

# 19C SERIES

## 0 TO 15 psi TO 500 psi PRESSURE SENSORS

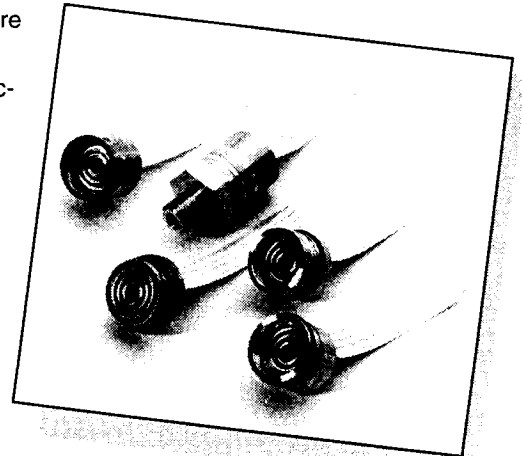
**Stainless Steel Isolated, Temperature Compensated,  
Pressure Sensors**

### General Description

These stainless steel 19C Series devices were developed for pressure applications that involve measurement of hostile media in harsh environments. These sensors will accommodate any media that will not adversely affect 316 L stainless steel.

These 19C sensors are calibrated and temperature compensated when used with a constant voltage source. They feature a variety of pressure connections to allow use in a wide range of OEM equipment.

The 19C Series devices are rugged and reliable transducers for use in a wide variety of pressure sensing applications where corrosive liquids or gases are monitored. Contact your local SenSym representative or the SenSym factory for additional details.



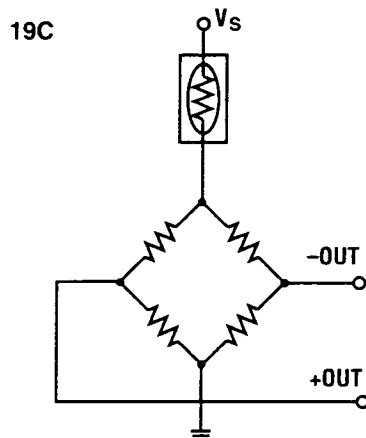
### Features

- ▲ **Low Cost**
- ▲ **Calibrated and Temperature Compensated (C version)**
- ▲ **Rugged Stainless Steel Isolated Package**
- ▲ **Small Size**
- ▲ **Absolute & Gage Pressure**
- ▲ **Reliable Semiconductor Technology**

### Applications

- ▲ **Industrial Automation and Flow Control**
- ▲ **Process Control Systems**
- ▲ **Pressure Calibrators**
- ▲ **Industrial Sprayers**

### Equivalent Circuit



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## Pressure Sensor Characteristics (all devices)

### Environmental Specifications

Temperature Ranges: Compensated 0°C to 70°C  
 Operating -40°C to +125°C  
 Shock: 100G for 11msec  
 Insulation Resistance: 100MΩ at 50 V<sub>dc</sub>  
 Vibration: 10G at 20–2000Hz

### Supply Voltage

Supply Voltage V<sub>S</sub> = +15 V<sub>dc</sub> maximum

### Pressure Range Specifications

SenSym Part No.*	Pressure Range	Proof Pressure <sup>(7)</sup>	Burst Pressure <sup>(7)</sup>
19C005 (G) (1...8)	0–5 psi	20 psi	75 psi
19C015 (A,G) (1...8)	0–15 psi	45 psi	75 psi
19C030 (A,G) (1...8)	0–30 psi	90 psi	150 psi
19C050 (A,G) (1...8)	0–50 psi	150 psi	750 psi
19C100 (A,G) (1...8)	0–100 psi	300 psi	850 psi
19C200 (A,G) (1...8)	0–200 psi	600 psi	1000 psi
19C300 (A,G) (1...8)	0–300 psi	600 psi	1000 psi
19C500 (A,G) (1...8)	0–500 psi	850 psi	1000 psi
19C1000 (A) (1...8)	0–1000 psi	1500 psi	2000 psi

\* Note: Parts are available in Absolute and Gage pressure (A=Absolute, G=Gage) and also in various Cell and Male pressure interfaces ( 1 through 8).

