



24PCBFA6G



Actual product appearance may vary.

Pressure Sensors: Measurement Type:
Gage, Vacuum Gage; Signal
Conditioning: Unamplified; Pressure
Range: ± 5.0 psi Port Style: Straight

Features

- Miniature package
- Variety of gage pressure port configurations - easily and quickly modified for special needs
- Operable after exposure to frozen conditions
- Choice of termination for gage sensors
- 2 mA constant current excitation significantly reduces sensitivity shift over temperature
- Can be used to measure vacuum or positive pressure

Potential Applications

Medical

- Oxygen and nitrogen gas distribution in hospitals
- Dental chairs

Environmental

- Water control valves
- Instrumentation
- Irrigation equipment
- Filter monitoring equipment

Industrial Instrumentation

- Robotics
- Pressure valves
- Leak detection
- Air compressors

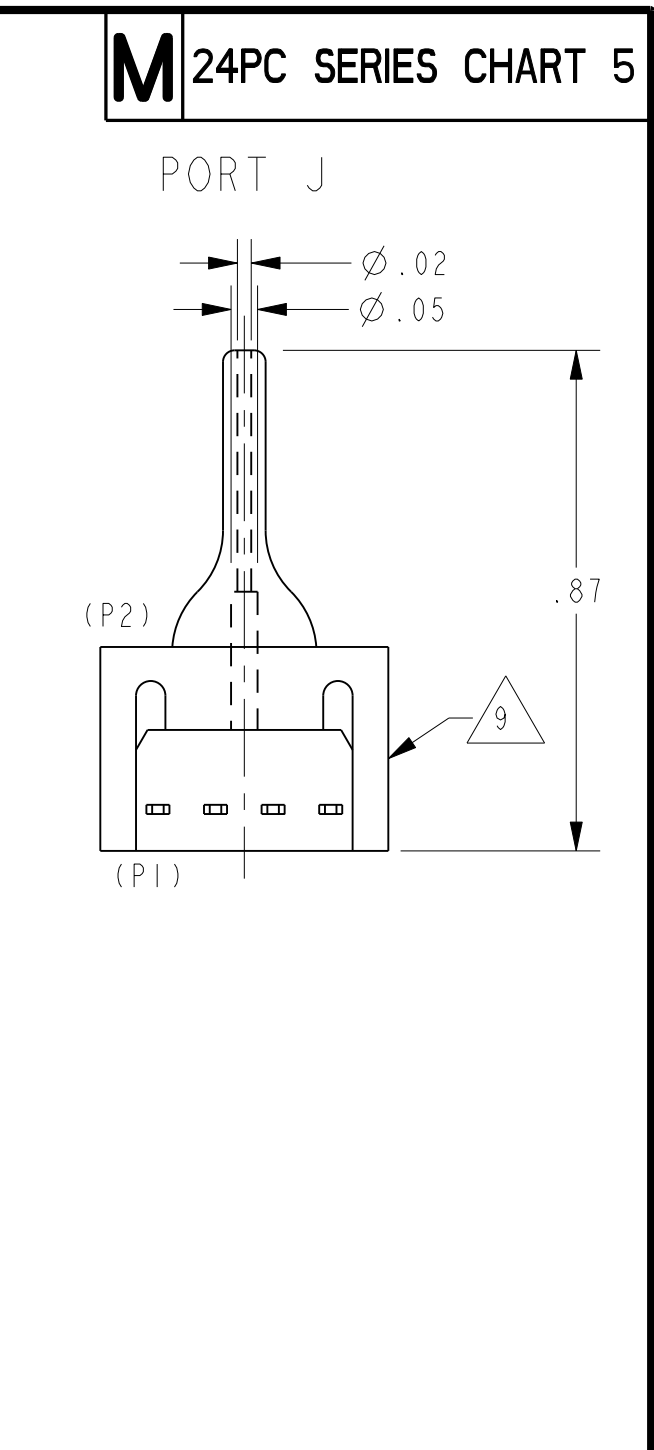
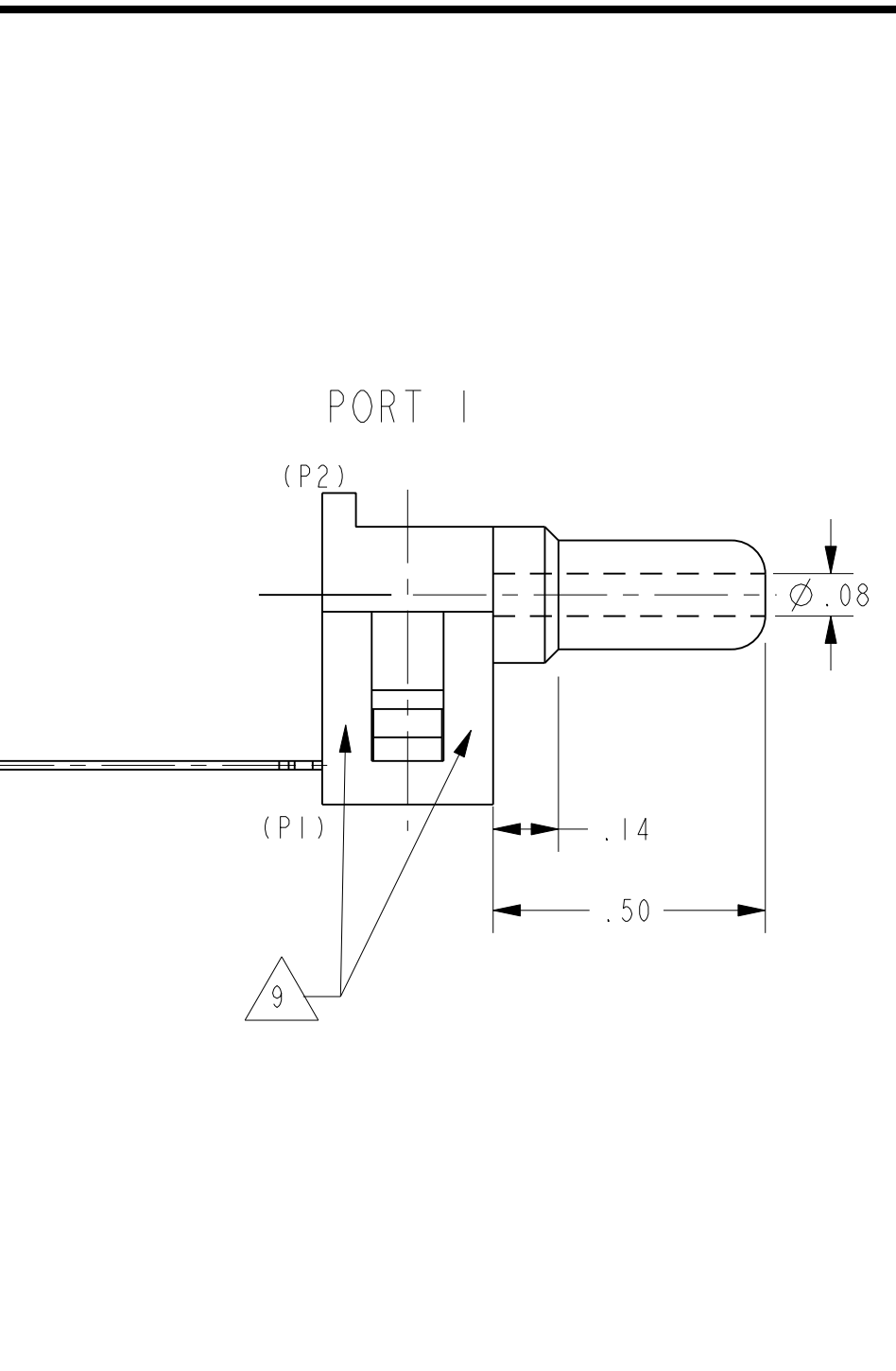
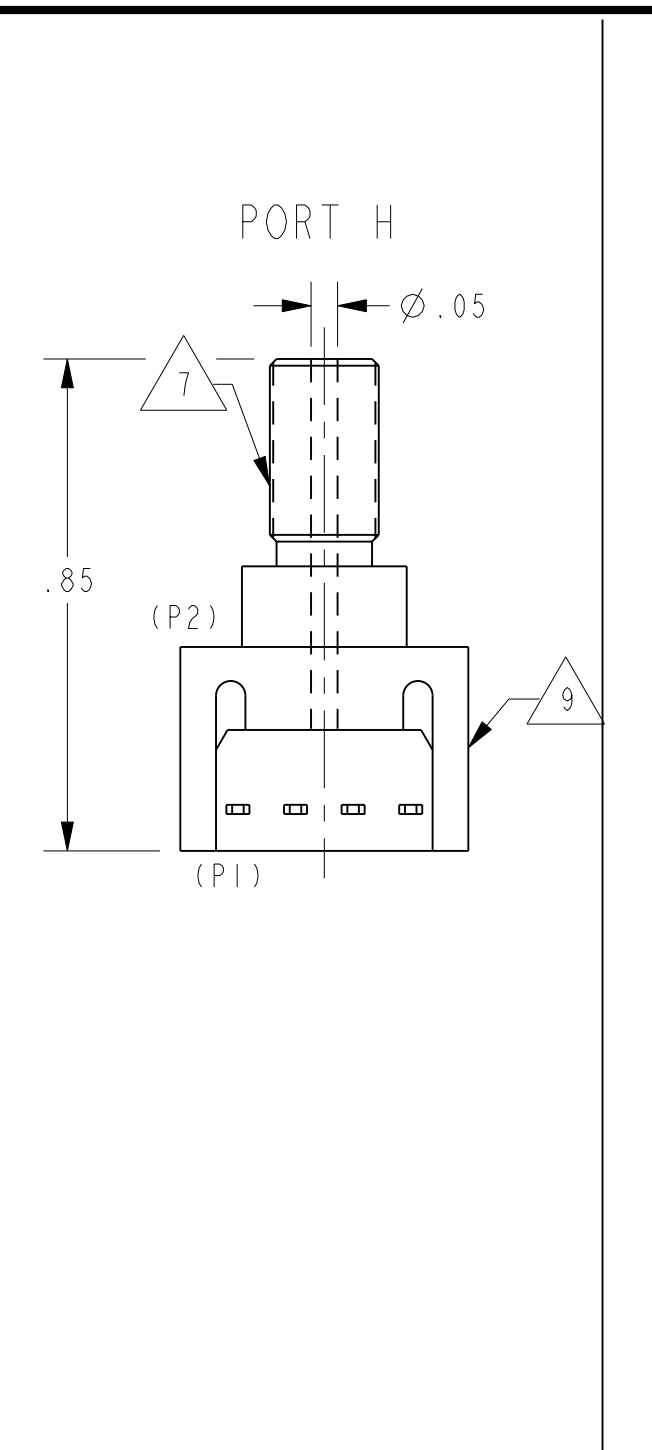
