DPT110 DPT112 Differential Pressure Transmitter

Summary:

DPT110 e DPT112 differential pressure transmitters detects differential pressure or gauge pressure then converts this pressure difference to a proportional analogue output signal. Two output signals are offered: 0~10VDC, and 4-20mA. These transmitters are applied to low differential pressure display and signal collection in HVAC, industrial equipment, intelligent building, test bench and other fields.

Features and Characteristics:

- LFM110 Range：-1,000Pa~1,000Pa （Minimum range from 0~100Pa）
- LFM112 Range：-10,000Pa~10,000Pa（Minimum range from 0~1,000Pa）
- Adjustable differential pressure range
- Input voltage：16~30Vac/Vdc
- Output signal：0~10V and 4~20mA（Both signals can be used at the same time）
- Unit Of measurement: Pa, mmH_2O, inWG, mmHG, daPa, KPa, hPa, mbar. Various pressure units
- LCD backlit digital display
- Auto zero calibration when power on
- Adopt the imported core
- ABS industrial plastic housing, IP 65
- Housing with simplified mounting systems

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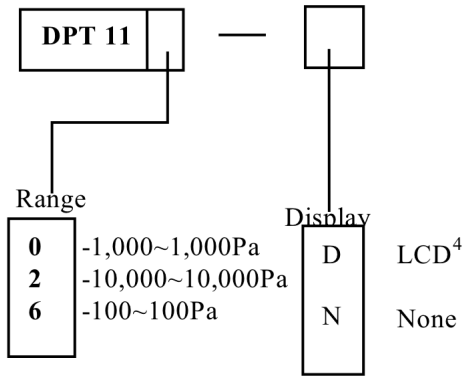
Specification

Range	DPT110	-1,000 ~ +1,000 Pa (Minimum range from 0 ~ +100 Pa)
	DPT112	-10,000 ~ +10,000Pa (Minimum range from 0 ~ +1,000Pa)
Precision	±1.0% FS	
Pressure Unit	DPT110 / DPT112	Pa, mmH_2O, mbar, inWG, mmHG, daPa, KPa, hPa
Tolerated Overpressure	DPT110	15,000Pa
	DPT112	150,000Pa
Output signal	4 ~ 20 mA and 0 ~ 10 Vdc (2 signals available)	
Power Supply	16 ~ 30 Vdc/Vac (2 wires) 24Vdc adaptor power supply(3.5×1.35) 220Vac	
Power Consumption	1.5W	

Model Selection



Functions

Response Time	20ms
Resolution	1Pa, 0.1mmH_2O, 0.01mbar, 0.004inWG, 0.007mmHG, 0.1daPa, 0.001KPa, 0.01hPa
Zero Calibration	Manual with push button or automatic at starting for zero calibration
Media	Air and neutral gases
Tolerated Overpressure	15KPa（DPT110） 150KPa（DPT112）
Operating Temperature	0~+60□
Storage Temperature	-10~+70□

