



Torque Measurement in A/C Compressors

Instrumented A/C Compressor pulley with telemetry and strain gages

datatel provides an effective turnkey solution for torque measurement in automotive A/C compressors, eg. to perform efficiency tests. A compact single channel telemetry transmitter is adapted on the shaft end or to the compressor clutch assembly. Strain gages can be connected directly to the transmitter signal input. The measuring range is individually adjustable.

Various transmitters are available for different installation requirements. Transmitter modules can be supplied with or without center line hole for an optimized mounting on different types of compressors. 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 test tracks, or on test stand 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 compressors even if space is limited. Especially if the system is integrated into the test vehicle's engine compartment (test track or climatic chamber operation) space can be a problem and a slim design is required.

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 inside the vehicle and can be recorded by any standard data acquisition system.

- State-of-the-art torque measurement in automotive A/C compressors 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 telemetry transmitters
- Easy to install and easy to set-up
- Contactless inductive power supply