

# Torque Sensors

For Test, Measurement, Research & Development

## Typical Applications

- Bearing Friction
- Brake Testing
- Electric Motors
- Engine & Chassis Dynamometer
- Fan & Blower Testing
- Gearbox Efficiency
- Hydraulic Pumps & Motors
- Pump Testing
- Stepper Motor Switch Torque
- Torsion Testing
- Transmission Development & Testing
- Viscosity & Lubrication Studies



## Torque Sensors

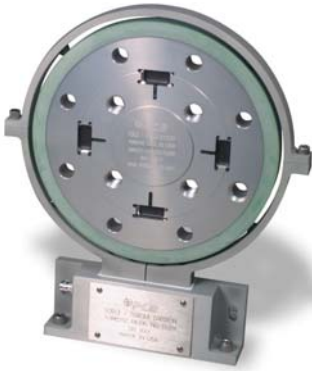
PCB® offers an extensive range of strain-gage torque sensors for test, measurement, monitoring, and research & development applications. Both rotary torque and reaction torque measurements are accommodated with a variety of sensor configurations. Whether it's an automotive dynamometer test or a hydraulic pump end-of-line quality assurance check, we can help, with sensors standard or custom designed for your specific application.

### **Features and benefits of rotary transformer and digital telemetry signal transmission.**

*A primary challenge for rotary torque sensors is transferring the measurement signal from the rotating portion to the stationary portion of the sensor. Two techniques are used by PCB® for rotary torque sensor signal transmission – rotary transformer and digital telemetry. The rotary transformer is a non-contacting technique providing low maintenance and quiet operation. Digital telemetry offers noise-free operation and smaller size. For installations where space is a premium, the TORKDISC®, with digital telemetry, provides a shorter coupled installation.*

## Rotary Torque Sensors

- Choice of digital telemetry or non-contact rotary transformer signal transmission
- Tests rotating items such as drive shafts, motors, pumps & dynamometers



### **Series 5300 TORKDISC®**

- 16-bit digital telemetry style
- Compact & lightweight
- Capacities from 1000 to 225k in-lb (113 to 25.4k N-m)
- Combined accuracy to 0.1% FSO
- Flange mount
- Immune to RF interference



### **Series 4100**

- Rotary transformer style
- Capacities from 50 in-oz to 100k in-lb (0.35 to 11.3k N-m)
- Combined accuracies to 0.07% FSO
- Keyed shaft versions



### **Series 4115K**

- Rotary transformer style
- Capacities from 50 to 10k in-lb (5.6 to 1130 N-m)
- Combined accuracies to 0.07% FSO
- Splined shaft-flange combinations
- AND 10262 & 20002

## Reaction Torque Sensors

- Conduct friction & viscosity studies
- No moving parts
- Responds to torsional loads
- Test braking systems



### **Series 2300**

- Capacities from 5 to 500k in-lb (0.56 to 56.5k N-m)

## Signal Conditioners

- Provides required carrier based sensor excitation
- Recommended for use with PCB® Series 4100, 4115K & 4200 rotary transformer torque sensors
- When used with PCB® sensors, offers a complete NIST traceable torque measurement system, pre-calibrated to sensor requirements.



### **Series 8120**

- AC bridge excitation
- ± 5 V analog output
- Shunt calibration
- 4-1/2 digit LED display
- Optional ± 10 V & 4-20 mA outputs
- Optional HI-LO set points & peak holds