

# Model NPS19F



## Product Overview

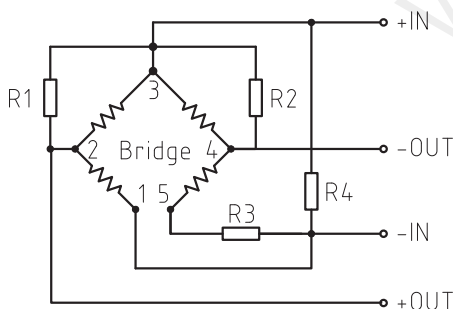
NPS19F is made from high-quality silicon piezoresistive sensor chip. The piezoresistive sensor chip is packaged in a fluid-filled cylindrical cavity and isolated from measured media by a stainless steel diaphragm and housing. NPS19F is temperature compensated and zero correction by using resistance technology. It is flush membrane configuration and easy to clean. It can be used for food industry.

NPS19F 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
- Food and the beverage industry

## Constant current schematic diagram



## Features

- 100mbar to 100bar (1.45psi to 1450psi )
- Absolute, gauge and sealed gauge
- Flush membrane configuration
- $\pm 0.25\%$  static accuracy
- Calibrated and temperature compensated
- Rugged 316L stainless steel isolated package
- Piezoresistive sensor design
- Standard configurations include:  
19 mm diameter x 12.4 mm long
- Solid state, high reliability
- Custom configurations and other pressure ranges available. Please consult the factory.

## Standard Pressure Range

Nominal pressure	gauge	sealed gauge	absolute
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	0-0.1, ..., 100	bar	1bar=14.5psi
Overpressure	1.5xFS	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. 18g

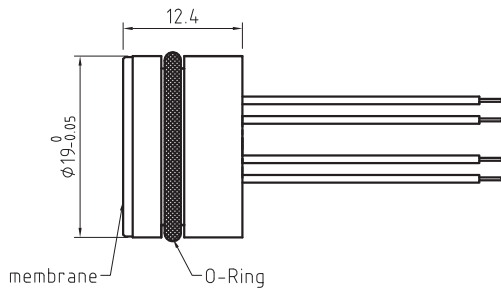
Parameter	Minimum	Typical	Maximum	Units	Notes
<b>Performance</b>					
Zero Output	-2	±1	2	mV	1
Full Scale Output	50	100		mV	1
Non-linearity	±0.1	±0.2	±0.3	%FSO	1, 2
Hysteresis	-0.05	±0.03	0.05	%FSO	1
Repeatability	-0.05	±0.03	0.05	%FSO	1
Temp Coeff - Zero	-1.5	±0.75	1.5	%FSO	3
Temp Coeff - Span	-1.5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

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

**Dimensions (in mm)**



Connection	Wire color
+IN	Red
- IN	Blue
+OUT	Yellow
- OUT	White

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

**Ordering Information**

Option1: Model	
NPS19F	Piezoresistive OEM Pressure Sensor
Option2: Pressure Range	
0001	0...0.1bar 0100 0...10bar
0002	0...0.2bar 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
0040	0...4bar
0060	0...6bar
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
NPS19F	0010 G I F T Examples of Ordering Code: NPS19F-0010-G-I-F-T

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