DATA SHEET

Remote Link

Reach MORE. Accomplish MORE. Expect MORE.





KEYSIGHT TECHNOLOGIES

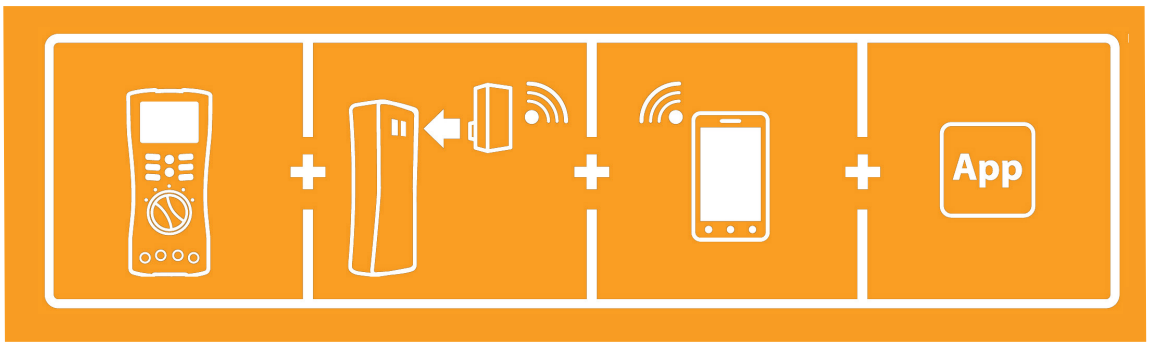
Introduction

The Remote Link solution – Keysight's next generation wireless connectivity solution lets you measure further, easier and faster. Transform your Keysight handheld meters into a wireless remote measurement solution by simply plugging in the U1177A/U1117A IR-to-*Bluetooth*® adapter. This allows users to safely measure, view and log test measurements with an extended range of up to 100 meters away with U1115A remote logging display. Users can log and monitor data on more display devices such as Windows PCs or iOS/ Android-based smart devices.

- Perform remote measurement and data logging wirelessly
- Easily set-up with wide choices of Keysight U1200 Series handheld meters and Keysight U1450/U1460 Series insulation resistance meters[1]
- Compatible in multiple platforms[2] (Windows PC, Apple iOS, Android)

Notes:

1. Refer to Table 1 for Keysight handheld meters compatibility
2. Refer to Table 3 for Remote Link application and software compatibility



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[1] with 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.[1] 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[1]

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

Note:

1. Refer to Table 1 for handheld meter models that are compatible with U1177A/U1117A IR-to-Bluetooth adapter and U1115A remote logging display.

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, 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.

Handheld meter models that are compatible with U1177A/U1117A and U1115A

Table 1.

	Handheld digital multimeter				Handheld clamp meter	Handheld insulation resistance tester
	U1230 Series	U1240 Series	U1250 Series	U1270 Series	U1210 Series	U1450A/60A Series
U1177A	●	●*	●	●	●	●
U1117A	●	●*	●	●	●	●
U1115A	●	●	●	●	●	–

* Needs a U1179A IR bracket - sold separately as an accessory

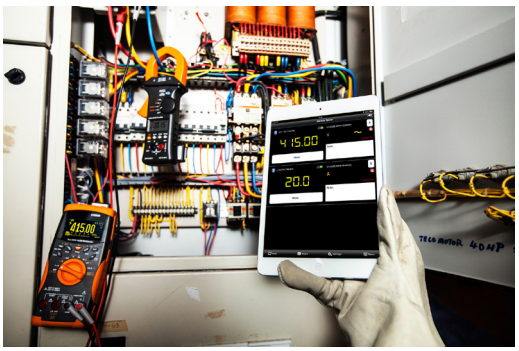


Figure 2. Monitoring handheld multimeter and clamp meter readings remotely via iOS/Android based smart devices

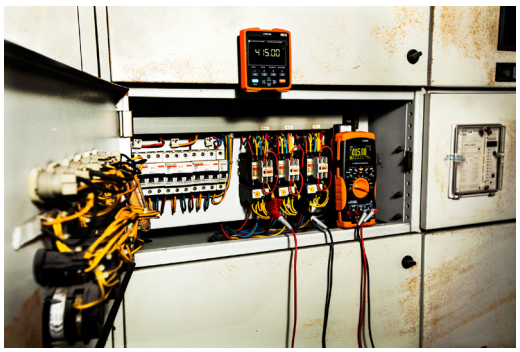


Figure 3. Monitoring handheld meter readings via the U1115A remote logging display

