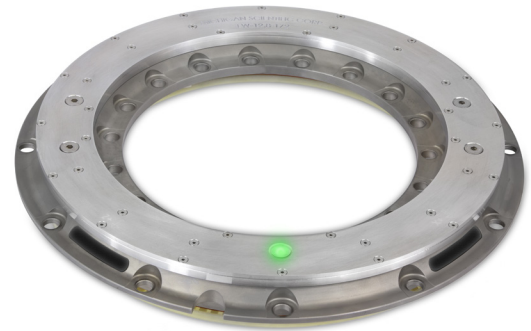


Wheel Force Transducer, 6-Axis, Telemetry

Model LW12.8-60-TEL

- 13,500 lb (60 kN) radial load capacity
- 6,750 lb (30 kN) lateral load capacity
- Measures 3 forces and 3 moments
- Adapts to 14" and larger wheels
- Temperature compensated
- Low profile package
- Tested to SAE J328 fatigue strength standard



Description

The *LW12.8-60-TEL Wheel Force Transducer (WFT)* is capable of measuring all of the wheel forces and moments on passenger cars, heavy SUVs, and commercial vehicles. It provides independent output signals for vertical, lateral, and longitudinal forces as well as camber, steer, and torque moments. High performance SUVs and electric vehicles can generate high camber moment (Mx) loads due to increased weight at a lower center of mass, and large rims with low profile tires. The *LW12.8-60-TEL* has sufficient Mx capacity to test these vehicles to their limits.

The Telemetry and Induction Power electronics are packaged into the transducer to create a low profile and durable assembly. It is completely weatherproof making it ideal for testing in rain or weather conditions.

The *CT2-TEL Transducer Telemetry Interface Box* performs real-time coordinate transformation and cross-talk compensation, and simultaneously outputs analog and CAN signals. An embedded web-page allows the user to configure the WFT system.

Specifications

Maximum Force Capacity, [Fx, Fz] (radial)	13,500 lb (60 kN)
[Fy] (lateral) at Tire Patch	6,750 lb (30 kN)
Maximum Torque Capacity [Mx, My, Mz]	6,600 lb-ft (9 kN-m)
SAE J328 Half Axle Load Rating	2,700 lb (1,225 kg)
SAE J328 Bending Moment on Transducer	6,600 lb-ft (9 kN-m)
Sensor	4 Arm Strain Gauge Bridges
Nonlinearity [Fx, Fz, My]	≤ 0.5% of full scale output
Nonlinearity [Fy, Mx, Mz]	≤ 1.0% of full scale output
Hysteresis [Fx, Fz, My]	≤ 0.5% of full scale output
Hysteresis [Fy, Mx, Mz]	≤ 1.5% of full scale output
Cross Axis Sensitivity After Correction [F→F]	0.5% of full scale output
Cross Axis Sensitivity After Correction [F→M]	1.5% of full scale output
Cross Axis Sensitivity After Correction [M→F]	1.5% of full scale output
Cross Axis Sensitivity After Correction [M→M]	1.0% of full scale output
Transducer Operating Temperature Range	-40°F to 257°F (-40°C to 125°C)
Angular Resolution	0.25°
Transducer & Telemetry Electronics Weight	14.8 lb (6.7 kg)
System IP Rating	IP67

Wheel Force Transducer, 6-Axis, Telemetry

Specifications

Transmission Rate of Data	2,200 Hz
Data Bandwidth	200 Hz (< -0.1 dB) 500 Hz (< -1.0 dB)
Data Resolution (16 bit ADC)	0.4 lb (1.8 N) 0.2 lb-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, 2 A @ 13.5 Vdc Typ

CT2-TEL Transducer Interface Box

- Performs real-time coordinate transformation and cross-talk compensation
- Easy-to-use Zero, Shunt Calibration, and Angle Zero functions
- Simultaneous analog and CAN signal outputs
- CAN sample rates up to 2,048 Hz
- Collect 32 WFT channels from four WFTs at 500 Hz on one CAN bus
- Embedded web page enables user to:
 - Change set-up options
 - Move WFT measurement origin
 - View Transducer static values
 - Create .dbc file



Telemetry Stator

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



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