



UPC9 Sputtered Thin-film Pressure Transducer

Description

UPC9 sputtered thin-film pressure transducer is manufactured based on sputtering techniques. The pressure medium can act on 17-4PH stainless steel diaphragm directly. The transducer's "micro" level resistance film is made by means of molecular bonding, then to be made to the needed Wheatstone bridge by microelectronics technology, and to form a metal-type sensing elements without using any adhesives. Therefore the transducer has no any moving parts, also do not need sealed chamber and oil-filled cavity. UPC9 pressure transducer is featured with good long-term stability for working in harsh environments.

UPC9 pressure transducer is a high-performance product and designed for oil well logging, well testing and pressure gauge application especially. It can work stably under high temperature, and have good ability on anti-vibration, impact resistance, moisture-proof.

UPC9 has been widely used for pressure measurement in harsh environments such as oil well logging, well testing, digital pressure gauge, internal combustion engines, compressors, high pressure testing machine etc.

Features

- Good long-term stability under high temperature
- Anti-vibration, impact resistance, moisture-proof
- High accuracy, small temperature drift
- Using sputtering techniques to make pressure sensing element, the max. working temperature reaches 180 degree c
- Long service life, pressure cycle reaches more than one million times

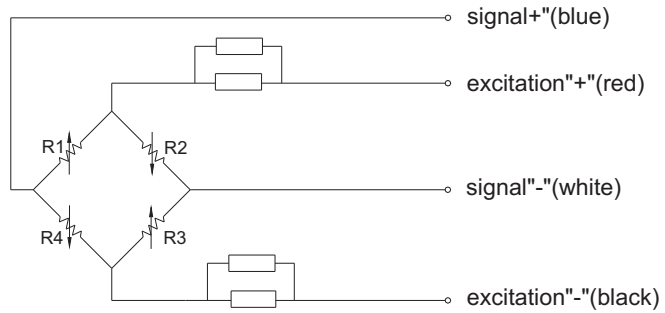


Specifications

| | |
|---------------------------------|---|
| pressure medium | gas or liquids compatible with 17-4PH stainless steel |
| pressure ranges | 0~5...2200bar |
| overload pressure | 200%FS |
| ultimate overload pressure | 1000%FS |
| output signal | 1mV/V~4mV/V (determined by pressure range) |
| accuracy | 0.25%FS(standard), 0.5%FS |
| zero offset | <0.5mV |
| long-term stability | <0.1%FS/year |
| excitation | 3VDC~20VDC |
| operating temperature range | -55°C~180°C |
| storage temperature range | -55°C~180°C |
| temperature coefficient of zero | 0.005%FS/°C |
| temperature coefficient of span | 0.005%FS/°C |
| input resistance | 3~4kΩ |
| output resistance | 2.8~3.8kΩ |
| electrical connection | 4-color high temperature wire or Pg7 connector |
| process connection | M10×1 or others |
| material of wetted part | 316 |
| impact | 20G, 11msec, ½ sine |
| shake | 10G peak, 20Hz~ 2400 Hz |
| protection | IP67 |

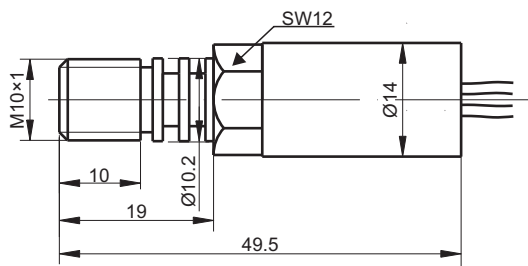
Electrical connection

| connection | cable color |
|---------------|-------------|
| excitation“+” | red |
| excitation“-” | black |
| signal“+” | blue |
| signal“-” | white |

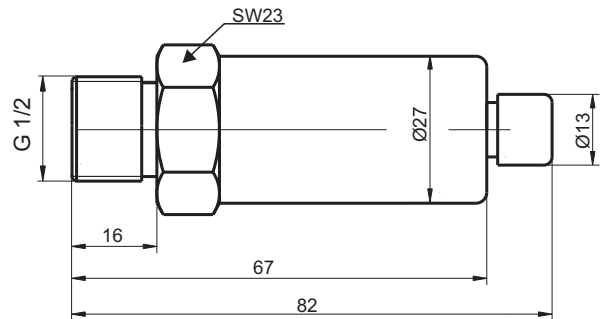


note : please refer to the user manual for the actual wiring

Dimensions



UPC9-a



UPC9-b

Ordering code

| UPC9-a | | UPC9-b | |
|----------|-------------------------------|--------|----|
| range | pressure range: 0~5...2200bar | | |
| (0~X)bar | X: required measuring range | | |
| code | accuracy | | |
| C | 0.25%FS | | |
| D | 0.5%FS | | |
| code | process connection | | |
| P8 | M10×1 | | |
| P6 | M12×1 | | |
| P2 | G1/2 | | |
| Pz | customer request | | |
| UPC9-a | (0~200)bar | C | P8 |