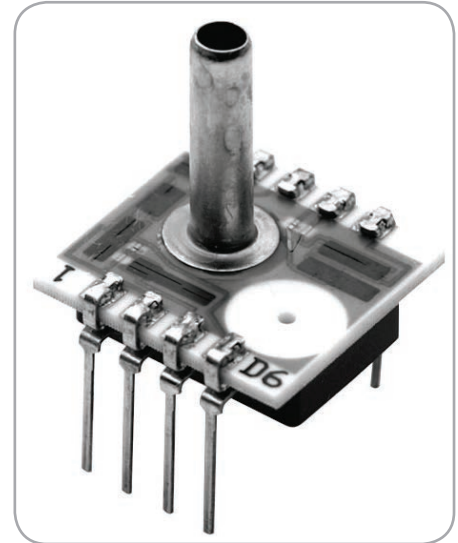


NPC-1210 Series

NovaSensor Medium/Low Pressure Sensors



Features

- High sensitivity
- High accuracy
- Interchangeable
- Temperature compensated 0°C to 60°C (32°F to 140°F)
- PCB mountable package
- DIP package
- Solid-state reliability
- Individual device traceability

Applications

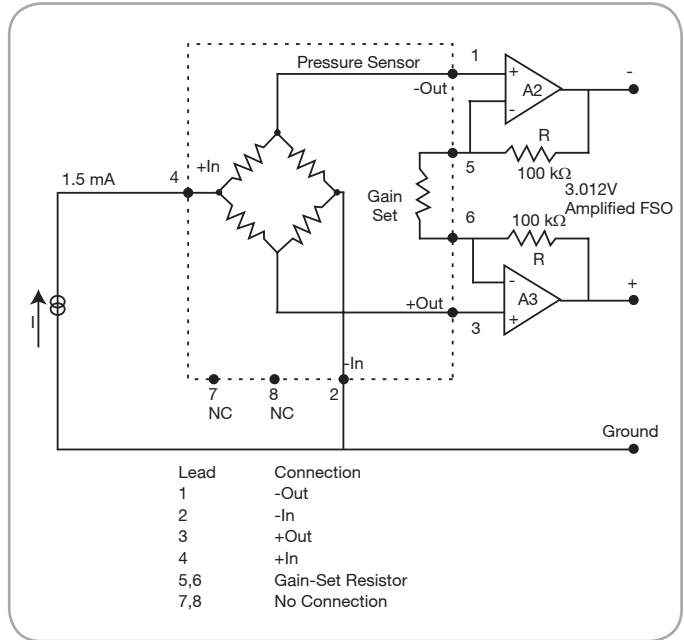
- Industrial automation
- Air flow monitors
- Process control
- Medical equipment
- Underground cable leak detection
- Ventilation
- Respirator monitoring