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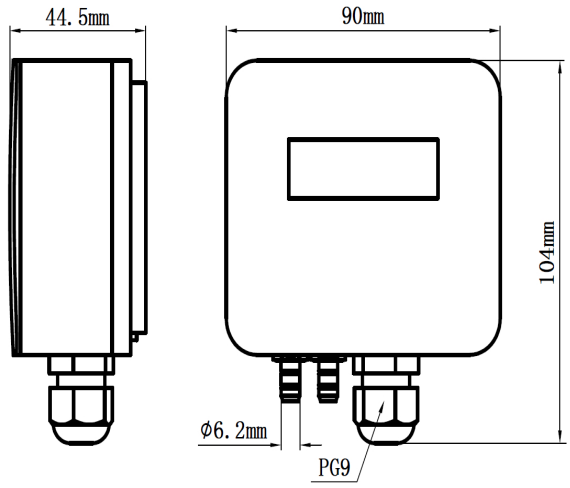
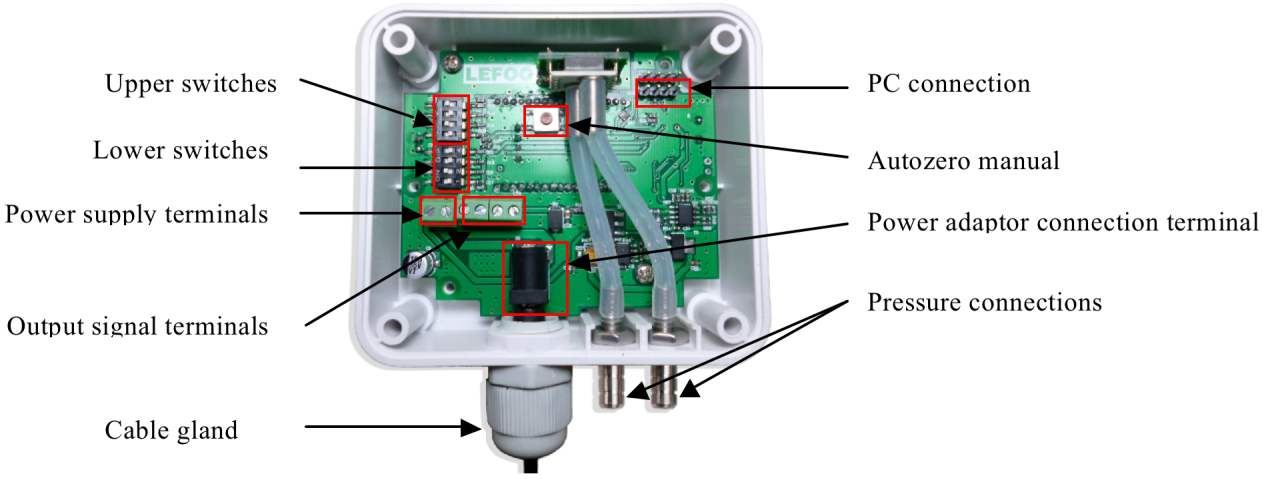
HOUSING FUNCTION
Material: Industrial plastic, fire resistance level per UL 94-V0
Display: backlit digital display 50 x 22.5mm
Digital Height: Value 10mm, Units 5 mm
Presure Connection: Ribbed Ø 6.2 mm .
Cabel Gland: For cable Ø 8 mm maximum
Weight: 166g.



Details



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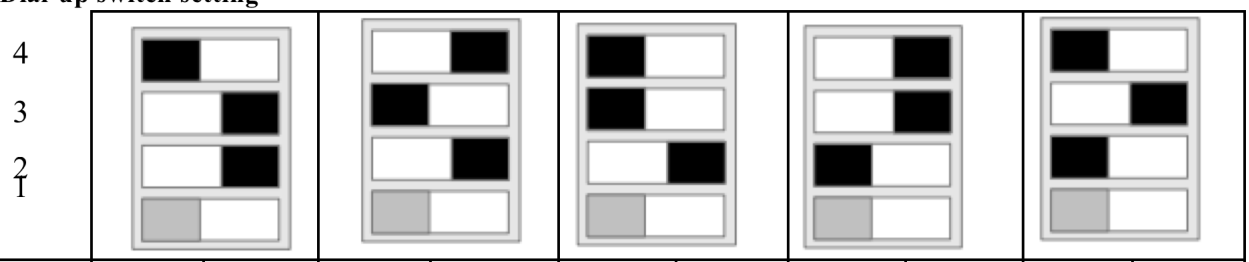
1. Display function

Display pressure range -1000Pa～1000Pa,other display pressure unit available as Pa, mmH_2O, inWG, mmHG, daPa, KPa, hPa, mbar.

2. Function settings

Precision calibration is through the circuit board by pushing the button. When the button activated, the sensor will enter into the precision calibration status. Input the pressure supply to -1000Pa and push the button to save the -1000Pa pressure value. Afterwards, by pressing quickly on the button, you can increment a value and scroll down the different position or values while by pressing on the button more than 3 seconds, you can validate the setting and go to the next setting. Usually, we set the pressure range with professional machines and workers before shipment. Customers are not encouraged to set the pressure

1. Dial-up switch setting



Model	DPT110	DPT112	DPT110	DPT112	DPT110	DPT112	DPT110	DPT112	DPT110	DPT112
Pa	100	1,000	250	2,500	500	5,000	750	7,500	1,000	10,000
mmH_2O	10.0	100.0	25.0	250.0	50.0	500.0	75.0	750.0	100.0	1,000.0
mbar	1	10.00	2.5	25.00	5.0	50.00	7.5	75.00	10.0	100.00
inWG	0.40	4.00	1.00	10.00	2.00	20.00	3.00	30.00	4.00	40.00
mmHG	0.75	7.50	1.87	18.75	3.750	37.50	5.62	56.20	7.50	75.00
daPa	10.0	100	25.0	250.0	50.0	500.0	75.0	750.0	100.0	1,000.0
KPa	0.100	1.00	0.250	2.50	0.500	5.00	0.750	7.50	1.000	10.00
hPa	1.00	10.00	2.50	25.00	5.00	50.00	7.50	75.00	10.00	100.00

