WTT - Compact Wheel Torque Transducer

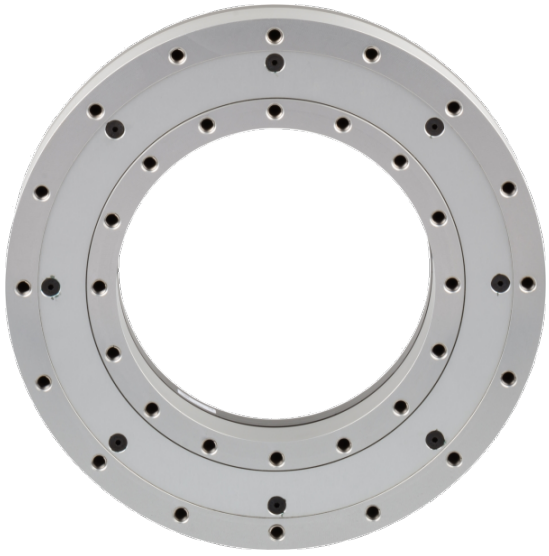
Data Sheet Version 1.0

CAEMAX presents a highly compact wheel torque transducer to measure torque in axial direction at the wheels of road vehicles. The new WTT is not only waterproof (IP 67), but due to its integrated radio telemetry also highly compact. Up to four WTT measurement wheels can be operated synchronously from one receiver unit, creating one synchronous data stream. All of this without wiring or elaborate constructions—and highly fail-safe due to digital data transmission!

Fully differential amplifiers (incl. bridge supply) ensure a maximum of noise suppression.

Due to mechanically induced nonlinearities, accurate calibration for each wheel on a special designed test rig is essential. The in-house CAEMAX calibration test rig has been redesigned to offer optimal calibration.

Highlights



- Measurement of driving and breaking torques
- sealed IP67 (waterproof)
- Transmitter electronics integrated in sensor
- My = 3.000 Nm (4.500 Nm optional)
- Power supply: rechargeable battery (approx. 50 h operating time)
- Working temperature (Sensor): -10°C ... +60°C
- Programmable amplifiers with autozero function
- Convenient parametrization by RemusLAB or web browser
- Telemetry transmitter with analog and CAN output
- Simultaneous recording of up to 4 WTTs

Besides convenient channel parametrization, CAEMAX's data acquisition software RemusLAB offers online display of measurement data in physical units. Measurement data from the WFT can be stored in one file with further measurement data from other sources — synchronously!

Order Code		article number
WT/CMX-WTT-Dx	Wheel Torque Transducer WTT Dx	1380xxx

Technical Specs - WTT

Data Sheet Version 1.0

Wheel Torque Transducer for Road Vehicles		
Parameter	Value	Remarks
Measured Variable	axial torque M_y	
Signal transmission	digital-telemetry	
Measurement range	M_y = ±3000 Nm	optional ±4500 Nm
Bandwidth	max. 1 kHz	
Nonlinerarity	<0.5% of applied load	
Hysteresis	<0.5% FS	
Crosstalk	<0.5% of applied load	
Sensor diameter	300 mm	
Sensor weight	approx. 4.75 kg	(with telemetry unit)
Material of sensor	aluminum	
Min. rim-Ø	13"	
Max. hub-Ø	6" with adapter	
Operating temperature	-10°C to +60°C	
Max. velocity	250 km/h	
Max. acceleration	50 g	
Protection class	IP67 (waterproof)	
Mounting and balancing	free access to wheel bolts	
Power supply	rechargeable battery, approx. 50 hrs operating time	
Autozero	remote control	
Signal output	analog, CAN	