

Heavy Duty Wheel Force Transducer System

Models LW-2T-60K-S and LW-2T-100K-S

- Up to 100,000 lbf (445 kN) radial load capacity
- Up to 80,000 lbf · ft (108 kN · m) moment capacity
- Measures 3 forces and 3 moments
- Measures X & Z accelerations
- Measures combined loads of one or two tires
- Adapts to 20 in and larger wheels
- Adapts to 285 mm & 335 mm hub bolt patterns
- Environmentally protected
- Rugged stainless steel construction



Description

The *LW-2T-60K-S* and *LW-2T-100K-S* Wheel Force Transducers (*WFT*) are capable of measuring all of the wheel forces and moments on Class 8 trucks and large off-road vehicles. They provide independent output signals for vertical, lateral, and longitudinal forces as well as camber, steer and torque moments. Completely weatherproof, they are ideal for on-road and off-road measurements in all conditions. Both models can also be used to monitor and control laboratory tests. One *WFT* measures the combined loads for either a dual wheel set or a single tire.

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 correction, 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

	LW-2T-60K-S	LW-2T-100K-S
Maximum Force Capacity [Fx, Fz] (radial)	67,400 lbf (300 kN)	100,000 lbf (445 kN)
Maximum Force Capacity [Fy] (lateral) at Tire Patch	33,700 lbf (150 kN)	50,000 lbf (222 kN)
Maximum Torque Capacity [Mx, My, Mz]	60,000 lbf · ft (81 kN · m)	80,000 lbf · ft (108 kN · m)
Accelerometer Range	± 55 g	
Sensor	4 arm strain gauge bridges	
Nonlinearity	≤ 1 % of full scale output	
Hysteresis	< 0.5 % of full scale output	
Crosstalk after Correction	< 1 % of full scale output	
Temperature Range, Operating	-40 °F to 257 °F (-40 °C to 125 °C)	
Angular Resolution	0.17°	

8500 Ance Road
Charlevoix, MI 49720
Tel: 231-547-5511
Fax: 231-547-7070
03-12-24
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

Heavy Duty Wheel Force Transducer System

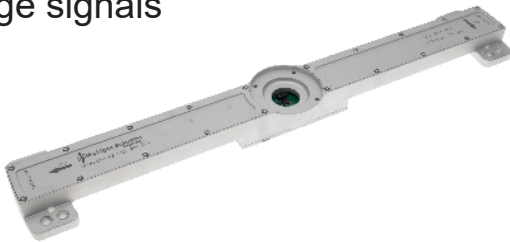
CT3 User Interface Box

- Performs real-time coordinate transformation, cross-talk correction, offset correction, and polarity correction
- Simple Zero, Shunt Calibration Check, and Zero Angle set-up functions
- CAN FD, CAN 2.0, EtherCAT, and analog signal outputs
- Synchronization through IEEE 1588 PTPv2
- Works with both slip ring and telemetry systems
- 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



8500 Ance Road
Charlevoix, MI 49720
Tel: 231-547-5511
Fax: 231-547-7070
03-12-24
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