

Wheel Force Transducer, 6-Axis

Model LW60

- 13,400 lbf (60 kN) radial load capacity
- 7,850 lbf (35 kN) lateral load capacity
- Measures 3 forces and 3 moments
- Measures X, Y, 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 *LW60 Wheel Force Transducer (WFT)* is capable of measuring all of the wheel forces and moments on passenger cars, SUVs, and light trucks. It provides independent output signals for vertical, lateral, and longitudinal forces as well as camber, steer, and torque moments. The *LW60'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 *LW60* 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. Michigan Scientific *Slip Ring Assemblies* are known worldwide for their signal quality and robust design.

The *CT3 User Interface Box* performs real-time coordinate transformation and crosstalk compensation, and provides CAN FD, CAN 2.0, and Ethernet signal outputs. EtherCAT and analog signal outputs are also available with optional modules. An embedded webpage accessed via USB allows the user to easily configure the WFT system. A front display indicates important information and prompts the user with instructions.

Specifications

Maximum Recommended Static Weight [Fz]	2,700 lb (1,225 kg)
Maximum Force Capacity [Fx, Fz] (radial)	13,400 lbf (60 kN)
Maximum Force Capacity [Fy] (lateral)	7,850 lbf (35 kN)
Maximum Torque Capacity [Mx, Mz]	5,900 lbf · ft (8.0 kN · m)
Maximum Torque Capacity [My]	6,650 lbf · ft (9.0 kN · m)
Accelerometer Range	± 100 g
Nonlinearity	≤ 0.25% of full scale output
Hysteresis	≤ 0.25% of full scale output
Cross Axis Sensitivity After 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	12.5 lb (5.7 kg)

8500 Ance Road
Charlevoix, MI 49720
Tel: 231-547-5511
Fax: 231-547-7070
03-18-24
Rev. A

MICHIGAN SCIENTIFIC
corporation
<http://www.michsci.com>
Email: msscinfo@michsci.com

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

Wheel Force Transducer, 6-Axis

CT3 User Interface Box

- Simple Zero, Shunt Calibration Check, and Zero Angle set-up functions
- CAN FD, CAN 2.0, analog, Ethernet, and EtherCAT signal outputs available
- Performs real-time coordinate transformation and crosstalk correction, offset correction, and polarity correction
- Embedded webpage enables user to:
 - Change set-up options
 - Move WFT measurement origin
 - View transducer static values
 - Correct file type creation



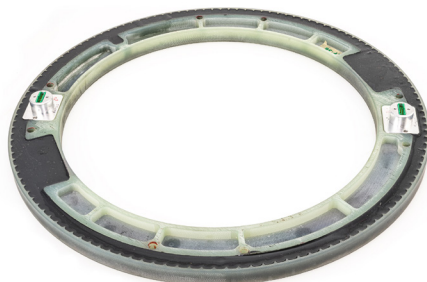
Amplifier & Slip Ring Package

- Internal ± 100 g X, Y, 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 trucks
- Telemetry Stator gets mounted in proximity to Rotating Telemetry Ring and contains the Telemetry Receiver, Encoder pick-ups, and Induction primary coil
- An Induction Module contains the WFT smart chip and provides Induction Power



8500 Ance Road
Charlevoix, MI 49720
Tel: 231-547-5511
Fax: 231-547-7070
03-18-24
Rev. A

MICHIGAN SCIENTIFIC
<http://www.michsci.com>
Email: mcsinfo@michsci.com
corporation

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