

Q TEST 6000 – The instrument with all measuring facilities for a competent repair service of quartz watches



- Rate measurement for quartz watches, tuning fork and mechanical watches
- Adjustment and accelerated test of watch IC's with EEPROM
- Measurement of IC - and total current consumption by integration
- Pulse generator with adjustable supply voltage and pulse width
- Test of watch batteries and test signal for buzzers
- Watch power supply with variable voltage
- Connectors for external signal sensors and watch carrier
- Measurement of the resistance, test for short circuits and interruptions
- Interface RS232 for the connection of a printer

witschi

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For the use in after-sales service centers and in laboratories, the watchmaker needs a test equipment, which allows to all electrical test and measurements.

The Q TEST 6000 is an extremely versatile instrument which offers all test measurement functions required for a skilled service diagnosis of quartz watches.

The functional layout of operating elements and the logical separate displays of results and parameters greatly simplify the use of the equipment. The measurement process, largely automated, and the ergonomic design make this tester easy to be used by the operator.

Technical Description

- Rate measurement: Measurement by means of the quartz frequency. Signal sensing acoustical, capacitive or over the supply current.
Measurement over the stepping motor pulses: Signal sensing inductive or over the current.
Measurement over the LCD-operating frequency.
Rate measurement on mechanical and tuning fork watches.
Special programs for the adjustment and accelerated test of watch IC's with EEPROM.
- Measuring times: Over the quartz frequency 1 s.
Over the stepping motor pulses or LCD-operating frequency from 2 s up to 960 s.
Mechanical and tuning fork watches: 4 s.
- Signal sensors: Built-in signal sensors of highest sensitivity for acoustical, inductive and capacitive signals.
Signal sensing over the supply current of the module.
Display of the signal intensity by LED's.
- Display of the results: Selectable mode in s/d or s/month.
Measuring range: +/- 9.99 s/d, resp. +/- 300 s/month.
Resolution: 0.01 s/d, resp. 1 s/month.
Display of the remaining measuring time (count down).
Illuminated three digit LCD display.
- Time base: Pre-aged oven-controlled high frequency quartz.
Accuracy +/- 0.02 s/d between 15°C and 30°C.
- Module power supply: Supply voltage from 0 up to 3.5 V in steps of 0.05 V.
Current limit: 5 mA for the μ A measuring range, 100 mA for the mA measuring range.
Indication of short circuit or interruption by LED.
Mobile probes for direct contacting on the working place of the instrument.
Test leads with probe tips and crocodile clamps.
Built-in mirror for the observation of the hands during measurements.

- Current measurement: Integrating measurement of the average current over the measuring time.
Manual selection of the measuring range μ A and mA, automatically within these ranges.
Measuring times: Adjustable from 1 up to 60 s.
Display of the remaining measuring time (count down).
Illuminated 4-digit LCD display.
- Battery test: Measuring range from 0 up to 5 V.
Measurement of the battery voltage without load, with a load of 2 kOhm (low drain) or 100 Ohm (high drain).
- Resistance: Measuring ranges of 1 kOhm, 10 kOhm, 100 kOhm, 1 MOhm.
Measuring time: 1 s.
Illuminated 4-digit LCD display.
Immediate indication of short circuit or interruption by LED.
- Pulse generator: For direct feed of bipolar pulses to the motor coil of analogue quartz watches.
Width: selectable from 1 up to 80 ms.
Frequency: 16 Hz for widths up to 16 ms, 8 Hz widths > 16 ms.
Voltage: adjustable from 0 up to 3.5 V.
- Alarm test: Test signal for buzzers of alarm clocks.
Frequency: 2 kHz.
Voltage: Adjustable from 0 up to 3.5 V.
- Setting of parameters: Setting of all parameters by means of a control knob (encoder).
Display of the parameters on a separate illuminated 4-digit LCD display.
- Casing: Black lacquered hardwood frame, scratchproof aluminum front panel.
Dimensions: 354 x 75 x 233 mm (w x h x d).
Weight: 2.6 kg.
- Mains connection: Plug supply adapter available for 230 V~ or 115 V~, power 11 VA.

Accessories

- Printer: DP-1014.0132A with graphic interface and universal plug supply adapter 90 V~ - 264 V~
- Switchbox: For connection of 2 equipment to the printer DP-1014.0132A.
- Dummy batteries: Set of connection cable and wooden box.
- Signal sensor: Handheld signal sensor for the test of watches directly in the box.
- Module carrier: PM 6000 for series tests and torque measurements.