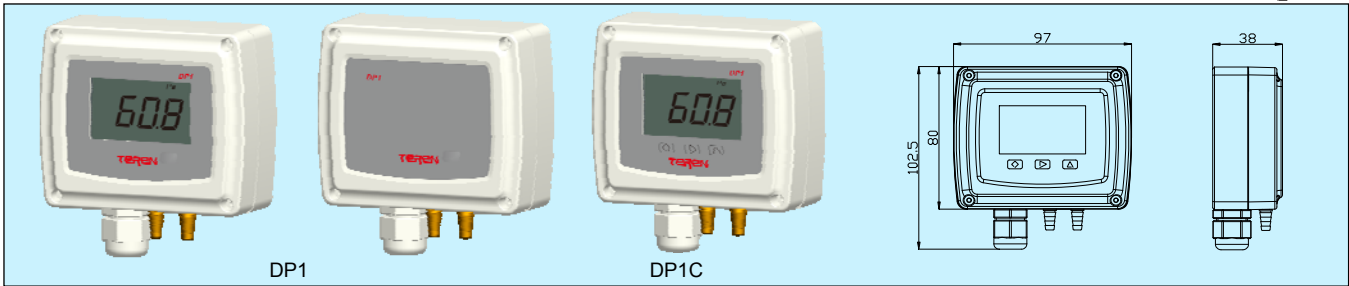


# DP1/DP1C Industrial Differential Pressure Transmitter/Controller



## Applications & Features

- Apply high accuracy MEMS sensor and digital technology, can measure positive, negative or differential pressure
- It can measure system pressure of fan, blower, filter, furnace draft and orifice plate and can apply to various clean room, biological safety cabinet, clean bench, ducts collection, medical or pharmaceutical machine, etc.
- High accuracy, excellent temperature compensation and electromagnetic interference (EMI) ability(industrial EMI level 3), good for applications in complex EMI environments of industrial systems or equipment
- Multiple ranges and engineering units, optional LCD display with unit indication
- Multiple outputs selection, over voltage and reverse polarity protection, high reliability
- Very good performance/price ratio, with accuracy up to 0.5% and range as low as 25Pa
- Function keys: zero reset, unit select, response time set, etc.
- DP1C has relay for independent alarm or ON/OFF control
- High protection rate up to IP65

## Specifications

**Medium:** non-combustible, non-corrosive air, insensitive to moisture, dust, condensation and oil

**Working/Medium Temp.:** -20~70°C

**Temp. Compensation:** 0~60°C

**Range:** 0~25/10000Pa, see ranges table

**Working Pressure:** overload 10xFS(<=1kPa)/8xFS(>1kPa)  
burst 20xFS(<=1kPa)/10xFS(>1kPa)

**Performance:**

Accuracy %FS	±1.0%	±0.5%
Thermal effect %FS/°C(Zero/FS)	±0.05/0.08	±0.03/0.04
Stability %FS/Year	±0.5	±0.3

**Response Time:** 0.5/1/2/5 s, can be set by DIP switch

**Transmitter output:** 0~10V, 4~20mA(2 wires), 0~5V

**Output Load:** ≤500Ω(current), ≥2kΩ(voltage)

**Communication:** 1 RS485/Modbus, R/W enable, 9600 bps, terminal resistance settable

**Display and Keys:** Optional large LCD display with unit and backlight (N/A for 4~20mA)

**Display resolution:** 0.1 Pa (or equivalent), unit switchable

**Display update time:** <1s

**Power:** current 18.5~35VDC (R<sub>L</sub>=500Ω), 8.5~35VDC (R<sub>L</sub>=0Ω)  
voltage 16~28VAC/16~35VDC; power consumption 1.5VA

**Process Connection:** 5mm ID tubing

**Zero set:** easy to reset by keys

**Work Temp.:** -20~70°C, 0~95%RH (Non cond.)

**Storage Temperature:** -30~85°C, 0~95%RH (Non cond.)

**Medium Temperature:** -40~100°C

**Housing:** fire retardant PC(UL94V-0), copper nozzle

**Protection:** IP65

**Weight:** 220g

**Approval:** CE, meet EN61326-1 for industrial equipment

## Models

Model	DP1				Industrial differential pressure transmitter
Accuracy		0			1%FS
		1			0.5%FS
Range			x		Range selection
Output				1	0~10VDC
				2	4~20mA(2 wires)
				E	0~5VDC
				8	RS485/Modbus RTU
Display				0	N/A
				1	LCD (no backlight for 4~20mA output)

## DP1C Differential Pressure Controller

### Specifications

The controller is originated from the DP10x11, with no transmitter output but with 2 relay outputs, LCD display and 3 keys for displaying and setting control parameters. Therefore, most of its technical parameters are the same as those of DP10x11. The different parts are:

**Relay:** 2×SPST, 3A/30VDC, 3A/250VAC

**Display and Keys:** large LCD with unit, backlight and 3 keys

### Models

Model	DP1C			Industrial differential pressure controller
Range		x		Range selection
Communication			0	N/A
			1	RS485/Modbus RTU

## Measuring Ranges

Code	UNIT & Range & Display Resolution					
	Pa	Pa	kPa	in w.c.	mm w.c.	mbar
0	0-25	25.0	0.025	0.100	2.50	0.250
1	0-60	60.0	0.060	0.250	6.00	0.600
2	0-125	125.0	0.125	0.500	12.00	1.250
3	0-250	250.0	0.250	1.000	25.00	2.500
4	0-500	500.0	0.500	2.000	50.00	5.000
5	0-1000	1000	1.000	4.000	100.0	10.00
6	0-2500	2500	2.500	10.00	250.0	25.00
7	0-5000	5000	5.000	20.00	500.0	50.00
8	0-10000	10000	10.000	40.00	1000.0	100.00

1. Set the 5 engineering units by DIP switch and the related LCD indicator will be on.

2. For zero center models, add "Z" at the end of the model. For example, DP1\*\*Z, means the range is -30-0-30Pa. Only ranges 1~6 have this selection.

3. If the measured value is -0.XXX, it will be displayed as -.XXX on the LCD.