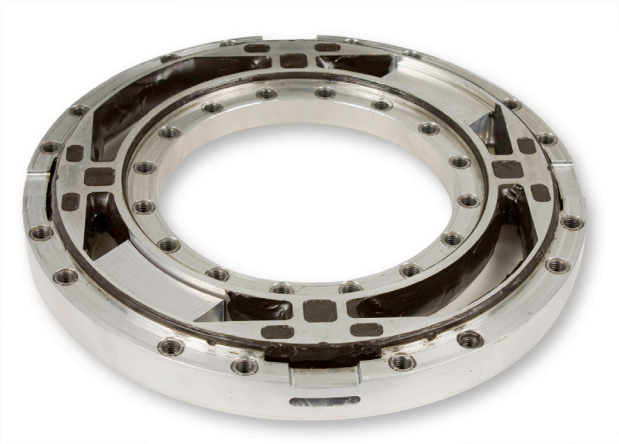
Motorcycle Wheel Force Transducer, 6-Axis

Model LW-MC-3.5K

- 3,500 lb (15.6 kN) radial load capacity
- 1,200 lb (5.3 kN) lateral load capacity
- Measures 3 Forces and 3 Moments
- Wireless Telemetry and Induction System
- CAN, Analog, and Ethernet signal outputs
- Adapts to 11” and larger wheels
- Low cross axis sensitivity
- Temperature compensated
- Remove wheel without removing electronics



Description

The *LW-MC-3.5K Wheel Force Transducer (WFT*) is capable of measuring all of the wheel forces and moments on a motorcycle. It provides independent output signals for vertical, lateral, and longitudinal forces as well as camber, steer, and torque moments. It is completely weatherproof making it ideal for testing in any weather conditions.

The Telemetry electronics, Induction Power electronics, and Magnetic encoder wheel 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 cross-talk compensation, and outputs analog, CAN, and Ethernet signals. An embedded web page allows the user to configure the WFT System.

Specifications

Maximum Force Capacity, [Fx, Fz] Radial	3,500 lb (15.6 kN)
[Fy] Lateral at Tire Patch	1,200 lb (5.3 kN)
Maximum Moments Capacity [Mx, Mz]	1,200 lb-ft (1.6 kN-m)
[My] Wheel Torque	2,500 lb.ft (3.4 kN-m)
Sensor	4 arm strain gage bridges
Nonlinearity	< 1% of full scale output
Hysteresis	≤ 0.5% of full scale output
Cross Axis Sensitivity After Compensation	< 1% of full scale output
Transducer Temperature Range, Operating	-40ºF to 257ºF (-40ºC to 125ºC)
CT2-TEL Temperature Range	-5ºF to 140ºF (-20ºC to 60ºC)
Weight (Transducer & Telemetry Electronics)	5.0 lb (2.25 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	16 bit
System Delay on Analog Channels	20.69 ms
Anti-Alias filter type	Bessel Linear Phase
Input Power Requirements	10–36 VDC, ~2.0 Amps @ 13.5 VDC Typ

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Motorcycle Wheel Force Transducer, 6-Axis

CT2 Transducer Interface Box

- Performs real-time coordinate transformation and cross-talk compensation
- Easy to use Zero, Shunt Calibration, and Bridge Power Off functions
- Provides power to Induction System
- Simultaneous Analog, CAN, & Ethernet signal outputs
- 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 the telemetry signal from the Transducer
- Provides High Resolution Speed & Position Signals
- Mounts outboard of the Transducer

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