ATi 2100/3100 SERIES Digital Radio Telemetry System



Wireless, Digital Torque Sensing System

The Efficient Solution for Rotating Measurements

FEATURES

- Torque Sensing System available in Disk, Spline, or Flange Mounting
- Dual Range Option available
- High Speed Operation with no lubrication up to 50,000 RPM
- Truly Non-Contact no bearings or foot mounting
- Short sensor length minimizes Coupling Accuracy Requirements
- > Available for most any size shaft
- Eliminates Frictional Error due to bearings
- High Torsional Stiffness
- > No Slip Ring Noise or Maintenance



ATi Model 2140DR Dual Range Disk Torque Sensor with 2132i Induction Power Antenna and 2125iD Receiver

Wireless Torque Sensor System Provides Real Time Data

The ATi 2100 Series Digital Wireless Torque Sensor Telemetry Systems are utilized in applications where conventional rotary torque transducers are not practical due to excessive shaft speeds, vibration, and dirty, oily environments. These factors pose major problems for conventional foot-mounted rotary torque transducers' bearings and slip rings.

Highly Reliable and Durable. Digital RF Telemetry is used for data transfer while Induction Power is used for power transfer to the rotating sensor. These technologies permit excessive movement between the rotating sensor and stationary loop antenna with no ill effect on the signal quality – minimal alignment between the stationary and rotating components is required.

Dual Range Option. This option provides two full scale ranges and permits the user to select

a second range (dynamic) which can be up to 10% of the higher range.

Immune to the Environment. The Digital RF Telemetry and Induction Power are also immune to dust and oil build-up, unlike Infrared Torque Sensors which are sensitive to not only dirt build-up but shaft movements as well.



Anyone who has struggled with an old-fashioned infrared keyless remote entry system for a vehicle will understand why all major automobile manufacturers have switched to RF technology – no pointing or aiming is required.

Model 2140 FS torque Sensor Shown with Antenna/IPS

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Features and Specifications

System

Full Range channel up to 6400 samples/sec (standard).....DC - 1250 Hz (-3db) Low Range channel up to 8800 samples/sec (with dual range system)10 - 2000 Hz (-3db) (Low Range channel is available AC or DC coupled)

Integral Non-Linearity..... \pm 0.10% Repeatability.... \pm 0.05%

Maximum Error(Normal range) <0.15% Full Scale

(Low range)<0.50% Full Scale High Accuracy Option 0.02% Full Scale

Model 2132i Stationary Power Antenna with Induction Power Supply (IPS)

Model 2125i or 2125i-2 Receiver

Power12 VDC or 7	110 VAC (others available)
Outputs 0-2, 5,	10 VDC; ±2, ±5, ±10 VDC
	(4-20 mA Optional)
Display Digital	Multi-function Backlit LCD
Output Ripple	< 2 mV
Size	8.0"L x 5.0"W x 3.48"H
Operating Tempe	rature20 to 80°C

Additional Features



ATi Model 2140F High Speed Torque Sensor

Model 2140D Torque Sensor

Remote Calibration:	Pressing a button on the Receiver's front panel places the Transmitter in CAL mode for approximately 15 seconds. This causes a Shunt Calibration resistor to be connected to one leg of the bridge simulating a known load.
Dual Range Torque Sensing:	This option provides two full scale ranges and permits the user to select a second range (dynamic) which can be up to 10% of the higher range.
Torsional Vibration Sensors:	Accelerometer based torsional vibration sensing is available as an option. This feature can be used simultaneously with the torque sensor.

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Applications

Turn-key systems are available!

Send us your shaft or component and we will instrument it, install the telemetry components, calibrate it, and ship it back to you with a NIST traceable Certificate of Calibration.



Tractor Transmission



Custom Automotive Torque Sensor with Torque, RPM and Horsepower Display



ATi Standard Flanged Torque Sensor



Standard Single Range Disk Torque Sensor



Custom Miniaturized Torque and Thrust Sensor



Dynamometer Torque Sensor

ATi Serves Almost Every Industry Around the Globe!



Solve your telemetry problems today. Have ATi build a standard or custom Telemetry System for your application.