



24PCEFA6D



Actual product appearance may vary.

Pressure Sensors: Measurement Type:
Gage, Vacuum Gage, Wet/Wet
Differential; Signal Conditioning:
Unamplified; Pressure Range: ± 0.5 psi;
Port Style: Straight

Features

- True wet/wet differential sensing
- Miniature package
- Variety of gage pressure port configurations - easily and quickly modified for your 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

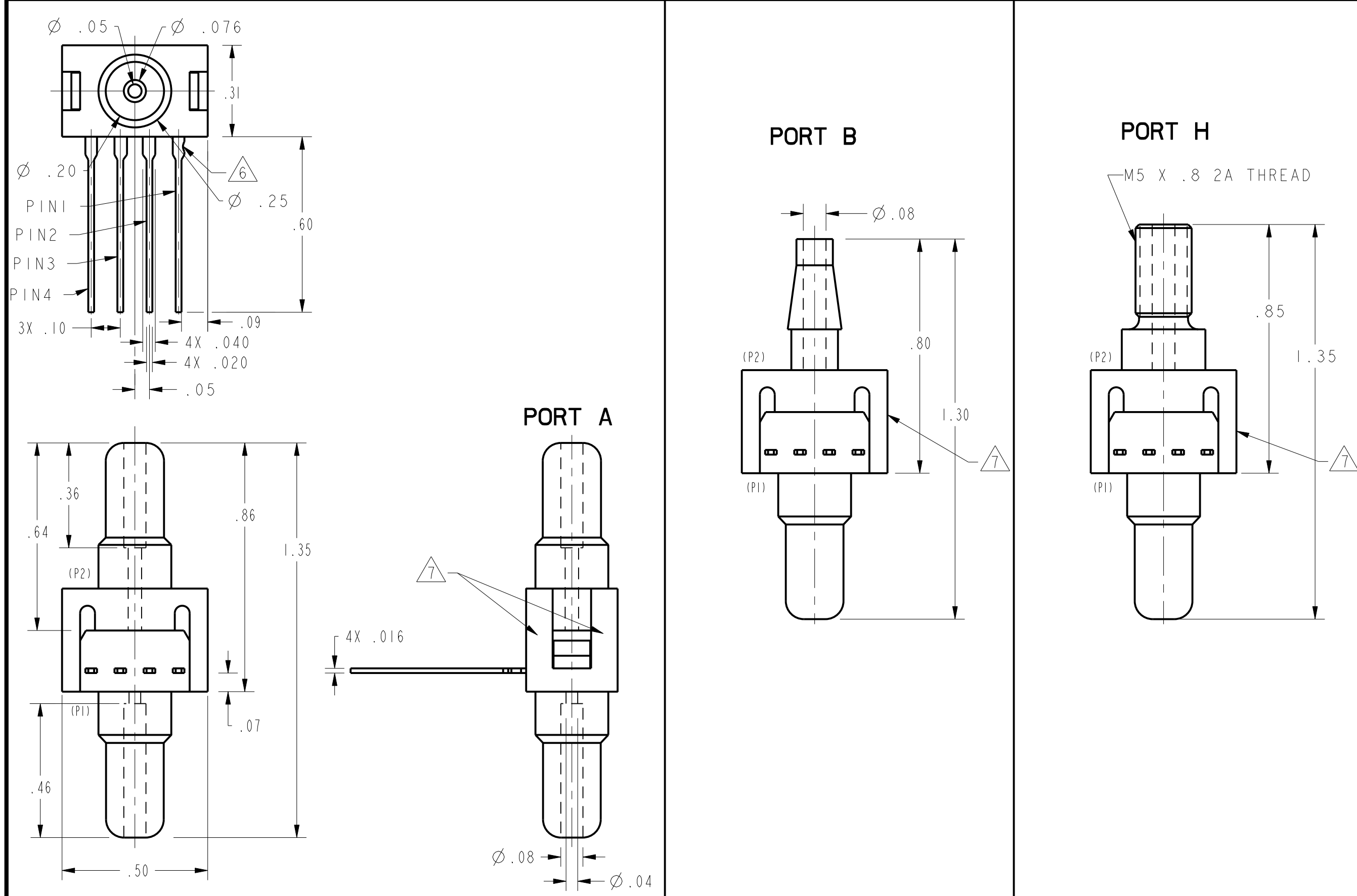
Analytical Instrumentation

- Gas chromatography

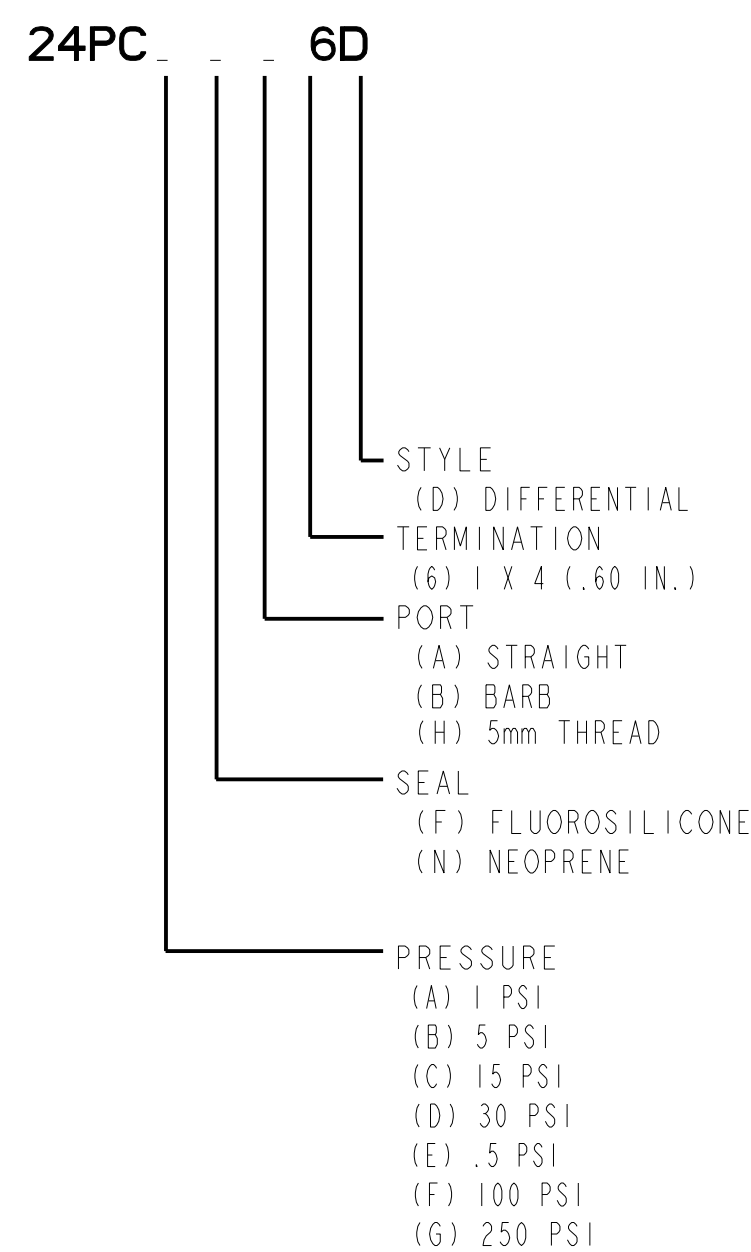
Description

The 24PC Series miniature pressure sensors provide reliable differential 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 | Wet-Wet Differential/Gage/ Vacuum Gage |
| Signal Conditioning | Unamplified |
| Pressure Range | ± 0.5 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 | 70 mV/psi |
| Full Scale Span | 35 mVdc typ. |
| Null Offset | 0 mV typ. |
| Null Shift over Temperature | ± 2.0 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 | LASER BRANDS |
|-----------------|--------------|
| 24PCFA6D | 4AF6D |
| 24PCBFA6D | 4BF6D |
| 24PCCFA6D | 4CF6D |
| 24PCDFA6D | 4DF6D |
| 24PCEFA6D | 4EF6D |
| 24PCFFA6D | 4FF6D |
| 24PCGFA6D | 4GF6D |
| 24PCFFB6D | 4CF6D |
| 24PCGFB6D | 4GF6D |
| 24PCGNH6D | 4GN6D |

