



## 154N Uncompensated

### SPECIFICATIONS

- ◆ **316L SS Pressure Sensor**
- ◆ **19mm Diameter Package**
- ◆ **Absolute and Gage**

The 154N uncompensated is a 19mm small profile, media compatible, piezoresistive silicon pressure sensor packaged in a 316L stainless steel housing. The 154N uncompensated is designed for o-ring mounting and OEM applications requiring compatibility with corrosive media is required.

The sensing package utilizes silicone oil to transfer pressure from the 316L stainless steel diaphragm to the sensing element.

Please refer to the 154N compensated and constant voltage datasheet for more information on different features of the 154N.

## FEATURES

O-Ring Mount  
-40°C to +125°C Operating  
Temperature Range  
Up to ±0.1% Pressure Non Linearity  
Solid State Reliability

## APPLICATIONS

Medical Instruments  
Process Control  
Fresh & Waste Water Measurements  
Partial Vacuum Gas Measurement  
Pressure Transmitters  
Tank Level Systems (RV & Industrial)

## STANDARD RANGES

Range	psia	psig
0 to 1		*
0 to 5	*	*
0 to 15	*	*
0 to 30	*	*
0 to 50	*	*
0 to 100	*	*
0 to 300	*	*
0 to 500	*	*

## PERFORMANCE SPECIFICATIONS

Supply Current: 1.5mA

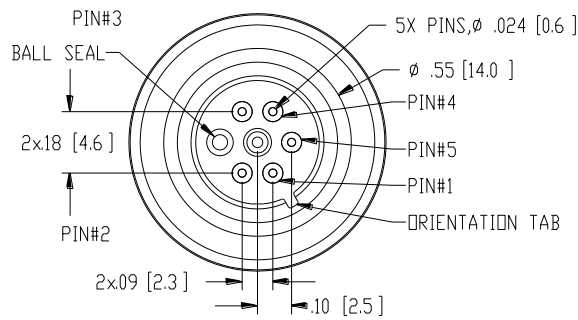
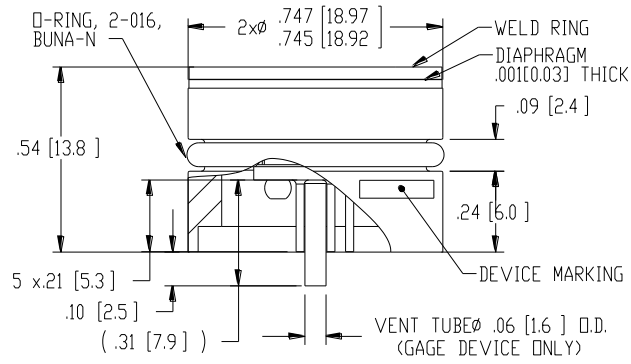
Ambient Temperature: 25°C (unless otherwise specified)

