

# SYZ Series Strain Core

## Product introduction

SYZ series strain cores have advantages such as small size, light weight, high accuracy, and easy to install and use; strong resistance to shock and impact, can withstand 300% of nominal range overload; high sensitive, up to 1 micro-strain; dynamic response is good, dynamic strain from 0~500000 Hz can be measured. The product 1904 won the national patent, and the patent number is ZL 20092 0032932.9. The products are widely used for measurement and control of water, oil and gas medium pressures.

## Applications

Industrial process control·Level measurement·Gas, liquid pressure measurement·Pressure measuring instrument·pressure calibration instrument·Hydraulic Systems and Switching·Refrigeration Equipment and Air Conditioning Systems·Aviation and navigation inspection

## Environment conditions

Vibration: No change at 10gRMS, 20Hz-2000Hz

Impact: 100g, 11ms

Medium Compatibility: Liquid or gas compatible with structural material stainless steel 17-4 and NBR

## General specification

Medium temperature:  $(25\pm 1)^{\circ}\text{C}$

Environment temperature:  $(25\pm 1)^{\circ}\text{C}$

Vibration: 0.1g (1m/s/s) Max

Humidity:  $(50\pm 10)\%$  RH

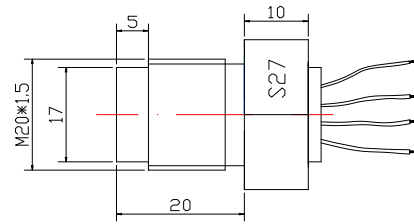
Environmental pressure:  $(86-106)$  KPa

Power supply: 10V DC

## Legend and structure dimensions

### Flat film (P-17)

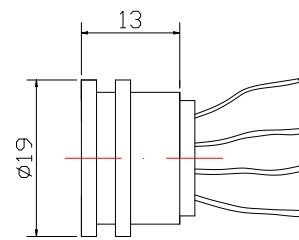
Range: 1~200MPa  
 Accuracy: 0.1%FS, 0.25%FS  
 Power supply: 9~15VDC  
 Output:  $1.5 \pm 0.3\text{mV}$   
 Output impedance:  $1\text{K}\Omega \pm 3\Omega$   
 Operating temperature:  $(-20\sim 80)\text{ }^{\circ}\text{C}$   
 Stability:  $\leq \pm 0.2\% \text{FS}$   
 Interface: M20\*1.5 or Customer selection  
 Working medium: liquid or gas that non-corrosive to 316 steel



External dimensions can be customized

### Side seal (1904)

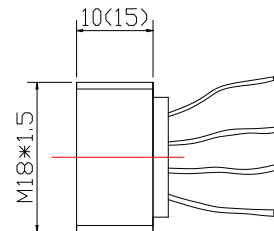
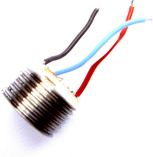
Range: 1~100MPa  
 Accuracy: 0.1%FS 0.25%FS  
 Power supply: 9~15VDC  
 Output:  $1.5 \pm 0.3\text{mV}$   
 Output impedance:  $1\text{K}\Omega \pm 3\Omega$   
 Operating temperature:  $(-20\sim 80)\text{ }^{\circ}\text{C}$   
 Stability:  $\leq \pm 0.2\% \text{FS}$   
 Interface:  $\phi 19$  side seal  
 Working medium: liquid or gas that non-corrosive to 316 steel or aluminum



External dimensions can be customized

### Rotary joint (External M1801)

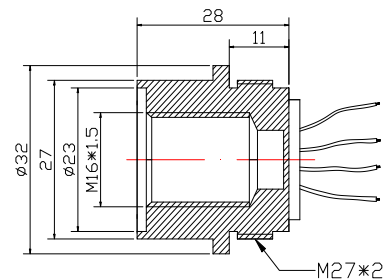
Range: 10~200MPa  
 Accuracy: 0.1%FS 0.25%FS  
 Power supply: 9~15VDC  
 Output:  $1.5 \pm 0.3\text{mV}$   
 Output impedance:  $1\text{K}\Omega \pm 3\Omega$   
 Operating temperature:  $(-20\sim 80)\text{ }^{\circ}\text{C}$   
 Stability:  $\leq \pm 0.2\% \text{FS}$   
 Interface: M18\*1.5(Negotiable)  
 Working medium: liquid or gas that non-corrosive to 316 steel or aluminum



