

# RT100D Prop & CV Shaft Torque Measurement System



## All Weather, Non-Contacting Measurement of Torque on FWD, RWD, and AWD Test Vehicles

### Key Features

- All weather operation
- No batteries or slip rings
- Remote shunt calibration
- Digital data transfer for a clean signal
- Scalable analog output
- Custom form factors available
- Temperature compensated output
- NIST traceable turnkey installation with 0.5% F.S. accuracy
- Non-critical antenna placement ( $\pm 0.75$  inches)
- Light weight collar does not present balance problems
- Racing and dynamometer units available

The RT100D allows the user to obtain an accurate and responsive torque measurement from a variety of prop and CV shaft designs without modifying the existing powertrain. The RT100D eliminates the need to weld or “cut in” heavy, in-line torque sensors that drastically effect the torsional dynamics and critical speed of a drive shaft. Inductive power is supplied across a generous air gap for reliable all-weather performance.

### Specifications

#### RT100D Rotating Electronics (Collar)

Torque capacity	Dependent on shaft size, typically $\pm 2k - 5k$ ft-lbs
Calibration range	0-6000 ft-lbs (8100 Nm)
Operating temperature range	-40 to +85C, -40 to +120C available
Physical size	Collar projects 0.50" from shaft diameter, with 5.25" axial length
Environmental concerns	Completely weatherproof
Maximum speed	5500 RPM (consult factory for higher speeds)

#### Stationary Electronics

Combined accuracy	0.5% FS NIST Traceable
Output signal	0+/-5, 0+/-10 V (scalable)
Sample rate	27,000 s/s
System frequency response	2, 20, 200 or 2000 Hz (-3dB, user selectable)
Input power requirements	9 to 15 VDC, 0.8 amp (1.8 amp startup surge)
Operating temperature range	0 to +50C
Physical size	7.0"W x 10.5" D x 3.0" H

### Applications

- Transmission development
- Engine development
- Powertrain torque monitoring
- Traction control
- Customer-use testing
- Racing vehicles tuning