General Ceramic Pressure Sensor

GPT233

DESCRIPTION

GPT233 ceramic pressure sensor is a cost-effective product with the characteristics of compact structure, reliable quality, mainly used to measure refrigerant. This series ceramic pressure transmitter provides 1% nonlinearity version. It has been certified by CE and RoHS, and deserves our trustfulness. We have ceramic piezoresistive and ceramic capacitance pressure sensor, and the housing materials can be stainless steel and brass, the electrical interface is Packard. In addition, GAMICOS is trying to meet our customers'needs in different pressure types and measurement range. Especially our ceramic capacitance pressure transducer, selects ceramic capacitive sensitive components and dedicated calibration circuit, has the advantages of high accuracy under operating temperature, high waterproof grade, and anti-condensation. All in all, It is an ideal product to measure refrigerant.ss connection, and meet your specific operating requirements within a short period.

SPECIFICATION

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

Pressure range	0～5...50bar (Gauge/Sealed gauge)	
Pressure core	Ceramic piezoresistive	Ceramic capacitance
Output signal	4mA ~ 20mA	0.5~4.5V
Power supply(U+)	24V	5±0.25VDC
Output load	≥10KΩ	≤(U+ - 10) / 0.023Ω
Room temperature Accuracy	±1.0% (Note 1)	±1.5%
Full temperature range accuracy	/	±2.5%
Medium temperature	−30～120℃(Note 2)	
Operating temperature	−20～85℃	−35℃~105℃
Storage temperature	−40℃~105℃	
Long-term stability	±0.5%FS/Year	
Response time	(10%～90%)≤10ms	
Overload pressure	⩾150%F.S	⩾200%F.S
Damage pressure	≥200%F.S	≥300%F.S
Pressure interface	G1/4，7/16-20UNF-2B (Female)，7/16-20UNF-2A(Male)，NPT1/4，G1/2	
Electrical interface	Packard connector	
Wetted sealing ring	NBR/ FKM/ CR (specific ceramic capacitance pressure sensor)	
Housing material	304/316 stainless steel	brass
Insulation resistance	≥100MΩ@100VDC	≥100MΩ@500VDC
Shock	10g，5~2000Hz	
Impact	20g，11ms Half-sine	
Protection	⩾IP65	⩾IP66
Refrigerant compatible	R12,R22,R134a,R404a,R407c, R410a,R502,R507	

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

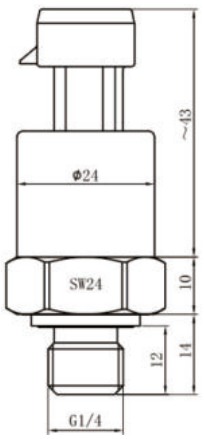
Note2：Medium temperature is mainly decided by sealing material. The default sealing ring material is NBR, and the medium temperature is from -30℃ to 120℃. When its material is FKM, temperature of the medium is -20~125℃. If the medium temperature exceeds 85 ℃ for a long time, please make special instructions.

FEATURES

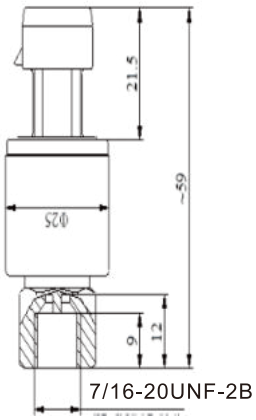
- Absolute pressure and sealed gauge pressure optional
- Breaking pressure up to 3X
- High accuracy under operating temperature
- Anti-condensation
- Fully sealed, IP66 protection

DIMENSION

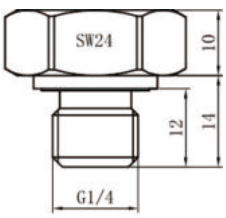
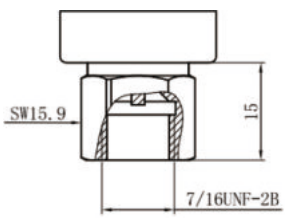
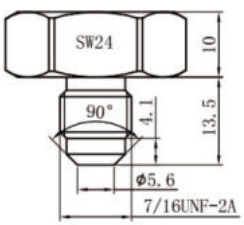
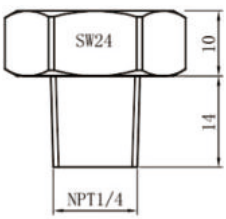
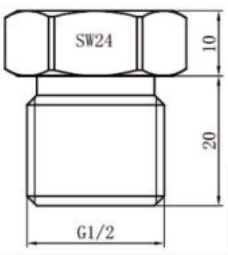
Ceramic Piezoresistive Core



Ceramic Capacitive Core



Pressure interface

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

WIRING DEFINITIONS

Connector M12 x 1 (4-pin)

	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）

ORDER GUIDE

GPT233	Ceramic Pressure sensor							
	Code	**Pressure range**						
	X	X represents actual pressure range						
		Code	**Pressure interface**					
		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	**Electrical interface**				
			P	Packard				
				Code	**Output**			
				420	4~20mA(ceramic piezoresistive)			
				0545R	0.5～4.5V proportional voltage（ceramic capacitive）			
					Code	**Power supply**		
					09	24VDC（ceramic piezoresistive）		
					03	5±0.25VDC（ceramic capacitive）		
						Code	**Sealing ring material**	
						B	NBR	
						F	FKM	
							Code	**Accuracy**
							05	±0.5%（customized）
							10	±1.0% (ceramic piezoresistive）
							15	±1.5%（ceramic capacitive）
GPT233	X	G1/2	P	420	03	B	10	

Precautions

a.GPT233 pressure sensor must be used in a medium that is not corrosive to the sealing material and housing material
b.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
c.No calibration or repair by yourself
d.Contact the supplier if you are not sure of the medium applicability
e.The installation location should be the places uneasy to touch or stampede
f.The pressure sensor may be damaged permanently if you make it work under a overload pressure
g.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.