



Dual Redundant Circuits Introduced

Introtek International released the option of dual redundant circuits for our line of ultrasonic sensors beginning in June 2006.

"The ultrasonic sensor has gained a reputation as an extremely reliable and long-lasting component with medical device manufacturers as well as many companies with industrial applications. Currently, the ultrasonic sensors designed and manufactured by Introtek are documented to have a MTBF (Mean Time Between Failure) rate of .707 failures per million hours or one failure every 1.4 million hours," said Joe Mariano, Chief Engineer of Introtek. "Introtek has decided to offer the option of dual redundant circuitry. This will take us to the next level of ultrasonic reliability."

"We believe the option of adding dual redundancy to the circuitry of our sensors to be invaluable for our customers that may require more stringent criteria," said Deb Corwin, General Manager of Introtek. "There are Introtek sensors operating flawlessly going on nine years or more for our customers. But with dual redundancy, there is another layer of 'fail-safe' operation."

A dual redundant approach utilizes two separate and complimentary electronics sections to monitor a single air detection sensor. These two sections have separate and independent output lines. The wet condition is defined as both outputs being high. The dry condition is defined as either Output being low. Should any single component failure occur, the failure will now be isolated to one Output or the other (thus the other Output will remain valid), or force both Outputs to the dry (safe) condition.

As the two electronics section operate independently from each other, a failure in one section would not cause a failure in the other. This allows time to test for a failure in one section before the remaining working section too could fail.

Introtek International has been custom-designing and manufacturing non-invasive ultrasonic sensors since 1982, and has been a wholly owned subsidiary of Magnetrol since 1986. The sensors have been utilized for applications that have included the detection of air bubbles in tubing, and liquid levels in containers. Introtek also offers sensors for drip chamber applications as well as optical sensors for blood leak detection.

Contact Larry Parish to discuss your air bubble, air-in-line or liquid level application.

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