

WICOMETRE PROFESSIONAL – Fulfills the utmost requirements for testing mechanical watches



- Noiseless tracing of the graph on a large LCD graphic screen
- Automatic determination of the beat number for all conventional watches
- Rate measurements on mechanical watches, LCD-watches, quartz- and tuning fork watches
- Display of the rate, beat error and amplitude
- Scope tracing of the beat noise for error analysis by means of the beat pictures
- Printout of a measurement report in a numeric, tabular or graphic form
- Ideal combination with the automatic microphone MICROMAT P
- All results are displayed in a tabular form at the end of the measuring cycle
- RS232 interface for the connection of a printer



The WICOMETRE PROFESSIONAL fulfills the highest requirements for testing mechanical watches. With the automatic microphone MICROMAT P, it forms the ideal combination for rate adjustment, final test and for laboratory test.

The measuring positions of the MICROMAT P may be programmed on the WICOMETRE PROFESSIONAL for any particular measurement sequence. All results, their average and maximum deviation, are shown in a table form at the end of the measuring cycle. The diagram for troubleshooting is displayed noiselessly on the LCD screen.

The operation is largely automated for current types of watches. The measurement parameters can be manually selected for particular watches or measurements.

The EXPERT Q is an optional signal sensor that also provides the means of measuring the rate deviation of quartz and tuning fork watches.

Technical Data

- Measuring possibilities: rate deviation, beat error and amplitude of mechanical watches. Diagram of the beat noises.
Rate deviation of analogue quartz watches by means of an optional signal sensor.
- Beat number: automatic selection of all common beat numbers. Manual selection of less common beat numbers. Manual selection of any beat number in the range between 3'600 to 36'000 b/h. Determination of a unknown beat number.
- Gain control: automatic. Manual control facility for watches with stray or unusual beat noises.
- Diagram: presentation on a LCD graphic display.
Resolution 128 x 240 dots.
Time scale selectable from 1 mm/ms to 10 mm/ms.
Recording speed depends on the beat number, 0.5 mm per watch beat.
Visible diagram length: 120 mm.
- Amplitude: numerical display in degrees.
Resolution 1°, measuring range 80° to 360°.
Lift angle adjustable from 10° to 90°.
- Measuring time for numerical results: selectable from 2 s to 240 s. Continuous renewal of the average values every 2 s. Display on the screen of the evaluated part of the rate measurement diagram.
- Rate measurement: numerical display in s/d.
Selectable resolution 1 s/d or 1/10 s/d.
Measuring range +/- 999 s/d, resp. +/- 99.9 s/d.
Measurement of quartz watches with the EXPERT Q: resolution 0.01 s/d, measuring range +/- 9.9 s/d.
- Beat error: numerical display in milliseconds.
Resolution 0.1 ms, measuring range 9.9 ms.
- Freeze-function: enables the current screen display to be stored as long as required at any time.
- Acoustic check: loudspeaker to hear the beat noises.
- Result printout: RS232 interface port for the connection of a printer.
Print-out of the numerical results or a graphic print-out of the displayed diagram.
Print-out of the average and delta values for the programmed positions including the results.
Continuous print-out of the results at the end of each measuring cycle.
The instrument can be connected to a PC for statistical evaluation purposes.
- Time base: pre-aged temperature controlled high frequency quartz time base.
Stability: +/- 0.02 s/d between 15° and 30° C.
- Oscillogram: visualisation of the beat noise allows analysis of the escapement.
Non linear signal amplification for better display of low signal amplitudes.
Automatic gain control for full screen display.
3 different time deviations: 20 ms, 220 ms and 420 ms for the full screen length.
- Display: LCD graphic display 128 x 240 dots.
- Housing: black lacquered hardwood casing with anodised aluminum front panel and steel base with support.
Dimensions: 260 x 150 x 80 mm.
Weight: 2.3 kg.
- Mains connection: plug supply adapter 230 V~ or 120 V~, power 11 VA.

Accessories

- Stand microphone: movable for any test position, suitable for watch movements and watches with or without bracelet
- Micromat P: programmable microphone for maximum 6 measuring positions with different run-down possibilities. Available for 230 V~ or 120 V~ .
- Clamping microphone for wall clocks.
- Optoelectronic sensor for pendulum clocks.
- EXPERT Q: signal sensor for the rate measurement of analogue and quartz watches & tuning fork watches.
- Micro Mode Box: application field switch for the connection of two microphones or one microphone and Expert Q.
- Protection for stand microphone and MICROMAT P.
- Printer DP-1014.0132A, incl. graphic mode, paper roll, connection cable and universal plug supply adapter for 90 V~ - 264 V~.
- Switchbox to connect 2 instruments on the printer DP-1014.0132A.