

TorqueTrak 9000 Torque Telemetry System

SPECIFICATIONS

BT9000 Transmitter

Sensor Input: Full (four-arm) Wheatstone Bridge strain gage (350Ω standard)
Bridge Input: 5.0 VDC, Regulated
Sensor Range: User selectable per chart below (chart based on gage factor = 2.0):

Transmitter Gain Level	Transmitter Gain	Full Bridge 4 Active Arms (Torque or Bending)	Full Bridge 2.6 Active Arms (Tension or Compression)	1/4 Bridge 1 Active Arm (Single Gage)
6	8000	±125 microstrain	±192 microstrain	±500 microstrain
5	4000	±250 microstrain	±385 microstrain	±1000 microstrain
4	2000	±500 microstrain	±769 microstrain	±2000 microstrain
3	1000	±1000 microstrain	±1538 microstrain	±4000 microstrain
2	500	±2000 microstrain	±3077 microstrain	±8000 microstrain
1	250	±4000 microstrain	±6154 microstrain	±16,000 microstrain
0	125	±8000 microstrain	±12,307 microstrain	±32,000 microstrain

Sensor & Power Connection: Screw terminal block
Transmitter Power Input: 7.5 to 12VDC, 60mA max with 350Ω bridge (9V battery typical)
Transmission Frequency: 903-922 MHz
Transmitter Battery Life: 12 hours (9V lithium, 350Ω bridge, 25°C)
Transmit Distance: 20 feet or more
G-force Rating: 3000 g's (steady state) (e.g. 6500 rpm on a 5 inch diameter shaft)
Operating Temperature: 0 – 70°C (32 – 158°F)
Size and Weight: 1.05" x 1.95" x 0.70" 2 oz

RD9000 Receiver

Receiver Output Signal: ±10 VDC, field adjustable down to ±5 VDC
Receiver Output Connection: 5-way binding posts (banana jacks)
Receiver Power Input: 12VDC nominal (10 - 18VDC acceptable), 250mA max (110VAC or 220VAC adapter provided)
Operating Temperature: 0 – 70°C (32 – 158°F)
Size and Weight: 5.5" x 7.5" x 1.5" 3 lbs

TT9000 System

Resolution: 14 bits (±full scale = 16,384 points)
Gain Error: ±0.1% (±0.5% before scale calibration)
Gain Drift: ±0.02%FS/°C over operating temperature range
Zero Error: ±0.1%FS (±1% typical before activating AutoZero)
Zero Drift: ±0.02%FS/°C over operating temperature range
Frequency Response: 0 - 250 Hz (-3dB max @ 250Hz)
Delay: 5.4 msec, typical
Slew Rate: 6V/msec, typical
Sample Rate: 1276 samples/sec

Specifications subject to change without notice.

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