

Sensor Technology Ltd Unveils SGR523: A Breakthrough in Torque and Angle Measurement

Sensor Technology Ltd proudly introduces the SGR523, a state-of-the-art digital rotary torque sensor equipped with an integrated incremental angle encoder. This innovative addition to the TorqSense SGR series sets a new benchmark for precision in torque and angular position monitoring across various industrial applications.

The SGR523 employs non-contact strain gauge technology, eliminating the need for traditional slip rings and enhancing reliability. Its high-resolution angle encoder delivers up to 10,000 pulses per revolution with a remarkable resolution of 0.009°, making it ideal for applications requiring meticulous torque-angle analysis, such as mechanical testing, automated assembly, and process control.

Key Features:

- Torque measurement range from 175 mNm to 20 Nm
- Accuracy of $\pm 0.1\%$
- High mechanical overload capacity of 400%
- Overrange reading capability of 250%
- High digital sample rate of 4000 samples per second
- Digital outputs: RS232 and USB (standard); CANbus and Ethernet (optional)
- Bi-directional angle and rotation count
- Speed measurement up to 9000 RPM
- Compatible with TorqView Advanced Torque Monitoring Software
- Lifetime warranty

The SGR523's advanced capabilities enable engineers to detect mechanical anomalies, such as rotational stiction or thread damage, by analysing torque versus angle plots. This dual-parameter monitoring is crucial for quality assurance in manufacturing processes, including bottle cap tightening and bolt fastening.

Additionally, the sensor's ability to monitor torque at specific shaft angles aids in identifying potential issues in process control applications, thereby reducing production wastage. Its high-resolution angle measurement also facilitates precise motion control, allowing for better management of inertia in motion platforms and improved safety in automated machinery.



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The SGR523's design simplifies system architecture by combining torque and angle measurement into a single unit, reducing component count and enhancing system reliability. Its robust construction and advanced diagnostics, including Built-In Test (BIT) self-diagnostics and shaft temperature monitoring, ensure consistent performance even in demanding environments.

For more information about the SGR523 and other torque measurement solutions, please visit Sensor Technology Ltd's website at www.sensors.co.uk

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