# Keysight Remote Link

Data Sheet

Reach MORE. Accomplish MORE. Expect MORE.

**KEYSIGHT**
TECHNOLOGIES

# Introduction

The remote link solution — Keysight's next generation wireless connectivity solution lets you measure further, easier and faster. With the new U1117A IR-to-*Bluetooth*® adapter and U1115A remote logging display, you get instant wireless *Bluetooth* connection and measure safely from an extended distance.

– Extended measurement distance of up to 100 meters

– Supported on both iOS/Android based smart device**

– View readings of up to four handheld meters simultaneously*

– Compatible with Keysight U1117A / U1177A IR-to-*Bluetooth* Adapter

– 60,000 points interval logging*

– Download logged data to a Windows PC via *Bluetooth* connection*

– Micro USB external power port*

– Indoor and outdoor viewing mode*

– Compatible with ALL Keysight's U1200 Series handheld meters*

   *     U1115A only
   **    U1117A only

## Improve work safety with 10 times MORE distance

On site testing in large industrial site can be challenging and hazardous when dealing with live machineries or high voltage equipment. By connecting your handheld meter to the remote link solution – U1117A IR-to-*Bluetooth* adapter and U1115A remote logging display, you can view and log measurements wirelessly up to 100 meters away. Get more wireless measurement distance to diagnose and evaluate live machinery from afar without having to be physically present – ensuring your safety and comfort level.

## Compatible with MORE handhelds

The remote link is able to communicate via *Bluetooth* to 20 Keysight U1200 Series handheld meters, including the new U1450/U1460A series insulation resistance testers. Now you can save investment cost by using existing Keysight handheld meters that you have already owned. The wide selection of handheld meters cater to various application needs to get real-time measurements from a basic, compact and low cost handheld meters.

| U1210 Series | U1230 Series | U1240 Series | U1250 Series | U1270 Series | U1450A/U1460A Series |

*Figure 1. Communicate via Bluetooth to all existing Keysight U1200 series handheld meters, including the U1450A/U1460A series insulation resistance testers*

## Support MORE display devices

The remote link solution offers versatility to work with more display devices. Now you can log and display measurement readings either on the U1115A remote logging display, via iOS and Android smart devices or on a Windows PC. With the wide supportability range, it allows you to multi-task by being able to measure various test points at the same time.

*Figure 2. Monitoring handheld multimeter and clamp meter readings remotely via iOS/Android based smart devices*

*Figure 3. Monitoring handheld meter readings via the U1115A remote logging display*

## New U1117A IR-to-*Bluetooth* adapter (Class 1)

– Supports Android and iOS smart devices
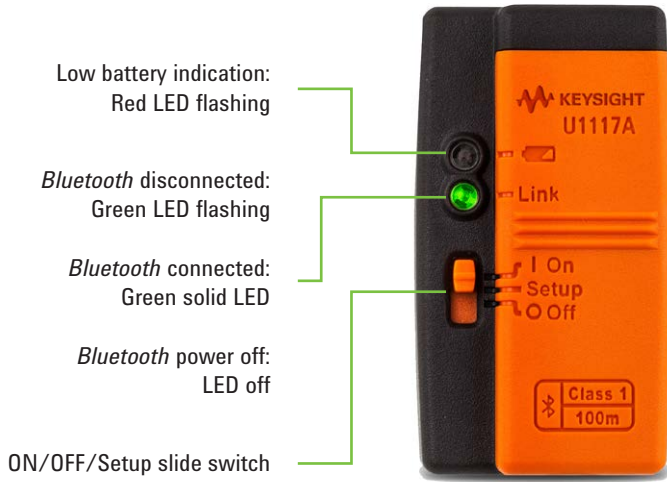– 100 meters measurement range capability *(Please refer to the connectivity distance table below)*

Low battery indication:
Red LED flashing

*Bluetooth* disconnected:
Green LED flashing

*Bluetooth* connected:
Green solid LED

*Bluetooth* power off:
LED off

ON/OFF/Setup slide switch

*Figure 4. The U1117A as illustrated*

## Existing U1177A IR-to-*Bluetooth* adapter (Class 2)

– Supports Android smart devices
– 10 meters measurement range capability *(Please refer to the connectivity distance table below)*

