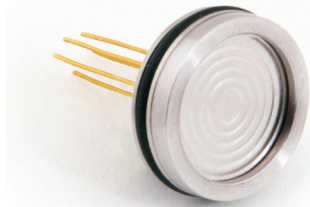


Model NPS19C



Product Overview

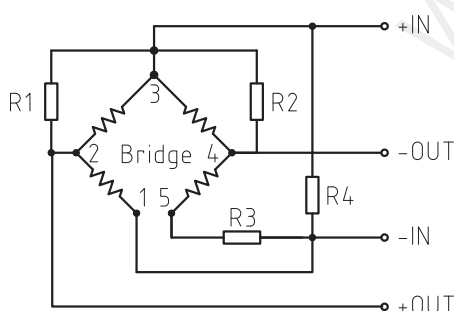
NPS19C is made from silicon piezoresistive sensor chip. The piezoresistive sensor chip is packaged in a fluid-filled cylindrical cavity and isolated from measured media by a stainless steel diaphragm and housing. NPS19C is temperature compensated and zero correction by using resistance technology. The sensor has a smaller thickness. The smaller volume is suitable for limited space.

NPS19C pressure sensor are designed for floating O-ring seal mounting. This not only can avoid housing induced stress, but also is easy for installation.

Applications

- Process control systems
- Refrigeration and HVAC controls
- Hydraulic systems and valve
- Pharmaceutical engineering
- Level measurement
- Ship and marine systems

Constant current schematic diagram



Features

- 100mbar to 100bar (1.45psi to 1450psi)
- Absolute, gauge and sealed gauge
- $\pm 0.25\%$ static accuracy
- Calibrated and temperature compensated
- Rugged 316L stainless steel isolated package
- Piezoresistive sensor design
- Standard configurations include:
19 mm diameter x 7 mm long
- Solid state, high reliability
- Low cost

Standard Pressure Ranges

Nominal pressure	gauge	sealed gauge	absolute
-1...0bar	●		
-0.35...0bar	●		
-0.2...0bar	●		
0...0.1bar	●		
0...0.2bar	●		
0...0.35bar	●		
0...0.7bar	●		
0...1bar	●		●
0...1.6bar	●		
0...2.5bar	●		●
0...4bar	●		●
0...6bar	●		●
0...10bar	●	●	●
0...16bar	●	●	●
0...25bar		●	
0...60bar		●	
0...100bar		●	

other pressure ranges available. Please consult the factory.

Performance Specifications

Parameter	Value	Units	Notes
General			
Pressure Range	-1-0, ..., 0-0.1, ..., 100	bar	1bar=14.5psi
Overpressure	2xFS	bar	
Environmental			
Operating Temperature Range	-40 to +125	°C	-40°F to 257°F
Compensated Temperature Range	0 to +70	°C	32°F to 158°F
Storage Temperature Range	-40 to +125	°C	-40°F to 257°F
Vibration	10	g	20 to 2000Hz
Shock	100	g	10ms
Cycles	10x10 ⁶	cycles	
Electrical @25°C(77°F)			
Excitation Current	1.5	mA	
Excitation Voltage	5	Vdc	
Bridge Resistance	2600 to 6000	Ω	
Insulation Resistance	100	MΩ	@100Vdc

Physical Specifications

Media Compatibility	All media compatible with 316L stainless steel		
Housing	316L stainless steel		
Diaphragm	316L stainless steel		
Seal Ring	Viton or NBR		
Oil Filling	Silicone oil		
Electrical Connection	Silicon rubber flexible wire or kovar pin		
Net Weight	Approx.13g		

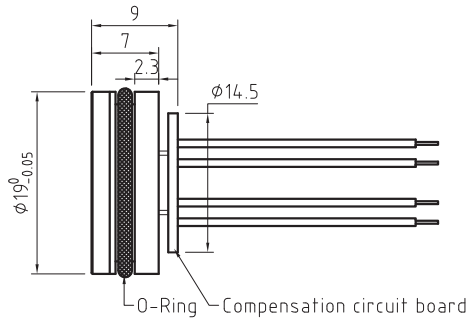
Parameter	Minimum	Typical	Maximum	Units	Notes
Performance					
Zero Output	-2	±1	2	mV	1
Full Scale Output	50	100		mV	1
Non-linearity	±0.1	±0.2	±0.3	%FSO	1, 2
Hysteresis	-0.05	±0.03	0.05	%FSO	1
Repeatability	-0.05	±0.03	0.05	%FSO	1
Temp Coeff - Zero	-1.5	±0.75	1.5	%FSO	3
Temp Coeff - Span	-1.5	±0.75	1.5	%FSO	3
Long-Term Stability		±0.2	±0.3	%FSO/year	1

Notes

1. All values measured at 25°C(77°F) and at 1.5mA
2. Best fit straight line(BFSL)
3. 0°C to 70°C(32°F to 158°F) with reference to 25°C(77°F)

This data sheet contains product specification, properties are not guaranteed. Subject to change without notice.

Dimensions (in mm)



Pin	Connection	Wire color
3	+IN	Red
5	- IN	Blue
2	+OUT	Yellow
4	- OUT	White

Note: The actual electric connection method, please check the parameter label enclosed with products

Ordering Information

Option1: Model						
NPS19C	Piezoresistive OEM Pressure Sensor					
Option2: Pressure Range						
N001	-1...0bar	0040	0...4bar			
N002	-0.35...0bar	0060	0...6bar			
N003	-0.2...0bar	0100	0...10bar			
0001	0...0.1bar	0160	0...16bar			
0003	0...0.35bar	0250	0...25bar			
0007	0...0.7bar	0600	0...60bar			
0010	0...1bar	1000	0...100bar			
0016	0...1.6bar	Cxxx	Customized range			
0025	0...2.5bar					
Option3: Pressure Type						
	G	gauge				
	A	absolute				
	S	sealed gauge				
Option4: Excitation						
	I	1.5mA Constant Current Excitation				
	V	5Vdc Constant Voltage Excitation				
Option5: Electrical Interface						
	F	4 color silicon rubber wires, length=100mm				
	P	gold-plated kovar pins (only for 1.5mA Constant Current Excitation)				
Option6: Compensation						
	T	0 to 70°C				
	NA	No temperature compensation				
NPS19C	0010	G	I	F	T	Examples of Ordering Code: NPS19C-0010-G-I-F-T