Keysight U1241B and U1242B Handheld Digital Multimeter

Quick Start Guide

KEYSIGHT TECHNOLOGIES

Contacting Keysight

www.keysight.com/find/assist
(worldwide contact information for repair and service)

Safety and EMC Information

The U1241B and U1242B is safety-certified in compliance with IEC/EN 61010-1, IEC/EN 61010-2-030, IEC/EN 61010-2-033, CAN/CSA-C22.2 No. 61010-1, CAN/CSA-C22.2 No. 61010-030, CAN/CSA-C22.2 No. 61010-033, UL Std. No. 61010-1, UL Std. No. 61010-030 and UL Std. No. 61010-033.

EMC is designed in compliance with IEC 61326-1/EN 61326-1, CISPR11/EN55011 Group 1 Class A, ICES/NMB-001, and AS/NZS CISPR 11.

Safety Notices

CAUTION

A CAUTION notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.

WARNING

A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

Safety symbols

	Earth (ground) terminal
	Equipment protected throughout by double insulation or reinforced insulation
	Caution, risk of electric shock
	Caution, risk of danger (refer to this manual for specific Warning or Caution information)
CAT III 1000 V	Category III 1000 V overvoltage protection
CAT IV 600 V	Category IV 600 V overvoltage protection

For further safety information details, refer to the *Keysight U1241B and U1242B Handheld Digital Multimeter User's and Service Guide*.

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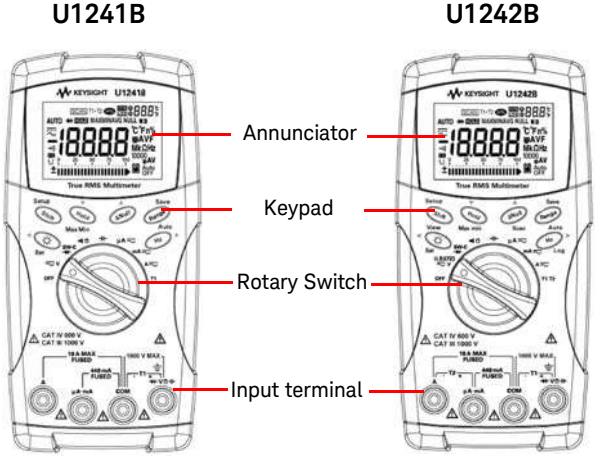
The following items are included with your multimeter:

- ✔ Silicone test leads  and 4 mm probes 
- ✔ Four 1.5 V AAA alkaline batteries
- ✔ Certificate of Calibration

If anything is missing or damaged, please contact the nearest Keysight Sales Office.

For more detailed information, please refer to the *Keysight U1241B and U1242B Handheld Digital Multimeter User's and Service Guide* on Keysight website (www.keysight.com/find/handheld-tools).

WARNING **Ensure the terminal connections are correct for that particular measurement selection before starting any measurement. To avoid damage to the device, do not exceed the input limit.**

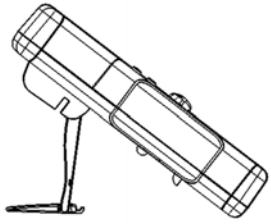


Measurement Functions	Input Terminal		Overload Protection
Voltage			1000 V R.M.S
Diode	⊣▶⊢ VΩ ⊣⊢	COM	1000 V R.M.S < 0.3 A short circuit current
Resistance			
Capacitance			
Current (µA and mA)	µA.mA	COM	440 mA/1000 V 30 kA/fast-acting fuse
Current (A)	A	COM	11 A/1000 V 30 kA/ fast-acting fuse
Temperature	+T1	–T1	1000 V R.M.S
Temperature (for U1242B)	+T2	–T2	440 mA/1000 V 30 kA/fast-acting fuse

Tilt Stand

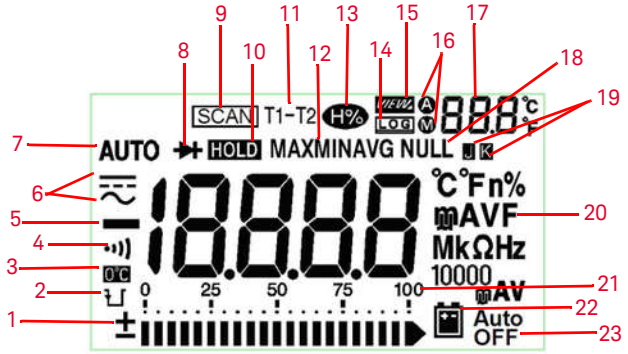


Tilt stand at 60 °



Tilt stand at 30 °

Annunciator Display

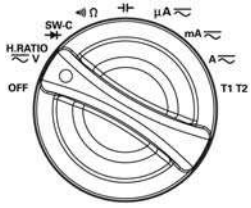


No.	Descriptions	No.	Descriptions
1	21-segment analog bar graph display	12	MINMAX Recording mode
2	Capacitor discharge indicator	13	Harmonic Ratio mode (for U1242B)
3	Cold junction of ambient temperature	14	Data logging mode (for U1242B)
4	Audible continuity for resistance and diode function	15	Data logging viewing mode (for U1242B)
5	Primary display -18.8.8.8	16	Auto or manual data logging mode and datalog viewing mode
6	AC or DC measurement mode	17	Secondary display (temperature display)
7	Auto range	18	Null math function
8	Diode / Audible continuity	19	Thermocouple type for temperature measurement
9	T1, T2 and T1 – T2 temperature measurements scan (for U1242B)	20	Primary measurement units
		21	Measurement range
10	Data hold	22	Low battery indicator
11	T1, T2* and T1 – T2* temperature measurements	23	Auto power off indicator

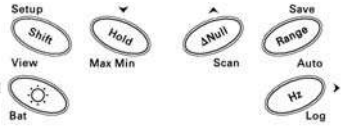
*T2 temperature measurement and delta (T1 – T2) are only available for U1242B.

Functions and Features

Rotary Switch



Keypad



Function	First level functions	Range	Second level functions (press Shift)	Range
OFF	Turn off the meter			
H.RATIO ≂V	DCV measurement	0.1 mV to 1000 V	ACV measurement	50 mV to 1000 V
			Harmonic ratio (for U1242B)	0.0% to 99.9%
SW-C	Diode measurement		Switch counter measurement	
Ω	Resistance measurement	0.1 Ω to 100 MΩ	Audible continuity measurement	
⊣⊢	Capacitance measurement	0.1 nF to 10 mF		
μA ≂	DCμA	0.1 μA to 10 mA	ACμA measurement	50 μA to 10 mA
mA ≂	DCmA	0.01 mA to 440 mA	ACmA measurement	5 mA to 440 mA
			mA% scale	
A ≂	DCA	0.001 A to 10 A	ACA measurement	0.5 A to 10 A
T1	T1 temperature	–40 °C to 1000 °C	T2 and T1–T2 temperature measurements (for U1242B)	–40 °C to 1000 °C

Action	Steps
Turns ON backlight	Press  .
Checks battery capacity	Press and hold  for >1 s.
Freezes the measured value	Press  .
Starts MIN/MAX/AVG recording	Press and hold  for >1 s.
Offsets the measured value	Press  .
Scan the measured temperature (for U1242B only)	Press and hold  for > 1 s.
Changes the measuring range	Press  .
Turns on auto range	Press and hold  for > 1 s.
Measures frequency for AC signal	Press  .
Starts manual data logging	Press and hold  for > 1 s.

This information is subject to change without notice. Always refer to the Keysight website for the latest revision.

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