

Chronoscope M10



Test system for the simultaneous measurement of 10 mechanical watches

The Chronoscope M10 is a versatile measuring system that can test a large numbers of mechanical watches in production lines. Up to 10 watches (with or without wristlet) or movements inside protective containers can be placed into the microphones. The identification of the movement and the storage of measurement results into a central database

ensure the tractability of all test steps. Graphical long term analysis up to 50 hours can also be performed.

The Chronoscope M10 can be networked at any time into a WiCoTrace group of instruments.

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Technical Data

Measurement possibilities

- **Standard measurement** Rate accuracy, amplitude and beat error of mechanical watches.
- **Graphic analysis** Records up to 50 hours.
- **Interval measurement** Execution of the measurements in a definable interval during a certain period.

Beat number

Adjustable for all beat numbers from 3600 to 36000 A/h.

Lift angle

Selectable from 10° to 90°.

Stabilisation time

Selectable from 00:00 to 60:00 minutes.

Measurement

Selectable from 00:00:02 to 50:00:00 hours.

Test modes

- **Std** Standard mode for watches with Swiss escapement.
- **Spe1** Mode for watches with coaxial escapement.
- **Spe2** Mode for watches with AP escapement.
- **Spe4** Mode with specific amplitude filter for watches with Swiss escapement.

Signal gain

Selectable from 1 to 4.

Measurement capability

Rate measurement (high resolution):

Measurement range ± 999.9 s/d (± 999.99 s/d),
Resolution 0.1 s/d (0.01 s/d), accuracy ± 0.1 s/d.

Beat error:

Measurement range 9.9 ms, resolution 0.1 ms,
Accuracy ± 0.1 ms.

Amplitude (high resolution):

Measurement range 80° to 360°, resolution 1° (0.1°),
Accuracy ± 0.4 °.

Functions

10 microphones for movements and watches with or without wristlet. The microphones are simultaneously opened/closed by the protective hood.

For the measurement up to 6 measuring positions are possible.

Details

The built-in electronic unit contains 10 measuring channels.

Time base: Pre-aged and thermo-compensated high frequency quartz, OCXO.

Stability: ± 0.004 s/d between 10° and 50° C.

Aging for the first year: max. ± 0.03 s/d.

RS232 interface for PC attachment.

Basic plate and casing: aluminium, silver.

Protection hood: smoked Plexiglas.

Dimensions: 560x400x460 mm (w x h x d).

Weight: 60 kg.

Connection to the mains:

- 230V~ (210 - 250 V~) 50/60 Hz (45 - 65 Hz). Mains with 10 A safety switch and connection to the protective ground.

- 120 V~ version on demand.

Requirements of the PC

- Processor: min. P4, 2 GHz.

- RAM: min. 1 GB.

- Requested free space on hard disc: min. 40 GB.

- CD or DVD drive (for the database backup).

- RS232-interface with use of Chronoscope S1/M1.

- USB- interface with use of Micromat C.

- Network interface is necessary for networking (WiCoTrace).

- Operating system: Windows XP, SP2 or Windows 7.

- Monitor with 1280x1024 Pixel. We recommend a 19" LCD monitor.

Accessories

PC Dell with 19 " TFT monitor, keyboard, mouse and Windows XP Professional. 64.1210

Printer HP LaserJet. JB01-HP-LJET-ML

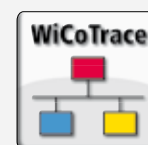
Label printer CT-S851 with USB interface. JB01-CT-S851BK

Thermo paper for CT-S851 JB01-MM58-DPU20-N

Bare code reader Gryphon USB JB01-901651082

Image System: 80GB hard disc USB 2.0 with Software Norton Ghost. 64PK1

Network capability with WiCoTrace



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