

High Resolution Truck Torque Wheel

Model TWHR2000

- 2,000 lbf · ft (2.7 kN · m) capacity
- 20,000 lbf · ft (27.0 kN · m) mechanical stop capacity
- Adapts to 22.5 in and larger wheels
- Used to measure rolling resistance, brake drag, bearing drag & aerodynamic drag on highway trucks
- Used for regulatory CO₂ emissions and fuel consumption testing
- Environmentally protected
- Rugged stainless steel construction
- Consistent sensitivity among all units
- Configured to minimize magnetic sensitivity



Description

The Michigan Scientific *TWHR2000 Truck Wheel Torque Transducers* are highly sensitive torque transducers. Ideal for measuring small variations in wheel torque on highway trucks, these units provide one channel of torque data, and are designed to attach to adapters that simulate production wheel rims. The adapter system is fabricated by generating a profile of the original wheel rim. The hub adapter and rim adapter duplicate the critical dimensions of the original rim.

TWHR2000 Truck Wheel Torque Transducers can measure up to 2,000 lbf · ft (2,700 N · m) and resolve down to 1 lbf · ft (1.5 N · m) with an accuracy of 2.3 lbf · ft (3 N · m), or better. Mechanical overload protection allows the transducer to be used under normal driving conditions. Torque and combined steer/camber moment overload ratings of each transducer is 20,000 lbf · ft (27,000 N · m). High grade stainless steel material and weatherproof sealing provide excellent resistance to corrosion and environmental conditions. Temperature compensation ensures that the transducer provides a stable output throughout a wide temperature range.

Specifications

Full Scale Measurable Load	2,000 lbf · ft (2.7 kN · m)
Maximum Torque Capacity	20,000 lbf · ft (27 kN · m)
Maximum Static Weight (Fz)	11,000 lb (5,000 kg)
Rim Size	≥ 22.5 in
Sensor	4 arm strain gauge bridge
Nonlinearity	3 lbf · ft (4 N · m)/0.15 % of full scale output
Crosstalk from vertical load (Fz)	< 0.5 % of full scale output
Hysteresis	0.05 % of full scale output
Temperature Range, Operating	-40 °F to 257 °F (-40 °C to 125 °C)
Excitation Voltage, Maximum	10 Vdc or Vac rms
IP Rating	IP67

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Rev. A

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TWHR2000 System Options

Amplifier & Slip Ring Package

- Easy connection to the transducer and vehicle
- High resolution speed and wheel position signals
- Rotating amplification
- Simple shunt calibration control



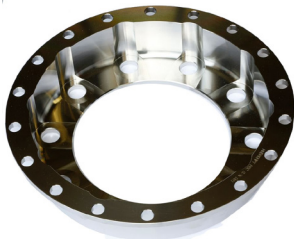
Telemetry Package

- Wireless Solution
- RF Based Telemetry System
- Rotating amplification



Adapters

- Hub Adapter
- Inside Rim Adapter
- Outside Rim Adapter



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