

Model NPS40



Product Overview

NPS40 is made from high-quality silicon piezoresistive pressure sensor. Put general NPS19 pressure sensor into the housing with standard or special thread, and weld sensor with housing together, no O-ring for sealing. NPS40 is temperature compensated and zero correction by using resistance technology.

NPS40 pressure sensor are designed for thread connection mounting. Various pressure interface available.

Applications

- Process control systems
- Refrigeration and HVAC controls
- Hydraulic systems and valve
- Pharmaceutical engineering
- Level measurement
- Food and the beverage industry

Features

- 100mbar to 350bar (1.45psi to 5000psi)
- Absolute, gauge and sealed gauge
- Welding configuration
- ±0.25% static accuracy
- Calibrated and temperature compensated
- Rugged 316L stainless steel isolated package
- Piezoresistive sensor design
- Various pressure interface available
- Solid state, high reliability
- Custom configurations and other pressure ranges available. Please consult the factory.

Standard Pressure Range

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...2bar	●		●
0...3.5bar	●		●
0...7bar	●		●
0...10bar	●	●	●
0...20bar	●	●	●
0...35bar	●	●	●
0...70bar	●	●	
0...100bar		●	
0...200bar		●	
0...350bar		●	

other pressure ranges available. Please consult the factory.

Performance Specifications

Parameter	Value	Units	Notes
General			
Pressure Range	0-0.1,...,350	bar	1bar=14.5psi
Overpressure	1.5xFS	bar	
Environmental			
Operating Temperature Range	-20 to +80	°C	-4°F to 176°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	10	Vdc	
Bridge Resistance	2600 to 6000	Ω	
Insulation Resistance	100	MΩ	@100Vdc

Physical Specifications	
Media Compatibility	All media compatible with 316L stainless steel
Housing	316 stainless steel
Diaphragm	316L stainless steel
Seal	welding
Oil Filling	Silicone oil
Electrical Connection	Silicon rubber flexible wire or kovar pin
Net Weight	Approx.80g

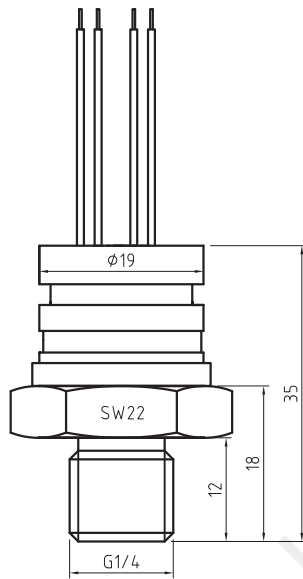
Parameter	Minimum	Typical	Maximum	Units	Notes
Performance					
Zero Output	-2	±1	2	mV	1
Full Scale Output	50	100		mV	1
Non-linearity	±0.1	±0.2	±0.3	%FSO	1, 2
Hysteresis	-0.05	±0.03	0.05	%FSO	1
Repeatability	-0.05	±0.03	0.05	%FSO	1
Temp Coeff - Zero	-1.5	±0.75	1.5	%FSO	3
Temp Coeff - Span	-1.5	±0.75	1.5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

Notes

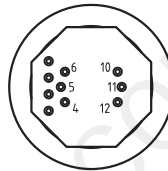
1. All values measured at 25°C(77°F) and at 1.5mA
2. Best fit straight line(BFSL)
3. 0°C to 70°C(32°F to 158°F) with reference to 25°C(77°F)
4. Consult factory for vacuum applications

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

Dimensions (in mm)



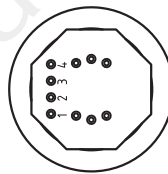
excitation=1.5mA,Electrical connection



Pin	Connection	Wire color
5	+IN	Red
6	- IN	Yellow
4	+OUT	Blue
10	- OUT	Green

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

excitation=10Vdc,Electrical connection



Pin	Connection	Wire color
1	+IN	Red
2	- IN	Yellow
3	+OUT	Blue
4	- OUT	Green

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

Ordering Information

Option1: Model	
NPS40	Piezoresistive OEM Pressure Sensor
Option2: Pressure Range	
N001	-1...0bar 0035 0...3.5bar Cxxx Customized range
N003	-0.35...0bar 0070 0...7bar
N002	-0.2...0bar 0100 0...10bar
0001	0...0.1bar 0200 0...20bar
0002	0...0.2bar 0350 0...35bar
0003	0...0.35bar 0700 0...70bar
0007	0...0.7bar 1000 0...100bar
0010	0...1bar 2000 0...200bar
0020	0...2bar 3500 0...350bar
Option3: Pressure Type	
G	gauge
A	absolute
S	sealed gauge
Option4: Excitation	
I	1.5mA Constant Current Excitation
V	10Vdc 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: Pressure Interface	
G1	G1/4(male) N1 1/4-18NPT(male)
G2	G1/2(male) F1 7/16-20UNF(male)
M1	M12x1 (male) Cx Customized
M2	M20x1.5(male)
Option7: Compensation	
T1	0 to 70°C
NA	No temperature compensation
NPS40	0010 G I F G1 T Examples of Ordering Code: NPS40-0010-G-I-F-G1-T

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