

watch-matic III

Watch testing unit for mechanical watches

Elma Order Nos

watch-matic III (230 V)* incl. microphone	102 2711
watch-matic III (115 V)* incl. microphone	102 2802
* power supply in delivery	
Clamping microphone for wall clocks	100 7549
Opto-electronical sensor for pendulum clocks	100 7550
Tripod for opto-electronical sensor	690 050 0000
Thermoprinter with Graphicmode	600 000 0005



Pictured watch-matic III

The watch-matic III is an economic measuring instrument ideally suited for testing mechanical watches. The diagram is displayed noiselessly on the new, illuminated LCD graphic display. Measured values for rate deviation, amplitude and beat error are automatically calculated and displayed numerically. The beat number of all common watches will be automatically recognised. Appropriate measuring modes are available for watches with special escapements. Two novelties: the additional display mode „VARIO“ and the storage of the last 5 screen contents, which later are callable. Further product features:

- **Measurement Possibilities:** Rate deviation, amplitude and beat error of mechanical watches. Diagram of the beat noises.
- **Beat Error:** Automatic selection of all common beat numbers. Manual selection of less common beat numbers. Manual selection of any beat number between 3'600 to 43'200 b/ h. Determination of an unknown beat number.
- **Measuring Modes:** Standard mode for watches with the Swiss escapement (Std), Mode for watches with coaxial escapement (Spe1), Mode for watches with AP escapement (Spe2), Mode with specific amplitude filter (Spe4), only the rate measurement occurs (Rate).
- **Display:** *Cont* Continuous diagram recording of the beat noises and display of the numeric values for the rate accuracy, amplitude and beat error. The last five screen contents are callable. *Vario* Enables to examine the stability and scattering of the rate accuracy or the amplitude over a long period of time (max. 100 hours).
- **Automatic Gain Control:** Manual control facility for watches with stray or unusual beat noises.
- **Rate accuracy:** numerical display in s/d. Resolution: 1 s / d with a measuring range of ± 999 s / d or 0.1 s / d with a measuring range of ± 99.9 s / d.
- **Amplitude:** numerical display in degrees. Resolution 1°. Measuring range from 70° to 360°. Lift angle adjustable from 10° to 90°.
- **Beat error:** numerical display in milliseconds. Resolution 0.1 ms. Measuring range 9.9 ms.
- **Diagram:** recording on a illuminated LCD graphic display with 256 x 64 dots. Time scale adjustable from 1 up to 9 mm / ms (zoom). 4 selectable tracing speeds.
- **Functions:** Selectable measuring time for numerical results: 2, 4, 8, 10, 20, 30, 60 s and automatic selection of the shortest possible measuring time. Continuous renewal of the average values every 2 s over the measurement period. Display on the screen of the evaluated part of the rate measurement diagram.
- **Acoustic check:** built in loudspeaker to hear the beat noises.
- **RS232-interface:** for the connection of a PC, GPS receiver or our printer to print out of the numeric results or graphic print out of the displayed diagram.

Technical Data

Outer dimensions of unit w/d/h (mm / inch)	250 / 101 / 135 / 8 7/10 x 5 9/10 x 5 1/2
Weight incl. microphone (kg / lbs)	2,1 / 4.4
Power consumption in use / Stand by (W)	4,7 / 3,2