PARAMETERS	001PSI			005PSIA			005PSIG & ≥015PSI			UNITS	NOTES
	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX		
Sensitivity	9		20	12	15	18	12		27	mV/V@Span	
Zero Pressure Output	-4.0		8.0	-10		10	-6.0		8.0	mV/V	1
Pressure Non Linearity	-0.3		0.3	-0.2		0.2	-0.1		0.1	%Span	2
Repeatability		±0.02			±0.02			±0.02		%Span	
Pressure Hysteresis	-0.10		0.10	-0.10		0.10	-0.05		0.05	%Span	3
Bridge Resistance	4.4		6.2	4.0	5.0	6.0	3.8		5.8	KΩ	4
Thermal Hysteresis – Span	-0.25	±0.05	0.25	-0.25	±0.05	0.25	-0.25	±0.05	+0.25	%Span	5
Thermal Hysteresis – Offset	-0.25	±0.05	0.25	-0.25	±0.05	0.25	-0.25	±0.05	+0.25	%Span	5
Temp. Coefficient – Resistance	2.6	3.2	3.5		2.4		1.30	1.51	1.75	K PPM/°C	5
Temp. Coefficient – Span	-3.3	-2.8	-2.3		-2.0		-1.65	-1.25	-1.0	K PPM/°C	5
Temp. Coefficient – Offset		±100		-30		30	-80		80	uV/V/°C	3, 5
Long Term Stability – Span		±0.10			±0.10			±0.10		%Span/year	
Long Term Stability – Offset		±0.25			±0.25			±0.10		%Span/year	3
Supply Current	0.5	1.5	2.0	0.5	1.5	2.0	0.5	1.5	2.0	mA	
Supply Voltage		5	9.5		5	9.5		5	9.5	V	
Output Noise (10Hz to 1KHz)		1.0			1.0			1.0		uV p-p	
Response Time (10% to 90%)		0.1			0.1			0.1		ms	
Insulation Resistance (50Vdc)	50			50			50			MΩ	6
Pressure Overload			10x			3x			3x	Rated	7
Pressure Burst			12x			4x			4x	Rated	8
Operating Temperature	-40		+85	-40		+125	-40		+125	°C	
Storage Temperature	-50		+125	-50		+125	-50		+125	°C	
Media – Pressure Port	Liquids and Gases compatible with 316L Stainless Steel										

## Notes

1. Measured at vacuum for absolute (A) and at ambient for gage (G).
2. Non linearity is ±0.2 max for 5 psiG devices.
3. Values for 5psiG devices are as follows:  
 Pressure Hysteresis: -0.10 min, +0.10 max  
 Temp. Coefficient (Span): -80 min, +80 max  
 Long Term Stability (Offset): ±0.25 typ
4. Bridge resistance is measured with both –E pins shorted together.
5. TC values are first order coefficients to a quadratic fit over a temperature range of -20°C to +85°C (0°C to 50°C for 1psi, 0°C to 70°C for 5psi).
6. Between case and sensing element.
7. The maximum pressure that can be applied without changing the transducer's performance or accuracy.
8. The maximum pressure that can be applied to a transducer without rupture of either the sensing element or transducer.
9. Standard gage units are not recommended for vacuum applications
10. Direct mechanical contact with diaphragm is prohibited. Diaphragm surface must remain free of defects (scratches, punctures, fingerprints, etc.) for device to operate properly. Caution is advised when handling parts with exposed diaphragms. Use protective cap whenever devices are not in use.

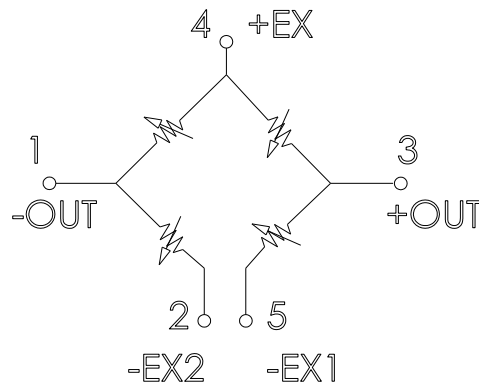
DIMENSIONS



SENSOR PINOUT	
PIN NO.	FUNCTION
1	-OUT
2	-EX2
3	+OUT
4	+EX
5	-EX1

DIMENSIONS ARE INCHES[mm]

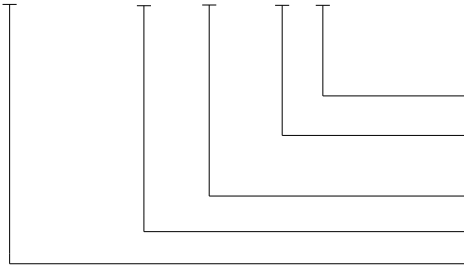
CONNECTIONS



APPLICATION SCHEMATIC

ORDERING INFORMATION

154N - 050 G - U T



Vent (T = Tube, Blank = No Tube)  
 Electrical (U = Open Bridge, Uncomp)  
 Type (A = Absolute, G = Gage)  
 Pressure Range  
 Model



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