

Keysight U1242B Digital Multimeter



Keysight U1242B Digital Multimeter

Introduction: Keysight U1242B Digital Multimeter

Recently, I decided to purchase a Keysight U1242B DMM to take advantage of three functions not offered on my Fluke 187DMM. Those three features are:

1. **Switch Counter** – The switch counter checks the open/closed condition of a switch, relay, or push button. The multimeter provides a time base of 10 and 100 seconds or a user-defined time base. This function detects if the switch condition is normally closed (Low level) or normally open (High level) of a circuit with a voltage of less than 3 V. The switch counter counts the intermittent for longer than 250 microseconds.
2. **Dual and Differential Temperature** – In the installation, maintenance, and troubleshooting of heating, ventilation, and air-conditioning (HVAC) systems, temperature measurements are essential. As an example, to ensure boiler temperature adheres to safety requirements, you would need to measure both boiler and air temperature simultaneously to achieve accurate real-time readings. With a faulty air conditioning system, viewing the temperature difference between the warm return air and cool air supply helps reveal the evaporator's cooling behavior with respect to time. Now, with the convenience of the U1242b DMM, you need only one instrument to efficiently get dual and differential measurements.
3. **Harmonic Ratio** – In real life, harmonics are present in AC power due to the fact that many electronic devices are powered by switched-mode current pulses, which travel back into the power source. If these unwanted harmonics become too large, the undesirable side effects include overheating that shortens the lifespan of motors, generators, and transformers, premature tripping of circuit breakers, and blown fuses. One of the fastest ways to detect and gauge the percentage of distortion due to harmonics is by measuring the harmonic ratio of the incoming AC voltage. With just a button press, you can easily perform this on the U1242B handheld DMM. The percentage helps you to decide if further analysis of the power source is required with an oscilloscope or a spectrum analyzer.

Admittedly, I've been wanting to try the Keysight U1242B after spending some time on a [Keysight U1272A](#) that I bought for one of my team members a few months back. I will save the details for a follow-up post at a later date.

AI Generated Description of the Keysight U1242B Digital Multimeter: The Keysight U1242B is a handheld digital multimeter that is designed for quick checks and fixes in the installation and maintenance of machinery, facility, and electrical systems. It has a 4-digit display and a switch counter for detecting glitches on facility switch and relay systems. It also has a harmonic ratio function that helps detect the presence of harmonics in AC supplies that can lead to overheating of motors, generators, and transformers.

Keysight U1242B Digital Multimeter Product Information

Keysight U1242B PDF Downloads

- [Keysight U1242B Datasheet](#)
- [Keysight U1242B Quick Start Manual](#)
- [Keysight U1242B User Manual](#)

The **Keysight U1242B** is a 4-digit DMM with a 10,000-count dual display. The 10,000-count resolution allows better viewing of measurements down to the smallest reading. This series comes with true RMS capability and 0.09% DC voltage accuracy. The handhelds are also designed with an adjustable backlighting function (with two intensity levels) that allows you to complete your jobs even in subdued lighting conditions while simultaneously prolonging the battery life.

The U1240 Series offers features like harmonic ratio, switch counter, and dual differential temperature measurement. Comprehensive temperature measurements can be done quickly with dual and differential temperature capabilities. The switch counter allows the detection of an intermittent failure in switches or relays. The harmonic ratio function helps determine the presence of harmonics in AC signals.

The Keysight U1240B Series handheld digital multimeters enable you to check more with wider measurement ranges. They feature true RMS readings on their 10,000-count displays. The adjustable backlighting allows you to complete your jobs even in subdued lighting conditions or simply prolong battery life. Maintenance tasks are greatly simplified due to the built-in switch counter, harmonic ratio, dual and differential temperature capabilities, and just a button press. The meters have a high safety rating with CAT III 1000 V and CAT IV 600 V protection and are certified to CE and CSA standards.

True RMS 10000 count handheld DMM with data logging

- U1240 Series 4 Digit Handheld Multimeter with Datalogging, Advanced Measurements
- DC voltage range; Accuracy: 1000 mV to 1000 V; 0.09% + 5
- AC voltage range; Accuracy: 1000 mV to 1000 V; 2% + 5
- DC current range; Accuracy: 1000 μ A to 10 A; 0.1% +3
- AC current range; Accuracy: 1000 μ A to 10 A; 1% +5
- Built-in LED flashlight; audible, visual alerts for dark, noisy environments; Keysight Meter Logger capable
- Resistance, frequency, capacitance, continuity, diode, switch counter,

differential temp, harmonic ratio

- Min/Max recording, data hold, auto-hold, null, PC-connectivity, manual data logging
- Overvoltage protection rating: CAT III 1000V and CAT IV 600V
- Store 2,000 readings in multimeter, IR-to-USB to transfer data to PC, Bluetooth Adapter Optional

Visit [Keysight Technologies](#)

