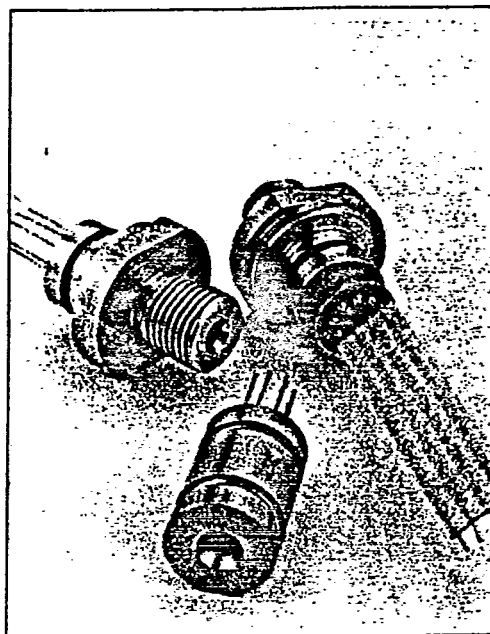


Nova PI Series

FEATURES

- ❑ Solid state, high reliability
- ❑ All media compatible, IsoSensor® design
- ❑ High sensitivity, 200mv FSO with 1.0ma excitation
- ❑ 300 series stainless steel, all wetted surfaces
- ❑ Nonlinearity 0.25%FSO max
- ❑ Thermal errors 1.0%FSO max 0 to 70°C
- ❑ Five standard ranges: 0-500 to 0-10,000 psi available, sealed gage or absolute
- ❑ Smallest sizes available, standard configurations include:
1/2"-20UNF threaded male port with 1.0" flange
0.59" diameter x 0.87" long cylinder with O-Ring seals
- ❑ Modular design: other ports or new OEM package configurations can be accommodated



Actual Size

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

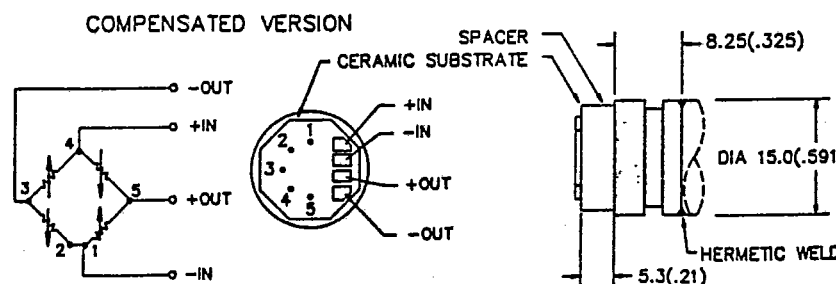
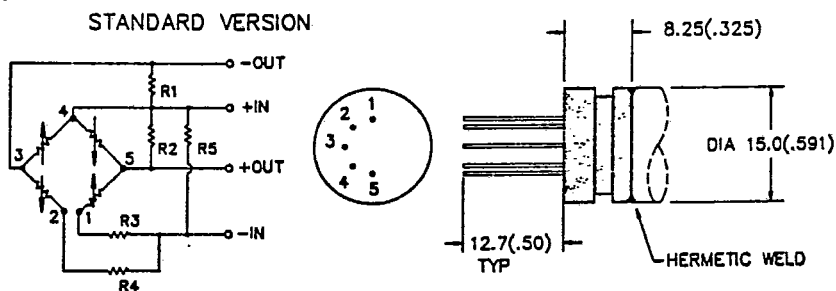
DESCRIPTION

The Nova PI series incorporates new IsoSensor technology, which gives the OEM user the best in price and performance. They can work in hostile environments yet give the outstanding performance in sensitivity, linearity and stability of a silicon sensor. The piezoresistive sensor chip is housed in a fluid-filled cylindrical cavity and isolated from measured media by a stainless steel diaphragm and body.

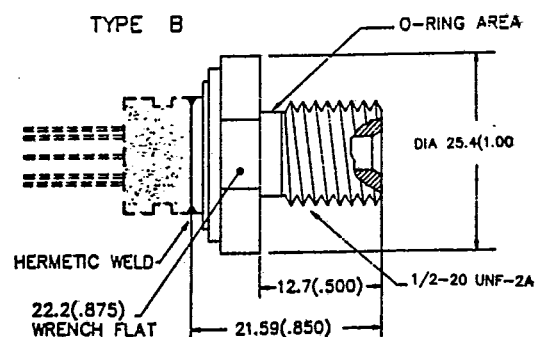
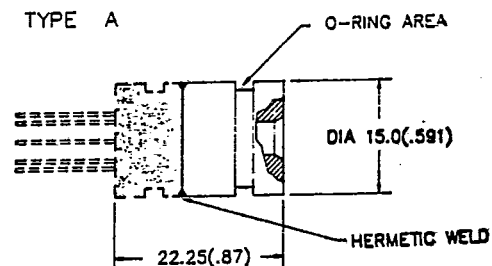
The modular design allows for a variety of pressure port modules which are hermetically welded to the sensor header module. Standard types A and B are shown below.

