

APB8300 Series Pressure Transmitter

Operation Instructions

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VAT number: CZ 29289971

Reference number: C 71338, kept by the Regional Court in Brno, Czech Republic



1. Summary

APB8300 series silicon spread pressure transmitter adopted advanced technology. It has a reliable quality and high function-cost ration. This transmitter is a scene install instrument with small volume, light weight and can be easily installed and used. It can be extensively applied in petroleum, chemical industry, metallurgy, electric power, national defense, shipping, medicine, light industry etc. divisions of scientific research, it is an ideal product to use in the test pressure and transmit process of the industry progress control.

2. Characteristics

The remarkable advantage of APB8300 Pressure Transmitter is that it can be changed from + to – at zero point, and the test Range is adjustable. Its zero point changed and Range adjustable had no influence of each other. This transmitter adopts high accuracy Silicon spread Sensor. It carry on the temperature compensation, linear compensation by its know-how technology. This product has fine linearity, temperature stability and long-term stability. It Can work steadily in the severe cold area and high-temperature area and not influenced by the temperature of the environment.

APB8300 pressure transmitter adopts 24V DC concentrated on supplying power and 4-20mA two wires signal transmit.

Its key characteristics:

- Stability: anniversary drifting amount $\leq 0.2\%F \cdot S$;
- Wide Range of Measuring: 10kPa-6MPa.
- Linear treatment, linear accuracy is better than 0.2%FS;
- Use 316C stainless steel isolated diaphragm

3. Working principle

The tested medium pressure pass through the isolated diaphragm, sealed silicon oil to the spread silicon diaphragm, at the same time, the pressure of the reference point (Atmospheric pressure, absolute pressure, or sealed pressure) act on the other side, so, the difference of the two pressures of the two sides of the diaphragm make the diaphragm to be one side compress, one side draws, the resistance value of the emergency resistance on the diaphragm changes, produce the output signal.

The two resistance of the diaphragm forms the Favor Stone electric bridge, the electric bridge is power supplied by the permanent current supply which with high stability. When power P is acted on the sensor, every resistances of the bridge will change the resistance value ΔR , so the bridge send out the Voltage signal, as the pressure sensor had nonlinear, and will influenced by the environment temperature, so after the linear treatment of the circuit module and temperature compensation module, it gives out an additional current, it work on the electric bridge. The signal after treatment will enlarged and then input to the V/I converter, get an 4- 20mA current signal which has direct proportion to pressure. The temperature adapt circuit system correct all the errors of other systems which resulted from temperature changing, to ensure the whole circuit to work stably under the temperature of $-25\sim+85$ °C.

4. Technical Data(to APB8300CNM)

Accuracy:	0.5%F•S
Measuring range:	-0.1MPa~0~60MPa
Output:	4~20mADC
Linear:	0.5%F•S
working temperature:	-25~+85°C
Temperature drift:	≤±0.025%F•S / °C
Long-term stability:	0.2%F•S / year
Power supply:	24VDC
Load:	0~600Ω
Overload limit:	150% full scale
Storing temperature:	-40~+125°C

5. Model Descriptions

(1)	Art. Name	APB83	Pressure transmitter
(2)	Pressure type	0	Gage Pressure
		1	Absolute Pressure
(3)	Scene indicator	0	No indicator
(4)	Accuracy	A	0.1%F•S
		B	0.25%F•S
		C	0.5%F•S
(5)	Type	N	Normal type
(6)	Pressure Connection	M	M20×1.5
		T1	1/2NPT
		T2	1/4NPT
		G1	G1/2 (1/2BSP)
		G2	G1/4 (1/4BSP)

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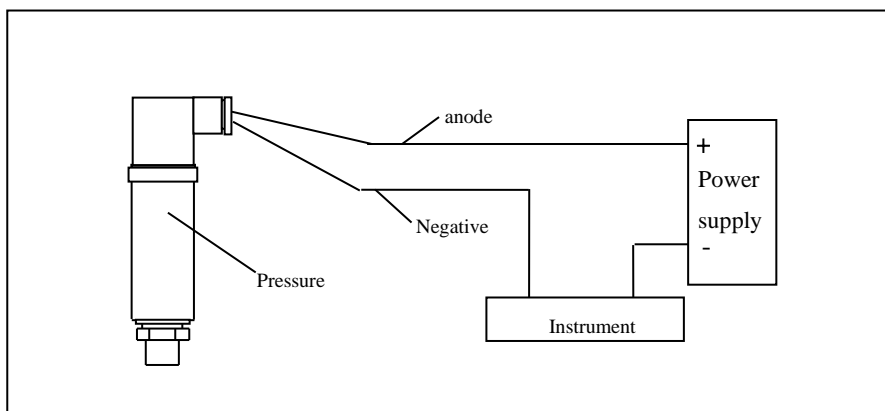
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- ※ When the transmitter was sold to the customer, the test scale can be decided by the customer to take an appointed value. When there is no special requirements, the test scale will corrected by the maximum value

6. The Operating Method and Wiring diagram of Pressure



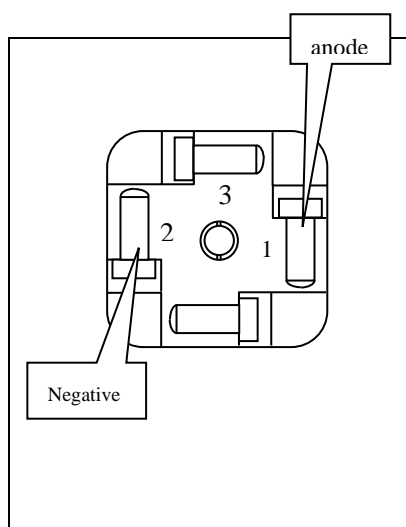
※ Open the up cover of the transmitter. The internal construction is shown as the right diagram.

※ Scene installing please see as the wiring diagram.

7. Complete set

Documents offered together with the product:

- 1、 Certificate of quality;
- 2、 Operating Instruction
- 3、 Connect Setting of Water-proof.



8. Others:

- 1、 Under the condition of correct use , storing ,installing of the Silicon spread transmitter, within 12 months of the delivery, the product doesn't work because of the quality ,Our company will offer free after sale service, if the products destroyed by improper use of the customer, the user should pay the cost of the repairing.
- 2、 Lease indicate on the purchasing contract the ref. Description .for e.g. APB8300BNM 0-1.6Mpa, the indication is :The pressure of the surface, accuracy is 0.25 % F•S 、 normal type of pressure transmitter 、 the connecting interface is M20×1.5、 range is 0~1.6MPa。