



**American Sensor Technologies, Inc.**

*Your sensor business partner...*

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### **Wet/Wet Differential Pressure Sensor Offered in Hydrogen Compatible Package**

Mount Olive, NJ, April 24, 2006... American Sensor Technologies, a New Jersey-based manufacturer of state-of-the-art, MEMS-based pressure sensing products, has added the Model5000 wet/wet differential pressure sensor to its line of hydrogen-compatible pressure sensors. Engineers and system integrators can now safely measure the differential pressure of hydrogen and other gases while reducing the number of components necessary.

Featuring AST's *Krystal Bond*<sup>™</sup> Technology, the Model 5000 does not contain internal O-rings or fluid-filled cavities, eliminating the chance of hydrogen permeation or system contamination from silicone oil. The diaphragm is constructed of 316L stainless steel wetted materials that resists hydrogen embrittlement to ensure the highest reliability in today's hydrogen applications. This design also provides excellent over-range and burst protection (5x rated line pressure or 2,000 psi, whichever is less) ratings for system safety in the most extreme conditions.

"When pressure sensors with oil-filled and other thin diaphragms (<10 mils) encounter long-term exposure to hydrogen, it causes hydrogen embrittlement which reduces the mechanical properties of metal, leading to transducer failure," notes Karmjit Sidhu, Vice President, Business Development, American Sensor Technologies. "Constructed of 316L stainless steel, the Model 5000 is highly resistant to hydrogen embrittlement which promotes the reliability needed for hydrogen systems."

Model 5000 Wet/Wet Differential Pressure Sensors are CE EN61326 certified. Units possess a high level (100V/m) of EMI/RFI protection and shock/vibration resistance to satisfy demanding performance requirements. A stainless steel housing welded over the electronics maintains an IP-66 rating. Female 1/8"-27 NPT threads simplify system integration.

Hydrogen-compatible packaging makes the Model 5000 pressure sensors ideal for hydrogen pipeline instrumentation, filling stations, compressors, PEM Cells, and other Hydrogen fuel cell applications. Bi-directional and uni-directional pressure ranges are offered for applications with line pressures up to 1,000 psi. In the event that either pressure port is at full line pressure and the other at zero, no damage will be done to the pressure transducer.

Voltage and current outputs are available over a wide operating temperature range of -40 to 85°C (-40 to 185°F). Accuracy specifications are  $< \nabla 0.3\%$  BFSL, including non-linearity, Hysteresis, and non-repeatability. For more information about the hydrogen compatible Model 5000 Wet/Wet Differential Pressure Sensors, go to American Sensor Technologies web site at: <http://www.astensors.com/model5000.html>.

### **About AST**

AST manufactures state-of-the-art, MEMS-based pressure sensing products that offer the best price-performance ratio in the industry. Common applications of AST sensor products are in industrial OEM, hydraulic systems, fuel cells, medical gases, HVAC/R, refrigeration (ammonia, Freon, CO<sub>2</sub>), oil & gas exploration and production, and off-road vehicles. By combining exotic metals and AST's exclusive, proprietary [Krystal Bond™ Technology](#) (an advanced process in which inorganic materials are molecularly diffused onto a metallic surface in the presence of certain gases), AST can produce high-performance strain gauge pressure sensors that support the specialized needs of key niche markets. Many AST products are UL listed as intrinsically safe and certified for explosion-proof required environments. Some of the world's most highly respected industrial Fortune 500 corporations have tested and now use AST products in a wide range of critical and harsh environments. For more information on AST products and technology, go to AST's website at [www.astensors.com](http://www.astensors.com).

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