

# GE Sensing

## Features

- Solid state reliability
  - $\pm 0.1\%$  accuracy
  - PCB mountable package
  - DIP package
  - Individual device traceability
- 

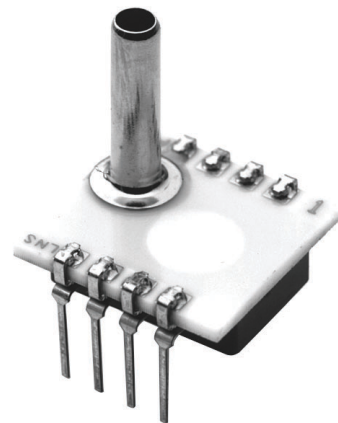
## Applications

- Industrial automation
  - Air flow monitors
  - Process control
  - Medical equipment
  - Underground cable leak detection
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# NPC-410 Series

## NovaSensor Medium Pressure Sensors

NPC-410 Series is a NovaSensor product. NovaSensor has joined other GE high-technology sensing businesses under a new name—GE Industrial, Sensing.



# NPC-410 Specifications

## Description

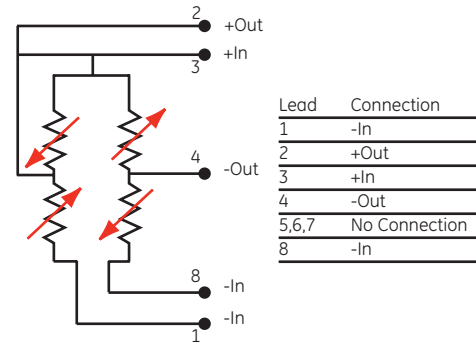
The NPC-410 Series of solid state pressure sensors are designed to provide a cost effective solution for applications that require long-term stability and high volume. Packaged in a dual-in-line configuration, the NPC-410 Series is intended for printed circuit board mounting. Optional pressure port and lead configurations give superior flexibility in low profile applications where pressure connection orientation is critical.

The NPC-410 Series is based on NovaSensor's advanced SenStable® piezoresistive sensing technology. The latest techniques in silicon micromachining have been used to ion implant piezoresistive strain gages into a Wheatstone bridge configuration, which is integrally formed on a micromachined diaphragm. Constant current or constant voltage can be used for sensor excitation. Offset and sensitivity temperature compensation and calibration can be achieved by adding external resistors. Additionally, the NPC-410 series is available in pressure ranges from 0 psi to 5 psi (0 bar to 0.34 bar) through 0 psi to 100 psi (0 bar to 7 bar). Please contact the GE for other pressure ranges.

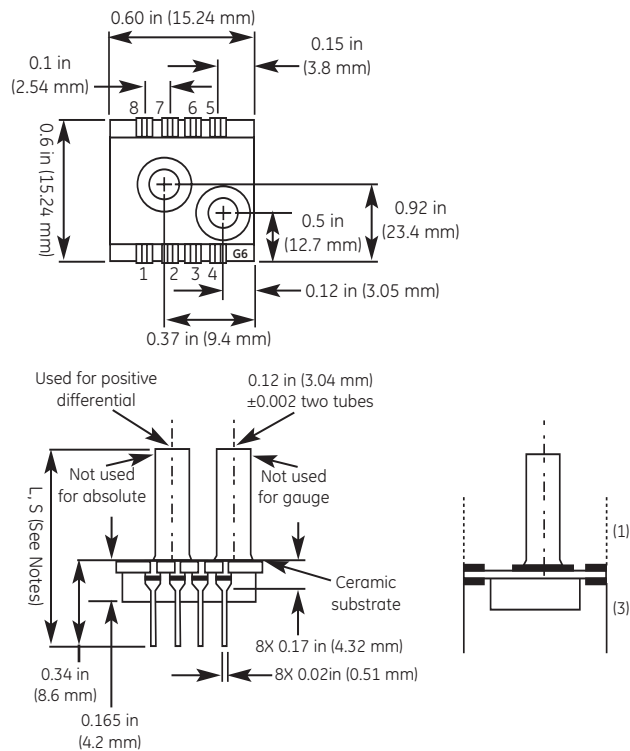
## Pressure Ranges

- Gauge and Differential: 5, 15, 30, 50 and 100 psi (0.34, 1, 2, 3.4 and 7 bar)
- Absolute: 15, 30, 50 and 100 psi (1.03, 2.06, 6.89 bar)

Parameter	Value	Units	Notes
<b>Environmental</b>			
Temperature Range			
Operating <sup>(9)</sup>	-40 to 257	°F	(-40°C to 125°C)
Storage	-67°F to 302	°F	(-55°C to 150°C)
<b>Mechanical</b>			
Weight	0.005	lb	(2.5 g)
Media Compatibility			
Positive differential and gage ports	Compatible with exposed materials		6
Absolute and negative differential ports	Dry gases only		



NPC-410 Series schematic diagram



NPC-410 Series package diagram

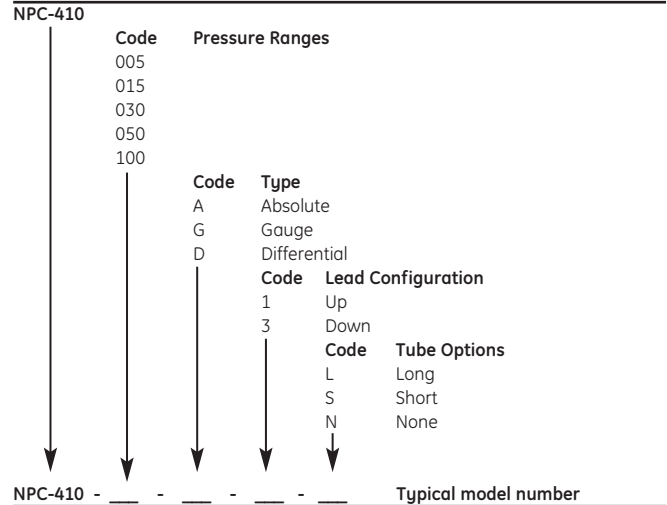
# NPC-410 Specifications

Parameter	Units	Minimum	Type	Maximum	Notes
<b>Performance Parameters<sup>(1)</sup></b>					
Full Scale Output (FSO)	mV	105	125	155	
Zero Pressure Output	mV	-50	0	50	2
Linearity	%FSO	—	—	0.1	3, 7
Pressure Hysteresis	%FSO	—	—	0.1	
Input and Output Impedance	Ω	2500	4000	6000	
Thermal Accuracy-Span	%FSO	—	1.5	—	2,4
Thermal Accuracy-Zero	%FSO	—	0.5	—	2,4
Temperature	%/°C	—	0.3	—	4
<b>Coefficient-Resistance</b>					
Thermal Hysteresis-Zero	%FSO	—	0.1	—	4
Pressure Overload	Rated	—	—	3X	5

- \*1. Ambient temperature = 77°F (25°C), unless otherwise noted.  
Supply current = 1.5 mA.
- External resistors can be added to reduce temperature errors and calibrate the offset and FSO.
  - Best fit straight line.
  - Temperature range 32°F to 140°F (0°C to 60°C), reference to 77°F (25°C).
  - 3X or 200 psi (13.78 bar) maximum, whichever is less.
  - Exposed materials are pyrex, ceramic, silicon, epoxy, RTV and stainless steel.
  - 5 psi (0.34 bar) specifications: Linearity: 0.25 ±%FSO.

## Ordering Information

The code number to be ordered may be specified as follows:



GE  
Sensing



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