

Clamping Battery Telemetry

Model CBT

- Clamps to any shaft 25 mm or larger
- Small Package
- 2 strain gauge bridge channels
- Up to 48 hours of battery life
- Lightweight rugged IP67 housing
- Digital 2.4 GHz RF link for reliable transmission without interference or spikes
- Programmable gain



Description

The Michigan Scientific Clamping Battery Telemetry (CBT) is a wireless, battery powered, signal transmitter for strain gages that easily mounts to shafts with a minimum diameter of 25mm or larger, making it ideal for shaft mounting and very versatile. The Michigan Scientific Telemetry provides reliable signal transmission without interference or signal spikes. The CBT can conveniently be strapped to any shaft with load rated plastic zip ties, steel banding, or hose clamps. The CBT provides excitation and signal conditioning to the strain gages, then digitally transmits the signals via RF in the 2.4 GHz broadcast frequency range. For higher speed shafts when shaft balancing is required a counter weight can be purchased and should be mounted 180 degrees opposite the CBT. The CBT is a small rugged housing and is designed for hostile environments.

Specifications

	CBT - 320
RF Frequency Range	2.4 GHz
Channel Type	Strain Gauge, Full Bridge, 350 Ω or higher
Channel Count	2
Battery Type	Two 18650 Rechargeable lithium batteries
Continuous Battery Life	48 hours for 1 strain gauge bridge. 36 hours for two strain gauge bridges
Weight	140 grams (235 grams with batteries installed)
Gain Type	Programmable gain via USB
Input Type	0.1 to 10 mV/V
Shunt Resistor	Fixed 100 k Ω standard, other shunt resistor values available
Typical Broadcast Distance	1-2 meters, line of sight
Channel Sampling Rate	3 kHz
Signal Output	\pm 10 Volt Analog
System Resolution	12 Bit
Operating Temperature	-20°C to +50°C (battery temperature limit)
Power Requirement	9 to 36 VDC, 4.5 Watts
Total System Delay	<670 μ s
RF Channels Available	16

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Rev. A

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