ATi 2000i SERIES
Radio Telemetry System

HALF-SHAFT TELEMETRY SYSTEM

THE EFFICIENT SOLUTION FOR ROTATING MEASUREMENTS

Miniature Half-Shaft Transmitter Collar (attached to shaft) shown with 2025iR Receiver

System Converts Half-Shaft into Rotating Torque Sensor

(suitable also for axle shafts)

The 2010i-XCL Miniature Half-Shaft Telemetry Collar transmits torque signals from rotating shafts to a stationary receiver. It connects directly to strain gages adhered to the shaft converting it to a torque sensor, allowing it to transmit shaft torque ***while the vehicle is operating***. This system is a testing tool used by automotive and racing engineers to obtain real-time torque measurements from vehicle drivelines. The system can be installed on most any size shaft and is completely field installable by the user.

Made from two-piece Fiberglass composites, there are no mechanical parts to wear out as found in slip rings making it lightweight and maintenance free. Requires **only 0.50" clearance** allowing it to be placed almost anywhere on the shaft.

Power is supplied to the Telemetry Collar inductively through a stationary loop adapter for continuous, uninterrupted operation. The Model 2025i-R Receiver features an integral induction power supply, built-in speaker and a digital backlit LCD display which can be scaled to read out in Engineering units. The receiver can be powered from 12 VDC or 120 VAC and provides an analog output signal representative of the measurement for use in almost any data acquisition system.

FEATURES

- Transmits Sensor Signals via Radio Transmitter to a Stationary Receiver.
- **No Shaft Modifications required**; Collars available for most any shaft size.
- Split Transmitter Collar clamps directly to half-shaft or axle shafts. Contains embedded transmitting antenna.
- No Slip Rings or moving parts.
- Quick and easy user installation.
- Eliminates Cumbersome Slip Ring Installation.

Turn-key systems available.

- Send us a shaft and we will instrument it for you. NIST traceable calibration supplied.

Advanced Telemetrics International
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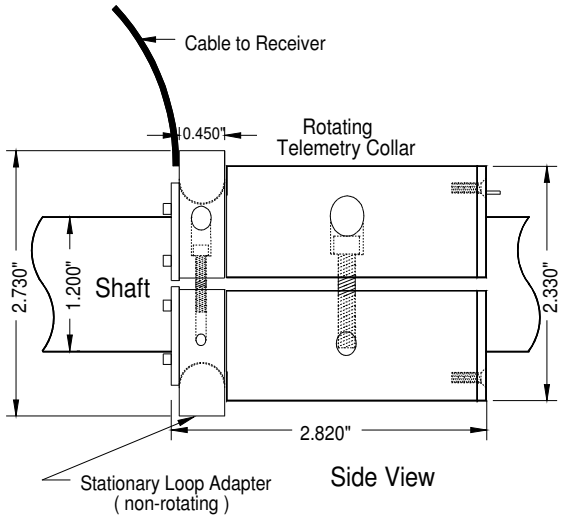
SPECIFICATIONS

SYSTEM

Bandwidth: Wide Band ..... DC to 1100 Hz
Filtered ..... DC to 100 Hz
Integral Non-Linearity ..... ±0.10%
Repeatability ..... ±0.05%
Maximum Error ..... < 0.25% Full Scale



RECEIVER: Model 2025i-R

Power ..... 120 Volts AC
and 12 Volts DC
Output ..... 0-2, 5, 10; ± 2, 5, 10 VDC;
..... (0-20, 4-20 mA Optional)
Display ..... 3½ Digit Backlit LCD
Output Ripple ..... < 2 mV (Filtered)
< 15 mV (Wide band)
Size ..... 8.0"L x 5.0"W x 3.48"H

MINIATURE TRANSMITTER COLLAR:

Requires only 0.500" clearance!

Power ..... 500KHz Induction Power
Zero Drift ..... .02% / ºC
Span Drift ..... .02% / ºC
Operating Temperature Range .... -40 ºC to 140ºC

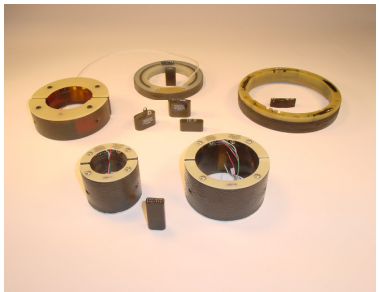
Model	Transmitter Type	Input	Excitation
2040BC-M	Strain Gage	4 arm Wheatstone Bridge (>120 ohms)	5 Volts DC
2041BC-M	Voltage	± 50 mV to 10 Volts Full Scale	5 Volts DC
2042BC-M	Thermocouple	Type J or K Thermocouples, Specify Measurement Range	--
2043BC-M	Acceleration	Compatible with most ICP type accelerometers	1mA constant current

☑ **Remote Calibration Option:** Terminals provided on top of Transmitter for mounting shunt calibration resistor. Positive and Negative Cal buttons on the front panel of the Receiver cause Transmitter's shunt cal resistor to be connected to the appropriate leg of the bridge for 15 seconds.

☑ Included with the system is the Stationary Loop Adapter, a non-rotating slip collar which clamps over the backside of the rotating collar.

☑ Systems available, which incorporate removable Transmitters (shown below).

Custom Collars available for most any shaft size. Multiple transmitters can be housed in one collar. (Refer to 2010B specification sheet for further information.)



Multi-channel Receivers available when multiple torque measurements are required; such as with 4-wheel drive vehicles.

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