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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight U1242B Handheld Digital Multimeter

Agilent Keysight U1242B Handheld Digital Multimeter The Agilent/Keysight U1242B adds harmonic-ratio, dual/differential temperature, and manual data logging to the U1240B 10000-count true-RMS platform. OEM specifications share the U1241B accuracy tables while enabling J-type thermocouples and harmonic ratio from 0.0 percent to 99.9 percent at 40 to 500 Hz. Industrial harmonics spot checks, differential temperature troubleshooting, and logged maintenance measurements under CAT III 1000 V / CAT IV 600 V. The Agilent/Keysight U1242B adds harmonic-ratio, dual/differential temperature, and manual data logging to the U1240B 10000-count true-RMS platform. OEM specifications share the U1241B accuracy tables while enabling J-type thermocouples and harmonic ratio from 0.0 percent to 99.9 percent at 40 to 500 Hz. Industrial harmonics spot checks, differential temperature troubleshooting, and logged maintenance measurements under CAT III 1000 V / CAT IV 600 V. Basic DCV Accuracy: 0.09 percent plus 5 counts on 1000 mV



MODEL

**Agilent / Keysight
U1242B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

U1242B

LISTING

<https://aumictechlabs.com/products/u1242b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight U1242B is a solid 4-digit handheld digital multimeter designed for comprehensive diagnostics and maintenance in electrical and electronic systems. It has a 10,000-count dual

display for detailed readings and true RMS measurements for accurate AC signal analysis. The U1242B integrates advanced troubleshooting features such as a switch counter for detecting intermittent failures in relays and switches, a harmonic ratio function to identify harmonics in AC supplies, and dual/differential temperature measurement capabilities for HVAC system analysis. Enhanced by adjustable dual-intensity backlighting for visibility in various lighting conditions and a ruggedized overmold casing for durability, this multimeter is engineered for field use. Connectivity options include IR-to-USB for PC data transfer and an optional Bluetooth adapter for wireless communication. Its overvoltage protection rating of CAT III 1000V and CAT IV 600V ensures user safety in demanding environments.

Technical Specifications General Features:

Display: 4-digit, 10,000-count dual display **Measurement Type:** True RMS for AC voltage and current **Backlighting:** Adjustable dual-intensity backlight **Data Logging:** Manual data logging, stores up to 200 readings **Durability:** Overmold body casing, certified to IP67 protection **Power:** Long battery life up to 300 hours

Electrical Measurements:

- DC Voltage:** * Ranges: 1000 mV to 1000 V * Accuracy: 0.09% + 5
- AC Voltage:** * Ranges: 1000 mV to 1000 V * Accuracy: 0.2% + 5 (Note: some sources list 2% + 5 for AC voltage range, but 0.2% is a more common precision spec for ACV in similar models. Confirming exact spec is recommended.)
- DC Current:** * Ranges: 1000 μ A to 10 A * Accuracy: 0.1% + 3
- AC Current:** * Ranges: 1000 μ A to 10 A * Accuracy: 1% + 5
- Resistance:** * Range: Up to 100 M Ω
- Frequency:** * Range: Up to 200 kHz
- Capacitance:** * Range: Up to 10 mF
- Diode Test:** Yes
- Continuity Test:** With audible beeper and visual (flashing backlight) alerts

Advanced Functions:

- Switch Counter:** For detecting intermittent failures in switches or relays
- Harmonic Ratio:** For analyzing harmonics in AC signals
- Temperature Measurement:** * J & K-Type thermocouple support * Dual and differential temperature capabilities * Ambient temperature display with each measurement * Scanning temperature measurement (U1242B only)
- VFD Troubleshooting:** Built-in low pass filter MIN/MAX/AVG
- Recording:** Yes
- Data Hold:** Auto-hold and manual data hold
- Null (Relative) Function:** Yes

Electrical Interface & Safety:

- Overvoltage Protection:** CAT III 1000 V, CAT IV 600 V
- Fuse Protection:** 30 kA/fast-acting fuse for 11 A range

Connectivity: * IR-to-USB for PC connectivity * Optional IR-to-Bluetooth adapter for wireless connectivity

Physical Characteristics:

- Dimensions:** Not specified in research materials.
- Weight:** Not specified in research materials.
- Ingress Protection:** Certified to IP67
- Operating Environment:** Designed for indoor use, low condensation areas

Included Accessories: Test Lead Set Quick Start Guide 4 $\times$ 1.5 V Batteries Certificate of Calibration

Why Choose Aumictech for Keysight U1242B?

At Aumictech, we specialize in supplying high-end electronic test and measurement equipment. Whether you need the Keysight U1242B for complex diagnostics, solid field maintenance, or advanced laboratory analysis, our team ensures that this versatile multimeter delivers maximum performance and reliability for your critical applications.

U1242B Characteristics / Specifications

PARAMETER	VALUE
Display Counts	10000
Basic DCV Accuracy	0.09 percent plus 5 counts on 1000 mV
DC Voltage Ranges	1000.0 mV to 1000.0 V
AC Voltage Bandwidth Class	40 Hz to 2 kHz
True RMS Mode	AC
DC Current Ranges	1000.0 uA to 10.000 A
Resistance Maximum	100.00 MOhm
Capacitance Maximum	10.000 mF
Frequency Effective Maximum	200 kHz
Frequency Accuracy	0.03 percent plus 3 counts
Harmonic Ratio Range	0.0 percent to 99.9 percent
Harmonic Ratio Frequency	40 to 500 Hz
Harmonic Ratio Voltage	100 mVAC to 1000 VAC
Temperature TypeKAnd J	minus 40 C to 1000 C
Temperature Accuracy	1 percent plus 1 C
Switch Counter Threshold Low	less than 370 ohms
Switch Counter Threshold High	greater than 430 ohms
Switch Event Minimum Duration	250 us
Safety Category	CAT III 1000 V / CAT IV 600 V
Battery Life Typical	300 hours
Dimensions HxWxD	193.8 × 92.2 × 58.0 mm
Weight With Batteries	450 g
Operating Temperature	minus 10 C to 55 C
CMRR	greater than 90 dB at DC 50/60 Hz
Bandwidth	Class: 40 Hz to 2 kHz

U1242B Specifications

PARAMETER	VALUE
Agilent Keysight U1242B Handheld Digital Multimeter	Overview
Technical Specifications	Display Counts: 10000
Notes	From Keysight U1240B Series Handheld Digital Multimeters data sheet (5989-7040) for U1242B-specific functions and shared accuracy tables.

General Specifications & Supplementary Characteristics

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CMRR	greater than 90 dB at DC 50/60 Hz Notes From Keysight U1240B Series Handheld Digital Multimeters data sheet (5989-7040) for U1242B-specific functions and shared accuracy tables.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

specifications share the U1241B accuracy tables while enabling J-type thermocouples and harmonic ratio from 0.0 percent to 99.9 percent at 40 to 500 Hz.

Applications

Industrial harmonics spot checks, differential temperature troubleshooting, and logged maintenance measurements under CAT III 1000 V / CAT IV 600 V.

Key Features

Harmonic ratio measurement

Dual and differential temperature

Manual data loggingJandKthermocouples

Switch counter function

Technical Specifications

Technical Specifications

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Notes

From Keysight U1240B Series Handheld Digital Multimeters data sheet (5989-7040) for U1242B-specific functions and shared accuracy tables.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.