

DIFFERENTIAL PRESSURE TRANSMITTER, 2-WIRE



ABOUT DPT551

DPT551 is a programmable, microprocessor-based, differential pressure transmitter. It features an IP65 enclosure, and an LCD display. DPT551 can be easily configured for pressure unit, range, etc.

FEATURES

- True 2-wire operation, 4~20mA 1 or 2 analog output
- Unit : Pa, mmWC, mbar, inWC, inHg, PSI, mmHg
- High accuracy
- Software calibration - no trimpots
- 12~32 V DC loop supply
- User programable through PC using DCC501 USB to serial converter
- Dual 7-segment LCD display
- Parameter configuration can be done through keys if display is provided
- DIP switch is provided for range selection if display is not provided
- Auto-zero adjustment with push button switch
- Surface mount or flameproof (with IP65 enclosure) available
- Duct mount model comes with factory installed duct probe

SPECIFICATIONS

All specifications at ambient of 25 °C, unless specified otherwise

INPUT

Unit of measurement	Pa, mmWC, mbar, inWC, inHG, PSI, mmHG
Range	See Table 1
Resolution	See Table 1
Display	Dual 7-segment, 4-digit, 0.5" (12.7 mm) LCD

ANALOG OUTPUTS

No. of outputs	1 or 2
Output type	
Current	4~20mA, 2-wire
Permissible load	600 Ω @ 24 V DC, 20 mA
Current limit	20~22 mA

ISOLATION

Isolation between Output1 and Output2	a) 1500 V AC RMS, 50 hz / 1 minute b) 250 V AC RMS, 50 hz, continuous
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ACCURACY

Linearity & calibration	See Table 1
Supply voltage effect	± 0.001% of span / V
Supply ripple effect, 50/60 hz, 5 Vp - p	± 0.005% of span

POWER SUPPLY

Supply voltage	12~32 V DC loop supply
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CALIBRATION

Zero & span	Through PC using serial converter (To be ordered separately)
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CONFIGURATION

	Through keys
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TEMPERATURE, HUMIDITY

Ambient, storage	-40 ~ +70 °C
Ambient, operation	-15 ~ +50 °C (For with display) -40 ~ +60 °C (For without display)
Relative humidity	0 ~ 95% RH, non-condensing

MECHANICAL

	See Table 2
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DIFFERENTIAL PRESSURE TRANSMITTER, 2-WIRE

TABLE1 - PRESSURE RANGE AND ACCURACY

ORDER CODE	UNIT	TYPICAL ACCURACY AT 30 °C (°C / % SPAN)	WORST CASE ACCURACY (°C / % SPAN)	MIN SPAN	RESOLUTION
2612 0XXXX 2612 1XXXX 2612 2XXXX	Pa	± 0.5% ± 2 Pa	± 1.5% of reading ±3 Pa	10% of full scale	1
	mmWC	± 0.5% ± 0.2 mmWC	± 1.5% of reading ±0.3 mmWC	10% of full scale	0.1
	mbar	± 0.5% ± 0.02 mbar	± 1.5% of reading ±0.03 mbar	10% of full scale	0.01
	inWC	± 0.5% ± 0.008 inWC	± 1.5% of reading ±0.012 inWC	10% of full scale	0.01
	PSI	± 0.5% ± 0.0003 PSI	± 1.5% of reading ±0.00045 PSI	10% of full scale	0.001
	inHg	± 0.5% ± 0.0007 inHG	± 1.5% of reading ±0.0008 inHG	10% of full scale	0.001
	mmHg	± 0.5% ± 0.016 mmHG	± 1.5% of reading ±0.024 mmHG	10% of full scale	0.01
2612 3XXXX 2612 4XXXX 2612 5XXXX	KPa	± 0.5% ± 0.02 KPa	± 1.5% of reading ±0.03 KPa	10% of full scale	0.01
	mmWC	± 0.5% ± 2 mmWC	± 1.5% of reading ±3 mmWC	10% of full scale	1
	mbar	± 0.5% ± 0.2 mbar	± 1.5% of reading ±0.3 mbar	10% of full scale	0.1
	inWC	± 0.5% ± 0.08 inWC	± 1.5% of reading ±0.12 inWC	10% of full scale	0.01
	PSI	± 0.5% ± 0.003 PSI	± 1.5% of reading ±0.0045 PSI	10% of full scale	0.001
	inHg	± 0.5% ± 0.007 inHG	± 1.5% of reading ±0.008 inHG	10% of full scale	0.001
	mmHg	± 0.5% ± 0.16 mmHG	± 0.5% of reading ±0.24 mmHG	10% of full scale	0.01

