



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
- 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                                                             |
| Load resistance    | 4 ... 20 mA < 500 $\Omega$ / 0 ... 10 V $\geq 10$ K $\Omega$       |
| (Current output)   |                                                                    |
| Response time(t63) | $\leq 2$ ms                                                        |
| Display type       | LCD module with back light,<br>double line character               |
| Display range      | Upon request, 2 decimal place<br>(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             |

### Accuracy(at 25°C)

|                       |                           |
|-----------------------|---------------------------|
| Accuracy              | $\pm 2.0\%$ of F.S.       |
| Temperature influence | $\pm 1.75\%$ (5 ... 55°C) |

### 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)<br>DC 24 V : $\leq 45$ mA(Display) / $\leq 40$ mA(Non-display)<br>AC 12 V : $\leq 150$ mA(Display) / $\leq 130$ mA(Non-display)<br>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 |
|--------------|--------|

### Protection

|                       |                                                         |
|-----------------------|---------------------------------------------------------|
| IP rating             | IP65                                                    |
| Electrical protection | ■ Polarity protection ■ Over-voltage<br>■ 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 |
|---------------|----|

### Material

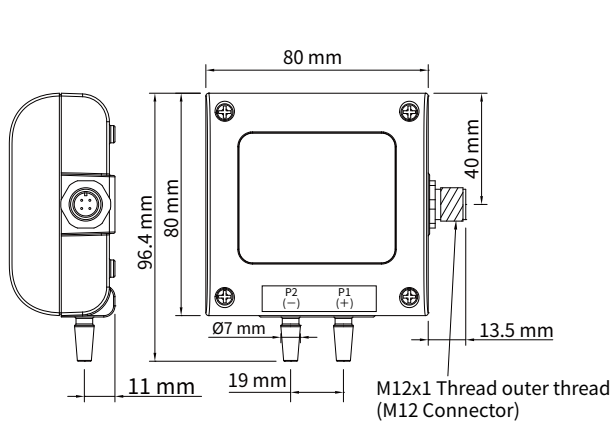
|         |                                      |
|---------|--------------------------------------|
| Housing | PC fire-proof class(PC-110)(UL94V-2) |
| Weight  | Display : 152g ; Non-display : 127g  |

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

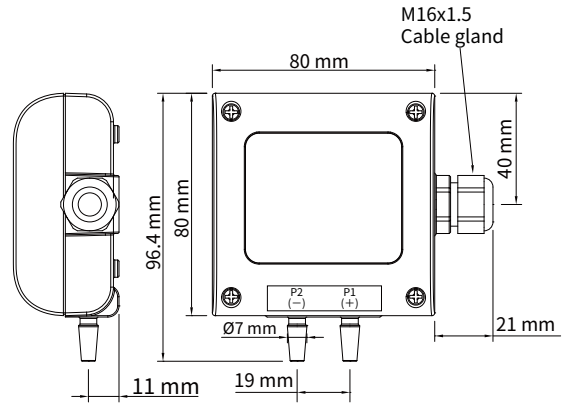
## | Pressure Unit Conversion Table |

| Unit  | Pa                   | mbar          | hPa           | kPa               | mmWS        | inH <sub>2</sub> O | mmHg                 |
|-------|----------------------|---------------|---------------|-------------------|-------------|--------------------|----------------------|
| Range | $\pm 50$ / 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 |

