



Application Alley

Automotive Fluid Level Sensors

Reed Switch-Based & Conductive Technologies



A top automobile manufacturer faced an issue of not meeting emissions standards due to needing to separate a pipe and hose assembly during maintenance. The hose and pipe needed to be attached to meet the CARB emission standards, which created the requirement to have a sensor installed that showed these two pieces were connected when the engine was running.

Our team responded quickly and partnered with the customer to arrive at a series of iterations for a solution. These developed into a patented design where we used an inductive coil and PCB to measure the Q and inductance of a coil that wrapped around the locking feature of the hose connection to meet the necessary standards.

We were approached for a reed based position sensor solution. Our research determined the resolution on 0.5mm for the pipe being installed into the hose was not possible with a reed switch and a magnet. There were also challenges such as “under-the-hood” temperatures, vibration, and surrounding metal to contend with.

Standex Electronics supplies fluid level sensors that use a wide range of technologies - from magnetic Reed Switch technology to conductive technology.

We offer engineering assistance at each stage of the procurement process – from product conception to volume production. Our “global footprint” means that we can produce the product you need close to your using facilities – thereby simplifying logistics and lowering costs.

Component Corner (Expert Insights) Executive Standex Electronics Customer

“ Our team had an urgent need to address issues related to our automotive coolant fluid sensors not functioning properly during testing and also normal use. The Standex Electronics team quickly responded by partnering with our team of Engineers to diagnose the problem, designed a reliable solution, led testing and measurement, validated requirements, and allowed us to continue with the manufacturing process. ”

Standex Electronics designs fluid level sensors that are appropriate for each individual application. From basic sensors which are driven by external electronics to turnkey sensor systems with switched outputs, Standex Electronics also delivers solutions to the most demanding fluid level sensing applications that can detect level, pressure, and flow.

Broadest Range of Products & Capabilities

- Magnetic technology based fluid level sensors use Standex Electronics manufactured magnetic Reed switches and injection molded float/magnet assemblies.
- Capability to switch dry circuits to power loads as high as 70 VA and 300 VAC.
- Non-intrusive sensing capability (externally mounted sensors)



- Sensors designs that can be mounted using seal grommets, spin welding, hot plate bonding or screw threaded into the container.
- Designs available for plastic and metal containers.
- Designs for injection molded or blow molded plastic containers.
- Conductive technology based sensors have the ability to operate properly with low viscosity fluids such as liquid soap.
- Conductivity based fluid level sensor systems that eliminate normal operational issues caused by multiple conductive paths.

Applications

- Fluid level sensor
- Windshield washer fluid
- Coolant level
- Brake fluid
- DI water

- Wastewater overflow
- Sump pumps and septic tank level
- Liquid detergent level for dishwasher and laundry
- Fabric softener for laundry
- Syrup level sensors for food processing
- Water level for commercial coffee makers and similar devices
- Boiling water

Find out more about our ability to propel your business with our products by visiting www.standexelectronics.com or by giving us a hello@standexelectronics.com today! One of our engineers or sales leaders will listen to you intently.



About Standex Electronics

Standex Electronics is a worldwide market leader in the design, engineering, and manufacture of standard and custom electro-magnetic components, including magnetics products and reed switch-based solutions.

Our magnetics offerings include planar, current sense, and conventional low- and high-frequency transformers and inductors. Reed switch-based solutions include Meder, Kent, and KOFU brand reed switches, as well as a complete portfolio of reed relays, and a comprehensive array of fluid level, proximity, motion, water flow, HVAC condensate, hydraulic pressure differential, capacitive, conductive and inductive sensors.

We offer engineered product solutions for a broad range of product applications in the transportation, automotive, medical, test and measurement, military and aerospace, aviation, HVAC, appliance, security and safety, and general power and industrial markets.

Standex Electronics has a commitment to absolute customer satisfaction through a partner, solve, and deliver approach. With a global organization that offers sales support, engineering capabilities, and technical resources worldwide – we implement customer driven innovation that puts the customer first.

For more information on Standex Electronics, visit us on the web at standexelectronics.com.

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