Smart Tweezers™

LCR Meter and Component Identifier in a Pair of Tweezers

Built-in high-precision LCR probe Convenient one-hand operation Ideal for Surface Mount Devices Automatic component recognition Automatic test range selection Precise tips for small-size devices Manual and voltage test modes Portable and ergonomic design



Smart Tweezers™ greatly simplifies testing and troubleshooting process.



Resistance, capacitance and inductance can be measured with automatic selection of the test parameters and range.

Your distributor:

IDEAL-TEK SA via San Gottardo 99A 6828 Balerna Switzerland Tel. +41 91 683.32.29 Fax: +41 91 683.03.71 E-mail: info@ideal-tek.com Web: www.ideal-tek.com Smart Tweezers[™] is a handheld LCR meter of a new concept. It provides a perfect solution for testing and identification of Surface Mount Devices as well as troubleshooting of complex electronic systems.

Its unique mechanical and electronic design combines a pair of precise gold-plated tweezers and a digital LCR meter in compact, lightweight, battery powered instrument. The probe is able to measure resistance, capacitance, inductance and voltage with high accuracy and automatic component recognition.

Testing Surface Mount Devices

Surface mount devices are usually tiny and without wire leads, making it more difficult to test and identify SMD than conventional components.

Smart Tweezers[™] gives users an easy way to sort and evaluate loose components and to perform on-board measurements and debugging.

Precise gold-plated tweezers are able pick and reliably contact even the smallest SMD components and take measurements from already mounted devices. The probe can also be used to test conventional components with wire leads too short to insert into the test terminals.

Fully Automatic Measurements

Smart Tweezers $^{\text{TM}}$ automatically determines type of the component (resistance/capacitance/inductance) and selects proper range for high accuracy measurements.

Unit's display clearly indicates the type of the component, measurement result and test conditions.

Lightweight and Ergonomic

The integrated measurement head allow the operator to use one hand and focus attention on the tested component and on the job at hand. Sorting, testing and troubleshooting become more efficient and cost effective.





Every test function have a manual mode when where is a need to measure a specific circuit parameter—L, C, R or voltage.

Navigation and mode selection are performed using a Jog Dial button.

The unit has a continuity detector with the beeper sound for resistance reading below threshold.

| Physical Specifications | Operating Temp | erature: | 0 °C to +55 °C |
|-------------------------|------------------------|-----------|---|
| | Batte | ry Туре: | 3 x 1.5V LR44 Alkaline or Air Zinc |
| | Battery Life (conti | nuous): | 80 Hours Alkaline, 240 hours Zinc Air (typical) |
| | | Size: | 14.0 x 2.5 x 3.0 cm (3.94 x 0.9 x 1.5 in) |
| | | Weight: | 53 grams (0.111b) |
| Basic Specifications | Measured Parameters: | | C+R (ESR), L+R, R |
| | Measuring Frequencies: | | 100Hz, 1 kHz, 10kHz |
| | Measureme | ent rate: | 4, 2, 1, 0.5 times per second (default 1) |
| | DC Voltage: | | 0 to 800 mV (up to 8V with manual setting) |
| | Re | sistance: | 0.1 to 5 MOhm |
| | Сарс | icitance: | Ι pF to 4999 μF (ΙpF - 5pF in manual mode) |
| | Ind | uctance: | ΙμΗ to 499 mH (ΙμΗ -4μΗ in manual mode) |
| Accuracy Specifications | Resistance: | Range: | 10 Ohm - 5 MOhm |
| | A | ccuracy: | 1% + 0.02 in the range 10 Ohm - 5 MOhm |
| | Test Fre | equency: | lkHz |
| | Capacitance: | Range: | 20pF - 4999µF |
| | A | ccuracy: | 3% + 1.7pF* *Typical offset 1.6pF for 0402 size component |
| | Re | solution: | 0.1pF in the range 1pF- 100pF |
| | Test Fre | equency: | IkHz C >1000pF, 10kHz C <1000pF, 100Hz C >1µF |
| | Inductance: | Range: | Ι0μΗ - 499 mΗ |
| | A | ccuracy: | 3% + 0.4µH** **Typical offset 1.4µH for 0402 size component |
| | Re | solution: | 0.1μH in the range 1μH - 100μH |
| | Test Fre | equency: | 10kHz L <1mH, 1kHz L >1mH, 100Hz L <10mH 2 |



Smart Tweezers's tips

Precise gold-plated tips made of non-magnetic steel are able to pick and **reliably contact even smallest SMD components** or take measurements from the devices already mounted on a board. The probe can also be used to test conventional components with wire leads too short to insert into the test terminals.





| Part number | Description | |
|-------------|---------------------------------------|--|
| ST-IT-TSHP | High precision sharp Replaceable tips | |



Product Description

Ideal-Tek SA

