



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.

FEATUIRES

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

APPLICATIONS

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

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PERFORMANCE SPECIFICATIONS

Unless otherwise specified, Supply Current: 1.5 mA; Ambient Temperature: 25°C

PARAMETERS	001PSI			005PSIA			005PSIG & ≥015PSI			UNITS	NOTE S
	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX		
Sensitivity	9	-	20	12	15	18	12	-	27	mV/V@FS	
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, 3
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	4.4K	-	6.2K	4.0K	5.0K	6.0K	3.8K	-	5.8K	Ω	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	2.60	3.20	3.50	-	2.40	-	1.30	1.51	1.75	kppm/°C	5
Temp. Coefficient – Span	-3.30	-2.80	-2.30	-	-2.00	-	-1.65	-1.25	-1.00	kppm/°C	5
Temp. Coefficient – Offset	-	±100	-	-80	-	80	-30	-	30	μV/V/°C	3, 5
Long Term Stability – Span	-	±0.1	-	-	±0.1	-	-	±0.1	-	%Span	
Long Term Stability – Offset	-	±0.25	-	-	±0.25	-	-	±0.1	-	%Span	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	-	μV p-p	
Response Time (10% to 90%)	-	0.1	-	--	0.1	-	-	0.1	-	ms	
Insulation Resistance (50Vdc)	50M	-	-	50M	-	-	50M	-	-	Ω	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