Low battery indication:
Red LED flashing

*Bluetooth* disconnected:
Green LED flashing

*Bluetooth* connected:
Green solid LED

*Bluetooth* power off:
LED off

ON/OFF/Setup slide switch

*Figure 5. The U1177A as illustrated*

*Figure 6. Multiple awards winning U1177A Infrared (IR)-to-Bluetooth adapter is being recognized as an innovative solution in Test & Measurement industry*

|          | U1177A | U1117A | U1115A |
|----------|--------|--------|--------|
| U1177A   | –      | –      | 10-m   |
| U1117A   | –      | –      | 100-m  |
| U1115A   | 10-m   | 100-m  | –      |
| Other Class 1 devices | 10-m | 100-m | 100-m |
| Other Class 2 devices | 10-m | 10-m  | 10-m   |

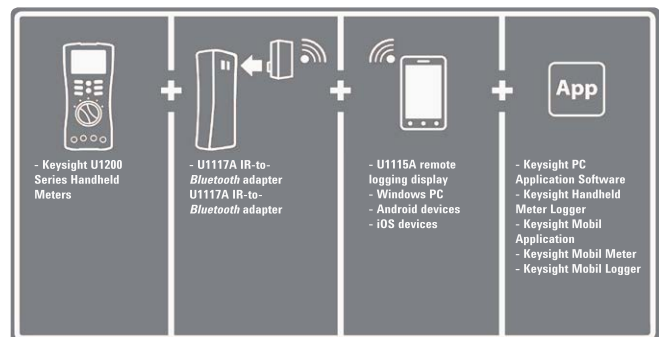*Figure 7. Connectivity distance (approximate) within the line-of-sight*

- Keysight U1200 Series Handheld Meters

- U1117A IR-to-*Bluetooth* adapter U1117A IR-to-*Bluetooth* adapter

- U1115A remote logging display
- Windows PC
- Android devices
- iOS devices

- Keysight PC Application Software
- Keysight Handheld Meter Logger
- Keysight Mobil Application
- Keysight Mobil Meter
- Keysight Mobil Logger

*Figure 8. Keysight remote link solution*

## U1115A remote logging display



Battery indicator
Time indicator

Function keys
Logger key

Navigation keys
Meter key

Slide power switch

Stand

External power port
(micro USB port)

Front view

Side view



Figure 9. Monitor up to four handheld meters readings at once with the U1115A remote logging display

*All images shown are for illustration purposes only*

## Keysight Mobile Meter Application (iOS/Android)

Monitor up to three multimeter measurements at the same time with Keysight Mobile Meter.



*iOS*          *Android*

*Figure 10. Up to three handheld meters measurements with the Keysight Mobile Meter Application*

Keysight Mobile Meter is a free iOS or Android application software that allows iOS or Android based smart devices to connect, control and perform up to three handheld meter measurements.

– Log and monitor up to three measurements simultaneously without the need to be physically present
– Make measurements from a safe distance
– Eliminates the need to walk back and forth between measurement points
– Save money, time and achieve higher work productivity

## Keysight Mobile Logger Application (iOS/Android)

Perform data logging up to three multimeters – wirelessly and simultaneously!



*iOS*          *Android*

*Figure 11. Data logging with Keysight Mobile Logger Application*

Keysight Mobile Logger is the free iOS or Android application software that logs data and provides trending graphs from Keysight handheld meters.

– Capture data streams or plot trending graphs
– Used for analysis to identify intermittent behavior or detect drifts
– Email functions, Short Message Service (SMS), pan and zoom function via iOS/Android device's touch screen
– Create mathematical functions and plot trending graphs

## Keysight Insulation Tester Application (iOS/Android)

Perform remote testing, data logging and report generation with Keysight Insulation Tester Application



*iOS*

Figure 12. Remote testing and report generation interface on the Keysight Insulation Tester Application



*Android*

Figure 13. Data logging interface on the Keysight Insulation Tester Application

Keysight Insulation Tester Application is the free iOS or Android application software for the new U1450A/U1460A series insulation resistance testers to perform remote testing, data logging and generate test report via a smart phone or tablet.

