

BROCHURE

# Digital Multimeters



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 **KEYSIGHT**  
TECHNOLOGIES

## Index

| Model   | Description   | Digits of resolution       | Measurement speed (reading/s at 4½ digits) | Basic 1-yr DCV accuracy | Basic measurements   | Connectivity & software   | Page: |
|---|---|----------------------------|--|-------------------------|--|---|-------|
| <br>U3401A/U3402A    | Benchtop DMM, dual display<br><br>Elegantly simple and affordable DMMs with basic and good capabilities | 4½ (U3401A)<br>5½ (U3402A) | N/A  | 0.0120%                 | DCV, ACV, DCI, ACI, 2-wire resistance (4-wire on U3402A), frequency, continuity, and diode   | N/A   | 4     |
| <br>U3606A/U3606B    | 5.5-digit DMM with built-in 30 W power supply<br><br>Halves bench/rackspace need for two instruments    | 5½                         | 26   | 0.0250%                 | DCV, ACV, DCI, ACI, 2- and 4-wire resistance, frequency, continuity, diode, and capacitance<br><br>30-W with four output ranges, OVP/OCV, auto scan/ramp and square wave generator | USB 2.0, GPIB   | 5     |
| <br>34450A           | 5.5 digit bench digital multimeter<br><br>OLED dual display   | 5½                         | 190  | 0.0150%                 | DCV, ACV, DCI, ACI, 2- and 4-wire resistance, frequency, continuity, diode, capacitance, and temperature   | USB 2.0, Serial Interface (RS-232), GPIB<br>BenchVue software enabled (page 25) | 6     |
| <br>34460A/34461A    | Bench/System DMM<br><br>Graphical color dual-line display with histogram and trend charts               | 6½                         | 300/1000                                   | 0.0075/0.0035%          | DCV, ACV, DCI, ACI, 2- and 4-wire resistance, frequency, period, continuity, diode, temperature, capacitance   | USB, LAN/LXI Core, GPIB,<br>BenchVue software enabled (page 25)                 | 7     |
| <br>34465A         | Bench/System DMM<br><br>Includes 34461A features plus data logging, digitizing and auto calibration     | 6½                         | 50,000                                     | 0.0030%                 | DCV, ACV, DCI, ACI, 2- and 4-wire, resistance, frequency, period, continuity, diode, temperature, capacitance, DC ratio  | USB, LAN/LXI Core, GPIB optional,<br>BenchVue software enabled (page 25)        | 8     |
| <br>34470A         | Bench/System DMM<br><br>Includes 34461A features plus data logging, digitizing and auto calibration     | 7½                         | 50,000                                     | 0.0016%                 | DCV, ACV, DCI, ACI, 2- and 4-wire, resistance, frequency, period, continuity, diode, temperature, capacitance, DC ratio  | USB, LAN/LXI Core, GPIB optional,<br>BenchVue software enabled (page 25)        | 8     |
| <br>34401A*        | Bench/System DMM<br><br>Industry standard for accuracy, speed, measurement ease and versatility         | 6½                         | 1000                                       | 0.0035%                 | DCV, ACV, DCI, ACI, 2- and 4-wire resistance, frequency, period, continuity, and diode.  | GPIB, RS-232, DMM Connectivity<br>BenchVue software enabled (page 25)           | 9     |
| <br>34410A/34411A* | Bench/System DMM, dual-line display<br><br>Highest through-put of benchtop DMMs                         | 6½                         | 10,000 (34410A)<br>50,000 (34411A)         | 0.0030%                 | DCV, ACV, DCI, ACI, 2- and 4-wire resistance, frequency, period, continuity test, capacitance, temperature   | USB, LAN/LXI Core, GPIB, BenchVue software enabled (page 25)                    | 10    |
| <br>34420A         | Nanovolt/μΩ meter<br><br>Very accurate, low-level measurements  | 7½                         | 250  | 0.0030%                 | DCV, DCI, 2- and 4-wire resistance, 2 channel scanning, temperature  | GPIB, RS-232, Intuilink software  | 11    |

\*NOTICE: The 34401A, 34410A, 34411A products will be discontinued December 1, 2016. For migration details visit: [www.keysight.com/find/nextgenDMMs](http://www.keysight.com/find/nextgenDMMs)

## Index

| Model   | Description  | Digits of resolution | Measurement speed (reading/s at 4½ digits) | Basic 1-yr DCV accuracy    | Basic measurements  | Connectivity & software  | Page:   |
|---|--|----------------------|--|----------------------------|---|--|---------|
|  3458A           | Bench/System DMM<br>The fastest, most flexible and most accurate multimeter by Keysight. Ideal multimeter for demanding applications | 8½                   | 100000 (@ 4½ digits)                       | 0.0008% (0.0004% optional) | DCV, ACV, DCI, ACI, 2- and 4-wire resistance, frequency, period, and temperature  | GPIB   | 12      |
|  U1177A/ U1117A  | Infrared (IR)-to-Bluetooth Adapter<br>Enables Bluetooth connection to compatible Keysight handhelds.                                 | N/A                  | N/A  | N/A                        | N/A   | Keysight Mobile Meter<br>Keysight Mobile Logger  | 13      |
|  U1190 Series    | Handheld DMM<br>Illuminate test area and measure in safer manner   | 3½                   | 3  | 0.5%                       | DCV, ACV, DCI, ACI, 2- and 4-wire resistance, frequency, period, continuity, diode, capacitance, temperature  | N/A  | 14      |
|  U1210 Series    | Handheld clamp meter<br>For convenient high current measurements   | 3½                   | 7  | 0.5%                       | DCV, ACV, DCI, ACI, 2-wire resistance, frequency, continuity, diode test, capacitance, temperature  | IR-USB, <i>Bluetooth</i>   | 15      |
|  U1230 Series    | Handheld DMM<br>Retool your expectations with the Keysight U1230 Series handheld DMM   | 3½                   | 5  | 0.5%                       | DCV, ACV, DCI, ACI, resistance, frequency, continuity, diode test, capacitance, temperature   | IR-USB, <i>Bluetooth</i>   | 16      |
|  U1240B Series   | Handheld DMM<br>Feature-rich and robust DMMs   | 4                    | 7  | 0.09%                      | DCV, DCI, ACV, ACI, 2-wire resistance, frequency, continuity, diode test, switch counter, harmonic ratio, capacitance, temperature, 4-20 mA % scale | IR-USB, <i>Bluetooth</i>   | 17      |
|  U1240C Series  | Handheld DMM<br>Perform test confidently and efficiently   | 4½                   | 5  | 0.09%                      | DCV, DCI, ACV, ACI, 2-wire resistance, frequency, continuity, diode test, switch counter, harmonic ratio, capacitance, temperature, 4-20 mA % scale | IR-USB, <i>Bluetooth</i>   | 18      |
|  U1250 Series  | Handheld DMM<br>Versatile, high performance DMMs   | 4½                   | 7  | 0.025%                     | DCV, DCI, ACV, ACI, 2-wire resistance, frequency, continuity, diode test, dB, capacitance, temperature, frequency counter, 4-20 mA % scale          | IR-USB, <i>Bluetooth</i>   | 19      |
|  U1270 Series  | Handheld DMM<br>More functionality in a single tool  | 4½                   | 7  | 0.05%                      | DCV, DCI, ACV, ACI, 2-wire resistance, frequency, continuity, diode test, dB, capacitance, temperature, 4-20 mA % scale                             | IR-USB, <i>Bluetooth</i>   | 20      |
|  U1280 Series  | Handheld DMM<br>Trustworthy measurements in the palm of your hand  | 4½                   | 5  | 0.025%                     | DCV, DCI, ACV, ACI, 2-wire resistance, frequency, continuity, diode test, dB, capacitance, temperature, 4-20 mA % scale                             | IR-USB, <i>Bluetooth</i>   | 21      |
|  U1401B        | Handheld multi-function calibrator/meter<br>Calibrator and DMM in one tool   | 4½                   | 3  | 0.003%                     | DCV, ACV, DCI, ACI, 2-wire resistance, temperature, frequency, diode test, continuity, pulse width, duty cycle                                      | IR-USB   | 22      |
|  U2741A        | USB Modular DMM<br>Compact, with plug-and-play simplicity  | 5½                   | 100  | 0.02%                      | DCV, ACV, DCI, ACI, 2- and 4-wire resistance, frequency and period, continuity, diode test, temperature   | USB 2.0  | 23      |
|  M9181A        | PXI DMM - basic features.<br>Best for functional test when there are multiple tests with range or function changes.                  | 6½                   | 150  | .009%                      | DCV, DCI, ACV, ACI, 2- and 4-wire resistance  | PXI module; IVI-C, IVI-COM, LabVIEW, MATLAB drivers. Signametrics compatible driver is also available        | 24      |
|  M9182A/M9183A | PXI DMM - enhanced performance models.<br>Best for functional test when there are multiple tests with range or function changes.     | 6½                   | 4,500 for M9182A<br>15,000 for M9183A      | .004%                      | All M9181A measurements, plus frequency/period, capacitance, and temperature. M9183A includes duty cycle, counter/totalizer, and DC source.         | PXI-hybrid module; IVI-C, IVI-COM, LabVIEW, MATLAB drivers. Signametrics compatible driver is also available | 24      |
| Accessories Compatibility Chart   |  |                      |  |                            |   |  | 25 - 26 |
| BenchVue Software   |  |                      |  |                            |   |  | 27      |