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)*



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)*

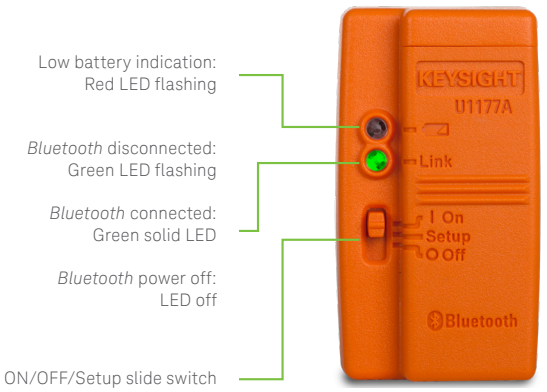


Figure 5. The U1177A as illustrated

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

Connectivity distance (approximate) within the line-of-sight

Table 2.

	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

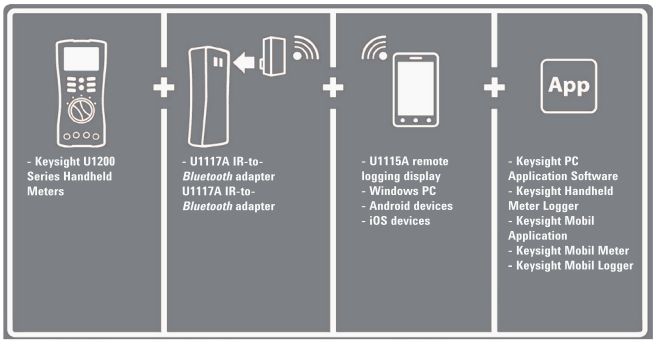


Figure 7. Keysight Remote Link solution

Remote Link application and software compatibility

Table 3.

	Android OS			Apple iOS			Windows PC
	Keysight Mobile Meter	Keysight Mobile Logger	Keysight Insulation Tester	Keysight Mobile Meter	Keysight Mobile Logger	Keysight Insulation Tester	Meter Logger Software
U1177A	●	●	●	–	–	–	●
U1117A	●	●	●	●	●	●	●
U1115A	–	–	–	–	–	–	● (data download only)

U1115A remote logging display





Figure 8. 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 9. 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 10. 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 Mobile Meter and Keysight Mobile Logger for iOS and Android can be downloaded from www.keysight.com/find/hhmeterapp or from Google Play Store (https://play.google.com)/
Apple iTunes App Store (https://itunes.apple.com)

Keysight Insulation Tester Application (iOS/Android)

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



iOS

Figure 11. Remote testing and report generation interface on the Keysight Insulation Tester Application



Android

Figure 12. 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

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

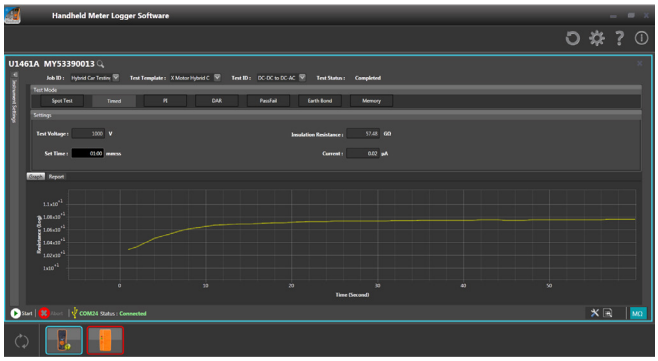


Figure 14. View insulation resistance test trendings and generate test report on a Windows PC

