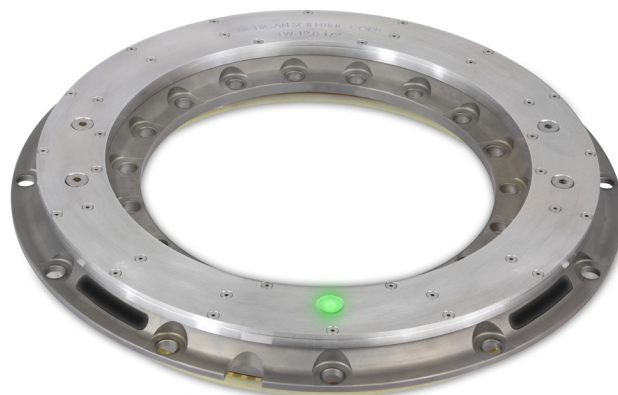


Wheel Force Transducer, 6-Axis, Telemetry

Model LW12.8-50-TEL

- 11,200 lbf (50 kN) radial load capacity
- 5,600 lbf (25 kN) lateral load capacity
- Measures 3 forces and 3 moments
- Wireless telemetry and induction system
- CAN, analog, and Ethernet signal outputs
- Adapts to 14 in and larger wheels
- Low cross axis sensitivity
- Temperature compensated
- Remove wheel without removing electronics
- Tested to SAE J328 fatigue strength standard



Description

The LW12.8-50-TEL Wheel Force Transducer (WFT) is capable of measuring all of the wheel forces and moments on passenger cars and light duty trucks. It provides independent output signals for vertical, lateral, and longitudinal forces as well as camber, steer, and torque moments. It is weatherproof, making it ideal for testing in all weather conditions.

The telemetry and induction powered electronics are packaged into the transducer to create a low profile and durable assembly.

The CT2-TEL Transducer Telemetry Interface Box performs real-time coordinate transformation and crosstalk compensation, and outputs analog, CAN, and Ethernet signals. An embedded webpage allows the user to configure the WFT System.

Specifications

| | |
|---|---|
| Maximum Force Capacity [Fx, Fz] Radial | 11,200 lbf (50 kN) |
| Maximum Force Capacity [Fy] Lateral at Tire Patch | 5,600 lbf (25 kN) |
| Maximum Torque Capacity [Mx, My, Mz] | 4,800 lbf · ft (6.5 kN · m) |
| Sensor | 4 arm strain gauge bridges |
| Nonlinearity [Fx, Fy, Fz, My] | ≤ 0.5 % of full scale output |
| Nonlinearity [Mx, Mz] | ≤ 1.0 % of full scale output |
| Hysteresis | < 1.0 % of full scale output |
| Crosstalk After Compensation | <1.0 % of full scale output |
| Transducer Temperature Range, Operating | -40 °F to 257 °F (-40 °C to 125 °C) |
| CT2-TEL Temperature Range | -5 °F to 140 °F (-20 °C to 60 °C) |
| Mass (Transducer & Telemetry Electronics) | 13.0 lb (6.0 kg) |
| Angular Resolution | 0.25° |
| Transmission Rate of Data | 2,200 Hz |
| Data Bandwidth | 200 Hz (<-0.1 dB) ; 500 Hz (<-1.0 dB) |
| Data Resolution in Engineering Units (16 bit ADC) | 0.4 lbf (1.8 N) ; 0.2 lbf · ft (0.27 N · m) |
| System Delay on Analog Channels | 20.69 ms |
| Anti-Alias Filter Type | Bessel Linear Phase |
| Input Power Requirements | 10–36 Vdc, approx 2.0 A at 13.5 Vdc typical |

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Rev. A

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Wheel Force Transducer, 6-Axis, Telemetry

CT2 Transducer Interface Box

- Performs real-time coordinate transformation and crosstalk compensation
- Easy to use Zero, Shunt Calibration, and Bridge Power Off functions
- Simultaneous analog, CAN, and Ethernet signal outputs
- Embedded webpage enables user to:
 - Change set-up options
 - Move WFT measurement origin
 - View Transducer static values
 - Create .dbc file



Telemetry Stator

- Receives and decodes the telemetry signal from the transducer
- Provides high resolution speed and position signals
- Mounts inboard of the transducer



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