



## Engine Torque Measurement in Flex Plates

Instrumented Flex Plate with telemetry and strain gages

Accurate engine torque measurement has become increasingly important for powertrain and vehicle system design and development. datatel provides an effective turnkey solution for engine torque measurement using the engine's original flex plate. No mechanical modifications are needed on the test engine. A compact single channel telemetry transmitter is adapted to the test unit. For torque sensing strain gages are applied to the flex plate assembly. The strain gages are connected directly to the transmitter signal input. The measuring range is individually adjustable.

Very slim transmitter modules are available to meet individual installation requirements with extreme space limitation. The transmitter is attached to the flex plate with custom designed carrier devices. The electronics is completely sealed and can be operated in an oily environment. The max. operating temperature limit is +125°C.

For long term testing on engine dynamometers, or for in-vehicle applications, the telemetry system is 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 engine even if space is limited.

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

- State-of-the-art engine torque measurement in flex plates
- Suitable for engine dynamometer or in-vehicle applications
- No mechanical modification required on test engine
- Wireless transmission of measured data via telemetry
- High accuracy and signal quality
- Direct connection of strain gage full bridge
- Integrated strain gage shunt calibration option
- Signal bandwidth DC..5kHz (-3dB)
- Operating temperature -10 to +85°C or -40 to +125°C optional
- Easy to install and easy to set-up
- Contactless inductive power supply