mA output plus direct digital HART communication
- Automatic zero calibration by press-button
- Explosion proof and weather proof housing



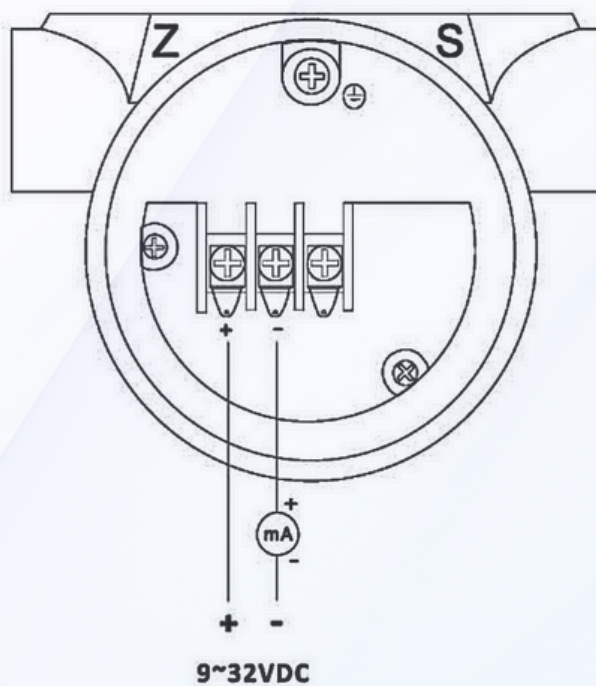
#### ■ STANDARD SPECIFICATION

Process Fluid	Liquid, Gas, Vapor
Application	Absolute Pressure, Gauge Pressure, Differential Pressure
Measuring Range	0-68900 mmWc
Accuracy	+/- 0.075% of Span
Stability	+/-0.2% of URL for 2 Years
Working Temperature	-25 to +120 °C
Material	
Flange/Adapter	Stainless Steel 304/ Stainless Steel 316
Drains/Vents	Stainless Steel 304/ Stainless Steel 316
Diaphragm	Stainless Steel 316L/ Hastelloy C/Monel / Tantalum
Wetted O-Ring	Buna N/Viton / PTFE
Bolts & Nuts	Carbon Steel/Stainless Steel
Mounting Bracket	Carbon Steel/Stainless Steel
Name / Tag Plate	Carbon Steel/Stainless Steel
Converter Housing	Low Copper Cast Aluminum Alloy with Polyurethane, light Blue Paint
Fill Fluid	Silicone / Fluorine Oil
Protection Class	IP65 (Standard) Intrinsically Safe Type, Flameproof (Exd IIC T6) Intrinsically Safe (Exia IIC T6)

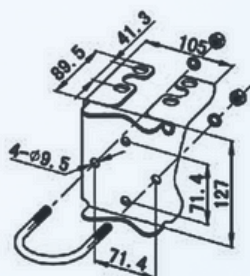
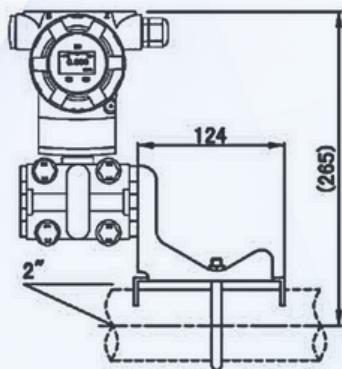
Display	5 Digits Programmable & 0-100% Bargraph Standard 22 Different Engineering Unit
Display Unit	5 Digits Programmable for Special Unit 3 Internal Keys for Programming and Output Setting
Keypad	4-20 mA 2 Wires with Hart Signal (Compatible)
Current Output	
Power Supply	9-32 VDC
Damping	0-32 seconds
Response Time	200 mS
Mounting	Bracket on 2" Pipe
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% ~ +/-0.5% of Span Per 20 °C
Vibration Effect	+/-0.05% of URL Per G to 200 Hz in Any Axis
Process Connection	1/4" - 18 NPT 1/2" 14 NPT(with Adapter)
Ambient Temperature	-25 to +80 °C



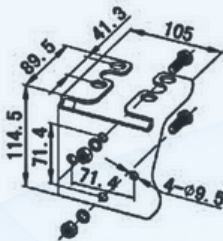
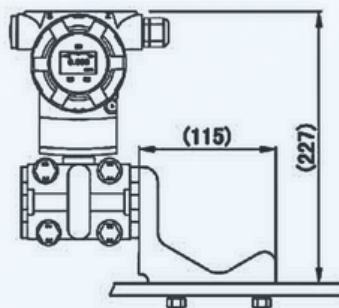
■ WIRING DIAGRAM



