

PB570-D Plus Ultra-Low Differential Pressure Transmitter



| Features |

- Thermal mass sensing for differential pressure
- High sensitivity at low pressure, low zero drift, range ± 10 , ± 25 , ± 50 , ± 100 Pa
- Supports square root function for analog output
- 2" LCD with easy button setup
- Analog output with RS-485 / Relay
- Compact metal housing, easy to install
- Resolution up to 0.05

| Applications |

Industrial / Agricultural / Ceramics & Glass / Chemical / Transportation / Technology / Energy /
Environmental / Factory Automation / Pharmaceutical / Food & Beverage

| Specification |

Input

Measuring element	Thermal mass type
Input	Differential
Measuring range	$\pm 10, \pm 25, \pm 50, \pm 100$ Pa

Output

Output	4 ... 20 mA / 0 ... 10 V / Relay / RS-485
Signal connection	M12, 3-wire
Warm-up time	60 sec
Response time	$t_{90} \leq 6$ sec
Load resistance	Current output : $\leq 500 \Omega$ Voltage output : $\geq 10 K\Omega$

Communication

Communication methods & protocol	RS-485 Modbus RTU
RS-485 baud rate	9600\19200\38400\57600\115200 bps

Accuracy

Accuracy	$\pm (1\% \text{ F.S.} + 0.1 \text{ Pa})$
Temp. influence	$\pm 0.5\% \text{ F.S.}/^{\circ}\text{C}$

Environmental

Medium	Air
Operating Temp. & Humid.	0 ... 50°C / 20 ... 90%RH(Non-condensing)
Storage Temp.	-25 ... +60°C
Operating pressure	16 bar

Electrical

Power supply	DC 24 V $\pm 10\%$
Current consumption	24 V : 60 mA
Relay capacity	Max current : 6 A Max voltage : DC 24 V (DC 36 V Max)
Electrical connection	M12 8P connector

Installation

Installation	Compatible with Ø8 PVC PTFE pneumatic tubing
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Display

Display readout	Diffe. pressure value with two decimal places
Decimal point	Button
Sampling time	1 cycle/sec
Diffe. pressure unit	Pa, mbar, hPa, kPa, mmWS, inH ₂ O, mmHg
Response time adjustment range	0.5 ... 300 sec

Certification

Certification	CE
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Protection

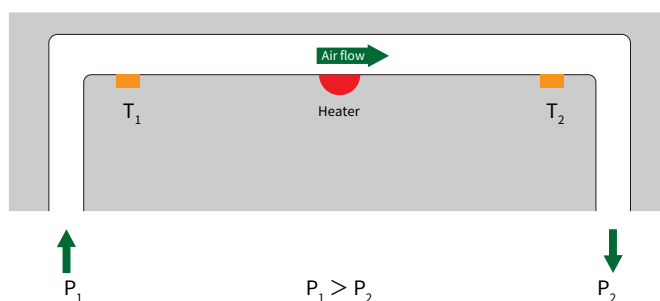
IP rating	IP65(Housing)
Electrical protection	■ Reverse polarity ■ Over-voltage

Material

Housing	Aluminum alloy / Plastic
Weight	207 g

| Hot-wire Type Differential Pressure Principle |

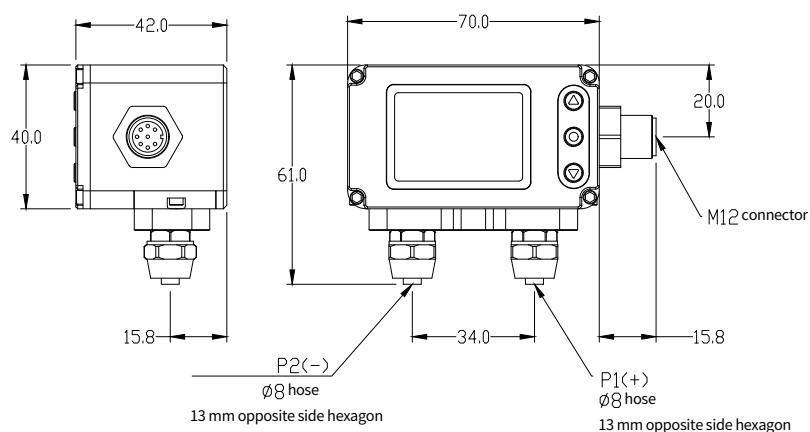
Hot-wire type differential pressure measurement technology calculates the pressure difference by measuring the air flow rate. When there is a pressure difference between two measurement points, air flows from the high-pressure side to the low-pressure side through a channel inside the transmitter. The 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.



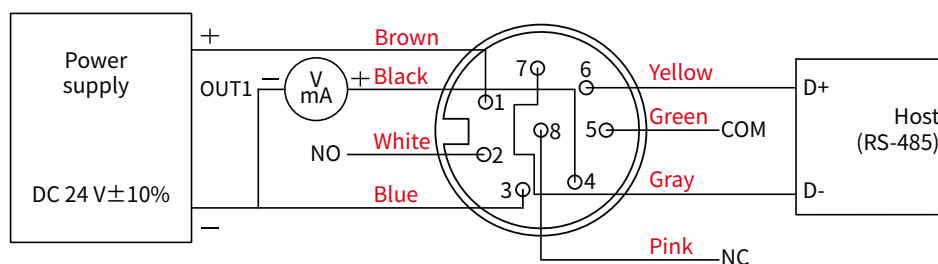
| Pressure Unit Conversion Table |

Unit	Pa	mbar	hPa	kPa	mmWS	inH ₂ O	mmHg
Range	±10	0.1	0.1	0.01	1	0.04	0.075
	±25	0.25	0.25	0.025	2.5	0.1	0.1875
	±50	0.5	0.5	0.05	5	0.2	0.375
	±100	1	1	0.1	10	0.4	0.75

| Dimension |



| Diagram |



*Please make sure the product and the device which connect with RS-485 are on common ground, avoid damaged product.