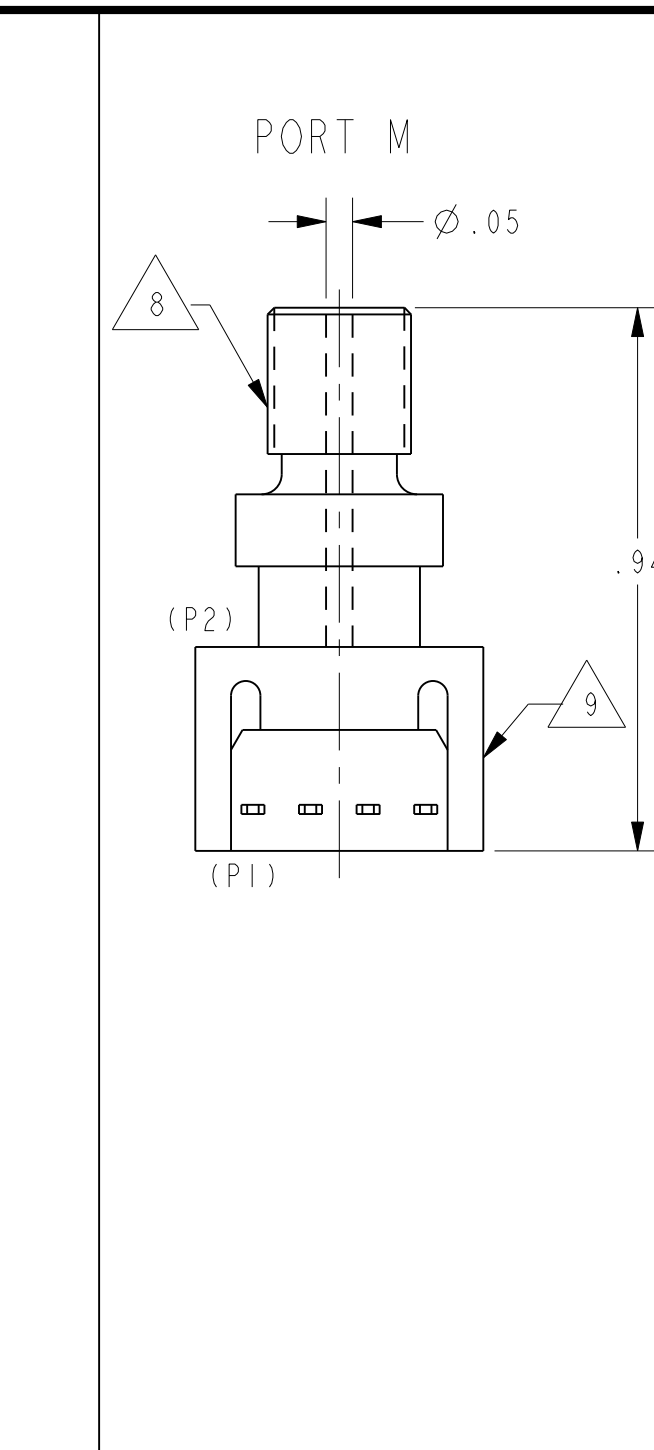
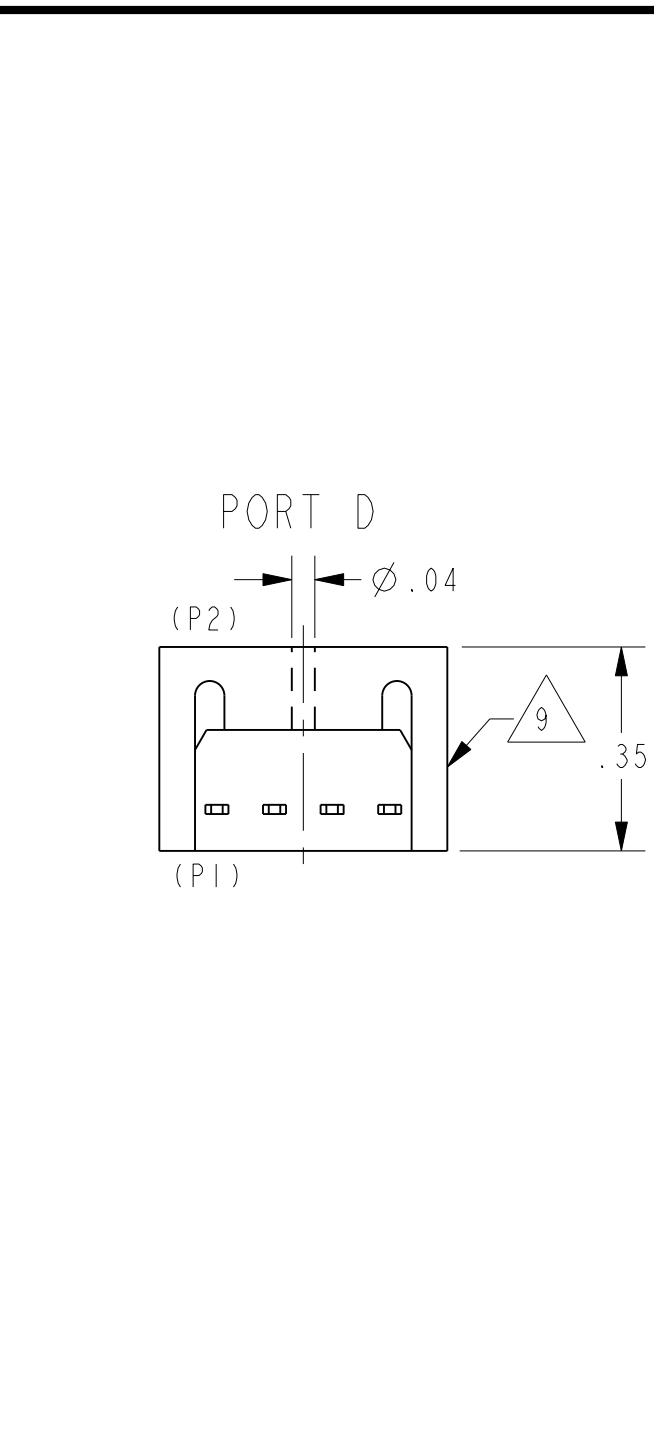
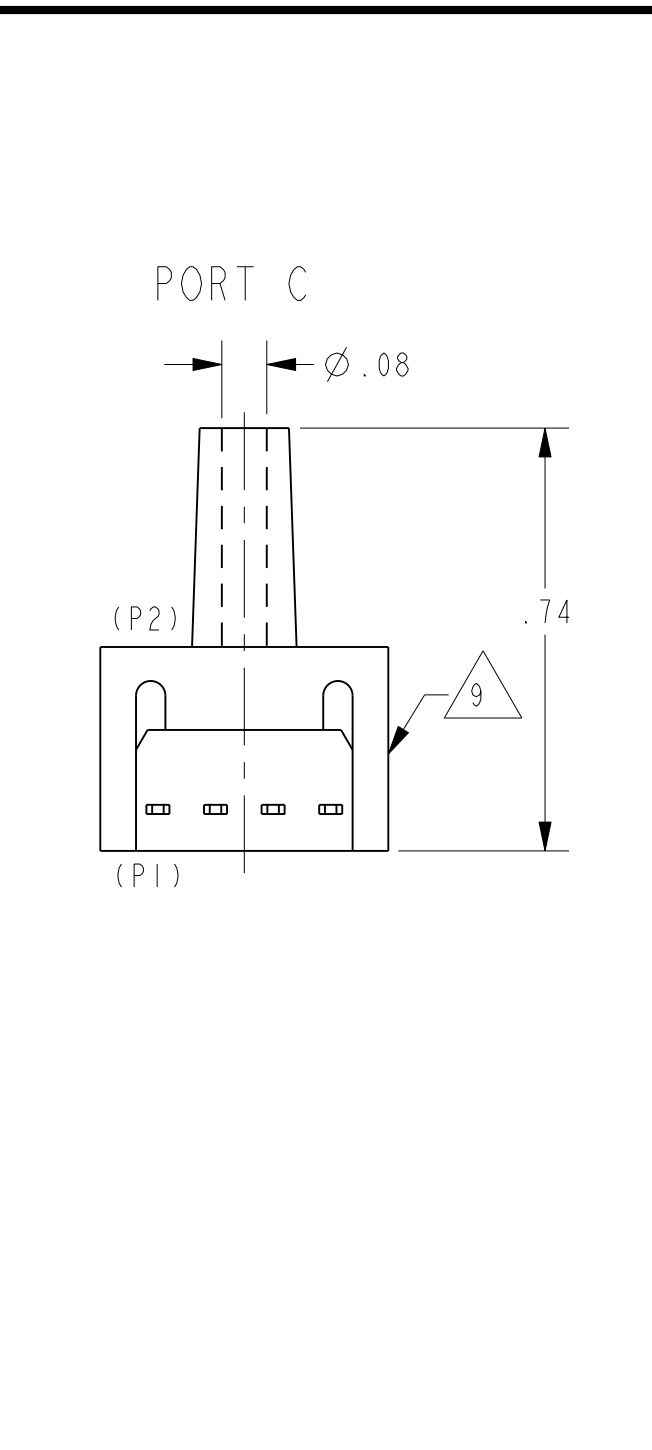
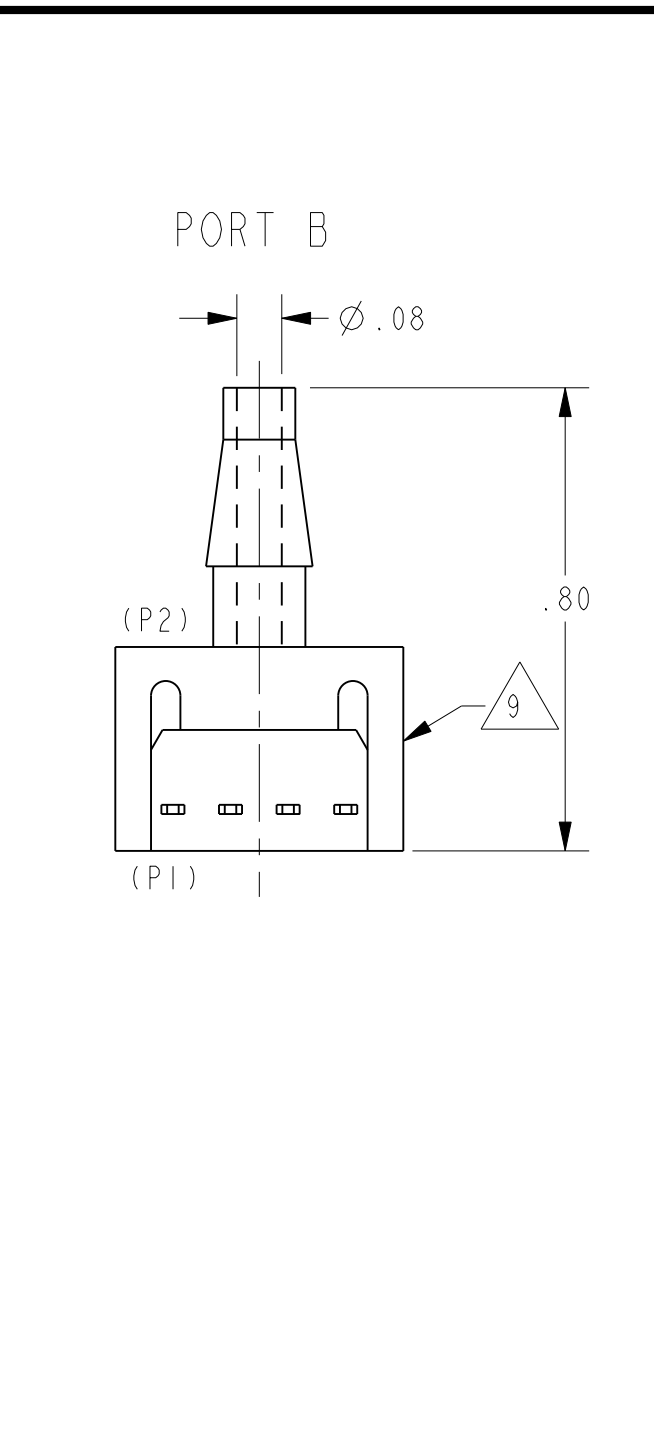
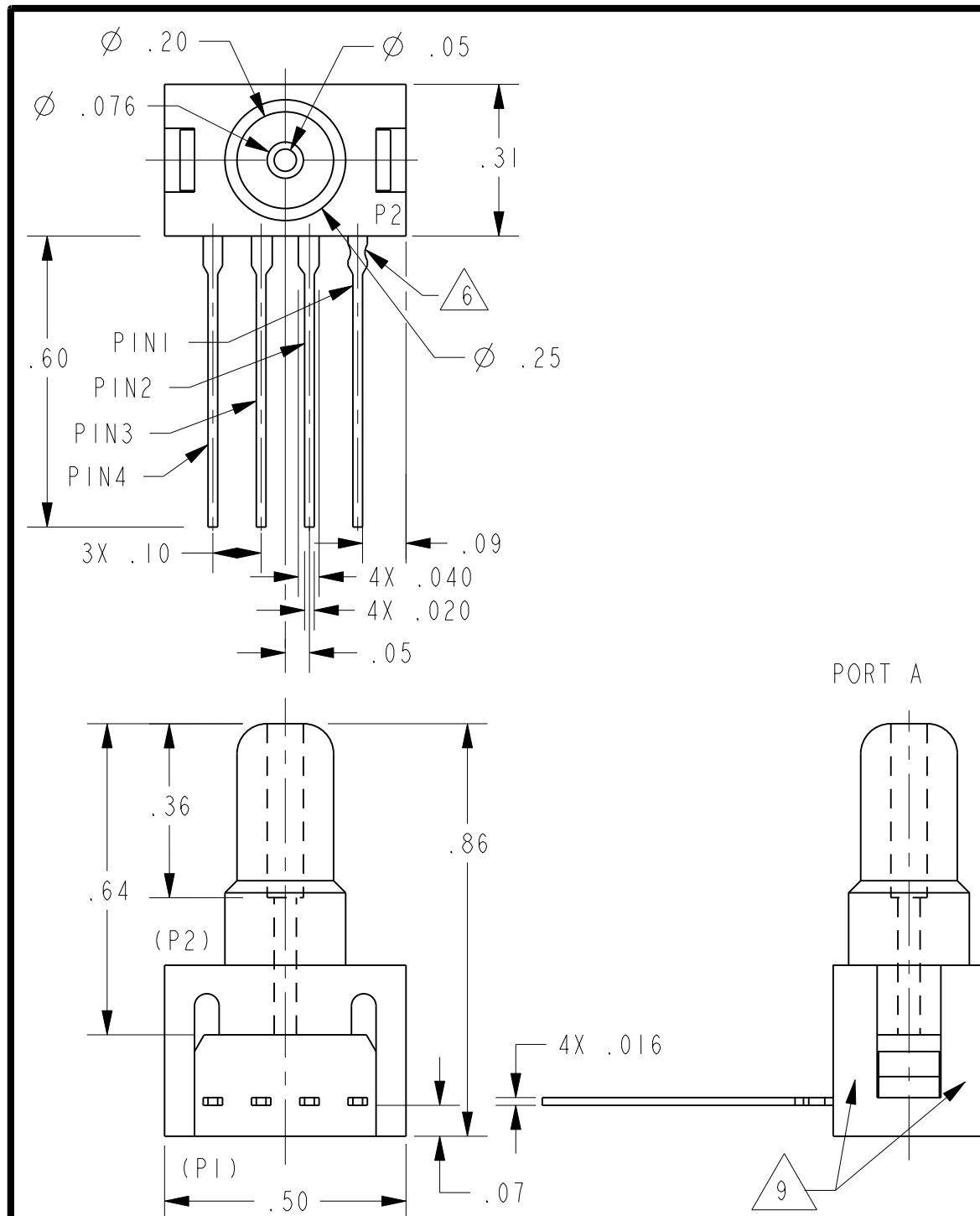
Analytical Instrumentation

