

# General Ceramic Pressure Sensor

## GPT230

**GaMicos**



### DESCRIPTION

GPT230 ceramic pressure sensor is a cost-effective product with the characteristics of compact structure, reliable quality. It is equipped with ceramic piezoresistive core, hard 304 stainless steel housing, suitable for measuring pressure of gas and liquid. GPT230 ceramic pressure transmitter is mainly used in air compressor, measurement and control technology, and other situations that requires gas and liquid pressure. GPT230 series pressure transducers have high ability of customization, we can provide our clients customized products with different pressure range and process connection, and meet your specific operating requirements within a short period.

### FEATURES

- Ceramic piezoresistive core
- Measurement range : 0 ~ 5...50bar gauge
- Accuracy:  $\pm 0.5\%F.S, \pm 1.0\%F.S$
- Output: 4 ~ 20mA, 0.5V~4.5V, 0~5V, 0~10V
- Electrical interface : Small Hirschmann , Packard connector , M12×1 connector , Waterproof connector outlet , Grommet outlet
- Process connection: G1/4 , 7/16-20UNF-2B (Female) , 7/16-20UNF-2A (Male) , NPT1/4 , G1/2 or others
- Accurate measurement and cost-effective
- Suitable for mass production

## APPLICATION

- Universal pressure measurement
- Air compressor
- Measurement and Control Technology
- Hydraulic and Pneumatic Technology

## SPECIFICATION

Temperature : 25℃ ; Relative humidity : 45%~75% ; Ambient atmospheric pressure : 86KPa~106KPa ;

Pressure range	0~5...50bar gauge			
Output signal	0.5~4.5V	0~10V	0~5V	4mA~20mA
Power supply(U+)	5VDC	12~30VDC	10VDC~30VDC	
Output load	≥10KΩ			≤(U+ - 10) / 0.023Ω
Room temperature Accuracy	±0.5%F.S. (Default), ±1.0% Optional (Note1)			
Medium temperature	-30~120℃ (Note2)			
Environment temperature	-20~85℃			
Storage temperature	-40℃~105℃			
Long-term stability	±0.5%FS/Year			
Response time	(10%~90%)≤10ms			
Overload pressure	≥150%F.S			
Damage pressure	≥200%F.S			
Pressure interface	G1/4 · 7/16-20UNF-2B (Female),7/16-20UNF-2A (Male),NPT1/4,G1/2			
Electrical interface	Small Hirschmann, Packard connector, M12 ×1 connector, Waterproof connector outlet, Grommet outlet			
Wetted sealing ring	NBR (Default),FKM (optional)			
Housing	304 SS (Default),316L SS or others optional			
Insulation resistance	≥100MΩ@100VDC			
Shock	10g,5~2000Hz			
Impact	20g,11ms Half-sine			
Protection	≥IP65			

Note 1 : Range 0 ~ 5bar includes products with pressure 5 bar , customers can only choose accuracy of ±1.0%F.S.

Note2: Medium temperature is mainly decided by sealing material. The default sealing ring material is NBR, and the medium temperature is from -30℃ to 120℃. When its material is FKM, temperature of the medium is -20~125℃. If the medium temperature exceeds 85℃ for a long time, please make special instructions.

# DIMENSION


Hirschmann ( DIN 43650 C )	Packard ( Packard Metri-Pack )	Connector M12×1 (4-pin)
Waterproof connector outlet	Grommet outlet	

## Pressure interface


G1/4	7/16-20UNF-2B	7/16-20UNF-2A
NPT1/4	G1/2	

## WIRING DEFINITIONS


Hirschmann ( DIN 43650 C )

	Pin	2-wire		3-wire	
		Definition	Wire color	Definition	Wire color
	1	Power supply	Red	Power supply	Red
	2	Output	Green/Blue	GND	Black
	3	/		Output	Green/Blue
	⊕			Shield	Black


Packard connector ( Packard Metri-Pack )

	Pin	2-wire		3-wire		
		Definition	Wire color	Definition	Wire color	
	A	Shield	Black	GND	Black	
	B	Power supply	Red	Power supply	Red	
	C	Output	Green/Blue	Output	Green/Blue	
		/		/		Yellow(Shield)

Connector M12 x 1 (4-pin)

	Pin	2-wire		3-wire	
		Definition	Wire color	Definition	Wire color
	1	Power supply	Red	Power supply	Red
	2	Output	Green/Blue	Output	Green/Blue
	3	/		GND	Black
	4			Shield	Black

Waterproof connector /grommet outlet

	Wire color	Pin Definition		
		2-wire	3-wire	
	Red	Power supply	Power supply	
	Green/Blue	Output	Output	
	Black	Shield	GND	
	Yellow	/		Shield

GPT230	Ceramic Pressure sensor							
	Code	<b>Pressure range</b>						
	X	X represents actual pressure measurement range						
	Code	<b>Pressure interface</b>						
	G1/4	G1/4						
	7/16U(F)	7/16-20UNF-2B						
	7/16U	7/16-20UNF-2A						
	NPT1/4	NPT1/4						
	G1/2	G1/2						
	Code	<b>Electrical interface</b>						
	HSM	Small Hirschmann						
	P	Packard						
	M12	M12x 1						
	CW	Waterproof connector outlet						
	C1	Grommet outlet						
	Code	<b>Output</b>						
	420	4~20mA						
	0545R	0.5~4.5V proportional voltage						
	005	0~5V						
	010	0~10V						
	Code	<b>Power supply</b>						
	09	10~30VDC						
	03	(5±0.25) VDC						
	13	12~30VDC						
	Code	<b>Wetted sealing ring material</b>						
	B	NBR						
	F	FKM						
	Code	<b>Resolution</b>						
	05	±0.5%						
	10	±1.0%						
GPT230	X	G1/2	C1	005	03	F	10	

**Precautions**

- GPT230 pressure sensor must be used in a medium that is not corrosive to the sealing material and housing material
- No sharps used when the pressure guide hole is blocked. Immerse the pressure guide hole into a liquid that can dissolve the blockage. Throw it out after the blockage is dissolved
- No calibration or repair by yourself
- Contact the supplier if you are not sure of the medium applicability
- The installation location should be the places uneasy to touch or stampede
- The pressure sensor may be damaged permanently if you make it work under an overload pressure
- Consider lightning protection measures if there may be lightning

**Declaration**

Our company reserves the right to modify the specifications and contents of this manual. Subject to modification without notice. Due to the update of the product, the individual details of this document may not match the product, please refer to the actual product. The interpretation right of this document belongs to our company.