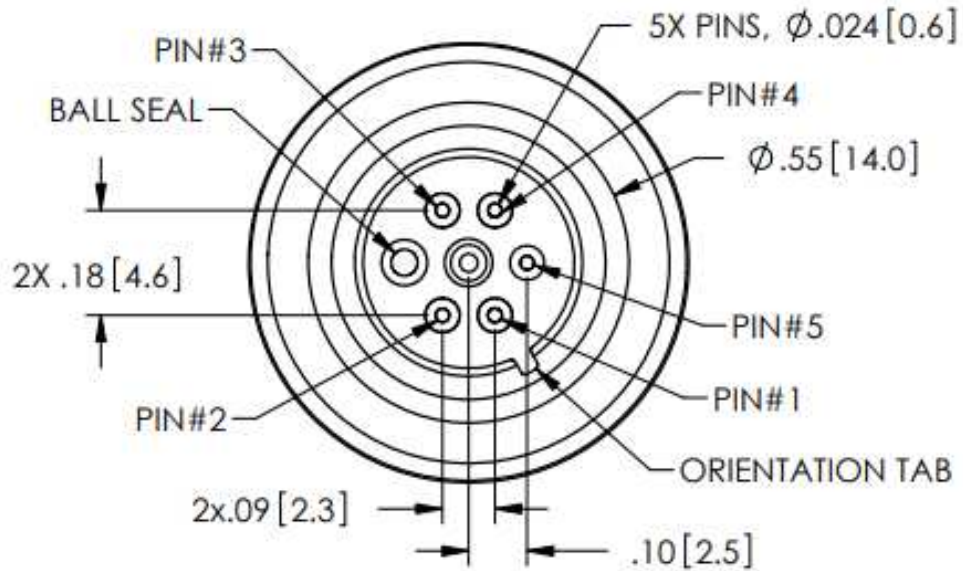
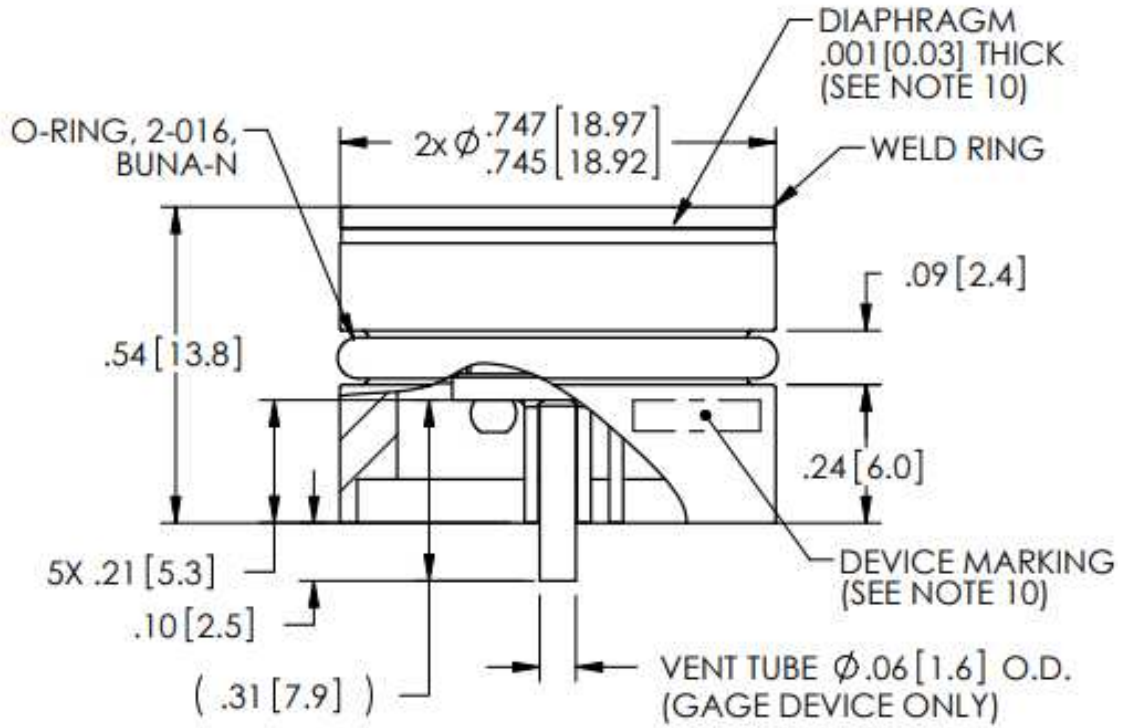
- Measured at vacuum for absolute (A) and at ambient for gage (G).
- Best fit straight line.
- Values for 5PSIG devices are as follows:
Non-linearity: ±0.2% max
Temp coefficient (offset): -80 min, +80 max
Long term stability (offset): ±0.25 TYP
Pressure Hysteresis:-0.10 min,+0.10 max.
- Bridge resistance is measured with both –E pins shorted together.
- TC values are first order coefficients to a quadratic fit over a temperature range of -20 to 85°C (0 to 50°C for 1psi, 0 to 70°C for 5psi).
- Between case and sensing element.
- The maximum pressure that can be applied without changing the transducer's performance or accuracy
- The maximum pressure that can be applied to a transducer without rupture of either the sensing element or transducer.
- Standard gage units are not recommended for vacuum applications.
- Direct mechanical contact with diaphragm is prohibited. Diaphragm surface must remain free of defects (scratches, punctures, dents, 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.
- Testing:
11.1 Units are not tested over temperature or pressure.
11.2 A final electrical test (@ 1.5mA) is performed to verify parts.
11.3 All units are subjected to 100% drift test.
- Marking:
Part marked with Model Number, Pressure Range, Type ,Lot Number, Serial Number and Date Code.
- Shipping and Packaging:
The stainless steel diaphragm is protected by a static dissipative cap (No fitting options only). Each unit will be packaged individually in a plastic vial with anti-static foam.
- Product description:
Model 154N-XXXX-U(T) is an uncompensated micro machined piezoresistive silicon pressure sensor

