



## New Range of non contact Rotary Torque Transducers

Sensor Technology has introduced their new range of **TORQSENSE™** RWT Rotary Torque Transducers.

With full-scale ranges between 100 mNm and 10,000 Nm, the E300 RWT1 series of transducers utilizes the little known Surface Acoustic Wave (SAW) phenomenon. This SAW approach has allowed the development of small transducers, which are not only exceptionally accurate, but more importantly, require no physical contact between the revolving shaft and its housing.

In a **TORQSENSE™** transducer, the surface waves are produced by passing an alternating voltage across the terminals of two interleaved comb-shaped arrays that are laid onto one end of piezoelectric substrate. A similar 'receiving' array, at the other end of the substrate, converts the wave back in to an electric signal.

The frequency of the wave generated is dependant on the spacing of the 'teeth' in the comb array and as the direction of the wave propagation is at right angles to the teeth, any change in its length alters the spacing of the teeth and the operating frequency.

To measure torque in a shaft, two SAW sensors are bonded rigidly to a shaft at 45 degrees to the axis and connected in a "half bridge" configuration, so that when the shaft is subjected to a torque, outputs are combined to produce a 'difference' signal proportional to applied torque. This signal is exchanged via a capacitive rotor and stator.

**TORQSENSE™** transducers require minimum length of shaft, have low inertia, no physical contact between shaft and housing, wide bandwidth, high resolution and accuracy, and excellent noise immunity. The technology lends itself to design of OEM transducers for specific customer applications.

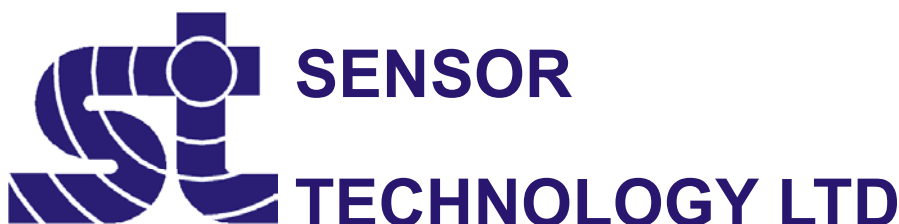
The transducers are available with RPM output and IP65 sealing as options, and interface with the E302 Advanced Torque Transducer Display, which features full temperature correction for changes in the modulus of elasticity of the shaft. The E302 can be interfaced with **TORQVIEW™** Virtual Instrumentation Display PC Software to give a self contained data display and recording system.

Applications include Automotive, Aerospace, Viscosity & Consistency Measurement, Motor & Machinery Control & Condition Monitoring, and Torque Control of Tightening Procedures.

**Press release 3E**

**FOR FURTHER DETAILS CONTACT TONY INGHAM ON 01295 730746**

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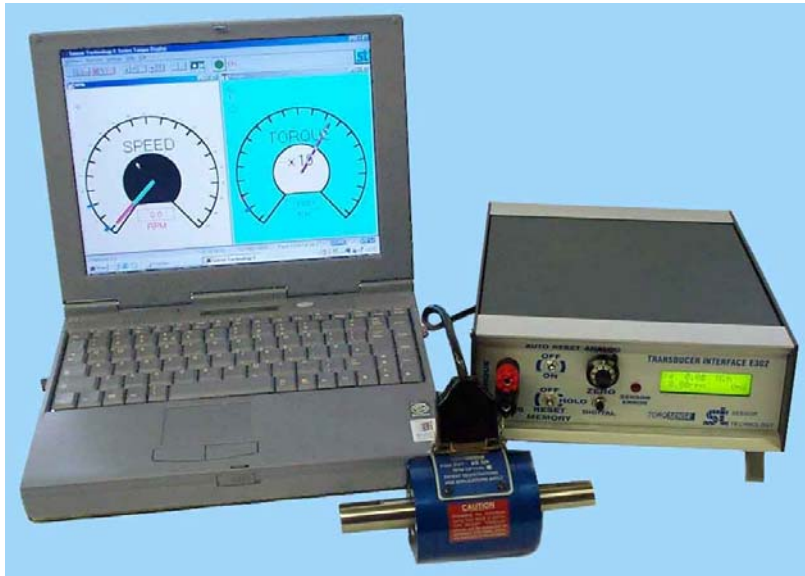
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# TORQSENSE™

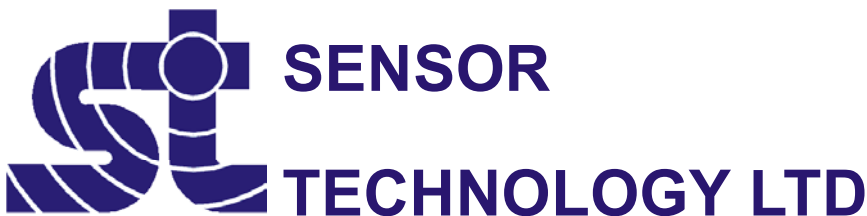


RWT1 Series **TORQSENSE™** transducers.



A portable PC, a Sensor Technology **TORQSENSE™** torque transducer, and an E-series instrument.

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