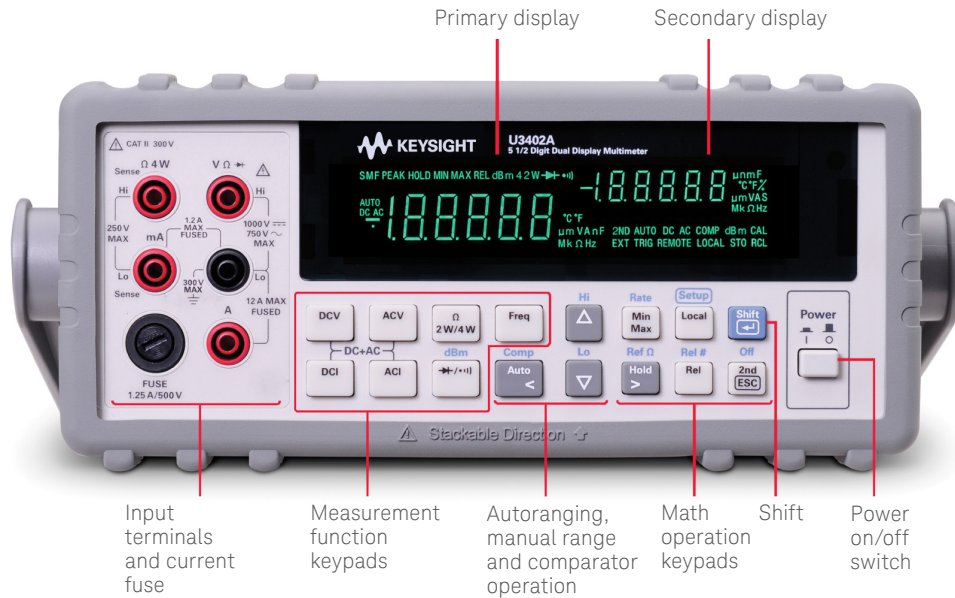
## Basic + good = elegant simplicity

U3400 Series 4½ and 5½ digit multimeters



### Key features

- Up to 120,000 counts resolution
- Up to six built-in math functions – dBm, Relative, Min/Max, Compare, Hold
- Dual display on bright VFD
- Selectable resolutions for variable measurement speeds
- Kensington lock slot security



### Key specifications

|                       |  |
|-----------------------|--|
| DCV accuracy          | 0.02%  |
| Reading speed         | N/A  |
| Measurement functions | DCV, ACV, DCI, ACI, 2-wire and 4-wire resistance, frequency, diode, continuity |
| Type of connectivity  | N/A  |

Technical datasheet:  
Literature number 5990-3970EN

### Ordering information

U3401A 4½ digit dual display digital multimeter  
U3402A 5½ digit dual display digital multimeter

Each U3400 Series includes:

- Quick start guide
- Product reference CD
- Certificate of calibration (CoC)
- 34138A test lead kit
- AC power cord

Options:

- U3400A-100      USB to RS232 cable
- U3400A-1CM      Rack mount kit
- U3400A-1CN      Dual flange kit



## Two instruments in one

U3606A/U3606B multimeter|DC power supply



### Key features

Full-featured DMM

- 8 built-in math functions
- 120,000 counts resolution
- 4-wire  $m\Omega$  measurement with 0.001  $m\Omega$  resolution

Full-featured DC power supply

- 30 W, 30 V/1 A, 100 mA/30 V, 8 V/3 A and 1000 mV/3 A ranges
- OVP and OCP load protection
- Auto ramp and scan for multi-level DC bias testing
- Up to 4.8 kHz square-wave output



### Key specifications

|                       |   |
|-----------------------|---|
| DCV accuracy          | 0.025%  |
| Reading speed         | 26 readings/second  |
| Measurement functions | DCV, ACV, DCI, ACI, 2-wire and 4-wire resistance, frequency, diode, continuity, and capacitance |
| Type of connectivity  | GPIB, USB 2.0   |

Technical datasheet:  
Literature number 5991-2849EN

### Ordering information

U3606A 5½ digit digital multimeter|DC power supply  
U3606B 5½ digit digital multimeter|DC power supply

Each unit includes:

- Quick start guide
- Product reference CD
- Keysight Technologies, Inc. IO Library Suite
- Certificate of calibration
- U8201A combo test lead kit
- USB 2.0 high-speed type A to type B cable
- AC power cord

# Turbo charge your measurements with one of the fastest tools in its class

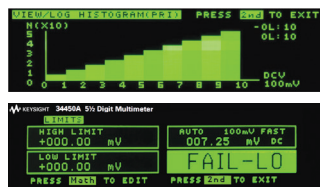
## 34450A bench digital multimeter



### Key features

- Fast reading speed up to 190 readings/sec
- Multiple connectivity options – USB 2.0, Serial Interface (RS-232) and GPIB
- Up to 50,000 memory points for data logging
- Built-in histogram function
- With Fluke 45 and Fluke 8808A code compatibility

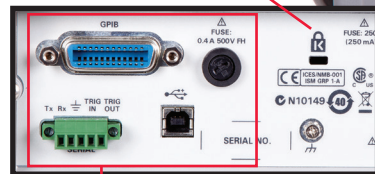
5.5 digit OLED dual display allows clear and quick view of measurements



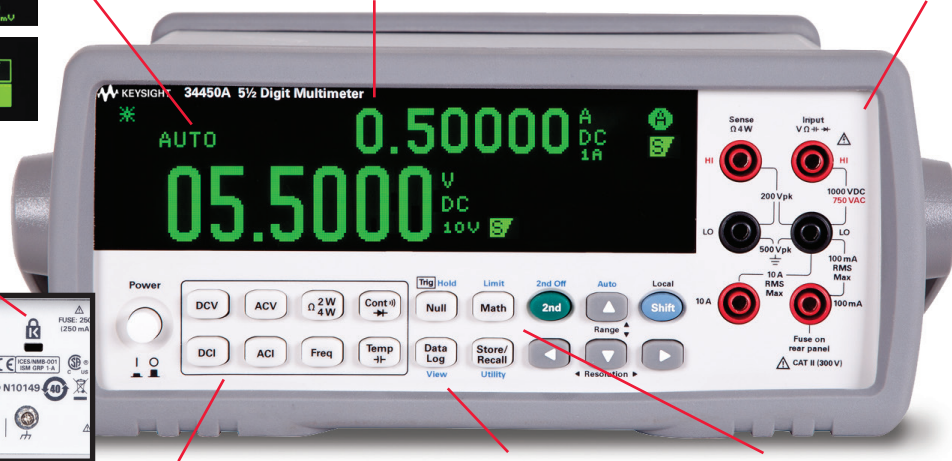
Fast 190 readings/sec and 0.015% DCV accuracy to help you achieve throughput breakthrough

Input terminals

Kensington lock to better secure the unit



Multiple choices of connectivity and trigger in/out capability for production data analysis



Eleven measurement functions

Up to 50,000 memory points for data logging and histogram function

Built-in math functions

### Key specifications

|                       |  |
|-----------------------|--|
| DCV accuracy          | 0.015%   |
| Reading speed         | 190 readings/s   |
| Measurement functions | DCV, ACV, DCI, ACI, 2-wire and 4-wire resistance, frequency, diode, continuity, capacitance, temperature |
| Type of connectivity  | USB 2.0, Serial Interface (RS-232) and GPIB  |

Technical datasheet:  
Literature number 5991-1133EN

### Ordering information

34450A 5½ digit dual display digital multimeter

Each 34450A includes:

- Test lead kit
- Power cord
- USB interface cable
- Quick start guide
- Product reference CD
- Keysight IO Library Suite CD-ROM

Upgradable options:

- 3445GPBU GPIB connectivity upgrade
- 3445MEMU 50,000 memory points upgrade for data logging
- BenchVue software enabled

# The new standard for uncompromising performance in bench and system test

## 34460A/34461A 6½ digit Truevolt DMMs



### Key features

Display DMM results in ways you never have before

- Color, graphical display with built-in bar chart, histogram, trend (34461A only), math, and statistics
- Save and document your DMM's data from your PC, mobile device, or IO of choice

