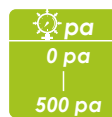


PHM33 Differential Pressure Transmitter



Range



Air velocity measurement



MEMS



Proof pressure



Burst pressure



Monitor in time



Protect rating



Digital output

Application

- The principle of differential pressure transmitter is measuring trace of differential pressure, the air through pressure in and pressure out, PCB will transduce it to differential pressure signal.
- Silicon chips on Thermo 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	Thermo Differential Pressure Module
measuring range	0 ... 500 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°C)	± 0.5 % 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	as unit is Pa : V = air velocity (at 25°C) / Q = air quantity (use with eYc AFMT)
height of character	5.56 mm

Environment

media measured	air
environment temperature	- 20 ... + 80 °C (without display) ; 0...+50 °C (without display)
environment humidity	97 %RH (non-cond.)
storage temperature	- 40 ... + 80 °C
compensation	0 ... + 70 °C

Temperature Influence

temperature drift	± 1.75 % (5°C ... 55°C)
-------------------	---------------------------

Electrical

power supply	8 ... 35 VDC / 12 ... 30 VAC
current consumption	DC 8V : ≤ 120 mA(display) / ≤ 100 mA(non-display) DC 24V : ≤ 45 mA(display) / ≤ 40 mA(non-display) AC 12V : ≤ 140 mA(display) / ≤ 120 mA(non-display) AC 24V : ≤ 90 mA(display) / ≤ 80 mA(non-display)
overvoltage protection	≤ 40VDC
electrical connection	M12 connector

Installation

installation	wall
--------------	------

Protection

protect rating	IP 65
electric protection	⊙Polarity protection ⊙over-voltage ⊙short circuit
proof pressure	2 bar
burst pressure	5 bar

Certification

certification	CE
---------------	----

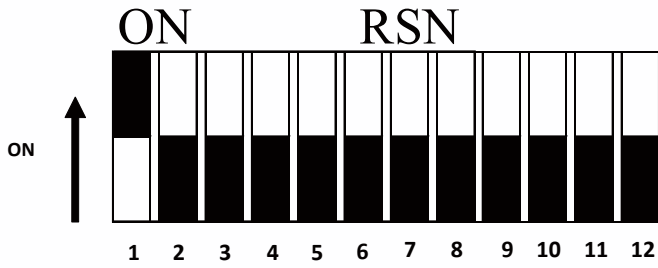
Material

case	Aluminum alloy
weight	display : 497g ; non-display : 478g

Ordering Guide

type	PHM	33	—	20	1	—	M	D
installation	wall	33						
range	50 / 100 / 250 pa 100 / 300 / 500 pa		—	10 20				
output	4 ... 20mA 0 ... 20mA 2 ... 10V 1 ... 5V 0 ... 10V 0 ... 5V 0 ... 1V				1 2 4 5 6 7 8			
electrical connection	M12x1 metal connector & 2m cable					—	M	
display	display RS-485							D 1

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)
		50	300
		100	500
		250	1000
		upon request	

(Other unit : please refer to pressure unit conversion table)

◎ 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. Switch RS-485 station no. : ID 1-4

DIP Switch 11	DIP Switch 12	STATION
		1
		2
		3
		4

◎ 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