



82 Compensated

SPECIFICATIONS

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

The 82 compensated is a 19 mm small profile, media compatible, piezoresistive silicon pressure sensor packaged in a 316L stainless steel housing. The 82 compensated can be configured for o-ring mounting or threaded process fittings and is designed for 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 82 uncompensated and constant voltage datasheets for more information on different features of the 82.

FEATURES

- ◆ O-Ring Mount/Threaded Process Fittings
- ◆ -40°C to +125°C Operating Temperature Range
- ◆ ±0.2% Pressure Non Linearity
- ◆ 1.0% Interchangeable Span (provided by gain set resistor)
- ◆ 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)

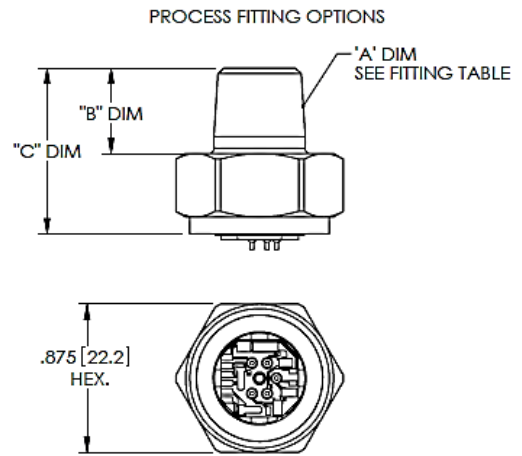
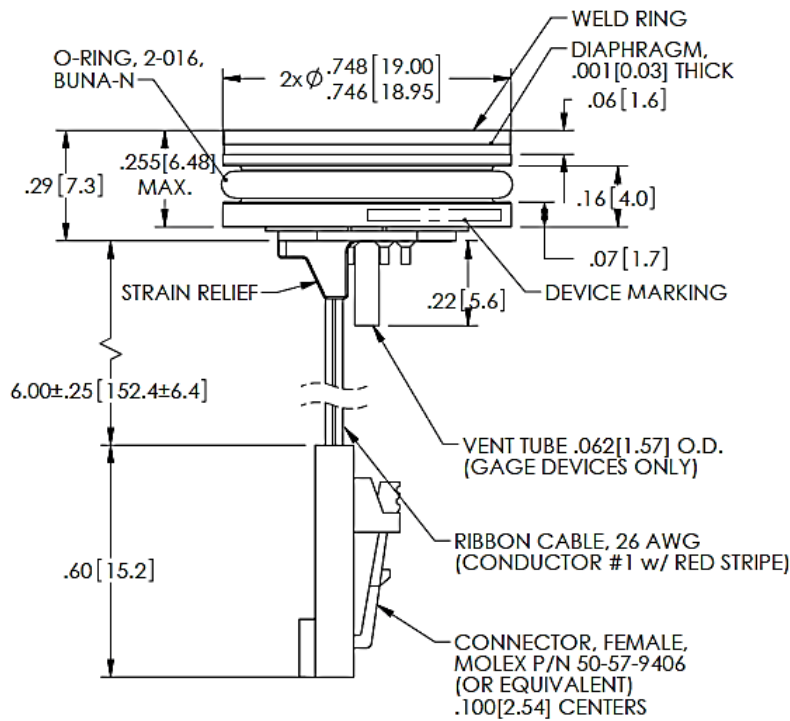
PARAMETERS	001PSI			005PSI			≥015PSI			UNITS	NOTES
	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX		
Span	50	100	150	50	100	150	75	100	150	mV	1
Zero Pressure Output	-2	0	2	-2	0	2	-1	0	1	mV	
Pressure Non Linearity	-0.3		0.3	-0.2		+0.2	-0.1		0.1	%Span	2
Pressure Hysteresis	-0.10	±0.02	0.10	-0.10	±0.02	0.10	-0.05	±0.02	0.05	%Span	
Repeatability		±0.02			±0.02			±0.02		%Span	
Input Resistance	2.5	5.0	6.5	2.5	5.0	6.5	3.8		5.8	KΩ	
Output Resistance	4.0		7.0	4.0		7.0	4.0		6.0	KΩ	
Thermal Hysteresis – Span	-0.25	±0.05	0.25	-0.25	±0.05	0.25	-0.25	±0.05	+0.25	%Span	3
Thermal Hysteresis – Offset	-0.25	±0.05	0.25	-0.25	±0.05	0.25	-0.25	±0.05	+0.25	%Span	3
Temperature Error – Span	-1.0		1.0	-1.0		1.0	-0.75		0.75	%Span	3
Temperature Error – Offset	-1.0		1.0	-1.0		1.0	-0.5		0.5	%Span	3, 9
Long Term Stability – Span		±0.10			±0.10			±0.10		%Span	4
Long Term Stability – Offset		±0.25			±0.25			±0.10		%Span	4
Supply Current	0.5	1.5	2.0	0.5	1.5	2.0	0.5	1.5	2.0	mA	
Insulation Resistance (50Vdc)	50			50			50			MΩ	5
Output Noise (10Hz to 1KHz)		1			1			1		uV p-p	
Response Time (10% to 90%)		0.1			0.1			0.1		ms	
Pressure Overload			10x			3x			3x	Rated	6
Pressure Burst			12x			4x			4x	Rated	
Operating Temperature	-20		+70	-20		+70	-40		+125	°C	
Compensated Temperature	0		+50	0		+70	-20		+85	°C	
Storage Temperature	-50		+125	-50		+125	-50		+125	°C	7
Media – Pressure Port	Liquids and Gases compatible with 316L Stainless Steel and Buna-N										8
Media – Reference Port	Compatible with Silicon, Pyrex, Gold, Fluorosilicone RTV and 316L Stainless Steel										