– Acquire and analyze insulation resistance data from a distance

– Eliminates manual data entry errors for report generation

– Fastest way to generate accurate test reports

– Log data and provide trending graphs to identify intermittent problems (multimeter functionality)

– Saves money, time and achieve higher work productivity

*Keysight Insulation Resistance Tester Application for iOS and Android can be downloaded from www.keysight.com/find/insulationtesterapp or from Google Play Store (https://play.google.com)/ App Store (https://itunes.apple.com)*

## Keysight Handheld Meter Logger software for Windows PC

The remote link solution also supports data logging and monitoring activities on a Windows PC via downloadable Keysight Handheld Meter Logger software.
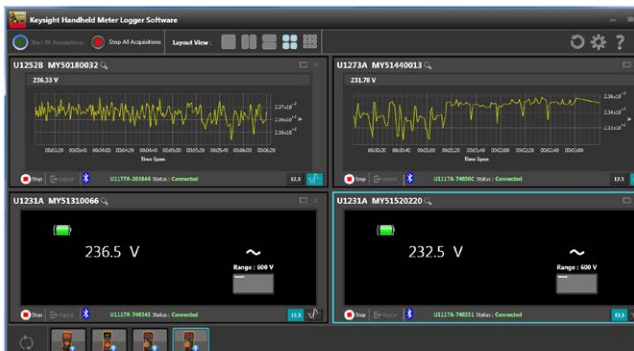


Figure 14. View up to 10 handheld meters readings or trendings with Keysight Handheld Meter Logger software
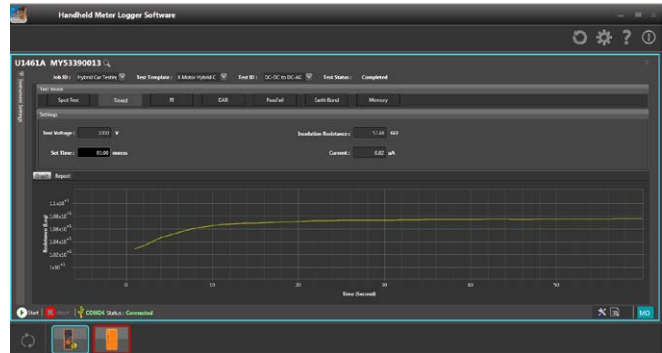


Figure 15. View insulation resistance test trendings and generate test report on a Windows PC

The Keysight Handheld Meter Logger software is a free software compatible with the U1210 Series, U1230 Series, U1240 Series*, U1250 Series, U1270 Series, and U1450A/U1460A**.

– Connect up to 10 handheld meters – 5x IR-to-*Bluetooth* Adapter (U1177A, U1117A) and 5x IR-USB Cable (U1173B)

– Meter view (live measurements) and Logger view (graph with zoom and pan) mode

– Manage multi-session data logging within the software and export the data to other software (Excel)

\* For the U1240 Series, you also need to purchase the U1179A IR Connectivity Bracket to enable IR connectivity

\*\* Only allows one connection at a time

*Keysight Handheld Meter Logger Software can be downloaded from www.keysight.com/find/hhmeterlogger*