- Gas chromatography

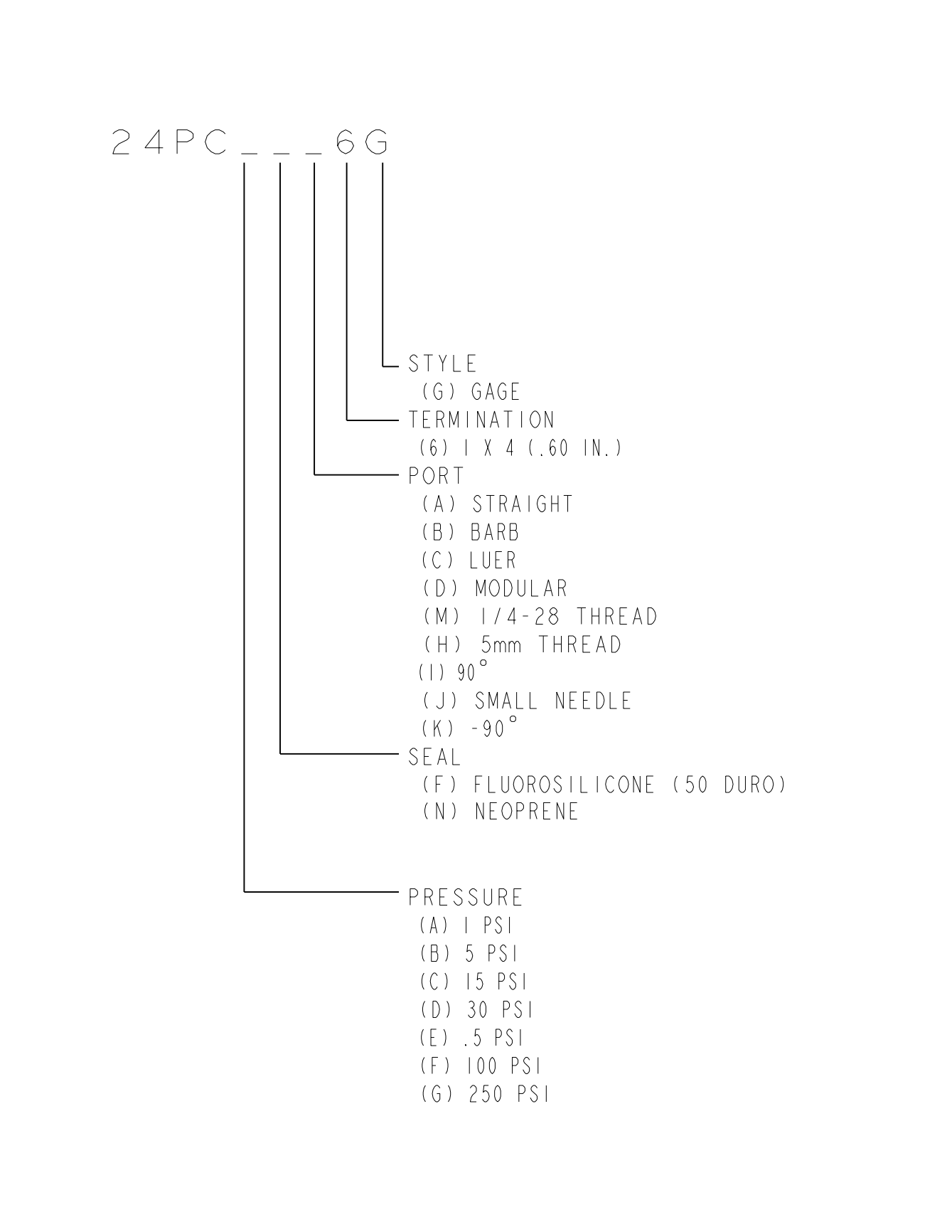
Description

The 24PC Series miniature pressure sensors provide reliable gage pressure sensing performance in a compact package. The sensor features a proven sensing technology that utilizes a specialized piezoresistive micro-machined sensing element. The low power, non-amplified, non-compensated Wheatstone bridge circuit design provides inherently stable mV outputs over 0.5 psi through 250 psi sensing ranges.

