Pressure Transmitter High Temperature

Features

- German imported diffusion silicon sensor, fast response, accurate and stable measurement.
- With diaphragm isolation technology, integrated core and wide voltage supply.
- Shell is 304 stainless steel, sturdy and durable, diaphragm is 316L stainless steel, strong corrosion resistance.
- The product adopts 8-point standard calibration and 4-point detection calibration, covering the full range of measurement.
- Customized parameters and product labels are available upon request.

Parameters

- Measuring medium: water, gas, oil (compatible with SS316L)
- Pressure type: Gauge pressure (default)
- Measuring range: -1bar-0-1000bar (-100Kpa-0-100 Mpa)
- Output: 4-20mA, 0-5V, 0-10V, RS485
- Power supply: DC12V/24V, DC12V-36V, customize
- Thread size: M20*1.5, G1/2, G1/4, NPT1/2, NPT1/4, customize
- Accuracy: 0.5% F.S. (default)
- Overload capacity: 150% F.S.
- Response time: ≤10 ms
- Protection grade: IP65
- Long-term stability: ±0.2%F.S./1year
- Medium temperature: -10℃-85℃
- Operating temperature: -10℃-65℃
- Temperature drift: 0.05%F.S./℃ (-10℃-65℃)

Product Material

- Husman connector/Sealing gasket: ABS engineering plastic
- Shell: 304 stainless steels (Customizable SS316)

Mechanical Stability

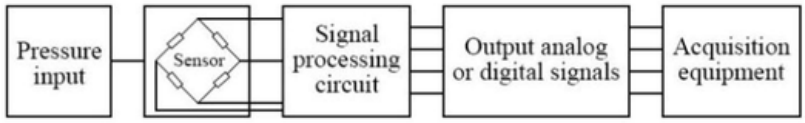
- Anti vibration performance: 10g (20... 2000Hz)
- Impact resistance: 500g/ms

Electrical Protection

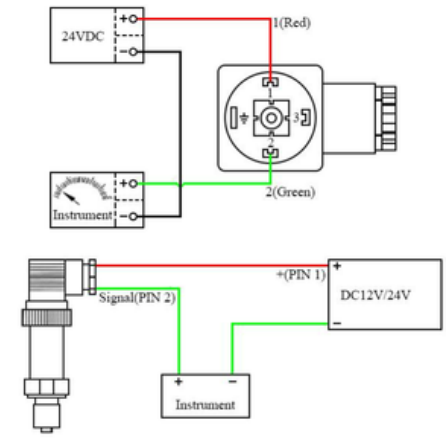
- Short circuit protection: permanent
- Reverse protection: No damage, but not working
- Insulation resistance: ≥ 100M Ω 500VDC
- Insulation strength: 500V AC

Working Principle

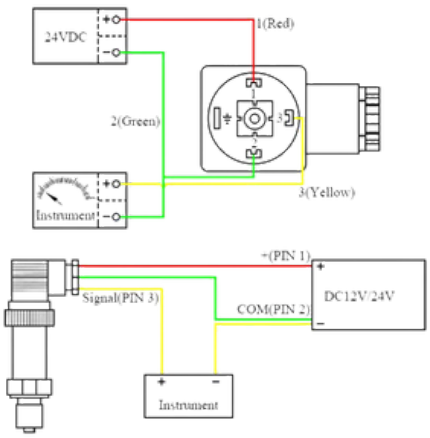
- The pressure sensor is a Wheatstone bridge diffused on a single crystal silicon wafer. The measured medium (gas or liquid) applies pressure to change the resistance of the bridge wall (piezoresistive effect), generating a differential voltage signal. This signal is converted into a standard analog or digital signal corresponding to the range through a dedicated amplifier.



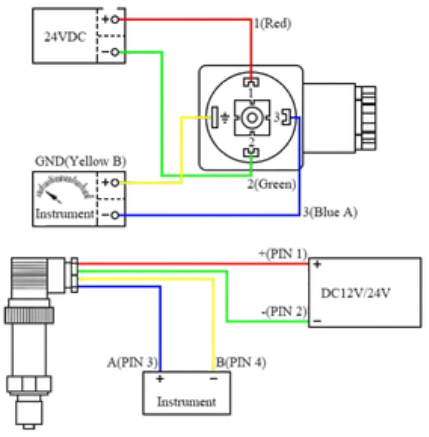
Wiring Diagram



Current output: Red:DC24V+ Green:current output



Voltage output: Red:DC24V+ Green:COM Yellow:voltage output



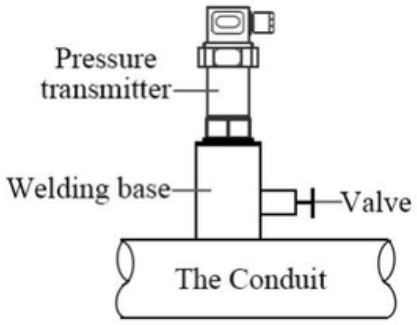
RS485 Output: Red:24V+ Green:24V- Blue:A Yellow:B

Precautions For Use

1. This product uses a diffused silicon oil filled core. Improper use may cause explosion accidents. To ensure safety, measuring oxygen is strictly prohibited.
2. It is prohibited to measure media that are incompatible with the medium in contact with the transmitter.
3. No modifications or changes are allowed on the device.
4. When measuring steam or other high-temperature media, be careful not to let the medium temperature exceed the upper limit of the transmitter's operating temperature. If necessary, a cooling device should be installed.
5. This product belongs to weak current equipment and must be wired separately from strong current cables.
6. Ensure that the power supply voltage meets the power supply requirements of the transmitter, and ensure that the high pressure of the pressure source is within the range of the transmitter.
7. During the pressure measurement process, the pressure should be slowly increased and released to avoid sudden high pressure or product damage.
8. This product is non-explosion-proof equipment, and its use in an explosion-proof area can cause accidents.

