



PMD33

# Differential Pressure Transmitter(Indoor)



## | Features |

- Silicon chips on differential pressure module of MEMS integration technology
- Offset function / UI software
- Low-pressure monitoring, high pressure resistance
- RS-485 communication interface(Optional), Modbus RTU protocol
- DIP switch output and range switch
- Physical unit switch : mbar / Pa / hPa / kPa / mmH<sub>2</sub>O / mmWS / inH<sub>2</sub>O / mmHg
- Square root function

## | Applications |

Monitor differential pressure of cleanroom / Hospital / Air duct / Filter environment and monitor air flow

## | Specification |

### Input

Input type	Piezoelectric differential pressure module
Measuring range	$\pm 50 \dots \pm 250$ pa

### Output

Output	4 ... 20 mA / 0 ... 10 V
Signal connection	3-wire
Modbus	RS-485
Accuracy(at 25°C)	$\pm 2.0\%$ of F.S.
Load resistance (Current output)	4 ... 20 mA < 500 $\Omega$ / 0 ... 10 V $\geq 10$ K $\Omega$
Response time(t63)	$\leq 2$ 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

### Environment

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

### Temperature effect

Temperature drift	$\pm 1.75\%$ (5 ... 55°C)
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### Electrical

Power supply	DC 8 ... 35 V / AC 12 ... 30 V
Current consumption	DC 8 V : $\leq 130$ mA(Display) / $\leq 115$ mA(Non-display) DC 24 V : $\leq 45$ mA(Display) / $\leq 40$ mA(Non-display) AC 12 V : $\leq 150$ mA(Display) / $\leq 130$ mA(Non-display) AC 24 V : $\leq 95$ mA(Display) / $\leq 90$ mA(Non-display)
Overvoltage protection	$\leq$ DC 40 V
Electrical connection	M12 connector/ M16 : terminal

### Installation

Installation	Indoor
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### Protection

IP rating	IP65
Electrical protection	■ Polarity protection ■ Over-voltage ■ Short circuit
Pressure resistance	$\pm 50 \dots \pm 250$ pa : 0.25 bar
Burst pressure	$\pm 50 \dots \pm 250$ pa : 0.25 bar

### Certification

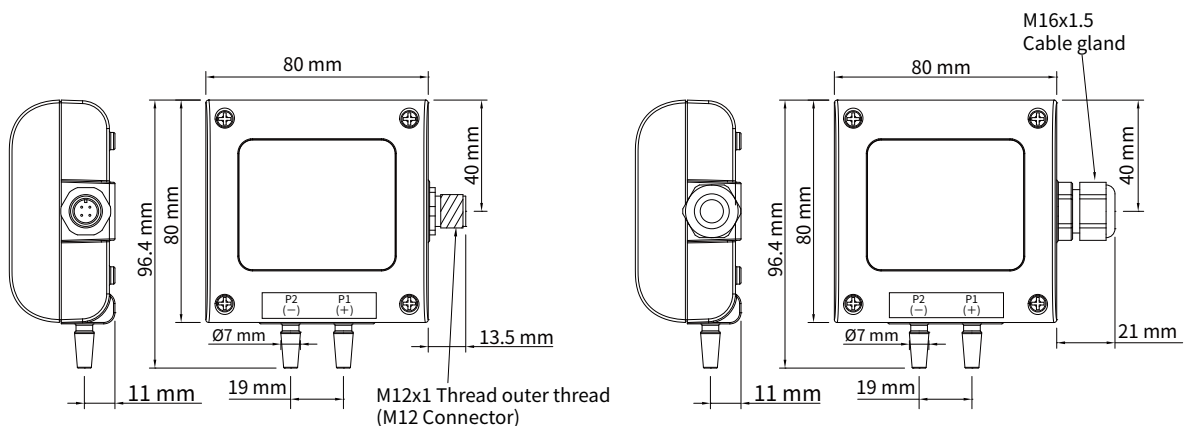
Certification	CE
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### Material