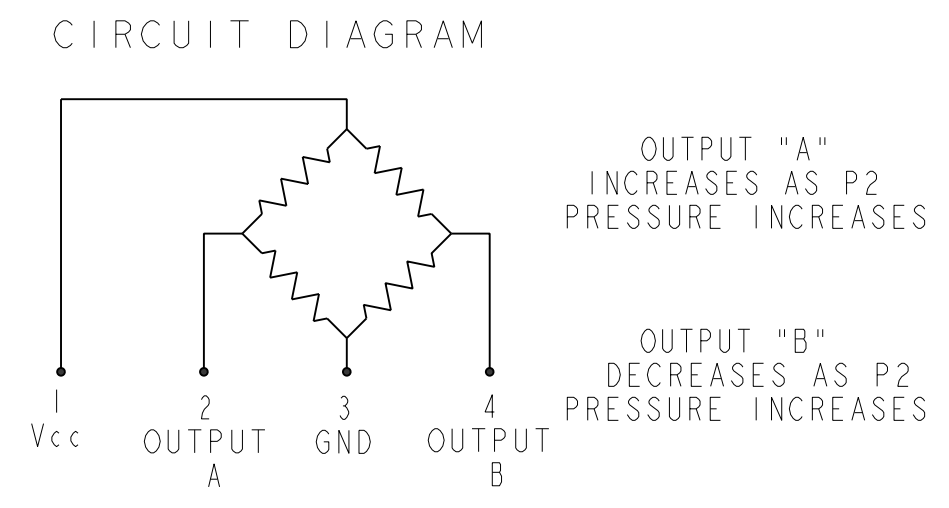
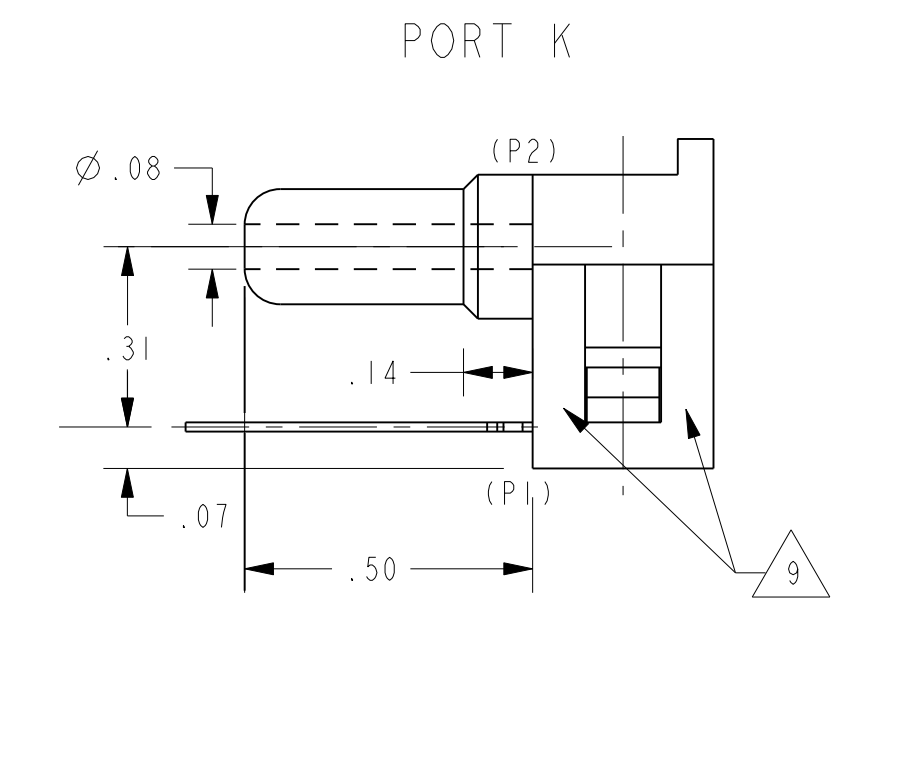
| Product Specifications | |
|----------------------------------|--|
| Measurement Type | Vacuum Gage, Gage |
| Signal Conditioning | Unamplified |
| Pressure Range | ± 5.0 psi |
| Maximum Overpressure | 20.0 psi |
| Supply Voltage | 10.0 Vdc typ., 12.0 Vdc max. |
| Compensated | No |
| Output Calibration | No |
| Response Time | 1 ms max. |
| Termination | PCB; 1 x 4; 0.600 in |
| Port Style | Straight |
| Package Style | Honeywell - 20PC |
| Linearity | ± 0.25% span typ., ± 1.0% span max. (P2 > P1) |
| Typical Sensitivity | 23 mV/psi |
| Full Scale Span | 115 mVdc typ. |
| Null Offset | 0 mV typ. |
| Null Shift over Temperature | ± 1.0 mV typ. |
| Span Shift Over Temperature | ± 5.0 % span typ. |
| Repeatability & Hysteresis Error | ± 0.15 % span typ. |
| Input Resistance | 4.0 kOhm min., 5.0 kOhm typ., 6.0 kOhm max. |
| Output Resistance | 4.0 kOhm min., 5.0 kOhm typ., 6.0 kOhm max. |
| Shock | Qualification tested to 150 g |
| Vibration | MIL-STD-202 Method 213 (150 g half sine 11 ms) |
| Weight | 2 g [0.07 oz] |
| Operating Temperature Range | -40 °C to 85 °C [-40 °F to 185 °F] |
| Storage Temperature Range | -55 °C to 100 °C [-67 °F to 212 °F] |
| Media Compatibility | Limited to media which will not attack polyetherimide, silicon, flourosilicone, silicone, EPDM and neoprene seals. |
| UNSPSC Code | 411121 |
| UNSPSC Commodity | 411121 Transducers |
| Availability | Global |
| Series Name | 24PC |



| CATALOG LISTING | BRAND DESIGNATION |
|-----------------|-------------------|
| 24PCFFH6G | 4FF6G |
| 24PCEFH6G | 4EF6G |
| 24PCCFH6G | 4CF6G |
| 24PCEFA6G | 4EF6G |
| 24PCFA6G | 4AF6G |
| 24PCBFA6G | 4BF6G |
| 24PCBFD6G | 4BF6G |
| 24PCBFH6G | 4BF6G |
| 24PCCFA6G | 4CF6G |
| 24PCDFA6G | 4DF6G |
| 24PCFFA6G | 4FF6G |
| 24PCEFD6G | 4EF6G |
| 24PCAFD6G | 4AF6G |
| 24PCAFB6G | 4AF6G |
| 24PCBFB6G | 4BF6G |
| 24PCCFB6G | 4CF6G |
| 24PCCFD6G | 4CF6G |
| 24PCDFB6G | 4DF6G |
| 24PCDFC6G | 4DF6G |
| 24PCDND6G | 4DN6G |
| 24PCFFB6G | 4FF6G |
| 24PCFFC6G | 4FF6G |
| 24PCFFD6G | 4FF6G |
| 24PCFFM6G | 4FF6G |
| 24PCFND6G | 4FN6G |
| 24PCGFA6G | 4GF6G |
| 24PCGFB6G | 4GF6G |
| 24PCGFH6G | 4GF6G |
| 24PCGM6G | 4GF6G |
| 24PCGND6G | 4GN6G |
| 24PCGNH6G | 4GN6G |
| 24PCEFJ6G | 4EF6G |
| 24PCAND6G | 4AN6G |
| 24PCBND6G | 4BN6G |
| 24PCDFD6G | 4DF6G |
| 24PCAFH6G | 4AF6G |
| 24PCEFM6G | 4EF6G |
| 24PCCFM6G | 4CF6G |
| 24PCAFJ6G | 4AF6G |
| 24PCDFH6G | 4DF6G |