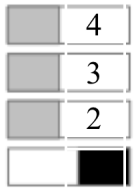
To set a unit of measurement, put the 4,3,2 and 1 on-off switches as indicated in the table above (For example, when the pressure range is 100Pa,the display will be 0-100Pa and with output signal as 4-20mA or 0-10V). The above table shows the dial-up switch position in order to reach the desired pressure range.

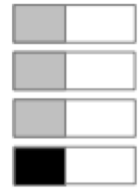
Other pressure ranges are available according to customer's requirements

DPT110 DPT112 Differential Pressure Transmitter

Full range/ Central zero (take 0~1,000Pa as an example)

To set the type of measuring range, put the on-off switch as indicated below





Full range：0~1,000Pa

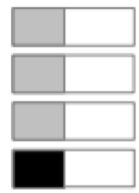
Central zero：-500Pa~500Pa

Please follow carefully the combinations above the Dial-up switch. If the combination is wrongly done, the following message will appear on the display as **"Err".** In that case, you have to unplug the transmitter, place the Dial-up switches correctly and then power the transmitter up

To set a measurement unit, put the on-off switch 3, 2 and 1of the units as shown in the table below

Configuration		Pa	mmH_2O	mbar	inWG	mmHG	daPa	KPa	hPa
Combination	4								
	3								
	2								
	1								

Push the button 1 to start or stop the auto zero powering up



Stop the auto zero in starting up

Start the auto zero in powering up

DPT110 DPT112 Differential Pressure Transmitter

1. Auto zero Manual

Press the auto zero manual button will zero the data and save the zero point

Electrical connection

1- Vac/Vdc Positive;

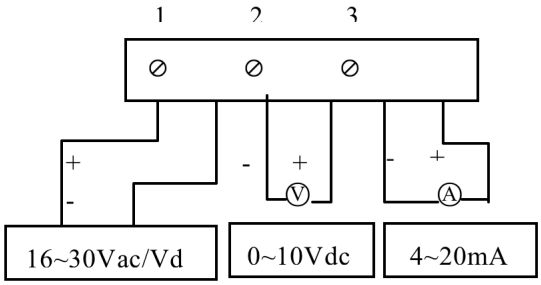
2- Vac/Vdc Negative;

3- GND;

4- V_out;

5- GND;

6- I_out;

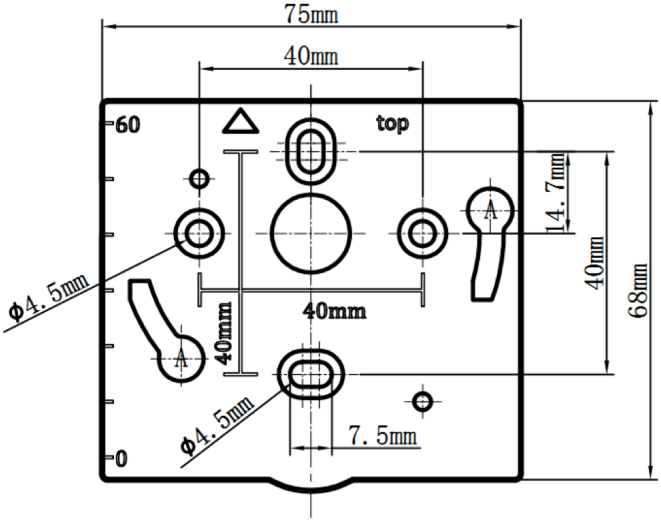


Mounting

To mount the transmitter, mount the ABS plate on the wall(drilling: Ø6mm,screws and pins are supplied)

Insert the transmitter on the fixing plate(see A on the drawing)

Rotate the housing in clockwise direction until you hear a 'click' which confirms that the transmitter is correctly installed. Once the trans -mitters installed and powered up, please make autozero.



Maintenance

Please avoid any aggressive solvent and protect the transmitter and its probes from any cleaning product containing formal, which may be used for cleaning rooms and ducts.

Chargeable Accessories

·Power adapter

·Connection tube