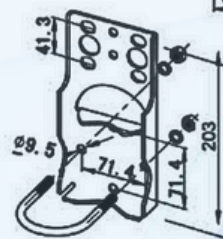
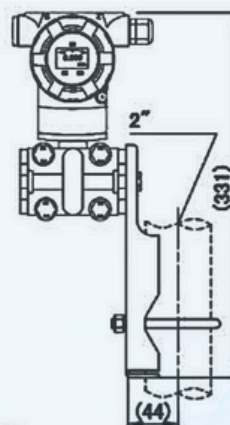
■ DIMENSIONS



**B01 B04**



**B02 B05**



**B03 B06**

## Gauge/Absolute Pressure Transmitter

### AE1021GP/AP Series

#### DESCRIPTION

AE1021GP/AP series is a digital pressure transmitter designed for industrial pressure measurement applications.

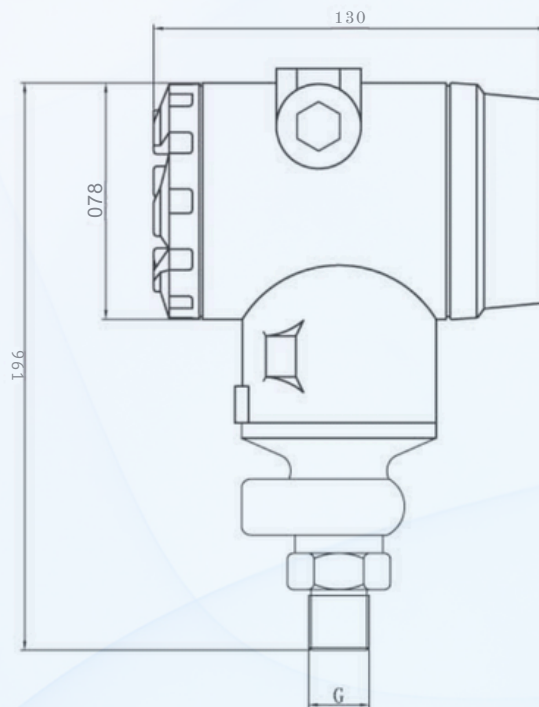
The AE1021GP(AP) offer configurations for gauge pressure, absolute pressure and vacuum including integrated solutions for industrial applications.

#### FEATURES

- Updating time of output current in 90 ms
- Improved performance, increased accuracy and greater stability
- Two years stability of 0.2%
- 0.075% accuracy
- Parameter setting by keypad directly
- 4-20 mA output plus direct digital HART communication
- Automatic zero calibration by press-button
- Explosion proof and weather proof housing



#### DIMENSIONS





## Differential Pressure Transmitter/Pressure Transmitter

### ■ MODEL SELECTION

Item	Code	Specification		
AE1021DP		Diferential Pressure Transmitter		
AE1021GP		Gauge Pressure Transmitter		
AE1021AP		Absolute Pressure Transmitter		
Measurement Range	2	0~15 MBAR	0~1 BAR	0~1 BAR ABS.
	3	0~750 MBAR	0~4 BAR	0~5 BAR ABS.
	4	0~400 MBAR	0~10 BAR	0~30 BAR ABS.
	5	0~1000 MBAR	0~20 BAR	
	6	0~ 2000 MBAR	0~60 BAR	
	7	0~50000 MBAR	0~160 BAR	
	8	0~10 BAR	0~400 BAR	
Output	S	4-20mA, HART Protocol, Linear Output		
	J	4-20mA, HART Protocol, Square Root Output(Range≥5kpa)		
Diaphragm Material / Fill Fluid	2	Stainless Steel 316L/Silicone Oil		
	3	Hastelloy C(range >3Kpa)/Silicone Oil		
	A	Stainless Steel 316L/Fluorine Oil		
Drain Hole	B	Back of Process Flange or None		
	U	Upper Side Process Flange		
	L	Lower Side Process Flange		
Wetted O-ring Material	7	Buna-N (NBR)		
	6	Viton (FKM) (Temperature 2-20°C)		
	5	Low Temperature Viton (FKM-GFLT)		
Process Connection	H	1/4" NPT F		
Maximum Pressure Limit	1	14 Mpa( 4Mpa for Range 2)		
	3	25 Mpa		
Cable Entry	1	M20*1.5		
	2	1/2" NPT		
Mounting Bracket	B00	None		
	B01	Tube-type Curved Bracket (Carbon Steel)		
	B02	Wall Mounting Bracket (Carbon Steel)		
	B03	Tube-type Flat Bracket (Carbon Steel)		
	B04	Tube-type Curved Bracket (Stainless Steel)		
	B05	Wall Mounting Bracket (Stainless Steel)		
	B06	Tube-type Flat Bracket (Stainless Steel)		
Optional	D	Intrinsically Safe Type, Flameproof (Exd IIC T6 Gb)		
	M3	Intrinsically Safe (Exia IIC T6 Ga)		
	D1	LCD Display		
	C1	Stainless Steel Drain Valve or Screw (2pcs)		
	C12	1/2" NPT Female Waist Flange (2sets)		
	C2	1/2" NPT-M20*1.5-014 Pressure Pipe (2sets)		
	C21	M20*1.5 Male Thread T Joint (2sets)		
	C22	M20*1.5 T Joint -14 Pressure Pipe (2sets)		
	K	Degreasing Treatment		

