PMD33/34
Differential Pressure Transmitter

Application

- Silicon chips on Differential Pressure Module of MEMS integration technology
- Off set function by bottom / UI software
- Low-pressure monitoring, high pressure bearable
- Option RS-485 communication interface, Modbus RTU protocol
- DIP switch output and range
- Physical switch：mbar / Pa / hPa / kPa / mmH2O / mmWS / inH2O / mmHg
- Square root function
- Application Field — monitor differential pressure of Cleanroom / hospital / air duct / filter environment and monitor air flow

Specification

Input

Input type	Piezoelectric Differential Pressure Module
Measuring range	± 50 ~ ± 7500 pa

Output

Output	0-20mA／4-20mA ／ 0-1V／0-5V／1-5V／
	2-10V ／0~10V
Signal connection	3-wire
ModBus	RS-485
Accuracy (at 25℃)	± 1.0 % of F.S.
Load resistance (current output)	4~20mA ＜ 500Ω / 0~10V ≧ 10KΩ
Response time (t 63)	≦ 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)
Height of character	5.56 mm

Environment

Media measured	air
Environment Temperature	0...+50 ℃
Environment Humidity	0~95 % (non-cond.)
Storage temperature	-20...+60 ℃

Temperature Influence

Temperature drift	± 1.75 % (5℃ ... 55℃)

Electrical

Power supply	8 ... 35 VDC ／ 12 ... 30 VAC
Current consumption	DC 8V ： ≦ 130 mA(display) / ≦ 115 mA(non-display)
	DC 24V ： ≦ 45 mA(display) / ≦ 40 mA(non-display)
	AC 12V ： ≦ 150 mA(display) / ≦ 130 mA(non-display)
	AC 24V ： ≦ 95 mA(display) / ≦ 90 mA(non-display)
Overvoltage protection	≦ 40VDC
Electrical connection	M12 connector ／ M16 terminal

Installation

Installation	wall / duct

Protection

Protect degree	IP 65
Elecric protection	◎Polarity protection ◎over-voltage
	◎short circuit
Proof Pressure	± 50 ~ ± 250 pa : 0.25 bar ; ± 300 ~ ± 7500 pa : 0.5 bar
Burst Pressure	± 50 ~ ± 250 pa : 0.25 bar ; ± 300 ~ ± 7500 pa : 0.5 bar

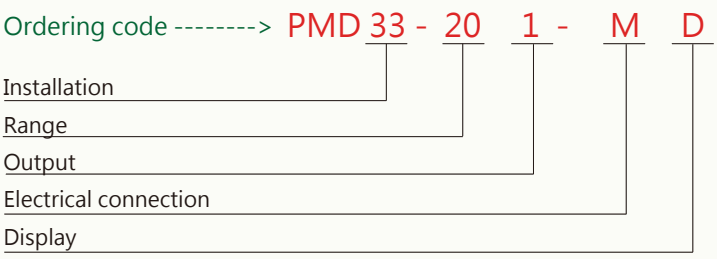
Certification

Certification	CE

Material

Case	PC fire-proof class (PC-110) (UL94V-2)
	display : 152g ； non-display : 127g

Ordering Guide



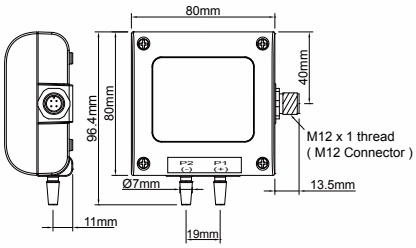
【Ordering item】】

Installation	Code	Range	Code	Output	Code	Electrical Connection	Code	Option	Code
Indoor	33	± 50 / 100 / 250 pa	10	4~20mA	1	Plastic Cable Gland	N	Display	D
Duct	34	± 300 / 500 / 1000 pa	20	0~20mA	2	M12x1 metal connector	M	RS-485	1
		± 1000 / 1600 / 2500 pa	30	2~10V	4				
		± 2500 / 5000 / 7500 pa	40	1~5V	5				
				0~10V	6				
				0~5V	7				
				0~1V	8				

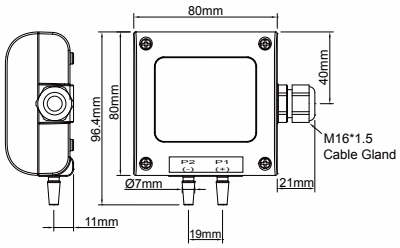
Pressure unit conversion table

Unit	Pa	mbar	hPa	kPa	mmWS	inH2O	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
	± 300/500/1000	3/5/10	3/5/10	0.3/0.5/1	30/50/100	1.2/2/4	2.25/3.75/7.5
	± 1000/1600/2500	10/16/25	10/16/25	1/1.6/2.5	100/160/250	4/6.4/10	7.5/12/18.75
	± 2500/5000/7500	25/50/75	25/50/75	2.5/5/7.5	250/500/750	10/20/30	18.75/37.5/93.75

