

# Heavy Duty Wheel Load Transducer, 6 Axis

## Model LW-1T-25K

- 25,000 lb (111.2 kN) radial load capacity
- 12,500 lb (55.6 kN) lateral capacity at tire patch
- Measures 3 forces and 3 moments
- Adapts to 22.5 and 24.5 inch wheels
- Low cross axis sensitivity
- Environmentally protected
- Temperature compensated
- Rugged stainless steel construction
- Configured to minimize magnetic sensitivity



### Description

The *LW-1T-25K Wheel Load Transducer* is capable of measuring all of the wheel forces and moments on class 8 trucks. 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 on-road and off-road measurements. It can also be used to monitor and control laboratory tests. Two sensors are required for a dual wheel set, one for each tire.

An amplifier package is available that bolts on to, and rotates with, the *LW-1T-25K Wheel Load Transducer*. The amplifiers provide high level signals and remote electrical calibration.

High grade stainless steel material and weatherproof sealing combine to provide excellent resistance to corrosion and environmental conditions. Temperature compensation of the wheel load transducer ensures stable output throughout a wide temperature range.

### Specifications

Maximum Force Capacity, [Fx, Fz] Radial	25,000 lb	(111.2 kN)
[Fy] Lateral at Tire Patch	12,500 lb	(55.6 kN)
Maximum Torque Capacity, [Mx, My, Mz]	20,000 lb ft	(27.1 kN-m)
Full Scale Output	1 mV/V nominal	
Sensor	4 arm strain gage bridges	
Nonlinearity	Less than 1% of full scale output	
Hysteresis	Less than 1% of full scale output	
Repeatability	Within 1% of full scale output	
Zero Balance prior to installation	Within 2% of rated output	
Cross Axis Sensitivity	<2% of full scale with amplifier	
Temperature Range, Compensated	-40 °F to 200 °F (-40 °C to 93 °C)	
Operating	-40 °F to 257 °F (-40 °C to 125 °C)	
Radial Sensitivity Variation	<1%	
Bridge Resistance	700 to 140 Ω, axis dependent	
Insulation Resistance, Bridge/Case	Exceeds 1000 MΩ	

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

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**MICHIGAN SCIENTIFIC**  
<http://www.michsci.com>  
Email: [mscinfo@michsci.com](mailto:mscinfo@michsci.com)  
**corporation**

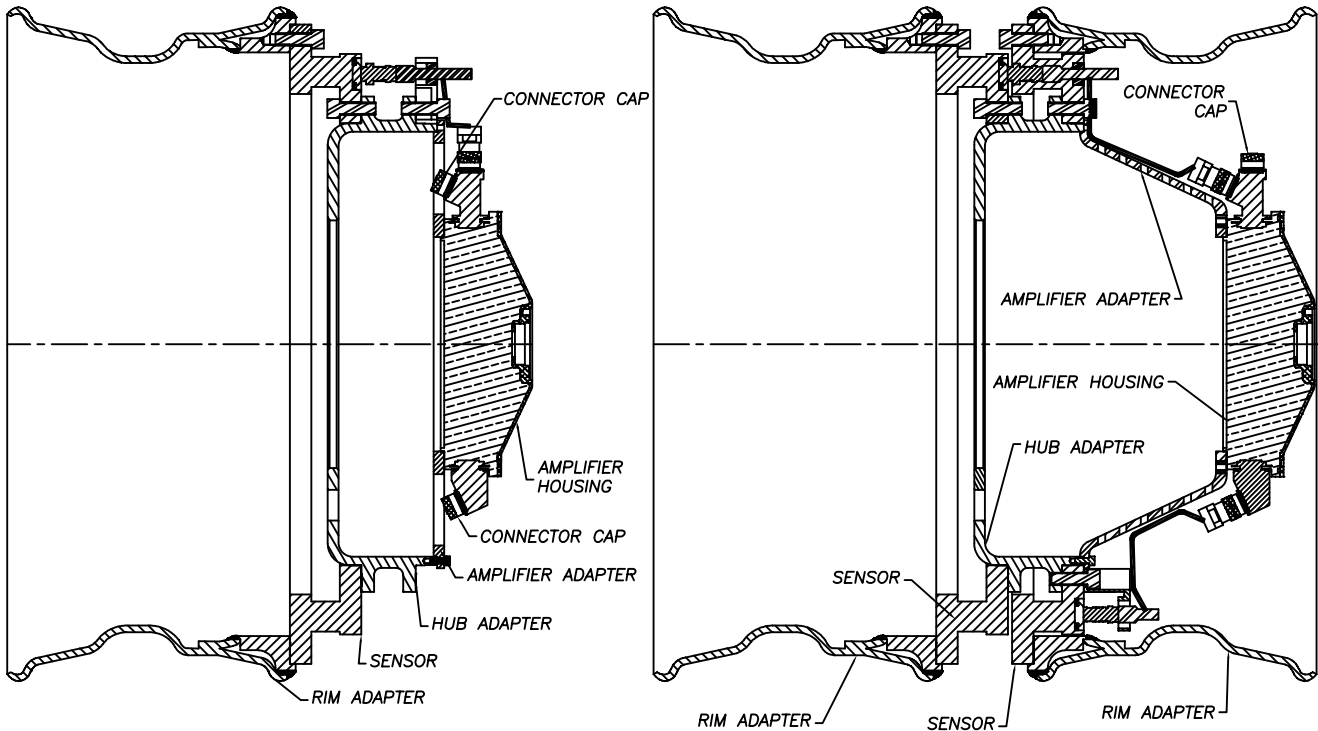
321 East Huron Street  
Milford, MI 48381  
Tel: 248-685-3939  
Fax: 248-684-5406

# Heavy Duty Wheel Load Transducer, 6 Axis

## LW-1T-25K Configuration

SINGLE WHEEL SET-UP

DUAL WHEEL SET-UP



C566053A  
LW-1T-25K  
07/12/2005

## Ordering Options

Custom designs with alternative output sensitivities and load capacities may also be ordered.

Michigan Scientific offers a fully weatherproof slip ring, resolver, and amplifier instrumentation assembly to be used with all wheel torque or load transducers. Refer to the product literature section "Instrumentation Assemblies" for more information.

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<http://www.michsci.com>  
Email: [mscinfo@michsci.com](mailto:mscinfo@michsci.com)  
corporation

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Milford, MI 48381  
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Fax: 248-684-5406