Note : Accuracy specified for temperature 0~60 °C

TABLE2 - MECHANICAL

Parameters	Surface mount	Duct mount	Flameproof wall mount	Flameproof duct mount
Dimensions (in mm)	See Fig 3	See Fig 4	See Fig 5	See Fig 6
Enclosure housing	ABS plastic	ABS plastic	LM6, pressure die-cast	LM6, pressure die-cast
Protection	IP65	IP65	IP65	IP66
Cable gland	PG7, suitable for cable dia 3 to 6.5 mm	PG7, suitable for cable dia 3 to 6.5 mm	3/4" ET threading gland	3/4" ET threading gland
Certification	-	-	Flameproof for gas group I, IIA & IIB	Flameproof for gas group I, IIA & IIB
Process connection				
Nozzle material	SS304	SS304 with adjustable flange	SS304	SS304 with adjustable flange
Tubing size	5mm ID, Max OD 9mm	12mm ID, Max OD 16mm	5.5mm ID, Max OD 8mm	12mm ID, Max OD 16mm

CONNECTION DIAGRAM

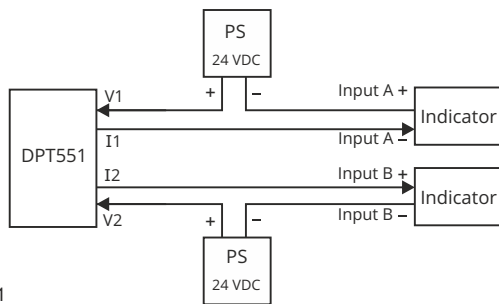


Fig 1

USING EXTERNAL POWER SUPPLY

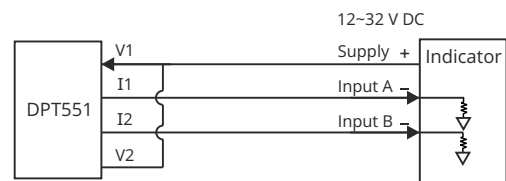
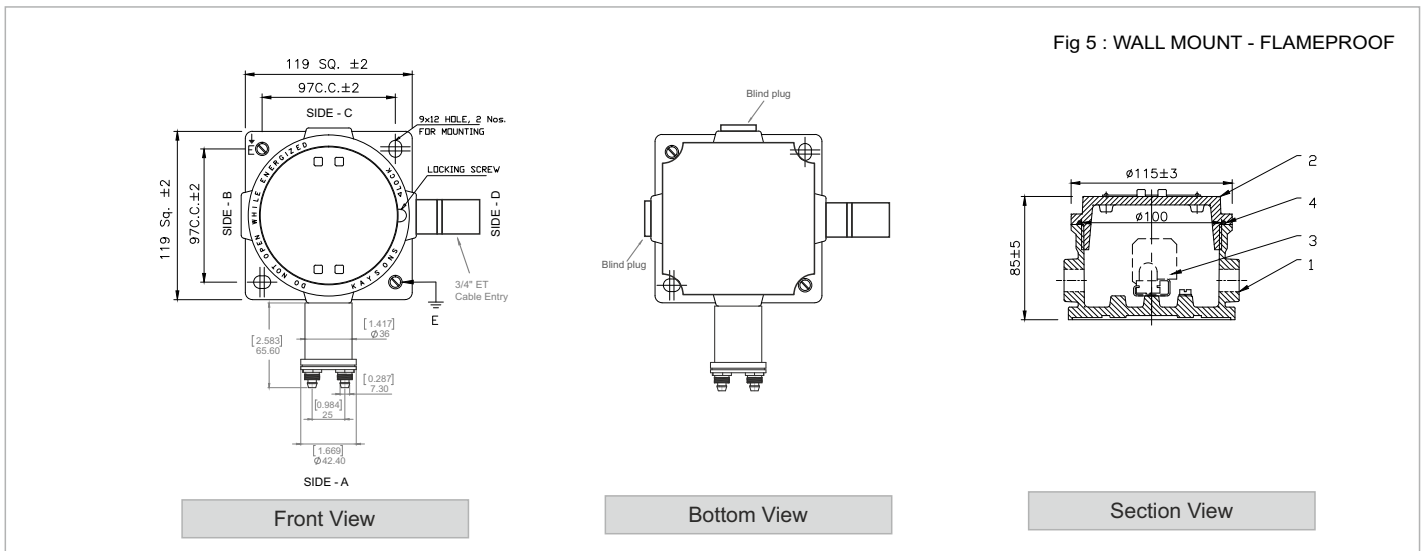
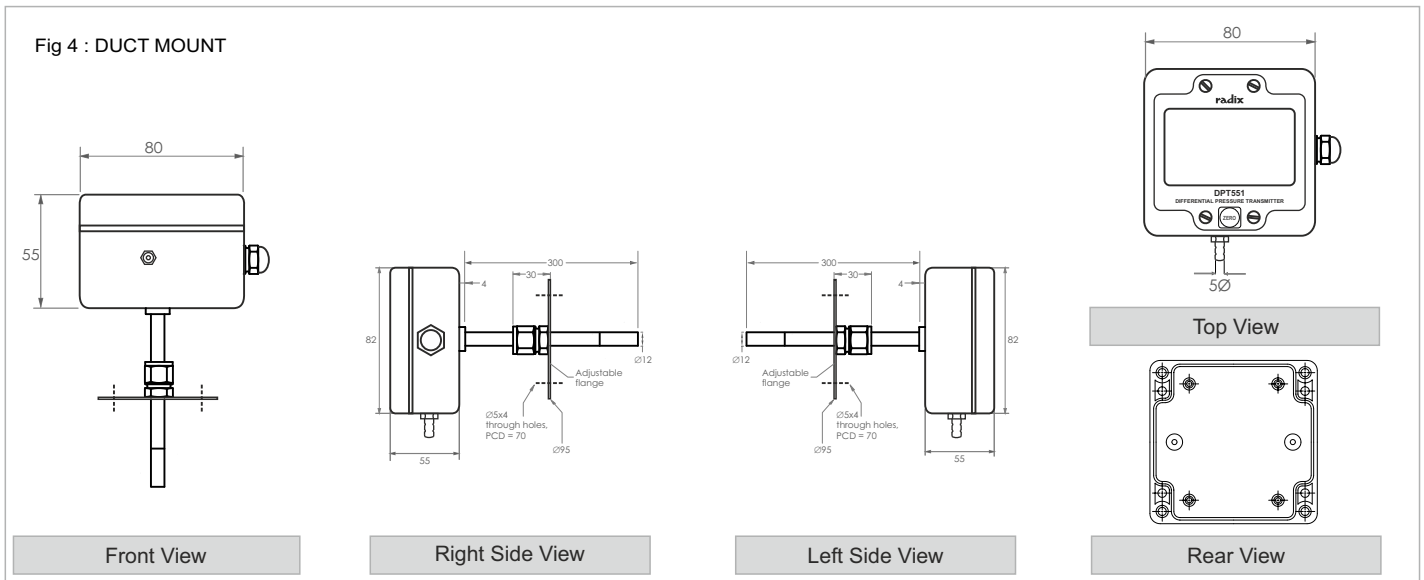
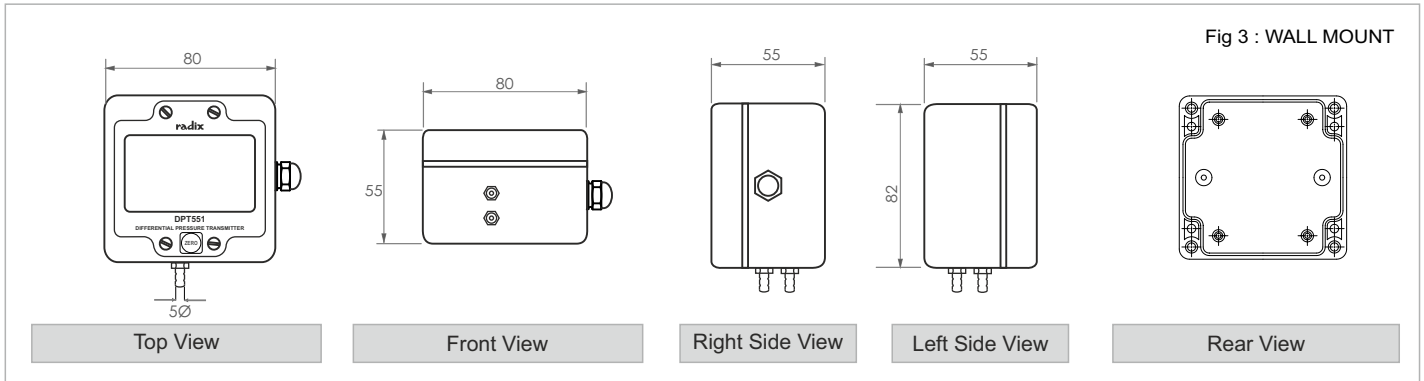


