![Controtec control technologies logo]

CT-DPTNxxx-R

CT-DPTN

DPTN/DPTD Differential Pressure Transmitter

Applications & Features

● Apply high accuracy MEMS sensor and digital technologies, can measure positive, negative or differential pressure. DPTN is suitable for surface mount.

● 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.

● Multiple ranges, engineering units and outputs

● Good performance with accuracy of 1.0% and range as low as 25Pa

● Function keys: zero calibrate, unit select, response time set, etc.

● Field upgradable LCD display module and multiple ranges selectable. The LCD of DPTN can have 180° reverse installation, meets different installation requirements and wiring methods

Specifications

Medium: non-combustible, non-corrosive air, insensitive to moisture, dust, condensation and oil
Working Temp.: -20~70°C
Medium Temp.: 0~60°C
Temp. Compensation: 0~50°C
Working Pressure: overload 10xFS, burst 15xFS
Accuracy: ±1.0%FS(±2.0%FS@25Pa range)
Long term stability: ±0.5%FS/Year
Thermal effect: <0.05%FS/°C (zero), <0.08%FS/°C (FS)
Response Time: 0.5/1/2/5s, can be set by DIP switches
Process Connection: 5mm ID tubing
Display: 5 digits LCD, display area 44x18mm, with unit indication, field upgradable
Output: 0~10V, 4~20mA (2 wires), 0~5V, RS485 selectable
Output Load: ≤500Ω (current), ≥2kΩ (voltage)
Power: Voltage: 16~28VAC/ 16~35VDC
Current: 18.5~35VDC (R_L=500Ω); 8.5~35VDC (R_L=0Ω)
Zero set: easy to reset by external key
Materials: ABS+PC(housing) & PC(Cover), fire retardant UL94V-0
Protection: IP65
Weight: DPTN:150g
Approval: CE
Accessories: LCD display module (model DPT-LCD or DPTN-LCD), including 1 LCD module and 1 panel film, and flush mount panel (model DPT-A), can be ordered separately

Models

Model	CT-DPTN			Room DP transmitter
Range		x		Range selection
Output			1	0-10V
			2	4-20mA(2 wires)
			E	0-5V
			8	RS485/Modbus
Display			0	N/A
			1	LCD

If select reverse installation for LCD of DPTN or DPTD, add suffix -R after model No.

Measuring Ranges

Code	Unit & Range & Display Resolution			
	Pa	Pa	kPa	Accuracy(%FS)
1	0-25/50/100	25.0	0.025	1%
		50.0	0.050	1%
		100.0	0.100	1%
2	0-250/500/1000	250.0	0.250	1%
		500.0	0.500	1%
		1000	1.000	1%
3	0-2500/5000/10000	2500	2.500	1%
		5000	5.000	1%
		10000	10.00	1%
4	±25/ ±50/ ±100	±25	0.050	1%
		±50	0.100	1%
		±100	0.200	1%

1. Each model has 3 ranges which could be jumper selected.

2. Set the 5 engineering units by DIP switches and the related LCD indicator will be on.

3. For zero center models, add "Z" at the end of the model. For example, DPTN1xxZ, means:-25-0-25/-50-0-50/-100-0-100.

Connection

0～10V/5V	4～20mA	RS485/Modbus

0～10V/5V
1 2 3 4
GND (V)
POWER SUPPLY
24VDC/AC

4～20mA
1 2
(A)
POWER SUPPLY
24VDC

RS485/Modbus
1 2 3 4
B A
RS485
POWER SUPPLY
24VDC/AC
9600,8,N,1
Slave Add.= 1
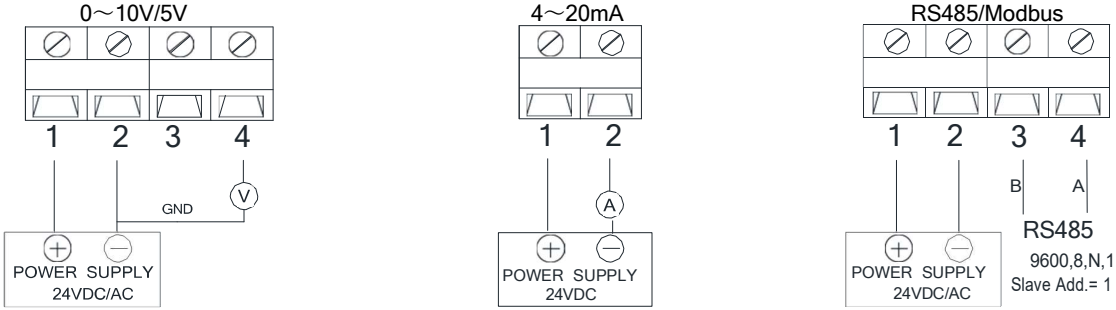
Multi-Range Jumpers Setting (J5, J6, J7)

Model	Jumper				Remark
	Range	J5	J6	J7(default)	
DPTN 1XX	0～25Pa			√	
	0～50Pa	√			
	0～100Pa		√		
DPTN 2XX	0～250Pa			√	√: ON (Connected)
	0～500Pa	√			
	0～1000Pa		√		
DPTN 3XX	0～2500Pa			√	
	0～5000Pa	√			
	0～10000Pa		√		

Model	Jumper				Remark
	Range	J5	J6	J7(default)	
DPTN 4XXZ	-25～25Pa			√	√: ON (Connected)
	-50～50Pa	√			
	-100～100Pa		√		

* DPTN-LCD – with digital LCD display.

DIP Settings

1. Unit setting: Set the unit switch as below.

ON ON ON	ON ON ON	ON ON ON	ON ON ON	ON ON ON
1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
Pa (Defalut)	kPa	mbar	mm w.c.	in w.c.

2. Respond time setting: Set the switch as below.

ON ON	ON ON	ON ON	ON ON
1 2	1 2	1 2	1 2
0.5S(Defalut)	1S	2S	5S

3. RS485 terminal resistance (120Ω) setting: When "J8" is ON, the terminal resistance (120Ω) is applied.

Terminal resistance : None(Default)   Terminal resistance : 120Ω