



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





## 154N Compensated

### SPECIFICATIONS

- 316L SS Pressure Sensor
- 19mm Diameter Package
- 0 - 100mV Output
- Absolute and Gage
- Temperature Compensated

### FEATURES

- O-Ring Mount
- -40°C to +125°C Operating Temperature Range
- Up to  $\pm 0.1\%$  Pressure Non-Linearity
- 1.0% Interchangeable Span (provided by gain set resistor)
- Solid State Reliability

### APPLICATIONS

- Medical Instruments
- Process Control
- Fresh & Waste Water Measurements
- Refrigeration/Compressors
- Pressure Transmitters
- Hydraulic Controls

### 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	•	•

The 154N compensated is a 19 mm small profile, media compatible, piezoresistive silicon pressure sensor packaged in a 316L stainless steel housing. The 154N compensated is designed for O-ring mounting and OEM applications where 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. A ceramic substrate is attached to the package that contains laser-trimmed resistors for temperature compensation and offset correction. An additional laser-trimmed resistor is included which can be used to adjust an external differential amplifier and provide span interchangeability to within  $\pm 1\%$ .

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

## PERFORMANCE SPECIFICATIONS

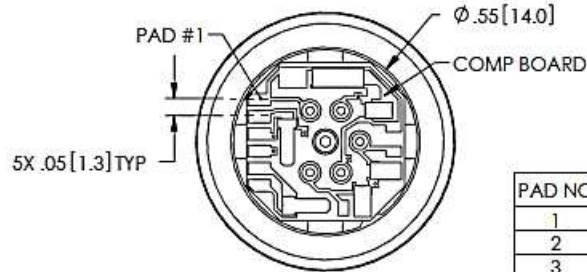
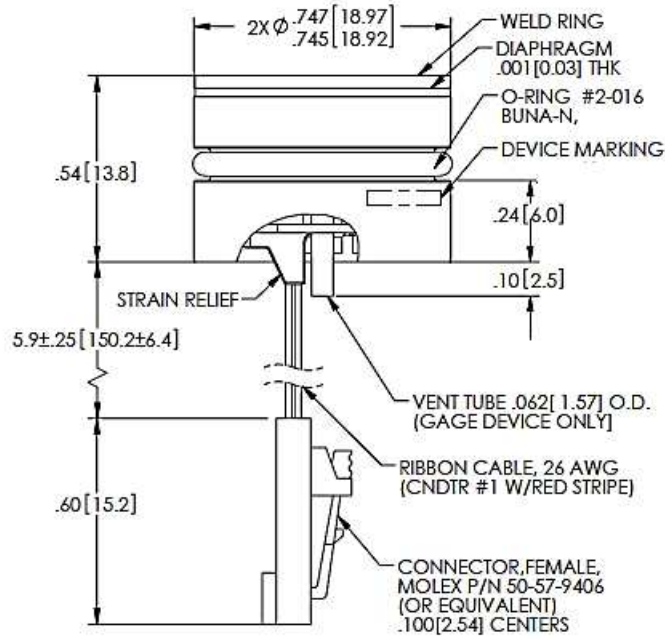
Unless otherwise specified: Supply Current: 1.5mA, Ambient Temperature: 25°C

PARAMETERS	≤005PSI			≥015PSI			UNITS	NOTES
	MIN	TYP	MAX	MIN	TYP	MAX		
Span	50	100	150	75	100	150	mV	1
Zero Pressure Output	-2.0	0	2.0	-1.0	0	1.0	mV	2
Pressure Non Linearity	1psi: -0.30 to 0.30 5psi: -0.20 to 0.20			-0.10		0.10	%Span	3
Pressure Hysteresis	-0.10	±0.02	0.10	-0.05	±0.02	0.05	%Span	
Repeatability	±0.02			±0.02			%Span	
Input Resistance	2.0	3.5	6.5	2.0	3.5	5.8	KΩ	
Output Resistance	4.0		7.0	4.0		6.0	KΩ	
Temperature Error – Span	-1.0		1.0	-0.75		0.75	%Span	4
Temperature Error – Offset	-1.0		1.0	15psi: -0.75 to 0.75 >15psi: -0.50 to 0.50			%Span	4
Thermal Hysteresis – Span	-0.25	±0.05	0.25	-0.25	±0.05	0.25	%Span	4
Thermal Hysteresis – Offset	-0.25	±0.05	0.25	-0.25	±0.05	0.25	%Span	4
Long Term Stability – Span		±0.10			±0.10		%Span/Year	
Long Term Stability – Offset		±0.25			±0.10		%Span/Year	
Supply Current	0.5	1.5	2.0	0.5	1.5	2.0	mA	5
Output Load Resistance	5			5			MΩ	6
Insulation Resistance (50V <sub>DC</sub> )	50			50			MΩ	7
Output Noise (10Hz to 1KHz)		1.0			1.0		μV p-p	
Response Time (10% to 90%)		0.1			0.1		ms	
Pressure Overload	1psi: 10X max 5psi: 3X max					3X	Rated	
Pressure Burst	1psi: 12X max 5psi: 4X max					4X	Rated	8
Compensated Temperature	1psi: 0 to 50 5psi: 0 to 70			-20		+85	°C	
Operating Temperature	-20		+70	-40		+125	°C	9
Storage Temperature	-50		+125	-50		+125	°C	9
Media – Pressure Port	Liquids and Gases compatible with 316/316L Stainless Steel							
Media – Reference Port	Compatible with Silicon, Pyrex, Gold, Fluorosilicone Rubber, and 316/316L Stainless Steel							

