

Press Release

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Noncontact position sensor exploits FPGA technology for higher performance

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The new ECL202 eddy-current displacement/position sensor has significantly improved thermal stability and immunity to electromagnetic interference (EMI) as well as improved linearity and resolution. The sensor employs FPGA technology enabling complex, proprietary mathematical algorithms to achieve higher performance levels than purely analog methods. According to Don Martin, president of Lion Precision, "Using FPGA digital processing techniques, we can achieve performance that simply is not possible with discrete analog electronics." Digital technology can very precisely detect the sensor's signal and more easily differentiate it from other electrical signals present in the sensing environment. This means the sensor continues to work well in electrically noisy environments such as near motor controllers or other high-power switching electronics. Using this same proprietary method, multiple ECL202 sensors can be positioned near each other without the mutual interference usually experienced with eddy-current sensors.

Internal calibration tables of tens of thousands of points assure precise linearity. Achieving these same levels of linearity with analog circuitry often involves a trade-off between linearity and other performance parameters such as thermal stability or resolution. With digital technology, this trade-off is no longer required. The ECL202 sensor is maximized for all of these parameters. Digital circuitry is immune to drift associated with analog circuitry, providing the ECL202 with greater thermal stability than analog designs.

The ECL202 also offers new features only available with digital technology: push-button offset adjustment, push-button setpoint adjustment, external offset and setpoint adjustments and user-selectable bandwidths.

Two Outputs: Analog 0-10V, Digital setpoint switch closure
Available Ranges: 0.5-15mm (0.020-0.6 inches)
Resolution: as low as 0.008% @10kHz (dependent on probe, range and bandwidth)
Bandwidth: User-selectable – 100Hz, 1kHz, 10kHz, 15kHz
Package: DIN Rail mount

More details available at www.eddy-current-sensors.com/ecl202.html.

For more information visit www.lionprecision.com or contact Lion Precision at:

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