# Diaphragm Level Transmitter

## AE1021LT Series

### DESCRIPTION

AE1021LT series is a digital differential pressure transmitter designed for industrial level measurement applications.

It can be configured to provide intergrated solutions for a broad range of pressure and level measurement applications.

### FEATURES

Updating time of output current in 200 ms

Improved performance, increased accuracy and greater stability

Two years stability of 0.2%

0.1% accuracy

Parameter setting by keypad directly

4-20 mA output plus direct digital HART communication

Automatic zero calibration by push-button

Explosion proof and weather proof housing



### STANDARD SPECIFICATION

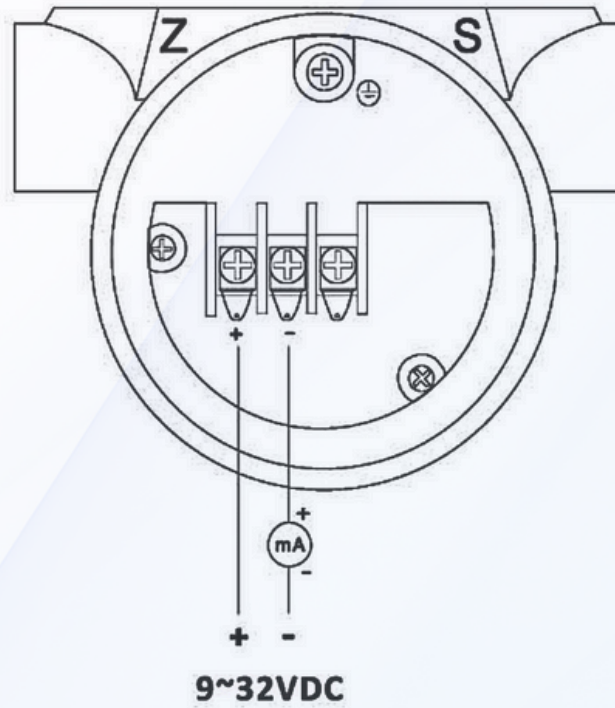
Process Fluid	Liquid, Gas, Vapor
Application	Liquid Level, Differential Pressure, Gauge Pressure, Absolute Pressure
Measuring Range	0-2068 Kpa
Accuracy	+/- 0.1% of Span
Stability	+/-0.2% of URL for 2 Years
Working Temperature	-40 to +250 °C
Material	Flange/Adapter : Carbon Steel/Stainless Steel 304 / Stainless Steel 316
	Diaphragm Stainless Steel 316L/ Hastelloy C/ Monel / Tantalum
	Bolts & Nuts: Carbon Steel / Stainless Steel
	Name/Tag Plate : Stainless Steel
	Converter Housing: Low Copper Cast Aluminum Alloy with Polyurethane, Light Blue Paint
	Fill Fluid Silicone / High Temperature Silicone / Fluorine Oil
	IP65 (Standard)
Protection Class	Intrinsically Safe Type, Flameproof (Exd IIC T6) Intrinsically Safe (Exia IIC T6)