# Specifications

| Product characteristics U1117A | |
|---|---|
| Radio specification | Frequency: 2402 MHz ~ 2480 MHz<br>Transmit power: +17 dBm<br>Number of channels: 79<br>Modulation: GFSK/PSK |
| Temperature | Operating condition: −20 to 55 °C<br>Storage condition: −40 to 70 °C |
| Relative humidity (R.H.) | Operating condition: Up to 80% at 40 °C (non-condensing)<br>Storage condition: Up to 95% at 40 °C (non-condensing) |
| Power consumption | Maximum 561 mVA for two 1.5 V AAA batteries |
| Battery lifespan | Lithium batteries: 30 hours<br>Alkaline batteries: 20 hours |
| Battery type | Lithium 24-LF (ANSI) and FR03 (IEC)<br>Alkaline 24 A (ANSI/NEDA) and LR03 (IEC)<br>Zinc Chloride 24 D (ANSI/NEDA) and R03 (IEC) |
| Dimension (W x L x H) | 39.0 mm x 71.0 mm x 37.0 mm |
| Weight | 60 g with batteries |
| Warranty | Three months (does not cover normal wear and tear of mechanical parts and batteries) |
| *Bluetooth* | "*Bluetooth*" Version 2.1 + EDR compliant, SPP profile, Class 1 device<br>(with approximately 100 meters connection range) |
| Regulatory<br><br>Complies with IDA Standards<br>DB 102425 | The U1117A complies with the requirements of the following product standards:<br><br>– EN 301 489-1V1.9.2<br>– EN 301 489-17:V2.1.1<br>– EN 55022:2006+A1:2007<br>– EN55024:1998+A1:2001+A2:2003<br>– EN 300 328 V1.7.1 (2006-10)<br>– EN 62311:2008<br>– EN 60950-1:2006+A11:2009+A12:2011<br>– India Equipment Type Approval (ETA) Certificate No: 1424/2011/WRLO<br>– COFETEL Certificate No: RCPAGU111-1066, registered under Keysight Technologies Mexico S de RL de CV<br><br>This telecommunication equipment conforms to the NTC technical requirement |
| Compatibility | Keysight Handheld Meter/Display:<br>– Keysight U1200 Series Handheld Meters<br>– Keysight U1450A/60A Series Insulation Resistance Testers1<br>– Keysight U1115A Remote Logging Display<br><br>Keysight PC Application Software:<br>– Keysight Handheld Meter Logger<br><br>Keysight Mobile Application:<br>– Keysight Mobile Meter<br>– Keysight Mobile Logger<br>– Keysight Insulation Tester<br><br>Hardware Devices:<br>– iPhone<br>– iPad<br>– iPod Touch<br>– Android smartphone/tablet<br>– Windows PC (with *Bluetooth* enabled) |

1.  *U1117A IR-Bluetooth Adapter is compatible with the U1450A/U1460A series to establish wireless connectivity on a Windows PC or iOS/Android smart devices. U1115A is not compatible with the U1450A/U1460A series.*

| Product characteristics U1177A | |
|---|---|
| Radio specification | Frequency: 2402 MHz ~ 2480 MHz<br>Antenna power: 1 mW or less<br>Number of channels: 79<br>Modulation: GFSK/PSK |
| Temperature | Operating condition: −20 to 55 °C<br>Storage condition: −40 to 70 °C |
| Relative humidity (R.H.) | Operating condition: Up to 80% at 40 °C (non-condensing)<br>Storage condition: Up to 95% at 40 °C (non-condensing) |
| Power consumption | Maximum 130 mVA for two 1.5 V AAA batteries |
| Battery life span | 30 hours typical (based on continuous data transfer) |
| Battery type | Alkaline 24 A (ANSI/NEDA) and LR03 (IEC)<br>Zinc Chloride 24 D (ANSI/NEDA) and R03 (IEC) |
| Dimension (W x L x H) | 39.0 mm x 37.0 mm x 71.0 mm |
| Weight | 60 g with batteries |
| Warranty | Three months (does not cover normal wear and tear of mechanical parts and batteries) |
| *Bluetooth* | *"Bluetooth"* Version 2.1 + EDR compliant, SPP profile, Class 2 device<br>(with 10 meters connection range) |
| Regulatory | The U1177A complies with the requirements of the following safety and regulation standards:<br><br>– FCC Part15C (Certification) (15.209, 15.247) FCC ID: ZKMKEYSIGHT-U1177A<br>– FCC Part15B (DoC) (15.109)<br>– RSS-210 Issue 8:2010 IC:6310A-U1177A<br>– ICES-003 Issue 4:2004<br>– EN 300 328 V1.7.1:2008<br>– EN 301 489-1V1.8.1:2008/-17 V2.11:2009<br>– EN 55022:2006+A1:2007/EN55024:1998+A1:2001+A2:2003<br>– EN 50371:2002<br>– EN 60950-1:2006/A11:2009/A1:2010<br>– Complies with IDA Standards (DB 102425)<br>– India Equipment Type Approval (ETA) Certificate No: 1424/2011/WRLO<br>– COFETEL Certificate No: RCPAGU111-1066, registered under Keysight Technologies Mexico S de RL de CV<br><br>This telecommunication equipment conforms to the NTC technical requirement |
| Compatibility | Keysight Handheld Meter/Display:<br>– Keysight U1200 Series Handheld Meters<br>– Keysight U1450A/60A Series Insulation Resistance Testers1<br>– Keysight U1115A Remote Logging Display<br><br>Keysight PC Application Software:<br>– Keysight Handheld Meter Logger<br><br>Keysight Mobile Application:<br>– Keysight Mobile Meter<br>– Keysight Mobile Logger<br>– Keysight Insulation Tester<br><br>Hardware Devices:<br>– iPhone<br>– iPad<br>– iPod Touch<br>– Android smartphone/table<br>– Windows PC (with *Bluetooth*-enabled) |

