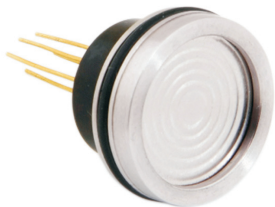


# Model NPS19L



## Product Overview

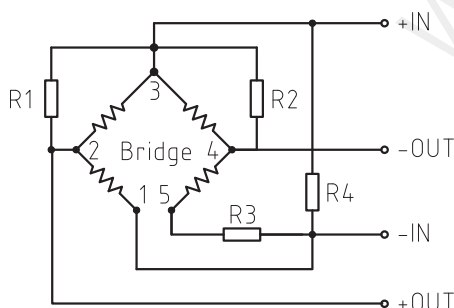
NPS19L is made from high-quality silicon piezoresistive sensor chip. The piezoresistive sensor chip is packaged in a fluid-filled cylindrical cavity and isolated from measured media by a stainless steel diaphragm and housing. NPS19L is temperature compensated and zero correction by using resistance technology. The temperature drift of sensor is within 1.5%FS.

NPS19L 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 11.5 mm long
- Solid state, high reliability
- Custom configurations and other pressure ranges available. Please consult the factory.

## 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

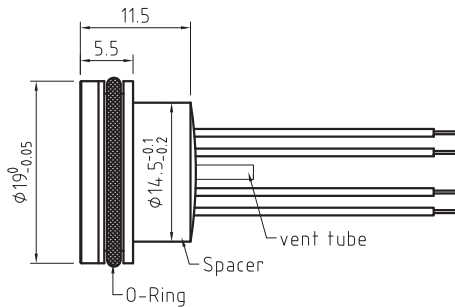
Parameter	Value	Units	Notes		
<b>General</b>					
Pressure Range	-1-0, ..., 0-0.1, ..., 100	bar	1bar=14.5psi		
Overpressure	2xFS	bar			
<b>Environmental</b>					
Operating Temperature Range	-40 to +125	°C	-40°F to 257°F		
Compensated Temperature Range	0 to +70	°C	32°F to 158°F		
Storage Temperature Range	-40 to +125	°C	-40°F to 257°F		
Vibration	10	g	20 to 2000Hz		
Shock	100	g	10ms		
Cycles	10x10 <sup>6</sup>	cycles			
<b>Electrical @25°C(77°F)</b>					
Excitation Current	1.5	mA			
Excitation Voltage	5	Vdc			
Bridge Resistance	2600 to 6000	Ω			
Insulation Resistance	100	MΩ	@100Vdc		
<b>Physical Specifications</b>					
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. 16g				
Parameter	Minimum	Typical	Maximum	Units	Notes
<b>Performance</b>					
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)
4. Consult factory for vacuum applications

**Dimensions (in mm)**

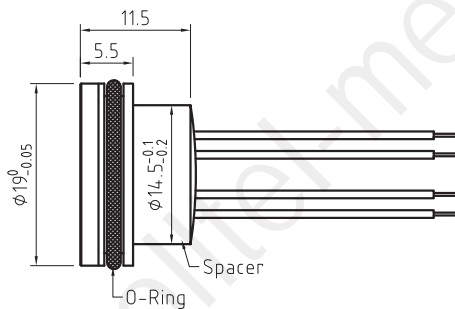
For Gauge Pressure



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

For Sealed Gauge Pressure or Absolute Pressure



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**

<b>Option1: Model</b>	
NPS19L	Piezoresistive OEM Pressure Sensor
<b>Option2: Pressure Range</b>	
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
<b>Option3: Pressure Type</b>	
G	gauge
A	absolute
S	sealed gauge
<b>Option4: Excitation</b>	
I	1.5mA Constant Current Excitation
V	5Vdc Constant Voltage Excitation
<b>Option5: Electrical Interface</b>	
F	4 color silicon rubber wires,length=100mm
P	gold-plated kovar pins(only for 1.5mA Constant Current Excitation )
<b>Option6: Compensation</b>	
T	0 to 70°C
NA	No temperature compensation
NPS19L	0010    G    I    F    T    Examples of Ordering Code: NPS19L-0010-G-I-F-T

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