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 Transmit power: 17 dBm ± 3 dB Number of channels: 79 Modulation: GFSK/PSK
Temperature	Operating condition: –20 to 55 °C Storage condition: –40 to 70 °C
Relative humidity (R.H.)	Operating condition: Up to 80% at 40 °C (non-condensing) 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 Alkaline batteries: 20 hours
Battery type	Lithium 24-LF (ANSI) and FR03 (IEC) Alkaline 24 A (ANSI/NEDA) and LR03 (IEC) 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
Bluetooth	"*Bluetooth*" Version 2.1 + EDR compliant, SPP profile, Class 1 device (with approximately 100 meters connection range)
Regulatory **Complies with IMDA Standards** (N5464-19)	The U1117A complies with the requirements of the following product standards: – EN 301 489-1V1.9.2 – EN 301 489-17:V2.1.1 – EN 55022:2006+A1:2007 – EN55024:1998+A1:2001+A2:2003 – EN 300 328 V1.7.1 (2006-10) – EN 62311:2008 – EN 60950-1:2006+A11:2009+A12:2011 – India Equipment Type Approval (ETA) Certificate No: 1424/2011/WRLO – COFETEL Certificate No: RCPAGU111-1066, registered under Keysight Technologies Mexico S de RL de CV This telecommunication equipment conforms to the NTC technical requirement
Compatibility	Keysight Handheld Meter/Display: – Keysight U1200 Series Handheld Meters – Keysight U1450A/60A Series Insulation Resistance Testers1 – Keysight U1115A Remote Logging Display Keysight PC Application Software: – Keysight Handheld Meter Logger Keysight Mobile Application: – Keysight Mobile Meter – Keysight Mobile Logger – Keysight Insulation Tester Hardware Devices: – iPhone – iPad – iPod Touch – Android smartphone/tablet – 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 Antenna power: 1 mW or less Number of channels: 79 Modulation: GFSK/PSK
Temperature	Operating condition: –20 to 55 °C Storage condition: –40 to 70 °C
Relative humidity (R.H.)	Operating condition: Up to 80% at 40 °C (non-condensing) 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) 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
Bluetooth	"*Bluetooth*" Version 2.1 + EDR compliant, SPP profile, Class 2 device (with 10 meters connection range)
Regulatory **Complies with IMDA Standards** (N5465-19)	The U1177A complies with the requirements of the following safety and regulation standards: – FCC Part15C (Certification) (15.209, 15.247) FCC ID: ZKMKEYSIGHT-U1177A – FCC Part15B (DoC) (15.109) – RSS-210 Issue 8:2010 IC:6310A-U1177A – ICES-003 Issue 4:2004 – EN 300 328 V1.7.1:2008 – EN 301 489-1V1.8.1:2008/-17 V2.11:2009 – EN 55022:2006+A1:2007/EN55024:1998+A1:2001+A2:2003 – EN 50371:2002 – EN 60950-1:2006/A11:2009/A1:2010 – Complies with IDA Standards (DB 102425) – India Equipment Type Approval (ETA) Certificate No: 1424/2011/WRLO – COFETEL Certificate No: RCPAGU111-1066, registered under Keysight Technologies Mexico S de RL de CV This telecommunication equipment conforms to the NTC technical requirement
Compatibility	Keysight Handheld Meter/Display: – Keysight U1200 Series Handheld Meters – Keysight U1450A/60A Series Insulation Resistance Testers1 – Keysight U1115A Remote Logging Display Keysight PC Application Software: – Keysight Handheld Meter Logger Keysight Mobile Application: – Keysight Mobile Meter – Keysight Mobile Logger – Keysight Insulation Tester Hardware Devices: – Android smartphone/table – 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 Transmit power: 17 dBm ± 3 dB Number of channels: 79 Modulation: GFSK/PSK
Temperature	Operating condition: –20 to 55 °C Storage condition: –40 to 70 °C
Relative humidity (R.H.)	Operating condition: Up to 80% at 40 °C (non-condensing) Storage condition: Up to 95% at 40 °C (non-condensing)
Power consumption	Maximum 1 VA for three AA batteries Maximum 5 V +10%, 250 mA for external power Auto Power Off mode, current consumption 3 mA
Battery lifespan	Lithium batteries: 30 hours Alkaline batteries: 20 hours
Battery type	Lithium 15-LF (ANSI) and FR06 (IEC) Alkaline 15 A (ANSI/NEDA) and LR06 (IEC) 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
Bluetooth	"*Bluetooth*" Version 2.1 + EDR compliant, SPP profile, Class 1 device (with approximately 100 meters connection range)
Regulatory **Complies with IMDA Standards** (N5463-19)	The U1115A complies with the requirements of the following product standards: – EN 301 489-1:V1.9.2 – EN 301 489-17:V2.1.1 – EN 55022:2006+A1:2007+A2:2010 (Group 1 Class A) – EN55024:1998+A1:2001+A2:2003+A3:2010 – EN 300 328 V1.7.1 (2006-10) – EN 62311:2008 – EN 60950-1:2006+A11:2009+A1:2010+A12:2011 This telecommunication equipment conforms to the NTC technical requirement
Compatibility	Keysight Handheld Meter/Display: – Keysight U1200 Series Handheld Meters – Keysight U1117A IR-to-*Bluetooth* Adapter – Keysight U1177A IR-to-*Bluetooth* Adapter Keysight PC Application Software: – Keysight Handheld Meter Logger[1] Hardware Device: – Windows PC (with *Bluetooth* enabled) 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. – USB to micro USB cable (for external power only). – Soft Carrying Case – Operating instruction
U1117A IR-to-*Bluetooth* adapter		– Two 1.5 V AAA batteries – Operating instruction
U1177A IR-to-*Bluetooth* adapter		– Two 1.5 V AAA batteries – Operating instruction

Learn more at: www.keysight.com

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