



154N

Vacuum Uncompensated

SPECIFICATIONS

- 316L SS Pressure Sensor
- 19mm Diameter
- Vacuum Gage

The 154N vacuum uncompensated is a 19mm small profile, media compatible, piezoresistive silicon pressure sensor packaged in a 316L stainless steel housing. The pressure sensor 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
- ±0.2% 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 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	MIN	TYP	MAX	UNITS	NOTES
Sensitivity	12		27	mV/V @Span	
Zero Pressure Output	-6.0		8.0	mV/V	1
Pressure Non Linearity	-0.2		0.2	%Span	2
Pressure Hysteresis	-0.05		0.05	%Span	
Repeatability		±0.02		%Span	
Bridge Resistance	3.8		5.8	kΩ	3
Thermal Hysteresis – Span	-0.25	±0.05	0.25	%Span	4
Thermal Hysteresis – Offset	-0.25	±0.05	0.25	%Span	4
Temperature Coefficient – Resistance	1.30	1.51	1.75	kPPM/°C	4
Temperature Coefficient – Span	-1.45	-1.25	-1.0	kPPM/°C	4
Temperature Coefficient – Offset	-30		30	μV/V/°C	4
Long Term Stability – Span		±0.10		%Span/Year	
Long Term Stability – Offset		±0.10		%Span/Year	
Supply Current	0.5	1.5	2.0	mA	
Supply Voltage		5	9.5	V	
Output Noise (10Hz to 1kHz)		1.0		uV p-p	
Response Time (10% to 90%)		0.1		ms	
Insulation Resistance (50Vdc)	50			MΩ	5
Pressure Overload			3X	Rated	6
Pressure Burst			4X	Rated	7
Operating Temperature	-40		+125	°C	
Storage Temperature	-50		+125	°C	
Media – Pressure Port	Liquids and Gases compatible with 316/316L Stainless Steel				

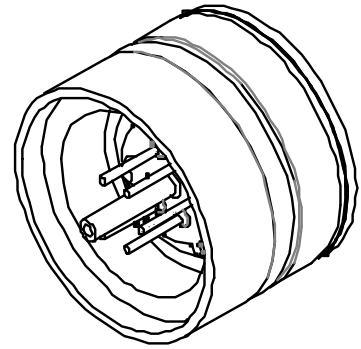
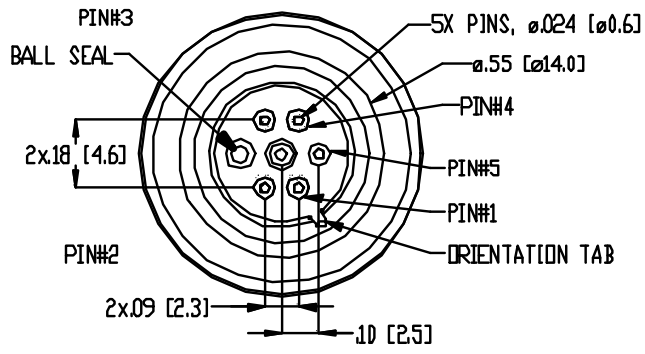
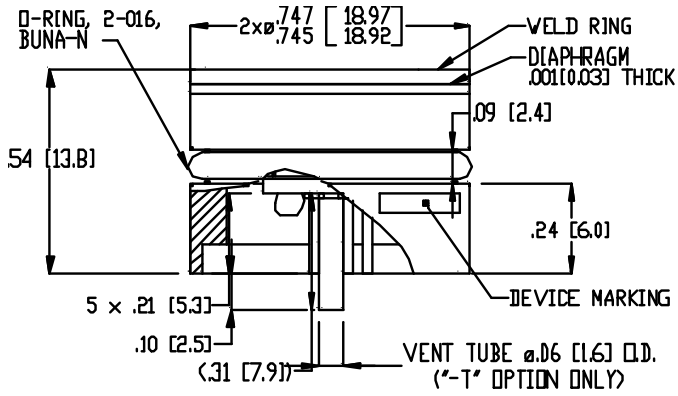
Notes

1. Measured at ambient.
2. Best fit straight line.
3. Bridge resistance is measured with both –E pins shorted together.
4. TC values are first order coefficients to a quadratic fit over a temperature range of -20 to +85°C.
5. Between case and sensing element.
6. The maximum pressure that can be applied without changing the transducer's performance or accuracy.
7. The maximum pressure that can be applied to a transducer without rupture of either the sensing element or transducer.

Additional Notes

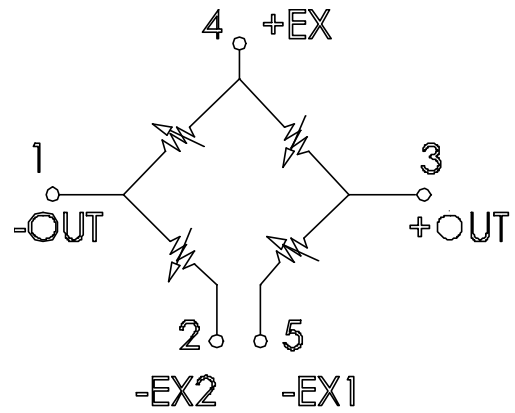
8. Testing:
 - 8.1 Units are not tested over temperature or pressure
 - 8.2 A final electrical test (@ 1.5mA) is performed to verify parts are electrically alive.
 - 8.3 All units are subjected to 100% drift test.

DIMENSIONS



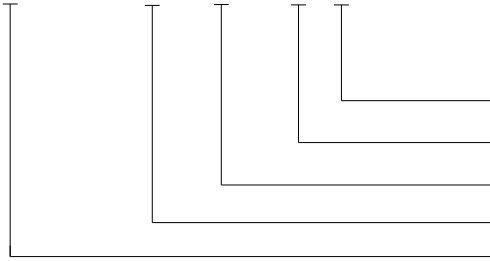
SENSOR PINDOUT	
PIN NO.	FUNCTION
1	-OUT
2	-EX2
3	+OUT
4	+EX
5	-EX1

CONNECTIONS



ORDERING INFORMATION

154N - 050 V - U T



Vent (T = Tube, Blank = No Tube)
 Electrical (U = Open Bridge, Uncompensated)
 Type (V = Vacuum Gage)
 Pressure Range
 Model

NORTH AMERICA

Measurement Specialties, Inc.,
 a TE Connectivity Company
 45738 Northport Loop West
 Fremont, CA 94538
 Tel: 1-800-767-1888
 Fax: 1-510-498-1578
 Sales: pfg.cs.amer@meas-spec.com

EUROPE

Measurement Specialties (Europe), Ltd.,
 a TE Connectivity Company
 26 Rue des Dames
 78340 Les Clayes-sous-Bois, France
 Tel: +33 (0) 130 79 33 00
 Fax: +33 (0) 134 81 03 59
 Sales: pfg.cs.emea@meas-spec.com

ASIA

Measurement Specialties (China), Ltd.,
 a TE Connectivity Company
 No. 26 Langshan Road
 Shenzhen High-Tech Park (North)
 Nanshan District, Shenzhen 518057
 China
 Tel: +86 755 3330 5088
 Fax: +86 755 3330 5099
 Sales: pfg.cs.asia@meas-spec.com

TE.com/sensorsolutions

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