| GENERAL OPERATING CHARACTERISTICS (ELECTRICAL PERFORMANCE AT 10.00±0.01 VDC EXCITATION, 25°C) | | | | | |
|--|---------------------------|----------------------------------|------|------|-------|
| PARAMETERS | PRESSURE RANGES (PSI) | MIN | TYP | MAX | UNITS |
| NULL OFFSET | ALL | -30 | 0 | +30 | mV |
| NULL SHIFT Δ | 0° TO 25°C OR 25° TO 50°C | ±1.0 | | | |
| SPAN Δ | 0 TO .5 G | 25 | 35 | 45 | %SPAN |
| | 0 TO 1 G | 30 | 45 | 60 | |
| | 0 TO 5 G | 85 | 115 | 145 | |
| | 0 TO 15 G | 165 | 225 | 285 | |
| | 0 TO 30 G | 240 | 330 | 420 | |
| P2 > P1 | 0 TO 100 G | 156 | 225 | 294 | %SPAN |
| | 0 TO 250 G | 145 | 212 | 280 | |
| | | | | | |
| SENSITIVITY SHIFT Δ | 0° TO 25°C OR 25° TO 50°C | ALL | | | %SPAN |
| | P2 > P1 AT 10 VDC AT 2 mA | | ±5.0 | | |
| LINEARITY P2 > P1 (BFSL) P1 > P2 | ALL | | .2 | 1.0 | |
| REPEATABILITY & HYSTERESIS | ALL | | ±.5 | | |
| STABILITY OVER 1 YEAR | ALL | | | | |
| EXCITATION VOLTAGE | | | ±1.5 | | |
| INPUT RESISTANCE | | 4.0K | 5.0K | 6.0K | OHMS |
| OUTPUT RESISTANCE | | 4.0K | 5.0K | 6.0K | OHMS |
| (P1 > P2) (P2 > P1) OVERPRESSURE AT 25°C | 0 TO .5 G | | | 20 | PSI |
| | 0 TO 1 G | | | 20 | |
| | 0 TO 5 G | | | 20 | |
| | 0 TO 15 G | | | 45 | |
| | 0 TO 30 G | | | 60 | |
| | 0 TO 100 G | | | 200 | |
| TEMPERATURE STORAGE OPERATE | ALL | -55° TO +100°C (-67°F TO +212°F) | | | |
| | | -40° TO +85°C (-40°F TO +185°F) | | | |



| METRIC | INCHES |
|--------|--------|
| 0.41 | .016 |
| 0.51 | .020 |
| 1.02 | .040 |
| 1.3 | .05 |
| 1.8 | .07 |
| 2.0 | .08 |
| 2.3 | .09 |
| 2.5 | .10 |
| 3.6 | .14 |
| 5.1 | .20 |
| 6.4 | .25 |
| 7.9 | .31 |
| 8.9 | .35 |
| 12.7 | .50 |
| 15.3 | .60 |
| 18.8 | .74 |
| 20.4 | .80 |
| 21.6 | .85 |
| 21.8 | .86 |
| 22.1 | .87 |
| 23.9 | .94 |

NOTES

- SPAN IS THE ALGEBRAIC DIFFERENCE BETWEEN END POINTS (OUTPUT AT MINIMUM AND MAXIMUM PRESSURE)
- TEMPERATURE ERROR IS CALCULATED WITH RESPECT TO 25°C AND EXPRESSES THE DEVIATION THAT COULD OCCUR AS TEMPERATURE IS RAISED OR LOWERED TO LIMITS INDICATED
- INPUT MEDIA LIMITED ONLY TO THOSE MATERIALS THAT WILL NOT ATTACK POLYESTER, SILICON, BUNA-N OR FLUROSILICONE
- TERMINALS ARE PLATED FOR SOLDERING
- LIMIT SOLDERING TO 315° FOR 10 SECONDS MAX
- PIN 1 IS IDENTIFIED BY NOTCH IN LEAD
- M5 THREADED PRODUCT: RECOMMENDED TORQUE FOR SEALING: 4 IN-LBS DO NOT EXCEED 6 IN-LBS OF TORQUE
- SIZE .007 O-RING O-RING COUNTERBORE DIMENSIONS: $\varnothing .300 \pm .003 \times \nabla .040$
- 1/4-28 UNF THREADED PRODUCT: RECOMMENDED TORQUE FOR SEALING: 8 IN-LBS DO NOT EXCEED 12 IN-LBS OF TORQUE
- SIZE .009 O-RING O-RING COUNTERBORE DIMENSIONS: $\varnothing .360 \pm .003 \times \nabla .040 \pm .002$
- BRAND 5 DIGIT LISTING AND 6 DIGIT DATE CODE (YYYYWW). ALTERNATE FORMAT OF CATALOG LISTING BRAND IS THE ENTIRE CATALOG LISTING