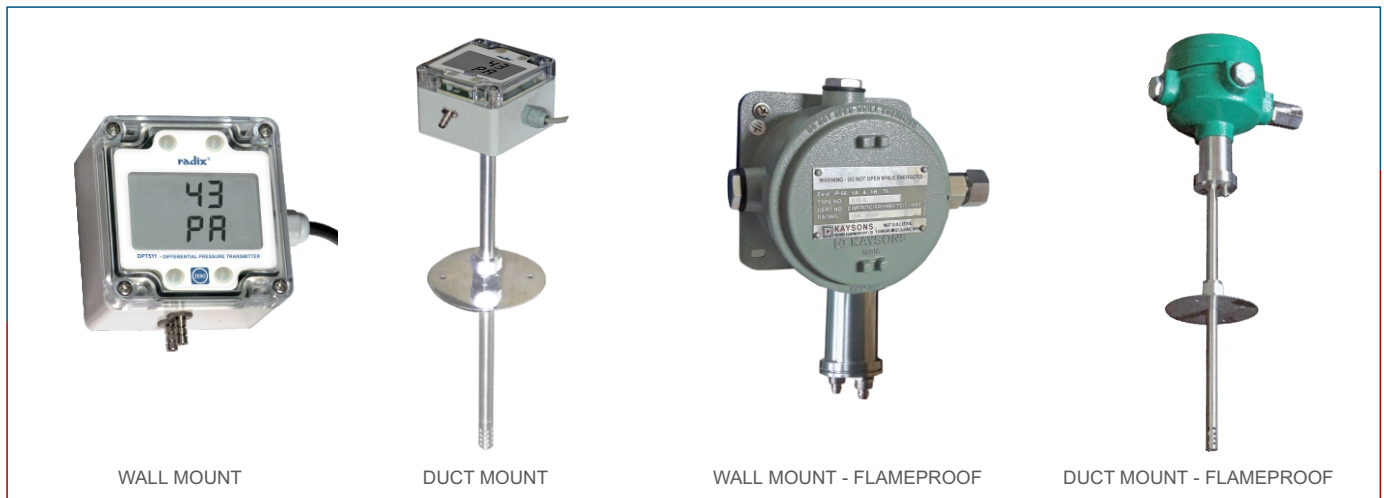


DIFFERENTIAL PRESSURE TRANSMITTER

0~10 VDC / 4~20 mA OUTPUT



WALL MOUNT

DUCT MOUNT

WALL MOUNT - FLAMEPROOF

DUCT MOUNT - FLAMEPROOF

ABOUT DPT511

DPT511 is a programmable, microprocessor-based, differential pressure transmitter. It is user configurable for pressure range and unit.

APPLICATIONS

Measurement of very low pressure applications such as :
Clean rooms, hospitals, fume hoods and computer rooms.

FEATURES

- Voltage or current analog output
- RS485 communication with MODBUS PROTOCOL
- Unit : Pa, mmWC, mbar, inWC, inHg, PSI, mmHg
- High accuracy
- Software calibration - no trim pots
- 18~30 V AC or DC
- Dual 7-segment LCD display
- User programmable USB port
- Parameter configuration can be done through keys if display is provided
- Auto-zero adjustment with pushbutton switch
- DIP switch is provided for range selection if display is not provided
- Surface mount or Flameproof (with IP66 enclosure) available
- Duct mount model comes with factory installed duct probe

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

SPECIFICATIONS

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
Proof Pressure	10X (See Table 3)
Burst Pressure	15X (See Table 3)

ANALOG OUTPUT

Output type	
Standard	
Current	4~20mA (Active/Passive), 0~20mA, 20~4 mA
Load for current output	0~500
Voltage	0~1 V DC, 0~5 V DC, 0~10 V DC / user specified
Load for voltage output	> 10 kohms
Non-standard	Please specify
	Note : For EACH output, one of the Std or Non-standard outputs MUST be specified

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	18~30 V AC or DC
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CALIBRATION, CONFIGURATION

Zero & span	a) Through keys b) Through PC using serial converter (To be ordered separately)
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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

DIFFERENTIAL PRESSURE TRANSMITTER

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TABLE1 - PRESSURE RANGE AND ACCURACY