### Performance Characteristics <sup>(1)</sup>

Characteristic	Min	Typical	Max	Units
Zero pressure offset <sup>(8)</sup>	-1	0	+1	mV
Full scale span <sup>(2) (8)</sup>	99	100	101	mV
Combined linearity & hysteresis <sup>(3)</sup>	—	±0.1	±0.3	%FSS
Temp. effect on span <sup>(4) (8)</sup>	—	±0.2	±1.0	%FSS
Temp. effect on offset <sup>(4) (8)</sup>	—	±0.2	±1.0	%FSS
Thermal hysteresis (0 to 50 °C)	—	±0.2	—	%FSS
Long term stability of offset & Span <sup>(5)</sup>	—	±0.1	—	%FSS
Response time (10% to 90%) <sup>(6)</sup>	—	0.1	—	ms
Input impedance	—	4.5	—	kΩ
Output impedance	—	4.5	—	kΩ
Repeatability	—	±0.05	—	%FSS

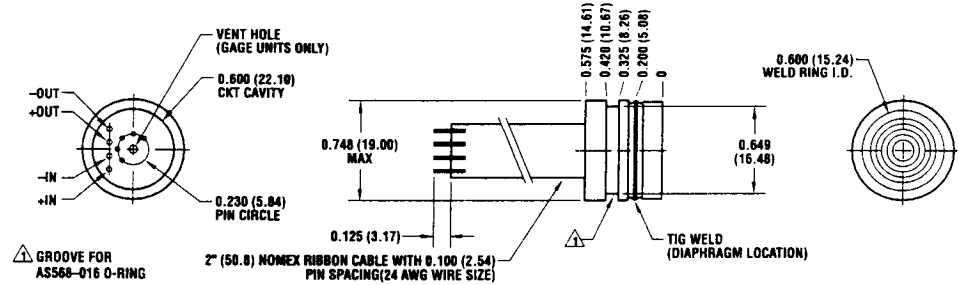
### Specification Notes:

- Note 1: Reference Conditions (unless otherwise noted): Supply voltage, V<sub>S</sub>=10 V<sub>dc</sub>; T<sub>A</sub>=25 °C.  
 Note 2: Span is the algebraic difference between the output voltage at full scale pressure and the output at zero pressure. Span is ratiometric to the supply voltage. Span for the 5 psi part is 60mV ±1mV.  
 Note 3: Linearity is based on best fit straight line. Hysteresis is the maximum output difference at any point within the operating pressure range for increasing and decreasing pressure.  
 Note 4: Maximum error band of the offset voltage or span over the compensated temperature range, relative to 25 °C.  
 Note 5: Long term stability over a one year period.  
 Note 6: Response time for 0 psi to full scale pressure step change  
 Note 7: If proof pressure is exceeded, even momentarily the pressure sensing die may fracture. If Burst pressure is exceeded, the package may leak or burst.  
 Note 8: Temperature affect offset on offset maximum for the 5psi device is ±2% FSO

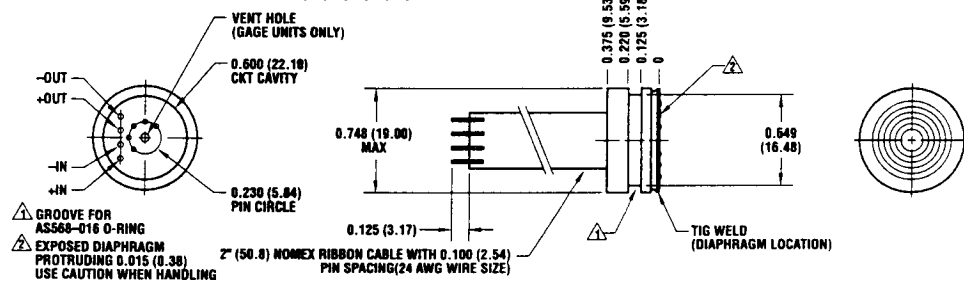
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## Physical Dimensions

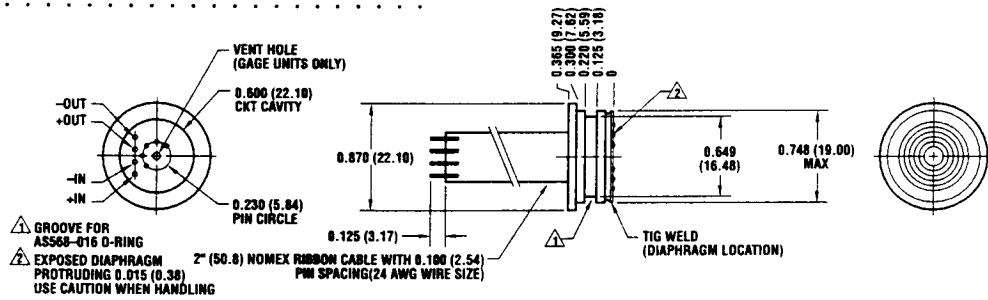
### Cell with Body O-Ring Package (1)