Display	5 Digits Programmable & 0-100% Bargraph
Display Unit	Standard 22 Diferent 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)
Power Supply	9-32 VDC
Digital Communication	Hart Protocol
Damping	0-32 Seconds
Response Time	100 mS
Turn on Time	2 Seconds with Minimum Damping
Zero Calibration	Automatic Calibration by Push-button 1/2" NPT(Female)/M20 Conduit Threads
Cable Entry	+/-0.18%~+/-0.5% of Span Per 20 °C
Temperature Effect	High Pressure Side: 1-1/2", 2", 3", 4" Flanges
Process Connection	ANSI/DIN/JIS/Tri-Clamp Extended Diaphragm : 2", 4", 6" Length Low Pressure Side: 1/4"-18 NPT, 1/2"-14 NPT
Ambient Temperature	-25 to+85 °C

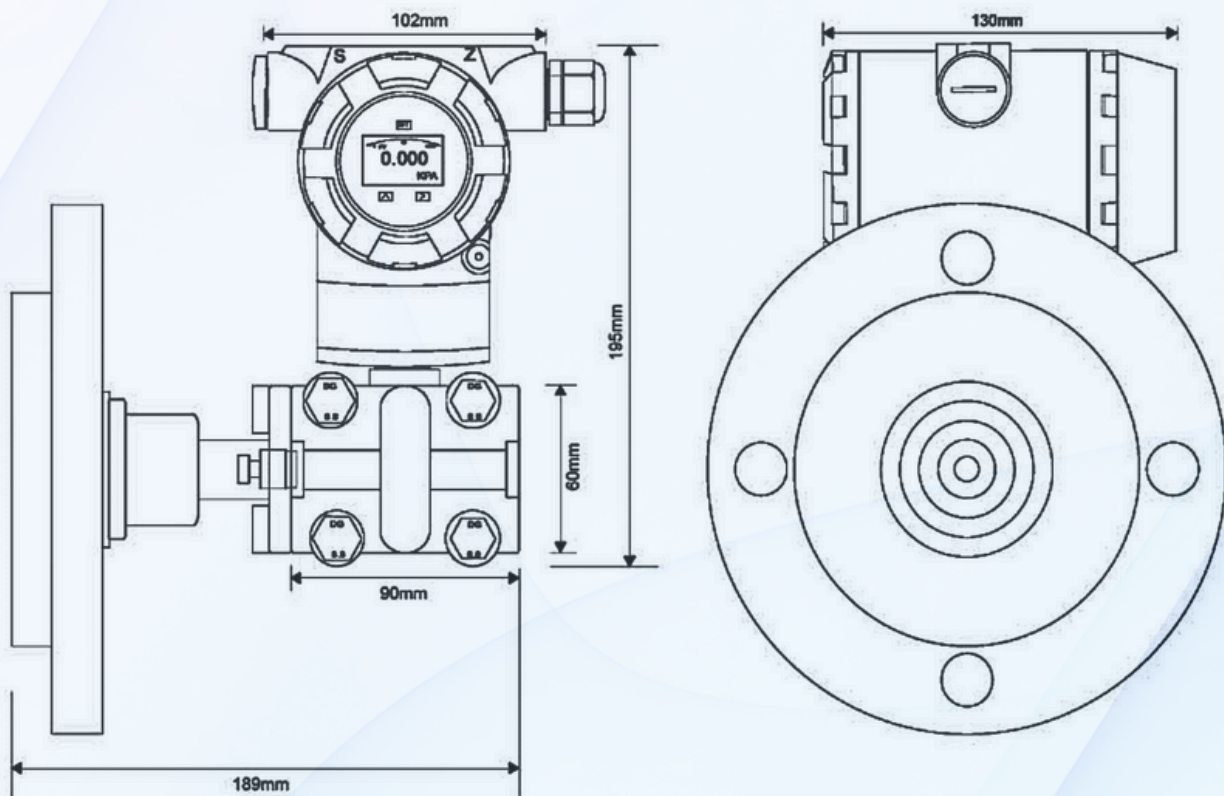


## Diaphragm Level Transmitter

### ■ WIRING DIAGRAM



### ■ DIMENSIONS



## Remote Diaphragm Seal Level Transmitter

### AE1021RD Series

#### DESCRIPTION

AE1021RD series is a diaphragm seal product, which designed for the high-viscosity/ granular/ high-temp./ high-corrosivity situation. RD series diaphragm seal assembles pressure/ DP transmitter to form direct-mount / capillary-connections style.

