



# ALDPT

## Differential Pressure Transmitter

### Model ALDPT DP Series

## GENERAL

SMARTMEASUREMENT's ALDPT-DP is an intelligent differential that combines proven capacitive sensor measuring techniques (piezoresistive sensors for absolute pressure models) with advanced microprocessor technology. By making use of advanced microprocessor technology, the ALDPT-DP differential pressure transmitter is able to offer features that include self-diagnostics, field parameter adjustment, auto-zeroing, and digital communication capabilities; all for about one half of the price of competitive models. The ALDPT-DP differential pressure transmitter can utilize traditional flanges as well as many other standard industrial process connections for pressure, flow and level applications.. Available output options include 4~20 mA or 1~5 V<sub>DC</sub> with HART protocol. The versatility and wide array of options offered by the ALDPT-DP differential pressure transmitter make it suitable for almost any application.

## FEATURES

- High accuracy, very minor temperature effect ( $\pm 0.15\%$  FS/ $10^{\circ}\text{C}$ )
- 100:1 turn-down
- Security lock- parameters
- Advanced diagnostics capabilities
- Large measuring range
- Software compensation
- Available in 316SS, Tantalum and other exotic materials
- Available in either Intrinsically Safe ExiallCT4 or Explosion Proof ExdIICT6, ATEX approval
- Auto-zero adjustment
- Analog 4~20 mA DC two wire linear output w/ HART



