

# M108

## Differential Pressure Transmitter Product operation manual



This product is suitable for HVAC, energy management systems, VAV and fan control, environmental pollution control static pipelines and clean room pressure, smoke hood control, oven pressurization and furnace ventilation control and other fields.

M108 pressure sensor detects differential pressure or gauge pressure, and converts this pressure difference into a proportional electrical signal output. LFM108 provides 0~5Vdc or 0~10Vdc, 4~20mA analog output or RS-485 digital output for building energy management systems. This sensor can measure the precise pressure and flow required for building pressurization and air flow control.

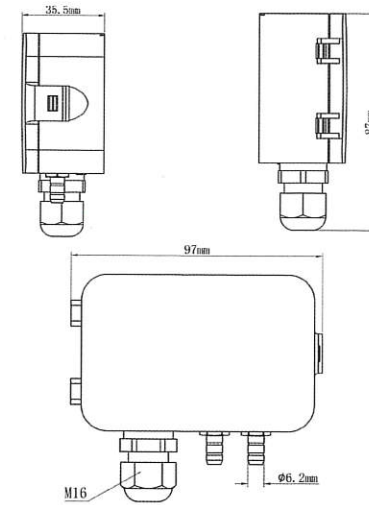
The M108 series pressure sensor can provide a range as low as 0~±50Pa and as high as 0~±10,000Pa. The static accuracy is ±1.0%FS at normal temperature, the temperature compensation range is -10~+60°C, and the thermal drift outside the temperature compensation range is less than 0.05%FS/°C.

M108 adopts imported pressure core, which has the characteristics of sensitive pressure response, stable long-term output, and superior temperature performance.

01

Accuracy	±1.0%FS
Compensated temperatures	-10~+60°C
Zero/Full range deviation %FS/°C	±0.01
Over pressure capacity	5Kpa(±100Pa), 10Kpa(±1000Pa) 80Kp(±10Kpa)
Output signal	0~5/10VDC\3-wire 4~20mA\2-wire RS485 communication
Supply voltage	0~5/10VDC\16~30VDC 4~20mA\10~30VDC(non-polarity) RS485 communication\ 12~30VDC
External load	0~5/10VDC\>50KΩ 4~20mA\<250Ω
Ambient temperature	-20~70°C
Media	Air or neutral gas
Pressure connection	Ribbed Ø 6.2 mm
Cable gland	For cables Ø 8 mm maximum
Weight	140g

02



03

## Functions

### 1. Analogue output

M108 have two output mode: voltage output (0~5/10VDC) and current output(420mA). Voltage output has three-wire whichneeds to be wired according to the label; the current output has two-wire, and there is no polarity, and the wiring can be exchanged at will. Output RS-485 communication signal, wiring method adopts Modbus standard communication protocol. There are two function codes in the protocol 0x03(read holdingregister) and 0x06 (write single register). For the specific protocol, please refer to "M108-Mod Communication Protocol" . The pin is the RS-485 A-B line matching resistance jumper. When the communication is 300 meters, the distance sensor jumper is connected to reduce the communication signal reflection interference.

### 2. Zero Button

Push the zero button to calibrate when the differential pressure between positive port and negative port reach to zero(The LED would light when the button be pushed).

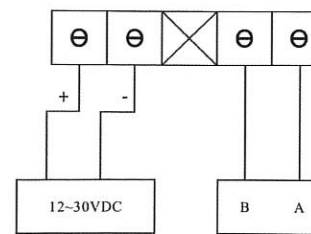
05

### 3.Output Response Time Setting

Dial switch response time in following arrangement:

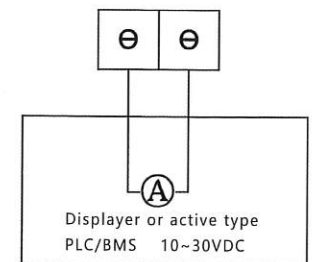
Dial Switch	0.5S	1s	2s	4s
1	■	■	■	■
2	■	■	■	■

### Wiring Method

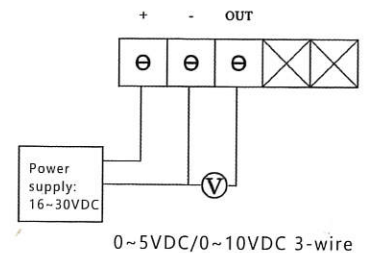


4-wire RS-485type

06

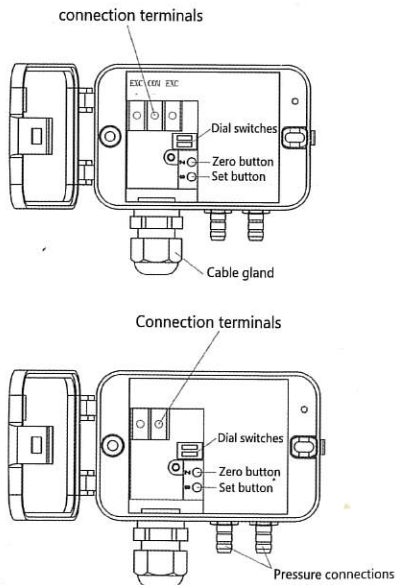


4~20mA2-wire non-polarized



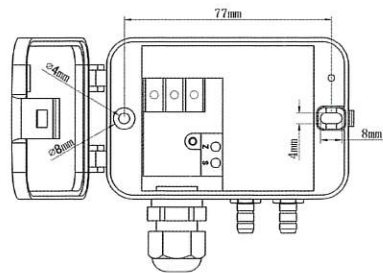
0~5VDC/0~10VDC 3-wire

07

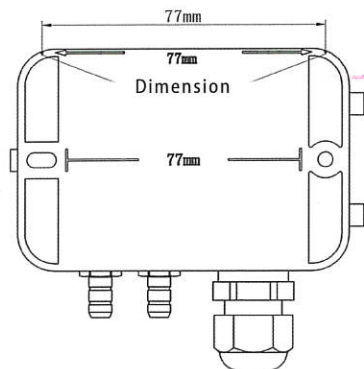


04

Locate position for installation then drill holes (30mm depth with 6mm diameter). Place expand plug inside the holes before install the transmitter. There are two holes for screwing after Uncovering the transmitter (expand plugs and screws for installation would be provided by the manufacturer).



08



09

M108 — [ ] — [ ]

Unidirectional	Bidirectional	Output
251G=0-250pa	251D=±250pa	AL=4~20mA
501G=0-500pa	501D=±500pa	VL=0~10VDC
102G=0-1000pa	102D=±1000pa	VZ=0~5VDC
252G=0-2500pa	252D=±2500pa	MOD=RS485
502G=0-5000pa	502D=±5000pa	MVL=0~10VDC&RS485
103G=0-10000pa	103D=±10000pa	MVZ=0~5VDC&RS485

CAUTION: Please read the manual carefully and follow the wiring diagram to operate, if any damage caused by wrong wiring, it is not covered by the warranty.

10