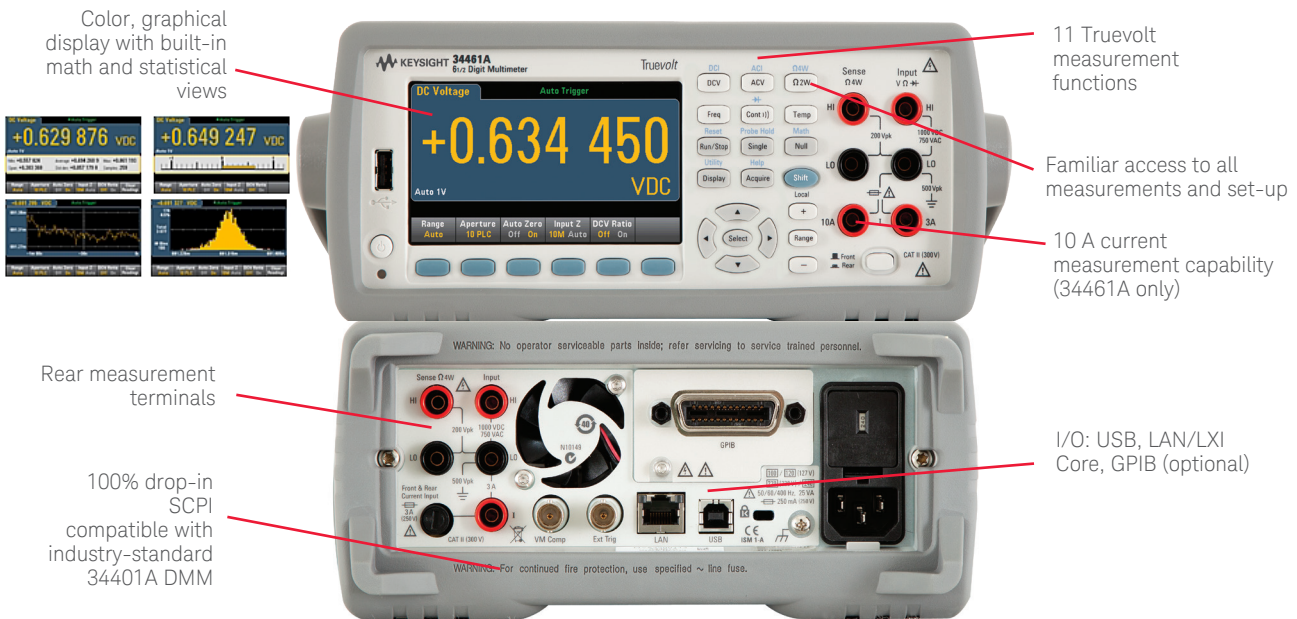
Measure with unquestioned Truevolt confidence

- Digital AC, lowest measurement noise, ISO/IEC derived and compliant specifications

- 1000 V max voltage input, 3 A/10 A (34461A) max current input

Move to the next generation 34401A DMM with 100% assurance

- Industry's only 100% drop-in, SCPI compatible replacement for the Keysight 34401A DMM (34461A)



### Key specifications

|                           |   |
|---------------------------|---|
| DCV accuracy              | 0.0075/0.0035%  |
| Reading speed - 4½ Digits | 300/1000 readings/s   |
| Measurements              | DCV, ACV, DCI, ACI, 2- and 4-wire resistance, frequency, period, diode, continuity, temperature |
| Type of connectivity      | USB, LAN/LXI Core (Option on 34460A, Std on 34461A)<br>GPIB (Optional)                          |

Technical datasheet:

Literature number 5991-1983EN

### Ordering information

34460A 6½ digit, basic Truevolt DMM

34461A 6½ digit, 34401A replacement, Truevolt DMM

Upgradeable options:

- 3446ACCU - Accessory kit for 34460A (documentation, test leads, USB cable)
- 3446GPBU - GPIB user installable interface module
- 3446LANU - Enable rear panel LAN/LXI web interface, external triggering for 34460A
- 3446SECU - Enable NISPOM and file security
- BenchVue software enabled (see page 25)

# The new standard for uncompromising performance in bench and system test

34465A 6½, 34470A 7½ digit performance Truevolt DMMs



## Key features

Get more insight quickly

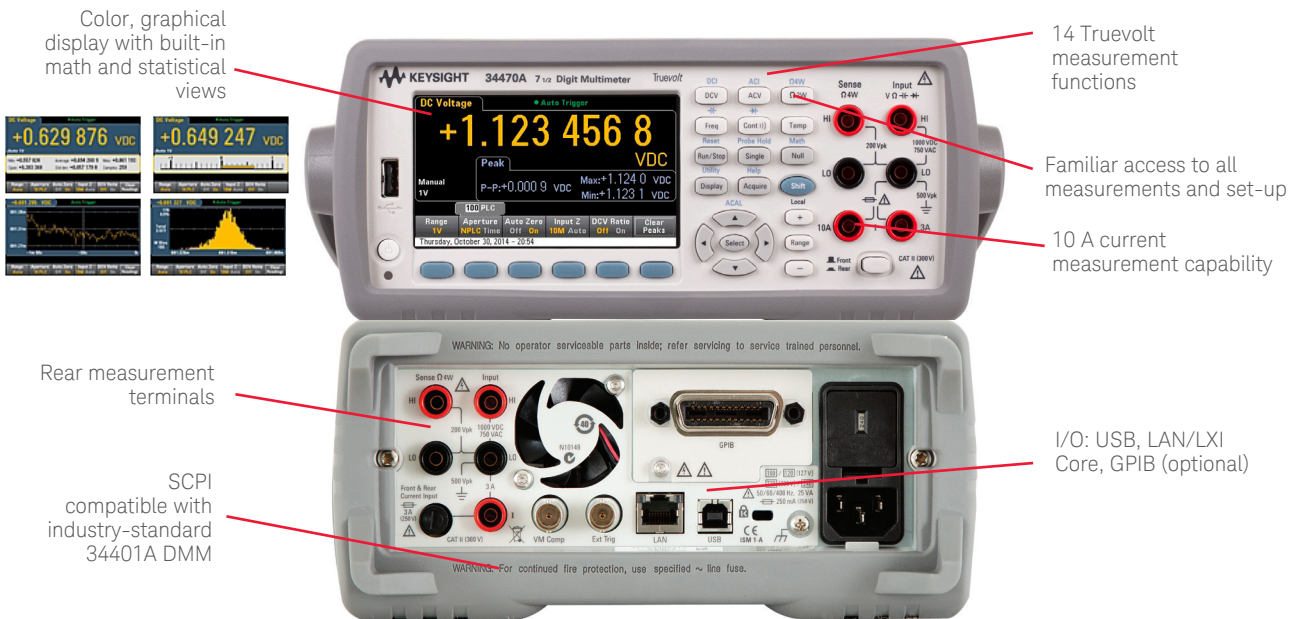
**Truevolt** DMM's graphical capabilities such as trend and histogram charts offer more insights quickly. Both models also provide a data logging mode for easier trend analysis and a digitizing mode for capturing transients.

Low-current measurements

The ability to measure very low current, 1 µA range with pA resolution, allows you to make measurements on very low power devices.

Maintaining calibration

Auto calibration allows you to compensate for temperature drift so you can maintain measurement accuracy throughout your workday.



## Key specifications

|                           |   |
|---------------------------|---|
| DCV accuracy              | 0.0030/0.0016%  |
| Reading speed – 4½ Digits | 50,000 readings/s   |
| Measurements              | DCV, ACV, DCI, ACI, 2- and 4-wire resistance, frequency, period, diode, continuity, temperature capacitance, DC ratio |
| Type of connectivity      | USB, LAN/LXI Core<br>GPIB (Optional)  |

Technical datasheet:  
Literature number 5991-1983EN

## Ordering information

34465A 6½ digit, performance Truevolt DMM (34410A/11A replacement)

34470A 7½ digit, performance Truevolt DMM

Upgradeable options:

- 3446GPBU – GPIB user installable interface module
- 3446SECU – Enable NISPOM and file security
- 3446DIGU – Enable digitizing and advanced triggering
- 3446MEMU – Enable 2 million readings of memory
- BenchVue software enabled



# Uncompromising performance for benchtop and system testing



34401A 6 1/2 digit multimeter (Replaced by 34461A 6 1/2 digit Truevolt multimeter)

NOTICE: The 34401A DMM will be discontinued December 1, 2016.  
For migration details visit: [www.keysight.com/find/nextgenDMMs](http://www.keysight.com/find/nextgenDMMs)