For compensation of temperature effects, the sensors are available in two versions: standard, with compensation resistor values supplied, or compensated, in which the complete resistor network is supplied on a hybrid ceramic substrate. The IsoSensor design has minimized temperature effects to provide 1.0% maximum error over the 0° to 70°C compensated range.

SENSOR HEADER MODULE



PRESSURE PORT TYPE



ALL DIMENSIONS ARE IN MM(INCHES)
A FLAT FLEX CABLE IS OPTIONAL WITH COMPENSATED UNIT

High Pressure

NOVA PI SERIES

SPECIFICATIONS

T-65-13

GENERAL

Parameter	Abbr.	Value	Units	Notes
Pressure Range*	P	0- 3,500	kPa	0- 500 psi
	P	0- 7,000	kPa	0- 1,000 psi
	P	0-17,000	kPa	0- 2,500 psi
	P	0-35,000	kPa	0- 5,000 psi
	P	0-70,000	kPa	0-10,000 psi

Maximum Pressure Pmax 2 times rated pressure (1.3x at 70,000 kPa)

Media Compatibility: all corrosive media compatible with 316 stainless steel

ELECTRICAL (@ 25°C (77° F) unless otherwise stated)

Input Excitation	I	1.0	mA	1.5mA max.
Insulation Resistance	R _i	100	MΩ	@ 50 Vdc
Bridge Resistance	R _b	5,000	Ω	± 10% typical

ENVIRONMENTAL

Parameter	Abbr.	Value	Units	Notes
Temperature Range				
Operating	T _a	-40 to +125	°C	-40° to +257°F
Compensated	T _c	0 to +70	°C	+32° to +158°F
Vibration				
		10	G	20 to 2000 Hz
Shock				
		100	G	11 milliseconds
Life				
		100 x 10 ⁶	min cycles	

MECHANICAL

Weight	W	<36 max	gr	<2.0 oz.
Case and Diaphragm Material 300 Series stainless steel				
Recommend O-Ring 2-014 for Type A per I.S.O. 3601/1				
2-013 for Type B				

* Other pressure ranges available upon request; please consult factory.

PERFORMANCE **

Parameter	Value	Units	Notes
Offset	± 2	mV	
Thermal Accuracy Offset	± 1.0	%FSO	0 to +70°C (with reference to 25°C)
Thermal Accuracy - Fullscale Output	± 1.0	%FSO	0 to +70°C (with reference to 25°C)
Full Scale Output	200 ± 30	mV	@ 1.0 mA
Nonlinearity	± 0.25	%FSO	best fit straight line
Hysteresis	± 0.05	%FSO	
Repeatability	± 0.05	%FSO	
Thermal Hysteresis	± 0.2	%FSO	0 to +70 (typical)
Long Term Stability - Sensitivity	± 0.2	%FSO	1 year (typical)
Long Term Stability - Offset	± 0.2	%FSO	1 year (typical)

Notes: Performance specifications stated with temperature compensation resistors.

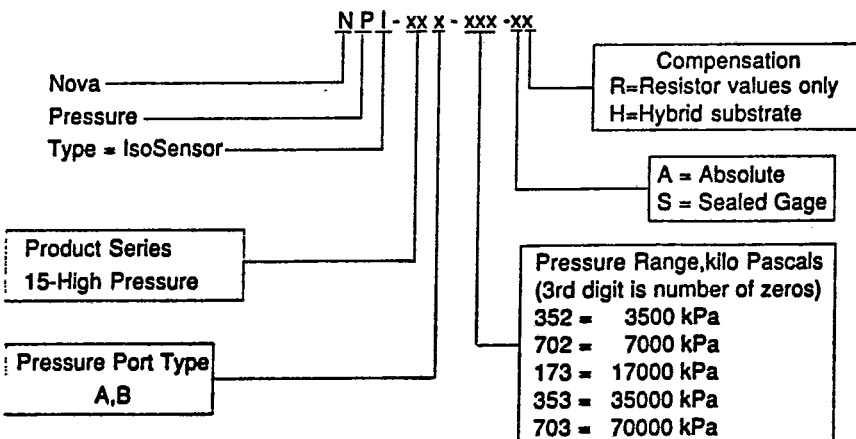
All values are maximum unless otherwise stated.

All values measured in reference to 25°C (77° F) and at 1.0 mA constant current unless otherwise stated.

**Higher performance available upon request.

ORDERING INFORMATION:

REPRESENTED BY:



Ordering Example: Assume a requirement for absolute pressure transducer with type A pressure port with a 0-35,000 kiloPascal range, with hybrid compensation substrate.
Model number would be: NPI-15A-353AH

Sales Terms: Net 30 days FOB Fremont, CA 94539. Prices and specifications are subject to change without notice.

Warranty: NovaSensor warrants its products against defects in material and workmanship for 12 months from date of shipment. Products not subjected to misuse will be repaired or replaced. THE FOREGOING IS IN LIEU OF ANY OTHER EXPRESSED OR IMPLIED WARRANTIES. NovaSensor reserves the right to make changes to any product herein and assumes no liability arising out of the application or use of any product or circuit described or referenced herein.

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