Paroscientific manufactures and sells a complete line of high precision pressure instrumentation. Resolution of better than 0.0001% and typical accuracy of 0.01% are achieved even under harsh environmental conditions. Resolution and accuracy comparable to the primary standards make the Digiquartz® Transducers essential for a variety of application areas where high resolution, accuracy, reliability, ruggedness, long-term stability, low power consumption and low cost of ownership are important requirements.

The remarkable performance of these transducers is achieved through the use of a precision quartz crystal resonator whose frequency of oscillation varies with pressure induced stress. A quartz crystal temperature signal is provided to thermally compensate the calculated pressure and achieve high accuracy over a broad range of temperatures. The transducers include integral shock protection to withstand extremely high acceleration, shock, and vibrational loads.

A Quality Management System that is certified to the requirements of the ISO 9001:2000 International Quality Standard provides consistency in our products and processes from design and development through production, calibration, test, and servicing. Our quality system and commitment to excellence ensure customers of outstanding products and services. As a result, we offer a market-leading five year limited warranty on all Digiquartz® Transducers with the first two years covered at 100%.
Series 3000 & 4000 Absolute Pressure Transducers

**PERFORMANCE**
- Repeatability - Better than ±0.01% Full Scale
- Hysteresis - Better than ±0.01% Full Scale
- 30K & 40K - Better than ±0.02% Full Scale
- Acceleration Sensitivity - ±0.008% Full Scale /g (Three axis average)

**CHARACTERISTICS**
Pressure signal is a frequency output with a 10% frequency change within the frequency band 30 KHz to 42 KHz.

Temperature signal is a frequency output with a 45 ppm/°C sensitivity within the band 168 KHz to 172 KHz.

Both pressure and temperature output signals are nominally square waves of 4 volts amplitude peak to peak.

Conformance and temperature compensation equations and calibration coefficients are provided with each transducer.

**Weight**
- Model 31K ........................................ 12 ounces (363 grams)
- Model 42K, 43K, 46K, 410K .......... 6 ounces (170 grams)
- Model 415K, 420K, 430K, 440K .... 11 ounces (308 grams)

**Power Requirements**
- +5 to +12 VDC
- 1.3 mA

**EQUIPMENTAL**
- Overpressure .......................... 1.2 times Full Scale
- Operating Temperature Range
  - Model 30K, 40K ........................... 6 ounces (170 grams)
  - Model 415K, 420K, 430K, 440K .... 11 ounces (308 grams)

**Pressure Ranges**

<table>
<thead>
<tr>
<th>Pressure Ranges</th>
<th>Model No.</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>psia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1000</td>
<td>31K-101</td>
<td>1139-001</td>
</tr>
<tr>
<td>0-2000</td>
<td>42K-101</td>
<td>1220-001</td>
</tr>
<tr>
<td>0-3000</td>
<td>43K-101</td>
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<td>0-9000</td>
<td>440K-101</td>
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<tr>
<td>0-10000</td>
<td>450K-101</td>
<td>1228-001</td>
</tr>
</tbody>
</table>

(1) Append - 0 to order oil-filled units.
(2) Please consult factory for ruggedized and high temperature (150 °C or 177 °C) models.

Digiquartz Data Storage (DDS) is an onboard serial EEPROM chip that contains calibration and transducer information. This information can be accessed electronically to provide plug and play pressure transducer interchangeability. See product SCD for details.

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E-Mail: support@paroscientific.com

Product defined by Specification Control Drawing.
Specifications subject to change without prior notice.

Manufactured under one or more of the following U.S. Patents: 6,497,152 - 6,595,054. Other patents pending.
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