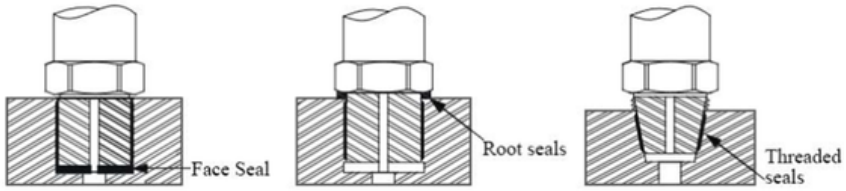
Installation Precautions

1. Installation requires no pressure and no power supply.
2. Try to install in the occasions where the temperature gradient change is small.
3. Except for gases, when the measuring range is less than 0.03Mpa, it needs to be mounted vertically so as not to affect the measuring accuracy. Others can be mounted at any angle to the measurement point.
4. In hydraulic systems, care should be taken so that the pressure connections of the unit are mounted upwards (for easy gas venting).
5. If the transmitter is installed with the pressure connection facing upwards or sideways, make sure that no liquids flow outside the transmitter housing, otherwise moisture and dirt can block the atmospheric outlets in the vicinity of the electrical connection and even cause equipment failure. The threaded connection edges of the electrical connections must be kept free of dust and dirt.
6. It is recommended that a pressure shut-off valve be installed in front of the pressure measurement point to facilitate access and removal of the transmitter. In addition, it can serve to reduce the pressure shock during the initial installation of the pressure measurement. Wait for the pressure in the pipeline to stabilize, then slowly open the shut-off valve to start the measurement. (As shown in the figure below)

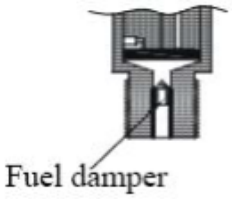


7. If the transmitter is to be installed in a harsh site where it will be exposed to dangerous damage such as lightning strikes or over-voltage, we recommend that the user protects against lightning strikes and over-voltage at the distribution box or between the power supply and the transmitter.

8. Select the appropriate sealing fitting and sealing position according to the size of the measuring medium and the input pressure. (① the thread length must be greater than the bottom thread depth to ensure an effective end gasket seal. ② the thread length must be less than the base thread depth to ensure an effective root gasket seal. ③ Using raw tape or seals, the threads have a small surplus after locking.)



9. Before cleaning, the pressure transmitter needs to be relieved of pressure and disconnected from power. Do not touch the diaphragm with objects to avoid damage. Wipe the surface of the transmitter with a soft, damp cloth.
10. Cavitation, liquid hammer, and peak pressure may occur in the filling system, such as when quickly closing valves or when starting and closing pumps. It is mainly possible to occur at the inlet and outlet ends, even if the working pressure is low. The sensor is equipped with a pulse buffer inside, which effectively solves such problems. Note: After installing a pulse buffer, the frequency of the dielectric pulse will decrease to below 30Hz.)



NOTICE

- Please check the product label to see if it is the same as your ordering parameters.
- Please read this instruction manual carefully before use. If you have any questions, please contact us for assistance.
- Make sure to follow under no pressure and no power when using.
- The transmitter adopts diffusion silicon oil-filled core, please do not use in high temperature or explosion-proof area to avoid accidents.
- It is prohibited to measure media that are not compatible with the contact material of the transmitter, and it is strictly prohibited to measure oxygen.
- When measuring pressure, please pressurize or relieve the pressure slowly to avoid instantaneous shock to the sensor by adding to the maximum pressure or to the maximum pressure, which may cause damage to the sensor.
- When disassembling the product, make sure that the pressure source and power supply have been disconnected to avoid accidents caused by the spraying of media.

Description

- By using imported diffused silicon cores, high-performance circuit boards, sensitivity and temperature compensation technology, the physical pressure parameters sensed by pressure sensors such as gases and liquids are converted into standard electrical signals, which are supplied to secondary instruments such as indicator alarms, recorders, and regulators for measurement, indication, and process adjustment.

Sample Standard Model Code

1	2	3	4	5	6	7
HP300	1	C (0-10bar)	2	1	1	2

Code Description	Code Option	Description
1.Base Model Numbers	HP300	High Temperature Pressure Transmitter
2.Display	1	No display
	2	LED display
	3	LCD display
3.Measuring Range	1	-1bar-0-1000bar
	2	-100Kpa-0-100Mpa
	C	Customize
4.Temperature Range	1	0-150 ℃
	2	0-200 ℃
	3	0-250 ℃
	4	0-300 ℃
5.Signal Output	1	4-20 mA
	2	0-5 Volt
	3	0-10 Volt
	4	RS485
6.Power supply	1	24 Vdc
7.Connector	1	G 1/2"
	2	G 1/4"
	3	NPT 1/2"
	4	NPT 1/4"

Thank you

Website

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PARKARN INSTUMENT Co.,Ltd