1.  U1177A IR-Bluetooth Adapter is compatible with the U1450A/U1460A series to establish wireless connectivity on a Windows PC or iOS/Android smart devices. U1115A is not compatible with the U1450A/U1460A Series

## Product characteristics U1115A

| | |
|---|---|
| Radio specification | Frequency: 2402 MHz ~ 2480 MHz<br>Transmit power: +17 dBm<br>Number of channels: 79<br>Modulation: GFSK/PSK |
| Temperature | Operating condition: −20 to 55 °C<br>Storage condition: −40 to 70 °C |
| Relative humidity (R.H.) | Operating condition: Up to 80% at 40 °C (non-condensing)<br>Storage condition: Up to 95% at 40 °C (non-condensing) |
| Power consumption | Maximum 1 VA for three AA batteries<br>Maximum 5 V +10%, 250 mA for external power<br>Auto Power Off mode, current consumption 3 mA |
| Battery lifespan | Lithium batteries: 30 hours<br>Alkaline batteries: 20 hours |
| Battery type | Lithium 15-LF (ANSI) and FR06 (IEC)<br>Alkaline 15 A (ANSI/NEDA) and LR06 (IEC)<br>Zinc Chloride 15 D (ANSI/NEDA) and R06 (IEC) |
| Dimension (W x L x H) | 92.0 mm x 107.9 mm x 33.5 mm |
| Weight | 238 g with batteries, 170 g without batteries |
| Warranty | One year (does not cover normal wear and tear of mechanical parts and batteries) |
| *Bluetooth* | "*Bluetooth*" Version 2.1 + EDR compliant, SPP profile, Class 1 device<br>(with approximately 100 meters connection range) |
| Regulatory | The U1115A complies with the requirements of the following product standards:<br><br>– EN 301 489-1:V1.9.2<br>– EN 301 489-17:V2.1.1<br>– EN 55022:2006+A1:2007+A2:2010 (Group 1 Class A)<br>– EN55024:1998+A1:2001+A2:2003+A3:2010<br>– EN 300 328 V1.7.1 (2006-10)<br>– EN 62311:2008<br>– EN 60950-1:2006+A11:2009+A1:2010+A12:2011<br><br>This telecommunication equipment conforms to the NTC technical requirement |
| Compatibility | Keysight Handheld Meter/Display:<br>– Keysight U1200 Series Handheld Meters<br>– Keysight U1117A IR-to-*Bluetooth* Adapter<br>– Keysight U1177A IR-to-*Bluetooth* Adapter<br><br>Keysight PC Application Software:<br>– Keysight Handheld Meter Logger[1]<br><br>Hardware Device:<br>– Windows PC (with *Bluetooth* enabled)<br><br>Note: U1115A is not compatible with U1450A/60A series |

1.  *Transfers logged data from U1115A remote logging display to Windows PC*

| Ordering information | Standard shipped accessories |
|---|---|
| U1115A Remote Logging Display  | – Three 1.5 V AA batteries.<br>– USB to micro USB cable (for external power only).<br>– Soft Carrying Case<br>– Operating instruction |
| U1117A IR-to-*Bluetooth* adapter  | – Two 1.5 V AAA batteries<br>– Operating instruction |
| U1177A IR-to-*Bluetooth* adapter  | – Two 1.5 V AAA batteries<br>– Operating instruction |

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