

# Small Vehicle Wheel Force Transducer, 6-Axis

## Model LW9.5

- 8000 lbf (35 kN) radial load capacity
- 4000 lbf (17.8 kN) lateral load capacity
- Measures 3 forces and 3 moments
- Measures X and Z accelerations
- Adapts to 10 in and larger wheels
- Low cross axis sensitivity
- Environmentally protected
- Temperature compensated
- Rugged stainless steel construction



## Description

The LW9.5 Wheel Force Transducer (WFT) is capable of measuring all of the wheel forces and moments on ATV's, utility and other lightweight vehicles. 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 off-road measurements in all weather conditions. It can also be used to monitor and control laboratory tests.

The matching 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.

The CT2 Transducer Interface Box performs real-time coordinate transformation and crosstalk compensation, and outputs analog, CAN, and ethernet signals. An embedded webpage allows the user to configure the WFT system.

## Specifications

Maximum Force Capacity [Fx, Fz] (radial)	8,000 lbf (35 kN)
Maximum Force Capacity [Fy] (lateral) at Tire Patch	4,000 lbf (17.8 kN)
Maximum Torque Capacity [Mx, My, Mz]	4,000 lbf · ft (5.4 kN · m)
Accelerometer Range	± 55 g
Sensor	4 arm strain gauge bridges
Nonlinearity	≤ 0.25 % 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°

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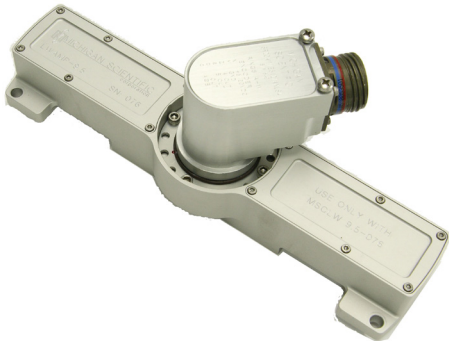
## CT2 Transducer Interface Box

- Performs real-time coordinate transformation and crosstalk compensation
- Easy to use Zero, Shunt Calibration, and Bridge Power Off functions
- Simultaneous analog, CAN, 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 X and Z accelerometers
- High resolution encoder for position and speed measurement
- Internal smart chip contains all calibration, zero, and shunt values
- Provides signal conditioning and amplification to the transducer strain gauge signals
- Digitizes transducer, encoder, and accelerometer signals
- Supports slip ring assembly



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