# 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 $V_{DC}$ 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 (±0.15% FS/10°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 ExiaIICT4 or Explosion Proof ExdIICT6, ATEX approval
- Auto-zero adjustment
- Analog 4~20 mA DC two wire linear output w/ HART

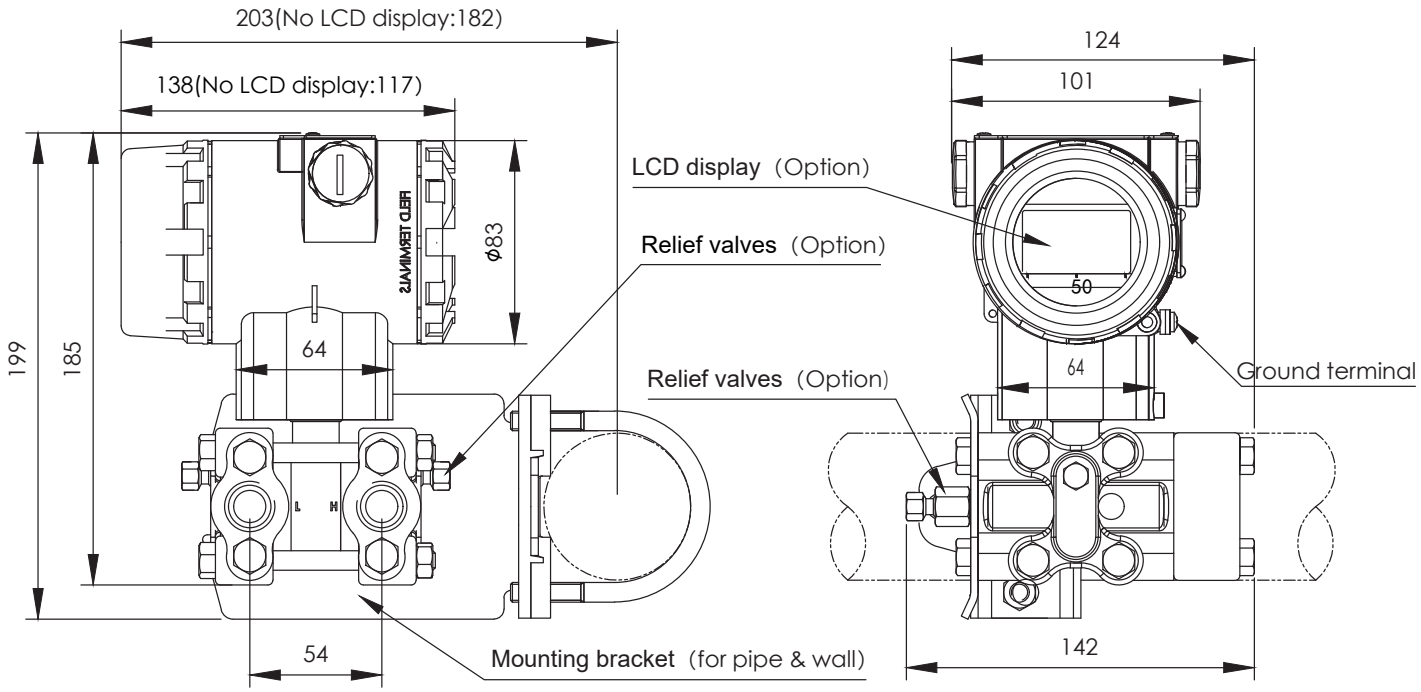
## SPECIFICATIONS

- **Measuring Range:** 0~1kPa~2MPa
- **Fluid:** liquid, gas and steam
- **Ambient Temperature:** –30°C~85°C/–20°C~65°C (Elastomer seal)
  - **Drift (zero):** 0.5% FS/50°C
  - **Drift (span):** 0.7% FS/50°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
  ExiaIICT4
- **Output signal:** 4~20 mA DC two wire
- **Working Voltage :** 12~36 $V_{DC}$-Blind type
  15~30 $V_{DC}$-LCD type
- **Outputs:** 4-20mA, pulse,
  - **Load capacitance:** below 0.22μF
  - **Load inductance:** below 3.3 mH
- **Isolating Diaphgram:** SS# 304, SS# 316
- **Communications distance:** 2 km when using CEV cable
- **Start time:** 2 seconds after power up
- **Storage temperature:** -50°C~85°C(NO display)
  -40°C~85°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°C
  - **Range drift:** 0.7% FS/50°C
- **Effect of power voltage variation:** ±0.005% FS/V
- **Protection:** IP67
- **Weight:** 3.3~5kg