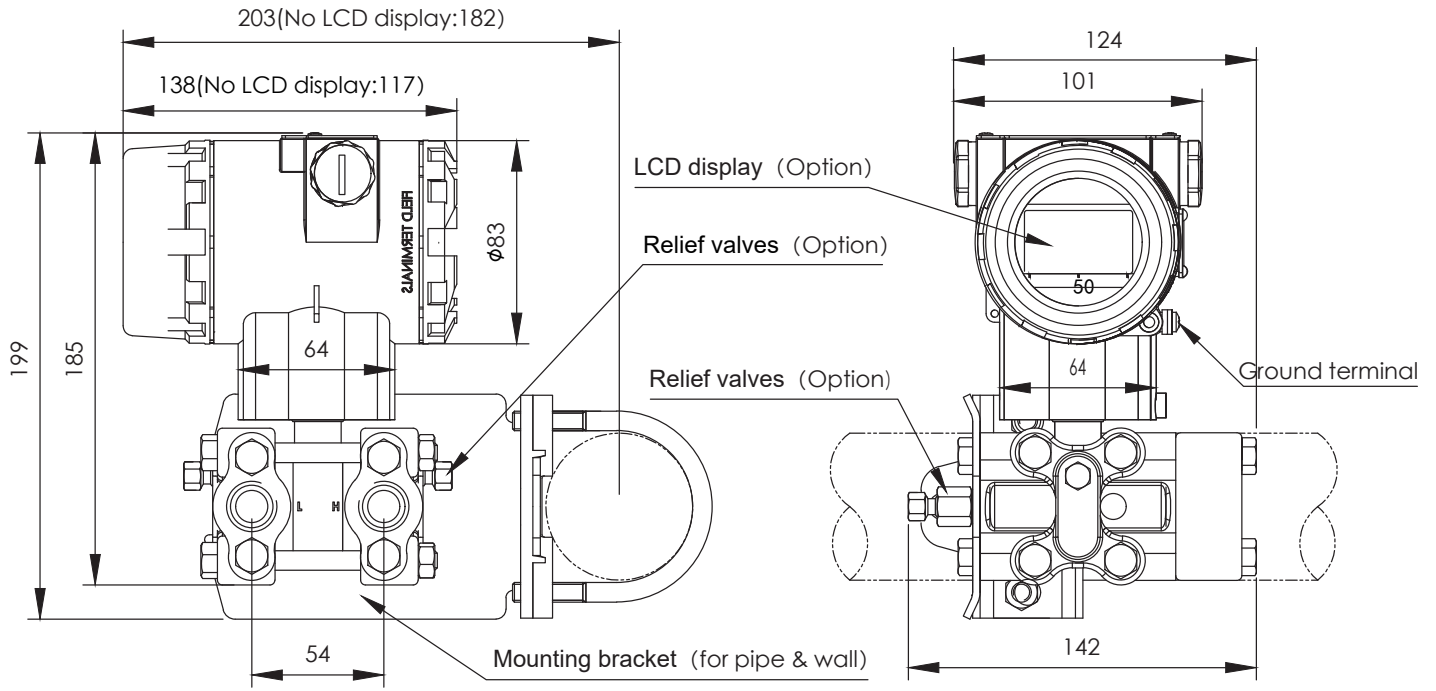
## SPECIFICATIONS

- **Measuring Range:** 0~1kPa~2MPa
- **Fluid:** liquid, gas and steam
- **Ambient Temperature:**  $-30^{\circ}\text{C}$ ~ $85^{\circ}\text{C}$ / $-20^{\circ}\text{C}$ ~ $65^{\circ}\text{C}$   
(Elastomer seal)
  - **Drift (zero):** 0.5% FS/ $50^{\circ}\text{C}$
  - **Drift (span):** 0.7% FS/ $50^{\circ}\text{C}$
- **Accuracy grade:** 0.075 %, 0.2% or 0.5%
- **Turn-down:** 100 : 1
- **Drift (Micro) :** 0.02% FS/year
  - **Standard:** 0.025% FS/year
- **Relative humidity:** 0~100% RH
- **Approvals:** ExdIICT6  
ExiallCT4
- **Output signal:** 4~20 mA DC two wire
- **Working Voltage :** 12~36 V<sub>DC</sub>-Blind type  
15~30 V<sub>DC</sub>-LCD type
- **Outputs:** 4-20mA, pulse,
  - **Load capacitance:** below 0.22 $\mu\text{F}$
  - **Load inductance:** below 3.3 mH
- **Isolating Diaphragm:** SS# 304, SS# 316
- **Communications distance:** 2 km when using CEV cable
- **Start time:** 2 seconds after power up
- **Storage temperature:**  $-50^{\circ}\text{C}$ ~ $85^{\circ}\text{C}$ (NO display)  
 $-40^{\circ}\text{C}$ ~ $85^{\circ}\text{C}$ (LCD display)
- **Damping time:** 2s
- **Process Flange:** SS# 304, SS# 316 optional
- **Filled fluid:** Silicon oil, fluorocarbon oil-option
- **Nuts and Bolt:** Stainless steel
- **O ring material:** Nitrile rubber, Fluorine rubber, PTFE
- **Transmitter Housing:** Aluminum with epoxy resin coat
  - **Spacing from power line:** Above 15 cm
  - **Resolution:** 0.05% of range
- **Field indication:** LCD
- **Effect of environmental temperature:**
  - **Zero drift:** 0.5% FS/ $50^{\circ}\text{C}$
  - **Range drift:** 0.7% FS/ $50^{\circ}\text{C}$
- **Effect of power voltage variation:**  $\pm 0.005\%$  FS/V
- **Protection:** IP67
- **Weight:** 3.3~5kg