## | Dimension |

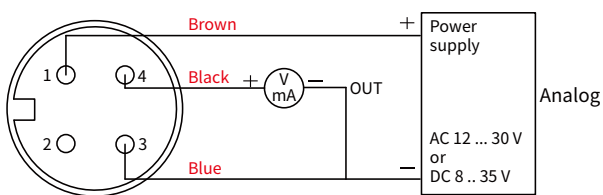


Indoor — M type

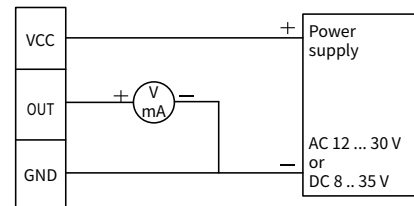


Indoor — N type

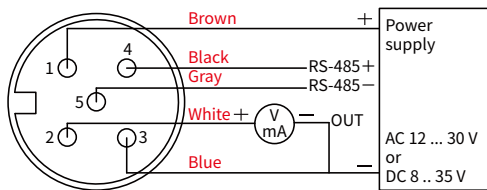
## | Connection Diagram |



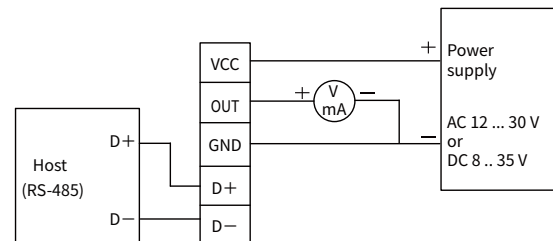
4P M12 Connector + Analog



3P Terminal, analog

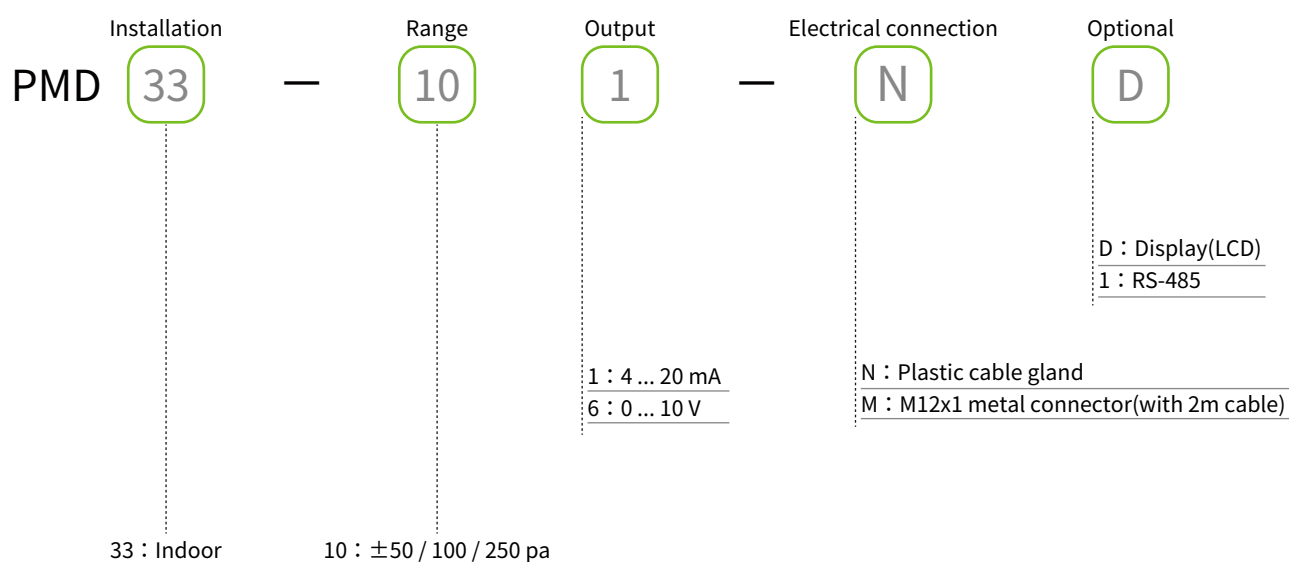


5P M12 Connector + RS-485



5P Terminal, analog + RS-485

## | Ordering Guide |



## | Additional Option Test Report |

For more detailed information please contact us.

### ■ ISO 9001

| Project  | Measurand level or range                                              |
|----------|-----------------------------------------------------------------------|
| Pressure | Differential pressure : 0 ... 500 Pa / 0 ... 1000 Pa / 0 ... 10000 Pa |