PMM330

Differential Pressure Transmitter

| Features |

- Uses hot-wire type differential pressure sensor
- High sensitivity at low differential pressure, low zero-point drift, minimum measurable value as low as 1 Pa
- Pressure resistance up to 1 bar, differential pressure measurement range of ±50 ... ±1500 Pa
- Compact and easy to install
- Includes square root function for converting measurement into air velocity
- Provides analog output, optional RS-485 communication function
- DIP switch to adjust range and square root function

| Introduction |

The FTI PMM330 differential pressure transmitter is designed for small differential pressures and low air velocities. It uses a hot-wire type differential pressure sensor with excellent zero-point stability and the ability to detect small differential pressures, allowing for precise measurements at low air velocities. The built-in square root function is used for converting measurement in to air velocity, and it provides flexible output options, making it an ideal choice for various differential pressure measurement applications.

| Applications |

Environmental monitoring (Clean rooms, HVAC) / Differential pressure monitoring (Air ducts, filters) / Airflow monitoring

Telephone: +1 302 300 1919 • Fax: +1 302 300 1619
mail:sales@ftisensors.com FTI .Inc
1013 Centre Road, Suite 403S Wilmington, DE 19805
www.ftisensors.com

| Specification |

Measurement

Measuring element	Hot-wire type diff. pressure sensor, flow-through
Measuring range	±50 ... ±1500 Pa

Output

Output	4 ... 20 mA / 0 ... 10 V / RS-485
Signal connection	3-wire
Load resistance	Current output : ≦ 500 Ω
	Voltage output : ≧10 KΩ
Response time	t63 ≦ 2 ms
Display type	LCD module with back light, double line character
Display range	Upon request, 2 decimal place
	(as unit is Pa : 1 decimal place)
Digit height	5.56 mm

Accuracy

Accuracy	±1.5% F.S. ±3% M.V.
Temperature influence	1% m.v. per 10°C

Environment

Measuring medium	Air
Operating temperature	0 ... 50°C
Operating humidity	0 ... 95% (Non-condensing)
Storage temperature	-20 ... +60°C

Electrical

Power supply	DC 24 V ± 10 % & AC 24 V ± 10 %
Current consumption	DC 24 V : ≦45 mA (Display) / ≦40 mA (Non-display)
	AC 24 V : ≦95 mA (Display) / ≦90 mA (Non-display)
Overvoltage protection	≦DC 40 V
Electrical connection	M type (M12 - 4 PIN connector) / (M12 - 5 PIN connector)
	N type (M16 plastic cable gland)
	*M type with 2 m cable

Installation

Installation	Indoor wall type

Protection

IP rating	IP65
Electrical protection	■ Over-voltage
	■ Reverse polarity
	■ Short circuit
Pressure resistance	1 bar
Burst pressure	3 bar

Certification

Certification	CE

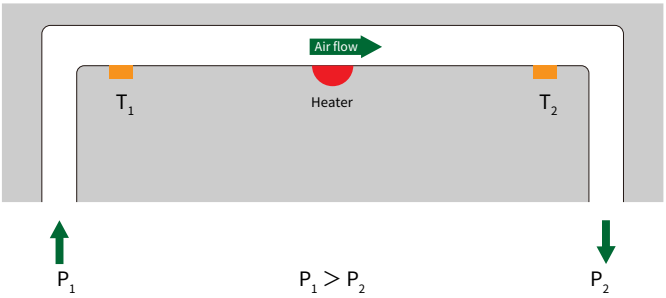
Material

Housing	PC fire-proof class(PC-110)(UL94V-2)
Weight	Display : 152g ; Non-display : 127g

Telephone: +1 302 300 1919 • Fax: +1 302 300 1619
mail:sales@ftisensors.com FTI .Inc
1013 Centre Road, Suite 403S Wilmington, DE 19805
www.ftisensors.com

| Hot-wire Type Differential Pressure Principle |

Hot-wire type differential pressure measurement technology calculates the pressure difference by measuring the air flow rate. When there is a pressure difference between two measurement points, air flows from the high-pressure side to the low-pressure side through a channel inside the transmitter. The channel contains a heating element and two temperature sensors. By comparing the heating and temperature changes, the air flow rate can be precisely measured, which in turn allows the calculation of the pressure difference. This technology can detect extremely low air flow rates, making it possible to precisely measure small pressure differences. Additionally, hot-wire type measurement technology has the characteristic of low zero-point drift, meaning the transmitter can maintain a stable initial zero point even after prolonged use, ensuring measurement precision and reliability.

