

# GE Sensing

## Features

- Solid state, high reliability
- High sensitivity, 200 mV typical FSO with 1.0 mA excitation
- 316 L stainless steel, IsoSensor design
- Linearity 0.1% FSO typical
- Three standard ranges: 0 psi to 500 psi to 0 psi to 5,000 psi (0 bar to 34 bar to 0 bar to 345 bar) available, sealed gage or absolute
- Standard configurations include:
  - 1/2–20 UNF threaded male port with 1.0 in (25.40 mm) flange
  - 0.59 in (15 mm) diameter x 0.87 in (22 mm) long cylinder with o-ring seals
  - 1/4–18 NPT male port with 7/8 in flange
  - 1/8–27 NPT male port with 7/8 in flange

- Thermal accuracy FSO 0.2% typical
- Custom Configurations and Other Pressure Ranges can be accommodated

## Applications

- Process control systems
- Hydraulic systems and valves
- Automobiles and trucks
- Biomedical instruments
- Refrigeration and HVAC controls
- Appliances and consumer electronics
- Ship and marine systems
- Aircraft and avionic systems

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# NPI-15 Series

## NovaSensor Current Driven, Media Isolated, High Pressure Sensors

NPI-15 Series is a NovaSensor product. NovaSensor has joined other GE high-technology sensing businesses under a new name—GE Industrial, Sensing.





# NPI-15 Series Specifications

Parameter	Value	Units	Notes
<b>General</b>			
Pressure Range	3500	kPA	507 psi
	7000	kPA	1015 psi
	35,000	kPA	5,076 psi
Maximum Pressure	2 x		rated pressure
<b>Electrical @ 77°F (25°C) unless otherwise stated</b>			
Input Excitation	1.0	mA	1.5 mA maximum
Insulation Resistance	10 <sup>(8)</sup>	Ω	@ 50 VDC
Input Impedance	4,000	Ω	±20%
Output Impedance	5,000	Ω	±20%
Bridge Impedance	5,000	Ω	±20%
<b>Environmental</b>			
Temperature Range			
Operating <sup>(9)</sup> Compensated	-40 to 257	°F	(-40°C to 125°C)
	32 to 158	°F	(0°C to 70°C)
Vibration	10	gRMS	20 to 2000Hz
Shock	100	g	11 milliseconds
Life (Dynamic Pressure Cycle)	10 x 10 <sup>(6)</sup>	cycles	500/1000 psi (34.47/68.94 bar)
	1 x 10 <sup>(6)</sup>	cycles	5000 psi (344.73 bar)
<b>Mechanical<sup>(1)</sup></b>			
Weight	≈28	g	NPI-15A-XXX
	≈47	g	NPI-15B-XXX
Media Compatibility	All corrosive media compatible with 316 stainless steel		
Case and Diaphragm	316 L stainless steel		
Material			
Recommended O-Ring	Type A: 0.472 in (12 mm) ID x 0.059 in (1.5 mm) wall Type B: 2-013 per ISO 3601/1		
<b>Parameter Units Minimum Typical Maximum Notes</b>			
Performance	3,500, 7,000 & 35,000 kPa	(Note 1 and 8)	
Offset	mV	-2	1 2
Full Scale Output	mV	170	200 230 2
Linearity	%FSO	-0.25	0.1 0.25 3
Hysteresis and Repeatability	%FSO	-0.05	0.01 0.05
Thermal Accuracy of Offset	%FSO	-0.75	0.2 0.75 4
Thermal Accuracy of FSO	%FSO	-0.75	0.2 0.75 4
Thermal Hysteresis	%FSO	-0.2	0.1 0.2 5
Short-Term Stability of Offset	μV/V		5 6
Short-Term Stability of FSO	μV/V		5 6
Long-Term Stability of Offset	%FSO		0.1 7
Long-Term Stability of FSO	%FSO		0.1 7

- Performance with offset, thermal accuracy of offset and thermal accuracy of FSO compensation resistors.
- FSO with 1.0 mA input excitation.
- Linearity by best fit straight line.
- 32°F to 158°F (0°C to 70°C) with reference to 77°F (25°C).
- 32°F to 158°F (0°C to 70°C) by design.
- Normalized offset/ bridge voltage—100 hours, typical value, not tested in production.
- One year, typical value, not tested in production.
- All values measured at 77°F (25°C) and at 1.0 mA constant current, unless otherwise noted.
- Reduced performance outside compensation range.

## Warranty

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## Ordering Information

NPI-15	
<b>Code</b>	<b>Pressure Port Type</b>
A	No port (see note 7)
B	1/2-20 UNF (see note 7)
H	1/4-18 NPT (see note 7)
J	1/8-27 NPT (see note 7)
<b>Code</b>	<b>Pressure Ranges</b>
	(kilo Pascals (kPa); 3rd digit is number of zeros)
352	3500 kPa
702	7000 kPa
353	35,000 kPa
<b>Code</b>	<b>Compensation</b>
A	Absolute
S	Sealed gauge
<b>Code</b>	<b>Current</b>
H	Constant current excitation
NPI-15 - - - - - Typical model number	

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