Fig 2

USING POWER SUPPLY OF MEASURING INSTRUMENT

DIFFERENTIAL PRESSURE TRANSMITTER, 2-WIRE

DIMENSIONS mm



DIFFERENTIAL PRESSURE TRANSMITTER, 2-WIRE

DIMENSIONS mm

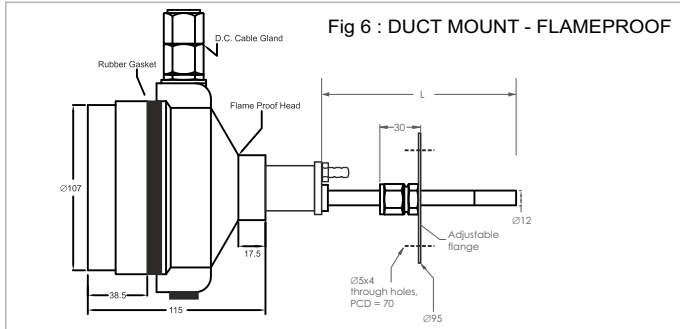


TABLE 3

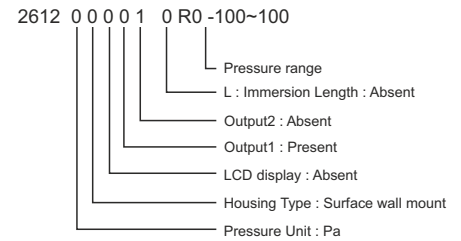
Dimension "L"
150
200
300
400
500

ORDERING INFORMATION

Example	2612	0	0	1	0	0	L	R	
Order code	2612								
Pressure Unit		0							Pa
		1							mmWC
		2							mbar
		3							inWC
		4							mmHg
		5							PSI
Housing Type			0						Surface wall mount
			1						Surface duct mount
			2						Flameproof wall mount
			3						Flameproof duct mount
LCD Display				0					Absent
				1					Present
Output 1					0				Present
					1				Absent
Output 2						0			Present
						1			Absent
Immersion length for Duct Mount sensor							L		Default length is 300mm. User can specify a different length from Table 3
Pressure Range								R	See Table 4

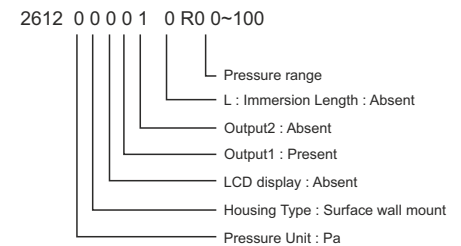
EXAMPLE

Pressure unit : Pa, Housing type : Surface wall mount, LCD display : Absent, Output 1 : Present, Output 2 : Absent, Pressure range : -100~100



Default order code

Pressure unit : Pa, Housing type : Surface wall mount, LCD display : Absent, Output 1 : Present, Output 2 : Absent, Pressure range : 0~100



User can also select range and unit through PC using serial converter

ITEM	MODEL	ORDER CODE
USB TO SERIAL CONVERTER - ISOLATED*	DCC501	2555

* To be purchased separately.

TABLE 4

Maximum available pressure range

R_code	Pa	mmWC	mbar	inWC	mmHg	PSI	inHg	User specified range
R0	-200~200	-20.0~20.0	-2.00~2.00	-0.80~0.80	-1.50~1.50	-0.030~0.030	-0.060~0.060	User need to specify actual pressure range as per selected unit
R1	-1000~1000	-100.0~100.0	-10.00~10.00	-4.01~4.01	-7.50~7.50	-0.145~0.145	-0.300~0.300	
R2	-2000~2000	-200.0~200.0	-20.00~20.00	-8.03~8.03	-15.00~15.00	-0.290~0.290	-0.600~0.600	
R3	-5000~5000	-500~500	-50.0~50.0	-20.0~20.0	-37.5~37.5	-0.725~0.725	-1.500~1.500	
R4	-10000~10000	-1000~1000	-100.0~100.0	-40.0~40.0	-75.0~75.0	-1.450~1.450	-3.00~3.00	
R5	-20000~20000	-2000~2000	-200.0~200.0	-80.3~80.3	-150.0~150.0	-2.90~2.90	-6.00~6.00	

CAT#564R1/T

ENQUIRIES

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