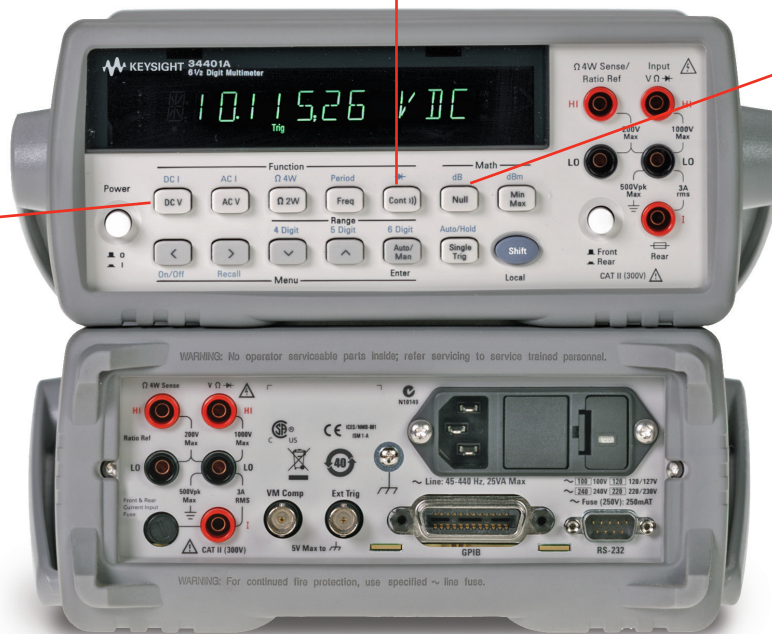
## Key features

- 1000 V maximum input
- SCPI commands standard
- Intuilink Connectivity Software included

Perform continuity and diode tests easily with the touch of a button

Remove lead resistance with Null feature

Measure up to 1000 volts with 6 1/2 digits resolution



## Key specifications

|                      |   |
|----------------------|---|
| DCV accuracy         | 0.0035%   |
| Reading speed - DCV  | 1000 readings/second  |
| Measurements         | DCV, ACV, DCI, ACI, 2- and 4-wire resistance, diode, continuity |
| Type of connectivity | GPIB, RS-232  |

Technical datasheet:  
Literature number 5968-0162EN

## Ordering information

34401A 6 1/2 digit digital multimeter

Each 34401A includes:

- Test lead kit with probe, alligator and grabber
- Operating manual
- Service manual
- Certificate of calibration
- Test report
- AC power cord

BenchVue software enabled



# Affordable yet feature-rich measurement tool

## 34410A/34411A 6½ digit multimeter

NOTICE: The 34410A/34411A DMMs will be discontinued December 1, 2016. For migration details visit: [www.keysight.com/find/nextgenDMMs](http://www.keysight.com/find/nextgenDMMs)



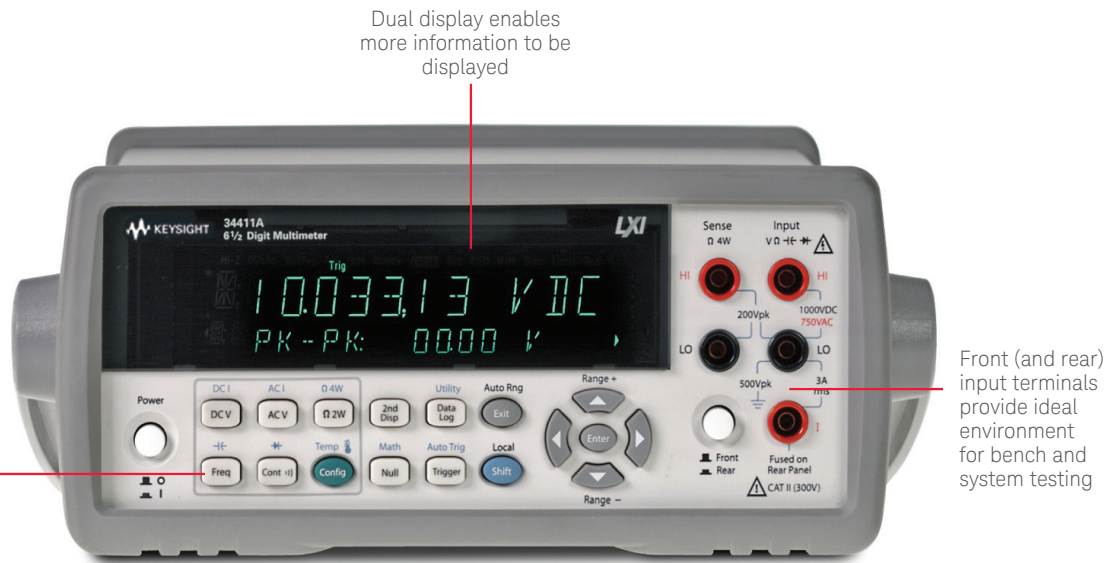
### Key features

Keysight 34410A 6½ digit high-performance DMM

- Expanded measurement ranges
- Data logger with 50k reading non-volatile memory

Keysight 34411A 6½ digit enhanced-performance DMM

- All features of the 34410A plus:
- 50,000 readings/s at 4½ digits direct to PC
- 1 million volatile reading memory
- Analog level triggering
- Programmable pre/post triggering



### Key specifications

|                      |   |
|----------------------|---|
| DCV accuracy         | 0.0030%   |
| Reading speed – DCV  | 34410A 10,000 readings/s<br>34411A 50,000 readings/s                                      |
| Measurements         | DCV, ACV, DCI, ACI, 2- and 4-wire resistance, continuity, diode, capacitance, temperature |
| Type of connectivity | GPIB, USB 2.0, LAN (LXI Core)   |

Technical datasheet:  
Literature number 5989-3738EN

### Ordering information

34410A 6½ digit digital multimeter  
34411A 6½ digit digital multimeter

Each 34410A/34411A includes:

- Test lead kit with probes and SMT attachments
- Test report
- AC power cord
- USB interface cable

BenchVue software enabled (see page 25)

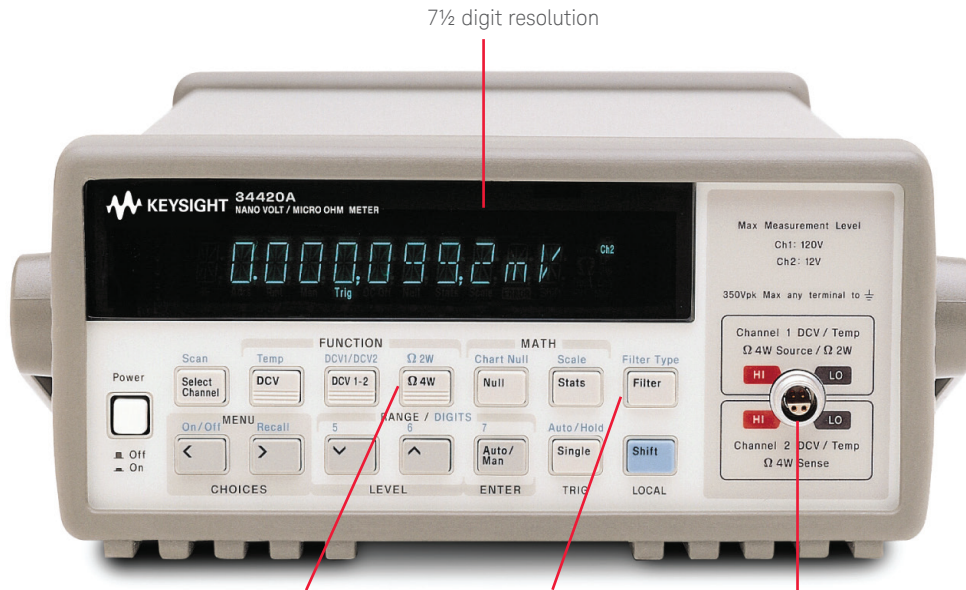
# Nanovolt performance at a micro-volt price

34420A 7½ digit multimeter



## Key features

- 100 pV/ 100 n1/2 sensitivity
- 1.3 nVrms/8 nVpp noise performance
- Built-in low noise 2-channel scanner
- Direct SPRT, RTD, thermistor, and thermocouple measurements



Three resistance modes are included:

- Standard
- Low-power
- Voltage-limited for dry-circuit testing

Selectable analog or digital filtering

Built-in low noise two channel scanner with ratio and difference functions

## Key specifications

|                      |  |
|----------------------|--|
| DCV accuracy         | 0.0030%                                    |
| Reading speed – DCV  | 250 readings/s                             |
| Measurements         | DCV, 2- and 4-wire resistance, temperature |
| Type of connectivity | GPIB, RS-232                               |

Technical datasheet:  
Literature number 5968-0161EN

## Ordering information

34420A nanovolt/micro-ohm meter

Each 34420A includes:

- Low-thermal input cable (34102A)
- Low-thermal shorting plug (34103A)
- Kelvin clip set (11062A)
- Operating manual
- Service manual
- Quick reference guide
- Test report with cal

# Shattering performance barriers of speed and accuracy

3458A 8½ digit multimeter

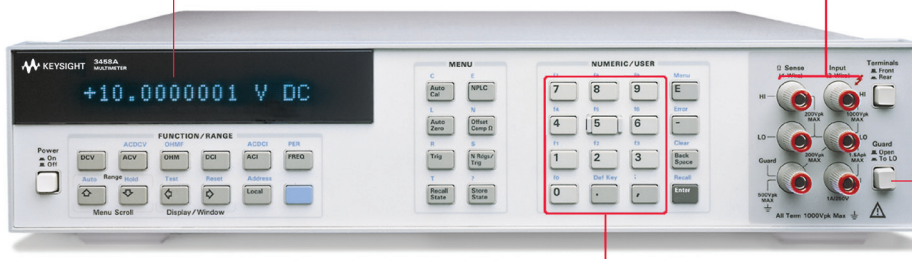


## Key features

- Maximum sensitivity: 10 nV
- Programmable integration times from 500 ns to 1 sec
- Two-source (10 V, 10 kΩ) calibration, including AC
- Self-adjusting, self-verifying auto-calibration for all functions and ranges, including AC
- Multimeter Language (ML) compatible

16 character alpha-numeric display to easily read data, messages and commands

Gold-plated tellurium copper terminals (volts/ohms/ratio) for minimum thermal emf



Guard terminal and switch for maximum common mode noise rejection

Shifted keys (f0 through f9) access up to ten user-defined setups

## Key specifications

|                      |   |
|----------------------|---|
| DCV accuracy         | 0.0008% (Optional 0.0004%)                                  |
| Reading speed DVC    | Up to 100,000 readings/second (41/2 digits)                 |
| Measurements         | DCV, ACV, DCI, ACI, 2-wire and 4-wire resistance, frequency |
| Type of connectivity | GPIB  |

Technical datasheet:  
Literature number 5965-4971E

## Ordering information

3458A multimeter

Each 3458A includes:

- Test lead set (34118B)
- Power cord
- Operating manual
- Calibration manual
- Assembly level repair manual
- Quick reference guide

# Go further with Keysight handheld digital multimeters

## Keysight Remote Link Solution

The remote link is Keysight Technologies, Inc. next generation wireless connectivity. With the new U1117A Infrared (IR)-to-Bluetooth® adapter and U1115A remote logging display, you can safely measure, view and log test measurements with an extended range of up to 100 meters. You can now log and monitor data on more display

devices such as iOS / Android-based smart devices or on a Windows-based PC. By simply attaching the U1177A / U1117A IR-to-Bluetooth adapter to the IR port of a Keysight handheld meter, you'll get instant wireless Bluetooth connection setup.

### Key features

- Extended measurement distance of up to 100 meters
- View readings of up to four handheld meters simultaneously
- Compatible across all existing Keysight U1200 series handheld meters
- 60,000 points interval logging<sup>1</sup>
- Download logged data to a PC via Bluetooth connection<sup>1</sup>
- Micro USB external power port<sup>1</sup>
- Indoor and outdoor viewing modes<sup>1</sup>

1. U1115A



Keysight U1117A Infrared (IR)-to-Bluetooth adapter



Keysight wireless remote connectivity solution



# Ergonomically designed for safer measurements

## U1190 Series handheld clamp meters



### Key features

- Vsense to perform non-contact voltage detection<sup>1</sup>
- Built-in LED flashlight to illuminate test area<sup>1</sup>
- Current measurement up to 600 A<sup>2</sup>
- Digital multimeter (DMM) with Resistance, Capacitance<sup>1</sup>, DCV, ACV, DCμA<sup>3</sup>, ACμA<sup>3</sup>, Continuity and Diode test measurements
- CAT III 600 V / CAT IV 300 V overvoltage protection

1. Only for U1192A, U1193A and U1194A  
 2. Only for U1193A and U1194A  
 3. Only for U1194A



1. Exclusive to U1192A, U1193A, and U1194A  
 2. Exclusive to U1194A

### Key specifications

|                       |   |
|-----------------------|---|
| DCV accuracy          | 0.5+3   |
| Reading speed         | 3 readings/s  |
| Measurement functions | DCV, ACV, DCI, ACI, resistance, capacitance, diode test, temperature, frequency, continuity |
| Type of connectivity  | N/A   |

Technical datasheet:  
 Literature number 5990-8646EN

### Ordering information

- U1191A clamp meter
- U1192A clamp meter
- U1193A clamp meter
- U1194A clamp meter

Each handheld includes:

- Certificate of calibration
- Quick start guide
- K-type thermocouple (only for U1194A)
- 1.5 V AAA alkaline battery
- Soft carrying case
- Test leads with 4-mm tips
- Test report with cal



Built-in LED flashlight to illuminate test area



# Handle big currents – safely

## U1210 Series handheld clamp meters



### Key features

- Large clamp opening of 52 mm or 2"
- High measurement capability of up to 1000 A for AC, DC or AC+DC
- CAT III 1000 V/CAT IV 600 V overvoltage protection
- Includes full-featured DMM with resistance, capacitance, frequency and temperature functions
- High resolution measurements – measure current as low as 0.01 A

Bluetooth wireless connectivity (optional U1177A Infrared (IR)-to-Bluetooth Adapter required)



- Large jaw opening of 2" to test thick current sources
- Max or Min recording capability
- Capacitance/diode measurement
- Temperature and audible continuity functions
- High measurement capability of up to 1000 A for AC, DC or AC+DC
- Large LCD display with maximum reading of 4000 counts
- Manual or auto ranging
- Peak hold function for in-rush current testing



### Key specifications

|                      |  |
|----------------------|--|
| DCV accuracy         | 0.50%  |
| Reading speed        | 7 readings/s   |
| Measurements         | DCV, ACV, DCI, ACI, 2-wire resistance, capacitance, temperature, frequency, diode test, continuity |
| Type of connectivity | IR-USB and Bluetooth   |

Technical datasheet:  
Literature number 5990-5083EN

### Ordering information

- U1211A clamp meter
- U1212A clamp meter
- U1213A clamp meter

Each clamp meter is shipped with::

- Test leads with 4-mm tips
- Soft carrying case
- Standard alkaline 9 V battery
- Quick start guide
- Certificate of calibration

# Robust and feature-packed

## U1230 Series handheld digital multimeters



### Key features

- Built-in LED flashlight to illuminate test area
- Flashing backlight as additional visual alert during continuity tests in noisy areas
- Vsense performs non-contact voltage detection
- Data logging capability (stores up to 10 readings)
- IR-to-USB connectivity to transfer data to PC for record

Bluetooth wireless connectivity (optional U1177A Infrared (IR)-to-Bluetooth Adapter required)



1. Only applicable for the U1233A model



The built-in flashlight as illustrated

### Key specifications

|                       |  |
|-----------------------|--|
| DCV accuracy          | 0.5%+2   |
| Reading speed         | 5 readings/s   |
| Measurement functions | DCV, ACV, ACI, DCI, diode test, capacitance, resistance, temperature*, frequency, continuity test<br>*Applies to U1233A only |
| Type of connectivity  | IR-USB and Bluetooth   |

### Ordering information

- U1231A digital multimeter
- U1232A digital multimeter
- U1233A digital multimeter

Each handheld comes with:

- Quick start guide
- Certificate of calibration
- U1167A 4 mm tips probes test leads
- 4 x 1.5 V batteries

Technical datasheet:  
Literature number 5990-7550EN

# Check more, fix more, spend less

## U1240B Series handheld multimeters



### Key features

- True RMS AC measurement
- Advanced functions – capacitance, temperature, MINMAX recording
- Manual data logging (U1242B only)
- Built-in switch counter, harmonic ratio (U1242B only), dual/differential temperature capabilities (U1242B only)
- CAT III 1000 V and CAT IV 600 V overvoltage protection

Bluetooth wireless connectivity (optional U1177A Infrared (IR)-to-Bluetooth Adapter required)



### Key specifications

|                       |   |
|-----------------------|---|
| DCV accuracy          | 0.09%   |
| Reading speed         | 7 readings/s  |
| Measurement functions | DCV, ACV, DCI, ACI, 2-wire resistance, frequency, capacitance, temperature, diode, continuity tests |
| Type of connectivity  | IR-USB and Bluetooth  |

### Ordering information

U1241B digital multimeter  
U1242B digital multimeter

Each handheld comes with:

- Four 1.5 V AAA alkaline batteries
- Certificate of calibration
- Test probe leads (4-mm tips)
- Quick start guide
- Free test data (Option UK6)

Technical datasheet:  
Literature number 5989-7040EN

Perform test confidently and efficiently over a longer period of time!

