AT-7000 Series Multi-channel Digital Telemetry

Multi-channel rotor telemetry

Applications

General purpose rotating shaft sensor applications where multiple channels are needed:

- Motor temperature monitoring
- Field voltage and currents on brushless designs
- Multichannel strain measurement
- ICP/IEPE accelerometer measurement
- Ground fault leakage current
- Torsional vibration

Highlights

- Dependable wireless replacement for sliprings
- Sensor data is measure and digitized on the rotor
- Modular construction allows for a variety of sensors to be monitored
- Rugged construction for high G force applications
- EMI resistant digital data
- Adaptable to RTD, thermocouple, strain gage, accelerometer, pressure sensor, and voltage inputs
- Induction powered (no batteries) for continuous use
- Custom solutions for specific combinations of sensors
- Robust split clamp collar, with standardized transmitter modules (other designs available)
- High accuracy and data integrity, with 12 bit digital resolution and anti-alias filtering on the rotor
- Wide selection of gains and bandwidths
- On the fly shunt calibration
- Analog and digital system data outputs

The Accumetrics AT–7000 Series Multichannel Telemetry System allows machine designers and maintenance personnel to measure exactly what is happening on the rotating components of their equipment while it is in operation --without the need for slip rings. The system can combine any customized mix of ordinary sensors: strain gages, thermocouples, RTDs, accelerometers, as well as motor/generator field voltages, currents and ground fault currents. The received data is continuously streamed to the user as analog (+/- 10V or 4/20mA) or digital data.

Overview:

Sensor signals are amplified, anti-alias filtered and 12 bit digitized while on the rotor. A data stream of digital data is wirelessly transferred off rotor by close proximity RF transformer coils (no rotation is needed). The digital data streams are carried by a coaxial cable to the remote receiver for digital output or conversion to analog voltage (+/- 10V typically). Software may be provided for control and data archiving of thermocouple data.

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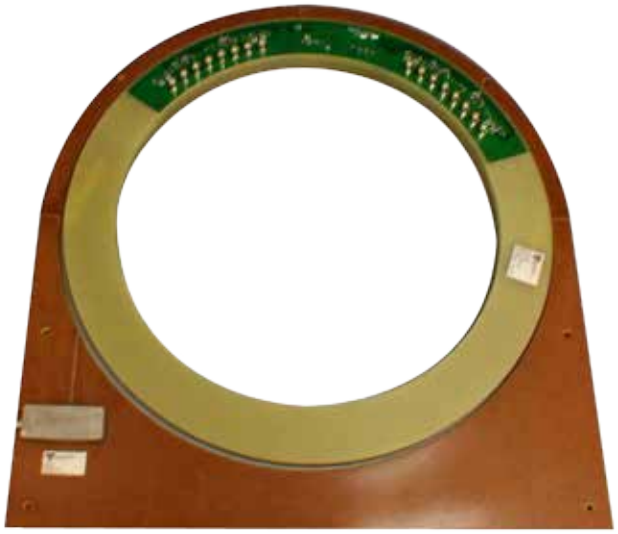

Split clamp-collar transmitter, multiple modules, epoxy-glass (G10) construction, and stationary loop coil

Receiver in NEMA enclosure

Receiver in rack mount enclosure

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About Accumetrics:

Accumetrics Inc., was founded in 1992, and became a part of the PCB Group in 2013. The company designs and assembles digital telemetry systems that transmit sensor data from rotating structures using wireless techniques, preserving the integrity of the data even in environments with high levels of electromagnetic interference.

We can provide a range of solutions from single channel products, such as strain gage torque measurements, to advanced multichannel systems that transmit data from hundreds of sensors.

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