#### TECHNICAL DATA

- The maximum temperature comes up to 280 °C
- Multiple connection modes - Flange style / Tri-Clamp style
- Multiple diaphragms/alternative connection material
- It can be used for fill fluid for food industry
- Extreme hot and cold temperature
- Stainless Steel with PVC coating capillary
- Tri-Clamp or union screw connection for food industry
- Oil-free treatment & water-free treatment
- Fast and dynamic response
- Improved performance, increased accuracy and great stability



#### STANDARD SPECIFICATION

Process Fluid	Liquid, Gas, Vapor
Application	Liquid Level, Differential Pressure, Gauge Pressure, Absolute Pressure
Measuring Range	0-2068 Kpa
Material	Flange Carbon Steel Stainless Steel 304 Stainless Steel 316 Diaphragms Stainless Steel 316L Hastelloy C Tantalum PTFE-coated Tantalum Diaphragm Capillary: Stainless Steel with PVC Coating
Flange Size	40mm, 50mm, 80mm, 100mm 1-1/2", 2", 3", 4"
Process Connection	Flange, Tri-clamp
Flange Rating	JIS 10K/JIS 20K /JIS 40K ANSI 150# / ANSI 300# / ANSI 600# DIN PN10 PN16/PN25/PN40 Tri Clamp (DIN32676 / ISO2852)
Extension Length	2", 4", 6"

Installation Style	Direct-mount One-sided Capillary Two-sided Capillaries
Capillary Length	1.0 M~10 M
Max. Temperature	Direct-Mount: -20 to 80 °C Remote Diaphragm -40 to 280 °C
Max. Pressure Fill Fluid and Maximum	8.0MPa Silicone Oil(Max. Temperature 130 °C)
Temperature	HT Silicone Oil(Max. Temperature 280 °C) Fluorine Oil (Max. Temperature 160 °C)
Ambient Temperature	+/-0.18% +/- 0.5% of Span Per 20 °C Effect
Time Response	Less Than 1.12 Seconds
Options	Water-free Treatment :Wetted parts are water-free Treated in Manufacturing Oil-free Treatment :Wetted Parts are Oil-free Treated in Manufacturing
Stability	+/-0.2% of URL for 2 Years
Accuracy	+/-0.1% of Span



## ■ MODEL SELECTION

Item	Code	Specification
AE1021LT		Level Transmitter
Measurement Range	3	0~7.5 Kpa
	4	0~37.4 Kpa
	5	0~186.8 Kpa
	6	0~690 Kpa
	7	0~2068 Kpa
Output	S	4-20mA, HART Protocol, Linear Output
Sensor Diaphragm Material/ Fill Fluid	2	Stainless Steel 316L/Silicone Oil
	3	Hastelloy C/Silicone Oil
	A	Stainless Steel 316L/Fluorine Oil
Drain Hole	B	Back of Process Flange or None
	U	Upper Side Process Flange
	L	Lower Side Process Flange
Wetted O-ring Material	7	Buna-N (NBR)
	6	Viton (FKM) (Temperature ≥-20°C)
	5	Low Temperature Viton (FKM-GFLT)
Cable Entry	1	M20*1.5
	2	1/2" NPT
Process Connection	C	2" ANSI 150#
	D	2" ANSI 300#
	J	2" ANSI 600#
	E	3" ANSI 150#
	F	3" ANSI 300#
	K	3" ANSI 600#
	G	4" ANSI 150#
	H	4" ANSI 300#
	Q	DN50 PN16
	R	DN50 PN40
	M	DN80 PN16
	S	DN80 PN25
	T	DN80 PN40
	N	DN100 PN16
	U	Customized
Flange Diaphragm Material	A	Stainless Steel 316L
	B	Hastelloy C
	C	Tantalum
	D	Titanium
	E	Monel
	F	PTFE Coating
	G	F46 Coating
	H	Gold-Plated
Insert Tube Length	0	0
	1	50mm
	2	100mm
	3	150mm
Fill Fluid(High Pressure Side)	A	Silicone Oil
	C	Fluorine Oil
Optional	d	Intrinsically Safe Type, Flameproof (Exd IIC T6 Gb)
	i	Intrinsically Safe (Exia IIC T6 Ga)
	M3	LCD Display
	D1	Stainless Steel Drain Valve or Screw (2pcs)
	C1	1/2" NPT Female Waist Flange (2sets)
	C12	1/2" NPT-M20*1.5-Φ14 Pressure Pipe (2sets)
	C2	M20*1.5 Male Thread T Joint (2sets)
	C21	M20*1.5 T Joint -Φ14 Pressure Pipe (2sets)
	K1	Degreasing Treatment