ORDER CODE	UNIT	TYPICAL ACCURACY AT 30 °C (°C / % SPAN)	WORST CASE ACCURACY (°C / % SPAN)	MIN SPAN	RESOLUTION
2589 0 X X X X 2589 1 X X X X 2589 2 X X X X	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
2589 3 X X X X 2589 4 X X X X 2589 5 X X X X	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

TABLE2 - MECHANICAL

Parameters	Surface mount	Duct mount	Flameproof wall mount	Flameproof duct mount
Dimensions (in mm)	See Fig 4	See Fig 5	See Fig 6	See Fig 7
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

TABLE3 - OVER PRESSURE

Order code	Operating pressure (mmWC)	Proof pressure	Burst pressure
2589 0 X X X 2589 1 X X X	-20.0~20.0	±1000	±1500
	-100.0~100.0		
2589 2 X X X	-200.0~200.0	±2000	±3000
2589 3 X X X	-500.0~500.0	±5000	±7500
2589 4 X X X	-1000.0~1000.0	±10000	±15000
2589 5 X X X	-2000.0~2000.0	±20000	±30000

CONNECTION DIAGRAM

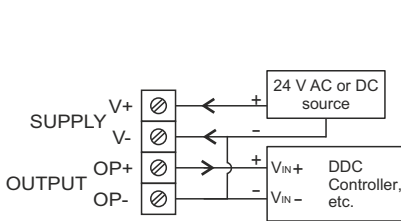


Fig 1

VOLTAGE OUTPUT

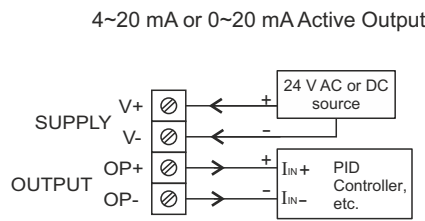


Fig 2

CURRENT OUTPUT

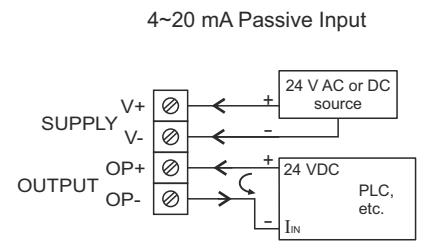
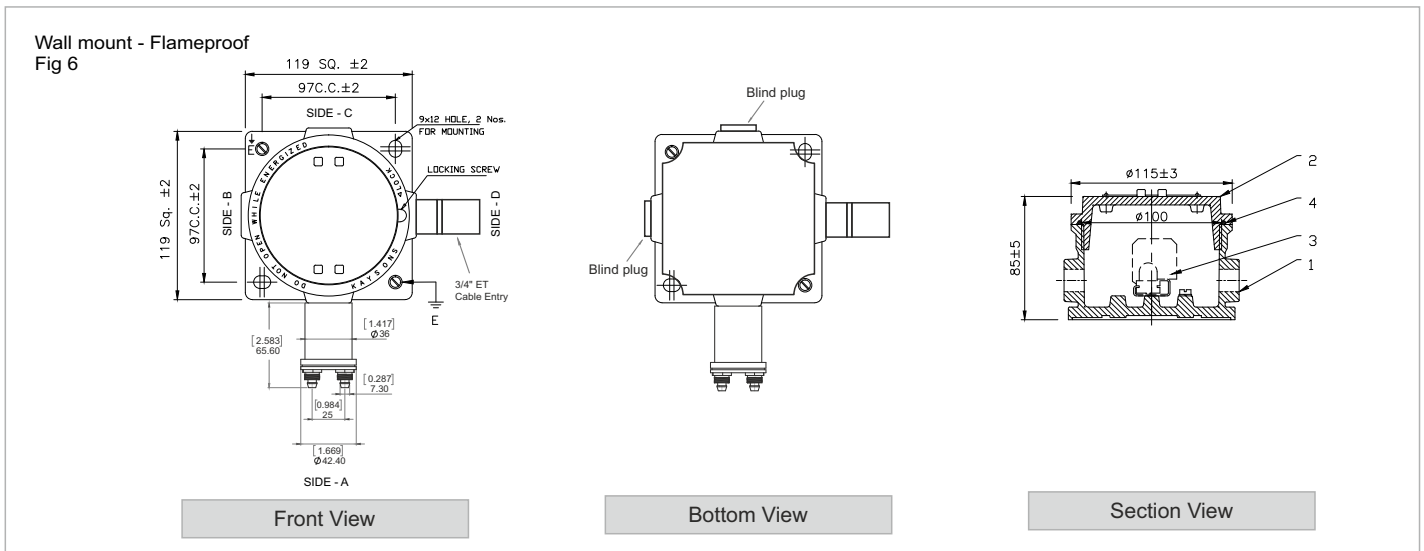
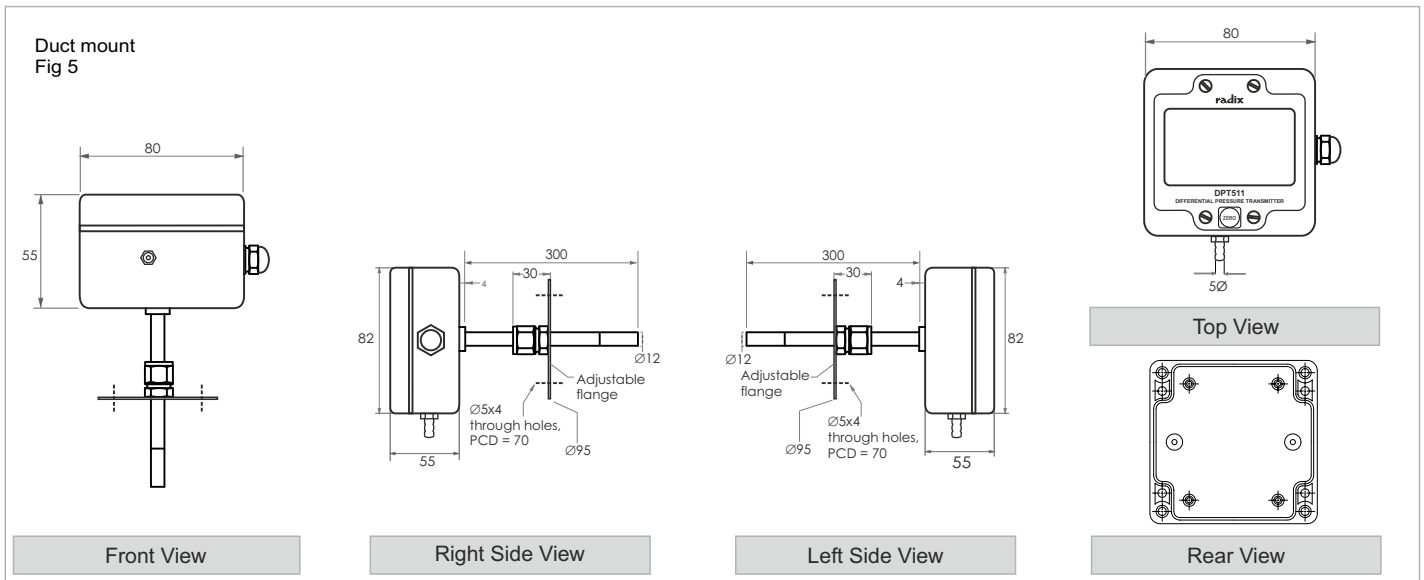
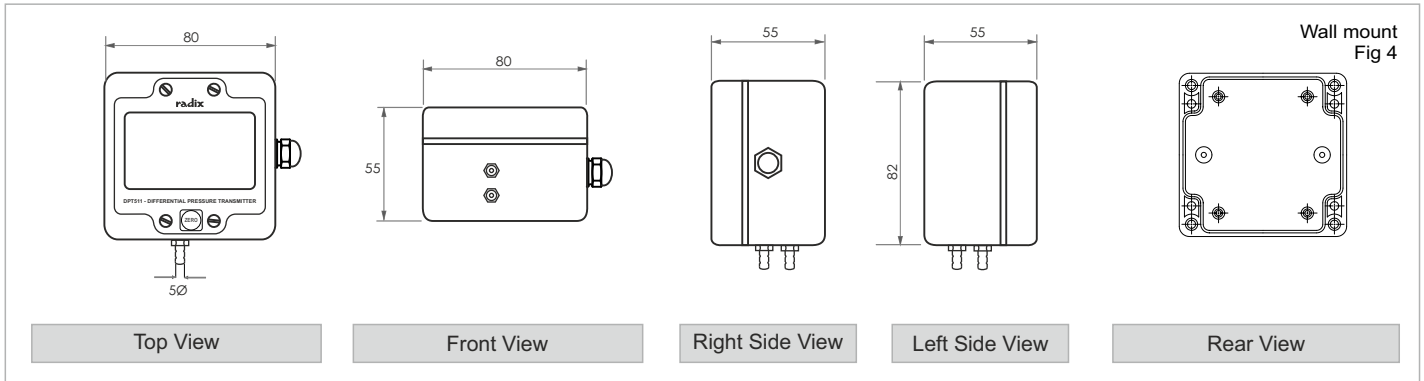