External dimensions can be customized

### Rotary joint (Internal M16)

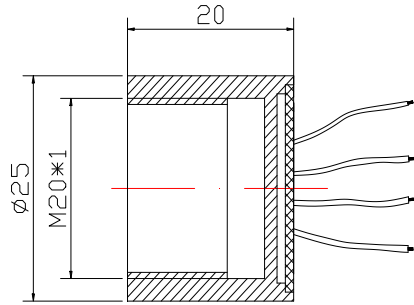
Range: 0~60MPa  
 Accuracy: 0.1%FS 0.25%FS  
 Power supply: 9~15VDC  
 Output:  $1.5 \pm 0.3\text{mV}$   
 Output impedance:  $1\text{K}\Omega \pm 3\Omega$   
 Operating temperature:  $(-20\sim 80)\text{ }^{\circ}\text{C}$   
 Stability:  $\leq \pm 0.2\% \text{FS}$   
 Interface: Internal M16\*1.5 or Customer selection  
 Working medium: liquid or gas that non-corrosive to 316 steel



External dimensions can be customized

### Rotary joint (Aluminum Internal M20)

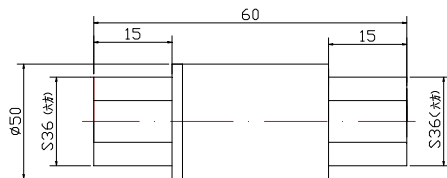
Range: 0~10MPa  
Accuracy: 0.1%FS 0.25%FS  
Power supply: 9~15VDC  
Output:  $1.5 \pm 0.3\text{mV}$   
Output impedance:  $1\text{K}\Omega \pm 3\Omega$   
Operating temperature:  $(-20 \sim 80)^\circ\text{C}$   
Stability:  $\leq \pm 0.2\% \text{FS}$   
Interface: M20\*1 or Customer selection  
Working medium: liquid or gas that non-corrosive to aluminum



External dimensions can be customized

### Torsion type (N8KN)

Range: 0~8000N (Customer selection)  
Accuracy: 0.1%FS 0.25%FS 0.5%FS  
Power supply: 9~15VDC  
Output:  $1.5 \pm 0.3\text{mV}$   
Output impedance:  $1\text{K}\Omega \pm 3\Omega$   
Operating temperature:  $(-20 \sim 80)^\circ\text{C}$   
Stability:  $\leq \pm 0.2\% \text{FS}$   
Interface: Customer selection  
Working medium: liquid or gas that non-corrosive to 316 steel or aluminum

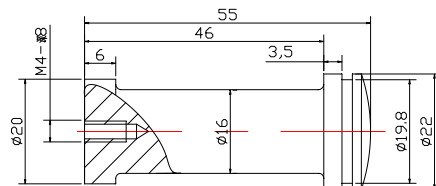


External dimensions can be customized

The range changes, the dimension changes

### Load type (H100T)

Range: 0~100T (Customer selection)  
Accuracy: 0.1%FS 0.25%FS 0.5%FS  
Power supply: 9~15VDC  
Output:  $1.5 \pm 0.3\text{mV}$   
Output impedance:  $1\text{K}\Omega \pm 3\Omega$   
Operating temperature:  $(-20 \sim 80)^\circ\text{C}$   
Stability:  $\leq \pm 0.2\% \text{FS}$   
Interface: Customer selection  
Working medium: liquid or gas that non-corrosive to 316 steel or aluminum



External dimensions can be customized

The range changes, the dimension changes

## Electrical connection

No.	Electrical definition	Wire color
1	Power supply V+	Red
2	Signal S+	Blue
3	Power supply V-	Black
4	Signal S-	Yellow

Note: The electrical connection is based on the connection method identified on the product parameter card.

## Modeling suggests

1. Pay attention to protect the front-end isolation diaphragm and back-end PCB compensation board of the pressure sensitive element, to avoid collision causing damage to the pressure sensitive element.
2. The temperature range of the NBR rubber seal ring for sensitive element labels is  $-55^{\circ}\text{C}\sim 100^{\circ}\text{C}$ . When the sensitive element is working not in the temperature range, or is used in hashed medium, please contact us.