Notes

1. Ratiometric to supply current.
2. Best fit straight line.
3. Maximum temperature error within the compensated temperature range with respect to 25°C.
4. Long term stability over a one year period with constant current and temperature.
5. Minimum resistance between case and pins.
6. 10 psi maximum for 1 psi devices.
7. Maximum temperature range for product with standard cable and connector is -20°C to +105°C.
8. Gage units not recommended for high vacuum applications. For high vacuum applications consult factory.
9. Temperature Error – Offset for 15psi is -0.75 to 0.75 and >15psi is -0.5 to 0.5.

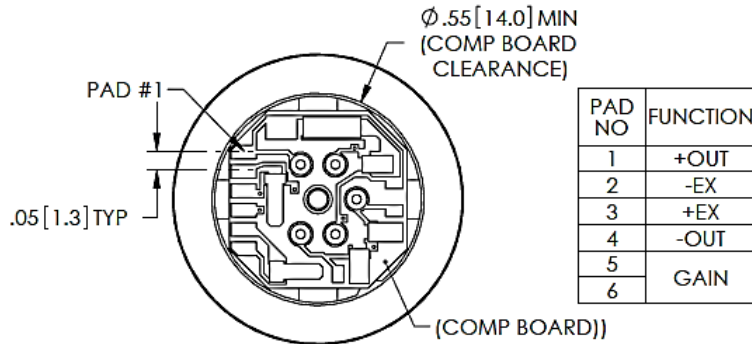
DIMENSIONS

Dimensions are in inches [mm]