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

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

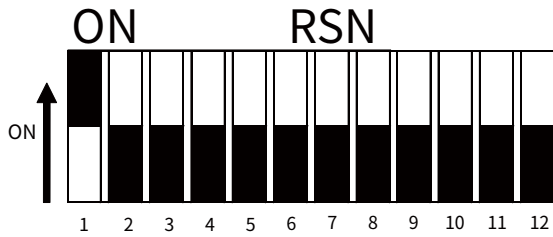
## | Dimension |



Indoor — M type

Indoor — N type

## | DIP Switch |



### 【 Function 】

1. DIP switch active / Deactivate
2. The type for analog output
- 3~4. Switch measuring range
- 5~7. Switch physical quantity unit
8. Zero switch
9. Linear / Square root, output switching
10. Filtering On / Off
- 11~12. RS-485 station no. switch

1. DIP switch active / Deactivate : Set the DIP switch as On / Off

STATUS	OPEN	CLOSE
DIP switch 1		

2. The type for analog output

STATUS	0 ... 10 V	4 ... 20 mA
DIP switch 2		

3~4. Switch measuring range: Upon ordering code(Unit:Pa)(Note:1)

DIP switch 3	DIP switch 4	Range (10)
		50
		100
		250
		Upon request

(Other unit: Please reference pressure unit conversion table)

※Note 1: If the user switches the measuring range by dip switch, the accuracy only for reference.

5~7. Switch physical quantity unit

DIP switch 5	DIP switch 6	DIP switch 7	UNIT
			mbar
			Pa
			hPa
			kPa
			mmH <sub>2</sub> O
			mmWS
			inH <sub>2</sub> O
			mmHg

8. Zero switch

STATUS	0 ... 100 %	-100 ... 100 %
DIP switch 8		

9. Linear / Square root, output switching

STATUS	$\sqrt{\quad}$	LINEAR
DIP switch 9		

10. Filtering On / Off

STATUS	OPEN	CLOSE
DIP switch 10		

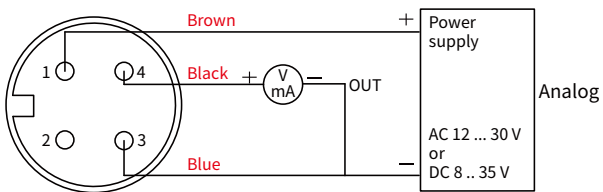
11~12. RS-485 Station no. switch ID 1-4

DIP switch 11	DIP switch 12	STATION
		1
		2
		3
		4

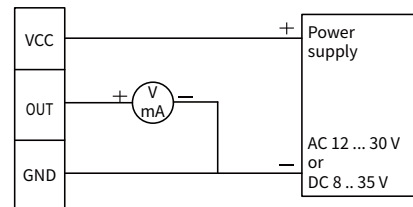
## | Pressure Unit Conversion Table |

Unit	Pa	mbar	hPa	kPa	mmWS	inH <sub>2</sub> O	mmHg
Range	±50 / 100 / 250	0.5 / 1 / 2.5	0.5 / 1 / 2.5	0.05 / 0.1 / 0.25	5 / 10 / 25	0.2 / 0.4 / 1	0.375 / 0.75 / 1.875

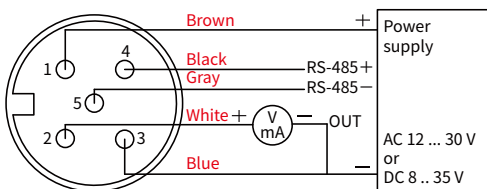
## | Connection Diagram |



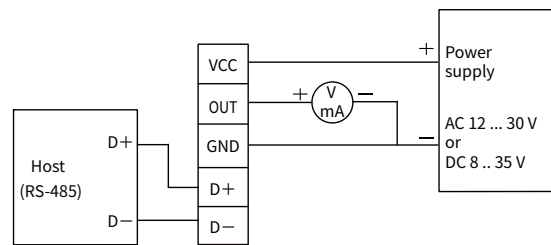
4P M12 Connector + Analog



3P Terminal, analog



5P M12 Connector + RS-485



5P Terminal, analog + RS-485

## | Ordering Guide |

