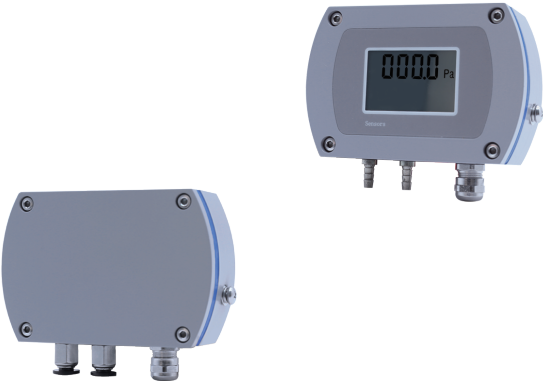


Product information

Wall mounted micro differential pressure transmitter



Wall mounted micro differential pressure transmitter can meet general site requirements and site with explosion-proof requirements. It is divided into three models: conventional (no explosion-proof), intrinsically safe explosion-proof and intrinsically safe dust explosion-proof. Air damping is installed inside, which can effectively prevent the spike caused by the unstable fluctuation of pulse air pressure and improve the comprehensive stability of the sensor. Whether there is display can be selected according to the site, and the installation hole can be hidden to make the appearance more beautiful.

Range: - 10KPA ~ 0 ~ 10KPA (see range selection table for details)

Output: 4 ~ 20mA, RS485, 0 ~ 5VDC, 0 ~ 10VDC, 1 ~ 5VDC

Power supply: 9 ~ 36VDC, 24VDC, 12 ~ 36VDC

Accuracy: 0.5% FS, 1% FS

In addition, we can provide customized products to meet the application needs of customers in a short time according to their applications.

Typical application

- ▲ industrial equipment
- ▲ HVAC
- ▲ Industrial control
- ▲ Building automation
- ▲ Environmental protection system

Instructions

Micro differential pressure transmitter is suitable for differential pressure measurement of dry gas. The operator is responsible for checking whether the equipment is suitable for the working conditions of the application. If you have any questions, please contact our sales department to ensure the correct application of the transmitter. The company does not assume any responsibility for the impact caused by improper model selection.

The user must ensure that the measured medium is compatible with the contact material of the transmitter.

⚠ Warning!
Improper use can lead to danger!

Icon description

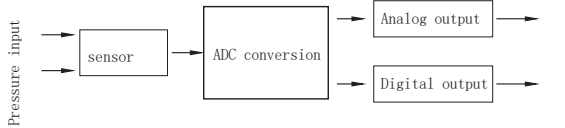
- ⚠ Danger! - A dangerous situation that could result in death or serious injury.
- ⚠ Warning! - A potentially hazardous situation that could result in death or serious injury.
- ! Be careful! - A potentially hazardous situation that may result in minor injury.
- 🔔 Reminder! - A potentially hazardous situation that may cause personal injury.
- ⚠ Tips! - Tips and information to ensure trouble free operation of the equipment.

User

⚠ Warning! This information is applicable to technicians.

working principle

The differential pressure sensor is a piezoresistive pressure sensor chip, which combines the pressure sensor and signal conditioning ASIC in one package, so that it has the characteristics of high stability and small error. Then the signal corresponding to the measuring range is converted into standard analog signal or digital signal through a special amplifier.



Product features

- a) Integrated chip, wide voltage power supply
- b) Frequency cut-off design and strong anti-interference ability
- c) Current limiting, voltage limiting and reverse connection protection
- d) High precision and good stability
- e) Insensitive to installation direction

Technical parameter

Measuring medium: gas (compatible with contact material)
Range: - 10KPA ~ 0 ~ 10KPA (see range selection table for details)
Output signal: 4 ~ 20mA, RS485, 0 ~ 5VDC, 0 ~ 10VDC, 1 ~ 5VDC
Pressure mode: differential pressure
Medium temperature: - 40 ~ 100 ℃
Accuracy grade: 0.5% FS (range ≥ 1kPa) 1% FS (range < 1kPa)
Temperature compensation: - 10 ~ 60 ℃
On time: 20ms
Response frequency: analog signal output ≤ 20Hz, digital signal output ≤ 5Hz
Stability performance: ± 0.3% FS / year (range ≥ 1kPa) ± 0.5% FS / year (range < 1kPa)
Temperature drift: ± 0.03% FS / ℃ (within the temperature compensation range)
Protection grade: IP65 note: the above protection grade refers to the degree reached after the electrical connection is complete
Durability: 10x10⁶ times (cycles from lower range to upper range)
Overall weight: no display ≈ 380g, with display ≈ 400g
Resolution: analog output 0.02% FS, digital output 0.05% FS