Fig 3

DIFFERENTIAL PRESSURE TRANSMITTER

0~10 VDC / 4~20 mA OUTPUT

DIMENSIONS mm



DIFFERENTIAL PRESSURE TRANSMITTER

0~10 VDC / 4~20 mA OUTPUT

DIMENSIONS mm

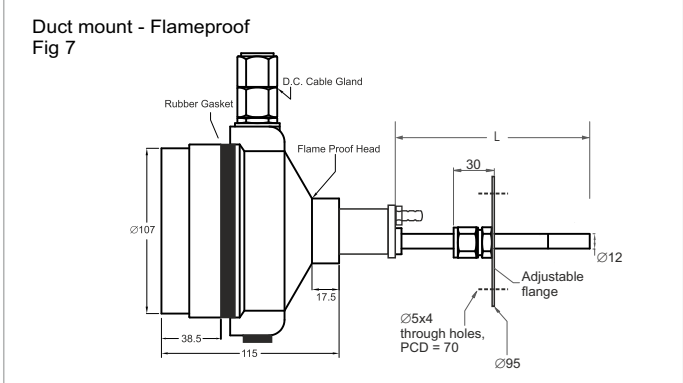


TABLE 4 - DUCT MOUNT TUBE LENGTH

Dimension "L"
150
200
300
400
500

ORDERING INFORMATION

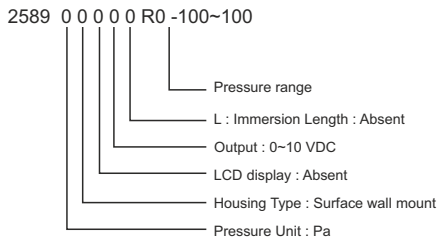
Order Code	2589	0	0	0	0	L	R	
Pressure Unit		0						Pa
		1						mmWC
		2						mbar
		3						inWC
		4						mmHG
		5						PSI
Housing Type			0					Surface wall mount
			1					Surface duct mount
			2					Flameproof wall mount
			3					Flameproof duct mount
LCD Display				0				Absent
				1				Present
Output					0			0~10 VDC
					1			0~5 VDC
					2			0~1 VDC
					3			4~20 mA (Active)
					4			4~20 mA (Passive)
Immersion length for Duct Mount sensor						L		Default length is 300mm. User can specify a different length from Table 4
							R	See Table 5

ITEM	MODEL	ORDER CODE	COMMENT
USB TO SERIAL CONVERTER - ISOLATED*	DCC501	2555	If RS485 is not present

* To be purchased separately.

EXAMPLE

Pressure unit : Pa, Housing type : Surface wall mount,
LCD display : Absent, Output : 0~10 VDC
Pressure range : -100~100



Default order code

Pressure unit : Pa, Housing type : Surface wall mount,
LCD display : Absent, Output : 0~10 VDC
Pressure range : 0~100

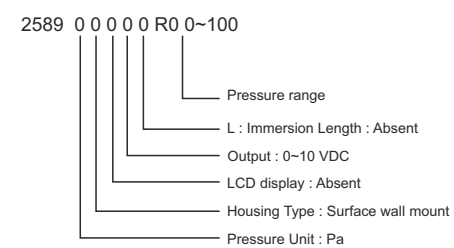


TABLE 5 - PRESSURE RANGE

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 must specify actual pressure range. The range must be part of one of the ranges in this Table.
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#587R2/A

ENQUIRIES

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Automation: automation@radix.co.in
Level: level@radix.co.in

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