

Vibration displacement measurement in road tests

With cars, tests on the running gear form the basic requirements for driving safety. Here sensors are needed which can also withstand the high demands of road tests. As an example, draw-wire sensors are mounted in parallel to the shock absorbers for the vibration displacement measurement and the data is recorded for varying road-surface quality. The displacement signal obtained is differentiated to give the vibration velocity and vibration acceleration.

Measurement system requirements

- Measurement range: Up to 50 mm
- Resolution: 0.1 mm
- Accuracy: 0.2 mm
- Bandwidth: Up to 100 Hz

Ambient conditions

- Temperature: -10 °C to +40 °C
- Medium: air
- Interference fields: none

Reasons for the system selection:

- High accuracy and resolution.
- Economical, rugged miniature version.
- Easy fitting and use.

Systems set up

- 1 x WDS-100-MP-C-P
- or
- 1 x WDS-150-MPM-C-P