NPC-1210 Series Specifications

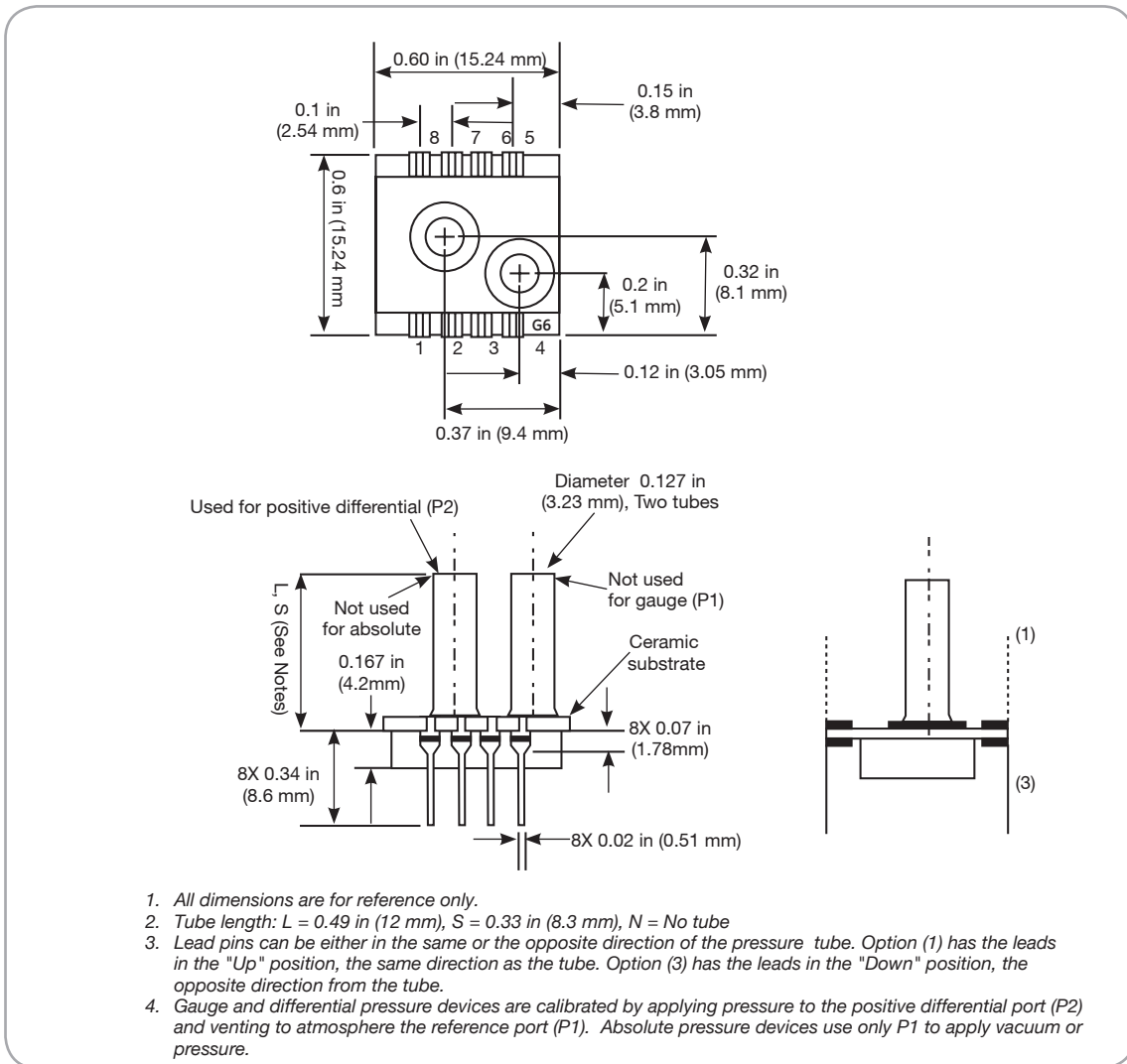
Description

The NPC-1210 series of solid-state pressure sensors are designed to provide a cost effective solution for applications that require calibrated performance over a wide temperature range. Packaged in a dual-in-line configuration, the NPC-1210 Series is intended for printed circuit board mounting. Optional pressure port and lead configurations provide superior flexibility in low profile applications where pressure connection orientation is critical.

The NPC-1210 series is based on NovaSensor's advanced SenStable® piezoresistive sensing technology. Silicon micromachining techniques are used to ion implant piezoresistive strain gages into a Wheatstone bridge configuration. The NPC-1210 Series offers the added advantage of superior temperature performance over the temperature compensated range of 0°C to 60°C (32°F to 140°F). A gain set resistor is included to normalize the FSO for field interchangeability.



NPC-1210 Series Schematic Diagram



NPC-1210 Series Package Diagram

NPC-1210 Series Specifications

Medium Pressure Sensors

Pressure Ranges

- Gauge and differential:
 - 5 psi (34 kPa, 0.34 bar)
 - 15 psi (100 kPa, 1.0 bar)
 - 30 psi (210 kPa, 2.1 bar)
 - 50 psi (340 kPa, 3.4 bar)
 - 100 psi (690 kPa, 6.9 bar)
- Absolute:
 - 15 psi (100 kPa, 1.0 bar)
 - 30 psi (210 kPa, 2.1 bar)
 - 50 psi (340 kPa, 3.4 bar)
 - 100 psi (690 kPa, 6.9 bar)
- For other pressure ranges, please contact NovaSensor.