Output power supply

output \ power supply	9~36VDC	12~36VDC	24VDC
4~20mA	√	×	√
RS485	√	×	×
0~10VDC	×	√	×
0~5VDC	√	×	×
1~5VDC	√	×	×

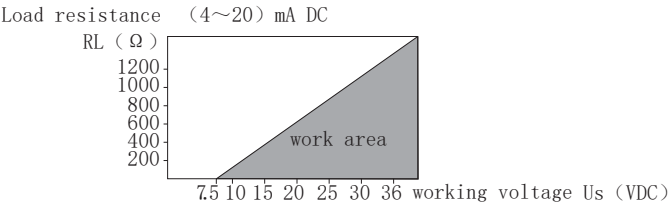
Maximum power

output \ power	≤0.02Us (W)	≤0.015Us (W)
4~20mA	√	
RS485		√
0~5VDC		√
0~10VDC		√
1~5VDC		√

Note: US = supply voltage.

Load characteristics

Voltage type: ≥10kΩ
Current type: Load ≤ {(us-7.5) ÷ 0.02} Ω (US = supply voltage)





Environment condition

Ambient temperature: - 40 ~ 85 ℃
Ambient humidity: 0% ~ 95% RH (no condensation and condensation)

Electromagnetic compatibility^(EMC)

Serial number	Test items	Basic standards	Test conditions	Performance level
1	Radiated interference (enclosure)	GB/T 9254/CISPR22	30MHz-1000MHz	qualified
2	Conducted interference (DC power port)	GB/T 9254/CISPR22	0.15MHz-30MHz	qualified
3	Electrostatic discharge (ESD)	GB/T 17626.2/IEC61000-4-2	4kV (触点), 8kV (空气)	B(Note 2)
4	Radio frequency electromagnetic field immunity	GB/T 17626.3/IEC61000-4-3	10V/m (80MHz-1GHz)	A(Note 1)
5	Power frequency magnetic field immunity	GB/T 17626.8/IEC61000-4-8	30A/m	A(Note 1)
6	Electrical fast transient burst immunity	GB/T 17626.4/IEC61000-4-4	2kV (5/50ns, 100kHz)	B(Note 2)
7	Surge immunity	GB/T 17626.5/IEC61000-4-5	1000V (Between lines) 2000V (Between ground wires) (1.2us/50us)	B(Note 2)
8	Immunity to conducted interference induced by RF field	GB/T 17626.6/IEC61000-4-6	3V (150kHz-80MHz)	A(Note 1)

Note 1: when the performance grade is a, the performance is normal within the limits of the technical specifications.
Note 2: when the performance level is level B, the function or performance is temporarily reduced or lost, but can be recovered by itself, and the actual operation status, storage and data will not change.

Static pressure and blasting

Range	Maximum static pressure at single end	Single end burst pressure
±1kPa	±10kPa	20kPa
±5kPa	±33kPa	41kPa
±10kPa	±82kPa	103kPa

⚠ Tips! Note: maximum static pressure at single end, maximum pressure at single end;
⚠ DANGER! Note: single end burst pressure, damage or conduction.

Overall material

Housing: LY12 aluminum
Diaphragm: silicon chip (contact with the measured medium)
Impulse pipe: silica gel (contact with the measured medium)
Φ 6 pagoda mouth: H59 copper (contact with the measured medium)
Φ 8 pagoda mouth: H59 copper (contact with the measured medium)
Φ 6 quick connector: copper nickel plating (contact with the measured medium)
Φ 4. Quick tightening interface: 304 stainless steel (contact with the measured medium)
Cable locking head: 304 stainless steel (lock wire diameter 4 ~ 6mm)
Display: LCD display without backlight



Mechanical stability

Seismic performance: 10g (20... 2000Hz) in accordance with iec60068-2-6 standard
Impact resistance: 500g / 1ms, conforming to iec60068-2-27 standard

Electrical protection

Short circuit protection: permanent
Reverse pole protection: no damage, but does not work
Insulation resistance: $\geq 100\text{m } \Omega$ 500VDC
Insulation strength: 500VAC

Output limit

	Output minimum	Maximum output
4-20mA	4mA	20mA
RS485	0	2000
0~5VDC	0VDC	5VDC
0~10VDC	0VDC	10VDC
1~5VDC	1VDC	5VDC

Explosion proof description(4 ~ 20mA output only)