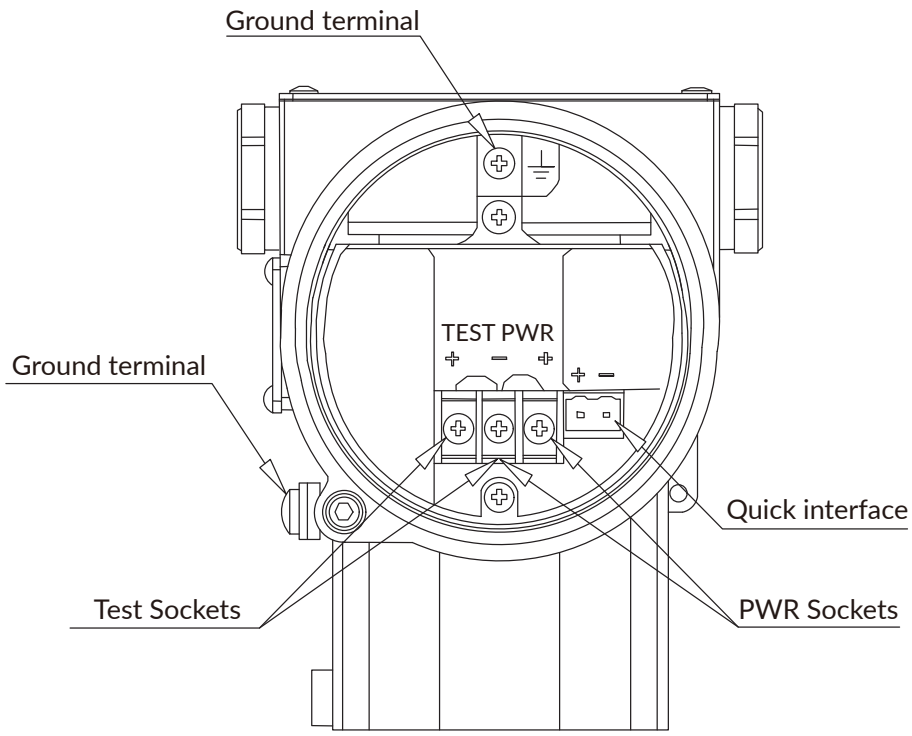
# INTEGRAL TYPE DIMENSIONS

## Transmitter

Units: mm

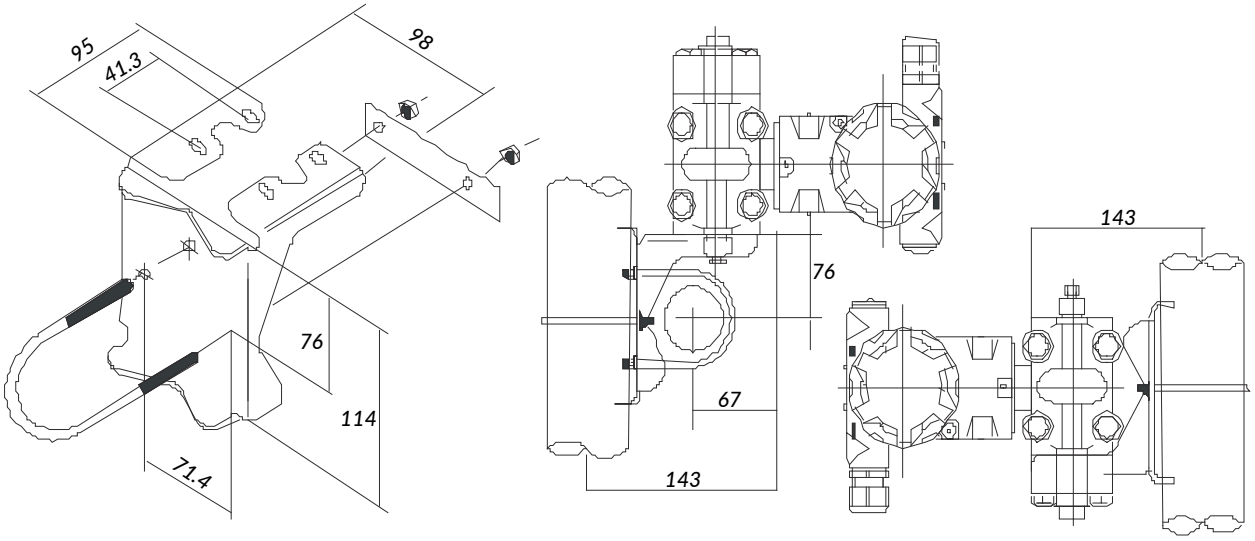



## Terminal Configuration

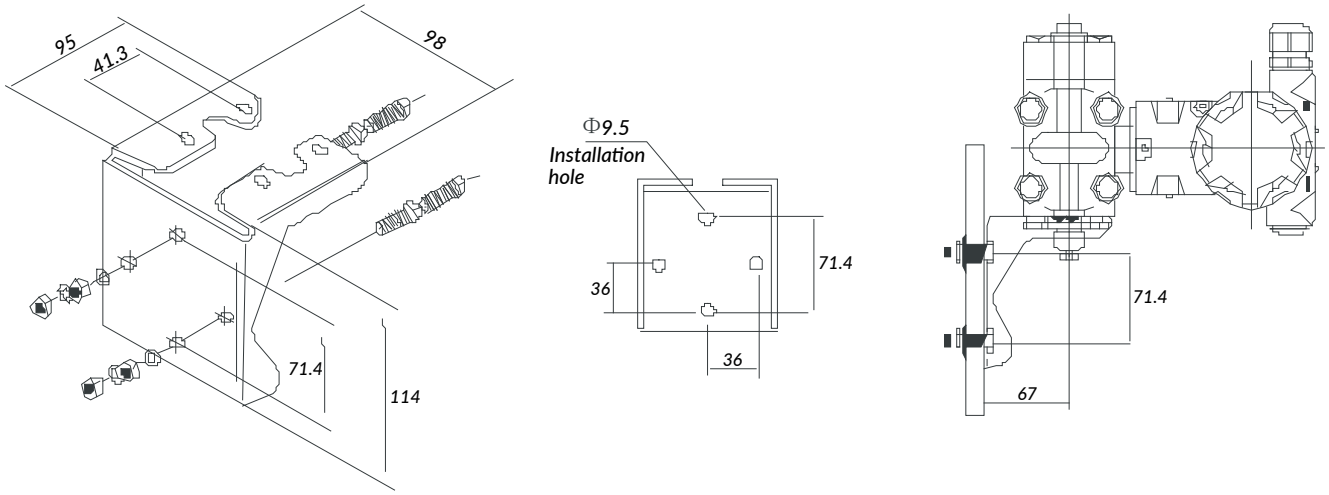


# ACCESSORIES

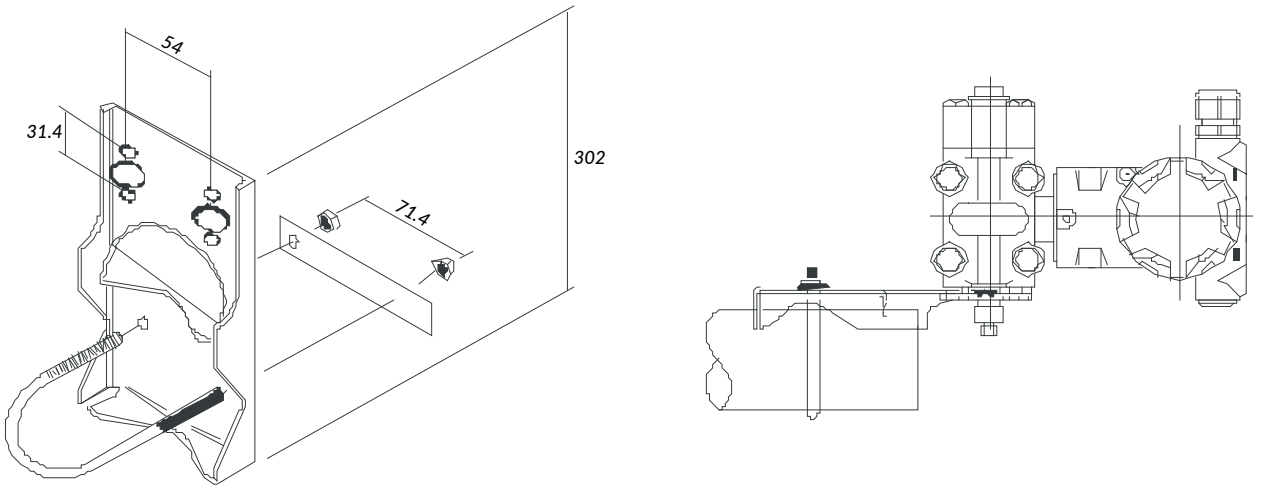
## Bending bracket for pipe installation (2”pipe)




## Bending bracket for panel installation




## Bending bracket for flat installation



# ALDPT

## Pressure & Different Pressure Transmitter Model ALDPT DP Series

| | |
|---|---|
| TYPE OF FLUID | Please provide the name of your fluid, including operating density and viscosity |
| PROCESS PRESSURE & TEMPERATURE | Working temperature, pressure measure range and connection |
| TYPE OF ELECTRONICS | Output and communication |
| POWER REQUIREMENTS | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Δ pressure transmitter | DP | | | | | | | | | | | ALDPT |
| Δ 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 |
| Halloy C Isolation diaphragm, Silicon oil | | | | | | 23 | | | | | | |
| ¼″ -18 NPT female thread and $^{7}/_{16}$″ -20 UNF | No Drain/vent valve | | | | | | S | | | | | Connection |
| ¼″ -18 NPT female thread and $^{7}/_{16}$″ -20 UNF | Drain/vent valve at the back of flange | | | | | | B | | | | | |
| ¼″ -18 NPT female thread and $^{7}/_{16}$″ -20 UNF | Drain/vent valve on the top of flange | | | | | | T | | | | | |
| ¼″ -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 ExiaIICT6 or ExibIICT6 (commonly choice) | | | | | | | | | I | | | |
| 0.2% | | | | | | | | | | 2 | | Accuracy |
| 0.5% | | | | | | | | | | 5 | | |
| 0.075% (not for remote) | | | | | | | | | | 7 | | |
| SS Installlation bracket | | | | | | | | | | | I | Options |
| Oxygen final clear (only for fluorinated oil, viton gasket, <6Mpa, +60°C) | | | | | | | | | | | O | |



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