



Torque Measurement in Automotive Transmissions

Instrumented transmission shaft with telemetry and strain gages

datatel provides interesting solutions for reliable torque measurement in automotive transmissions. A compact, ring-shaped single channel telemetry transmitter, only 6mm thick, is mounted on the transmission shaft. The strain gages can be connected directly to the transmitter signal input. The measuring range is individually adjustable.

Systems are available for different shaft diameters, eg. for applications in passenger cars or heavy trucks. A typical application is torque measurement between the engine and transmission, directly on the input shaft. The electronics is completely sealed and can be operated in oily environment. The max. operating temperature limit is +125°C. The telemetry system features a remote controlled shunt calibration option. This allows an online check of the complete measuring chain at any time during the test even with the system installed inside the transmission

For long term testing on test tracks, or on test stand applications, the telemetry system can be powered by an inductive power supply which guarantees maintenance-free and wear-free durable operation. The inductive coil/antenna system can be adapted to the mechanical requirements of the individual transmission even if space is limited.

The measured torque data is transmitted via the coil/antenna assembly to a receiver unit inside the vehicle and can be recorded by any standard data acquisition system.

- State-of-the-art torque measurement in automotive transmissions with limited space
- Suitable for test stands or test track application
- Wireless transmission of measured data via telemetry High accuracy and signal quality
- Direct connection of strain gage full bridge
- Integrated strain gage shunt calibration
- Signal bandwidth 5kHz (-3dB)
- Operating temperature -10 to +85°C or -40 to +125°C optional
- Compact, ring-shaped telemetry transmitter
- Easy to install and easy to set-up
- Contactless inductive power supply