Parameter	Value	Units	Notes
Environmental			
Temperature Range			
<i>Operating</i>	-40 to 125	°C	(-40° to 257°F)
<i>Compensated</i>	0 to 60	°C	(32°F to 140°F)
<i>Storage</i>	-55 to 150	°C	(-67 to 302 °F)

Mechanical			
Weight	2.5	g	(0.005 lb)
Media Compatibility	Compatible with exposed materials		7
<i>Positive differential and gauge ports</i>	<i>Dry gases only</i>		
<i>Absolute. negative differential ports</i>	<i>Dry gases only</i>		

Parameter	Units	Minimum	Typical	Maximum	Notes
Performance Parameters *					
FS Output (FSO)	mV	75	100	150	2, 3
Zero Pressure Output	mV	-2	—	2	3
Linearity	%FSO	-0.1	—	0.1	4, 8
Pressure Hysteresis	%FSO	-0.1	—	0.1	
Input Impedance	Ω	2500	4000	6000	
Output Impedance	Ω	4000	5000	6000	
Thermal Accuracy–Span	%FSO	-0.5	—	0.5	3, 5, 8
Thermal Accuracy–Zero	%FSO	-0.5	—	0.5	3, 5, 8
Temperature Coefficient–Resistance	%/°C	—	0.2	—	5
Thermal Hysteresis–Zero	%FSO	—	0.1	—	5
Input Excitation	mA	—	1.5	2.0	
Pressure Overload	Rated	—	—	3X	6

Low Pressure Sensors

Pressure Ranges

- Gauge and differential:
 - 10 in H₂O (2.5 kPa, 0.025 bar)
 - 1 psi (6.9 kPa, 0.069 bar)

Parameter	Value	Units	Notes
Environmental			
Temperature Range			
<i>Operating</i>	-40 to 125	°C	(-40° to 257°F)
<i>Compensated</i>	0 to 60	°C	(32°F to 140°F)
<i>Storage</i>	-55 to 150	°C	(-67 to 302 °F)

Mechanical			
Weight	2.5	g	(0.005 lb)
Media Compatibility	Compatible with exposed materials		7
<i>Positive differential and gauge ports</i>	<i>Dry gases only</i>		
<i>Absolute. negative differential ports</i>	<i>Dry gases only</i>		

Parameter	Units	Minimum	Typical	Maximum	Notes
Performance Parameters *					
FSO 10 inH ₂ O	mV	25	50	70	2, 3
FSO 1 psi	mV	50	75	110	2, 3
Zero Pressure Output	mV	-2	—	2	3
Linearity	%FSO	-0.5	—	0.5	4
Pressure Hysteresis	%FSO	-0.1	—	0.1	
Input Impedance	Ω	2500	4000	6000	
Output Impedance	Ω	4000	5000	6000	
Thermal Accuracy–Span	%FSO	-1.0	—	1.0	3, 5
Thermal Accuracy–Zero	%FSO	-1.25	—	1.25	3, 5
Temperature Coefficient–Resistance	%/°C	—	0.22	—	5
Thermal Hysteresis–Zero	%FSO	—	0.1	—	5
Input Excitation	mA	—	1.5	2.0	
Pressure Overload	psi (bar)	5 (0.34)	—	—	6

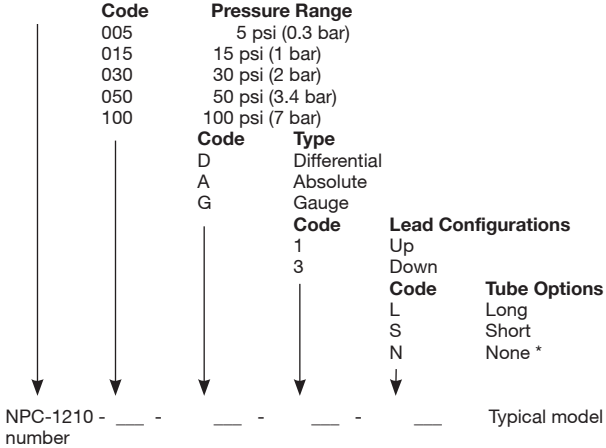
- * 1. Supply current = 1.5 mA and ambient temperature = 77°F (25°C), unless otherwise noted. Gauge and differential pressure devices are calibrated by applying pressure to the positive differential port (P2) and venting to atmosphere the reference port (P1).
2. Output span of unamplified sensor.
3. Compensation resistors are an integral part of the sensor package; no additional external resistors are required. Pins 7 and 8 must be kept open. The NPC-1210 is interchangeable only when used with the gain set resistor shown in the schematic diagram. Maximum gain-set resistor mismatch is 2%.
4. Best fit straight line.
5. Temperature range 32°F to 140°F (0°C to 60°C), reference to 77°F (25°C).
6. 3X or 200 psi (13.78 bar) maximum, whichever is less.
7. Exposed materials are pyrex, ceramic, silicon, epoxy, RTV, and stainless steel.
8. 5 psi (0.34 bar) spec.: Linearity: 0.25 ±%FSO, TC-span: 0.75 ±%FSO, TC-zero: 0.75 ±%FSO. otherwise noted.