U1240C Series handheld digital multimeters



### Key features

- 10,000-count dual display
- Up to 0.09% basic DCV accuracy
- Longer battery life up to 400 hours
- Certified to IP 67 for water and dust protection and tested to withstand a 3-meter (10-ft) drop
- Built-in flashlight
- (U1242C) Vsense for non-contact voltage detection, built-in harmonic ratio, low impedance mode, T1-T2 differential temperature

Bluetooth wireless connectivity (optional U1177A Infrared (IR)-to-Bluetooth Adapter required)



### Key specifications

|                       |  |
|-----------------------|--|
| DCV accuracy          | 0.09%  |
| Reading speed         | 5 readings/s   |
| Measurement functions | Voltage, current, frequency, capacitance, resistance, continuity, diode test and temperature |
| Type of connectivity  | IR-USB and <i>Bluetooth</i>  |

Technical datasheet:  
Literature number 5992-0848EN

### Ordering information

U1241C digital multimeter  
U1242C digital multimeter

Each handheld comes with:

- Test leads (red and black)
- Infrared (IR)-to-USB cable
- Four 1.5 V AAA alkaline batteries
- Quick start guide
- Certificate of calibration

# Be well equipped from the start

## U1250 Series handheld multimeters



### Key features

- High contrast ratio of 2000:1 and wide viewing angle of 160°\*
- Built-in square-wave generator and frequency counter
- Includes all essential accessories for electronics troubleshooting
- Smoothing function to stabilize erratic readings\*
- Data logging to instrument and PC \*with U1253B

Bluetooth wireless connectivity (optional U1177A Infrared (IR)-to-Bluetooth Adapter required)

### Key specifications

|                       |   |
|-----------------------|---|
| DCV accuracy          | 0.25%   |
| Speed                 | 100 readings/s  |
| Measurement functions | DCV, ACV, DCI, ACI, 2-wire resistance, frequency, capacitance, temperature, diode, continuity tests |
| Type of connectivity  | IR-USB and Bluetooth  |



OLED display with approximately 160° viewing angle, and high contrast ratio of 2000:1 for crystal-clear viewing<sup>1</sup>



50,000 count dual display with true-RMS reading capability



SHIFT key and one-stop function keys for easy access

Broad range of measurement functions, including temperature and capacitance

Built-in battery charging for optimum capacity

20 MHz frequency counter<sup>2</sup>

Data logging to internal or external memory

Programmable square-wave generator for stimulation of digital circuits<sup>2</sup>

CAT III 1000 V and CAT IV 600 V overvoltage protection for assurance of your safety while you go about your tasks

1. U1253B only
2. U1252B/U1253B only

### Ordering information

- U1251B digital multimeter
- U1252B digital multimeter
- U1253B digital multimeter

Each U1251B includes:

- One 9V size alkaline battery
- Certificate of calibration
- Test probe leads (4-mm tips)
- Quick start guide
- Free test data (Option UK6)

Each U1252B/U1253B includes:

- One 9V size rechargeable Ni-MH battery
- Certificate of calibration
- Test probe leads (4-mm tips)
- Quick start guide
- Free test data (Option UK6)

Technical datasheet:

Literature number 5989-5509EN



Best Value Portable Test Equipment, 2006



A testament to innovation and credibility, 2006



General-purpose instruments category, 2009



Category Winner, EC&M Product of the Year competition, 2009



# Shaped to fit, tailored to perform, built to last

## U1270 Series handheld digital multimeters



### Key features

- OLED display with 2000:1 contrast ratio and 160 degree viewing angle<sup>1</sup>
  - Measure up to 1000 V AC/DC and 10 A (20 A for 30 s)
  - Down to -40 °C operating temperature<sup>1</sup>
  - Water and dust resistance (IP 54)
  - CAT III 1000 V / CAT IV 600 V overvoltage protection
- <sup>1</sup>. With U1273AX

Bluetooth wireless connectivity (optional U1177A Infrared (IR)-to-Bluetooth Adapter required)

### Key specifications

|                       |   |
|-----------------------|---|
| DCV accuracy          | 0.05%   |
| Speed                 | 7 readings/s  |
| Measurement functions | DCV, DCI, ACV, ACI, 2-wire resistance, frequency, capacitance, continuity, diode test |
| Type of connectivity  | IR-USB and Bluetooth  |

### Ordering information

- U1271A digital multimeter
- U1272A digital multimeter
- U1273A digital multimeter
- U1273AX digital multimeter

Each handheld comes with:

- Standard test leads
- Test probes with 4-mm tips
- K-type thermocouple and adapter
- 4 x AAA alkaline batteries (for U1271A, U1272A, U1273A)
- 4 x AAA lithium batteries (for U1273AX)
- Certificate of calibration
- UK 6 (test report)
- Quick start guide

Technical datasheet:  
Literature number 5990-6425EN



Front panel



Back panel



# Trustworthy measurements in the palm of your hand!

## U1280 Series handheld digital multimeters



### Key features

- 60,000-count dual display
- Up to 0.025% basic DCV accuracy
- Longer battery life up to 800 hours
- Certified to IP 67 for water and dust protection and tested to withstand a 3-meter (10-ft) drop
- (U1282A only) Vsense for non-contact voltage detection, square wave output, low pass filter, frequency counter

Bluetooth wireless connectivity (optional U1177A Infrared (IR)-to-Bluetooth adapter required)



### Key specifications

|                       |  |
|-----------------------|--|
| DCV accuracy          | 0.025%   |
| Speed                 | 5 readings/s   |
| Measurement functions | Voltage, current, frequency, capacitance, resistance, continuity, diode test and temperature |
| Type of connectivity  | IR-USB and <i>Bluetooth</i>  |

Technical datasheet:  
Literature number 5992-0847EN

### Ordering information

U1281A digital multimeter  
U1282A digital multimeter

Each handheld comes with:

- Test leads (red and black)
- Infrared (IR)-to-USB cable
- Four 1.5 V AA alkaline batteries
- Quick Start Guide
- Certificate of calibration

# Calibrate and measure with just one tool

U1401B handheld multi-function calibrator/meter



## Key features

- Dual display with bright LCD backlight
- Simultaneous source and measure
- Bipolar voltage and current, square-wave, auto scan and ramp outputs
- Full-span DMM capability, including temperature and frequency measurements
- Data logging to PC with optional



## Key specifications

|                      |  |
|----------------------|--|
| DCV accuracy         | 0.003%   |
| Reading speed        | 3 readings/s   |
| Measurement          | DCV, ACV, DCI, ACI, 2-wire resistance, temperature, frequency, diode test, continuity, pulse width, duty cycle |
| Type of connectivity | IR-USB   |

Technical datasheet:  
Literature number 5990-3459EN

## Ordering information

U1401B multi-function calibrator/meter

Each U1401B is shipped with:

- Calibrator/meter standard test
- Lead kit
- Yellow test lead for mA simulation
- Protective holster
- Rechargeable battery pack
- AC power adapter and cord (according to country)
- Quick start guide
- Certificate of calibration
- Soft carrying case is included for U1401A

## A bench that fits into your bag

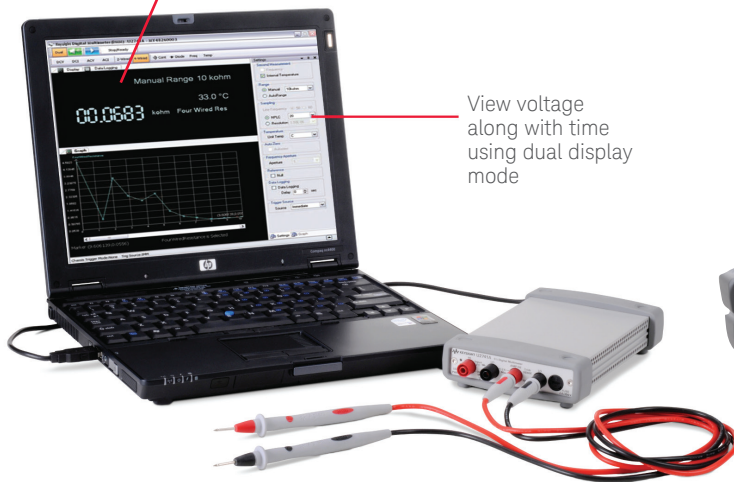
U2741A 5½ digit USB modular multimeter



### Key features

- Up to 300 VDC with 5½ digit resolution
- Wide measurement ranges: 100 mVDC to 300 VDC, 10 mA to 2 A
- Compatibility with high-speed USB 2.0, USBTMC-USB488 standard
- Standalone and modular capabilities

Bundled software -  
Keysight Measurement  
Manager (AMM)



