Wheel Force Transducer, 6-Axis

Model LW65

- 14,500 lbf (65 kN) radial load capacity
- 7,850 lbf (35 kN) lateral load capacity
- 7,700 lbf · ft (10.5 kN · m) moment capacity
- Measures 3 forces and 3 moments
- Measures X and Z accelerations
- Adapts to 12 in and larger wheels
- Low cross axis sensitivity
- Swappable slip ring or telemetry system for signal transmission

Description

The *LW65 Wheel Force Transducer (WFT)* is capable of measuring all of the wheel forces and moments on passenger cars, SUVs, and light duty trucks. It provides independent output signals for vertical, lateral, and longitudinal forces as well as camber, steer, and torque moments. The *LW65*'s robust IP67 design is ideal for the harshest track and off-road measurements as well as non-spinning applications to monitor and control laboratory test rigs. For spinning applications, the *LW65* offers the convenience of utilizing an outboard slip ring signal transmission or in-board telemetry signal transmission.

When using an outboard slip ring, the amplifier package easily mounts onto the transducer. It amplifies and digitizes the transducer signals before they pass through the slip ring. The amplifier package also includes X and Z acceleration outputs and performs remote shunt calibration of the transducer. Michigan Scientific *Slip Ring Assemblies* are known worldwide for their signal quality and robust design.

The *CT2 Transducer Interface Box* performs real-time coordinate transformation and crosstalk compensation, and provides analog and CAN signal outputs. EtherCAT signal outputs are also available. An embedded webpage allows the user to easily configure the *WFT* system.

Specifications

Maximum Recommended Static Weight [Fz]	2,900 lb (1320 kg)
Maximum Force Capacity [Fx,Fz] (radial)	14,500 lbf (65 kN)
Maximum Force Capacity [Fy] (lateral)	7,850 lbf (35 kN)
Maximum Torque Capcity [Mx, My, Mz]	7,700 lbf · ft (10.5 kN · m)
Accelerometer Range	± 100 g
Nonlinearity [Fy, Mz, Mx]	≤ 0.25 % of full scale output
Nonlinearity [Fz, Fx, My]	≤ 0.2 % of full scale output
Hysteresis	≤ 0.25 % of full scale output
Crosstalk Correction	≤ 0.4 % of full scale output
Temperature Range, Operating	-40 °F to 350 °F (-40 °C to 177 °C)
Angular Resolution	0.17°
Transducer Mass	17.5 lb (7.9 kg)

8500 Ance Road
Charlevoix, MI 49720
Tel: 231-547-5511
Fax: 231-547-7070
09-6-22
Rev. A

MICHIGAN SCIENTIFIC corporation

http://www.michsci.com
Email: mscinfo@michsci.com

321 East Huron Street
Milford, MI 48381
Tel: 248-685-3939
Fax: 248-685-5406

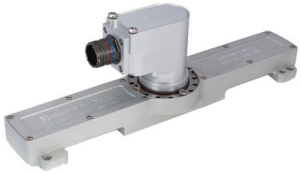
Wheel Force Transducer, 6-Axis

CT2 & CT2-TEL User 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

Amplifier & Slip Ring Package

- Internal ± 100 g X and Z accelerometers
- High resolution optical encoder for position and speed measurement
- Removable smart chip contains all calibration, zero, and shunt values
- Provides signal conditioning, amplification, and digitization to the transducer strain gauge signals



Telemetry Package

- Non-contact signal transmission
- High resolution magnetic encoder for position and speed measurement
- Telemetry Package can be mounted inboard for passenger cars, SUVs, and light duty trucks.
- Telemetry Stator gets mounted in proximity to Rotating Telemetry Ring and contains the Telemetry Receiver, Encoder pick-ups, and Induction Primary Coil.
- CT2-TEL is the User Interface Box as well as Induction Power Supply

8500 Ance Road
Charlevoix, MI 49720
Tel: 231-547-5511
Fax: 231-547-7070

09-6-22
Rev. A

MICHIGAN SCIENTIFIC corporation

http://www.michsci.com
Email: mscinfo@michsci.com

321 East Huron Street
Milford, MI 48381
Tel: 248-685-3939
Fax: 248-685-5406