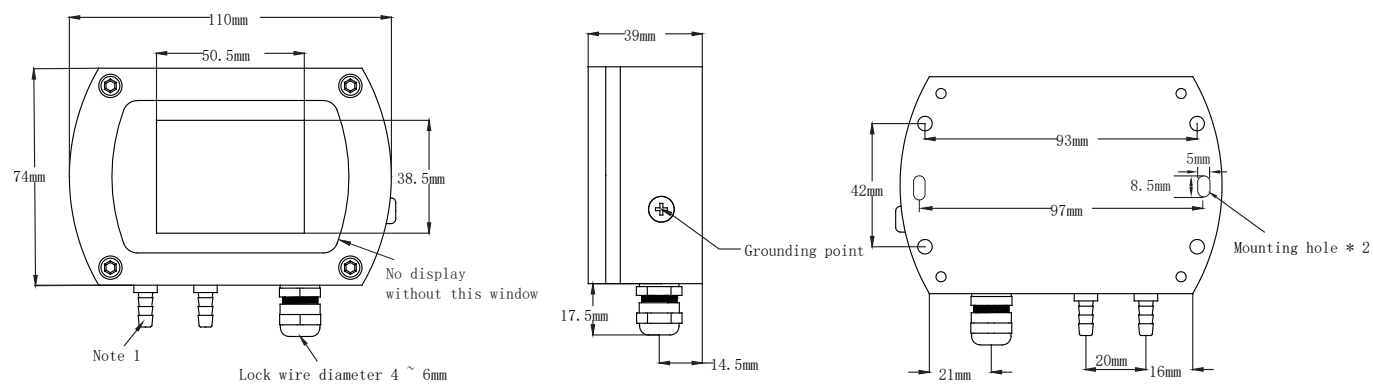
Intrinsically safe

Comply with gb3836.1-2010 and gb3836.4-2010
Explosion proof sign: ex IA II C T4 GA
Intrinsic safety parameters: $U_I = 28\text{vdc}$, $I_I = 93\text{madc}$, $C_I = 0 \text{ } \mu \text{ F}$ $L_I = 0\text{mH}$
Parameters of associated equipment: $u_o \leq U_I$, $I_O \leq I_I$, $C_O = C_C + C_i$, $L_o = L_C + L_i$
 U_o , I_O , C_O and l_o are safety barrier parameters, and C_C and L_C are distribution parameters of connecting cables.
Explosion proof Certificate No.: clex20.1828

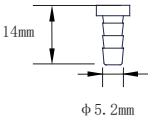
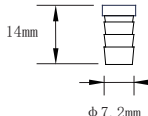
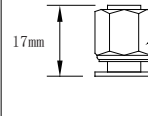
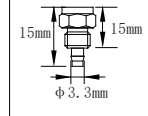
Dust intrinsically safe

Comply with the standards gb3836.1-2010, gb3836.4-2010, gb12476.1-2013 and gb12476.4-2010
Explosion proof sign: ex IAD 20 IP65 T80 °C
Intrinsic safety parameters: $U_I = 28\text{vdc}$, $I_I = 93\text{madc}$, $C_I = 0 \text{ } \mu \text{ F}$ $L_I = 0\text{mH}$
Parameters of associated equipment: $u_o \leq U_I$, $I_O \leq I_I$, $C_O = C_C + C_i$, $L_o = L_C + L_i$
 U_o , I_O , C_O and l_o are safety barrier parameters, and C_C and L_C are distribution parameters of connecting cables.
Explosion proof Certificate No.: clex20.1829

Outline and dimensions

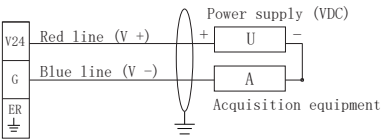


Note 1

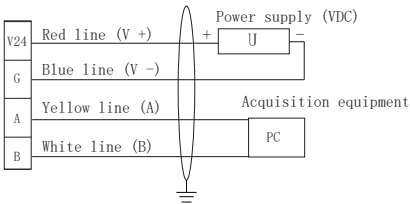
Interface size				
Interface specification	φ 6 pagoda mouth	φ 8 pagoda mouth	φ 6 fast interface	φ 4 quick screw interface

Wiring diagram

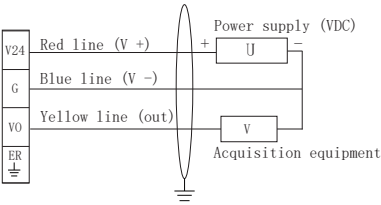
Current output wiring diagram (two-wire system)



RS485 (digital signal) output wiring diagram (four wire system)



Voltage output wiring diagram (three wire system)



☞ Represents shielded wire, and all marked grounding points must be effectively grounded. It is recommended to select shielded twisted pair signal cable for the best effect. In order to avoid grounding loop, the shielding layer adopts single end grounding, insulated floating grounding at the transmitter end and grounding at the control cabinet end.

☞ The transmitter shell is grounded by default, so the field equipment shall be effectively grounded. If the field equipment cannot be grounded, the marked grounding point shall be effectively grounded.

Enclosure(to be purchased separately)

filter

