

# WP 300.20

## System for data acquisition



### Learning objectives/experiments

- supported experiments in WP 300
  - ▶ tensile test, compressive test, hardness test according to Brinell, determination of modulus of elasticity during a bending test, shear test
  - ▶ recording of load-extension diagrams respectively stress-strain diagrams
  - ▶ complete test logs according to DIN (tensile and compressive tests)
  - ▶ preparation, display and saving of the data

### Specification

- [1] data acquisition for WP 300
- [2] linear potentiometer to measure displacement
- [3] force measurement via pressure sensor
- [4] GUNT software for data acquisition via USB under Windows 10
- [5] software for recording, preparation and storage of stress-strain diagrams

### Technical data

Pressure sensor for force measurement

- 0...100bar

Displacement sensor

- 0...50mm

Measuring amplifier with USB interface

- input: 0...5V
- resolution: 12bit

LxWxH: 225x200x75mm (measuring amplifier)  
Weight: approx. 5kg

### Required for operation

PC with Windows

### Scope of delivery

- 1 pressure sensor
- 1 displacement sensor
- 1 measuring amplifier
- 1 GUNT software + USB cable
- 1 manual

### Description

#### ■ electronic data acquisition and evaluation of material testing

This system for data acquisition is an addition to the experimental unit WP 300. The software supports tensile tests, compressive tests, hardness tests according to Brinell, shear tests and the determination or the modulus of elasticity of a bending specimen.

The measuring system consists of a pressure sensor for force measurement, a linear potentiometer to measure the displacement and a measuring amplifier including a USB interface for connection to a PC. Measured values are evaluated in the user-friendly software, so diagrams can be recorded, saved and printed on a printer.

Additionally, it is possible to print a complete test log in accordance with DIN for tensile and compressive tests. Up to ten load-extension curves can be displayed simultaneously. Load-extension diagrams are displayed in real-time.

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Required accessories

WP 300                    Materials testing, 20kN