

North American Edition

technology

Two-Fold Sensor Approach For NO_x Reduction


Partially in response to the Oct. 1, 2002, EPA “pull ahead” emissions standards, but also reflecting the increased need for overall low exhaust emissions in the future, Kavlico, Moorpark, Calif., has developed a two-fold sensor approach to reducing the formation of NO_x emissions for on-highway vehicle applications.

Fluid level measurements are important for engine manufacturers targeting urea/water-based selective catalytic reduction (SCR) systems, Kavlico said. Injecting urea into the exhaust stream has been shown to reduce the formation of NO_x. To support this approach to emissions control, Kavlico has developed two sensors for urea level monitoring and measuring.

The first sensor measures the changes in fluid level by monitoring dielectric change. The change in dielectric occurs due to the influx of contaminants into the system thereby changing the dielectric output. The sensor then provides a proportional voltage output to urea fluid level. The sensor utilizes Kavlico’s ceramic capacitive technology. The design incorporates all stainless steel wetted parts due to the caustic nature of the media environment.

The second sensor actually measures the pressure of the

fluid and provides a proportional voltage output to fluid level. Both sensors operate on a 5 Vd.c. power supply, have robust design elements such as all stainless steel wetted parts, and can be customized to the application-specific need of the particular OEM requirements, Kavlico said. When used in combination, the two sensors measure both the level and the concentration of urea in the fluid. ★



Kavlico has developed a two-fold sensor approach to reducing the formation of NO_x emissions for on-highway vehicle applications, offering two sensors for urea level monitoring and measuring. One sensor measures the changes in fluid level by monitoring dielectric change, while the second sensor measures the pressure of the fluid and provides a proportional voltage output to fluid level.



**@Kavlico...
Our Sensors
Are The Solution!**

When it comes to aggressive, high vibration, broad temperature range environments, Kavlico OEM sensors and transducers are unequalled. Our high accuracy, field-proven designs offer reliable and cost-effective solutions for engine mounted and underhood applications for on/off-highway use. The sensors operate in hostile media environments, have an operating temperature range of -50°C to +150°C, 1% accuracy and are available in ranges of ±1" H₂O to 8,000 psi gage, absolute, differential, and combined pressure and temperature.

- EGR Differential Pressure
- Barometric/Manifold (BAP/MAP)
- Engine Oil Pressure
- Common Rail Fuel Pressure
- Tilt
- Coolant Pressure
- Turbo Boost
- Oil Level/Quality
- Exhaust Back-Pressure
- Particulate Trap Differential
- Crankcase Pressure
- Compressed Air Pressure

When you have an engine or industrial vehicle application that demands the best in sensor performance, Kavlico sensors are the solution!

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