

Model NPC18



Product Overview

The NPC18 is piezoresistive pressure sensor based on ceramic. Be manufactured by thick film technology. The bridge circuit is directly printed at the back of ceramic diaphragm. The other side of the diaphragm can measure pressure media.

NPC18 is temperature compensated and zero correction by using laser trimming resistance technology.

NPC18 pressure sensor is designed for O-ring seal mounting. This is easy for installation.

Applications

- Process control systems
- Refrigeration and HVAC controls
- Hydraulic systems and valve
- Air compressor
- Pressure transmitter

Features

- 2bar to 400bar (1.45psi to 5000psi)
- Gauge type
- Thick film technology
- Mono-block structure
- Calibrated and temperature compensated
- Gas or dilute liquid compatible with ceramic
- Standard configurations include:
18 mm diameter x 6.35 mm long
- Custom configurations and other pressure ranges available. Please consult the factory.

Standard Pressure Range

Nominal pressure	gauge	sealed gauge	absolute
0...2bar	●		
0...5bar	●		
0...10bar	●		
0...16bar	●		
0...20bar	●		
0...25bar	●		
0...30bar	●		
0...40bar	●		
0...50bar	●		
0...100bar	●		
0...250bar	●		
0...400bar	●		

other pressure ranges available. Please consult the factory.

Performance Specifications

Parameter	Value	Units	Notes
General			
Pressure Range	0-2,...,400	bar	1bar=14.5psi
Overpressure	2xFS(P≤250bar) 1.5xFS(P>250bar)	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 Voltage	5 to 25	Vdc	
Bridge Resistance	8 to 12	kΩ	
Insulation Resistance	100	MΩ	@100Vdc

Physical Specifications

Media Compatibility	All media compatible with ceramic		
Housing	Ceramic(96%Al ₂ O ₃)		
Diaphragm	Ceramic(96%Al ₂ O ₃)		
Seal	O-Ring		
Electrical Connection	(F)4-color silicon rubber flexible wire ,(P) Plated leads,(S)Solder-pads		
Net Weight	Approx.4g		

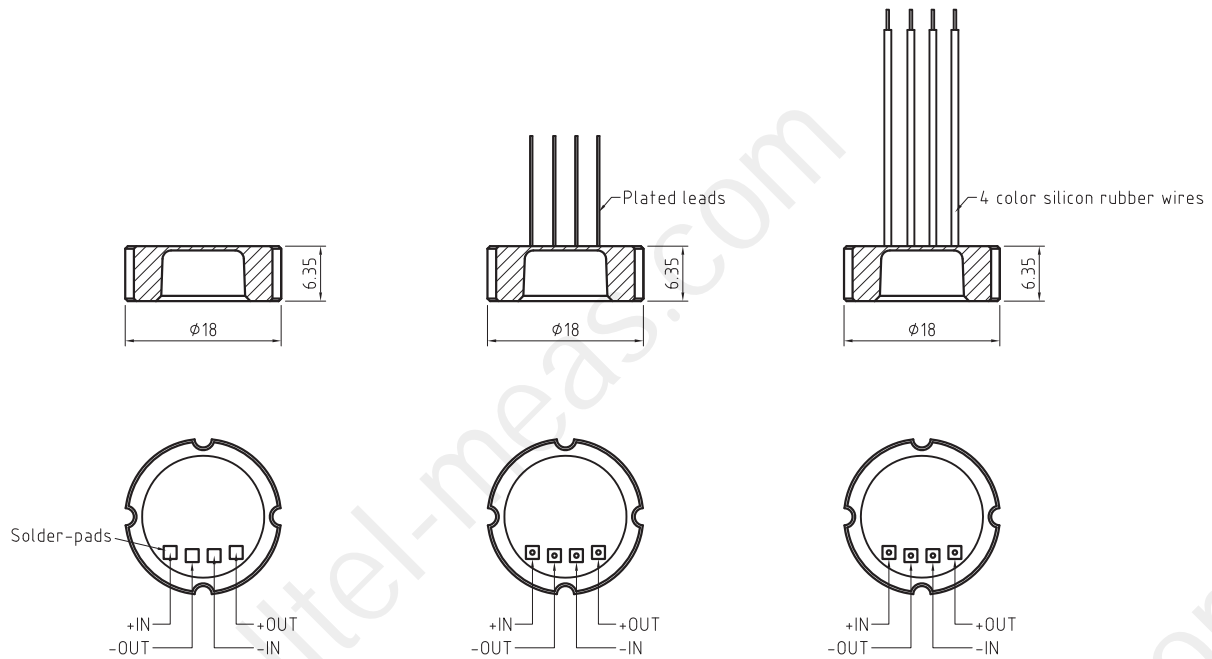
Parameter	Minimum	Typical	Maximum	Units	Notes
Performance					
Zero Output	-2	±1	2	mV	1
Output Sensitivity	2	3		mV/V	1
Non-linearity	±0.1	±0.2	±0.3	%FSO	1, 2
Hysteresis	-0.1	±0.05	0.1	%FSO	1
Repeatability	-0.1	±0.05	0.1	%FSO	1
Temp Coeff - Zero	-0.05	±0.02	0.05	%FSO/°C	3
Temp Coeff - Span	-0.05	±0.02	0.05	%FSO/°C	3
Long-Term Stability		±0.2	±0.3	%FSO/year	1

Notes

1. All values measured at 25°C(77°F) and at 10Vdc
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)



Ordering Information

Option1: Model	
NPC18	Ceramic Pressure Sensor
Option2: Pressure Range	
0020	0...2bar 1000 0...100bar
0050	0...5bar 2500 0...250bar
0100	0...10bar 4000 0...400bar
0160	0...16bar Cxxx Customized range
0200	0...20bar
0250	0...25bar
0300	0...30bar
0400	0...40bar
0500	0...50bar
Option2: Pressure Type	
G	gauge
Option3: Electrical Interface	
F	4 color silicon rubber wires,length=100mm
P	Plated leads
S	Solder-pads
FC	Flat cable
NPC18	0100 G F Examples of Ordering Code: NPC18-0100-G-F