TM 150.20
System for data acquisition

Learning objectives/experiments

- supported experiments with TM 150
  - natural vibration of a bar-type oscillator
  - damped vibration of a bar-type oscillator
  - forced vibration of a bar-type oscillator (damped and undamped resonance)
  - frequency and period time measurements
  - Kater's pendulum

Specification

[1] data analysis for TM 150
[2] measurement, recording and analysis of frequency response and transfer function
[3] functions as a digital storage oscilloscope
[4] interface box with 3 sensor inputs and 3 analogue outputs
[5] 1 inductive displacement sensor (amplitude), 1 reference sensor (exciter force)
[6] GUNT software for data acquisition via USB under Windows 10

Technical data

Sensor input channels: 3
Inputs in oscilloscope mode: 2
Time basis: 10...750ms/DIV
Record length: 2000 points
Displacement sensors
- measuring range: 5...10mm
- frequency range: 0...50Hz

230V, 50Hz, 1 phase
230V, 60Hz, 1 phase
120V, 60Hz, 1 phase; UL/CSA optional
LxWxH: 265x260x110mm (interface box)
Weight: approx. 7kg
LxWxH: 600x400x170mm (storage system)

Required for operation

PC with Windows

Scope of delivery

1   interface box
1   displacement sensor
1   reference sensor
1   GUNT software + USB cable
1   set of cables
1   storage system
1   manual

Description

- **measurement and illustration of frequency and phase response**
- **digital storage oscilloscope**

This system for data acquisition is an addition to the TM 150 vibration trainer and makes it possible to analyse vibration signals on a PC. Frequency and phase response curves can be easily generated, saved and output using this system. The system also offers all the essential functions of a digital storage oscilloscope and can calculate the frequency spectra of the signals.

In addition to the software, a displacement sensor and a reference sensor, the system also includes an interface box. This supplies up to three sensors, prepares their measuring signals for the PC and offers them to three analogue outputs for display.

All components of the system are ready at hand and securely housed in a storage system.

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Required accessories

TM 150	Vibration trainer

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