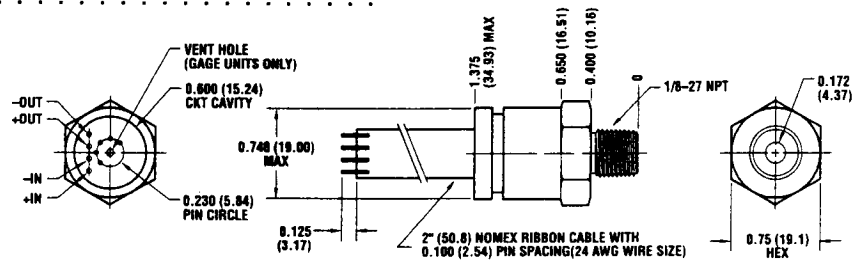
### Flush Mount Package (2)



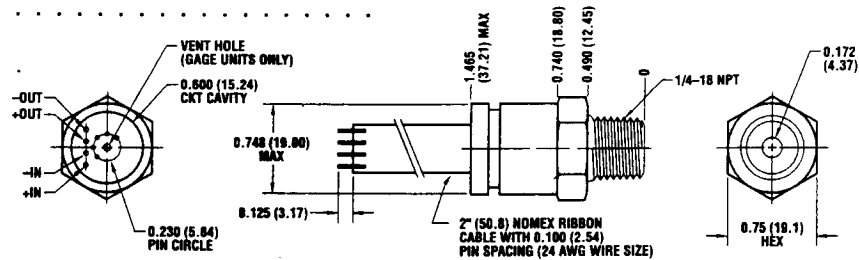
### Flush Mount Package w/ Flange (3)



### 1/8" NPT Male Port Package (4)



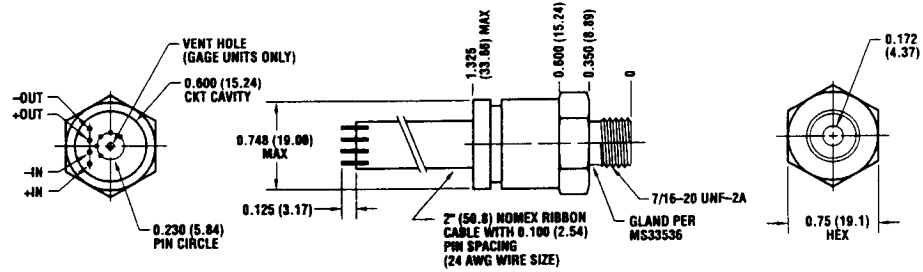
### 1/4" NPT Male Port Package (5)



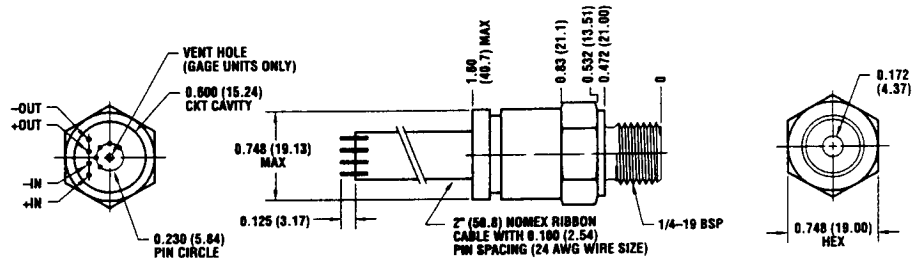
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## Physical Dimensions

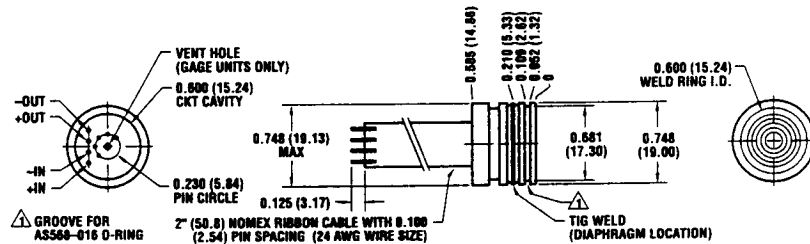
### 7/16 UNF Fitting Package (6)



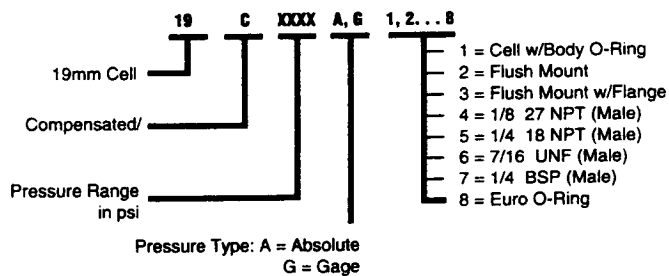
### 1/4 BSP Male Port Package (7)



### Euro O-Ring Package (8)



### Ordering Information — Part Number & Description



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