View voltage  
along with time  
using dual display  
mode



### Key specifications

|                      |   |
|----------------------|---|
| DCV accuracy         | 0.02%   |
| Reading speed - DCV  | 100 readings/s  |
| Measurement          | DCV, ACV, DCI, ACI, 2-wire and 4-wire resistance, frequency, temperature, diode, continuity tests |
| Type of connectivity | USB 2.0   |

Technical datasheet:  
Literature number 5991-0042EN

### Ordering information

U2741A digital multimeter

Each U2741A includes:

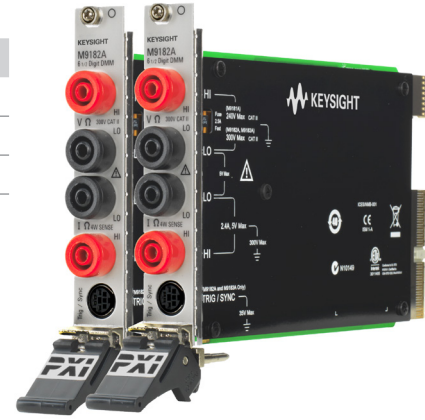
- 12 V, 2A AC/DC power adapter
- Power cord
- Standard test lead
- USB standard-A to mini-B interface cable
- L-mount kit (used with modular product chassis)
- Keysight USB modular products quick start guide
- Keysight Measurement Manager quick reference card
- Certificate of calibration
- Keysight USB modular products reference CD-ROM
- Keysight automation-ready CD-ROM (contains the Keysight IO Libraries Suite)

## Challenge the boundaries of test

M9181A/M9182A/M9183A PXI 6½ digit multimeters



| Model  | Description  |
|--------|--|
| M9181A | PXI digital multimeter, 6½ digit, basic features         |
| M9182A | PXI-H digital multimeter, 6½ digit, high performance     |
| M9183A | PXI-H digital multimeter, 6½ digit, enhanced performance |



## Comparison of Keysight PXI DMM models

|  | M9181A  | M9182A   | M9183A   |
|--|---|--|--|
| Resolution   |   | 6½ digits  |  |
| Maximum reading rate @ 4½ digits                           | 150 readings/s  | 4,500 readings/s   | 15,000 readings/s  |
| Maximum transactional speed (single reading interval time) | 6.7 ms  | 222 µs   | 66 µs  |
| Measurements and functions                                 | DCV, DCI, True RMS ACV and ACI, 2- and 4-wire resistance                | All M9181A measurements, plus frequency/period, temperature, and capacitance | All M9182A measurements plus duty cycle, counter/totalizer, DC source, and extended measurement ranges |
| Basic 1 year DCV accuracy                                  | 0.009%  | 0.004%   | 0.004%   |
| Floating isolation (CAT II)                                | Up to 240 V   | Up to 300 V  | Up to 300 V  |
| Triggering   | Immediate   | Immediate, analog level, programmable pre/post triggering, PXI trigger bus   |  |
| Reading storage  | none  | Circular buffer, 80 readings   |  |
| Connector capability                                       | cPCI, PXI-1   | cPCI, PXI-H, PXI-1   |  |
| <b>Software</b>  |   |  |  |
| Drivers  | IVI-C, IVI-COM, LabVIEW, MATLAB   |  |  |
| Supported software development environments                | Visual Studio (VB.NET, C#, C/C++), VEE, LabVIEW, LabWindows/CVI, MATLAB |  |  |
| Included GUI   | Soft front panel  |  |  |
| Application code examples                                  | C/C++, Visual Basic   |  |  |

M9181A Technical datasheet and flyer:  
 Literature number 5990-9035EN (DS)  
 Literature number 5990-9024EN (FL)

M9182A and M9183A Technical datasheet and flyer:  
 Literature number 5990-7580EN (DS)  
 Literature number 5990-6550EN (FL)



# Accessories Compatibility Chart

| Ordering number                                    | Description  | Handheld clamp meters |              | Handheld DMMs |               |               |              |              |              |        | Bench DMMs |          |        |        |        |        |        |            |            |       | Modular DMM | Handheld calibrator/meter |
|--|--|-----------------------|--------------|---------------|---------------|---------------|--------------|--------------|--------------|--------|------------|----------|--------|--------|--------|--------|--------|------------|------------|-------|-------------|---------------------------|
|  |  | U1210 Series          | U1190 Series | U1230 Series  | U1240B Series | U1240C Series | U1250 Series | U1270 Series | U1280 Series | U3401A | U3402A     | U3606A/B | 34401A | 34410A | 34411A | 34420A | 34450A | 34460A/61A | 34465A/70A | 3458A | U2741A      | U1401B                    |
| <b>Kits/rack mounts</b>                            |  |                       |              |               |               |               |              |              |              |        |            |          |        |        |        |        |        |            |            |       |             |                           |
| 34137A   | Deluxe test lead set   |                       |              |               |               |               |              |              |              |        |            |          |        |        |        |        |        |            |            |       |             | ■                         |
| 34190A   | Rackmount kit  |                       |              |               |               |               |              |              |              |        | ■          | ■        | ■      | ■      | ■      | ■      | ■      | ■          |            |       |             |                           |
| 34191A   | 2U dual flange kit   |                       |              |               |               |               |              |              |              |        | ■          | ■        | ■      | ■      | ■      | ■      | ■      | ■          |            |       |             |                           |
| 34194A   | Dual lock link kit   |                       |              |               |               |               |              |              |              |        | ■          | ■        | ■      | ■      | ■      | ■      | ■      | ■          |            |       |             |                           |
| 34307A   | Thermocouple kit   |                       |              |               |               |               |              |              |              |        |            | ■        |        |        |        |        |        |            | ■          |       |             |                           |
| 34308A   | Thermistor kit   |                       |              |               |               |               |              |              |              |        |            |          |        |        |        |        | ■      | ■          |            |       |             |                           |
| E3600A-100   | Test lead kit  |                       |              |               |               |               |              |              |              |        | ■          |          |        |        |        |        |        |            |            |       |             |                           |
| U1161A   | Extended test lead kit   | ■                     | ■            | ■             | ■             | ■             | ■            | ■            | ■            | ■      |            |          |        |        |        |        |        |            |            |       |             | ■                         |
| U1168B   | Standard test lead kit   | ■                     | ■            | ■             | ■             | ■             | ■            | ■            | ■            | ■      |            |          |        |        |        |        |        |            |            |       |             | ■                         |
| U1180A   | Thermocouple adapter+lead kit<br>(for U1242B only)<br>(for U1252/53B only)<br>(for U1272A/73/73AX) |                       |              |               |               | ■             | ■            |              | ■            |        |            |          |        |        |        |        |        |            |            |       |             |                           |
| U8201A   | Combo test lead kit  |                       |              |               |               |               |              |              |              |        | ■          |          |        |        |        |        |        |            |            |       |             |                           |
| U8202A   | Electronic test lead kit   |                       |              |               |               |               |              |              |              |        | ■          |          |        |        |        |        |        |            |            |       |             |                           |
| Y1133A   | Low-thermal external DMM scanning kit  |                       |              |               |               |               |              |              |              |        |            | ■        | ■      | ■      |        |        | ■      | ■          |            |       |             |                           |
| <b>Probes/leads/clamps/bocks/shunts/connectors</b> |  |                       |              |               |               |               |              |              |              |        |            |          |        |        |        |        |        |            |            |       |             |                           |
| 11059A   | Kelvin prob set  |                       |              |               |               |               |              |              |              |        |            | ■        | ■      | ■      |        |        | ■      | ■          | ■          |       |             |                           |
| 11060A   | Surface mount device probe   |                       |              |               |               |               |              |              |              |        |            | ■        | ■      | ■      |        |        | ■      | ■          |            |       |             |                           |
| 11062A   | Kelvin clip set  |                       |              |               |               |               |              |              |              | ■      | ■          | ■        | ■      | ■      | ■      |        | ■      | ■          | ■          |       |             |                           |
| 34103A   | Low thermal shorting plug  |                       |              |               |               |               |              |              |              |        |            |          |        |        | ■      |        |        |            |            |       |             |                           |
| 34104A   | Low thermal input connector  |                       |              |               |               |               |              |              |              |        |            |          |        |        | ■      |        |        |            |            |       |             |                           |
| 34131A   | Transit case   |                       |              |               |               |               |              |              |              |        |            |          |        |        |        |        | ■      | ■          |            |       |             |                           |
| 34133A   | Precision electronic test leads  |                       |              |               |               |               |              |              | ■            | ■      | ■          | ■        | ■      | ■      |        |        | ■      | ■          |            |       |             |                           |
| 34134A   | DC coupled current probe   |                       |              |               |               |               |              |              |              |        |            | ■        | ■      | ■      |        |        | ■      | ■          |            |       |             |                           |
| 34136A   | High voltage probe   |                       |              |               |               |               |              |              |              |        | ■          | ■        | ■      |        |        |        | ■      | ■          |            |       |             |                           |
| 34138A   | Test lead set  |                       |              |               |               |               |              |              | ■            | ■      |            | ■        | ■      | ■      |        | ■      | ■      | ■          |            | ■     |             |                           |
| 34171B   | Input terminal block   |                       |              |               |               |               |              |              |              |        |            | ■        | ■      | ■      |        |        | ■      | ■          |            |       |             |                           |
| 34172B   | Calibration short  |                       |              |               |               |               |              |              |              |        |            | ■        | ■      | ■      |        |        | ■      | ■          |            |       |             |                           |
| 34330A   | 30 A current shunt   |                       |              |               |               |               |              |              | ■            | ■      | ■          | ■        | ■      | ■      |        |        | ■      | ■          | ■          |       |             |                           |
| E2308A   | Thermister temperature probe   |                       |              |               |               |               |              |              |              |        |            | ■        | ■      | ■      |        | ■      | ■      | ■          | ■          | ■     |             |                           |
| U1115A   | Remote logging display   | ■                     |              | ■             | ■             | ■             | ■            | ■            | ■            |        |            |          |        |        |        |        |        |            |            |       |             |                           |
| U1117A   | Infrared (IR)-to-Bluetooth adapter   | ■                     |              | ■             | ■             | ■             | ■            | ■            | ■            |        |            |          |        |        |        |        |        |            |            |       |             |                           |
| U1162A   | Alligator clips  | ■                     | ■            | ■             | ■             |               | ■            | ■            |              |        |            |          |        |        |        |        |        |            |            |       |             | ■                         |
| U1163A   | SMT grabbers   | ■                     | ■            | ■             | ■             |               | ■            | ■            |              |        |            |          |        |        |        |        |        |            |            |       |             | ■                         |
| U1164A   | Fine-tip test probes   | ■                     | ■            | ■             | ■             |               | ■            | ■            |              |        |            |          |        |        |        |        |        |            |            |       |             | ■                         |
| U1169A   | Test probe leads   | ■                     | ■            | ■             | ■             |               | ■            | ■            |              |        |            |          |        |        |        |        |        |            |            |       |             | ■                         |
| U1176A   | Probe clip light   | ■                     | ■            | ■             | ■             | ■             | ■            | ■            | ■            |        |            |          |        |        |        |        |        |            |            |       |             | ■                         |
| U1177A   | Infrared (IR)-to-Bluetooth adapter   | ■                     |              | ■             | ■             | ■             | ■            | ■            | ■            |        |            |          |        |        |        |        |        |            |            |       |             |                           |
| U1580A   | DMM terminal test lead set   | ■                     | ■            | ■             | ■             | ■             | ■            | ■            | ■            |        |            |          |        |        |        |        |        |            |            |       |             | ■                         |
| U1583B   | AC current clamp   |                       |              | ■             | ■             | ■             | ■            | ■            | ■            |        |            |          |        |        |        |        |        |            |            |       |             |                           |

