

OEM Piezoresistive Pressure Sensor

Model: PT124G-3101 (Cost-effective)

Description

PT124G-3101 piezoresistive pressure sensor is designed in automatic mass production line. It is cost effective. PT124G-3101 outline, installation, dimension and sealing methods are similar to other famous brand, they have high interchangeability. It is widely used for pressure measurement of media which is compatible with stainless steel and Viton.

Features

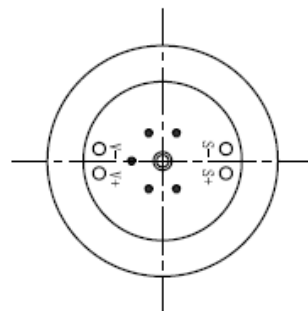
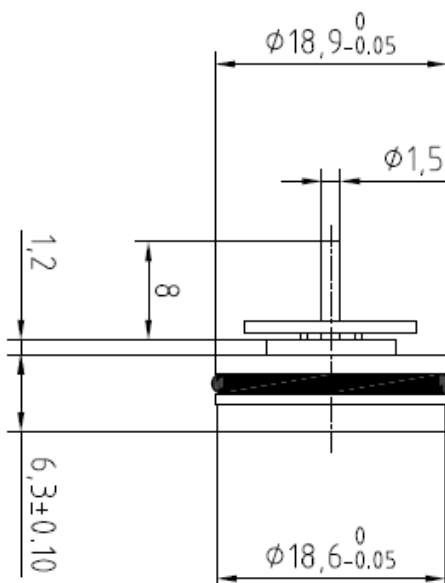
Cost Effective
Chip from international famous brand
Laser Trimming for temperature compensation
Pressure range: 0kPa~35kPa...35MPa
Constant current / Constant Voltage power supply
Isolated construction, enable to measure various fluid media
Φ19mm standard OEM piezo-resistive pressure sensor
Full stainless steel 316L



Application

Industrial process control
Level measurement
Gas, liquid pressure measurement
Pressure checking meter
Pressure calibrator
Liquid pressure system and switch
Cooling equipment and air conditioning system
Aviation and navigation inspection

Dimensions



Wire lead color

PIN	Electric Connection	Wire lead color
1	V+	Red
2	V-	Yellow
3	S+	Blue
4	S-	White

Electric Performance

Power supply: $\leq 2.0\text{mA DC}$; $\leq 10\text{V DC}$
Electric connection: 100mm silicon rubber flexible wires
Common mode voltage output: 50% input (typ.)
Input impedance: $2\text{k}\Omega \sim 8\text{k}\Omega$
Output impedance: $3.5\text{k}\Omega \sim 6\text{k}\Omega$
Response (10%~90%): $< 1\text{ms}$
Insulation resistor: $100\text{M}\Omega$, 100VDC
Overpressure: 1.5 times FS

Construction Performance

Diaphragm: stainless steel 316L
Housing: stainless steel 316L
Leading wire: silicone-rubber flexible wire
O-ring: Viton
Net weight: $\sim 25\text{g}$

Environment Condition

Position: deviate 90° from any direction, zero change $\leq \pm 0.05\%\text{FS}$
Shock: no change at 10g RMS , (20~2000)Hz
Impact: 100g, 11ms
Media compatibility: the gas or liquid which is compatible with stainless steel and viton

Basic Condition

Media temperature: $(35 \pm 1)^\circ\text{C}$
Environment temperature: $(35 \pm 1)^\circ\text{C}$
Shock: $0.1\text{g}(1\text{m/s}^2)\text{Max}$
Humidity: $(50\% \pm 10\%)\text{RH}$
Local air pressure: $(86 \sim 106)\text{kPa}$
Power supply: $(1.5 \pm 0.0015)\text{mA DC}$

Basic Specification:

Item (1)	Min.	Typ.	Max.	Units
Linearity		±0.2	±0.25	%FS,BFSL
Repeatability			±0.075	%FS
Hysteresis			±0.075	%FS
Zero output (2)			±2.0	mV DC
FS output	50			mV DC
Zero thermal error			±1.0	%FS,@35℃
FS thermal error			±1.0	%FS,@35℃
Compensation temp. range	0~70			℃
Working temp. range	-40~125			℃
Storage temp. range	-40~125			℃
Long term stability	±0.5			%FS/Yr
(1) Testing at basic condition, G: Gauge				
(2) Zero output for closed loop sensor.				

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Order Guide

PT124G-3101 Cost-effective Piezoresistive Pressure Sensor

	Range code	Pressure range	Ref.	Range code	Pressure range	Ref.
	0A	0kPa~35kPa	G.A	12	0MPa~2MPa	G.A
	02	0kPa~70kPa	G.A	13	0MPa~3.5MPa	G.A
	03	0kPa~100kPa	G.A	14	0MPa~7.0MPa	S.
	07	0kPa~200kPa	G.A	15	0MPa~10MPa	S.
	08	0kPa~350kPa	G.A	17	0MPa~20MPa	S
	09	0kPa~700kPa	G.A	18	0MPa~35MPa	S
	10	0kPa~1000kPa	G.A			
		Code	Pressure Type			
		G	Gauge			
		A	Absolute			
		S	Sealed gauge			
			Code	Pressure connection		
			0 or null	O-ring		
			Code	Compensation		
			L	Laser trimming		
				Code	Electric connection	
				2	88mm silicon rubber flexible wires	

For Example: PT124G-3101 10 G 0 L 2

Order Note:

1. We suggest you to use Floating construction when you install the sensor to prevent affecting sensor stability;
2. Please pay attention to protect sensor isolated diaphragm and ceramic compensated board, to avoid damaging sensor or affecting the performance;
3. Temperature resistant range of standard Viton O-ring of sensor is $-20^{\circ}\text{C} \sim 250^{\circ}\text{C}$. When working temperature is lower than -20°C , or sensor is applied in critical environment, please contact us.

