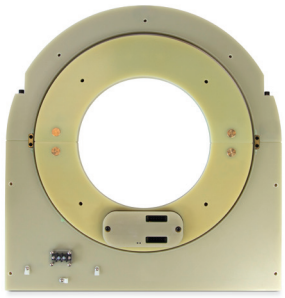
ACCUMETRICS
AN AMPHENOL COMPANY



MODEL **AT-7800**

MULTI-CHANNEL DIGITAL TELEMETRY

- Transmit shaft measurements wirelessly without slip rings or batteries
- Measure and report data from sensors such as strain gages, RTDs, accelerometers, thermocouples, and more
- Durable solid composite mounting structure
- High dynamic range, up to 100 dB FS
- Configurable analog output

TYPICAL APPLICATIONS

- Roller mill monitoring
- Large machine vibration analysis
- Stress and strain monitoring
- Mechanical design verification
- Naval applications

HIGH PERFORMANCE ROTOR TELEMETRY

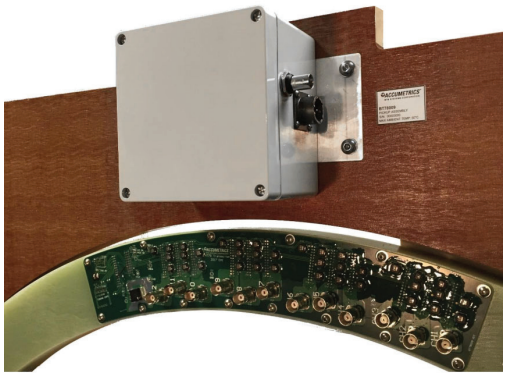
The Multi-Channel Telemetry Systems Series AT-7800 from Accumetrics delivers 18-bit, high dynamic range customized measurement data from rotating shafts. These systems capture signals from various sensors mounted on rotor components within large rotating machinery. Commonly used sensors include strain gages, RTDs, accelerometers, and thermocouples, though the system can be adapted to accommodate a wide range of other sensors. The Multi-Channel Digital Telemetry System continuously digitizes these sensor signals and transmits them off the rotor using advanced wireless digital telemetry technology.

The AT-7800 systems are tailored to meet the specific needs of each application. The number and types of sensors can vary, and the packaging configuration is customized to best fit the machinery into which it is installed, according to customer requirements.

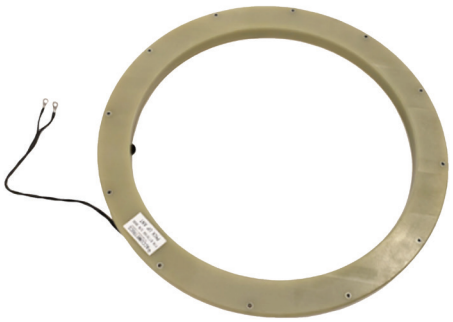
Accumetrics telemetry systems utilize wireless power and digital data communication to provide a robust solution for virtually any rotor instrumentation application. These systems operate independently of rotor position and speed. The absence of mechanically wearable parts ensures long-lasting performance, even under significant centrifugal loading and harsh environmental conditions.

SPECIFICATIONS		
Transmitter	**ICP Accelerometer**	**Strain Guage**
Channel Count	1 to 24+ [1]	
ADC Resolution	18-bit	
Bandwidth	Configurable from 180 Hz to ~84% Nyquist upon request	
Example Sample Rates (Channel Count)	5.16 kHz (12), 7.3 kHz (8), 12.3 kHz (4), 18.8 kHz (2) [2]	
Latency	< 50 ms	< 50 ms
Excitation Current	4mA	n/a
Excitation Voltage / Compliance	20-24 VDC	5-20 VDC
Accuracy	n/a	< 0.4% FS
Dynamic Range	100 dB	> 85 dB
Filtering	High-pass shelving filter, linear phase digital lowpass	Linear phase digital lowpass
Environmental		
Transmitter Temperature Range (Operating)	14 °F to +176 °F (-10 °C to 80 °C)	
IPS and Receiver Temperature Range (Operating)	14 °F to +140 °F (-10 °C to 50 °C)	
Temperature Range (Storage)	-40 °F to +176 °F (-40 °C to 80 °C)	
Mechanical		
Housing Material	G10 composite transmitter, steel and aluminum 19-inch rack	
Transmitter Size (length x width x height)	Custom, based on customer needs	
Receiver Size	4U tall rack mount, 15.55 in (39.5 cm) deep	
Receiver Weight	20 lbs (9 kg)	
Electrical Connector (input, sensor)	BNC Jacks	Multi pin connector
Electrical Connector (output, device)	BNC Jacks	BNC Jacks

[1] Channel count and configuration is configurable upon customer request
[2] Actual sample rates are higher due to oversampling for digital antialiasing and reconstruction filters



Tuning Enclosure



Antenna Pick Up

Receiver

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