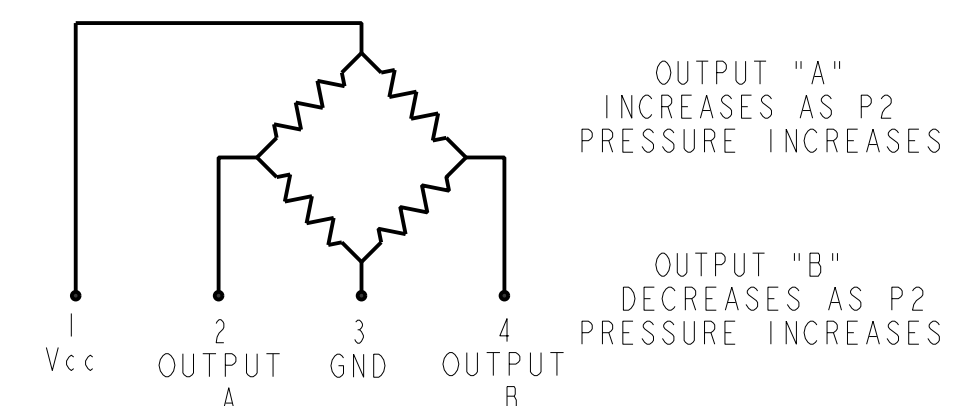


| GENERAL OPERATING CHARACTERISTICS (ELECTRICAL PERFORMANCE AT 10.00 ± 0.01 VDC EXCITATION, 25°C) | | | | | |
|--|--|---|------|-----|-------|
| PARAMETERS | PRESSURE RANGES (PSI) | MIN | TYP | MAX | UNITS |
| NULL OFFSET | ALL | -30 | 0 | +30 | mV |
| NULL SHIFT Δ | 0° TO 25° C OR 25° TO 50° C | | ±1.0 | | |
| SPAN Δ P2 > P1 | 0 TO .5 D | 25 | 35 | 45 | |
| | 0 TO 1 D | 30 | 45 | 60 | |
| | 0 TO 5 D | 85 | 115 | 145 | |
| | 0 TO 15 D | 165 | 225 | 285 | |
| | 0 TO 30 D | 240 | 330 | 420 | |
| | 0 TO 100 D | 156 | 225 | 294 | |
| | 0 TO 250 D | 145 | 212 | 280 | |
| SENSITIVITY SHIFT Δ | 0° TO 25° C OR 25° TO 50° C P2 > P1 AT 10 VDC AT 2 mA | | ±5.0 | | %SPAN |
| | | | | | |
| | | | | | |
| LINEARITY P2 > P1 (BFSL) P1 > P2 | ALL | | .2 | 1.0 | |
| | | | | | |
| REPEATABILITY & HYSTERESIS STABILITY OVER 1 YEAR EXCITATION VOLTAGE INPUT RESISTANCE | ALL | | ±.5 | | |
| | | | | | |
| (P1 > P2) (P2 > P1) OVERPRESSURE AT 25° C | 0 TO .5 D | | | 20 | OHMS |
| | 0 TO 1 D | | | 20 | PSI |
| | 0 TO 5 D | | | 20 | |
| | 0 TO 15 D | | | 45 | |
| | 0 TO 30 D | | | 60 | |
| | 0 TO 100 D | | | 200 | |
| | 0 TO 250 D | | | 500 | |
| TEMPERATURE STORAGE OPERATE | ALL | -55° TO +100° C (-67° F TO +212° F) -40° TO +85° C (-40° F TO +185° F) | | | |

- NOTES
- SPAN IS THE ALGEBRAIC DIFFERENCE BETWEEN END POINTS (OUTPUT AT MINIMUM AND MAXIMUM PRESSURE)
 - TEMPERATURE ERROR IS CALCULATED WITH RESPECT TO 25° 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 HOUSING MATERIAL, SILICON, OR SEAL MATERIAL
 - TERMINALS ARE PLATED FOR SOLDERING
 - LIMIT SOLDERING TO 315° FOR 10 SECONDS MAX
 - PIN 1 IS IDENTIFIED BY NOTCH IN LEAD
 - CATALOG LISTING AND DATE CODE BRANDED HERE. ALTERNATE FORMAT OF CATALOG LISTING BRAND IS THE ENTIRE CATALOG LISTING

| METRIC | INCHES |
|--------|--------|
| 0.41 | .016 |
| 0.51 | .020 |
| 1.02 | .040 |
| 1.3 | .05 |
| 1.8 | .07 |
| 1.93 | .076 |
| 2.0 | .08 |
| 2.3 | .09 |
| 2.5 | .10 |
| 3.6 | .14 |
| 5.1 | .20 |
| 6.4 | .25 |
| 7.9 | .31 |
| 8.9 | .35 |
| 9.1 | .36 |
| 11.7 | .46 |
| 12.7 | .50 |
| 15.2 | .60 |
| 16.3 | .64 |
| 20.3 | .80 |
| 21.8 | .86 |
| 22.6 | .89 |
| 33.0 | 1.30 |
| 34.3 | 1.35 |
| 35.6 | 1.40 |

CIRCUIT DIAGRAM



| THIRD ANGLE PROJECTION | |
|---|--------------|
| SCALE | 3 : 1 |
| DO NOT SCALE PRINT | |
| UNLESS OTHERWISE SPECIFIED TOLERANCES ARE | |
| ONE PLACE | (.0) +.030 |
| TWO PLACE | (.00) +.015 |
| THREE PLACE | (.000) +.005 |
| ANGLES | + |
| WEIGHT | 2 OZ. |

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CATALOG LISTING
BRIDGE PRESSURE SENSOR
24PC SERIES CHART 15