### Notes

- For amplified output circuits, 3.012V ±1% interchangeability with gain set resistor. See application schematic.
- Measured at vacuum for absolute (A), ambient for gage (G).
- Best fit straight line.
- Over the compensated temperature range with respect to 25°C.
- Guarantees output/input ratiometricity.
- Load resistance to reduce measurement errors due to output loading.
- Between case and sensing element.
- The maximum pressure that can be applied to a transducer without rupture of either the sensing element or transducer.
- Maximum temperature range for product with standard cable and connector is -20°C to +105°C.
- Standard gage units are not recommended for vacuum applications. For vacuum applications below 1/2 atmosphere, consult factory.
- Device Marking:  
Each part shall be identified with Model Number, Pressure Range, Type, Lot Number, Serial Number and Date Code.
- Shipping/Packaging:  
The stainless steel diaphragm is protected by a plastic cap. Each unit will be packaged individually in a plastic vial with anti-static foam.

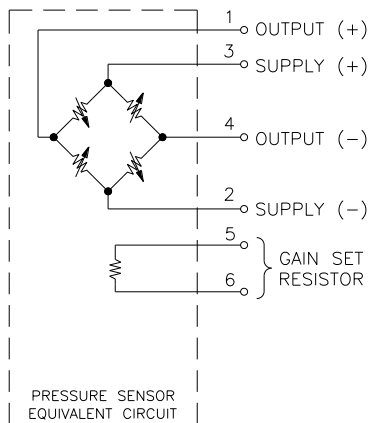
## DIMENSIONS



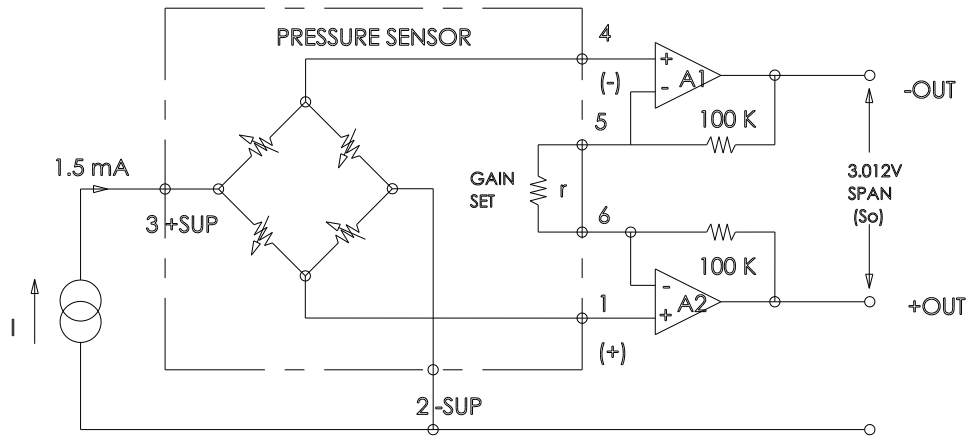
VIEW SHOWN W/O CABLE AND CONNECTOR FOR CLARITY

PAD NO	FUNCTION
1	+OUT
2	-EX
3	+EX
4	-OUT
5	GAIN
6	

## CONNECTIONS



## APPLICATION SCHEMATIC



## ORDERING INFORMATION

154N - 030 A - P I

Pressure Range [psi]	
001	(Gage Only)
005	
015	
030	
050	
100	
300	
500	

Pressure Type	
G	Gage
A	Absolute

Vent	
T	Tube
[Blank]	No Tube

Electrical	
P	Solder Pads
R	Ribbon cable
C	Cable w/ Connector

### NORTH AMERICA

Measurement Specialties, Inc.,  
a TE Connectivity Company  
Tel: +1 800-522-6752  
Email: [customercare.frmt@te.com](mailto:customercare.frmt@te.com)

### EUROPE

Measurement Specialties (Europe), Ltd.,  
a TE Connectivity Company  
Tel: +31 73 624 6999  
Email: [customercare.lcsb@te.com](mailto:customercare.lcsb@te.com)

### ASIA

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
Tel: +86 0400-820-6015  
Email: [customercare.shzn@te.com](mailto:customercare.shzn@te.com)

### [TE.com/sensorsolutions](http://TE.com/sensorsolutions)

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2015 TE Connectivity Ltd. family of companies All Rights Reserved.