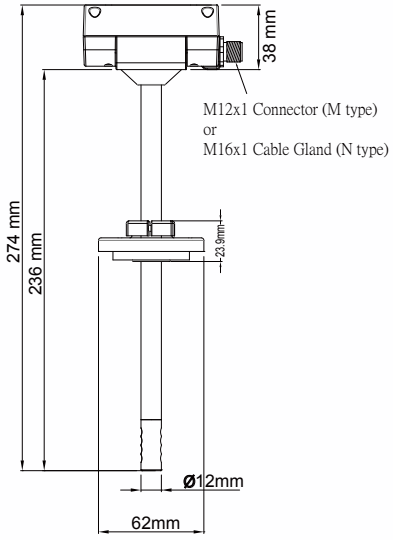
Diagram



Indoor — M type

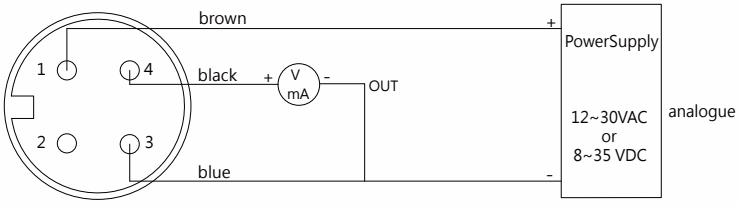


Indoor — N type

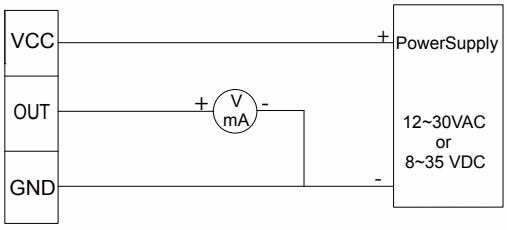


Duct

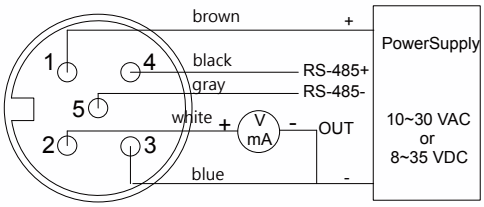
Connection



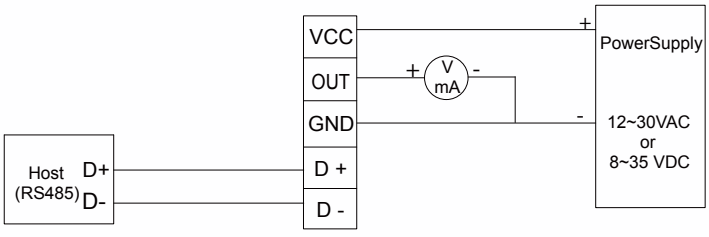
4P M12 Connector + Analogue



3P Terminal, Analogue

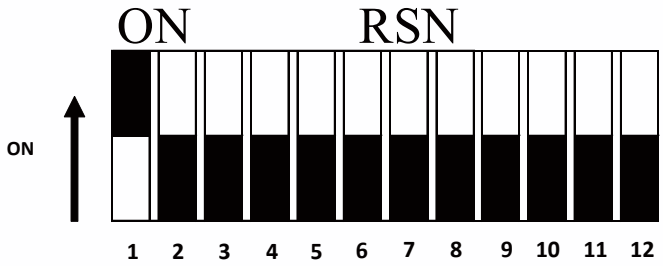


5P M12 Connector + RS-485



5P Terminal, Analogue + RS-485

DIP Switch



【 Function 】

1. DIP Switch Active / Deactivate
2. The Type for Analog Output
3 & 4. Switch Measuring range
5 & 6 & 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	0-10V	4-20mA
DIP Switch 2	▮□	□▮

◎ 3 & 4. Switch Measuring range：upon ordering code (unit : Pa)

DIP Switch 3	DIP Switch 4	Range (10)	Range (20)	Range (30)	Range (40)
□▮	□▮	50	300	1000	2500
▮□	□▮	100	500	1600	5000
□▮	□▮	250	1000	2500	7500
▮□	▮□	upon request			

(Other unit : please reference pressure unit conversion table)

◎ 5 & 6 & 7. Switch physical quantity unit

DIP Switch 5	DIP Switch 6	DIP Switch 7	UNIT
□▮	□▮	□▮	mbar
▮□	□▮	□▮	Pa
□▮	□▮	□▮	hPa
▮□	▮□	□▮	kPa
□▮	□▮	▮□	mmH2O
▮□	□▮	▮□	mmWS
□▮	▮□	▮□	inH2O
▮□	▮□	□▮	mmHg

◎ 8. Zero switch

STATUS	0-100 %	-100~100%
DIP Switch 8	▮□	□▮

◎ 9. Linear / square root output switching

STATUS	√	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