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DIMENSIONS

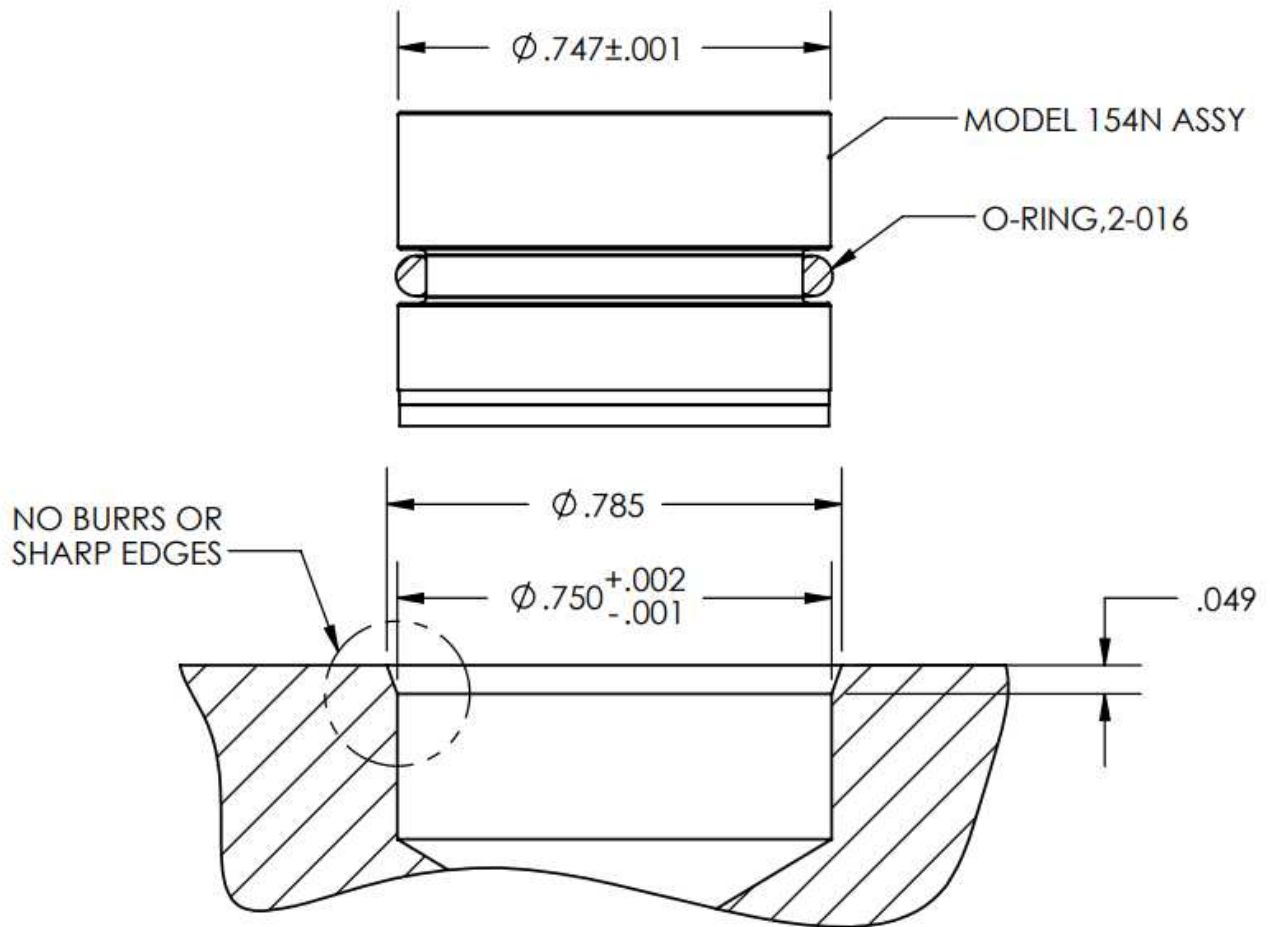
Dimensions are in inches [mm]



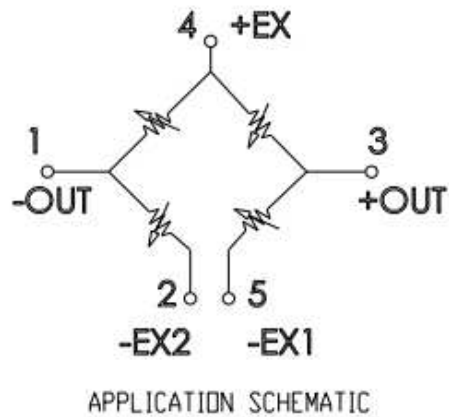
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RECOMMENDED MOUNTING DIMENSIONS



CONDITIONS



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ORDERING INFORMATION

Part Number
154N – 030 G – U T

Pressure Range [psi]	
005	
015	
030	
050	
100	
300	
500	

Pressure Type	
G	Gage
A	Absolute

Vent	
T	Tube
[Blank]	No Tube

Electrical	
U	Open Bridge, Uncomp

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