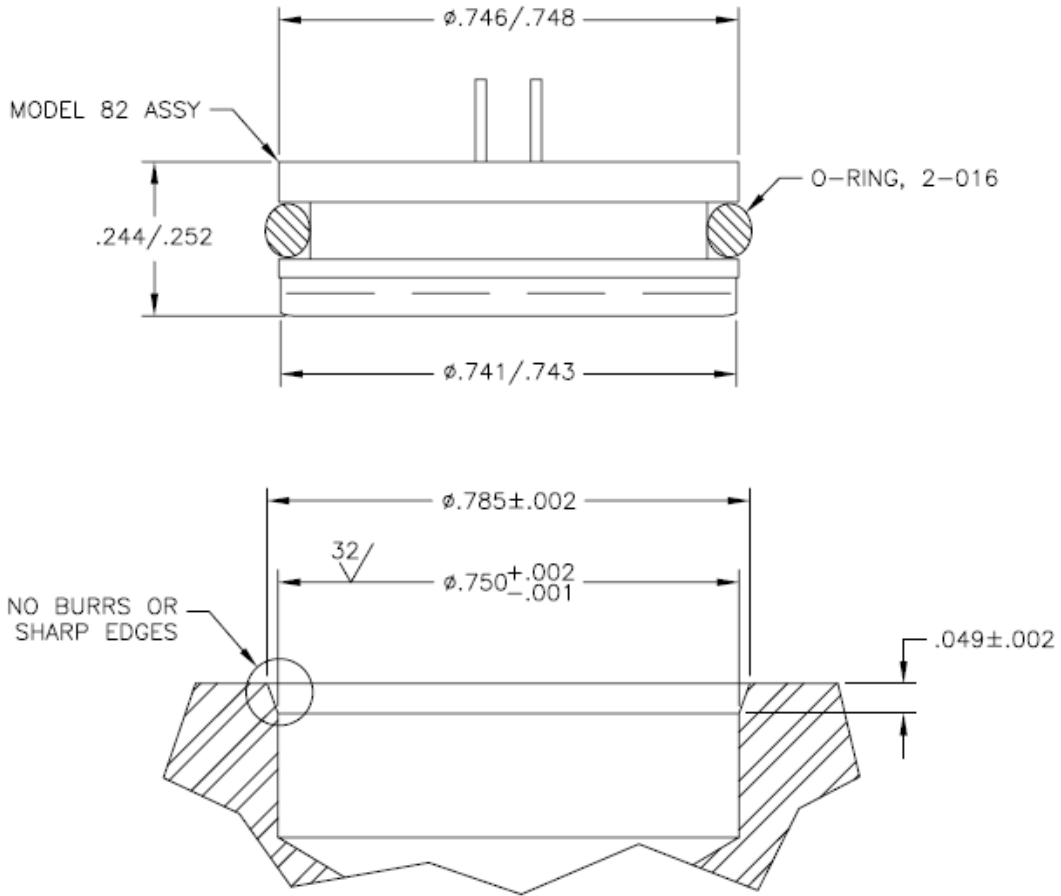


FITTING TABLE				
FITTING TYPE	MEMS P/N	'A' DIM	'B' DIM	'C' DIM
1	IC-7152	1/4-18 NPT	.50 [12.7]	.98 [24.9]
2	IC-D00510	1/8-27 NPT	.47 [11.9]	.95 [24.1]
3	IC-D00511	7/16-20 UNF	.33 [8.4]	.80 [20.3]
9	IC-D00512	1/4-19 BSP	.45 [11.4]	.93 [23.3]

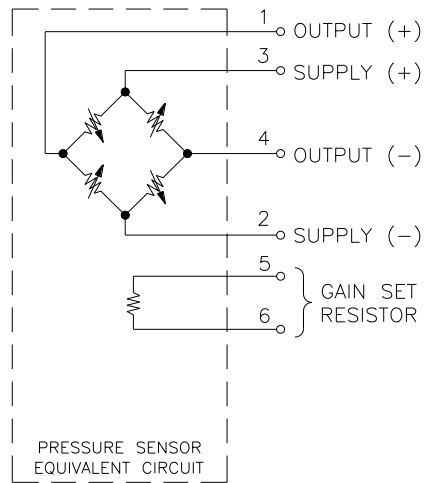
NOTE: FITTING TYPE '1' ASSEMBLY SHOWN
ALL DIMS ARE FOR REFERENCE.



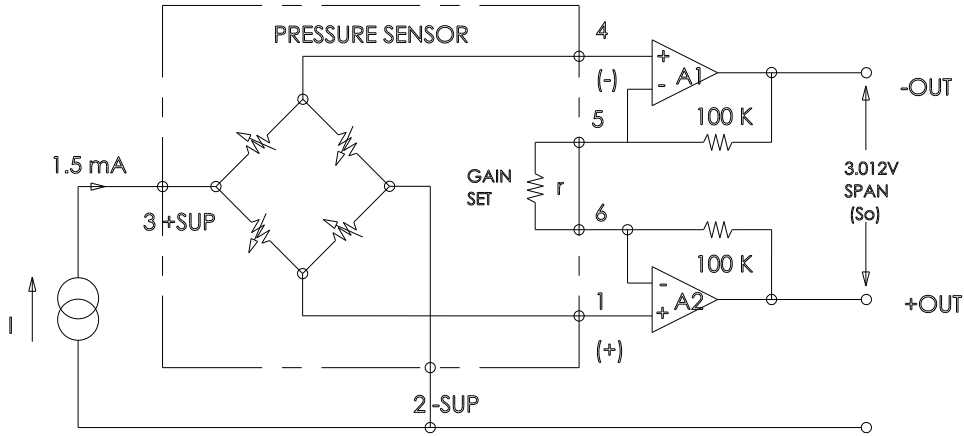
VIEW SHOWN W/O CABLE AND CONNECTOR FOR CLARITY



CONNECTIONS



APPLICATION SCHEMATIC



ORDERING INFORMATION

82 - 030 A - 3 B 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

Fitting Type	
[Blank]	No Fitting, Weldable
3	7/16-20 UNF
1	1/4-18 NPT
2	1/8-27 NPT
9	1/4-19 BSP

Refer to Fitting Table for more information

NORTH AMERICA

Measurement Specialties, Inc.,
 a TE Connectivity Company
 Tel: 800-522-6752
 Email: customercare.frmt@te.com

EUROPE

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

ASIA

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

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.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.