



8 Channel Shaft-End Telemetry System for Temperature Measurement

8ch. telemetry transmitter with integrated sensor connector interface

A new telemetry system for precise temperature measurement on high-speed rotating shafts is now available from datatel. Individual wireless "Telemetry Slipring" solutions for centerline installations, replacing conventional instrumentation sliprings on high-speed test facilities can now be designed. Typical applications are testing of heavy-duty turbochargers or centrifugal compressors, spin testers, crank shafts, bearing and seal test rigs, electric motors or any other application with an accessible rotor shaft end. The compact telemetry unit is attached directly to the test stand's rotor shaft and does not require any complicated bearing assembly or lubrication as usually needed for traditional sliprings.

Due to the wireless data and power transmission the system is free of wear and makes it suitable for continuous long-term operation in high-speed applications. The power coil/antenna system is an integral part of the transmitter module and no connection to any external component is required.

The multi-channel telemetry system reads 8 thermocouples with high accuracy and reliability and transmits the data from the rotor to a stationary receiving unit. The receiver unit provides the measured temperature data to any external data acquisition system. Special signal conditioning accepts both grounded and ungrounded thermocouples. Alternatively a version for measurements with RTDs is available.

Open or shorted thermocouples are automatically detected. Programmable gain, signal conditioning and optional transmitter temperature monitoring is built in. A special sensor connection interface makes the installation and hookup easy. This feature enables the system to be swapped in a few minutes from one instrumented test item to another. The turn-key system guarantees user friendly commissioning.

- Reliable temperature testing on high-speed shafts up to 80.000 rpm
- Replacement for traditional instrumentation sliprings
- Turnkey solution for easy installation and commissioning
- Data transmission by wireless telemetry
- Maintenance-free inductive power supply
- High accuracy and signal quality
- 8 Thermocouple inputs
- Grounded and ungrounded thermocouples can be used
- Thermocouple "open" detection
- Optional T/C linearization and TX internal temperature monitoring
- Alternatively 8 RTD inputs available (PT100, 4-wire hookup)
- Sensor connector interface for quick and easy connection/disconnection to the test item