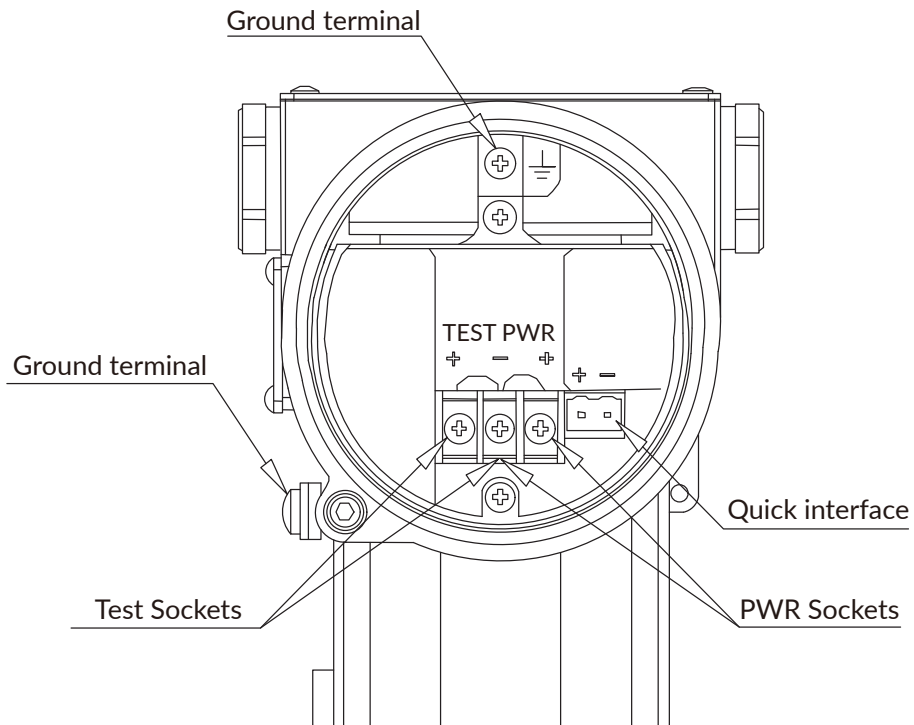
## INTEGRAL TYPE DIMENSIONS

### Transmitter

Units: mm

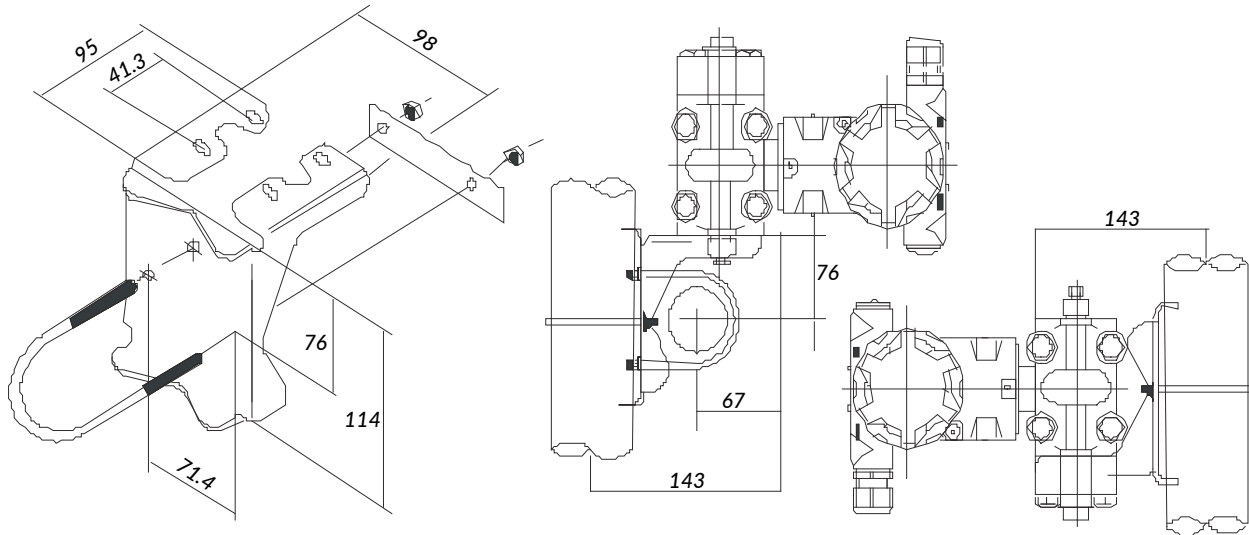


### Terminal Configuration

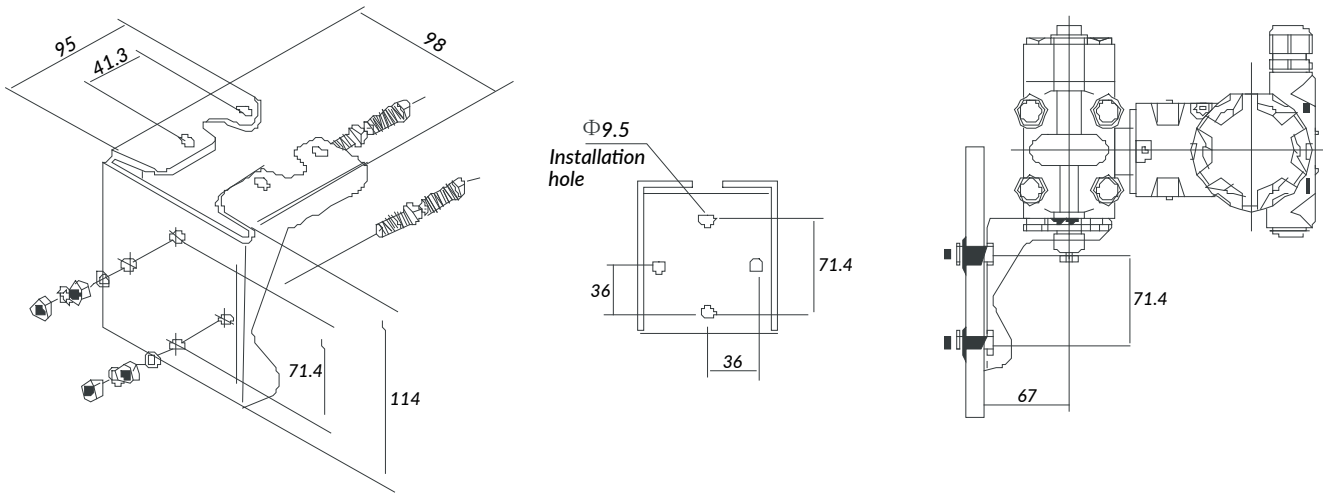


## ACCESSORIES

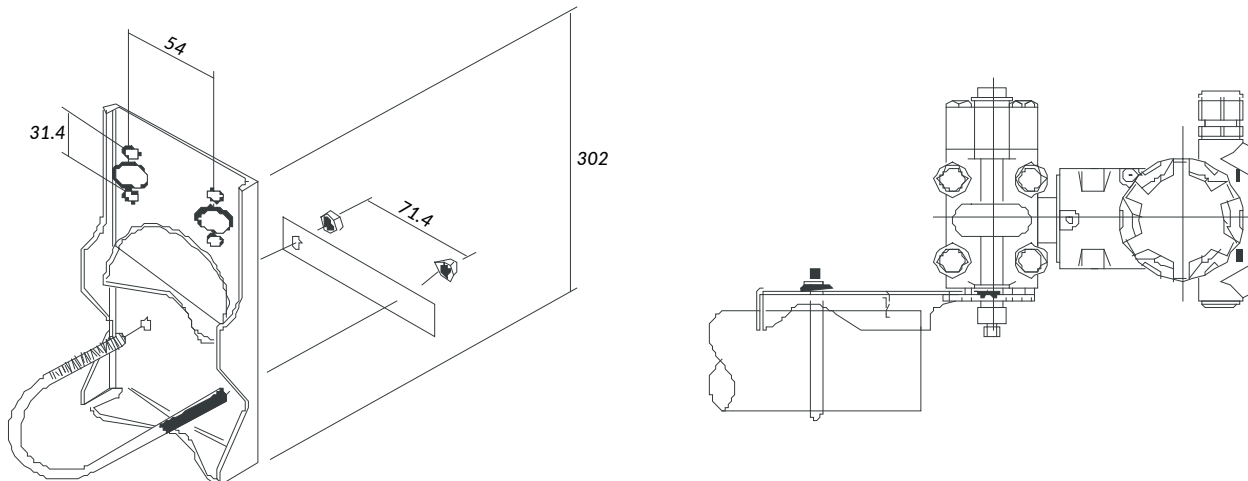
### Bending bracket for pipe installation (2" pipe)



### Bending bracket for panel installation



### Bending bracket for flat installation



<b>TYPE OF FLUID</b>	Please provide the name of your fluid, including operating density and viscosity
<b>PROCESS PRESSURE &amp; TEMPERATURE</b>	Working temperature, pressure measure range and connection
<b>TYPE OF ELECTRONICS</b>	Output and communication
<b>POWER REQUIREMENTS</b>	Please provide the name of your pipe material

### ALDPT SERIES

EXAMPLE: ALDPT-BADP-S-6-A-22-M8-NN-N-N-S-N

ALDPT DP/LT	*_	*	*_	*	*_	*	*_	*	*_	*	*_	DESCRIPTION
pressure transmitter	DP											ALDPT
pressure level transmitter	LT											
0~0.1~1KPa		2										Measuring range
0~0.2~6KPa		3										
0~0.4~40KPa		4										
0~2.5~250KPa		5										
0~20~2000KPa		6										
16Mpa			2									Static pressure
25Mpa			3									
40Mpa			4									
False 4~20mA DC with keystroke and HART				I								Output signal
