

# Datasheet

## Absolute Pressure Transmitter DP100

### Introduction

DP100 absolute pressure transmitter is designed to measure pressure for liquid, gas or steam. Stable performance and high accuracy make it idea for high requirement applications. Equipped HART make it easier to communicate with control system.



### Characteristics

Absolute pressure measurement

High accuracy, high stability

Temperature compensation

4...20mA / HART / RS485

Easy to use

### Applications

Applicable to liquid or gas

Power plant

Steel mill

Paper mill

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## Specifications

Measuring range	See measuring range table for details
Output	2-wire 4...20mA with HART
Accuracy	0.2% URL 0.075% URL
Temperature effect	$\leq \pm 0.45\%/55^{\circ}\text{C}$ (131°F)
Stability	$\pm 0.1\%$ of full span
Mounting position effect	An up to 0.24 kPa error can be expected (Can be calibrated out)
Vibration effect	$\pm 0.1\%$ of upper range limit.
Power supply	24VDC
Over-pressure	1.5 x full span
Initialization time	5s
Refresh time	0.25s
Zero and span adjust	Adjust by menu or HART communicator.
Alarm	If self-diagnostics detect a transmitter failure; Analog output is lower than 3.8 mA or higher than 20.8 mA;
Damping time	Settable between 0 and 32s.
Ambient temperature	-40...85°C / -40...185°F -20...70°C / -4...158°F ( LCD display)
Medium temperature	-40...120°C / -40...248°F (Silicone oil)
Relative humidity	5%-98%
Protection class	IP65
Electrical connection	M20 x 1.5

## Measuring range code (Absolute pressure)

Code	Measuring range		Static pressure limit	
	kPa	psi	Mpa	psi
AP40	0...40	0...5.8	16	2300
AP250	0...250	0...36	16	2300
AP1000	0...1000	0...145	16	2300
AP10000	0...10000	0...1450	20	2900

## Calibration

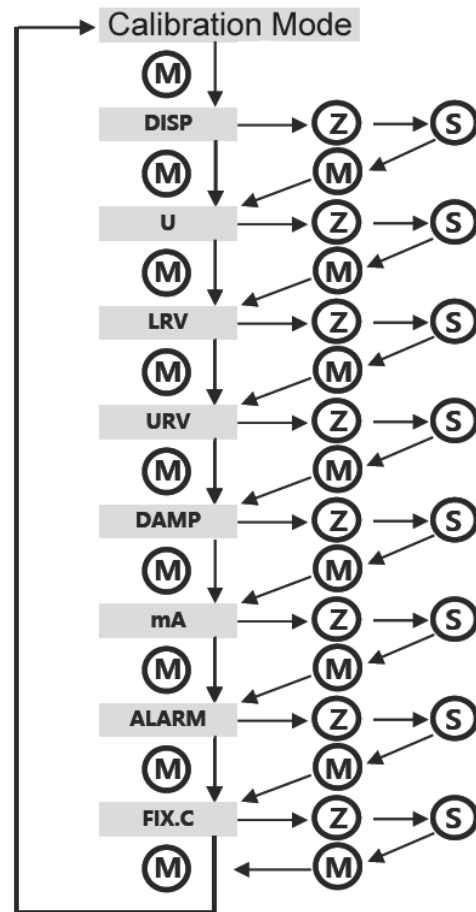
LCD Display		Description
PV=0		Reset PV: press Z and S at same time and hold for 5 seconds, release both keys when "PV=0" displays, reset is success,
Restore to factory setting	RECOVERY	Pressure S and hold for 5 seconds, enter setting 1
	OK	Pressure Z and hold for 2 seconds, OK will be displayed, release the key to enter setting 3
	LOADING	Wait until initialization displays, recovery is done successfully.

## Keys

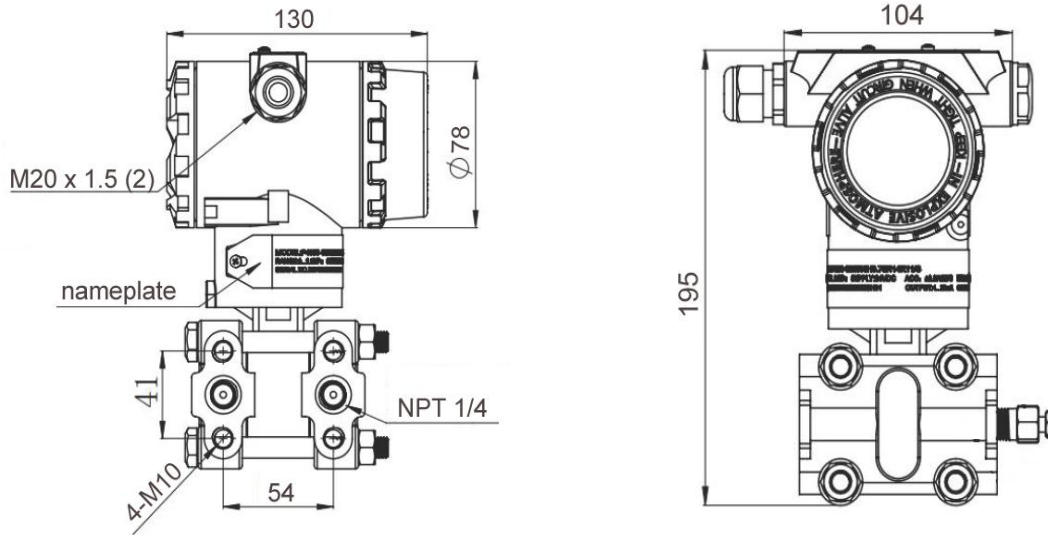
Key	Description
<b>M</b>	Confirm / Enter setting mode
<b>Z</b>	Select a menu / Change value
<b>S</b>	Change value / select unit of measure / select display mode / set output mode

## Menu

Menu	Description	Options
URV	Set analog output lower limit	Use Z to change selection. Use S to change value.
LRV	Set analog output upper limit	Use Z to change selection. Use S to change value.
U	Set unit of measure	bar, mbar, mmHg, Pa, kPa, psi, mmH <sub>2</sub> O, mH <sub>2</sub> O, Kg/cm <sup>2</sup> , g/cm <sup>2</sup>
DAMP	Set damping time	Use Z to change selection. Use S to change value.
DISP	Set display mode	Use Z to enter setting. Use S to select pressure / current / percentage
mA	Set output signal	Use Z to enter setting. Use S to select output
ALARM	Alarm	Use Z to select alarm
FIX.C	Fixed current output	Use Z to enter setting, Use S to select 3.8 / 4 / 8 / 12 / 16 / 20 / 20.8 mA



**Dimensions in mm**



**Order Code**

Example: DP100-AB250LAAN14DN

**1. Model**

DP100- Absolute pressure transmitter

**2. Measuring range**

- AP40 0...40 kPa / 0...5.8 psi
- AP250 0...250 kPa / 0...36 psi
- AP1000 0...1000 kPa / 0...145 psi
- AP10000 0...10000 kPa / 0...1450 psi

**3. Wetted part material**

- L 316L
- H Hastelloy C

**4. Output**

- A 4...20mA

**5. Accuracy**

- A 0.075%
- B 0.2%

**6. Process connection**

- N14 Female thread NPT1/4

**7. Display**

- N No display
- D LCD display

**8. Protocol**

- N None
- R RS485
- H HART