

# **PRESS RELEASE**

## **Wireless Rotary Torque Transducers Use Battery-Powered 2.4GHz Telemetry**

Applied Measurements are proud to introduce the DTDR-F wireless rotary torque transducer, a novel design that expunges stator coils and inductive transmission systems from the design brief in favour of a cutting edge, battery-powered 2.4GHz wireless telemetry data acquisition and transmission system.

The DTDR-F design is based on the DTD-F torque transducer, a flanged device designed for use in static and quasi-static torque measurement applications, with modifications to allow the incorporation of a pair of balanced Delrin housings, one containing the telemetry acquisition and transmission module and the other containing a 3.6V high capacity lithium-ion (Li-Ion) battery that is recharged in-situ.

The DTDR-F is intended primarily for use in rotating applications at speeds of up to 6500rpm where a direct, in-line torque measurement is desired, but is prohibited due to access restrictions or other obstacles. In these cases, the lack of connecting cables and additional mounting hardware make the DTDR-F the ideal choice. The DTDR-F is, of course, also suited to static or quasi-static applications where reaction torque sensing is required.

The T24-SA telemetry acquisition and transmission module is taken from the T24 range of wireless telemetry products and offers extremely low power consumption and a range of up to 120m. The superb power supply control capability of the T24 acquisition modules allows you to achieve a battery life of 650 hours / 27 days based on continuous use at a transmission rate of 1 per second. Reduce the transmission rate to 1 per minute and you'll be looking at a battery life of 1 year!

As the DTDR-F's output is not polled, it is possible to have multiple receiving modules from the T24 range reading the data simultaneously. The T24 range includes handheld indicators, analogue output modules, printers, relay modules and even USB base stations with software to read and log data onto a PC.

One existing installation of the DTDR-F features a scaled 4-20mA signal being fed into a PLC via the T24-AO1i analogue output module whilst plant engineers can take torque readings on demand from anywhere nearby using a T24-HS handheld digital indicator.

The DTDR-F can also be used for dynamic torque measurement applications if fitted with the high speed T24-SAf acquisition module, which increases the output bandwidth to 2kHz (2000 readings per second).

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