4~20mA DC output is $\sqrt{\Delta P}$ and HART				F								
No display					M1							Display
LCD display					M3							
Backlight LCD display					M4							
316 SST Isolation diaphragm, Silicon oil						22						Construction material
Hallo C Isolation diaphragm, Silicon oil						23						
1/4" -18 NPT female thread and 7/16" -20 UNF			No Drain/vent valve				S					Connection
1/4" -18 NPT female thread and 7/16" -20 UNF			Drain/vent valve at the back of flange				B					
1/4" -18 NPT female thread and 7/16" -20 UNF			Drain/vent valve on the top of flange				T					
1/4" -18 NPT female thread and 7/16" -20 UNF			Drain/vent valve under of the flange				U					
Perbunan (NBR)								N				Connector gasket (wetting part)
Viton (FKM)								F				
Teflon (PTFE)								P				
Standard (without explosion proof)									S			Approval
NEPESI Isolated explosion ExdIIBT5 or ExdIICT6									D			
ATEX Intrinsic safety ExialICT6 or ExibIICT6 (commonly choice)									I			
0.2%										2		Accuracy
0.5%										5		
0.075% (not for remote)										7		
SS Installation bracket											I	Options
Oxygen final clear (only for fluorinated oil, viton gasket, <6Mpa, +60)											O	