NPC-1210 Series Specifications

Ordering Information

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

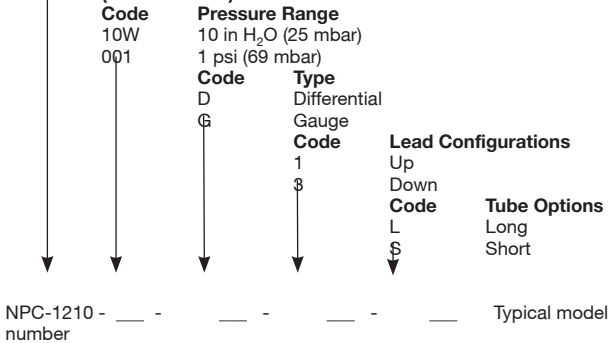
NPC-1210 (Medium Pressure)



* Order NPC-1210-XXXG-XN in place of NPC-1210-XXXD-XN

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

NPC-1210 (Low Pressure)



Warranty

Amphenol Advanced Sensors warrants its products against defects in material and workmanship for 12 months from the date of shipment. Products not subjected to misuse will be repaired or replaced. Amphenol Advanced Sensors reserves the right to make changes without further notice to any products herein. NovaSensor makes no warranty, representation or guarantee regarding the suitability of its products for any particular application, nor does Amphenol Advanced Sensors assume any liability arising out of the application or use of any product or circuit and specifically disclaims and all liability without limitation consequential or incidental damages. The foregoing warranties are exclusive and in lieu of all other warranties, whether written, oral, implied or statutory. No implied statutory warranty of merchantability or fitness for particular purpose shall apply.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Amphenol:

[NPC-1210-001G-1-L](#) [NPC-1210-001G-1-N](#) [NPC-1210-005D-1-L](#) [NPC-1210-005D-1-S](#) [NPC-1210-005G-1-L](#) [NPC-1210-005G-1-N](#) [NPC-1210-005G-1-S](#) [NPC-1210-015G-1-L](#) [NPC-1210-015G-1-N](#) [NPC-1210-015G-1-S](#) [NPC-1210-030A-1-L](#) [NPC-1210-030D-1-L](#) [NPC-1210-030G-1-L](#) [NPC-1210-030G-1-N](#) [NPC-1210-050A-1-L](#) [NPC-1210-050A-1-S](#) [NPC-1210-050D-1-L](#) [NPC-1210-050D-1-S](#) [NPC-1210-050G-1-L](#) [NPC-1210-050G-1-N](#) [NPC-1210-050G-1-S](#) [NPC-1210-100A-1-L](#) [NPC-1210-100A-1-S](#) [NPC-1210-100D-1-L](#) [NPC-1210-100G-1-L](#) [NPC-1210-100G-1-S](#) [NPC-1210-10WD-1-L](#) [NPC-1210-10WD-1-S](#) [NPC-1210-10WG-1-L](#) [NPC-1210-10WG-1-N](#) [NPC-1210-10WG-1-S](#) [NPC-1210-015A-1-N](#) [NPC-1210-015G-3-N](#) [NPC-1210-030A-1-N](#) [NPC-1210-030A-3-N](#) [NPC-1210-030A-3-S](#) [NPC-1210-030D-3-L](#) [NPC-1210-030D-3-S](#) [NPC-1210-030G-3-N](#) [NPC-1210-050A-1-N](#) [NPC-1210-050A-3-L](#) [NPC-1210-050A-3-N](#) [NPC-1210-050A-3-S](#) [NPC-1210-050D-3-S](#) [NPC-1210-100A-1-N](#) [NPC-1210-100A-3-N](#) [NPC-1210-100A-3-S](#) [NPC-1210-100G-1-N](#) [NPC-1210-015A-3N](#)



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.