



Ceramic pressure series AP801/808/AP681



AP801/808/AP681 are dry types made of ceramic materials by special processes. Ceramic piezoresistive pressure sensor, ceramic is recognized as a high elasticity, corrosion resistance, wear resistance, Impact and vibration resistant materials. The thermal stability of ceramics and its thick film resistors can operate in a wide temperature range of -40 to 125°C and has high precision and stability in measurement. Qualitative. Electrical insulation degree >2kV, strong output signal, good long-term stability. High characteristics, Low price ceramic sensors will be the development direction of pressure sensors, in Europe and the United States there are full The trend of replacing other types of sensors is also increasing in China, where more and more users are using ceramic sensors to replace diffused silicon pressure sensors.

AP681 is an improved model of AP801. Its unique structure completely solves the unstable output signal caused by improper packaging and force on sensitive diaphragm.

The AP801/808/AP681 dry-type ceramic pressure sensors are widely used in various fields such as process control, environmental control, hydraulic and pneumatic equipment, servo valves and transmissions, chemical products and chemical industries, as well as medical instruments. With a compact size of 18mm diameter and a measurement range of 1 to 500 bar, these cost-effective sensors are extensively applied in pressure measurement scenarios across multiple industries.

main features :

Strong ceramic sensitive diaphragm, zero and full range laser calibration, excellent corrosion resistance, wear resistance, impact and vibration resistance, high precision, high stability, wide working temperature range, small size, easy packaging, the most competitive price, has been supplied OEM pressure sensors for many well-known enterprises.

operational principle :

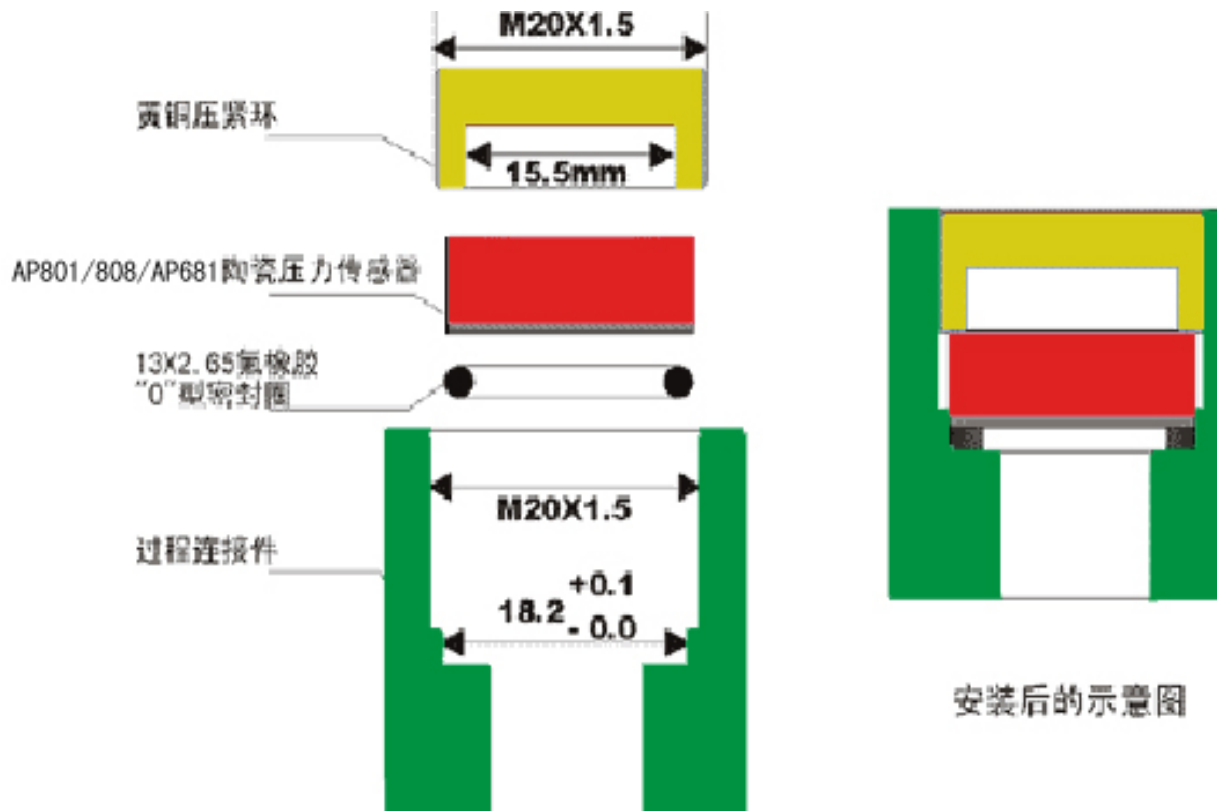
The corrosion-resistant ceramic pressure sensor operates without liquid transmission. Pressure acts directly on the front surface of the ceramic diaphragm, causing micro-deformation. A thick-film resistor is printed on the diaphragm's backside and connected to form a Wheatstone bridge (closed circuit). Utilizing the piezoresistive effect of the piezoresistive element, the bridge generates a voltage signal that exhibits high linearity proportional to both pressure and excitation voltage. The standard signal is calibrated to 2.0/3.0/3.3 mV/V depending on the pressure range, ensuring compatibility with strain gauge sensors. Laser calibration ensures exceptional temperature and time stability, while built-in temperature compensation (0-70°C) enables direct contact with most media.