# Accessories Compatibility Chart

| Ordering number  | Description   | Handheld clamp meters | Handheld DMMs |              |               |               |              |              |              | Bench DMMs |            |        |        |        |        |        | Modular DMM | PXI modular DMMs | Handheld calibrator/meter |        |              |        |
|--|---|-----------------------|---------------|--------------|---------------|---------------|--------------|--------------|--------------|------------|------------|--------|--------|--------|--------|--------|-------------|------------------|---------------------------|--------|--------------|--------|
|  |   | U1210 Series          | U1190 Series  | U1230 Series | U1240B Series | U1240C Series | U1250 Series | U1270 Series | U1280 Series | U3401A/02A | U3606A/06B | 34401A | 34410A | 34411A | 34420A | 34450A | 34460A/61A  | 34465A/70A       | 3458A                     | U2741A | M9180 Series | U1401B |
| <b>Probes/adapters/leads for temperature measurement</b> |   |                       |               |              |               |               |              |              |              |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| U1179A   | IR connectivity/bracket   |                       |               |              | ■             |               |              |              |              |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| U1181A   | Immersion temperature probe<br>(for U1212A/13A only)<br>(for U1194A only)<br>(for U1233A only)                              |                       | ■             | ■            | ■             | ■             | ■            | ■            | ■            |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| U1182A   | Industrial surface temperature probe<br>(for U1212A/13A only)<br>(for U1194A only)<br>(for U1233A only)                     |                       | ■             | ■            | ■             | ■             | ■            | ■            | ■            |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| U1183A   | Air temperature probe<br>(for U1212A/13A only)<br>(for U1194A only)<br>(for U1233A only)                                    |                       | ■             | ■            | ■             | ■             | ■            | ■            | ■            |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| U1184A   | Temperature probe adapter<br>(for U1212A/13A only)<br>(for U1194A only)<br>(for U1233A only)                                |                       | ■             | ■            | ■             | ■             | ■            | ■            | ■            |            |            |        |        |        |        |        |             |                  |                           |        |              | ■      |
| U1185A   | Thermocouple (J-type) and temperature probe adapter<br>(for U1242A only)<br>(for U1252A /53B only)<br>(for U1272A/73A/73AX) |                       |               |              | ■             | ■             | ■            | ■            | ■            |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| U1186A   | Thermocouple (K-Type) and temperature probe adapter<br>(for U1212A/13A only)<br>(for U1194A only)<br>(for U1233A only)      | ■                     | ■             | ■            | ■             |               | ■            | ■            |              |            |            |        |        |        |        |        |             |                  |                           |        |              | ■      |
| U1586B   | Temperature module<br>(for U1233A only)   |                       |               | ■            |               |               |              | ■            |              |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| U5404A   | Remote test probe for U1280 Series  |                       |               |              |               |               |              |              | ■            |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| <b>Carry case/ hanging kit/brackets</b>                  |   |                       |               |              |               |               |              |              |              |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| 34131A   | Transit case  |                       |               |              |               |               |              |              |              |            | ■          | ■      | ■      | ■      | ■      | ■      | ■           |                  |                           |        |              |        |
| 34161A   | Accessory pouch   |                       |               |              |               |               |              |              |              |            | ■          |        |        |        | ■      |        |             |                  |                           |        |              |        |
| 34162A   | Accessory pouch   |                       |               |              |               |               |              |              |              |            | ■          | ■      | ■      | ■      |        | ■      | ■           | ■                |                           |        |              |        |
| 34398A   | RS-232 cable, 9-pin (F) to 9-pin (F)  |                       |               |              |               |               |              |              |              |            | ■          |        |        |        |        |        |             |                  |                           |        |              |        |
| 82350A   | Interface card, high-performance PCI to GPIB  |                       |               |              |               |               |              |              |              |            |            |        |        |        | ■      |        |             |                  |                           |        |              |        |
| 82357B   | USB/GPIB interface  |                       |               |              |               |               |              |              |              |            |            |        |        |        | ■      |        |             |                  |                           |        |              |        |
| U1171A   | Magnetic hanging kit  |                       | ■             | ■            | ■             | ■             | ■            | ■            |              |            |            |        |        |        |        |        |             |                  |                           |        |              | ■      |
| U1172A   | Transit case (aluminum-clad)  |                       | ■             | ■            | ■             | ■             | ■            | ■            |              |            |            |        |        |        |        |        |             |                  |                           |        |              | ■      |
| U1174A   | Soft carrying case  |                       |               | ■            | ■             | ■             | ■            | ■            | ■            |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| U1175A   | Soft carrying case  | ■                     |               |              |               |               |              |              |              |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| U1178A   | Soft carrying case  |                       | ■             |              |               |               |              |              |              |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| U1594A   | Hard carrying case  |                       |               |              |               |               |              |              |              |            |            |        |        |        |        |        |             |                  |                           |        |              | ■      |
| U1595A   | Rugged carrying case  | ■                     | ■             | ■            | ■             | ■             | ■            | ■            | ■            |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| <b>Power/cables/interface card</b>                       |   |                       |               |              |               |               |              |              |              |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| 10833A/B/C/D/F/G   | GPIB cable  |                       |               |              |               |               |              |              |              |            |            |        |        |        |        | ■      |             |                  |                           |        |              |        |
| 34102A   | Low thermal input cable   |                       |               |              |               |               |              |              |              |            |            |        |        |        | ■      |        |             |                  |                           |        |              |        |
| U1170A   | Battery charger adapter (for U1250/52/53B only)   |                       |               |              |               |               |              |              | ■            |            |            |        |        |        |        |        |             |                  |                           |        |              |        |
| U1173A   | IR-to-USB cable   | ■                     |               | ■            | ■             |               |              | ■            | ■            |            |            |        |        |        |        |        |             |                  |                           |        |              |        |