

THE MEASUREMENT SOLUTION.

**burster**



# Quality leading the way

**TO THE BEST SOLUTION FOR YOU - WITH PASSION AND PRECISION  
MEASUREMENT AUTOMOTIVE APPLICATIONS**

[www.burster.com](http://www.burster.com)

## PRECISION TENSION & COMPRESSION LOAD CELL 85SD-F312

### ↳ Motor vehicle suspension testing under continuous load



#### Highlights

- Up to 100 million tension/compression load cycles possible thanks to "fatigue-rated" design
- Redundant measurement using second measurement bridge
- High dynamic performance

#### Benefits

- Measuring ranges from 0 ... 1 kN up to 0 ... 2 MN
- Pull plates and load application components optionally available

Endurance testing involves simulating various load profiles applied to the individual suspension springs. The tension & compression load cell used

in the tests features impressive durability with excellent precision to 0.05 % F.S. even under the toughest environmental conditions.

## PRECISION TENSION & COMPRESSION LOAD CELL 8524 USB MULTISENSOR INTERFACE 9206

### ↳ Force measurements on charging sockets for e-mobility



#### Highlights

- Non-linearity < 0.1 % F.S.
- Overload protection up to 5 times the measuring range
- Measuring range 5 kN

#### Benefits

- Measuring ranges of 0 ... 500 N up to 0 ... 200 kN
- burster TEDS for extra certainty

Even autonomous driving needs some tasks done by hand; for instance charging an electrically powered vehicle. Inserting a charging plug in the charging socket involves overcoming a slight friction force to make sure it engages positively in place. The plug must have a high breaking

strength for safety reasons yet also be comfortable to operate using a small amount of manual strength. The 8524 load cell is ideally suited to integration in a test facility and provides high resolution measurements of the required friction, latching and end-point forces.

## PRECISION TORQUE SENSOR 8661 UNIVERSAL PROCESS CONTROLLER DIGIFORCE® 9307

### ↳ Torque measurements on steering-drive components



#### Highlights

- Measuring range 10 N\*m with a linearity error of 0.05 % F.S.
- Integral angular position sensor with 2000 increments (maximum resolution 0.025°)
- Zero-maintenance contactless construction

#### Benefits

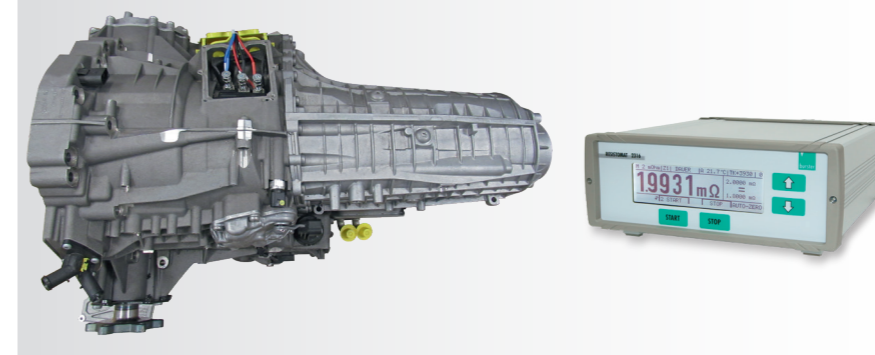
- Analog output or USB version available
- Optionally available as a dual-range sensor

Steering rods, as a safety-related component, must undergo a defined test procedure both in pre-production testing and during the production process. After compression of the bearing, it is tested for low breakaway and friction torques. Torque sensor 8661 with 10 N\*m measuring range

is used featuring a high-resolution angular position output, which is evaluated by a DIGIFORCE® 9307. This process step can be used to prevent admissible component tolerances being exceeded.

## MILIOHMETER RESISTOMAT® 2316

### ↳ Measuring resistances in electric motors for vehicle hybrid drives



#### Highlights

- Resistance measurements in range 30 ... 50 mΩ at 0.03 % of measured value
- Temperature coefficient taken into account
- Protection against high induced voltages

#### Benefits

- Thermal-EMF compensation
- PC port

Very high accuracy is required for measuring the winding resistances of electric motors. It is important that the three windings are symmetrical, and resistance values typically equal around 40 mΩ. In this situation,

care must also be taken to make proper contact with the connecting studs to avoid contact resistances.

## MULTI-AXIS LOAD CELL 8561 INSTRUMENTATION AMPLIFIER 9250

### ↳ Multi-axis force measurement in tire test machines



#### Highlights

- Measuring ranges X: 1500 lbs, Y: 1000 lbs
- Cross-talk < 0.5 % F.S.
- Up to 100 million load cycles

#### Benefits

- Custom measuring ranges available on request
- Standardized rated outputs for easy replacement

Vehicle tire testing places particular demands on our load cells. Measurements must be acquired and analyzed simultaneously in two directions, X and Y, which demands low cross-talk between the two channels. The

other challenge is posed by the very large number of load cycles. In the event of a fault, maintenance staff must be able to replace the sensors quickly and reliably to minimize down times.

## MULTI-CHANNEL MEASUREMENT SYSTEM AUTOLOG 92308/3000

### ↳ Strain measurement using multi-channel measurement system on suspension links



#### Highlights

- Online via Ethernet
- Strain gage rosettes for easy measurements
- 500 MB data storage, with expansion possible via SD memory card

#### Benefits

- Synchronous measurement rate up to 1 kHz/channel
- 2/4/6-wire technology
- Drivers for LabVIEW, DASyLab and DIAdem

New developments in the motor industry involve comprehensive testing of safety-critical components such as control/suspension links. In these tests, strain gages are adhesively bonded to critical locations and readings taken by a high-speed measuring system. Versatile data recording

using the AUTOSOFT software allows comprehensive analysis and post-processing of the measurement data in downstream systems and processes. Practically any number of locations can be measured in this way.



## PEDAL LOAD CELL 8400-B001

### ↳ Measuring pedal actuating forces



#### Highlights

- Non-linearity  $\pm 0.25$  % F.S.
- Low-profile design
- Insensitive to side loads

#### Benefits

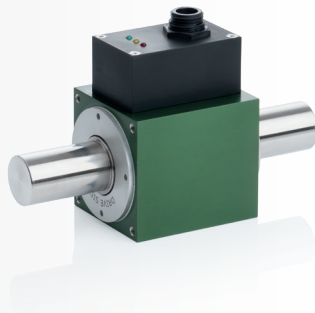
- Measuring ranges of 0 ... 500 N up to 0 ... 2 kN
- IP67 degree of protection

The actuating forces applied to pedals under different operating conditions are measured during test drives on the road and in the driving simulator to obtain a human/machine response profile and to determine the loads exerted on individual components. The sensor used in these

tests has a low-profile design to minimize any impact on the feel of the pedal. It must be designed to be insensitive to side loads over its entire surface, be able to track rapid load changes when using the ABS system, have overload protection and be easy to fit securely.

## PRECISION TORQUE SENSOR 8661

### ↳ Testing the haptic response in vehicle controls



#### Highlights

- Precise measurement of ultra-low torques of up to 1 N\*cm
- High-speed synchronous acquisition of measurement signal
- Ultra-fine angular resolution

#### Benefits

- Measuring ranges from 0 ... 0.02 N\*m up to 0 ... 1000 N\*m
- USB signal transfer and innovative visualization and analysis software

Torque/angle readings are checked continuously during cyclical testing of motor vehicle controls to assess their haptic response when rotated forward and back. The sensor can pick up minimal adjustment torques

and any number of detent positions for analysis by the DigiVision PC software.

# Measuring technology with perspective.

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