The AP801/AP681 ceramic sensors, featuring no liquid transmission and zero filling fluid, effectively prevent process contamination. This design enables their widespread adoption in food and pharmaceutical industries. As dry-type ceramic diaphragms, they remain unaffected by installation orientation. When paired with Hirschmann series connectors from Germany, these pressure transmitters are extensively used in various pressure measurement applications.

technical parameter

service voltage :	5 ~30	VDC
Bridge arm resistance:	11	K±20%
range ability :	1bar~600bar	bar
response time :	<1	mS
Comprehensive error (including: linearity, hysteresis, repeatability)	0.2 ~ 0.4	FS%
Zero output:	0±0.2	mV/V
Full scale output:	2.0 ~4.8	mV/V
Temperature characteristics: (thermopile range: 0 ~ 70°C)	±0.015	%FS/°C
stability :	<0.2	%FSO/ year
working temperature :	-40 ~ 125	°C
Insulating resistance:	>2	kV
outline dimension :	18*5.25 ... 8.05	mm

installation diagram

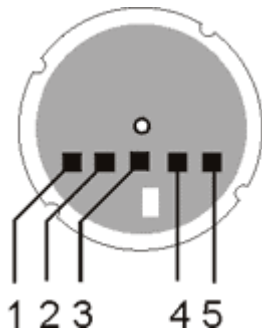


Selection guidance:

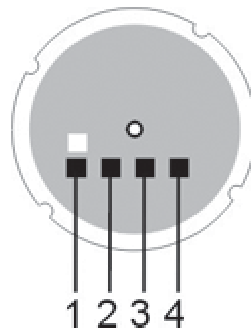
AP801/808/681- * (range)-A/G**

001	0--- 1bar	002	0--- 2bar
005	0--- 5bar	010	0--- 10bar
020	0--- 20bar	050	0--- 50bar
100	0--- 100bar	200	0--- 200bar
250	0--- 250bar	400	0--- 400bar
600	0---600bar (A: absolute pressure G: gauge pressure)		

Wire connection instructions:



AP801



AP681

1 Power supply positive 2 output positive 3 power supply negative 4 output negative 1 Power positive 2 Output negative 3 Power negative 4 Output positive

5 Power Supply Negative * 3 and 5 Pins Are Universal, One Can Be Selected

Example of selection: AP681-010-G ceramic piezoresistive sensor/range of 10 bar/ gauge pressure

Please refer to the selection guide or directly consult our technicians

深圳市杰晟兴电子有限公司 JM Components Limited

地址：深圳市福田区中航路7号鼎诚国际大厦南座2007室
手机：13662266995 马少良 电话：0755-83951311
官网：cn-sensor.com

邮编：518031
传真：0755-83952401
电邮：jackson@jmcomponents.com