



WPAH01

Ceramic Pressure Sensor

Manual Version4.0



Zhengzhou Winsen Electronics Technology Co., Ltd

Statement

This manual's copyright belongs to Zhengzhou Winsen Electronics Technology Co., LTD. Without the written permission, any part of this manual shall not be copied, translated, stored in database or retrieval system, also can't spread through electronic, copying, record ways.

Thanks for purchasing our products. In order to have customers use it better and reduce the faults caused by misuse, please read the manual carefully and operate it correctly in accordance with the instructions. If users disobey the terms or remove, disassemble, change the components inside of the sensor, we shall not be responsible for the loss.

The specific such as color, appearance, sizes &etc., please in kind prevail.

We are devoting ourselves to products development and technical innovation, so we reserve the right to improve the products without notice. Please confirm it is the valid version before using this manual. At the same time, users' comments on optimized using way are welcome.

Please keep the manual properly, in case you need help during the usage in the future.

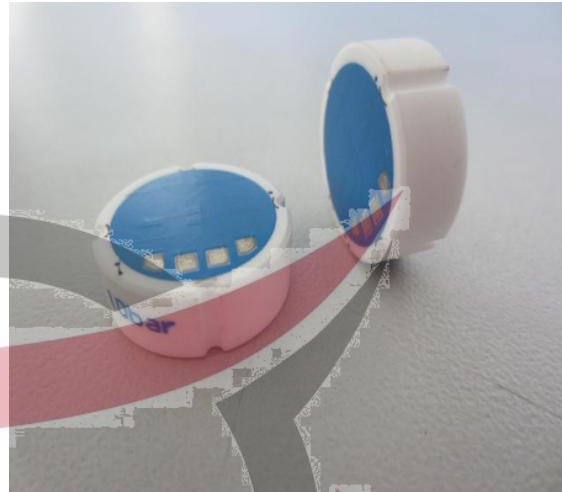
Zhengzhou Winsen Electronics Technology CO., LTD.

8th, Oct 2016

WPAH01 Ceramic Pressure Sensor

1. Profile

WPAH01 ceramic pressure sensor adopts ceramic base, made into ceramic piezoresistance pressure sensor with thick-film technology. It's size $\Phi 18\text{mm} \times 6.35\text{mm}$. Ceramic is a kind of material with high elasticity, corrosion resistance, wear resistance, resistance to impact and vibration. Ceramic's good thermal stability and thick film high temperature sintering process make the ceramic pressure sensor's operating temperature range up to $-40 \sim 125\text{ }^{\circ}\text{C}$. The ceramic's high elasticity and creep resistance make the ceramic pressure sensor have good long-term stability. Besides, the corrosion resistance character makes the sensor have unique advantages in the application such as the refrigeration, chemical and environmental protection and other fields.



2. Features

- Ceramic sensitive film with high overload capacity
- Laser calibration for zero and full scale
- Excellent corrosion resistance, wear resistance
- Impact resistance, anti-vibration
- High precision, good stability
- Wide operating temperature range
- Small size, easy to package
- Environmental protection

3. Applications

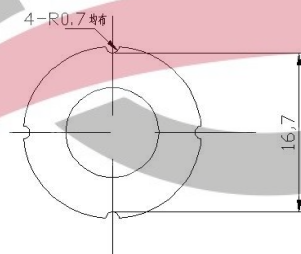
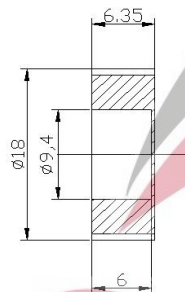
WPAH01 ceramic pressure sensors are widely used in: process control, environmental control, hydraulic and pneumatic equipment, servo valves and transmission, chemical and chemical industry and medical instruments and many other fields.

Now, high-performance and low-cost ceramic sensor is the direction of development of pressure sensors with the trend of replacing other type sensors in Europe and the United States. In China, more and more users choose ceramic sensors instead of strain and diffusion Silicon pressure sensor.

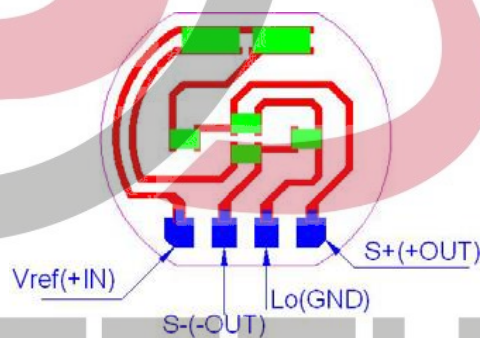
4. Parameters

Item	Parameter
Size	Φ18mm*6.35mm
Detection Range	2bar、5bar、10bar、20bar、50bar、100bar
Working voltage	2-20V
Sensitivity	1.5—4mv/V, typical value 2.5±1.0mv/V
Input, output resistance	10KΩ±30%
Temperature range	-40℃-125℃
Zero output	0—±0.4 mv/V,, typical value 0±0.25mv/V
Linearity, hysteresis, repeatability	typical value ±0.3 %FS
Temperature draft	Typical value ±0.05%FS/℃
Safe overload	two times of rated detection range (when sensitivity is typical value)
Stability	Better than ±0.5%FS / year (if it is used properly)

5. Structure sizes



6. Electric connection



7. Cautions

- 1, During installing sensor, the sensor's surface with lead must be equipped with nylon gasket, to make force event, avoiding zero instability.
- 2, Before welding lead, please preheat the sensor with heating table, to increase the solderability of solder joint, that heating solder joints for a long time will reduce the adhesion of the pad. When welding, please use a tip iron soldering that is less than 60W.
- 3, Don't touch the blue part on the sensor, scratching the blue part will destroy the internal circuit and cause performance instability.