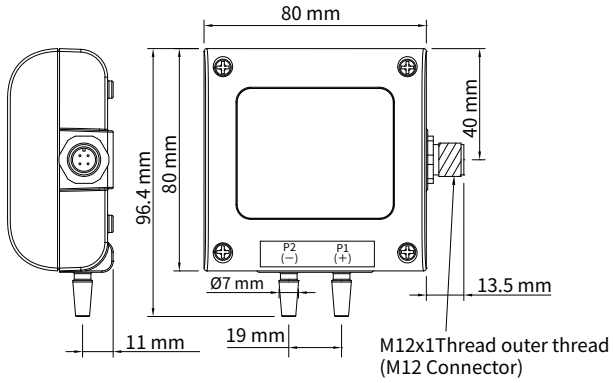


| Pressure Unit Conversion Table |

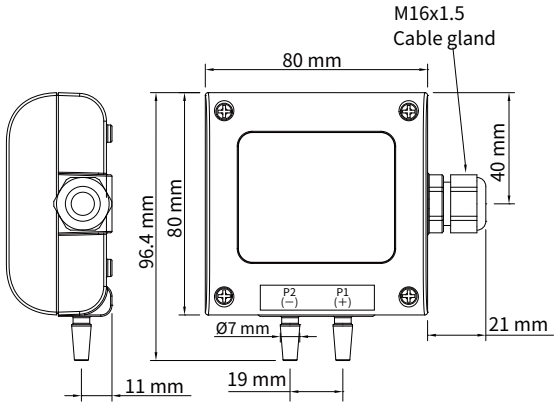
Unit	Pa	mbar	hPa	kPa	mmWS	inH_2O	mmHg
Range	±50 / 100	0.5 / 1	0.5 / 1	0.05 / 0.1	5 / 10	0.2 / 0.4	0.375 / 0.75
	±300 / 500	3 / 5	3 / 5	0.3 / 0.5	30 / 50	1.2 / 2	2.25 / 3.75
	±1000 / 1500	10 / 15	10 / 15	1 / 1.5	100 / 150	4 / 6	7.5 / 11.25

Telephone: +1 302 300 1919 • Fax: +1 302 300 1619
mail:sales@ftisensors.com FTI .Inc
1013 Centre Road, Suite 403S Wilmington, DE 19805
www.ftisensors.com

| Dimension |

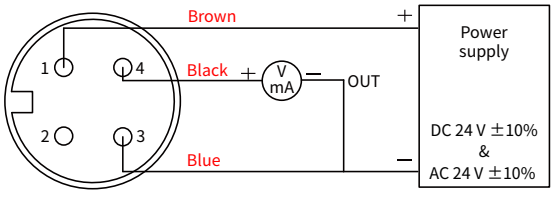


M type

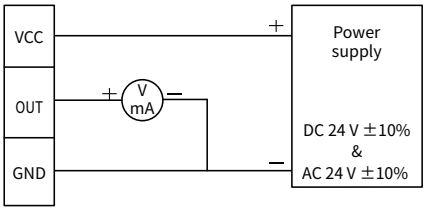


N type

| Analog Diagram |



M12 - 4 PIN connector



M16 plastic cable gland - 3P Terminal

Telephone: +1 302 300 1919 • Fax: +1 302 300 1619
mail:sales@ftisensors.com FTI .Inc
1013 Centre Road, Suite 403S Wilmington, DE 19805
www.ftisensors.com